

C A M B R I A

ENVIRONMENTAL
PROTECTION

June 23, 2000

03 JUN 27 AM 11:15

Mr. Scott Seery
Groundwater Protection Program
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Subsurface Investigation Report**
Shell-branded Service Station
4226 First Street
Pleasanton, California
Incident #98995840
Agency Case #STID 1646
Cambria Project #242-0523



Dear Mr. Seery:

On behalf of Equiva Services LLC (Equiva), Cambria Environmental Technology, Inc. (Cambria) is submitting the results of the subsurface investigation conducted on January 18 and 19, 2000 at the above-referenced site. The investigation was conducted in accordance with Cambria's November 15, 1999 *Investigation Work Plan*, which was approved with conditions, in the December 1, 1999 Alameda County Health Care Services Agency (ACHCSA) correspondence. Presented below are summaries of the site background, investigation procedures, investigation results, and conclusions.

BACKGROUND

Site Description: This Shell-branded station is located at the intersection of First Street and Vineyard Avenue, in Pleasanton, California (Figure 1). Three 10,000-gallon gasoline underground storage tanks (USTs) and one 550-gallon waste-oil UST are located at the site.

1985, Subsurface Investigation: In 1985 Emcon Associates of San Jose, California installed five soil borings between 20 and 30 feet below grade (fbg) adjacent to the gasoline USTs and collected soil samples. One soil boring was converted into a monitoring well of 30 ft depth. The maximum volatile fuel hydrocarbons detected was 1,300 parts per million (ppm) in S-B 4 at 15 feet below grade (fbg). No benzene was detected in the soil samples collected during this investigation. No groundwater was ever encountered in the monitoring well.

Oakland, CA
San Ramon, CA
Sonoma, CA
Portland, OR

**Cambria
Environmental
Technology, Inc.**

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

June 23, 2000

1986, *Underground Storage Tank Removal:* In 1986 Blaine Tech Services of San Jose, California (Blaine) collected soil samples beneath the four gasoline underground storage tanks when they were removed. Blaine collected soil samples from the excavation at each end of each tank and analyzed the samples for total petroleum hydrocarbons as gasoline (TPHg) and for benzene, toluene, ethylbenzene, and xylenes (BTEX). The concentrations of TPHg in the samples ranged from 240 ppm to below detection limits. Three 10,000-gallon, double-walled, fiberglass tanks were installed at a location closer to the dispenser islands. No oil was detected in a soil sample collected from the waste-oil tank excavation.



March 1990, Subsurface Investigation: In March 1990, Hart Crowser, Inc. of San Francisco (Hart), California drilled three soil borings between 30 and 50 feet deep in the vicinity of the former gasoline tanks and collected soil samples. They also abandoned monitoring well S-1 by drilling it out, and they continued drilling past the depth of the monitoring well to a total depth of 45 fbg. Soil samples were also collected from the well abandonment boring. The soil samples from all four borings were analyzed for TPHg and BTEX. Concentrations of 380 ppm and 290 ppm TPHg were detected in the samples from the well abandonment boring at 30 and 35 fbg, respectively. The maximum TPHg concentration in soil samples from the other borings was 18 ppm. In April 1990, Hart drilled two more soil borings at the site to a total depth of 51.5 fbg and collected soil samples. A maximum concentration of 820 ppm TPHg in one boring was detected at a depth of 35 fbg. No TPHg was detected in the other soil boring. A small amount of groundwater was present at 49.5 fbg in one boring.

September 1995, Dispenser and Piping Replacement: On September 8 and 11, 1995, Weiss Associates of Emeryville, California collected soil samples from beneath the gasoline product piping and dispensers. Paradiso Mechanical of San Leandro, California removed the product lines and replaced the dispensers and piping. A maximum concentration of 120 ppm TPHg was detected in soil samples collected at the southernmost former dispenser. Approximately 40 cubic yards of soil were overexcavated at the direction of the Pleasanton Fire Department.

July 1998, Facility Upgrade: In July 1998, Cambria inspected the waste-oil-tank, remote-fill piping during its removal by Gettler-Ryan of Dublin, California. No hydrocarbon impact was observed during the site visit, and, therefore, no further investigation was required. Total petroleum hydrocarbons as diesel was detected at 27 ppm in a sample collected from the pea gravel.

April 1999, Subsurface Investigation: In April 1999, Cambria advanced soil borings SB-6 and SB-7 and converted SB-6 to monitoring well, MW-1. TPHg was detected in soil sample SB-7-40.0' at 83 ppm. Benzene was detected at 0.1 ppm in the sample from 45 fbg in boring SB-6. No other TPHg or benzene was detected in soil samples. TPHg was detected in grab groundwater

samples from borings SB-6 and SB-7 at concentrations of 10,000 and 750 ppb, respectively. Benzene was detected in SB-6 and SB-7 at concentrations of 4,500 and 20 ppb, respectively. No MTBE (by EPA Method 8020) was reported in soil or groundwater samples collected during this investigation.

INVESTIGATION PROCEDURES

Cambria positioned the wells for this investigation to determine whether groundwater has been impacted by hydrocarbons. Two soil borings were drilled onsite, and were converted to monitoring wells MW-2 and MW-3 (Figure 2).

The procedures for this subsurface investigation, described in Cambria's approved work plan, are summarized below. Analytical results for soil and groundwater are summarized in Tables 1 and 2 and presented as Attachment A. Boring logs and Cambria's standard field procedures for monitoring well installation are presented as Attachments B and C, respectively. State well completion forms are presented as Attachment D.

- Personnel Present:** Barbara Jakub, Project Geologist of Cambria.
- Permits:** Zone 7 Water Agency permit #99215.
- Drilling Company:** Gregg Drilling of Martinez, California (License #485165).
- Drilling Dates:** January 18 and 19, 2000.
- Drilling Method:** Hollow-stem auger with continuous coring and split-spoon sampler.
- Number of Borings:** Two (MW-2 and MW-3) (Figure 2).
- Number of Wells:** Two (MW-2 and MW-3) (Figure 2).
- Boring Depths:** 47 fbg and 42 fbg, respectively (Attachment B).
- Well Depths:** 46 fbg and 35 fbg, respectively (Attachment B).
- Groundwater Depths:** Groundwater was encountered at 33 fbg in MW-2 and at 25 fbg in MW-3*. Blaine measured groundwater on February 10, 2000 * at 36.62 fbg in MW-2 and 32.77 fbg in MW-3. *The

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groundwater encountered at 25 fbg in MW-3 may have been perched.

Groundwater Gradient:

The groundwater flow direction and gradient is to the north at 0.074, as determined from first quarter water levels (Figure 3).

Sediment Lithology:

The site is underlain by silts to 15 and 20 fbg. Interbedded gravelly sand, sandy silt, and sandy and clayey gravels underlie the silt. The clayey silt that was encountered at 55 fbg and 59 fbg in SB-6 and SB-7, was encountered at 45 fbg and 40 fbg in MW-2 and MW-3, respectively. Clayey sand was encountered at 99 fbg to the total explored depth of 100 fbg. Geologic cross-sections for the site are presented in Figures 4 and 5.

Well Materials:

The wells were constructed using four-inch diameter, 0.020-inch slotted Schedule 40 PVC well screen, Schedule 40 PVC well casing and #3 Monterey sand.

Screened Intervals:

26-46 fbg in MW-2 and 20-35 fbg in MW-3 (Attachment B).

Well Elevation Survey:

The top of casing elevations were surveyed by Virgil Chavez Land Surveying of Vallejo, California on March 19, 2000 (Attachment E).

Chemical Analyses:

Soil and groundwater samples from the borings and wells were analyzed as follows:

- TPHg by modified EPA Method 8015;
- MTBE, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020; and
- The groundwater sample with the highest reported concentration of MTBE by EA Method 8020 was reanalyzed using EPA Method 8260.

To characterize stockpiled soil for disposal, four brass tubes were collected from the stockpiled soil and then composited by the analytical laboratory. The composite samples were analyzed for:

- TPHg by modified EPA Method 8015;
- BTEX by EPA Method 8020; and
- TTLC lead.

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Backfill Method: The borings were backfilled with neat cement grout to match the existing grade.

Soil Handling: Soil cuttings produced from the borings were disposed by Manley and Sons Trucking Company of Sacramento, California at Forward Landfill in Manteca, California on February 2, 2000.

INVESTIGATION RESULTS



Analytical Results for Soil Samples: No hydrocarbons or MTBE (by EPA Method 8020) was detected in samples collected during this investigation including capillary fringe samples. The results are presented in Attachment A.

Analytical Results for Groundwater: The maximum TPHg and benzene concentrations were detected in MW-1 at 523, and 106 ppb, respectively. The maximum MTBE concentration (by EPA Method 8020) was reported at 26.8 ppb in MW-3. MTBE was confirmed out of hold time by EPA Method 8260 depth at 21.5 ppb.

CONCLUSIONS AND RECOMMENDATIONS

Low concentrations of hydrocarbons were detected in monitoring wells MW-1 and MW-3. No hydrocarbons or MTBE was detected in soil samples collected from the capillary fringe in the borings. Dissolved-phase hydrocarbons were detected in groundwater samples collected downgradient of the former UST complex in MW-1 but not downgradient of the current UST complex, MW-2. MTBE was detected in the groundwater sample collected from upgradient monitoring well MW-3.

Given the relatively low hydrocarbon and MTBE concentrations in soil and groundwater, the site may be a candidate for closure. However, we recommend continued groundwater monitoring for several quarters to establish hydrocarbon and groundwater trends. Future monitoring will include dissolved oxygen measurements to evaluate the bioactivity at the site.


CLOSING

We appreciate your continued assistance with this project. Please call Barbara Jakub at (510) 420-3309 if you have any questions or comments.

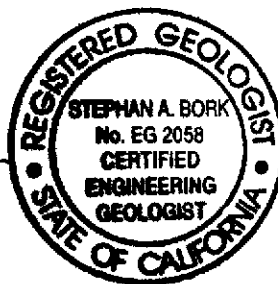
Sincerely,
Cambria Environmental Technology, Inc.



Barbara J. Jakub
Project Geologist



Stephan A. Bork, C.E.G., C.H.G.
Associate Hydrogeologist

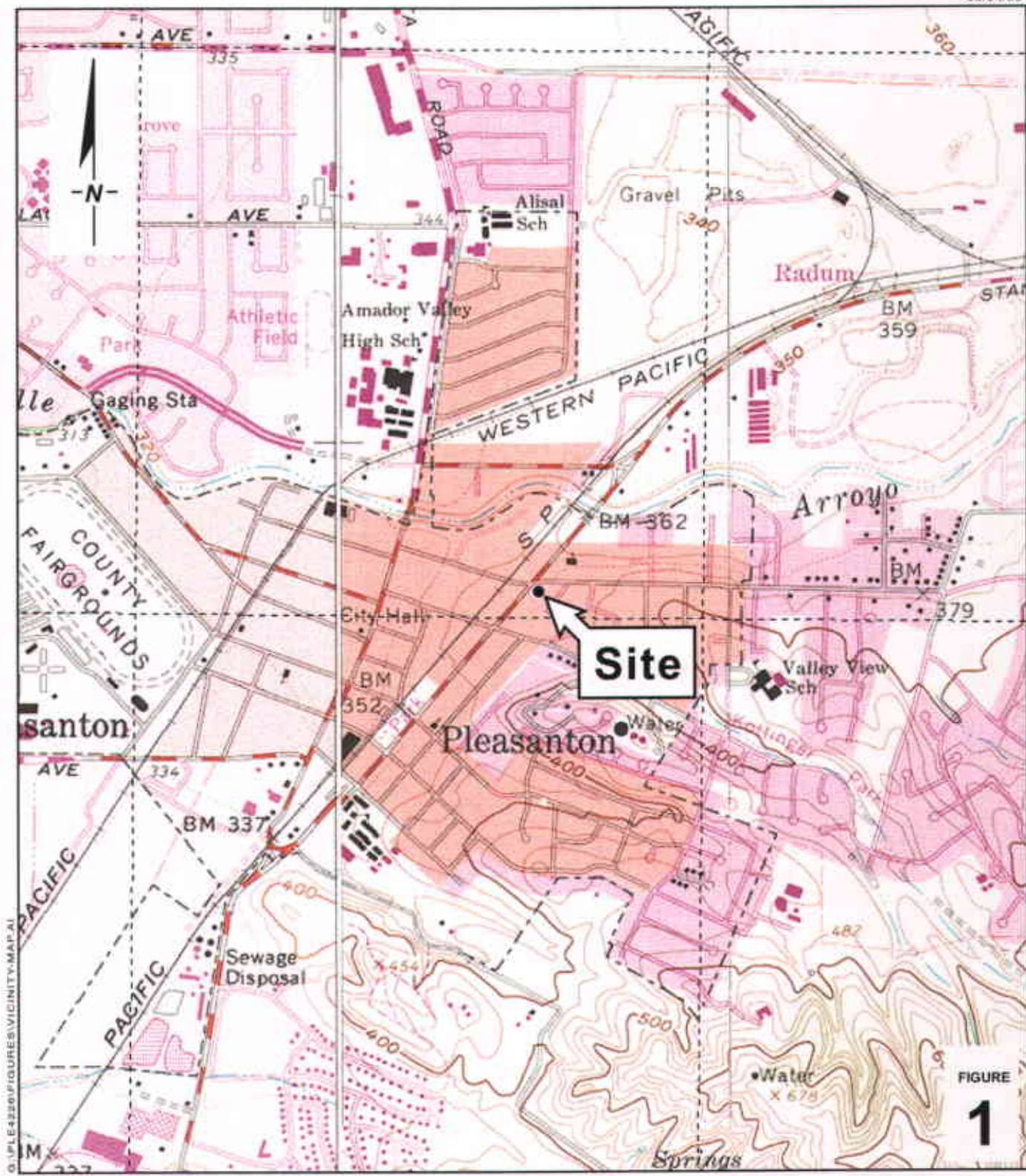


- Figures:
- 1 - Vicinity Map
 - 2 - Monitoring Well Locations
 - 3 - Groundwater Contour Map
 - 4 - Geologic Cross-Section A-A'
 - 5 - Geologic Cross-Section B-B'

- Tables :
- 1 - Soil Analytical Results
 - 2 - Groundwater Analytical Results

- Attachments:
- A - Analytical Reports for Soil and Groundwater
 - B - Monitoring Well Logs
 - C - Standard Field Procedures for Monitoring Well Installation
 - D - State Well Completion Reports
 - E - Well Elevation Survey Results
 - F - Disposal Confirmation

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, CA 91510-7869
Wyman Hong, Zone 7 Water Agency, 5997 Parkside Drive, Pleasanton, CA 94588-5127



0 1/8 1/4 1/2 1
 SCALE 1:1/4 MILES

FIGURE
1

Shell-branded Service Station
 4226 First Street
 Pleasanton, California
 Incident #98995840



C A M B R I A

Vicinity Map

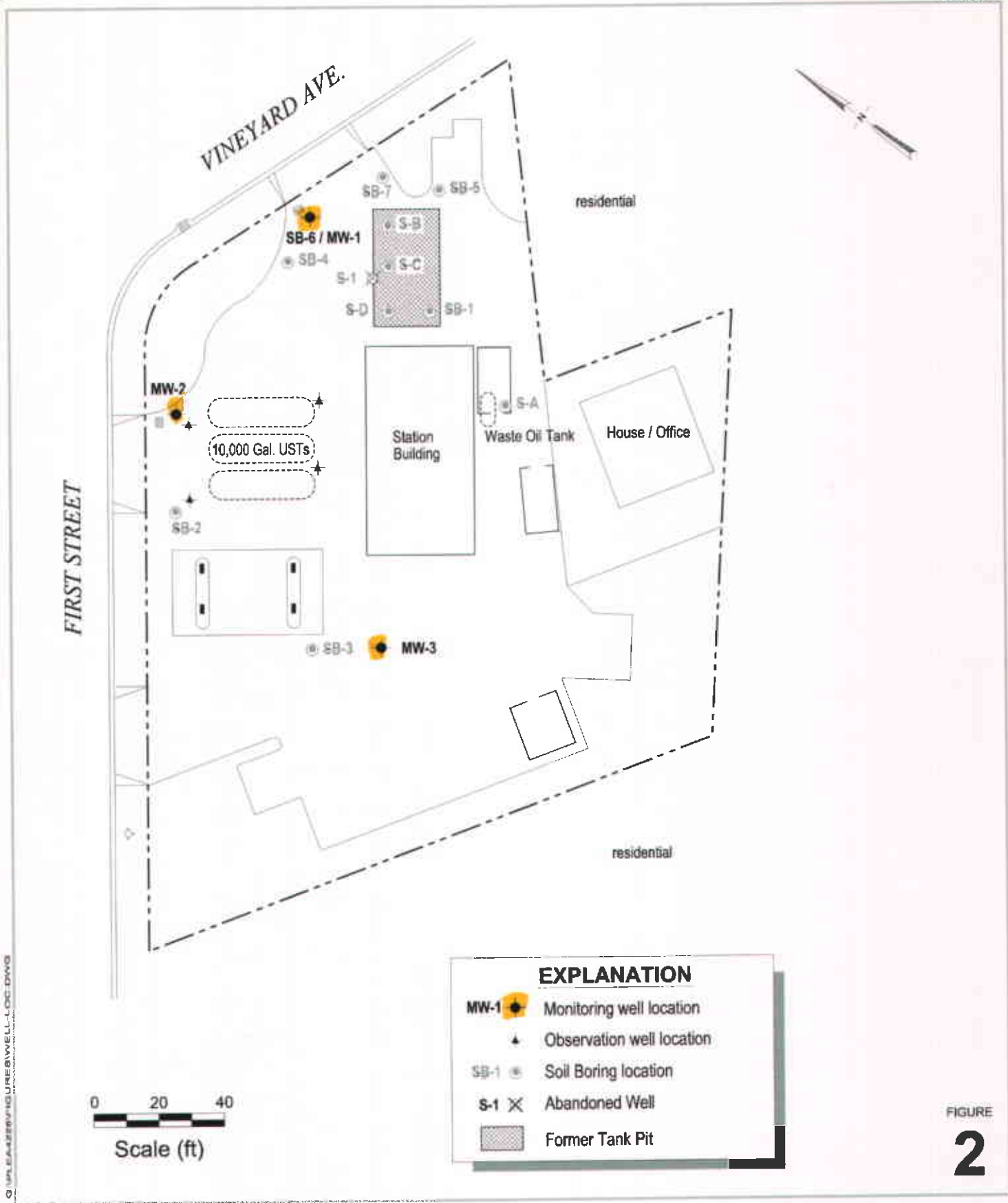


FIGURE 2

D:\MPLA\2000\FIG 01\RES\WELL-LOC.DWG

Shell-branded Service Station
 4226 First Street
 Pleasanton, California
 Incident #98995840



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Monitoring Well Locations

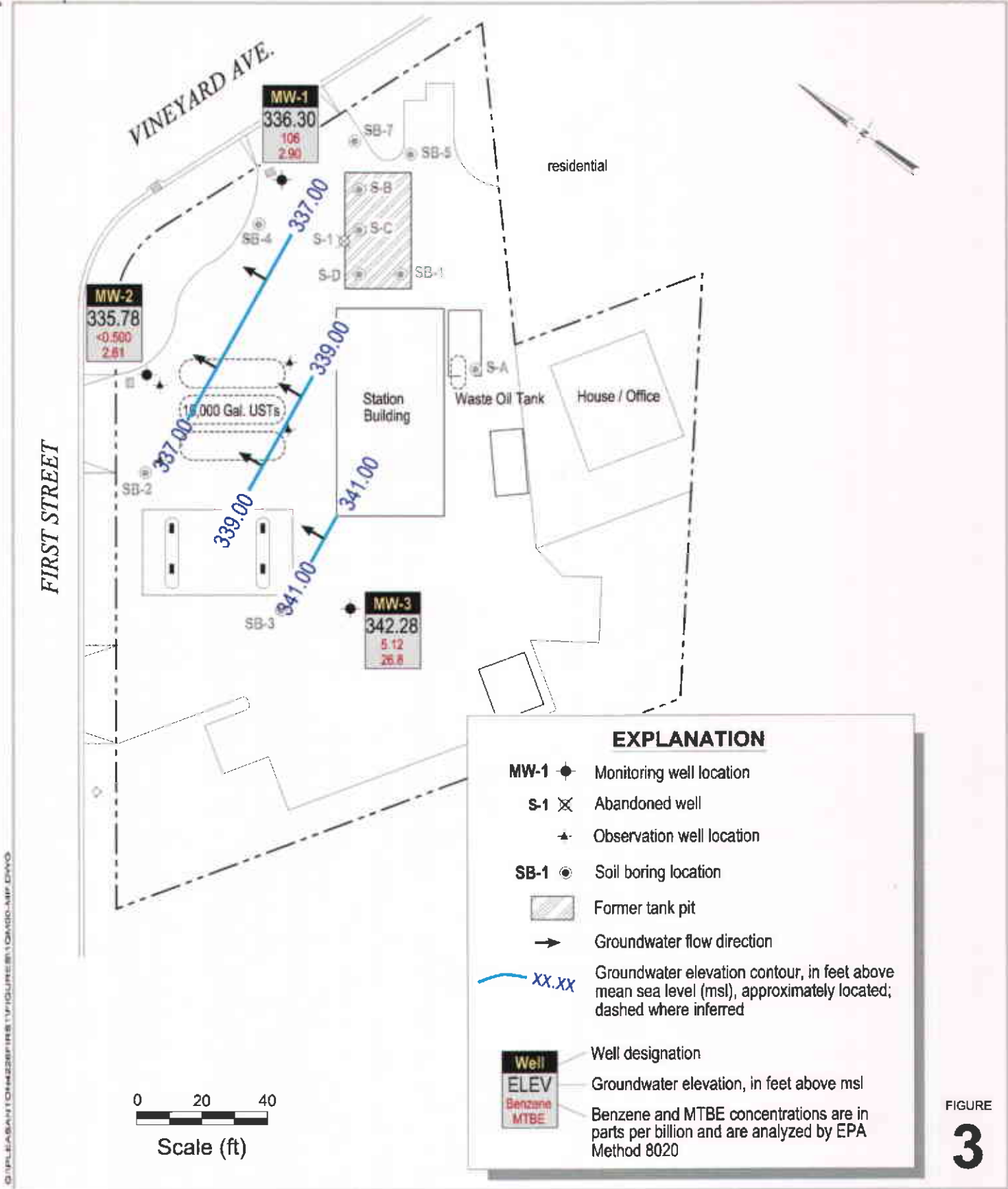


FIGURE 3

Shell-branded Service Station
 4226 First Street
 Pleasanton, California
 Incident #98995840



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Groundwater Elevation Contour Map

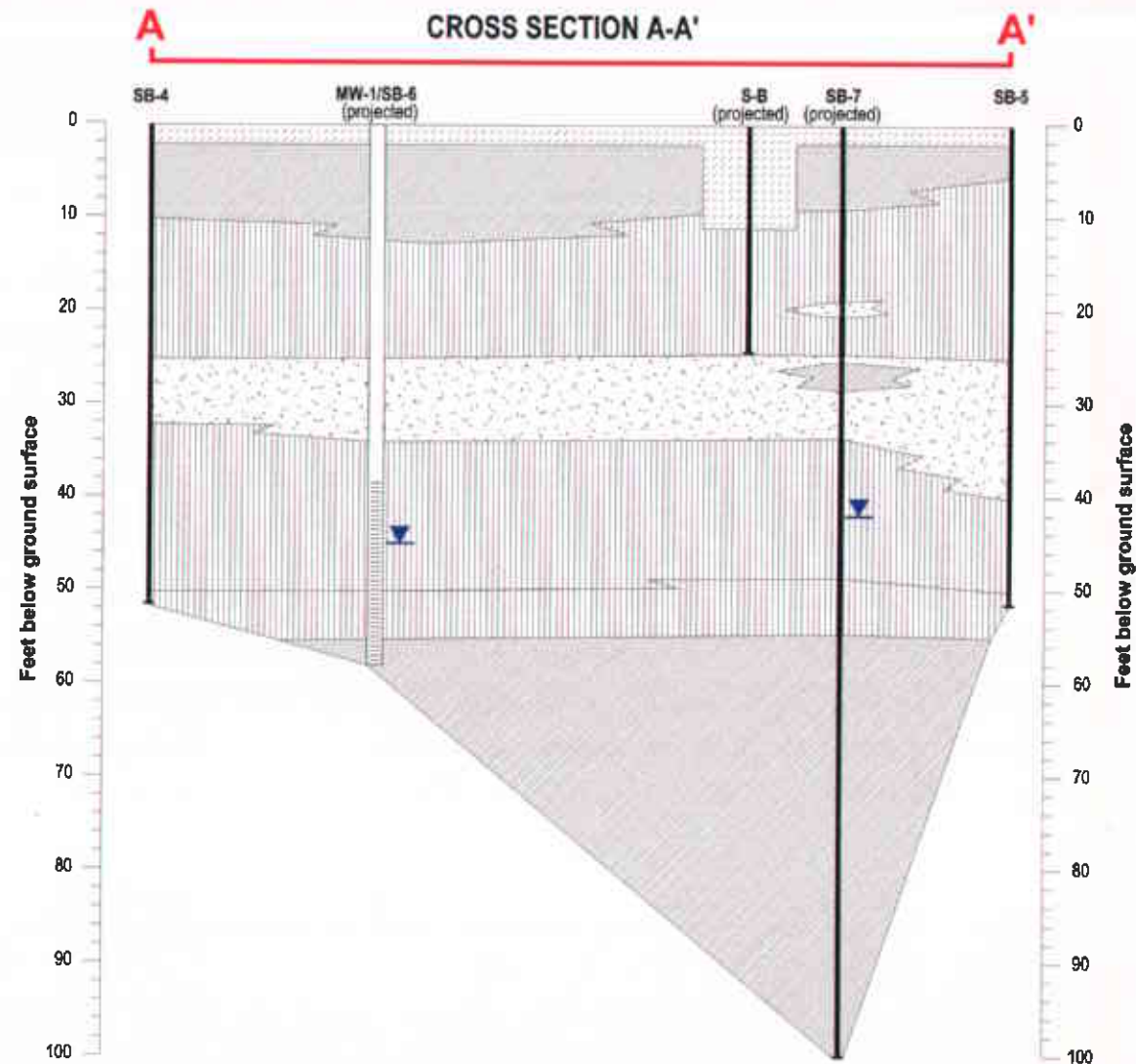
February 10, 2000

D:\PLEASANTON\4226\2000\FEB10\FIGURE3\104910-MP.DWG

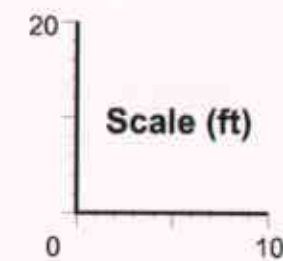
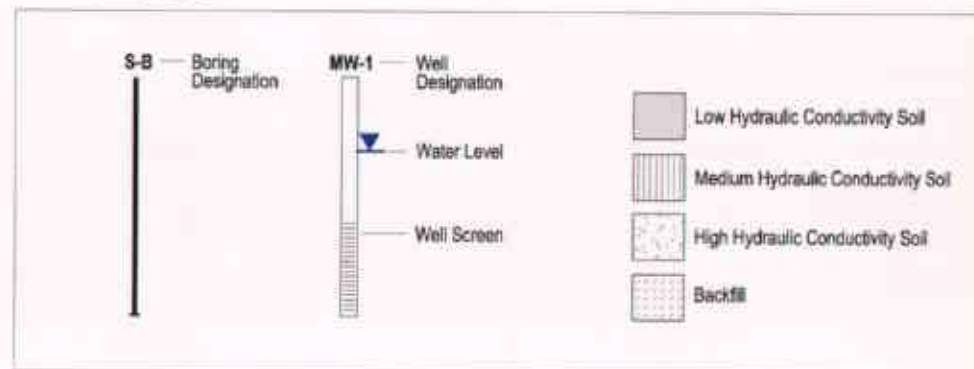
Shell-branded Service Station
 4226 First Street
 Pleasanton, California

Designed By: B. Jakub	Drawn By: G. Glasser	Approved By: B. Jakub
Revisions By:	Date:	
Description:		

Geologic Cross Section
 Incident #98995840



LEGEND

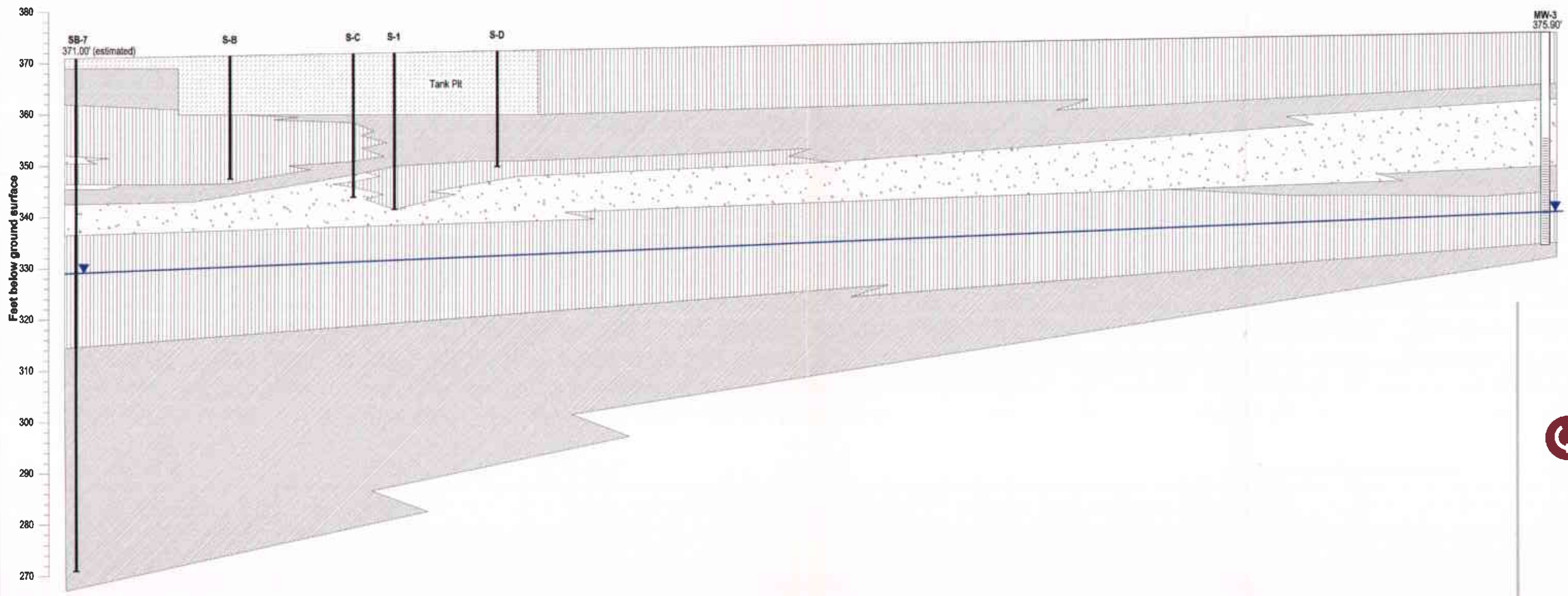


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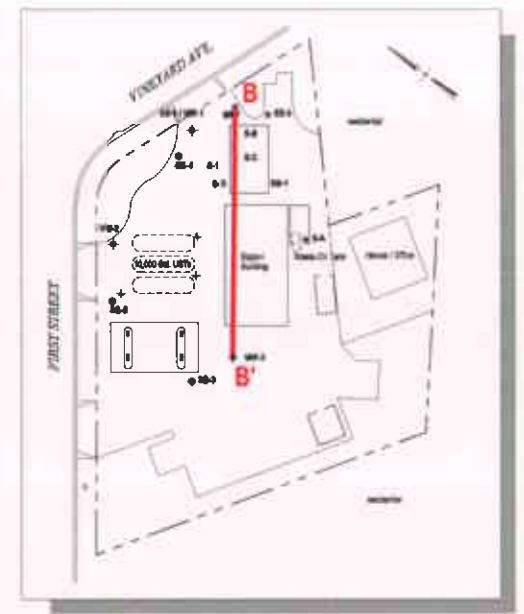


FIGURE 4

CROSS SECTION B-B'



Geologic Cross Section B-B'



LEGEND

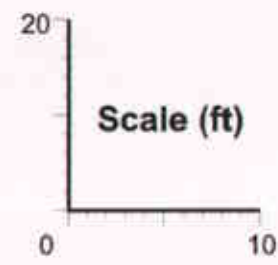
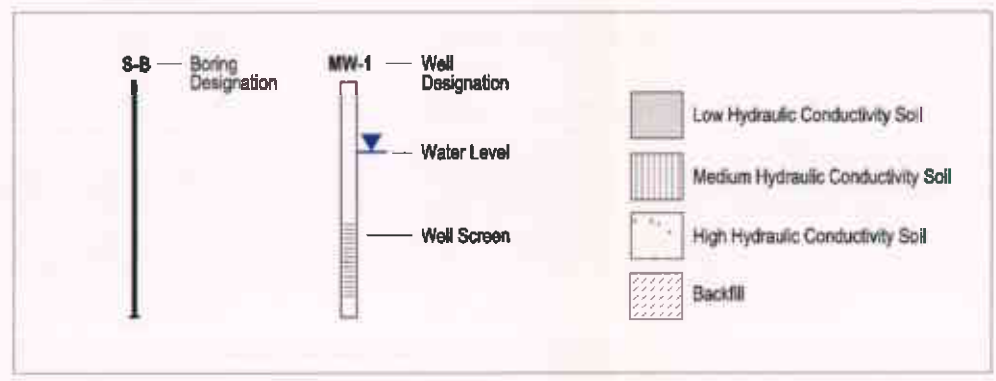


FIGURE 5



C A M B R I A

Shell-branded Service Station
4226 First Street
Pleasanton, California

WELL MONITORING DATA SHEET

Project #: <u>000210M-1</u>	Client: <u>Equiva 9875840</u>
Sampler: <u>Mark S.</u>	Start Date: <u>2-10-00</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: <u>56 FS</u>	Depth to Water: <u>34.90</u>
Before: _____ After: _____	Before: _____ After: _____
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port
 Other: _____

Other: _____

<u>3.5</u>	(Gals.) X	<u>3</u>	=	<u>10.5</u>	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1000	65.8	6.4	1810		4	
1007	67.2	6.5	1840		8	
1013	67.4	6.5	1890		11	

Did well dewater? Yes No Gallons actually evacuated: 11

Sampling Time: 1020 Sampling Date: 2-10-00

Sample I.D.: MW-1 Laboratory: Sequoia

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

Equipment Blank I.D.: _____ @ _____ Time Duplicate I.D.: _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
ORP (if req'd):	Pre-purge:	mV	Post-purge:	mV



Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4226 First St. Project Manager: Nick Sudano	Sampled: 2/10/00 Received: 2/11/00 Reported: 3/2/00 11:03
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Notes and Definitions

#	Note
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- I-02 This sample was analyzed outside of the EPA recommended holding time.
- M-03 Sample was analyzed at a second dilution per clients request.
- P-01 Chromatogram Pattern: Gasoline C6-C12
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- Recov. Recovery
- RPD Relative Percent Difference





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4226 First St. Project Manager: Nick Sudano	Sampled: 2/10/00 Received: 2/11/00 Reported: 3/2/00 11:03
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**MTBE by EPA Method 8260A/Quality Control
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0020133			Date Prepared: 2/25/00			Extraction Method: EPA 5030B (P/T)				
Blank			0020133-BLK1							
Methyl tert-butyl ether	2/25/00			ND	ug/l	0.500				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.9	"	76.0-114	95.8			
Blank			0020133-BLK2							
Methyl tert-butyl ether	2/25/00			ND	ug/l	0.500				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.8	"	76.0-114	95.6			
LCS			0020133-BS1							
Methyl tert-butyl ether	2/25/00	50.0		48.1	ug/l	70.0-130	96.2			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		48.2	"	76.0-114	96.4			
LCS			0020133-BS2							
Methyl tert-butyl ether	2/25/00	50.0		52.5	ug/l	70.0-130	105			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.7	"	76.0-114	95.4			
Matrix Spike			0020133-MS1 L002192-01							
Methyl tert-butyl ether	2/25/00	50.0	ND	48.1	ug/l	60.0-140	96.2			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.1	"	76.0-114	94.2			
Matrix Spike Dup			0020133-MSD1 L002192-01							
Methyl tert-butyl ether	2/25/00	50.0	ND	49.3	ug/l	60.0-140	98.6	25.0	2.46	
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.3	"	76.0-114	94.6			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4226 First St. Project Manager: Nick Sudano	Sampled: 2/10/00 Received: 2/11/00 Reported: 3/2/00 11:03
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS Dup	0B23009-BSD1									
Purgeable Hydrocarbons	2/23/00	250		298	ug/l	70-130	119	25	2.98	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.9	"	70-130	109			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4226 First St. Project Manager: Nick Sudano	Sampled: 2/10/00 Received: 2/11/00 Reported: 3/2/00 11:03
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS EUP/Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Units	Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: OB22011			Date Prepared: 2/22/00			Extraction Method: EPA 5030B [P/T]				
Blank			OB22011-BLK1							
Purgeable Hydrocarbons	2/22/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.50				
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		8.92	"	70-130	89.2			
LCS			OB22011-BS1							
Benzene	2/22/00	10.0		9.06	ug/l	70-130	90.6			
Toluene	"	10.0		8.38	"	70-130	83.8			
Ethylbenzene	"	10.0		8.38	"	70-130	83.8			
Xylenes (total)	"	30.0		24.4	"	70-130	81.3			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		8.97	"	70-130	89.7			
LCS Dup			OB22011-BSD1							
Benzene	2/22/00	10.0		8.89	ug/l	70-130	88.9	25	1.89	
Toluene	"	10.0		8.33	"	70-130	83.3	25	0.598	
Ethylbenzene	"	10.0		8.31	"	70-130	83.1	25	0.839	
Xylenes (total)	"	30.0		24.0	"	70-130	80.0	25	1.65	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		9.24	"	70-130	92.4			
Batch: OB23009			Date Prepared: 2/23/00			Extraction Method: EPA 5030B [P/T]				
Blank			OB23009-BLK1							
Purgeable Hydrocarbons	2/23/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.50				
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		9.43	"	70-130	94.3			
LCS			OB23009-BS1							
Purgeable Hydrocarbons	2/23/00	250		307	ug/l	70-130	123			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		10.6	"	70-130	106			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4226 First St. Project Manager: Nick Sudano	Sampled: 2/10/00 Received: 2/11/00 Reported: 3/2/00 11:03
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**MTBE by EPA Method 8260A
Sequoia Analytical - San Carlos**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>MW-3</u>				<u>MJB0473-03</u>			<u>Water</u>	<u>I-02</u>
Methyl tert-butyl ether	0020133	2/25/00	2/25/00		2.00	21.5	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		107	%	





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4226 First St. Project Manager: Nick Sudano	Sampled: 2/10/00 Received: 2/11/00 Reported: 3/2/00 11:03
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
MW-1		MJB0473-01				Water		
Purgeable Hydrocarbons	0B23009	2/23/00	2/23/00	DHS LUFT	500	523	ug/l	P-01
Benzene	"	"	"	DHS LUFT	5.00	106	"	
Toluene	"	"	"	DHS LUFT	5.00	ND	"	
Ethylbenzene	"	"	"	DHS LUFT	5.00	ND	"	
Xylenes (total)	"	"	"	DHS LUFT	5.00	31.8	"	
Methyl tert-butyl ether	"	"	2/22/00	DHS LUFT	2.50	2.90	"	M-03
Surrogate: a,a,a-Trifluorotoluene	"	"	2/23/00	70-130		86.5	%	
MW-2		MJB0473-02				Water		
Purgeable Hydrocarbons	0B23009	2/23/00	2/23/00	DHS LUFT	50.0	ND	ug/l	
Benzene	"	"	"	DHS LUFT	0.500	ND	"	
Toluene	"	"	"	DHS LUFT	0.500	ND	"	
Ethylbenzene	"	"	"	DHS LUFT	0.500	ND	"	
Xylenes (total)	"	"	"	DHS LUFT	0.500	ND	"	
Methyl tert-butyl ether	"	"	"	DHS LUFT	2.50	2.61	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70-130		92.0	%	
MW-3		MJB0473-03				Water		
Purgeable Hydrocarbons	0B22011	2/22/00	2/22/00	DHS LUFT	50.0	180	ug/l	P-01
Benzene	"	"	"	DHS LUFT	0.500	5.12	"	
Toluene	"	"	"	DHS LUFT	0.500	ND	"	
Ethylbenzene	"	"	"	DHS LUFT	0.500	ND	"	
Xylenes (total)	"	"	"	DHS LUFT	0.500	0.714	"	
Methyl tert-butyl ether	"	"	"	DHS LUFT	2.50	26.8	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70-130		155	%	S-02





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose, CA 95112	Project: Equiva Project Number: 4226 First St. Project Manager: Nick Sudano	Sampled: 2/10/00 Received: 2/11/00 Reported: 3/2/00 11:03
--	---	---

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	MJB0473-01	Water	2/10/00
MW-2	MJB0473-02	Water	2/10/00
MW-3	MJB0473-03	Water	2/10/00





March 2, 2000

Nick Sudano
Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose, CA 95112

RE: Equiva 4226 First Street, Pleasanton

Dear Nick Sudano

Enclosed are the results of analyses for sample(s) received by the laboratory on February 11, 2000.
If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kayvan Kirnyai
Project Manager D.M.

CA ELAP Certificate Number 1210



WELL CONCENTRATIONS
Shell-branded Service Station
4226 First Street
Pleasanton, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-1	06/16/1999	NA	NA	NA	NA	NA	NA	NA	371.20	37.81	333.39
MW-1	06/30/1999	89.0	5.89	<0.500	<0.500	0.652	<5.00	NA	371.20	33.65	337.55
MW-1	09/24/1999	1,560	473	<10.0	<10.0	22.8	<2.50	NA	371.20	37.04	334.16
MW-1	12/08/1999	1,020	375	<5.00	<5.00	15.2	<50.0	NA	371.20	36.79	334.41
MW-1	02/19/2000	528	106	<5.00	<5.00	11.3	<50.0	NA	371.20	34.91	336.00
MW-2	02/09/2000	NA	NA	NA	NA	NA	NA	NA	372.40	32.65	339.75
MW-2	02/07/2000	NA	NA	NA	NA	NA	NA	NA	372.40	33.51	336.89
MW-2	02/10/2000	<50.0	<5.00	<5.00	<5.00	<5.00	<2.00	NA	372.40	36.82	335.79
MW-3	02/09/2000	NA	NA	NA	NA	NA	NA	NA	375.00	32.00	342.99
MW-3	02/07/2000	NA	NA	NA	NA	NA	NA	NA	375.00	32.00	342.40
MW-3	02/10/2000	130	12	<5.00	<5.00	0.14	<2.00	23.66	375.00	32.71	342.28

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = parts per billion

msl = Mean sea level

ft = Feet

<n = Below detection limit

NA = Not applicable

Notes:

Well MW-1 surveyed on May 4, 1999 by Virgil Chavez Land Surveying of Vallejo, California.

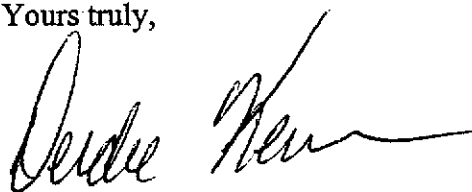
Wells MW-1 through MW-3 surveyed on March 19, 2000 by Virgil Chavez Land Surveying of Vallejo, California.

a = Sample was analyzed outside of the EPA recommended holding time.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. concentrates on objective data collection and does not participate in the interpretation of analytical results, the definition of geological or hydrological conditions, the formulation of recommendations, or the marketing of remedial systems.

Please call if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "Deidre Kerwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Deidre Kerwin
Operations Manager

DK/jt

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th Street, Suite C
Oakland, CA 94608-2411

BLAINE
TECH SERVICES, INC.



1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

April 17, 2000

Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

First Quarter 2000 Groundwater Monitoring at
Shell-branded Service Station
4226 First Street
Pleasanton, CA

Monitoring performed on February 3, 7 and 10, 2000

Groundwater Monitoring Report 000210-M-1

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight hour refresher courses.



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 52000203

Date: January 8, 2000
Page 2 of 2

Site Address: 4226 First St. Pleasanton

INCIDENT # 98995840

Shell Engineer: Karen Petryna Phone No.: 539
Fax #: 645-9309

Consultant Name & Address: CAMBRIA ENVIRONMENTAL
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Barbara Jakub Phone No.: 510
420-0700
Fax #: 420-9170

Comments:

Sampled by: Barbara Jakub

Printed Name: Barbara Jakub

Sample ID	Date	Sludge	Soil	Water	Air	No. of confs.
MW-3-15.5'	1/18/00 1/20/00	(9)	✓			1
MW-3-20.5'	1/20/00	(10)	✓			1
MW-3-25.5'	1/20/00	(11)	✓			1

Analysis Required

TPH (EPA 8015 Med. Gas)	TPH (EPA 8015 Med. Diesel)	TEX (EPA 8020/602)	Volatile Organics (EPA 8210)	Test for Disposal	Combination TPH 8015 & 8210, MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N
-------------------------	----------------------------	--------------------	------------------------------	-------------------	-----------------------------------	----------	----------------	------------------	---------------

LAB: Columbia

CHECK ONE (1) BOX ONLY	CODE	TURNS AROUND TIME
G.W. Monitoring	<input type="checkbox"/> 4441	24 hours <input type="checkbox"/>
Site Investigation	<input checked="" type="checkbox"/> 4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal	<input type="checkbox"/> 4442	16 days <input type="checkbox"/> (Normal)
Water Classify/Disposal	<input type="checkbox"/> 4443	Other <input checked="" type="checkbox"/> <u>Willing</u>
Soil/Air Rem. or Sys. O & M	<input type="checkbox"/> 4452	NOTE: Notify Lab as soon as possible at 24/48 hrs. TAT.
Water Rem. or Sys. O & M	<input type="checkbox"/> 4453	
Other	<input type="checkbox"/>	

TEST AGENCY: ACLD

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	x Confirm highest MTBE detection using EPA Method 8260.

Due: 2/3/00 R16

Relinquished By (signature): Barbara Jakub Printed Name: Barbara Jakub
Date: 1/20/00 Time: 1:40

Received (signature): CAS
Date: _____ Time: _____

Printed Name: P. BINS Date: 1/20/00
Time: 1:40

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
LCS Matrix: Soil

Service Request: S2000203
Date Collected: NA
Date Received: NA
Date Extracted: 1/26/00
Date Analyzed: 1/28/00

Laboratory Control Sample Summary
BTEX and TPH as Gasoline

Sample Name: Lab Control Sample
Lab Code: S200126-LCS
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Benzene	EPA 5030	8021B	0.5	0.44	88	57-154	
Toluene	EPA 5030	8021B	0.5	0.45	90	60-142	
Ethylbenzene	EPA 5030	8021B	0.5	0.46	92	46-150	
Gasoline	EPA 5030	CA/LUFT	10	8.3	83	67-121	

Approved By:  Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: NA
Date Received: NA
Date Extracted: 1/26/00
Date Analyzed: 1/28/00

Matrix Spike/Duplicate Matrix Spike Summary
 BTEX and TPH as Gasoline

Sample Name: BATCH QC
Lab Code: S200194-002MS, S200194-002DMS
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		CAS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Benzene	EPA 5030	8021B	0.005	0.5	0.5	ND	0.34	0.33	68	66	57-154	3	
Toluene	EPA 5030	8021B	0.005	0.5	0.5	ND	0.35	0.34	70	68	60-142	3	
Ethylbenzene	EPA 5030	8021B	0.005	0.5	0.5	ND	0.36	0.35	72	70	46-150	3	
Gasoline	EPA 5030	CA/LUFT	1	10	10	ND	7.2	8.5	72	85	67-121	17	

Approved By:  Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

**Surrogate Recovery Summary
 BTEX and TPH as Gasoline**

Prep Method: EPA 5030
Analysis Method: 8021B CALUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery	
			a,a,a-Trifluorotoluene	a,a,a-Trifluorotoluene
MW-2-6.3'	S2000203-001		100	95
MW-2-16.5'	S2000203-002		95	102
MW-2-21.5'	S2000203-003		95	89
MW-2-26.0'	S2000203-004		98	92
MW-2-30.5'	S2000203-005		100	93
MW-2-35.0'	S2000203-006		99	93
MW-3-5.0'	S2000203-007		99	93
MW-3-10.5'	S2000203-008		97	91
MW-3-15.5'	S2000203-009		98	91
MW-3-20.5'	S2000203-010		95	90
MW-3-25.5'	S2000203-011		98	91
BATCH QC	S200194-002MS		102	113
BATCH QC	S200194-002DMS		102	111
Lab Control Sample	S200126-LCS		102	96
Method Blank	S200126-SB1		103	97

CAS Acceptance Limits: 70-130% 70-130%

Approved By: *Rui Zou* Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: NA
Date Received: NA

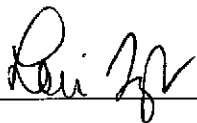
BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S200126-SB1
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By: _____



Date: _____

2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil


Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-3-25.5'
Lab Code: S2000203-011
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By:  Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil


Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-3-15.5'
Lab Code: S2000203-009
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By:  Date: 2-3-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-3-10.5'
Lab Code: S2000203-008
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By: _____



Date: _____

2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-3-5.0'
Lab Code: S2000203-007
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By:  Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-2-35.0'
Lab Code: S2000203-006
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By: _____



Date: _____

2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-2-30.5'
Lab Code: S2000203-005
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By: _____

Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

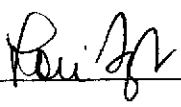
BTEX, MTBE and TPH as Gasoline

Sample Name: MW-2-26.0'
Lab Code: S2000203-004
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By: _____



Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00


BTEX, MTBE and TPH as Gasoline

Sample Name: MW-2-16.5'
Lab Code: S2000203-002
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By: _____



Date: 2-3-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Equiva Services LLC
Project: 4226 1st. St, Pleasanton, CA/98995840 (INCIDENT#)SAP#135782
Sample Matrix: Soil

Service Request: S2000203
Date Collected: 1/18/00
Date Received: 1/20/00

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-2-6.3'
Lab Code: S2000203-001
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	1/26/00	1/28/00	ND	
Benzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Toluene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Ethylbenzene	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Xylenes, Total	EPA 5030	8021B	0.005	1	1/26/00	1/28/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	0.05	1	1/26/00	1/28/00	ND	

Approved By: _____



Date: _____

2-3-00

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)



February 3, 2000

Service Request No.: S2000203

Ms. Barb Jakub
Cambria Environmental Technology, Inc.
1144 65th Street, Ste. C
Oakland, CA 94608

RE: 4226 1st. Street, Pleasanton, CA

Dear Ms. Jakub:

Enclosed are the results of the sample(s) submitted to our laboratory on January 20, 2000. All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply to the sample(s) analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Signature of this CAS Analytical Report confirms that pages 2 through 17, following, have been thoroughly reviewed and approved for release.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 2352, expiration: January 31, 2001).

If you have any questions, please call me at (408) 748-9700.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lori Tyler
Project Chemist

Attachment A

Analytical Reports for Soil and Groundwater

CAMBRIA

Table 2 Groundwater Analytical Results - Shell-branded Service Station Incident# 98995840
4226 First Street, Pleasanton, California

Sample	TPHg	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE
	← (concentrations reported in ppb) →					
MW-1	523	106	<5.00	<5.00	31.8	2.90
MW-2	<50.0	<0.500	<0.500	<0.500	<0.500	2.61
MW-3	180	5.12	<0.500	<0.500	1	26.8 (21.5a)

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tert-Butyl Ether by EPA 8020. Results in parentheses confirmed using 8260.

ppb = parts per billion

a = sample analyzed out of hold time.

Samples collected February 10, 2000

CAMBRIA

Table 1 Soil Analytical Results - Shell-branded Service Station Incident# 98995840
4226 First Street, Pleasanton, California

Sample	TPHg	Benzene	Toluene	Ethylbenzene	Xylene	MTBE
	← (concentrations reported in ppm) →					
MW-2-6.3'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-2-16.5'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-2-21.5'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-2-26.0'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-2-30.5'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-2-35.0'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-3-5.0'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-3-10.5'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-3-15.5'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-3-20.5'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05
MW-3-25.5'	<1.0	<0.005	<0.005	<0.005	<0.010	<0.05

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tert-Butyl Ether by EPA 8020.

ppm = parts per million

Samples collected January 18 and 19, 2000

EQUIVA WELL MONITORING DATA SHEET

Project #: <u>000210M-1</u>	Job #: <u>98995840</u>
Sampler: <u>Mark S.</u>	Date: <u>2-10-00</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>46.20</u>	Depth to Water: <u>36.62</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd):

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius ² * 0.163

Purge Method: Bailer
 Middleburg
 Electric Submersible
 Extraction Pump

Sampling Method: Bailer
 Extraction Port
 Other: _____

Other: _____

$$\frac{6.2}{1 \text{ Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{18.6}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
920	66.9	6.6	1850		7	
930	66.4	6.7	1860		13	
940	67.0	6.7	1860		19	

Did well dewater? Yes No Gallons actually evacuated: 19

Sampling Time: 950 Sampling Date: 2-10-00

Sample I.D.: MW-2 Laboratory: Sequoia BC Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
	O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:

EQUIVA WELL MONITORING DATA SHEET

BTS #: 000210m-1	Site: 9P995840
Sampler: Mark S.	Date: 2-10-00
Well I.D.: MW-3	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 34.27	Depth to Water: 32.77
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Waterra
 Peristaltic
 Extraction Pump
 Other _____

Sampling Method:

- Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Other: _____

1.97	(Gals.) X	3	=	2.9	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
900	64.8	6.7	1990		1	
904	66.7	6.7	1890		2	
906	67.5	6.7	1880		3	

Did well dewater? Yes No Gallons actually evacuated: 3

Sampling Time: 915 Sampling Date: 2-10-00

Sample I.D.: MW-3 Laboratory: Sequoia Columbia Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
	O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:

WELL DEVELOPMENT DATA SHEET

Project #: 000207-22	Client: Equiva
Developer: BF	Date Developed: 2-7-00
Well I.D. MW-2	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before 45.82 After 45.98	Depth to Water: Before 35.51 After 42.86
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
 $(12 \times (d^2/4) \times \pi) / 231$
 where
 12 = in / foot
 d = diameter (in.)
 $\pi = 3.1416$
 231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
<u>4"</u>	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 6.87

$$\frac{6.7}{1 \text{ Case Volume}} \times \frac{10}{\text{Specified Volumes}} = \frac{67}{\text{gallons}}$$

Purging Device: Bailer Electric Submersible
 Middleburg Suction Pump

Type of Installed Pump _____
 Other equipment used 4" sub

TIME	TEMP (F)	pH	COND.	TURBIDITY.	VOLUME REMOVED:	NOTATIONS:
13:20	68.8	6.3	1952	7200	6.7	Surged for 20 min
13:27	68.9	6.3	1973	7200	13.4	silty/sandy
13:34	68.9	6.3	2047	7200	20.1	"Cleared out"
	switched to		Ele Sub.		20.1	"very little sand"
13:38	69.6	6.1	2030	7200	26.8	Turbid.
13:39	70.0	6.3	1954	7200	33.5	Turbid.
13:40	70.2	6.1	2026	7200	40.2	HARD Bottom
13:41	70.2	6.2	2031	7200	46.9	to START with
13:42	70.3	6.2	2027	7200	53.6	
13:44	70.3	6.3	2039	7200	60.3	"Slow Recharge"
13:45	70.3	6.3	2026	7200	67	Rate"
	"HARD Bottom"					

Did Well Dewater? If yes, note above. Gallons Actually Evacuated: 67

WELL DEVELOPMENT DATA SHEET

Project #: <u>000207-72</u>	Client: <u>Equiva</u>
Developer: <u>BF</u>	Date Developed: <u>2-7-00</u>
Well I.D. <u>MW-3</u>	Well Diameter: (circle one) 2 3 <u>(4)</u> 6
Total Well Depth:	Depth to Water:
Before <u>34.19</u> After <u>34.57</u>	Before <u>32.57</u> After <u>31.98</u>
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):

$$(12 \times (d^2/4) \times \pi) / 231$$

where

- 12 = in / foot
- d = diameter (in.)
- $\pi = 3.1416$
- 231 = in³/gal

Well dia.	VCF
2"	0.16
3"	0.37
<u>4"</u>	0.65
6"	1.47
10"	4.08
12"	6.87

<u>1.0</u>	X	<u>10</u>	=	<u>10</u>
1 Case Volume		Specified Volumes		gallons

Purging Device: Bailer Electric Submersible
 Middleburg Suction Pump

Type of Installed Pump _____
 Other equipment used 4" snub

TIME	TEMP (F)	pH	COND.	TURBIDITY	VOLUME REMOVED:	NOTATIONS:
14:16	66.4	7.7	2273	7200	1 gal.	Surged for 15 min.
14:17	66.7	7.8	2279	7200	2	middle Surged
14:19	66.4	7.8	2284	7200	3	Not that sandy or silty
14:21	68.7	6.3	2275	7200	4	"Used Bailer"
14:22	68.5	6.3	2284	7200	5	"Not Enough H2O"
14:24	68.4	6.2	2291	7200	6	for middle Burg
14:24	68.6	6.3	2292	7200	7	"Slow Recharge
14:29	68.7	6.2	2298	7200	8	Rate"
14:33	68.5	6.3	2297	7200	9	
14:36	68.6	6.3	2295	7200	10	HARD Bottom
						to start with

Did Well Dewater? NO If yes, note above. Gallons Actually Evacuated: 10 gal

WELL DEVELOPMENT DATA SHEET

Project #: <u>000203-41</u>	Client: <u>EQUIVA</u>
Developer: <u>LEON G.</u>	Date Developed: <u>2-3-00</u>
Well ID: <u>MW-2</u>	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before <u>48.02</u> After	Depth to Water: Before <u>32.65</u> After
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF): $(12 \times (d^2/4) \times \pi) / 231$ where 12 = in / foot d = diameter (in.) $\pi = 3.1416$ 231 = in ³ /gal	<table border="1" style="font-size: x-small; border-collapse: collapse;"> <tr><th>Well dia.</th><th>VCF</th></tr> <tr><td>2"</td><td>= 0.16</td></tr> <tr><td>3"</td><td>= 0.37</td></tr> <tr><td>4"</td><td>= 0.65</td></tr> <tr><td>6"</td><td>= 1.47</td></tr> <tr><td>10"</td><td>= 4.08</td></tr> <tr><td>12"</td><td>= 6.87</td></tr> </table>	Well dia.	VCF	2"	= 0.16	3"	= 0.37	4"	= 0.65	6"	= 1.47	10"	= 4.08	12"	= 6.87
Well dia.	VCF														
2"	= 0.16														
3"	= 0.37														
4"	= 0.65														
6"	= 1.47														
10"	= 4.08														
12"	= 6.87														

<u>9.9</u>	X	<u>10</u>	=	<u>99</u>
1 Case Volume		Specified Volumes		gallons

Purging Device: Bailer Electric Submersible
 Middleburg Suction Pump

Type of Installed Pump _____
 Other equipment used 4" SURGE BLOCK

TIME	TEMP (F)	pH	COND.	TURBIDITY	VOLUME REMOVED:	NOTATIONS:
610	SURGED					WELL FOR 10 MIN.
625	BEGAN					PURGE W/ MIDDLEBURG
636	67.4	6.6	2855	17	10	
652	65.2	7.9	2814	11	20	DTW = 43.52
	WELL DEWATERED				30	
WELL BOTTOM HARD / LOW TURBIDITY / SWITCH TO ELEC SUB. PUMP						
925	DTW = 44.10					

Did Well Dewater? YES If yes, note above. Gallons Actually Evacuated: 20

Attachment B

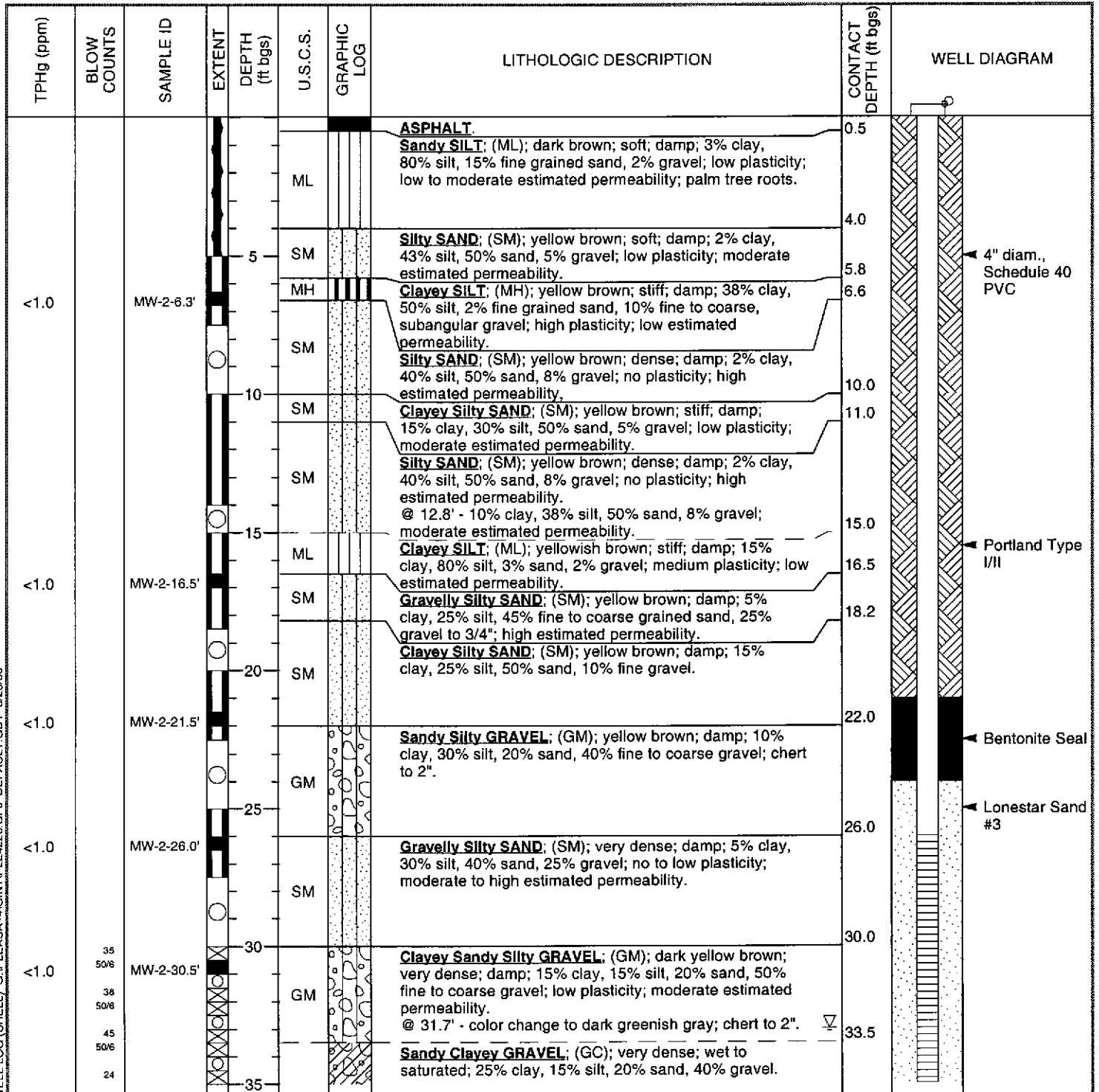
Monitoring Well Logs



Cambria Environmental Technology, Inc.
 1144 - 65th St.
 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	MW-2
JOB/SITE NAME	Shell-branded service station	DRILLING STARTED	18-Jan-00
LOCATION	4226 First Street, Pleasanton, California	DRILLING COMPLETED	19-Jan-00
PROJECT NUMBER	241-0395	WELL DEVELOPMENT DATE (YIELD)	03-Feb-00
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	372.65 ft above msl
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	372.40 ft above msl
BORING DIAMETER	8"	SCREENED INTERVAL	26 to 46 ft bgs
LOGGED BY	B. Jakub	DEPTH TO WATER (First Encountered)	33.0 ft (18-Jan-00)
REVIEWED BY	S. Bork, RG# 5620	DEPTH TO WATER (Static)	NA
REMARKS	Hand augered to 5' bgs.		



WELL LOG (SHELL) G:\PLEASA-4\GINT\PLE4226.GPJ_DEFAULT.GDT 6/23/00

Continued Next Page



Cambria Environmental Technology, Inc.
 1144 - 65th St.
 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	MW-2
JOB/SITE NAME	Shell-branded service station	DRILLING STARTED	18-Jan-00
LOCATION	4226 First Street, Pleasanton, California	DRILLING COMPLETED	19-Jan-00

Continued from Previous Page

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
<1.0	50/6 40 50/6 35 50/6 50/8 37 50/6 29 50/6 27 50/6 26 50/6 12 19 27	MW-2-35.0'							
				40	GC		Sandy Clayey GRAVEL; (GC); very dense; wet to saturated; 25% clay, 15% silt, 20% sand, 40% gravel.	40.3	<p>4"-diam., 0.020" Slotted Schedule 40 PVC</p>
				45	ML		Sandy Gravelly SILT; (ML); hard; saturated; 12% clay, 58% silt, 15% sand, 15% gravel; medium plasticity; low estimated permeability.	43.5	
				45	ML		Sandy Clayey SILT; (ML); hard; saturated; 15% clay, 60% silt, 15% sand, 10% gravel.	45.0	
				48.0	ML		Sandy SILT; (ML); hard; saturated; 12% clay, 45% silt, 43% fine grained sand; slight plasticity ; low estimated permeability.	48.0	
									Bottom of Boring @ 48 ft

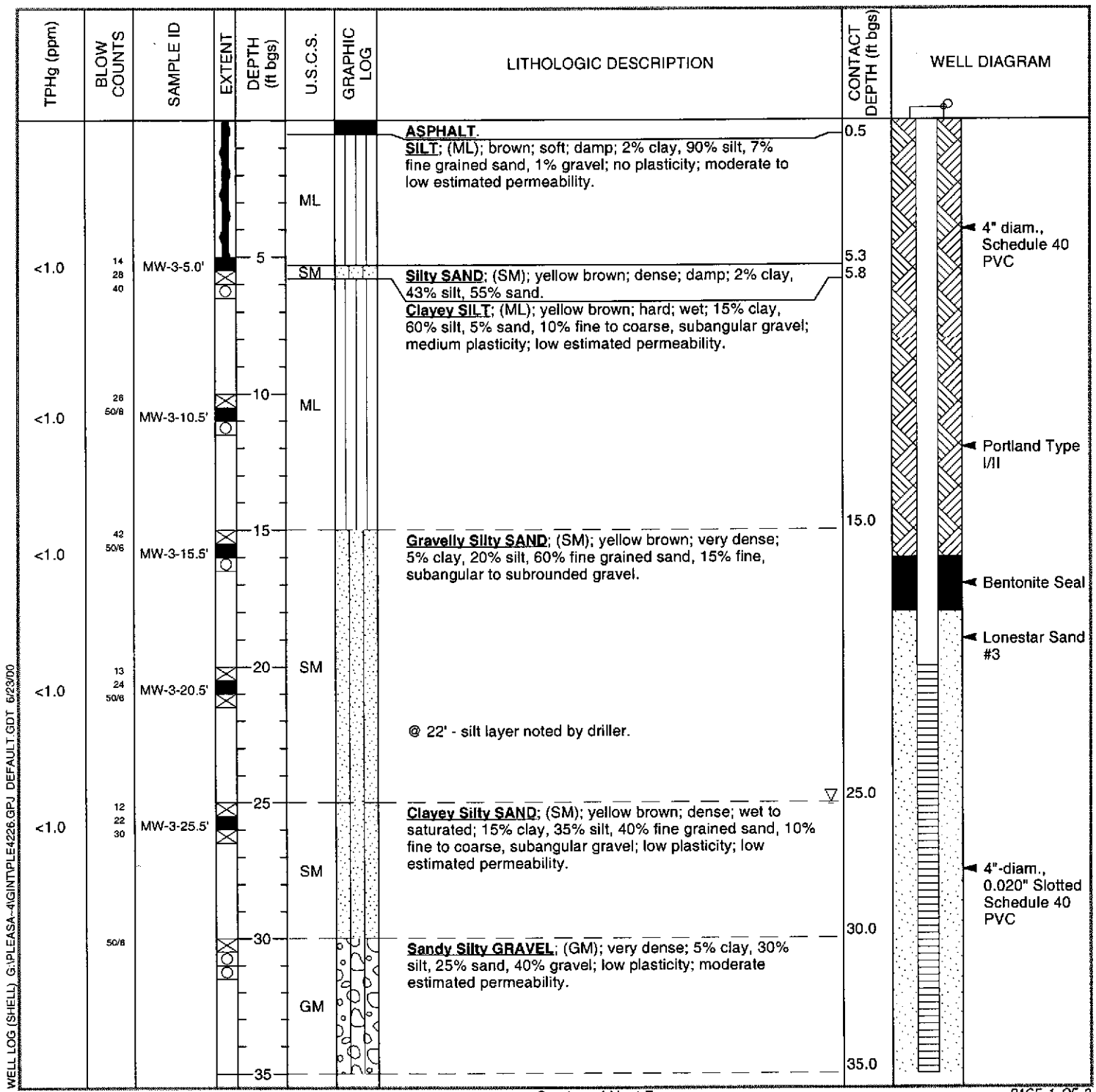
WELL LOG (SHELL) G:\PLEASA-4\GINT\PLE4226.GPJ_DEFAULT.GDT 6/23/00



Cambria Environmental Technology, Inc.
 1144 - 65th St.
 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	MW-3
JOB/SITE NAME	Shell-branded service station	DRILLING STARTED	18-Jan-00
LOCATION	4226 First Street, Pleasanton, California	DRILLING COMPLETED	19-Jan-00
PROJECT NUMBER	241-0395	WELL DEVELOPMENT DATE (YIELD)	03-Feb-00
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	375.90 ft above msl
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	375.05 ft above msl
BORING DIAMETER	8"	SCREENED INTERVAL	20 to 35 ft bgs
LOGGED BY	B. Jakub	DEPTH TO WATER (First Encountered)	25.0 ft (18-Jan-00)
REVIEWED BY	S. Bork, RG# 5620	DEPTH TO WATER (Static)	NA
REMARKS	Hand augered to 5' bgs.		



WELL LOG (SHELL) G:\PLEASA-4\GINT\PLE4226.GPJ, DEFAULT.GDT, 6/23/00



Cambria Environmental Technology, Inc.
 1144 - 65th St.
 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	<u>Equiva Services LLC</u>	BORING/WELL NAME	<u>MW-3</u>
JOB/SITE NAME	<u>Shell-branded service station</u>	DRILLING STARTED	<u>18-Jan-00</u>
LOCATION	<u>4226 First Street, Pleasanton, California</u>	DRILLING COMPLETED	<u>19-Jan-00</u>

Continued from Previous Page

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
	15 38 46		XXXX		ML		SILT ; (ML); light brown; hard; 10% clay, 80% silt, 10% sand; low plasticity; low estimated permeability.		<p>← Bentonite Seal</p> <p>Bottom of Boring @ 41.5 ft</p>
	15 25 42		XXXX	40	ML		Clayey SILT ; (ML); hard; 20% clay, 70% silt, 10% fine grained sand; medium plasticity; low estimated permeability.	40.0 41.5	

WELL LOG (SHELL) G:\PLEASA-4\GINT\PLE4226.GPJ DEFAULT.GDT 6/23/00

Attachment C

Standard Field Procedures for Monitoring Well Installation

STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling ground water monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Ground water monitoring wells are installed to monitor ground water quality and determine the ground water elevation, flow direction and gradient. Well depths and screen lengths are based on ground water depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 ft below and 5 ft above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three ft thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two ft thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of ground water surging and extraction. Surging agitates the ground water and dislodges fine sediments from the sand pack. After about ten minutes of surging, ground water is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of ground water are extracted and the sediment volume in the ground water is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Ground Water Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of ground water are purged prior to sampling. Purging continues until ground water pH, conductivity, and temperature have stabilized. Ground water samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

F:\TEMPLATE\SOPs\Wells-gwLH.wpd

Attachment D

Well Completion Reports

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



Cambria Environmental Technology, Inc.
 1144 - 65th St.
 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	
JOB/SITE NAME	Shell-branded service station	DRILLING STARTED	18-Jan-00
LOCATION	4226 First Street, Pleasanton, California	DRILLING COMPLETED	19-Jan-00
PROJECT NUMBER	241-0395	WELL DEVELOPMENT DATE (YIELD)	03-Feb-00
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	372.65 ft above msl
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	372.40 ft above msl
BORING DIAMETER	8"	SCREENED INTERVAL	26 to 46 ft bgs
LOGGED BY	B. Jakob	DEPTH TO WATER (First Encountered)	33.0 ft (18-Jan-00)
REVIEWED BY	S. Bork, RG# 5620	DEPTH TO WATER (Static)	NA
REMARKS	Hand augered to 5' bgs.		

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
				0.5			ASPHALT.	0.5	
				4.0	ML		Sandy SILT; (ML); dark brown; soft; damp; 3% clay, 80% silt, 15% fine grained sand, 2% gravel; low plasticity; low to moderate estimated permeability; palm tree roots.	4.0	
				5.8	SM		Silty SAND; (SM); yellow brown; soft; damp; 2% clay, 43% silt, 50% sand, 5% gravel; low plasticity; moderate estimated permeability.	5.8	
<1.0		MW-2-6.3'		6.6	MH		Clayey SILT; (MH); yellow brown; stiff; damp; 38% clay, 50% silt, 2% fine grained sand, 10% fine to coarse, subangular gravel; high plasticity; low estimated permeability.	6.6	
				10.0	SM		Silty SAND; (SM); yellow brown; dense; damp; 2% clay, 40% silt, 50% sand, 8% gravel; no plasticity; high estimated permeability.	10.0	
				11.0	SM		Clayey Silty SAND; (SM); yellow brown; stiff; damp; 15% clay, 30% silt, 50% sand, 5% gravel; low plasticity; moderate estimated permeability.	11.0	
				12.8	SM		Silty SAND; (SM); yellow brown; dense; damp; 2% clay, 40% silt, 50% sand, 8% gravel; no plasticity; high estimated permeability.	12.8	
				15.0	ML		Clayey SILT; (ML); yellowish brown; stiff; damp; 15% clay, 80% silt, 3% sand, 2% gravel; medium plasticity; low estimated permeability.	15.0	
<1.0		MW-2-16.5'		16.5	SM		Gravelly Silty SAND; (SM); yellow brown; damp; 5% clay, 25% silt, 45% fine to coarse grained sand, 25% gravel to 3/4"; high estimated permeability.	16.5	4" diam., Schedule 40 PVC
				18.2	SM		Clayey Silty SAND; (SM); yellow brown; damp; 15% clay, 25% silt, 50% sand, 10% fine gravel.	18.2	
				20.0	SM			20.0	
<1.0		MW-2-21.5'		22.0	GM		Sandy Silty GRAVEL; (GM); yellow brown; damp; 10% clay, 30% silt, 20% sand, 40% fine to coarse gravel; chert to 2".	22.0	Portland Type I/II
				25.0	GM			25.0	
<1.0		MW-2-26.0'		26.0	SM		Gravelly Silty SAND; (SM); very dense; damp; 5% clay, 30% silt, 40% sand, 25% gravel; no to low plasticity; moderate to high estimated permeability.	26.0	Bentonite Seal
				30.0	SM			30.0	Lonestar Sand #3
<1.0	35 50/6	MW-2-30.5'		30.0	GM		Clayey Sandy Silty GRAVEL; (GM); dark yellow brown; very dense; damp; 15% clay, 15% silt, 20% sand, 50% fine to coarse gravel; low plasticity; moderate estimated permeability.	30.0	
	38 50/6			31.7			@ 31.7' - color change to dark greenish gray; chert to 2".	31.7	
	45 50/6			33.5			Sandy Clayey GRAVEL; (GC); very dense; wet to saturated; 25% clay, 15% silt, 20% sand, 40% gravel.	33.5	
	24			35				35	

WELL LOG (SHELL) G:\PLEASA-4\GINT\PLE4226.GPJ DEFAULT.GDT 6/23/00

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Cambria Environmental Technology, Inc.
 1144 - 65th St.
 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	<u>Equiva Services LLC</u>	BORING/WELL NAME	<u>MW-2</u>
JOB/SITE NAME	<u>Shell-branded service station</u>	DRILLING STARTED	<u>18-Jan-00</u>
LOCATION	<u>4226 First Street, Pleasanton, California</u>	DRILLING COMPLETED	<u>19-Jan-00</u>

Continued from Previous Page

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
<1.0	50/6 40 50/6 35 50/6 50/6 37 50/6 29 50/6 27 50/6 26 50/6 12 19 27	MW-2-35.0'		40	GC		Sandy Clayey GRAVEL ; (GC); very dense; wet to saturated; 25% clay, 15% silt, 20% sand, 40% gravel.	40.3	<p>4"-diam., 0.020" Slotted Schedule 40 PVC</p>
				43.5	ML		Sandy Gravelly SILT ; (ML); hard; saturated; 12% clay, 58% silt, 15% sand, 15% gravel; medium plasticity; low estimated permeability.	43.5	
				45.0	ML		Sandy Clayey SILT ; (ML); hard; saturated; 15% clay, 60% silt, 15% sand, 10% gravel.	45.0	
				48.0	ML		Sandy SILT ; (ML); hard; saturated; 12% clay, 45% silt, 43% fine grained sand; slight plasticity ; low estimated permeability.	48.0	
									Bottom of Boring @ 48 ft

WELL LOG (SHELL) G:\PLEASA-4\INT\PLE4226.GPJ DEFAULT.GDT 6/23/00

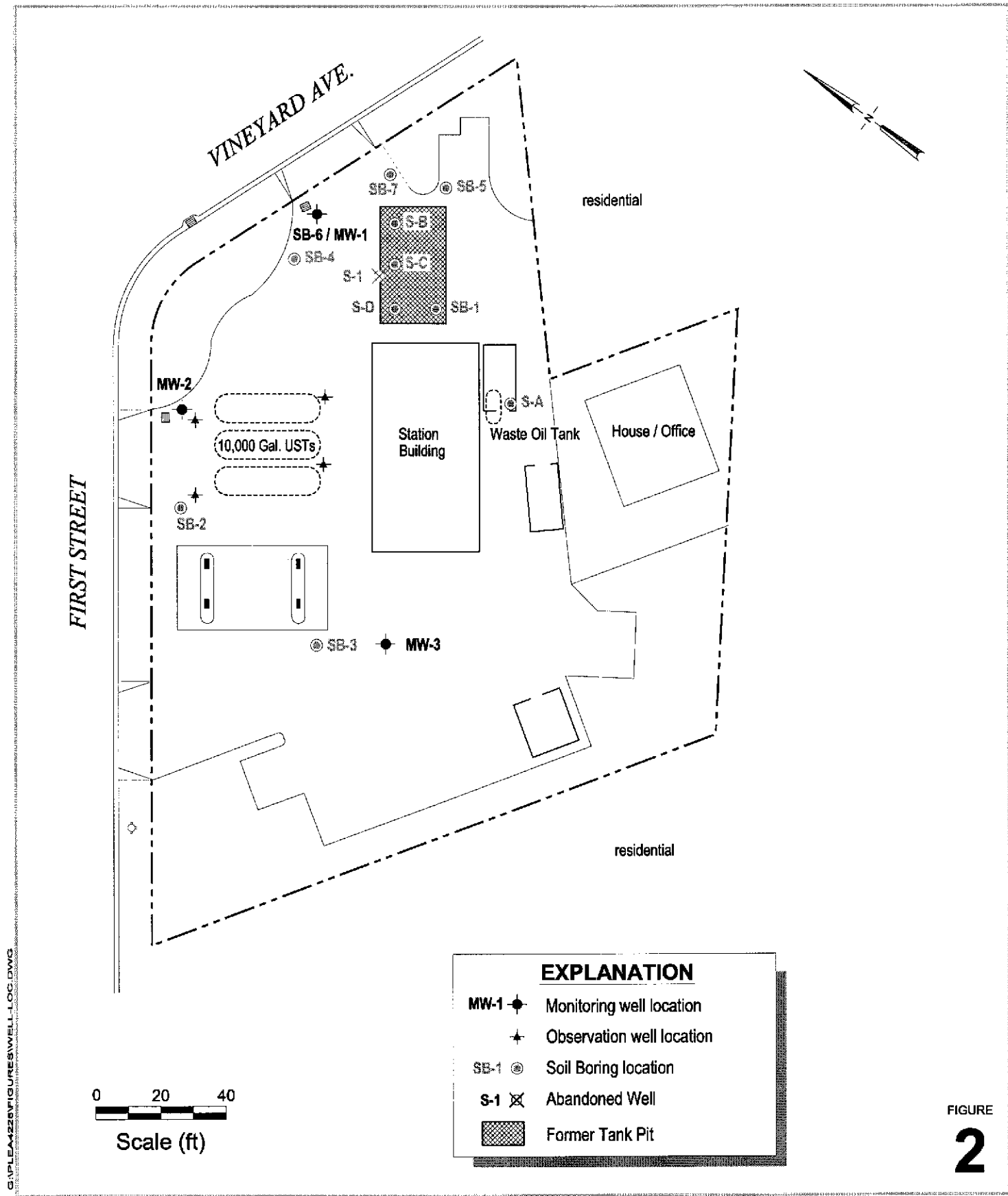


FIGURE 2

Shell-branded Service Station
 4226 First Street
 Pleasanton, California
 Incident #98995840



C A M B R I A

Monitoring Well Locations

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CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

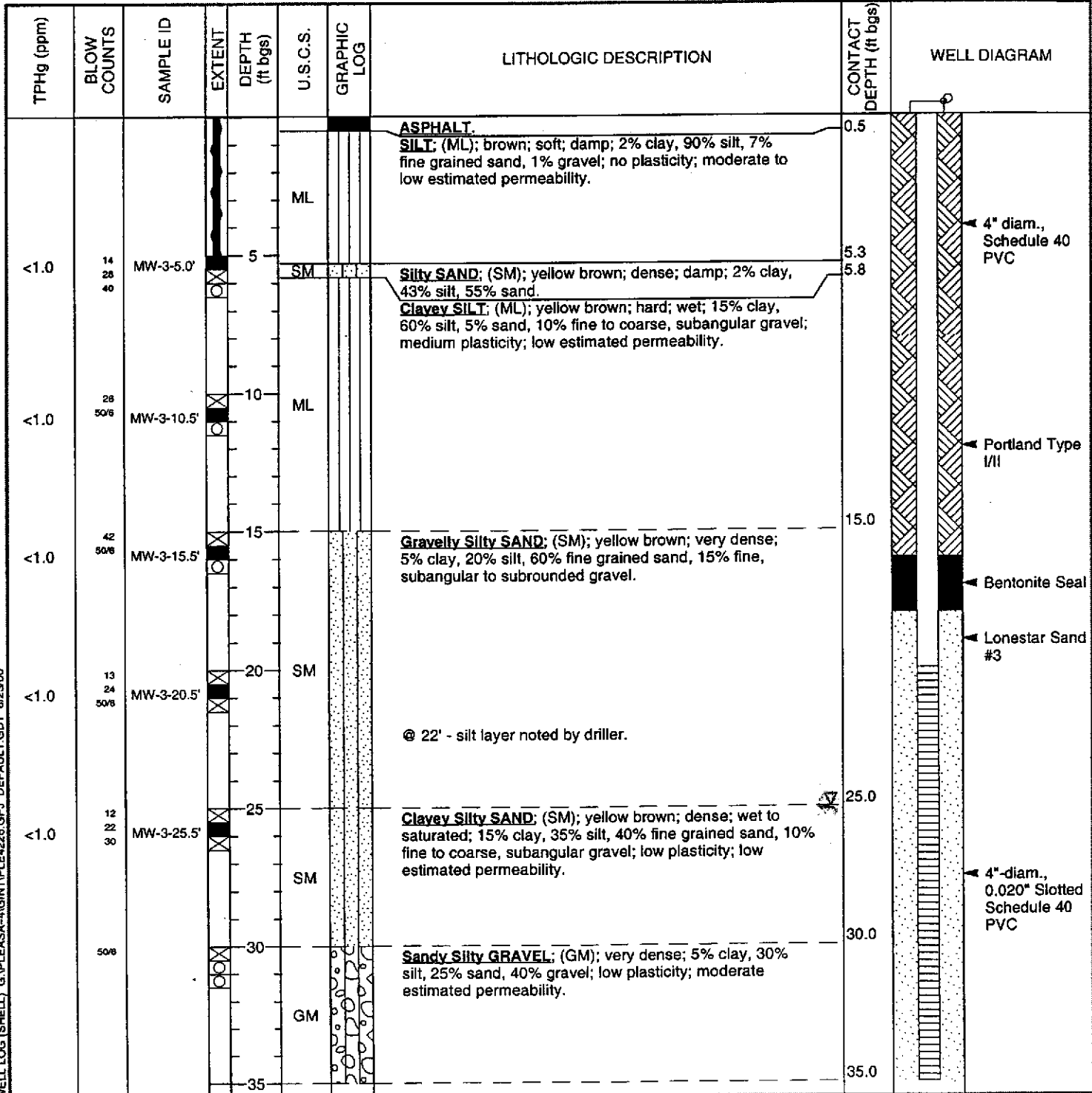
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Cambria Environmental Technology, Inc.
 1144 - 65th St.
 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	<u>Equiva Services LLC</u>	BORING/WELL NAME	<u>MW-3-1</u>
JOB/SITE NAME	<u>Shell-branded service station</u>	DRILLING STARTED	<u>18-Jan-00</u>
LOCATION	<u>4226 First Street, Pleasanton, California</u>	DRILLING COMPLETED	<u>19-Jan-00</u>
PROJECT NUMBER	<u>241-0395</u>	WELL DEVELOPMENT DATE (YIELD)	<u>03-Feb-00</u>
DRILLER	<u>Gregg Drilling</u>	GROUND SURFACE ELEVATION	<u>375.90 ft above msl</u>
DRILLING METHOD	<u>Hollow-stem auger</u>	TOP OF CASING ELEVATION	<u>375.05 ft above msl</u>
BORING DIAMETER	<u>8"</u>	SCREENED INTERVAL	<u>20 to 35 ft bgs</u>
LOGGED BY	<u>B. Jakub</u>	DEPTH TO WATER (First Encountered)	<u>25.0 ft (18-Jan-00)</u>
REVIEWED BY	<u>S. Bork, RG# 5620</u>	DEPTH TO WATER (Static)	<u>NA</u>
REMARKS	<u>Hand augered to 5' bgs.</u>		



WELL LOG (SHELL) G:\PLEASA-KGINT\PLE4226.GPJ DEFAULT.GDT 6/23/00

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Cambria Environmental Technology, Inc.
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 Oakland, CA 94608
 Telephone: (510) 420-0700
 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	MW-3
JOB/SITE NAME	Shell-branded service station	DRILLING STARTED	18-Jan-00
LOCATION	4226 First Street, Pleasanton, California	DRILLING COMPLETED	19-Jan-00

Continued from Previous Page

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
	15 36 46		XXXX		ML		SILT ; (ML); light brown; hard; 10% clay, 80% silt, 10% sand; low plasticity; low estimated permeability.		<p>← Bentonite Seal</p> <p>Bottom of Boring @ 41.5 ft</p>
	15 25 42		XXXX	40	ML		Clayey SILT ; (ML); hard; 20% clay, 70% silt, 10% fine grained sand; medium plasticity; low estimated permeability.	40.0 41.5	

WELL LOG (SHELL) G:\PLEASA-4\GINT\PLE4226.GPJ_DEFAULT.GDT 6/23/00

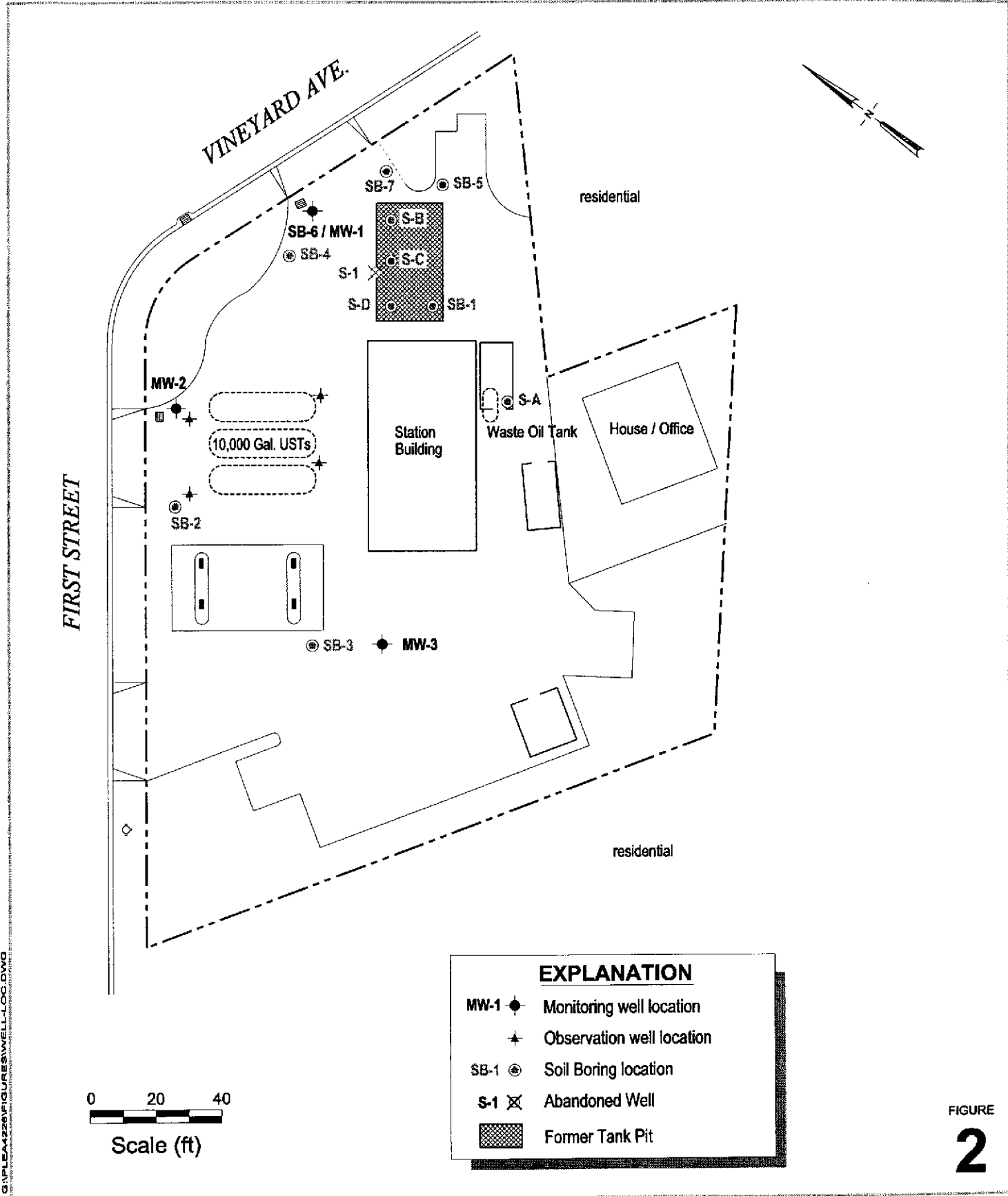


FIGURE 2

Shell-branded Service Station
 4226 First Street
 Pleasanton, California
 TEL: (925) 436-0510



Monitoring Well Locations

D:\P\44226\FIGURES\WELL-LOC.DWG

Attachment E

Well Elevation Survey Results

Virgil Chavez Land Surveying

312 Georgia Street, Suite 200
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

March 29, 2000
Project No. 1703-14

Barbara Jakub
Cambria Environmental
1144 65th Street, Suite C
Oakland, Ca. 94608

Subject: Monitoring Well Survey
Shell Service Station
4226 First Street
Pleasanton, Ca.

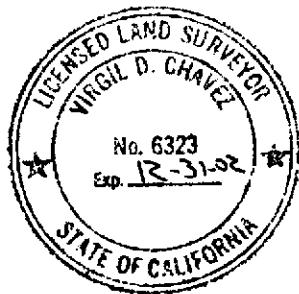
Dear Barbara:

This is to confirm that we have proceeded at your request to survey the monitoring wells located at the above referenced location. The survey was performed on March 19, 2000. The benchmark for the survey was a USC & GS bronze disc in the back of sidewalk at the southwest corner of the bridge on First Street over Arroyo Del Valle, stamped P 929 1958. Measurement locations were marked at approximate north side of top of box and top of casing. The second table is for locations, using the face of building as reference line. Benchmark Elevation = 361.91 MSL.

<u>Monitoring Well No.</u>	<u>Rim Elevation</u>	<u>TOC Elevation</u>
MW - 1	371.79'	371.20'
MW - 2	372.65'	372.40'
MW - 3	375.90'	375.05'

<u>Well No.</u>	<u>Station</u>	<u>Offset</u>
MW - 1	1+04.23	-37.30(Lt.)
MW - 2	0+53.26	-61.75(Lt.)
MW - 3	0-21.98	- 2.52(Lt.)
SW Building Corner	0+00.00	0.00
NW Building Corner	0+57.42	0.00

Sincerely,



Virgil D. Chavez
Virgil D. Chavez, PLS 6323

Attachment F

Disposal Confirmation

SD

DISPOSAL CONFIRMATION

Consultant: CAMBRIA ENVIRONMENTAL

Contact: BARB JAKUB

Phone/Fax: (510) 420-3309 (510) 420-9170

Client: EQUIVA SERIVCES - KAREN PETRYNA

Station #/Wic #: WIC#204-6138-0303 INC#98995840 CRMT#NC000534

Site Address: 4226 FIRST STREET

City/State: PLEASANTON, CA

Estimated YD/Ton: 3-4 YARDS BULK PILE

Actual YD/Ton: 3.95 TONS

Disposal Facility: FORWARD LANDFILL

Disposal Date: FEBRUARY 2, 2000

Contact: BRAD BONNER

Phone #: (800) 204-4242

Hauler: MANLEY & SONS TRUCKING, INC.

Contact: TIM A. MANLEY

Phone #: (916) 381-6864

Fax #: (916) 381-1573

Date & Time Faxed

9880