

C A M B R I A

ENVIRONMENTAL
PROTECTION
November 16, 1999
99 NOV 18 PM 3:55

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

Re: Third Quarter 1999 Monitoring Report
Shell-branded Service Station
105 Fifth Street
Oakland, California
Incident #98995757
Cambria Project #241-0472-002



Dear Mr. Seto:

On behalf of Equiva Services LLC, Cambria Environmental Technology, Inc. (Cambria) is submitting this ground water monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

THIRD QUARTER 1999 ACTIVITIES

Monitoring Well Installations: Cambria supervised the installation of three ground water monitoring wells on May 14, 1999. Details of the installation were submitted in a *Well Installation Report* to the Alameda County Health Care Services Agency (ACHSA). Further subsurface characterization was requested by the ACHSA in a letter to Equiva dated October 15, 1999.

Ground Water Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California developed, gauged and sampled the site wells. Blaine calculated ground water elevations and compiled the analytical data. Cambria prepared a ground water elevation contour map (Figure 1). The Blaine report, presenting the laboratory report and including supporting field documents, is included as Attachment A. All MTBE concentrations were analyzed using EPA Method 8260. The results are shown in Figure 1.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

**Cambria
Environmental
Technology, Inc.**

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

ANTICIPATED FOURTH QUARTER 1999 ACTIVITIES

Ground Water Monitoring: Blaine will gauge and sample all wells and tabulate the data. Cambria will prepare a monitoring report.


Investigation Work Plan: Cambria will submit a work plan for further subsurface investigations as requested in the ACHSA October 15, 1999 letter.



CLOSING

We appreciate the opportunity to work with you on this project. Please call Troy Buggle at (510) 420-3333 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

fn: 
Troy Buggle
Senior Staff Scientist



Ailsa S. Le May, R.G.
Senior Geologist



Figure: 1 - Ground Water Elevation Contour Map
Attachment: A - Blaine Ground Water Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 6249, Carson, California 90749-6249
Arthur R. and Mary A. Hansen, Trs., et al, 820 Loyola Drive, Los Altos, CA 94024

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ATTACHMENT A

Blaine Ground Water Monitoring Report
and Field Notes

BLAINE
TECH SERVICES INC.



1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE

August 26, 1999

Karen Petryna
Equiva Services LLC
P.O. Box 6249
Carson, CA 90749-6249

Third Quarter 1999 Groundwater Monitoring at
Shell-branded Service Station
105 5th Street
Oakland, CA

Monitoring performed on July 20 & 23, 1999

Groundwater Monitoring Report **990720-R-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, appropriate 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.

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", with a long horizontal flourish extending to the right.

Deidre Kerwin
Operations Manager

DK/ld

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

WELL CONCENTRATIONS
Shell-branded Service Station
105 5th Street
Oakland, 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	07/20/1999	NA	NA	NA	NA	NA	NA	NA	12.22	17.56	-5.34
MW-1	07/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	<2.00	12.22	6.45	5.77
MW-2	07/20/1999	NA	NA	NA	NA	NA	NA	NA	10.87	18.24	-7.37
MW-2	07/23/1999	13800	1790	<100	<100	682	29900	29400	10.87	5.98	4.89
MW-3	07/20/1999	NA	NA	NA	NA	NA	NA	NA	11.27	19.07	-7.80
MW-3	07/23/1999	128	<0.500	<0.500	<0.500	<0.500	404000	324000	11.27	6.43	4.84

Abbreviations:

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

TEPH = Total petroleum hydrocarbons as diesel 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



Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308

August 12, 1999

W.R. Jones
Blaine Tech Services
1680 Rogers Ave
San Jose, CA 95112

RE: 105 5th Street/M907957

Dear W.R. Jones

Enclosed are the results of analyses for sample(s) received by the laboratory on July 26, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kayvan Kamyai
Project Manager D.M.

CA ELAP Certificate Number 1210





Blaine Tech Services
1680 Rogers Ave
San Jose, CA 95112

Project: Equiva
Project Number: 105 5th Street
Project Manager: Ann Pember

Sampled: 7/23/99
Received: 7/26/99
Reported: 8/12/99

ANALYTICAL REPORT FOR M907957

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	M907957-01	Water	7/23/99
MW-2	M907957-02	Water	7/23/99
MW-3	M907957-03	Water	7/23/99





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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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	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-1				M907957-01			Water	
Purgeable Hydrocarbons	9080159	8/3/99	8/4/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		90.2	%	
MW-2				M907957-02			Water	
Purgeable Hydrocarbons	9080150	8/3/99	8/3/99		10000	13800	ug/l	
Benzene	"	"	"		100	1790	"	
Toluene	"	"	"		100	ND	"	
Ethylbenzene	"	"	"		100	ND	"	
Xylenes (total)	"	"	"		100	682	"	
Methyl tert-butyl ether	"	"	8/5/99		500	29900	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	8/3/99	70.0-130		131	%	1
MW-3				M907957-03			Water	
Purgeable Hydrocarbons	9080150	8/3/99	8/3/99		50.0	128	ug/l	2
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	8/9/99		5000	404000	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	8/3/99	70.0-130		ND	%	1





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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**Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW-1</u> Ferrous Iron	9071022	7/30/99	7/30/99	<u>M907957-01</u> EPA 6010A	0.0100	17.0	<u>Water</u> mg/l	
<u>MW-2</u> Ferrous Iron	9071022	7/30/99	7/30/99	<u>M907957-02</u> EPA 6010A	0.0100	7.20	<u>Water</u> mg/l	
<u>MW-3</u> Ferrous Iron	9071022	7/30/99	7/30/99	<u>M907957-03</u> EPA 6010A	0.0100	25.0	<u>Water</u> mg/l	





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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**Conventional Chemistry Parameters by APHA/EPA Methods
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW-1</u> Total Alkalinity	9070960	7/28/99	7/28/99	<u>M907957-01</u> EPA 310.1	5.00	150	<u>Water</u> mg/l	
<u>MW-2</u> Total Alkalinity	9070960	7/28/99	7/28/99	<u>M907957-02</u> EPA 310.1	5.00	270	<u>Water</u> mg/l	
<u>MW-3</u> Total Alkalinity	9070960	7/28/99	7/28/99	<u>M907957-03</u> EPA 310.1	5.00	530	<u>Water</u> mg/l	





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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**Anions by EPA Method 300.0
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW-1</u>								
Nitrate as NO3	9070943	7/27/99	7/27/99	EPA 300.0	1.00	ND	mg/l	
Sulfate as SO4	9070944	"	"	EPA 300.0	1.00	17.5	"	
<u>MW-2</u>								
Nitrate as NO3	9070943	7/27/99	7/27/99	EPA 300.0	1.00	ND	mg/l	
Sulfate as SO4	9070944	"	"	EPA 300.0	1.00	9.97	"	
<u>MW-3</u>								
Nitrate as NO3	9070943	7/27/99	7/27/99	EPA 300.0	1.00	ND	mg/l	
Sulfate as SO4	9070944	"	"	EPA 300.0	1.00	6.36	"	





Blaine Tech Services
1680 Rogers Ave
San Jose, CA 95112

Project: Equiva
Project Number: 105 5th Street
Project Manager: Ann Pember

Sampled: 7/23/99
Received: 7/26/99
Reported: 8/12/99

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*
Batch: 9080150			Date Prepared: 8/3/99			Extraction Method: EPA 5030B [P/T]				
Blank			9080150-BLK1							
Purgeable Hydrocarbons	8/3/99			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				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		11.0	"	70.0-130	110			
LCS			9080150-BS1							
Benzene	8/3/99	10.0		10.9	ug/l	70.0-130	109			
Toluene	"	10.0		10.8	"	70.0-130	108			
Ethylbenzene	"	10.0		10.6	"	70.0-130	106			
Xylenes (total)	"	30.0		32.1	"	70.0-130	107			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.1	"	70.0-130	101			
LCS Dup			9080150-BSD1							
Benzene	8/3/99	10.0		10.8	ug/l	70.0-130	108	25.0	0.922	
Toluene	"	10.0		10.6	"	70.0-130	106	25.0	1.87	
Ethylbenzene	"	10.0		10.3	"	70.0-130	103	25.0	2.87	
Xylenes (total)	"	30.0		31.4	"	70.0-130	105	25.0	1.89	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.1	"	70.0-130	101			
Batch: 9080159			Date Prepared: 8/3/99			Extraction Method: EPA 5030B [P/T]				
Blank			9080159-BLK1							
Purgeable Hydrocarbons	8/3/99			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				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.89	"	70.0-130	98.9			
LCS			9080159-BS1							
Benzene	8/3/99	10.0		9.80	ug/l	70.0-130	98.0			
Toluene	"	10.0		10.4	"	70.0-130	104			
Ethylbenzene	"	10.0		9.52	"	70.0-130	95.2			
Xylenes (total)	"	30.0		29.0	"	70.0-130	96.7			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.6	"	70.0-130	106			





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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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	9080159-BSD1									
Benzene	8/3/99	10.0		9.81	ug/l	70.0-130	98.1	25.0	0.102	
Toluene	"	10.0		10.3	"	70.0-130	103	25.0	0.966	
Ethylbenzene	"	10.0		9.59	"	70.0-130	95.9	25.0	0.733	
Xylenes (total)	"	30.0		28.7	"	70.0-130	95.7	25.0	1.04	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		10.6	"	70.0-130	106			





Blaine Tech Services
1680 Rogers Ave
San Jose, CA 95112

Project: Equiva
Project Number: 105 5th Street
Project Manager: Ann Pember

Sampled: 7/23/99
Received: 7/26/99
Reported: 8/12/99

**Total Metals by EPA 6000/7000 Series Methods/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*
Batch: 9071022			Date Prepared: 7/2/99			Extraction Method: EPA 3010A				
Blank			9071022-BLK1							
Ferrous Iron	7/30/99			ND	mg/l	0.0100				
LCS			9071022-BS1							
Ferrous Iron	7/30/99	1.00		1.04	mg/l	80.0-120	104			
Matrix Spike			9071022-MS1 M907885-01							
Ferrous Iron	7/30/99	1.00	0.110	0.970	mg/l	80.0-120	86.0			
Matrix Spike Dup			9071022-MSD1 M907885-01							
Ferrous Iron	7/30/99	1.00	0.110	1.10	mg/l	80.0-120	99.0	20.0	14.1	





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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**Conventional Chemistry Parameters by APHA/EPA Methods/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*
Batch: 9070960	Date Prepared: 7/28/99		Extraction Method: General Preparation							
Blank	9070960-BLK1									
Total Alkalinity	7/28/99			ND	mg/l	5.00				
LCS	9070960-BS1									
Total Alkalinity	7/28/99	100		98.0	mg/l	80.0-120	98.0			
Matrix Spike	9070960-MS1		M907957-01							
Total Alkalinity	7/28/99	100	150	240	mg/l	75.0-125	90.0			
Matrix Spike Dup	9070960-MSD1		M907957-01							
Total Alkalinity	7/28/99	100	150	240	mg/l	75.0-125	90.0	20.0	0	





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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**Anions by EPA Method 300.0/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*
Batch: 9070943			Date Prepared: 7/27/99			Extraction Method: General Preparation				
Blank			9070943-BLK1							
Nitrate as NO3	7/27/99			ND	mg/l	1.00				
LCS			9070943-BS1							
Nitrate as NO3	7/27/99	100		92.2	mg/l	80.0-120	92.2			
Matrix Spike			9070943-MS1 M907989-01							
Nitrate as NO3	7/27/99	100	73.3	168	mg/l	75.0-125	94.7			
Matrix Spike Dup			9070943-MSD1 M907989-01							
Nitrate as NO3	7/27/99	100	73.3	165	mg/l	75.0-125	91.7	20.0	3.22	
Batch: 9070944			Date Prepared: 7/27/99			Extraction Method: General Preparation				
Blank			9070944-BLK1							
Sulfate as SO4	7/27/99			ND	mg/l	1.00				
LCS			9070944-BS1							
Sulfate as SO4	7/27/99	100		99.7	mg/l	80.0-120	99.7			
Matrix Spike			9070944-MS1 M907957-03							
Sulfate as SO4	7/27/99	100	6.36	94.9	mg/l	75.0-125	88.5			
Matrix Spike Dup			9070944-MSD1 M907957-03							
Sulfate as SO4	7/27/99	100	6.36	94.2	mg/l	75.0-125	87.8	20.0	0.794	





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112	Project: Equiva Project Number: 105 5th Street Project Manager: Ann Pember	Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99
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Notes and Definitions

#	Note
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- 1 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 2 Chromatogram Pattern: Weathered Gasoline C6-C12
- 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





August 2, 1999

Kayvan Kimyai
Sequoia - Morgan Hill
885 Jarvis Drive
Morgan Hill, CA 95037

RE: 1/L907273

Dear Kayvan Kimyai

Enclosed are the results of analyses for sample(s) received by the laboratory on July 29, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson
Project Manager





Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: 1 Project Number: M907957 Project Manager: Kayvan Kimyai	Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00
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ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
M907957-01/MW-1	L907273-01	Water	7/23/99
M907957-02/MW-2	L907273-02	Water	7/23/99
M907957-03/MW-3	L907273-03	Water	7/23/99





Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: I Project Number: M907957 Project Manager: Kayvan Kimyai	Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00
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**M907957-01/MW-1
[L907273-01]**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

MTBE by EPA Method 8260A

Methyl tert-butyl ether	9070118	7/29/99	7/29/99		2.00	ND	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		109	%	





Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: 1 Project Number: M907957 Project Manager: Kayvan Kimyai	Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00
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**M907957-02/MW-2
[L907273-02]**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

MTBE by EPA Method 8260A

Methyl tert-butyl ether	9070122	7/30/99	7/30/99		400	29400	ug/l	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	"	"	76.0-114		95.0	%	





Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: 1 Project Number: M907957 Project Manager: Kayvan Kimyai	Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00
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**M907957-03/MW-3
[L907273-03]**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

MTBE by EPA Method 8260A

Methyl tert-butyl ether	9070122	7/30/99	7/30/99		10000	324000	ug/l	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	"	"	76.0-114		94.0	%	





Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: 1 Project Number: M907957 Project Manager: Kayvan Kimyai	Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00
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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: 9070118			Date Prepared: 7/23/99			Extraction Method: EPA 5030B [P/T]				
Blank			9070118-BLK1							
Methyl tert-butyl ether	7/23/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.2	"	76.0-114	108			
Blank			9070118-BLK2							
Methyl tert-butyl ether	7/29/99			ND	ug/l	0.500				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		52.2	"	76.0-114	104			
LCS			9070118-BS1							
Methyl tert-butyl ether	7/23/99	50.0		50.2	ug/l	70.0-130	100			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.4	"	76.0-114	109			
LCS			9070118-BS2							
Methyl tert-butyl ether	7/29/99	50.0		56.8	ug/l	70.0-130	114			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		53.5	"	76.0-114	107			
Matrix Spike			9070118-MS1		L907212-01					
Methyl tert-butyl ether	7/23/99	50.0	11.0	60.1	ug/l	60.0-140	98.2			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		55.1	"	76.0-114	110			
Matrix Spike Dup			9070118-MSD1		L907212-01					
Methyl tert-butyl ether	7/23/99	50.0	11.0	59.6	ug/l	60.0-140	97.2	25.0	1.02	
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.8	"	76.0-114	110			
Batch: 9070122			Date Prepared: 7/26/99			Extraction Method: EPA 5030B [P/T]				
Blank			9070122-BLK1							
Methyl tert-butyl ether	7/26/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		46.0	"	76.0-114	92.0			
Blank			9070122-BLK2							
Methyl tert-butyl ether	7/27/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		45.8	"	76.0-114	91.6			
Blank			9070122-BLK3							
Methyl tert-butyl ether	7/28/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		45.6	"	76.0-114	91.2			
Blank			9070122-BLK4							
Methyl tert-butyl ether	7/29/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		45.6	"	76.0-114	91.2			





Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: 1 Project Number: M907957 Project Manager: Kayvan Kimyai	Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00
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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*
Blank	9070122-BLK5									
Methyl tert-butyl ether	7/30/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		46.0	"	76.0-114	92.0			
LCS	9070122-BS1									
Methyl tert-butyl ether	7/26/99	50.0		40.1	ug/l	70.0-130	80.2			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		44.7	"	76.0-114	89.4			
LCS	9070122-BS2									
Methyl tert-butyl ether	7/27/99	50.0		37.7	ug/l	70.0-130	75.4			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		43.8	"	76.0-114	87.6			
LCS	9070122-BS3									
Methyl tert-butyl ether	7/28/99	50.0		38.8	ug/l	70.0-130	77.6			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		45.9	"	76.0-114	91.8			
LCS	9070122-BS4									
Methyl tert-butyl ether	7/29/99	50.0		41.8	ug/l	70.0-130	83.6			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		48.0	"	76.0-114	96.0			
LCS	9070122-BS5									
Methyl tert-butyl ether	7/30/99	50.0		40.9	ug/l	70.0-130	81.8			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.6	"	76.0-114	95.2			
Matrix Spike	9070122-MS1		L907232-01							
Methyl tert-butyl ether	7/26/99	50.0	ND	41.8	ug/l	60.0-140	83.6			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		44.8	"	76.0-114	89.6			
Matrix Spike Dup	9070122-MSD1		L907232-01							
Methyl tert-butyl ether	7/26/99	50.0	ND	40.6	ug/l	60.0-140	81.2	25.0	2.91	
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.0	"	76.0-114	94.0			





Sequoia - Morgan Hill	Project: 1	Sampled: 7/23/99
885 Jarvis Drive	Project Number: M907957	Received: 7/29/99
Morgan Hill, CA 95037	Project Manager: Kayvan Kimyai	Reported: 8/2/99 12:00

Notes and Definitions

#	Note
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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



Sequoia Analytical - Morgan Hill Subcontract Order

M907957 *L907273*

Sending Laboratory	Receiving Laboratory
Sequoia Analytical - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037 Phone: 408-776-9600 Fax: 408-782-6308 Project Manager: Kayvan Kimyai	Sequoia Analytical - San Carlos 1551 Industrial Road San Carlos, CA 94070 Phone: 650-232-9600 Fax: 650-232-9612

Subcontract Order Comments

7/26/99 11:19

Sample/Analysis Information

Sample Name	Matrix	Sampled/ Expires	Analysis Requested	Due	Lab Number	Container	Comments
M907957-01	Water	7/23/99				C	
		8/6/99	8260A MTBE H	8/9/99			San Carlos
M907957-02	Water	7/23/99				C	
		8/6/99	8260A MTBE H	8/9/99			San Carlos
M907957-03	Water	7/23/99				C	
		8/6/99	8260A MTBE H	8/9/99			San Carlos

Released By *[Signature]* Date 7/28/99 Received By *[Signature]* Date 7/29/99 *0800*

Released By _____ Date _____ Received By _____ Date _____

CONDUCT ANALYSIS TO DETECT

LAB SEQUOIA DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

- EPA RWQCB REGION _____
 LIA
 OTHER

SPECIAL INSTRUCTIONS

Send invoice to Equiva
 Incident # 98995757

Send report to Blaine Tech Services
 Attn: Ann Pember

CHAIN OF CUSTODY
 990723-P3

CLIENT
 Equiva - Karen Petryna

SITE
 105 5th Street

Oakland, CA

C = COMPOSITE ALL CONTAINERS

TPH - gas, BTEX

MTBE by 8020

MTBE by 8260

TPH - diesel

Alkalinity (EPA 800.2) sulfate
 - only generated by 8260 EPA 300.0

1,2-DCA & EDB by 8010

Nitrate (300.0) EPA

Ferrous Iron EPA 200.7

SAMPLE I.D.	MATRIX		CONTAINERS	
	S = SOIL	W = H2O	TOTAL	
MW-1 / 7/23	W		6	X X X X X X
MW-2 ↓	↓		↓	↓ ↓ ↓ ↓ ↓ ↓
MW-3 ↓	↓		↓	↓ ↓ ↓ ↓ ↓ ↓

ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
M 907 957			

SAMPLING COMPLETED 7/23/99 13:00 PERFORMED BY Paul Sousa RESULTS NEEDED NO LATER THAN

RELEASED BY [Signature] DATE 7-26-99 TIME 9:44 RECEIVED BY [Signature] DATE 7-26-99 TIME 9:44

RELEASED BY [Signature] DATE [] TIME [] RECEIVED BY [Signature] DATE 7/26/99 TIME 11:19

RELEASED BY [Signature] DATE [] TIME [] RECEIVED BY [Signature] DATE [] TIME []

SHIPPED VIA DATE SENT TIME SENT COOLER #

EQUIVA WELL MONITORING DATA SHEET

Project #: <u>990723-P3</u>	Job #: <u>98995757</u>
Sampler: <u>PA-1</u>	Date: <u>7-23-99</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>23.60</u>	Depth to Water: <u>6.45</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

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

Other: _____

Sampling Method: Bailer Extraction Port

Other: _____

<u>11.1</u>	x	<u>3</u>	=	<u>33.4</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>12:02</u>	<u>67.6</u>	<u>7.3</u>	<u>869</u>	<u>7200</u>	<u>12</u>	
<u>12:04</u>	<u>67.2</u>	<u>7.2</u>	<u>851</u>	<u>7200</u>	<u>24</u>	
<u>12:06</u>	<u>65.8</u>	<u>7.2</u>	<u>779</u>	<u>7200</u>	<u>36</u>	

Did well dewater? Yes No Gallons actually evacuated: 36

Sampling Time: 12:10 Sampling Date: 7-23-99

Sample I.D.: MW-1 Laboratory: Sequoia BC Other _____

Analyzed for: ~~TPH-LG~~ ~~BTEX~~ ~~MTBE~~ ~~TPH-D~~ Other: Bio Parameters

D.O. (if req'd): Pre-purge: 3.2 mg/L Post-purge: 4.5 mg/L

O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV

EQUIVA WELL MONITORING DATA SHEET

Project #: <u>990723-P3</u>	Job # <u>98995757</u>
Sampler: <u>Pa-1</u>	Date: <u>7-23-99</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u> </u>
Total Well Depth: <u>23.55</u>	Depth to Water: <u>5.98</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

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: _____

<u>11.4</u>	X	<u>3</u>	=	<u>34.2</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>12:26</u>	<u>67.6</u>	<u>6.9</u>	<u>734</u>	<u>7200</u>	<u>12</u>	
<u>12:28</u>	<u>67.8</u>	<u>7.0</u>	<u>721</u>	<u>7200</u>	<u>24</u>	
<u>12:30</u>	<u>68.0</u>	<u>7.0</u>	<u>711</u>	<u>7200</u>	<u>36</u>	

Did well dewater? Yes No

Gallons actually evacuated: _____

Sampling Time: 12:35 Sampling Date: 7-23-99

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Bio Parameters

D.O. (if req'd):	Pre-purge: <u>2.8</u> mg/L	Post-purge: <u>3.2</u> mg/L	
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: <u>321</u> mV	

EQUIVA WELL MONITORING DATA SHEET

Project #: <u>990723-P3</u>	Job # <u>98995757</u>
Sampler: <u>P-1</u>	Date: <u>7-23-99</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>24.95</u>	Depth to Water: <u>6.43</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

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

Other: _____

Sampling Method: Bailer Extraction Port

Other: _____

<u>11.6</u>	x	<u>3</u>	=	<u>34</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>12:52</u>	<u>68.0</u>	<u>6.8</u>	<u>1178</u>	<u>7200</u>	<u>12</u>	
<u>12:54</u>	<u>67.8</u>	<u>6.7</u>	<u>1089</u>	<u>7200</u>	<u>24</u>	
<u>12:56</u>	<u>67.4</u>	<u>6.7</u>	<u>1054</u>	<u>7200</u>	<u>36</u>	

Did well dewater? Yes No

Gallons actually evacuated: 36

Sampling Time: 13:02 Sampling Date: 7-23-99

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

Analyzed for: TPH-G BTEX MTBE TPH-D Other: 6i Parameter

D.O. (if req'd):	Pre-purge: <u>2.6</u> mg/L	Post-purge: <u>3.0</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: <u>85</u> mV

WELL DEVELOPMENT DATA SHEET

Project #: <u>990720 R-1</u>	Client: <u>Shell</u>
Developer: <u>Sim</u>	Date Developed: <u>7-20-99</u>
Well I.D. <u>MW-1</u>	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before <u>21.45</u> After <u>23.61</u>	Depth to Water: Before <u>6.40</u> After <u>17.56</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
4" =	0.65
6" =	1.47
10" =	4.08
12" =	6.87

<u>9.7</u>	<u>X</u>	<u>10</u>	<u>=</u>	<u>97</u>	gallons
1 Case Volume		Specified Volumes			

Purging Device: Bailer Electric Submersible
 Middleburg Suction Pump

Type of Installed Pump _____
 Other equipment used Sudge Block

TIME	TEMP (F)	pH	COND.	TURBIDITY	VOLUME REMOVED:	NOTATIONS:
9:10	67.8	7.3	1056	7200	10	Swabbed well
9:12	70.8	7.2	925	7200	20	5 minutes
9:14	70.1	7.2	799	7200	30	Heavy silt + sand
9:16	70.3	7.3	783	7200	40	Agitated submersible
9:18	69.8	7.4	875	7200	50	Swabbed well 5
9:23	68.7	7.3	854	7200	60	minutes
9:25	68.3	7.3	865	7200	70	Hit hard bottom
9:27	67.9	7.3	872	7200	80	Still Heavy Sand + silt
9:29	68.0	7.3	835	7200	90	Agitated submersible
9:38	67.6	7.3	779	7200	100	still turbid / Reached Hard Bottom

Did Well Dewater? No If yes, note above. Gallons Actually Evacuated: 100

WELL DEVELOPMENT DATA SHEET

Project #: <u>990720R-1</u>	Client: <u>Shell</u>
Developer: <u>Sim</u>	Date Developed: <u>7-20-99</u>
Well I.D. <u>MW-2</u>	Well Diameter: (circle one) 2 3 <u>(4)</u> 6 <u> </u>
Total Well Depth: Before <u>21.31</u> After <u>23.57</u>	Depth to Water: Before <u>6.00</u> After <u>18.24</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
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 Surge Block

TIME	TEMP (F)	pH	COND.	TURBIDITY	VOLUME REMOVED:	Odor NOTATIONS:
9:45	68.3	6.9	684	7200	10	Swabbed well 5
9:47	68.5	6.9	698	7200	20	minutes prior to C.V.
9:49	69.0	6.8	804	7200	30	Heavy sand dark brown
9:51	68.7	6.7	823	7200	40	Swabbed well 5
9:56	70.1	6.8	847	7200	50	minutes / odor
9:58	69.4	6.8	851	7200	60	Heavy sand / strong
10:00	70.1	6.9	799	7200	70	odor / Hit Bottom
10:02	71.6	6.9	792	7200	80	Swabbed well 5
10:07	70.8	7.0	739	7200	90	minutes Hard Bottom
10:09	70.5	7.0	715	7200	100	Reached / Still Sandy

Did Well Dewater? NO If yes, note above. Gallons Actually Evacuated: 99 / 100

WELL HEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client Equiva Site # 98995757
 Site address 105 5th St.
Oakland

Inspection date: 7-23-99
 Inspected by: Paul S.
 BTS Event # 990723-P3

1. Lid on the box? Yes No	5. Water standing in the well box?	7. Can cap be pulled loose?
2. Lid whole?	5a. Standing above well top?	8. Can cap seal out water?
3. Lid secure?	5b. Standing below well top?	9. Padlock present?
4. Lid seal intact?	5c. Water even with top of well cap?	10. Padlock found locked?
	6. Well cap/plug present?	11. Padlock functional?

Check box if *no deficiencies* were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken
	<u>MW-1</u>	<u>Replace Lock</u>

Note below all deficiencies that could not be corrected and *still need to be corrected*.

Well I.D.	Persisting Deficiency	BTS Office assigns or defers Correction to:	Date assigned	Date corrected

Office review and assignments made by _____ date _____