

C A M B R I A

ENVIRONMENTAL
PROTECTION
00 JUN 23 AM 10:45

June 20, 2000

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

Re: **First Quarter 2000 Monitoring Report**
Shell-branded Service Station
4226 First Street
Pleasanton, California
Incident #98995840
Cambria Project #242-0523-002



Dear Mr. Seery:

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

FIRST QUARTER 2000 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site well, calculated the groundwater elevation, and compiled the analytical data. Cambria prepared a site vicinity map (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Site Investigation: Cambria installed two onsite monitoring wells on January 18 and 19, 2000. Blaine developed and sampled the wells on February 10, 2000. Cambria's Site Investigation Report will be submitted in the second quarter 2000.

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

ANTICIPATED SECOND QUARTER 2000 ACTIVITIES

**Cambria
Environmental
Technology, Inc.**

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

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

CLOSING

We appreciate the opportunity to work with you on this project. Please call Barbara Jakub at (510) 420-3309 if you have any questions or comments.

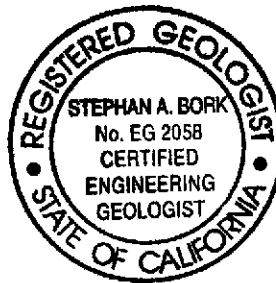
Sincerely,
Cambria Environmental Technology, Inc



Barbara J. Jakub

Barbara J. Jakub
Project Geologist

Stephan Bork
Stephan Bork, C.E.G., C. HG.
Associate Hydrogeologist

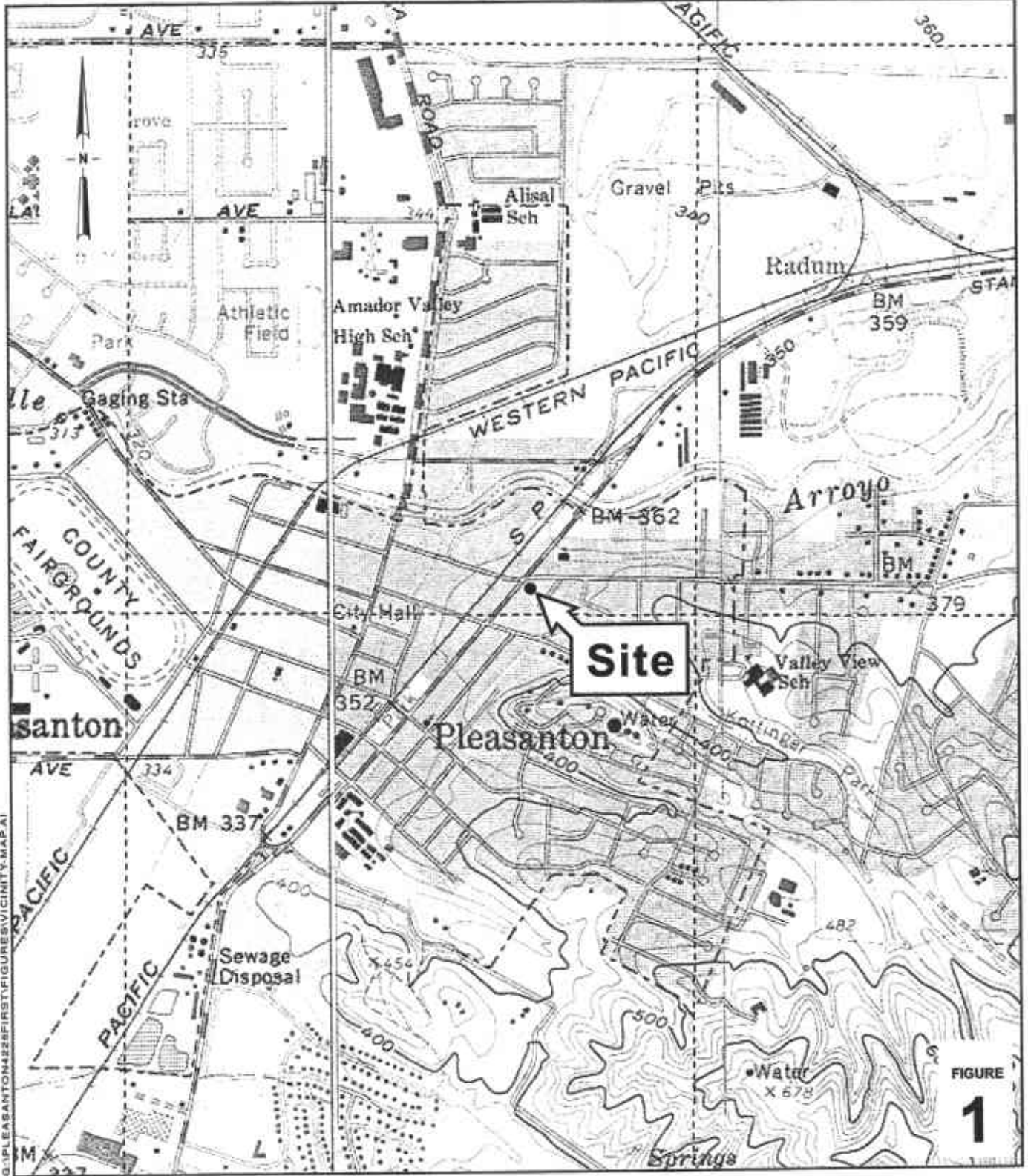


Figures: 1 - Site Vicinity Map
 2 - Groundwater Elevation Contour Map

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869
 Douglas E & Mary M Safreno, 1627 Vineyard Avenue, Pleasanton, CA 94566-6389

g:\ple4226\qm\1q00qm.doc



G:\PLEASANTON\4226FIRST\FIGURE\VICINITY.MAP.A1

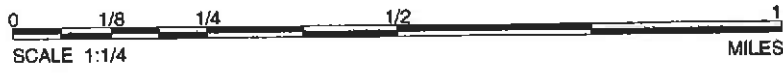


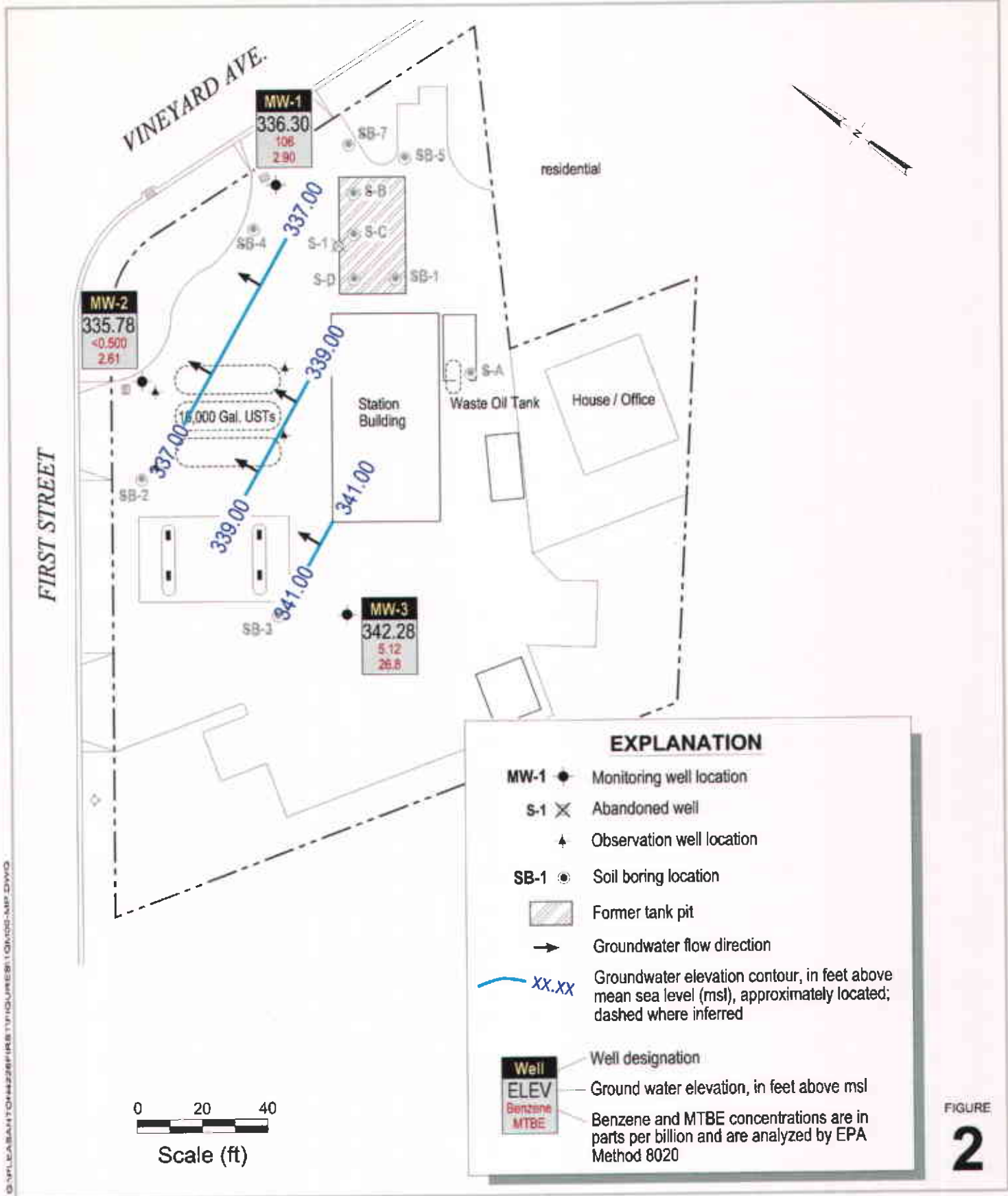
FIGURE
1

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



C A M B R I A

Vicinity Map



G:\FILE\SANTO\4226\FIRB\FIGURE81\GW05-MP.DWG

EXPLANATION

- MW-1 ● Monitoring well location
 - S-1 ✕ Abandoned well
 - ▲ Observation well location
 - SB-1 ● Soil boring location
 - ▨ Former tank pit
 - Groundwater flow direction
 - XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred
- | | |
|---------|--|
| Well | Well designation |
| ELEV | Ground water elevation, in feet above msl |
| Benzene | Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8020 |
| MTBE | |

0 20 40
 Scale (ft)

FIGURE
2

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



C A M B R I A

Groundwater Elevation Contour Map

February 10, 2000

ATTACHMENT A
Blaine Groundwater Monitoring Report
and Field Notes

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.

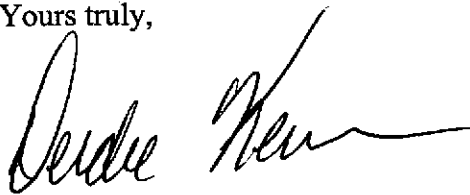
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

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.

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 flourish extending to the right.

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

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	02/10/2000	523	106	<5.00	<5.00	31.8	2.90	NA	371.20	34.90	336.30
MW-2	02/03/2000	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	35.51	336.89
MW-2	02/10/2000	<50.0	<0.500	<0.500	<0.500	<0.500	2.61	NA	372.40	38.62	335.78
MW-3	02/03/2000	NA	NA	NA	NA	NA	NA	NA	375.05	32.06	342.99
MW-3	02/07/2000	NA	NA	NA	NA	NA	NA	NA	375.05	32.57	342.48
MW-3	02/10/2000	180	5.12	<0.500	<0.500	0.714	26.8	21.5a	375.05	32.77	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.



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 Kirmyai
Project Manager D.M.

CA ELAP Certificate Number 1210





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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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





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
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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*
MW-3				<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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	"	"	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/Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. Limits	RPD %	RPD Limit	RPD %	Notes*
Batch: 0B22011			Date Prepared: 2/22/00			Extraction Method: EPA 5030B [P/T]				
Blank			0B22011-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				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.92	"	70-130	89.2			
LCS			0B22011-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			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.97	"	70-130	89.7			
LCS Dup			0B22011-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	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.24	"	70-130	92.4			
Batch: 0B23009			Date Prepared: 2/23/00			Extraction Method: EPA 5030B [P/T]				
Blank			0B23009-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				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.43	"	70-130	94.3			
LCS			0B23009-BS1							
Purgeable Hydrocarbons	2/23/00	250		307	ug/l	70-130	123			
Surrogate: a,a,a-Trifluorotoluene	"	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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**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	Reporting Limit Units	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: <i>a,a,a-Trifluorotoluene</i>	"	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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**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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Notes and Definitions

#	Note
---	------

- 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



F. 002

TEL: 408 573 1111

BLAINE TECH SERVICES, INC

FEB. - 14' 00 (MON) 09:34

BLAINE

TECH SERVICES, INC.

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

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 # 98995840
Send report to Blaine Tech Services, Inc.
ATTN: Nick Sudano

ADD'L INFORMATION STATUS CONDITION LAB SAMPLE #

CONFIRM HIGHEST MTBE CONCENTRATION BY 8260

MTBE 0473

CHAIN OF CUSTODY
000210-M1

CLIENT Equiva - Karen Petryna

SITE 4226 First Street
Pleasanton, CA

C = COMPOSITE ALL CONTAINERS

SAMPLE I.D.	DATE	TIME	MATRIX	CONTAINERS		C = COMPOSITE ALL CONTAINERS	TPH - gas, BTEX	MTBE by 8020	MTBE by 8260	TPH - diesel	Oxygenates by 8260
			S= SOIL W=H ₂ O	TOTAL							
<u>Mu-1</u>	<u>2-10-00</u>	<u>1020</u>	<u>W</u>	<u>3</u>			<u>X</u>	<u>X</u>			
<u>Mu-2</u>	<u>↓</u>	<u>950</u>	<u>↓</u>	<u>3</u>			<u>X</u>	<u>X</u>			
<u>Mu-3</u>	<u>↓</u>	<u>915</u>	<u>↓</u>	<u>3</u>			<u>X</u>	<u>X</u>			

SAMPLING COMPLETED 2-10-00 1020 SAMPLING PERFORMED BY Mark Sorensen

RESULTS NEEDED
NO LATER THAN

RELEASED BY [Signature] DATE 2-14-00 TIME 8:30 RECEIVED BY _____ DATE _____ TIME _____

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

SHIPPED VIA _____ DATE SENT _____ TIME SENT _____ COOLER # _____

WELL MONITORING DATA SHEET

Project #: <u>000210M-1</u>	Client: <u>Equilon 9875840</u> ⁹⁹
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>56.85</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

Other: _____

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port

Other: _____

3.5 (Gals.) X 3 = 10.5 Gals.
 I 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

EQUIVA WELL MONITORING DATA SHEET

Project #: 000210M-1	Job #: 98995840
Sampler: Mark S.	Date: 2-10-00
Well I.D.: MW-2	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 46.20	Depth to Water: 36.62
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: Boffer
 Middleburg
 Electric Submersible
 Extraction Pump

Sampling Method: Boffer
 Extraction Port
 Other: _____

Other: _____

$$\frac{6.2}{1 \text{ Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{18.3}{\text{Calculated Volume}} \text{ Gals.}$$

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):	mV	Post-purge:	mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 0002/0m-1	Site: 98995840
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: _____

$2.97 \text{ (Gals.)} \times 3 = 2.9 \text{ Gals.}$
 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:	mV

WELL DEVELOPMENT DATA SHEET

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

Volume Conversion Factor (VCF): (12 x (d ² /4) x π) / 231	Well dia.	VCF
where	2" =	0.16
12 = in / foot	3" =	0.37
d = diameter (in.)	<u>4" =</u>	<u>0.65</u>
π = 3.1416	6" =	1.47
231 = in ³ /gal	10" =	4.08
	12" =	6.87

<u>6.7</u>	X	<u>10</u>	=	<u>67</u>
1 Case Volume		Specified Volumes		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.	—	6.7	"very little sand"
13:38	69.6	6.1	2030	7200	24.8	Turbid.
13:39	70.0	6.3	1954	7200	33.5	Turbid.
13:40	70.2	6.1	2026	7200	40.2	HARD Bottom to START with
13:41	70.2	6.2	2031	7200	46.9	
13:42	70.3	6.2	2027	7200	53.6	
13:44	70.3	6.3	2039	7200	60.3	"Slow Recharge" Rate"
13:45	70.3	6.3	2026	7200	67	
	"HARD Bottom"					

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

WELL DEVELOPMENT DATA SHEET

Project #: <u>000207-72</u>	Client: <u>Equiv</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: Before <u>34.19</u> After <u>34.57</u>	Depth to Water: 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

4" = 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 H ₂ O"
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
"	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 I.D. <u>MW-2</u>	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before <u>44.02</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 = 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 4" SURGE BLOCK

TIME	TEMP (F)	pH	COND.	TURBIDITY	VOLUME REMOVED:	NOTATIONS:
610	SURGED	WELL	FOR	10		MIN.
625	BEGAN	PURGE	W/	MIDDLEBURG		
436	67.4	6.6	2455	17	10	
452	65.2	7.9	2414	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

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 I.D. <u>MW-3</u>	Well Diameter: (circle one) 2 3 <u>4</u> 6
Total Well Depth: Before <u>36.97</u> After	Depth to Water: Before <u>33.06</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 style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Well dia.</th> <th style="text-align: left;">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>2.4</u>	X	<u>10</u>	=	<u>24</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:
904						<u>SURGE WELL FOR 10 MIN</u>
915						<u>BEGAN PURGE W/ MIDDLEBURG</u>
926					<u>1.5</u>	<u>DTW = 34.62</u>
						<u>WELL DEWATERED</u>

Did Well Dewater? Yes If yes, note above. Gallons Actually Evacuated: 1.5