

ENVIRONMENTAL
PROTECTION



Chevron

99 DEC 16 PM 2:14

Chevron U.S.A. Products Company
6001 Bollinger Canyon Rd. Bldg. L
P. O. Box 6004
San Ramon, CA 94583-1804

Site Assessment and
Remediation Group
Phone (510) 842-9500
Fax (510) 842-3570

Date: December 8, 1999
To: Distribution
Re: Groundwater Monitoring Report , 9-8341

The enclosed groundwater monitoring report has been properly reviewed by a Chevron authorized representative. Agency guidelines have been followed. Blaine Tech Services is authorized to distribute the report directly to interested parties.

If you have any questions, please call me at (510) 842-3695.

Sincerely,

A handwritten signature in cursive script that reads "Brett L. Hunter".

Brett Hunter
Site Assessment and Remediation
Project Manager

BLAINE
TECH SERVICES INC.



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

December 3, 1999

Brett Hunter
Chevron U.S.A. Products Company
P.O. Box 6004
San Ramon, CA 94583-0904

4th Quarter 1999 Monitoring at 9-8341

Fourth Quarter 1999 Groundwater Monitoring at
Chevron Service Station Number 9-8341
3530 MacArthur Blvd.
Oakland, CA

Monitoring Performed on October 13, 1999

Groundwater Sampling Report 991013-I-2

This report covers the routine monitoring of groundwater wells at this Chevron facility. Blaine Tech Services, Inc.'s work at the site includes inspection, gauging, evacuation, purgewater containment, sample collection and sample handling 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 volume of a three-case volume purge, elapsed evacuation time, total volume of water removed, and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater is, likewise, collected and transported to McKittrick Waste Treatment Site for disposal.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**. The table also contains new groundwater elevation calculations taken from the computer plotted gradient map which is located in the **Professional Engineering Appendix**.

At a minimum, Blaine Tech Services, Inc. field personnel are certified upon 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,



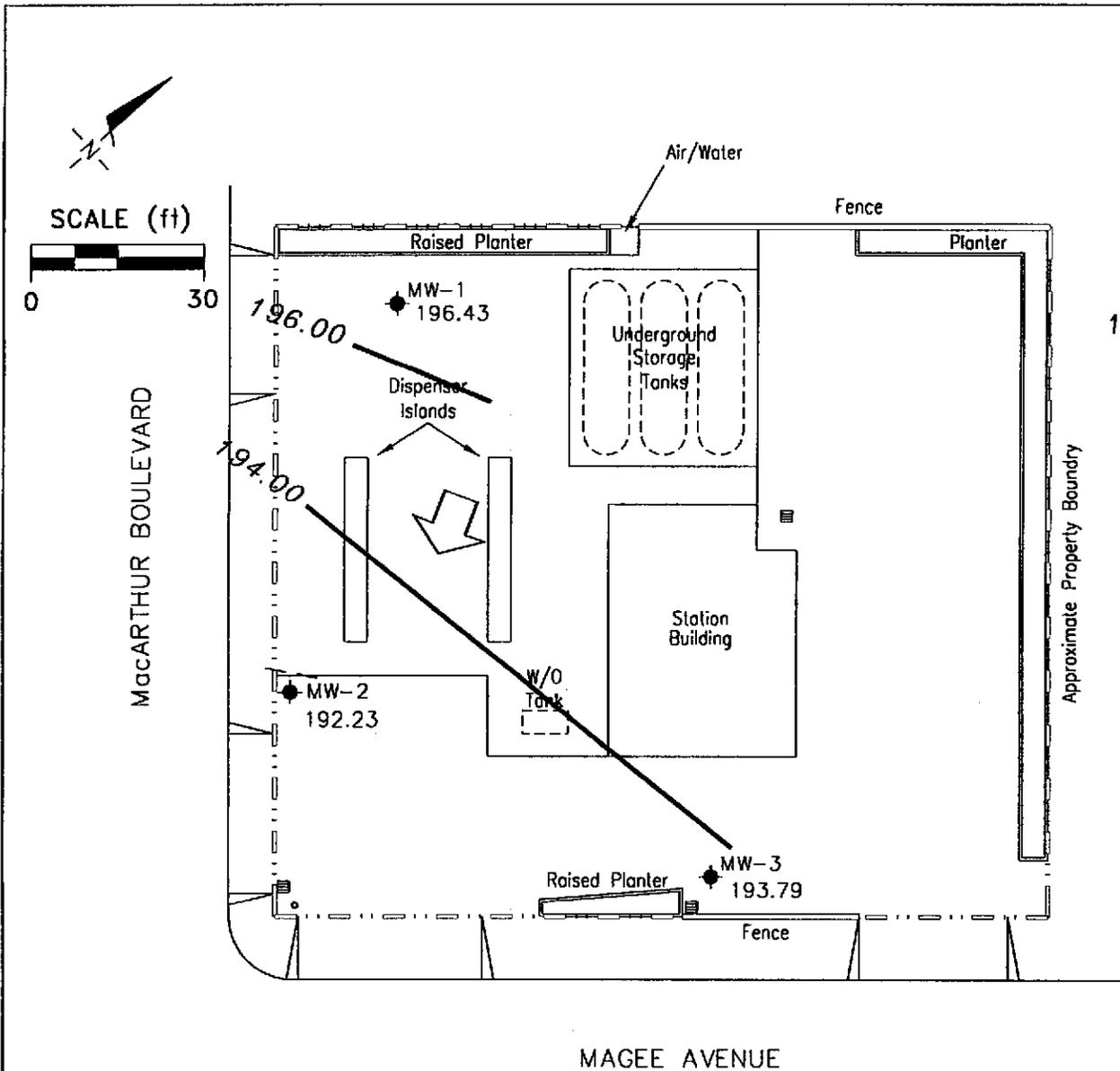
Scott Boor
Project Coordinator

SB/esw

attachments: Professional Engineering Appendix
Cumulative Table of Well Data and Analytical Results
Analytical Appendix
Field Data Sheets

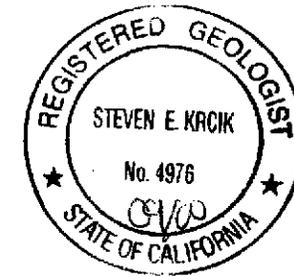
cc: **Thomas Peacock, Alameda County Health Care Services**
Chuck Headlee, RWQCB-S.F. Bay Region
Madhulla Logan, Alameda County Health Care Services
Jim Perkins, Cambria Environmental Technology, Inc.
Greg Gurss, Gettler-Ryan, Inc.

Professional Engineering Appendix



EXPLANATION

- ◆ Groundwater monitoring well
- 193.79 Groundwater elevation (ft, msl)
- 194.00 — Groundwater elevation contour (ft, msl)
- ⇨ Approximate groundwater flow direction;
Approximate gradient = 0.06



Ref. Gelller-Ryan, Inc.

PREPARED BY

RRM
engineering contracting firm

Chevron Station 9-8341
3530 MacArthur Boulevard
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP,
OCTOBER 13, 1999

FIGURE:
1
PROJECT:
DAC04

Table of Well Data and Analytical Results

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
MW-1										
04/04/96	202.47	198.65	3.82	--	<50	<0.5	<0.5	<0.5	<0.5	ND
11/01/96	202.47	197.45	5.02	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/06/97	202.47	199.72	2.75	--	<50	<0.5	<0.5	<0.5	<0.5	14
04/14/97	202.47	197.71	4.76	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/17/97	202.47	196.72	5.75	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/29/97	202.47	196.97	5.50	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/04/98	202.47	199.80	2.67	--	<50	4.2	<0.5	<0.5	<0.5	94
04/03/98	202.47	197.06	5.41	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/29/98	202.47	192.26	10.21	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/26/98	202.47	195.66	6.81	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/18/99	202.47	196.05	6.42	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
04/15/99	202.47	197.13	5.34	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
07/22/99	202.47	196.97	5.50	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/13/99	202.47	196.43	6.04	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
MW-2										
04/04/96	198.88	196.07	2.81	--	<50	<0.5	<0.5	<0.5	<0.5	6100
11/01/96	198.88	195.27	3.61	--	<500	<5.0	<5.0	<5.0	<5.0	2600
01/06/97	198.88	195.97	2.91	--	<2000	31	<20	<20	<20	4000
04/14/97	198.88	195.43	3.45	--	<2000	<20	<20	<20	<20	5100
04/14/97	198.88	195.43	3.45	Confirmation run	--	--	--	--	--	5800
07/17/97	198.88	194.98	3.90	--	<500	<5.0	<5.0	<5.0	<5.0	2300
07/17/97	198.88	194.98	3.90	Confirmation run	--	--	--	--	--	2900
10/29/97	198.88	192.96	5.92	--	120*	12	<0.5	<0.5	<0.5	810
10/29/97	198.88	192.96	5.92	Confirmation run	--	--	--	--	--	900
02/04/98	198.88	195.05	3.83	--	<1000	<10	<10	<10	<10	2100
02/04/98	198.88	195.05	3.83	Confirmation run	--	--	--	--	--	2800
04/03/98	198.88	191.55	7.33	--	<1000	<10	<10	<10	<10	3800
04/03/98	198.88	191.55	7.33	Confirmation run	--	--	--	--	--	3600
07/29/98	198.88	189.86	9.02	--	120**	<0.5	<0.5	<0.5	<0.5	2800
07/29/98	198.88	189.86	9.02	Confirmation run	--	--	--	--	--	3900
10/26/98	198.88	192.77	6.11	--	<50	<0.5	<0.5	<0.5	<0.5	1200
01/18/99	198.88	194.67	4.21	--	<1000	<10	<10	<10	10.5	2530
04/15/99	198.88	194.56	4.32	--	<50	<0.5	<0.5	<0.5	<0.5	5270
07/22/99	198.88	193.73	5.15	--	<50	8.92	<0.5	<0.5	<0.5	1450
10/13/99	198.88	192.23	6.65	--	<250	<2.5	<2.5	<2.5	<2.5	1740

* Chromatogram report indicates an unidentified hydrocarbon and gas.

** Chromatogram report indicates an unidentified hydrocarbon.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
MW-3										
04/04/96	199.10	195.22	3.88	--	<50	<0.5	<0.5	<0.5	<0.5	ND
11/01/96	199.10	194.91	4.19	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/06/97	199.10	195.29	3.81	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/14/97	199.10	194.93	4.17	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/17/97	199.10	194.92	4.18	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/29/97	199.10	193.90	5.20	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/04/98	199.10	194.71	4.39	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/03/98	199.10	195.78	3.32	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/29/98	199.10	189.24	9.86	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/26/98	199.10	193.59	5.51	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/18/99	199.10	194.68	4.42	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
04/15/99	199.10	194.54	4.56	--	<50	<0.5	<0.5	<0.5	1.16	<5.0
07/22/99	199.10	192.45	6.65	--	<50	<0.5	<0.5	<0.5	<0.5	3.94
10/13/99	199.10	193.79	5.31	--	<50	<0.5	<0.5	<0.5	<0.5	6.55

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
TRIP BLANK										
11/01/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/06/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/14/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/17/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/29/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/04/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/03/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/29/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/26/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/18/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
04/15/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
07/22/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/13/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on October 26, 1998. Earlier field data and analytical results are drawn from the July 29, 1998, Gettler-Ryan, Inc. report.

ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons

ND = Not detected at or above the minimum quantitation limit. See laboratory reports for minimum quantitation limits.

MTBE = Methyl tertiary-butyl ether

Analytical Appendix



November 1, 1999

Scott Boor
Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112

RE: Chevron USA, Inc./P910399

Dear Scott Boor

Enclosed are the results of analyses for sample(s) received by the laboratory on October 18, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Marvin Heskett
Project Manager

CA ELAP Certificate Number I-2374





Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112

Project: Chevron USA, Inc.
Project Number: 991013-J2
Project Manager: Scott Boor

Sampled: 10/13/99
Received: 10/18/99
Reported: 11/1/99

ANALYTICAL REPORT FOR P910399

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	P910399-01	Water	10/13/99
MW-2	P910399-02	Water	10/13/99
MW-3	P910399-03	Water	10/13/99
TB	P910399-04	Water	10/13/99





Blaine Tech Services, Inc. 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron USA, Inc. Project Number: 991013-I2 Project Manager: Scott Boor	Sampled: 10/13/99 Received: 10/18/99 Reported: 11/1/99
--	--	--

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-1				P910399-01		Water		
Gasoline	9100450	10/20/99	10/20/99		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: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		105	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		95.3	"	
MW-2				P910399-02		Water		
Gasoline	9100450	10/20/99	10/20/99		250	ND	ug/l	
Benzene	"	"	"		2.50	ND	"	
Toluene	"	"	"		2.50	ND	"	
Ethylbenzene	"	"	"		2.50	ND	"	
Xylenes (total)	"	"	"		2.50	ND	"	
Methyl tert-butyl ether	"	"	"		12.5	1740	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		105	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		95.7	"	
MW-3				P910399-03		Water		
Gasoline	9100450	10/20/99	10/20/99		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	6.55	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		106	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		95.3	"	
TB				P910399-04		Water		
Gasoline	9100450	10/20/99	10/20/99		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: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		107	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		98.7	"	





Blaine Tech Services, Inc. 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron USA, Inc. Project Number: 991013-I2 Project Manager: Scott Boor	Sampled: 10/13/99 Received: 10/18/99 Reported: 11/1/99
--	--	--

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
 Sequoia Analytical - Petaluma**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9100450			Date Prepared: 10/20/99			Extraction Method: EPA 5030 waters				
Blank			9100450-BLK1							
Gasoline	10/20/99			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	"	300		327	"	65.0-135	109			
Surrogate: 4-Bromofluorobenzene	"	300		284	"	65.0-135	94.7			
LCS			9100450-BS1							
Gasoline	10/20/99	1000		940	ug/l	65.0-135	94.0			
Surrogate: 4-Bromofluorobenzene	"	300		287	"	65.0-135	95.7			
Matrix Spike			9100450-MS1		P910389-01					
Gasoline	10/20/99	1000	645	1610	ug/l	65.0-135	96.5			
Surrogate: 4-Bromofluorobenzene	"	300		294	"	65.0-135	98.0			
Matrix Spike Dup			9100450-MSD1		P910389-01					
Gasoline	10/20/99	1000	645	1630	ug/l	65.0-135	98.5	20.0	2.05	
Surrogate: 4-Bromofluorobenzene	"	300		310	"	65.0-135	103			





Blaine Tech Services, Inc. 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron USA, Inc. Project Number: 991013-12 Project Manager: Scott Boor	Sampled: 10/13/99 Received: 10/18/99 Reported: 11/1/99
--	--	--

Notes and Definitions

#	Note
---	------

- 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



Field Data Sheets

CHEVRON WELL MONITORING DATA SHEET

Project #: 991013-JD	Station #: 9-8341
Sampler: P.F.	Date: 10-13-99
Well I.D.: MW-1	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: 29.95	Depth to Water: 6.04
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>RVC</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
Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump
 Other: _____

Sampling Method: Bailer
Disposable Bailer
 Extraction Port
 Other: _____

<u>3.8</u>	x	<u>3</u>	=	<u>11.4</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1159	72.3	7.5	590	4	
1203	72.0	7.3	580	7.75	
1207	71.9	7.2	580	11.5	

Did well dewater? Yes No Gallons actually evacuated: 11.5

Sampling Time: 1210 Sampling Date: 10-13-99

Sample I.D.: MW-1 Laboratory: Sequoia CORE N. Creek Assoc. Labs

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

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

CHEVRON WELL MONITORING DATA SHEET

Project #: 991013-I2	Station #: 9-8341
Sampler: P.F.	Date: 10-13-99
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 33.45	Depth to Water: 6.65
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 Sampling Method: Bailer
~~Middleburg~~ ~~Extraction Port~~
 Electric Submersible Other: _____
 Extraction Pump

4.2	x	3	=	12.6	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1140	72.7	7.2	720	4.25	
1145	72.4	7.0	750	8.5	
1150	72.2	6.8	760	12.75	

Did well dewater? Yes No Gallons actually evacuated: 12.75

Sampling Time: 1152 Sampling Date: 10-13-99

Sample I.D.: MW-2 Laboratory: Sequoia CORE N. Creek Assoc. Labs

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

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

CHEVRON WELL MONITORING DATA SHEET

Project #: 991013-12	Station #: 9-8341
Sampler: P.F.	Date: 10-13-99
Well I.D.: MW-3	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: 33.01	Depth to Water: 5.31
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
 Disposable Bailer
 Middleburg
 Electric Submersible
 Extraction Pump
 Other: _____

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port
 Other: _____

4.4	x	3	=	13.2	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1207	73.7	7.2	570	4.5	
1222	73.5	7.0	570	9	
1227	73.4	6.9	560	13.25	

Did well dewater? Yes No Gallons actually evacuated: 13.25

Sampling Time: 1230 Sampling Date: 10-13-99

Sample I.D.: MW-3 Laboratory: Sequoia CORE N. Creek Assoc. Labs

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

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