



Chevron

ENVIRONMENTAL
PROTECTION

99 SEP 17 PM 3:42

Chevron U.S.A. Products Company
6001 Bollinger Canyon Rd. Bldg. L
P. O. Box 6004
San Ramon, CA 94583-0804

Site Assessment and
Remediation Group
Phone (510) 842-9500
Fax (510) 842-6370

Date: September 1, 1999
To: Distribution
Re: Groundwater Monitoring Report

SATS

SAT 1042

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) 842-8695

Sincerely,

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

August 31, 1999

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

3rd Quarter 1999 Monitoring at 9-8341

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

Monitoring Performed on July 22, 1999

Groundwater Sampling Report 990722-X-3

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,



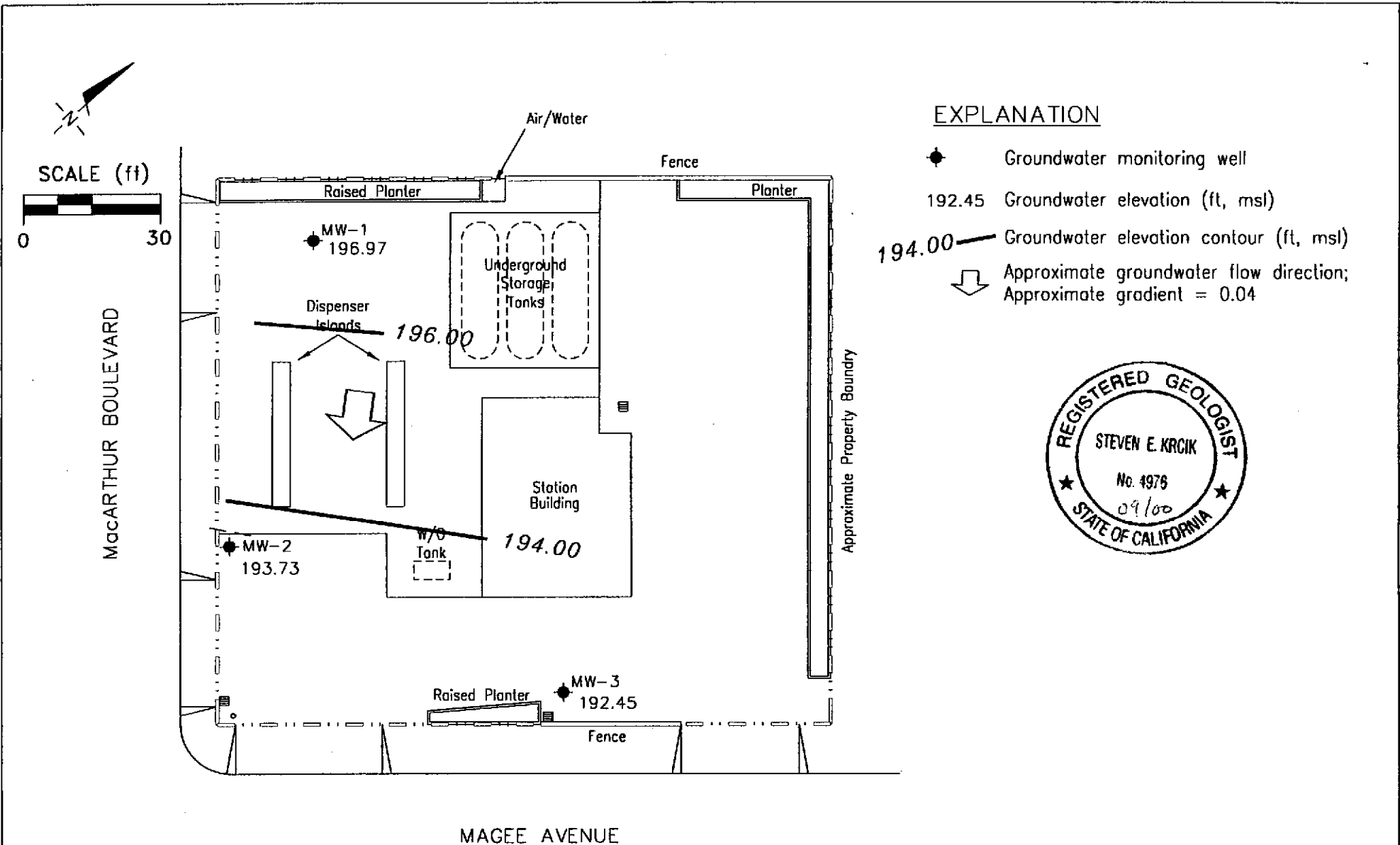
Christine Lillie
Project Coordinator

CAL/sb

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
- 192.45 Groundwater elevation (ft, msl)
- 194.00 — Groundwater elevation contour (ft, msl)
- ⇩ Approximate groundwater flow direction; Approximate gradient = 0.04



Ref. Gettler-Ryan, Inc.

<p>PREPARED BY</p> <p>RRM engineering contracting firm</p>	<p>Chevron Station 9-8341 3530 MacArthur Boulevard Oakland, California</p>	<p>GROUNDWATER ELEVATION CONTOUR MAP, JULY 22, 1999</p>	<p>FIGURE: 1 PROJECT: DAC04</p>
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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

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

* 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

Analytical Appendix



August 10, 1999

Christine Lillie
Blaine Tech Services (Chev)
1680 Rogers Avenue
San Jose, CA 95112

RE: Chevron/9070001

Dear Christine Lillie

Enclosed are the results of analyses for sample(s) received by the laboratory on July 23, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Anne Fowler
Project Manager

CA ELAP Certificate Number 1210





Blaine Tech Services (Chev) 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron Project Number: 9-8341/3530 Macarthur Blvd., Oakland Project Manager: Christine Lillie	Sampled: 7/22/99 Received: 7/23/99 Reported: 8/10/99
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ANALYTICAL REPORT FOR 9070001

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	9070001-01	Water	7/22/99
MW-2	9070001-02	Water	7/22/99
MW-3	9070001-03	Water	7/22/99
TB	9070001-04	Water	7/22/99





Blaine Tech Services (Chev) 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron Project Number: 9-8341/3530 Macarthur Blvd., Oakland Project Manager: Christine Lillie	Sampled: 7/22/99 Received: 7/23/99 Reported: 8/10/99
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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				9070001-01			Water	
Purgeable Hydrocarbons	9080116	8/2/99	8/2/99		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		101	%	
MW-2				9070001-02			Water	
Purgeable Hydrocarbons	9080116	8/2/99	8/2/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	8.92	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	8/5/99		25.0	1450	"	D
Surrogate: a,a,a-Trifluorotoluene	"	"	8/2/99	70.0-130		109	%	
MW-3				9070001-03			Water	
Purgeable Hydrocarbons	9080116	8/2/99	8/2/99		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	3.94	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		101	%	
TB				9070001-04			Water	
Purgeable Hydrocarbons	9080116	8/2/99	8/2/99		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		102	%	





Blaine Tech Services (Chev) 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron Project Number: 9-8341/3530 Macarthur Blvd., Oakland Project Manager: Christine Lillie	Sampled: 7/22/99 Received: 7/23/99 Reported: 8/10/99
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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*
Batch: 9080116		Date Prepared: 8/2/99			Extraction Method: EPA 5030B (P/T)					
Blank		9080116-BLK1								
Purgeable Hydrocarbons	8/2/99			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: <i>a,a,a</i> -Trifluorotoluene	"	10.0		9.86	"	70.0-130	98.6			
LCS		9080116-BS1								
Purgeable Hydrocarbons	8/2/99	250		273	ug/l	70.0-130	109			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		21.4	"	70.0-130	214			I
LCS Dup		9080116-BSD1								
Purgeable Hydrocarbons	8/2/99	250		255	ug/l	70.0-130	102	25.0	6.64	✓
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		10.9	"	70.0-130	109			





Blaine Tech Services (Chev) 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron Project Number: 9-8341/3530 Macarthur Blvd., Oakland Project Manager: Christine Lillie	Sampled: 7/22/99 Received: 7/23/99 Reported: 8/10/99
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Notes and Definitions

#	Note
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- D Data reported from a dilution.
- 1 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



CHEVRON WELL MONITORING DATA SHEET

Project #: <u>990722-X3</u>	Station #: <u>9-8341</u>
Sampler: <u>h.c.</u>	Date: <u>7-22-99</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>27.50 27.50 VV</u>	Depth to Water: <u>5.50</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 Sampling Method: Bailer
 Disposable Bailer Middleburg Disposable Bailer Extraction Port
 Electric Submersible Other: _____
 Extraction Pump

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

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
16:30	70.1	7.5	594	3.5	
16:25	70.7	7.4	591	7.0	✓
16:40	71.0	7.4	587	10.5	

Did well dewater? Yes No Gallons actually evacuated: 10.5

Sampling Time: 16:46 Sampling Date: 7-22-99

Sample I.D.: MW-1 Laboratory: Sedona 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 #: 990722-X3	Station #: 9-8341
Sampler: h.c.	Date: 7-22-99
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 33.50 ✓	Depth to Water: 5.15
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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 <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other: _____	Sampling Method: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other: _____
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4.5	X	3	=	13.5	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
16:55	72.2	7.5	712	4.5	
17:02 17:01	71.4	7.4	722	4.5 9.0	✓
17:09	71.0	7.4	731	13.5	

Did well dewater? Yes <input checked="" type="checkbox"/> (No)	Gallons actually evacuated: 13.5
Sampling Time: 17:15	Sampling Date: 7-22-99
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 #: 990722-X3	Station #: 9-8341
Sampler: h.c.	Date: 7-22-99
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8
Total Well Depth: 32.95 32.95	Depth to Water: 6.65
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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: _____

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

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
17:21	70.7 70.9	7.0	600	4	✓
17:27	71.0	7.2	605	8	
17:33	71.1	7.2	607	13	

Did well dewater? Yes No Gallons actually evacuated: 13.0

Sampling Time: 17:40 Sampling Date: 7-22-99

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: <input type="text"/>	mg/L	Post-purge: <input type="text"/>	mg/L
O.R.P. (if req'd):	Pre-purge: <input type="text"/>	mV	Post-purge: <input type="text"/>	mV