



Chevron

December 19, 1997

Mr. Larry Seto
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Chevron Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 6004
San Ramon, CA 94583-0904

Marketing - Sales West
Phone 510 842-9500

**Re: Former Signal Service Station #S0800
800 Center Street
Oakland, California**

Dear Mr. Seto:

Enclosed is a copy of the Fourth Quarter Groundwater Monitoring report for 1997, that was prepared by our consultant Blaine Tech Services, Inc. for the above noted facility. Groundwater samples were analyzed for TPH-g, BTEX and MtBE constituents.

The concentrations detected in monitoring wells MW-2, MW-6 and MW-7 were below method detection limits for all constituents, while the concentrations detected in well MW-4 were below method detection limits for all constituents except for toluene at 0.79 ppb. The consultant was unable to sample monitoring wells MW-1 and MW-5 as vehicles were parked over the well boxes.

The constituents detected in monitoring well MW-3 were similar as in the previous sampling event and appears to confirm the concentrations detected in this well. Chevron has no explanation for the concentration of MtBE that continues to be detected in this well since the tanks were reportedly removed in 1973 prior to usage of MtBE.

The depth to ground water varied from 9.43 feet to 11.08 feet below grade with a direction of flow northwesterly. This is a complete reversal of flow from the previous sampling event.

December 19, 1997
Mr. Larry Seto
Former Signal Service Station #S0800
Page 2

Sampling will continue quarterly. If you have any questions, call me at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY



Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc: Ms. Bette Owen, Chevron

Ms. Ann Payne, Chevron

Mr. Terrell A. Sadler
618 Brooklyn Avenue
Oakland, CA. 94606

Mr. James Scott
BPH, Inc.
580 Market Street, Suite 400
San Francisco, CA. 94104

Ms. Sandi Nichols
Washburn, Briscoe & McCarthy
55 Francisco Street, Suite 600
San Francisco, CA. 94133

Mr. Hollis Rodgers
c/o Victor E. Brown, Esq.
580 Grand Avenue
Oakland, CA 94610

Mr. Ross Tinline
Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440
San Jose, CA 95110 (Less analytical results)

BLAINE
TECH SERVICES INC.

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



RECEIVED
DEPT OF ENVIRONMENTAL
PROTECTION
12/11/97

December 11, 1997

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

4th Quarter 1997 Monitoring at S-800

Fourth Quarter 1997 Groundwater Monitoring at
Former Chevron Service Station Number S-800
800 Center St.
Oakland, CA

Monitoring Performed on October 29 and
November 13, 1997

Groundwater Sampling Report 971029-D-1

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,

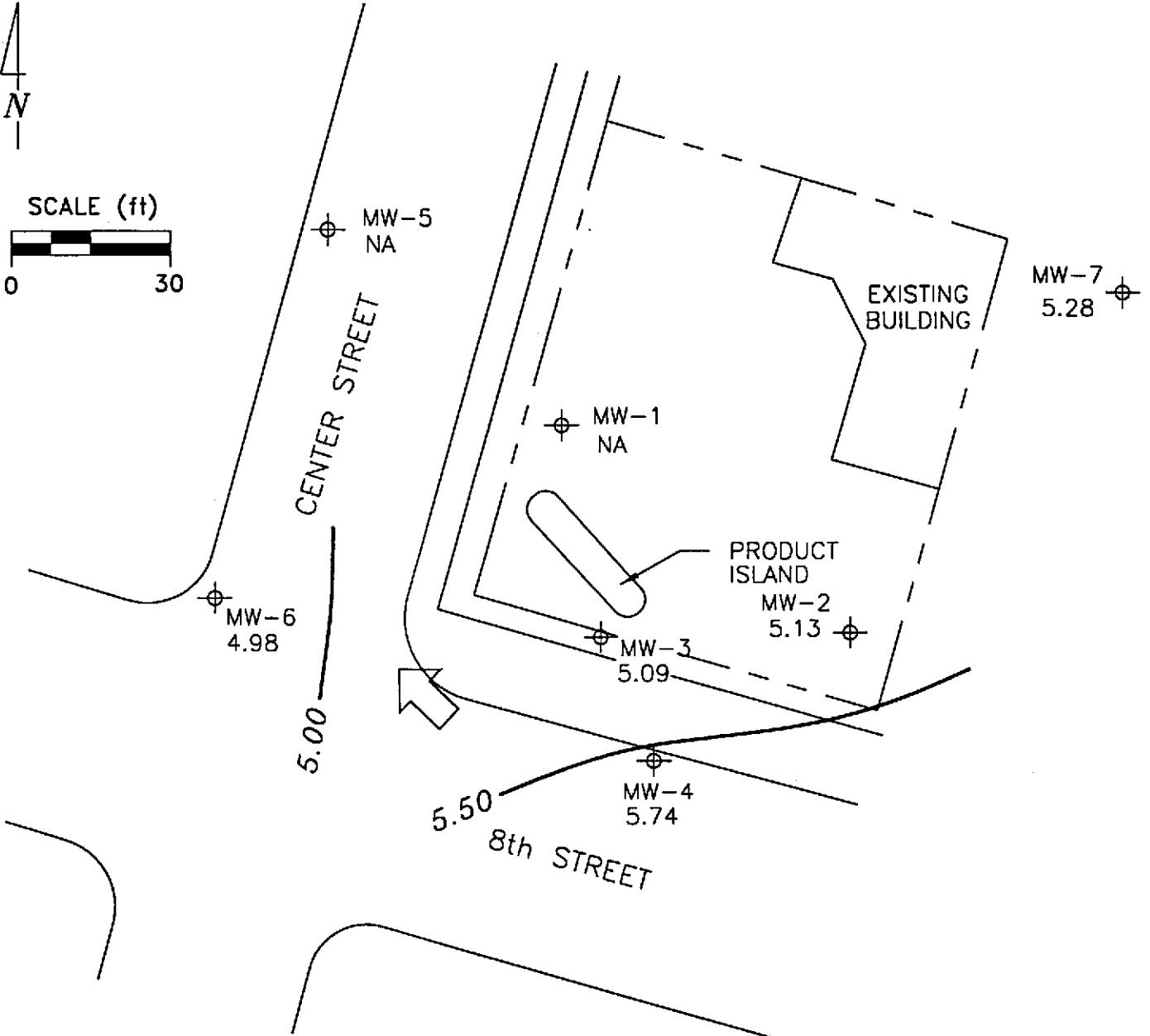
A handwritten signature in black ink, appearing to read "Francis Thie".

Francis Thie
Vice President

FPT/ew

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

Professional Engineering Appendix



EXPLANATION

- ⊕ MONITORING WELL
- 4.98 GROUNDWATER ELEVATION (FT, MSL)
- 5.00 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- NA DATA NOT AVAILABLE
- ↗ APPROXIMATE GROUNDWATER FLOW DIRECTION;
APPROXIMATE GRADIENT = 0.008



Basemap from Ron Archer Engineer Inc.

PREPARED BY

RRM
engineering contracting firm

Former Signal Service Station S-800

800 Center Street
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP,
OCTOBER 29, 1997

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										
10/27/95	15.69	10.54	5.15	--	170,000	19,000	34,000	4800	26,000	--
02/20/97	15.64	8.96	6.68	--	18,000	870	3500	470	2100	<250
04/24/97	15.64	7.30	8.34	--	76,000	4600	16,000	1600	8300	1000
07/23/97	15.64	5.90	9.74	--	37,000	2700	8000	870	6100	<250
10/29/97	15.64	--	--	Inaccessible	--	--	--	--	--	--
MW-2										
10/27/95	15.77	10.60	5.17	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/20/97	15.72	8.51	7.21	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/24/97	15.72	7.82	7.90	--	83*	<0.5	<0.5	<0.5	<0.5	<2.5
07/23/97	15.72	5.92	9.80	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/29/97	15.72	5.13	10.59	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
MW-3										
10/27/95	15.46	10.37	5.09	--	33,000	11,000	1700	2300	4200	--
02/20/97	15.42	8.37	7.05	--	260	56	<1.0	7.6	5.9	<5.0
04/24/97	15.42	7.29	8.13	--	1400	310	28	76	75	74
07/23/97	15.42	5.84	9.58	--	37,000	10,000	1500	2700	4200	2500
10/29/97	15.42	5.09	10.33	--	53,000	12,000	1200	3000	3100	2500
MW-4										
10/27/95	14.45	9.37	5.08	--	66	6.8	<0.5	<0.5	<0.5	--
02/20/97	14.40	8.12	6.28	--	54	<0.5	<0.5	<0.5	7.4	39
04/24/97	14.40	7.29	7.11	--	54	1.4	<0.5	0.65	3.0	100
07/23/97	14.40	5.80	8.60	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/29/97	14.40	5.74	8.66	Inaccessible	--	--	--	--	--	--
11/13/97	14.40	4.97	9.43	--	<50	<0.5	0.79	<0.5	<0.5	<2.5

* Chromatogram pattern 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-5										
01/03/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/20/97	15.03	--	--	Inaccessible	--	--	--	--	--	--
04/24/97	15.03	--	--	Inaccessible	--	--	--	--	--	--
04/30/97	15.03	7.06	7.97	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/23/97	15.03	--	--	Inaccessible	--	--	--	--	--	--
10/29/97	15.03	--	--	Inaccessible	--	--	--	--	--	--
MW-6										
01/03/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/20/97	14.73	8.11	6.62	--	800	310	23	11	28	<12
04/24/97	14.73	7.13	7.60	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/23/97	14.73	5.73	9.00	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/29/97	14.73	4.98	9.75	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
MW-7										
01/03/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/20/97	16.36	8.86	7.50	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/24/97	16.36	7.59	8.77	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/23/97	16.36	6.09	10.27	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/29/97	16.36	5.28	11.08	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
TRIP BLANK										
02/20/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/24/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/23/97	--	--	--	--	<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

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on February 20, 1997.

Earlier field data and analytical results are drawn from the January 24, 1997 Groundwater Technology, Inc. report.

ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons

MTBE = Methyl t-Butyl Ether

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

Analytical Appendix



**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(650) 364-9600
(510) 988-9600
(916) 921-9600

FAX (650) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron S-800/971029-D1
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9710H92-01

Sampled: 10/29/97
Received: 10/30/97

Analyzed: 11/06/97
Reported: 11/10/97

QC Batch Number: GC110697BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron S-800/971029-D1
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9710H92-02

Sampled: 10/29/97
Received: 10/30/97

Analyzed: 11/06/97
Reported: 11/10/97

QC Batch Number: GC110697BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	20000	53000
Methyl t-Butyl Ether	1000	2500
Benzene	200	12000
Toluene	200	1200
Ethyl Benzene	200	3000
Xylenes (Total)	200	3100
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	92

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(650) 364-9600
(510) 988-9600
(916) 921-9600

FAX (650) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron S-800/971029-D1
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9710H92-03

Sampled: 10/29/97
Received: 10/30/97

Analyzed: 11/04/97
Reported: 11/10/97

QC Batch Number: GC110497BTEX22A
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	109

Analytics reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager



Sequoia
Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(650) 364-9600
(510) 988-9600
(916) 921-9600

FAX (650) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron S-800/971029-D1
Sample Descript: MW-7
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9710H92-04

Sampled: 10/29/97
Received: 10/30/97
Analyzed: 11/04/97
Reported: 11/10/97

QC Batch Number: GC110497BTEX22A
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates		
Trifluorotoluene	Control Limits % 70 130	% Recovery 110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron S-800/971029-D1
Sample Descript: TB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9710H92-05

Sampled: 10/29/97
Received: 10/30/97

Analyzed: 11/04/97
Reported: 11/10/97

QC Batch Number: GC110497BTEX22A
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	106

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8	Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834	(650) 364-9600 (510) 988-9600 (916) 921-9600	FAX (650) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
--	--	--	--

Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Chevron S-800 / 971029-D1
Matrix: Liquid

Work Order #: 9710H92 -01-02

Reported: Nov 10, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC110697BTEX21A	GC110697BTEX21A	GC110697BTEX21A	GC110697BTEX21A	GC110697BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030				

Analyst:	A. Miraftab				
MS/MSD #:	9710I4809	9710I4809	9710I4809	9710I4809	9710I4809
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/6/97	11/6/97	11/6/97	11/6/97	11/6/97
Analyzed Date:	11/6/97	11/6/97	11/6/97	11/6/97	11/6/97
Instrument I.D. #:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.9	8.7	8.7	26	49
MS % Recovery:	89	87	87	87	82
Dup. Result:	8.7	8.5	8.5	25	50
MSD % Recov.:	87	85	85	83	83
RPD:	2.3	2.3	2.3	3.9	2.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK110697	BLK110697	BLK110697	BLK110697	BLK110697
Prepared Date:	11/6/97	11/6/97	11/6/97	11/6/97	11/6/97
Analyzed Date:	11/6/97	11/6/97	11/6/97	11/6/97	11/6/97
Instrument I.D. #:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.8	8.6	8.5	26	50
LCS % Recov.:	88	86	85	87	83

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

Reggy Pernier
Project Manager

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9710H92.BLA <1>



**Sequoia
Analytical**

680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8	Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834	(650) 364-9600 (510) 988-9600 (916) 921-9600	FAX (650) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
--	--	--	--

Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Chevron S-800 / 971029-D1
Matrix: Liquid

Work Order #: 9710H92-03-05

Reported: Nov 10, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC110497BTEX22A	GC110497BTEX22A	GC110497BTEX22A	GC110497BTEX22A	GC110497BTEX22A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter				
MS/MSD #:	9710F6604	9710F6604	9710F6604	9710F6604	9710F6604
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Analyzed Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Instrument I.D. #:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	11	11	11	31	59
MS % Recovery:	110	110	110	103	98
Dup. Result:	10	9.9	9.7	28	58
MSD % Recov.:	100	99	97	93	97
RPD:	9.5	11	13	10	1.7
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK110497	BLK110497	BLK110497	BLK110497	BLK110497
Prepared Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Analyzed Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Instrument I.D. #:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	10	10	10	29	62
LCS % Recov.:	100	100	100	97	103

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9710H92.BLA <2>



**Sequoia
Analytical**

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Client Proj. ID: Chevron S-800/971029-D1
Lab Proj. ID: 9710H92

Received: 10/30/97
Reported: 11/10/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 7 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPPH Note: Sample 9710H92-02 was diluted 400-fold.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(650) 364-9600
(510) 988-9600
(916) 921-9600

FAX (650) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron S-800/971113-S1
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9711870-01

Sampled: 11/13/97
Received: 11/14/97
Analyzed: 11/25/97
Reported: 12/01/97

QC Batch Number: GC112597BTEX04A
Instrument ID: GCHP4

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	0.79
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates		
Trifluorotoluene	Control Limits % 70 130	% Recovery 88

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8	Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834	(650) 364-9600 (510) 988-9600 (916) 921-9600	FAX (650) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
--	--	--	--

Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Chevron S-800 / 971113-S1
Matrix: Liquid

Work Order #: 9711870 -01

Reported: Dec 3, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC112597802004A	GC112597802004A	GC112597802004A	GC112597802004A	GC112597802004A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	S.L.	S.L.	S.L.	S.L.	S.L.
MS/MSD #:	97110481	97110481	97110481	97110481	-
Sample Conc.:	8.9	N.D.	N.D.	1.4	-
Prepared Date:	11/25/97	11/25/97	11/25/97	11/25/97	-
Analyzed Date:	11/25/97	11/25/97	11/25/97	11/25/97	-
Instrument I.D. #:	GC4	GC4	GC4	GC4	-
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	-
Result:	26	18	19	54	-
MS % Recovery:	86	91	95	88	-
Dup. Result:	26	19	20	60	-
MSD % Recov.:	87	95	99	98	-
RPD:	0.77	3.8	4.7	10	-
RPD Limit:	0-25	0-25	0-25	0-25	-

LCS #:	LCS112597	LCS112597	LCS112597	LCS112597	LCS112597
Prepared Date:	11/25/97	11/25/97	11/25/97	11/25/97	11/25/97
Analyzed Date:	11/25/97	11/25/97	11/25/97	11/25/97	11/25/97
Instrument I.D. #:	GC4	GC4	GC4	GC4	GC4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	500 µg/L
LCS Result:	16	17	18	58	411
LCS % Recov.:	80	86	90	97	82

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL
Elap #1229

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9711870.BLA <1>



**Sequoia
Analytical**

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Client Proj. ID: Chevron S-800/971113-S1

Received: 11/14/97

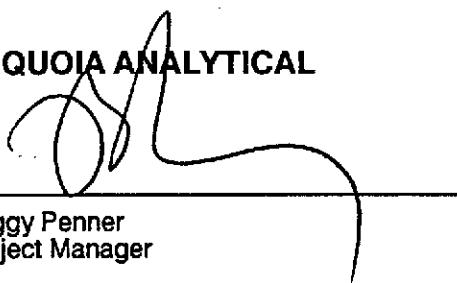
Lab Proj. ID: 9711870

Reported: 12/01/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 5 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL



Peggy Penner
Project Manager

Field Data Sheets

CHEVRON WELL MONITORING DATA SHEET

Project #: 971113-S1	Station #: 5 S-800
Sampler: DOUG	Date: 11-13-97
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth: 13.39	Depth to Water: 9.43
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: _____

0.6	x	3	=	1.9	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1203	70.2	7.3	560	0.5	Black color / odor
1204	69.8	7.2	580	1.0	
1205	70.0	7.1	570	2.0	

Did well dewater? Yes Gallons actually evacuated: 2.0

Sampling Time: 1210 Sampling Date: 11-13-97

Sample I.D.: MW-4 Laboratory: Sequoia GTEL

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 GAUGING DATA

Project # 971029-D1 Date 10/29/97 Client Chvron

Site 800 Center St Oakland CA

CHEVRON WELL MONITORING DATA SHEET

Project #:	971029-D1		Station #:	5-800						
Sampler:	DV		Date:	10/29/97						
Well I.D.:	MW - 1		Well Diameter:	2	3	4	6	8	_____	
Total Well Depth:			Depth to Water:							
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	Outer	radius ² * 0.163

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Extraction Pump

Other: _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port

Other: _____

1 Case Volume (Gals.)	X	Specified Volumes	=	Calculated Volume	Gals.
-----------------------	---	-------------------	---	-------------------	-------

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
		Well	not sampled		
		(car parked over well)			
		@ 8:30, 10:00, 10:30, 11:30			

Did well dewater? Yes No Gallons actually evacuated:

Sampling Time: Sampling Date:

Sample I.D.: Laboratory: Sequoia GTEL 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 #:	971029-D1	Station #:	5-800
Sampler:	DV	Date:	10/24/97
Well I.D.:	MW-2	Well Diameter:	(2) 3 4 6 8 _____
Total Well Depth:	13.42	Depth to Water:	10.54
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

<u>Well Diameter</u>	<u>Multiplier</u>	<u>Well Diameter</u>	<u>Multiplier</u>
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	$\text{radius}^2 * 0.163$

Purge Method: Bailer
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other: _____

Sampling Method: Bailer
Disposable Bailer ✓
Extraction Port
Other:

$$\frac{0.5}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{1.5}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
10:50	69.6	6.8	700	0.5	
10:52	68.8	7.0	580	1.0	
10:55	68.2	7.2	540	1.5	

Did well dewater? Yes No Gallons actually evacuated: 1,5

Sampling Time: 11:00 Sampling Date: 10/29/97

Sample I.D.: MW-2 Laboratory: Sequoia GTEL 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 #:	971029-D	Station #:	S-800
Sampler:	DV	Date:	10/29/97
Well I.D.:	MW-3	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	14.34	Depth to Water:	10.33
Depth to Free Product:		Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

<u>Well Diameter</u>	<u>Multiplier</u>	<u>Well Diameter</u>	<u>Multipplier</u>
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	$\text{radius}^2 \times 0.163$

Purge Method: Bailer
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other: _____

Sampling Method: Bailer
Disposable Baile~~x~~
Extraction Port
Other:

$$\frac{0.7}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{2.1}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
11:20	68.7	6.9	1100	0.75	odor/sheen / tiny white bags floating on the surface
11:25	68.8	7.0	1000	1.5	odor/sheen
11:30	70.1	7.1	1000	2.25	strong odor

Did well dewater? Yes No Gallons actually evacuated: 2.25

Sampling Time: 11:35 Sampling Date: 10/24/17

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

Analyzed for: TRH-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 #:	971029-DI		Station #:	S-800					
Sampler:	DV		Date:	10/29/97					
Well I.D.:	MW-4		Well Diameter:	2	3	4	6	8	_____
Total Well Depth:	_____		Depth to Water:	8.66					
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: _____

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

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
		Well	Not Sampled		
			Debris lodged in well at 8,90		
			unable to purge any water		

Did well dewater? Yes No Gallons actually evacuated:

Sampling Time: Sampling Date:

Sample I.D.: Laboratory: Sequoia GTEL 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 #:	971029-PI		Station #:	S-800						
Sampler:	DV		Date:	10/29/97						
Well I.D.:	MW-S		Well Diameter:	2	3	4	6	8		
Total Well Depth:			Depth to Water:							
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: _____

1 Case Volume (Gals.)	X	=	Gals.
			Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
		No	Sample Taken		
		Car	parked down well		
		@ 8:30, 9:30	11:00, 12:00		

Did well dewater? Yes No Gallons actually evacuated:

Sampling Time: Sampling Date:

Sample I.D.: Laboratory: Sequoia GTEL 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 #:	971028 971029-D1	Station #:	S - 800				
Sampler:	DV	Date:	10/29/97				
Well I.D.:	MW-6	Well Diameter:	(2)	3	4	6	8
Total Well Depth:	19.70	Depth to Water:	9.75				
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: _____

$$\frac{1.7}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{5.1}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
10:20	71.0	6.9	220	2	
10:23	70.8	6.8	220	4	
10:27	69.0	6.9	240	5.5	

Did well dewater? Yes No Gallons actually evacuated: 5.5

Sampling Time: 10:30 Sampling Date: 10/29/97

Sample I.D.: MW-6 Laboratory: Sequoia GTEL 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 #: 971029-D1	Station #: 5-000	
Sampler: DV	Date: 10/29/97	
Well I.D.: MW-7	Well Diameter: (2) 3 4 6 8	
Total Well Depth: 18.38	Depth to Water: 11.08	
Depth to Free Product:	Thickness of Free Product (feet):	
Referenced to: PVC	Grade	D.O. Meter (if req'd): YSI HACH

<u>Well Diameter</u>	<u>Multiplier</u>	<u>Well Diameter</u>	<u>Multiplier</u>
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: _____

$$\frac{1.2}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{3.6}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
9:15	63.0	6.9	1400	1.25	
9:19	62.4	7.0	800	3.25	
9:25	62.4	7.0	740	4	

Did well dewater? Yes Gallons actually evacuated: 4

Sampling Time: 9:27 Sampling Date: 10/29/97

Sample I.D.: MW-7 Laboratory: Sequoia GTEL 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 #:	971029-D1	Station #:	5-000
Sampler:	DV	Date:	10/29/97
Well I.D.:	MW-7	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	18.38	Depth to Water:	11.08
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 Baile~~r~~
 Middleburg
 Electric Submersible
 Extraction Pump
 Other: _____

Sampling Method: Bailer
 Disposable Baile~~r~~
 Extraction Port
 Other: _____

$$\frac{1.2}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{3.6}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
9:15	67.0	6.9	1400	1.25	
9:19	62.4	7.0	800	2.5	
9:25	62.4	7.0	740	4	

Did well dewater? Yes No Gallons actually evacuated: 4

Sampling Time: 9:27 Sampling Date: 10/29/97

Sample I.D.: MW-7 Laboratory: Sequoia GTEL 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