

ENVIRONMENTAL  
PROTECTION



**Chevron**

October 14, 1996

96 OCT 22 PM 2:31

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

# 541

**Chevron U.S.A. Products Company**  
6001 Bollinger Canyon Road  
Building L  
San Ramon, CA 94583  
P.O. Box 5004  
San Ramon, CA 94583-0804

**Marketing - Northwest Region**  
Phone 510 842 9500

**Re: Chevron Service Station #9-1851  
451 Hegenberger Road, Alameda, California**

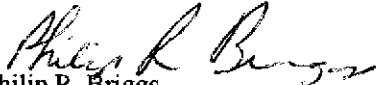
Dear Mr. Chan:

Enclosed is the First and Second Quarter 1996 Groundwater Monitoring Reports that were prepared by our consultant Blaine Tech Services Inc., for the above noted site. I apologize for the delay in the submittal of the quarterly reports and future reports will be submitted in a timely manner. The groundwater samples collected were analyzed for TPH-g, BTEX, MtBE, TPH-d and VOC constituents, in monitoring well M-2 and analyzed for TPH-g, BTEX, and MtBE constituents for the remaining three wells.

Low concentrations of TPH-g, BTEX, MtBE, TPH-d and VOC constituents were detected in monitoring well MW-2. Concentrations of TPH-g, and BTEX constituents were below method detection levels in the other three monitoring wells. The ground water depth varied from 3.33 to 4.61 feet below grade in the first quarter and with a ground water flow to the southwest. In the second quarter the water depth varied from 3.60 to 4.60 feet below grade and with a ground water flow to the northwest.

Chevron will continue to monitor the wells quarterly. If you have any questions, I can be contacted at (510) 842-9136.

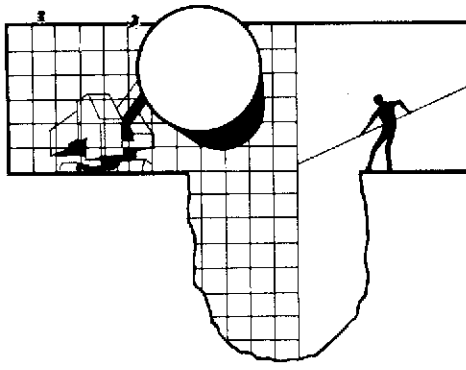
Sincerely,  
CHEVRON PRODUCTS COMPANY

  
Philip R. Briggs  
Site Assessment and Remediation Project Manager

Enclosure

cc. Mr. Bill Scudder, Chevron

Mr. Ben Shimek  
451 Hegenberger Road  
Oakland, CA 94621



# BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE  
SAN JOSE, CA 95133  
(408) 995-5535  
FAX (408) 293-8773

July 19, 1996

Phil Briggs  
Chevron U.S.A. Products Company  
P. O. Box 5004  
San Ramon, CA 94583-0804

## 2nd Quarter 1996 Monitoring at 9-1851

Second Quarter 1996 Groundwater Monitoring at  
Chevron Service Station Number 9-1851  
451 Hegenberger Rd.  
Oakland, CA

Monitoring Performed on June 26, 1996

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### Groundwater Sampling Report 960626-H-2

This report covers the routine quarterly 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 cursive script that reads "James Keller for".





James Keller  
Vice President

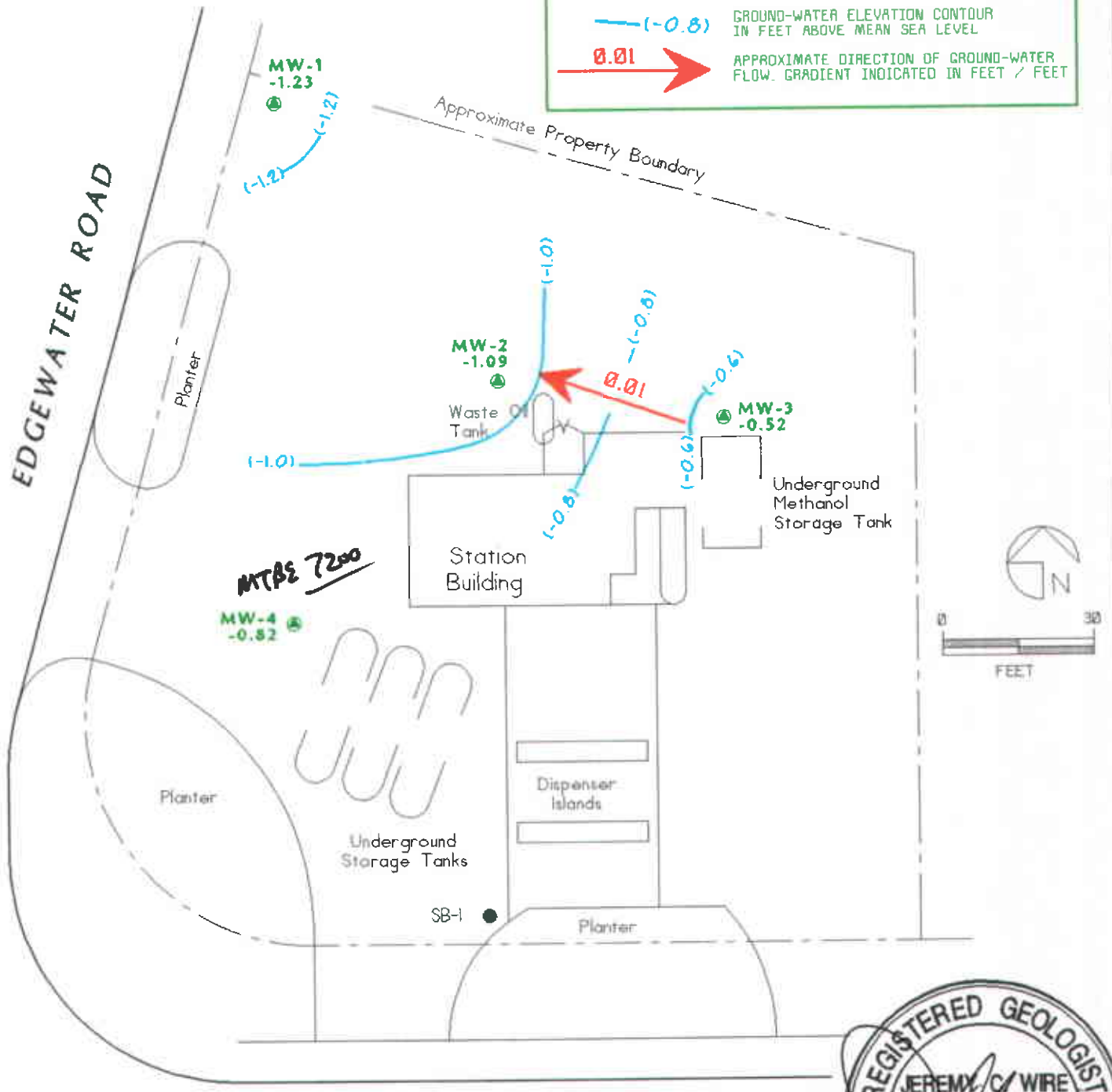
JPK/dk

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

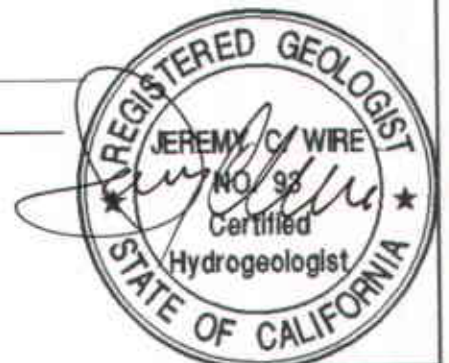
# **Professional Engineering Appendix**

**EXPLANATION**

- MW-1  MONITORING WELL LOCATION AND WELL NUMBER
- SB-1  SOIL BORING LOCATION AND BORING NUMBER
- 1.23 GROUND-WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
-  (-0.8) GROUND-WATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL
-  0.01 APPROXIMATE DIRECTION OF GROUND-WATER FLOW. GRADIENT INDICATED IN FEET / FEET



**HEGENBERGER ROAD**



TITLE : GROUND-WATER ELEVATION CONTOUR MAP - JUNE 26, 1996  
 LOCATION : CHEVRON SERVICE STATION No.: 9-1851 451 HEGENBERGER ROAD, OAKLAND, CALIFORNIA  
 SOURCE : GETTLER-RYAN INC.



**GEOCONSULTANTS, INC**  
 SAN JOSE, CALIFORNIA  
 Project No. 0758-09

DRWG NO. CHEVRON-CHEE2-V482096

# **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	TOG	TPH- Benzene by Diesel (EPA 8240)	Xylene by (EPA 8240)	C-1, 2- DCE	Vinyl Chloride	
<b>MW-1</b>															
10/17/95	2.61	-1.51	4.12	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
03/29/96	2.61	-0.72	3.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
06/26/96	2.61	-1.23	3.84	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
<b>MW-2</b>															
10/17/95	3.51	-1.82	5.33	*	170	3.5	<0.5	1.0	6.1	<5000	1600**	--	--	11	
03/29/96	3.51	-0.44	3.95	--	89	4.7	<0.5	0.64	0.74	--	3000**	11	2.5	17	
06/26/96	3.51	-1.09	4.60	--	80	8.7	<0.5	1.2	1.3	--	2000**	11	<2.0	15	
<b>MW-3</b>															
10/17/95	3.08	-1.34	4.42	***	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
03/29/96	3.08	0.08	3.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
06/26/96	3.08	-0.52	3.60	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
<b>MW-4</b>															
10/17/95	3.48	-1.60	5.08	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	--	--	--	
03/29/96	3.48	-1.13	4.61	--	<1000	<10	<10	<10	<10	--	--	--	--	--	
06/26/96	3.48	-0.82	4.30	--	<2000	<20	<20	<20	<20	--	--	--	--	--	

\* Results of EPA 8010 test indicates that the detection of 1,1-Dichloroethane is 1.7 ppb.

\*\* Chromatogram pattern indicates an unidentified hydrocarbon.

\*\*\* Results of EPA 8015 test indicates that levels of Methanol and Methyl ethyl ketone are respectively <1000 and <200 ppb.

## 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	TOG	TPH- Diesel (EPA 8240)	Benzene (EPA 8240)	Xylene (EPA 8240)	1, 2- DCE	Vinyl Chloride
<b>TRIP BLANK</b>															
10/17/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
03/29/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
06/26/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on March 29, 1996. Earlier field data and analytical results are drawn from the December 29, 1995 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.

TOG = Total Oil Grease

MTBE = Methyl t-butyl ether

C-1,2 DCE = Cis-1,2-Dichloroethylene



# **Analytical Appendix**



Blaine Technical Services	Client Proj. ID: Chevron 9-1851 960626-H2	Sampled: 06/26/96
985 Timothy Drive	Sample Descript: MW-1	Received: 06/27/96
San Jose, CA 95133	Matrix: LIQUID	
Attention: Jim Keller	Analysis Method: 8015Mod/8020	Analyzed: 07/05/96
	Lab Number: 9606G25-01	Reported: 07/13/96

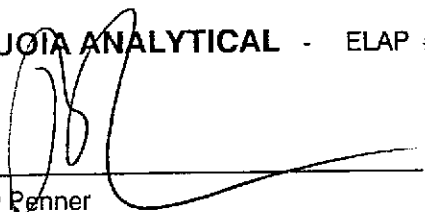
QC Batch Number: GC070596BTEX21A  
Instrument ID: GCHP21

**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	46
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	93

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

SEQUOIA ANALYTICAL - ELAP #1210



\_\_\_\_\_  
Peggy Renner  
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Jim Keller	Client Proj. ID: Chevron 9-1851 960626-H2 Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9606G25-02	Sampled: 06/26/96 Received: 06/27/96 Analyzed: 07/05/96 Reported: 07/13/96
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QC Batch Number: GC070596BTEX21A  
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	80
Methyl t-Butyl Ether	2.5	31
Benzene	0.50	8.7
Toluene	0.50	N.D.
Ethyl Benzene	0.50	1.2
Xylenes (Total)	0.50	1.3
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Jim Keller	Client Proj. ID: Chevron 9-1851 960626-H2 Sample Descript: MW-2 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9606G25-02	Sampled: 06/26/96 Received: 06/27/96 Extracted: 07/02/96 Analyzed: 07/05/96 Reported: 07/13/96
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QC Batch Number: GC0701960HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50 C9-C24	2000 Unidentified HC
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 212 Q

Results quantitated against a diesel standard.  
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Attention: Jim Keller

Client Proj. ID: Chevron 9-1851 960626-H2  
Sample Descript: MW-2  
Matrix: LIQUID  
Analysis Method: EPA 8260  
Lab Number: 9606G25-02

Sampled: 06/26/96  
Received: 06/27/96

Analyzed: 07/09/96  
Reported: 07/13/96

**Volatile Organics (EPA 8260)**

Analyte	Detection Limit 115	Sample Results 115
Benzene	2.0	11
Bromobenzene	2.0	N.D.
Bromochloromethane	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
n-Butylbenzene	2.0	N.D.
sec-Butylbenzene	2.0	N.D.
tert-Butylbenzene	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chloroethane	2.0	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
2-Chlorotoluene	2.0	N.D.
4-Chlorotoluene	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.
Dibromomethane	2.0	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.
Dichlorodifluoromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethylene	2.0	N.D.
cis-1,2-Dichloroethylene	2.0	15
trans-1,2-Dichloroethylene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
1,3-Dichloropropane	2.0	N.D.
2,2-Dichloropropane	2.0	N.D.
1,1-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
Hexachlorobutadiene	2.0	N.D.
Isopropylbenzene	2.0	N.D.





# 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

(415) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Attention: Jim Keller

Client Proj. ID: Chevron 9-1851 960626-H2  
Sample Descript: MW-2  
Matrix: LIQUID  
Analysis Method: EPA 8260  
Lab Number: 9606G25-02

Sampled: 06/26/96  
Received: 06/27/96

Analyzed: 07/09/96  
Reported: 07/13/96

Analyte	Detection Limit 115	Sample Results 115
p-Isopropyltoluene	2.0	N.D.
Methylene chloride	10	N.D.
<b>Naphthalene</b>	<b>2.0</b>	<b>4.6</b>
n-Propylbenzene	2.0	N.D.
Styrene	2.0	N.D.
1,1,1,2-Tetrachloroethane	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethylene	2.0	N.D.
Toluene	2.0	N.D.
1,2,3-Trichlorobenzene	2.0	N.D.
1,2,4-Trichlorobenzene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethylene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
1,2,3-Trichloropropane	2.0	N.D.
1,2,4-Trimethylbenzene	2.0	N.D.
1,3,5-Trimethylbenzene	2.0	12
<b>Vinyl chloride</b>	<b>2.0</b>	<b>N.D.</b>
Total Xylenes	2.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	76 114	Q
Toluene-d8	88 110	101
4-Bromofluorobenzene	86 115	96

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

**SEQUOIA ANALYTICAL** - ELAP #1894

  
Peggy Renner  
Project Manager

Page:

5





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Jim Keller	Client Proj. ID: Chevron 9-1851 960626-H2 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9606G25-03	Sampled: 06/26/96 Received: 06/27/96 Analyzed: 07/05/96 Reported: 07/13/96
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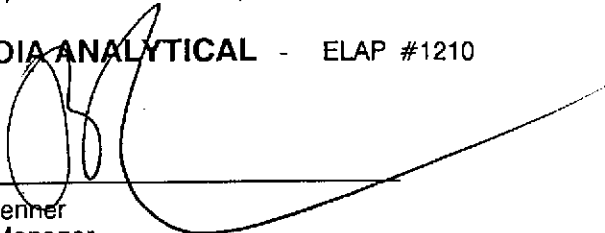
QC Batch Number: GC070596BTEX21A  
Instrument ID: GCHP21

**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	47
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	86

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Jim Keller	Client Proj. ID: Chevron 9-1851 960626-H2 Sample Descript: MW-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9606G25-04	Sampled: 06/26/96 Received: 06/27/96  Analyzed: 07/08/96 Reported: 07/13/96
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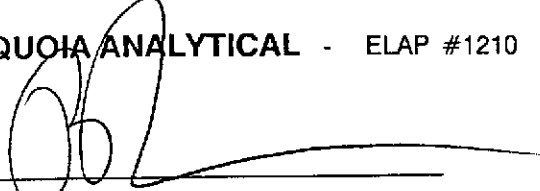
QC Batch Number: GC070896BTEX17A  
Instrument ID: GCHP17

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2000	N.D.
Methyl t-Butyl Ether	100	7200
Benzene	20	N.D.
Toluene	20	N.D.
Ethyl Benzene	20	N.D.
Xylenes (Total)	20	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	110

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Peggy Penner  
Project Manager







Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Jim Keller	Client Proj. ID: Chevron 9-1851 960626-H2 Sample Descript: TB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9606G25-05	Sampled: 06/26/96 Received: 06/27/96 Analyzed: 07/05/96 Reported: 07/13/96
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QC Batch Number: GC070596BTEX21A  
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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	88

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Proj. ID: Chevron 9-1851 960626-H2

Lab Proj. ID: 9606G25

Received: 06/27/96

Reported: 07/13/96

### LABORATORY NARRATIVE

TPPH Note: Sample 9606G25-04 was diluted 40-fold.

8260 Note: Q = Dibromofluoromethane was used as a surrogate to replace 1,2-Dichloroethane-d4 the recovery for this surrogate is 96% with control limits of 86-118 %.

SEQUOIA ANALYTICAL

Peggy Penner  
Project Manager





Blaine Tech Services, Inc. Client Project ID: Chevron 9-1851 / 960626-H2  
 985 Timothy Drive Matrix: Liquid  
 San Jose, CA 95133 Work Order #: 9606G25 -01-03, 05 Reported: Jul 13, 1996  
 Attention: Jim Keller

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC070596BTEX21A	GC070596BTEX21A	GC070596BTEX21A	GC070596BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9606E7103	9606E7103	9606E7103	9606E7103
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/5/96	7/5/96	7/5/96	7/5/96
Analyzed Date:	7/5/96	7/5/96	7/5/96	7/5/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.7	10	10	30
MS % Recovery:	97	100	100	100
Dup. Result:	9.7	10	10	32
MSD % Recov.:	97	100	100	107
RPD:	0.0	0.0	0.0	6.5
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK070596	BLK070596	BLK070596	BLK070596
Prepared Date:	7/5/96	7/5/96	7/5/96	7/5/96
Analyzed Date:	7/5/96	7/5/96	7/5/96	7/5/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	11	32
LCS % Recov.:	100	100	110	107

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

**SEQUOIA ANALYTICAL**

Peggy Penker  
Project Manager

**Please Note:**

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

9606G25.BLA <1>





Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: Chevron 9-1851 / 960626-H2  
Matrix: Liquid

Work Order #: 9606G25-04

Reported: Jul 13, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC070896BTEX17A	GC070896BTEX17A	GC070896BTEX17A	GC070896BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9606H4705	9606H4705	9606H4705	9606H4705
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/8/96	7/8/96	7/8/96	7/8/96
Analyzed Date:	7/8/96	7/8/96	7/8/96	7/8/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	11	31
MS % Recovery:	100	100	110	103
Dup. Result:	10	11	11	32
MSD % Recov.:	100	110	110	107
RPD:	0.0	9.5	0.0	3.2
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK070896	BLK070896	BLK070896	BLK070896
Prepared Date:	7/8/96	7/8/96	7/8/96	7/8/96
Analyzed Date:	7/8/96	7/8/96	7/8/96	7/8/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	11	11	32
LCS % Recov.:	100	110	110	107

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

**SEQUOIA ANALYTICAL**  
  
Reggy Renner  
Project Manager

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

9606G25.BLA <2>





Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: Chevron 9-1851 / 960626-H2  
Matrix: Liquid

Work Order #: 9606G25-02

Reported: Jul 13, 1996

### QUALITY CONTROL DATA REPORT

**Analyte:** Diesel

**QC Batch#:** GC0701960HBPEXB  
**Analy. Method:** EPA 8015M  
**Prep. Method:** EPA 3510

**Analyst:** J. Minkel  
**MS/MSD #:** BLK070196  
**Sample Conc.:** N.D.  
**Prepared Date:** 7/1/96  
**Analyzed Date:** 7/2/96  
**Instrument I.D.#:** GCHP5  
**Conc. Spiked:** 1000 µg/L

**Result:** 860  
**MS % Recovery:** 86

**Dup. Result:** 780  
**MSD % Recov.:** 78

**RPD:** 9.8  
**RPD Limit:** 0-50

**LCS #:** -

**Prepared Date:** -  
**Analyzed Date:** -  
**Instrument I.D.#:** -  
**Conc. Spiked:** -

**LCS Result:** -  
**LCS % Recov.:** -

**MS/MSD** 50-150  
**LCS** 60-140  
**Control Limits**

**SEQUOIA ANALYTICAL**

Peggy Penner  
Project Manager

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

9606G25.BLA <3>





# Sequoia Analytical

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404 N. Wiget Lane  
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(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: Chevron 9-1851 / 960626-H2  
Matrix: Liquid

Work Order #: 9606G25-02

Reported: Jul 13, 1996

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0708968260	MS0708968260	MS0708968260	MS0708968260	MS0708968260
Analy. Method:	EPA 8260	EPA 8260	EPA 8260	EPA 8260	EPA 8260
Prep. Method:	N/A	N/A	N/A	N/A	N/A
Analyst:	J.M.S.	J.M.S.	J.M.S.	J.M.S.	J.M.S.
MS/MSD #:	6070048	6070048	6070048	6070048	6070048
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/8/96	7/8/96	7/8/96	7/8/96	7/8/96
Analyzed Date:	7/8/96	7/8/96	7/8/96	7/8/96	7/8/96
Instrument I.D.#:	-	-	-	-	-
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
Result:	51	43	49	48	49
MS % Recovery:	102	86	98	96	98
Dup. Result:	55	46	52	50	53
MSD % Recov.:	110	92	104	100	106
RPD:	7.5	6.7	5.9	4.1	7.8
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS070896	LCS070896	LCS070896	LCS070896	LCS070896
Prepared Date:	7/8/96	7/8/96	7/8/96	7/8/96	7/8/96
Analyzed Date:	7/8/96	7/8/96	7/8/96	7/8/96	7/8/96
Instrument I.D.#:	-	-	-	-	-
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
LCS Result:	51	43	49	48	49
LCS % Recov.:	102	86	98	96	98

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

Roggy Penner  
Project Manager

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

9606G25.BLA <4>



Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

# Chain-of-Custody-Record

Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591	Chevron Facility Number <u>9-1851</u> Facility Address <u>451 Hegenberger Rd., Oakland, CA</u> Consultant Project Number <u>960626-42</u> Consultant Name <u>Blaine Tech Services, Inc.</u> Address <u>985 Timothy Dr., San Jose, CA 95133</u> Project Contact (Name) <u>Jim Keller</u> (Phone) <u>108 995-5535</u> (Fax Number) <u>408 293-8773</u>	Chevron (Name) <u>Phil Briggs</u> (Phone) <u>6 (510) 842-9136</u> Laboratory, <u>SEQUOIA</u> Laboratory Release Number <u>3741480</u> Samples Collected by (Name) <u>TROY N. HORNER</u> Collection Date <u>6/26/96</u> Signature <u>Troy N. Horner</u>
--	--	--

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										DO NOT BILL FOR TB-LB	Remarks
								STX + TPH GAS (8020 + 8015) <u>MTBE</u>	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)	960625			
<del>MW-1</del>	1	3	W		1435	HCL	Y	X	X										
<del>MW-2</del>	2	8	W		1540	HCL/NONE	Y	X	X										
<del>MW-3</del>	3	3	W		1455	HCL	Y	X	X										
<del>MW-4</del>	4	3	W		1515	HCL	Y	X	X										
<del>TB</del>	5	2	W			HCL	Y	X	X										

Requisitioned By (Signature) <u>Troy N. Horner</u>	Organization <u>BTS</u>	Date/Time <u>6/27/96 1025</u>	Received By (Signature) <u>William Weir</u>	Organization <u>SEQ</u>	Date/Time <u>6/27/96 1025</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days <u>10 Days</u> As Contracted
Requisitioned By (Signature) <u>William Weir</u>	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Requisitioned By (Signature)	Organization	Date/Time	Received By (Signature) <u>Bill Weir</u>	Organization	Date/Time <u>6/27/96 1130</u>	

# **Field Data Sheets**





# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>960626-H2</u>	Station #: <u>9-1851</u>
Sampler: <u>JNH</u>	Date: <u>6/26/96</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>    </u>
Total Well Depth: <u>14.57</u>	Depth to Water: <u>3.84</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 <sup>2</sup> * 0.163

Purge Method:                      Bailer                      Sampling Method:                      Bailer

Disposable Bailer

Middleburg

Electric Submersible

Extraction Pump

Other: \_\_\_\_\_

Disposable Bailer

Extraction Port

Other: \_\_\_\_\_

<u>1.7</u>	x	<u>3</u>	=	<u>5.1</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1425</u>	<u>69.5</u>	<u>7.0</u>	<u>3800</u>	<u>2</u>	
<u>1427</u>	<u>71.8</u>	<u>7.6</u>	<u>3200</u>	<u>4</u>	
<u>1430</u>	<u>72.2</u>	<u>7.8</u>	<u>3000</u>	<u>5.5</u>	

Did well dewater?    Yes    No    Gallons actually evacuated: 5.5

Sampling Time: 1435    Sampling Date: 6/26/96

Sample I.D.: MW-1    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

## CHEVRON WELL MONITORING DATA SHEET

Project #: <u>960626-142</u>	Station #: <u>9-1851</u>
Sampler: <u>TNH</u>	Date: <u>6/26/96</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>14.84</u>	Depth to Water: <u>4.60</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 <sup>2</sup> * 0.163

Purge Method: Bailer Sampling Method: Bailer

Disposable Bailer ~~x~~ Disposable Bailer ~~x~~  
Middleburg Extraction Port  
Electric Submersible Other: \_\_\_\_\_  
Extraction Pump  
 Other: \_\_\_\_\_

<u>1.6</u>	x	<u>3</u>	=	<u>4.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1525</u>	<u>69.2</u>	<u>6.8</u>	<u>9000</u>	<u>2</u>	<u>ODOR SHEEN</u>
<u>1528</u>	<u>67.6</u>	<u>6.8</u>	<u>22000</u>	<u>4</u>	<u>HCL REACTANCE</u>
<u>1531</u>	<u>67.2</u>	<u>7.0</u>	<u>20000</u>	<u>5.0</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 5.0

Sampling Time: 1540 Sampling Date: 6/26/96

Sample I.D.: MW-2 Laboratory: (Sequoia) GTEL

Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D) Other: 8240

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

## CHEVRON WELL MONITORING DATA SHEET

Project #: <u>960626-HZ</u>	Station #: <u>9-1851</u>
Sampler: <u>TNH</u>	Date: <u>6/26/86</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>14.62</u>	Depth to Water: <u>3.60</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 <sup>2</sup> * 0.163

Purge Method:                      Bailer                                      Sampling Method:                      Bailer

Disposable Bailer    Disposable Bailer

Middleburg    Extraction Port

Electric Submersible    Other: \_\_\_\_\_

Extraction Pump

Other: \_\_\_\_\_

<u>1.8</u>	x	<u>3</u>	=	<u>5.4</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1445</u>	<u>72.2</u>	<u>7.0</u>	<u>3500</u>	<u>2</u>	
<u>1448</u>	<u>72.2</u>	<u>7.0</u>	<u>3600</u>	<u>4</u>	
<u>1451</u>	<u>72.2</u>	<u>7.0</u>	<u>3500</u>	<u>5.5</u>	

Did well dewater?    Yes    (No)    Gallons actually evacuated: 5.5

Sampling Time: 1455    Sampling Date: 6/26/86

Sample I.D.: MW-3    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

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>960626-H2</u>	Station #: <u>9-1851</u>
Sampler: <u>TNH</u>	Date: <u>6/26/96</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>    </u>
Total Well Depth: <u>15.00</u>	Depth to Water: <u>4.30</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 <sup>2</sup> * 0.163

Purge Method:                      Bailer                      Sampling Method:                      Bailer

Disposable Bailer

Middleburg

Electric Submersible

Extraction Pump

Other: \_\_\_\_\_

Disposable Bailer

Extraction Port

Other: \_\_\_\_\_

<u>1.7</u>	x	<u>3</u>	=	<u>5.1</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1502</u>	<u>70.2</u>	<u>7.0</u>	<u>3800</u>	<u>2</u>	
<u>1505</u>	<u>68.3</u>	<u>7.0</u>	<u>5400</u>	<u>4</u>	
<u>1508</u>	<u>67.8</u>	<u>7.2</u>	<u>5600</u>	<u>5.5</u>	

Did well dewater?    Yes    (No)    Gallons actually evacuated: 5.5

Sampling Time: 1515                      Sampling Date: 6/26/96

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