Chevron

November 14, 1998

Chevron Products Company
6001 Bollinger Canyon Road
Building L, Room 1110
PO Box 6004
San Ramon, CA 94583-0904

Philip R. Briggs
Project Manager
Site Assessment & Remediation
Phone 925 842-9136
Fax 925 842-8370

#541

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

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

- MTBE increased — MW1 - 3900 → 16,000 ppb 210 - 1400 TPHg
MW3 - 390 → 830
MW4 - 6800 → 14,000

Dear Mr. Chan:

Enclosed is the Third Quarter Groundwater Monitoring Report for 1998 that was prepared by our consultant Blaine Tech Services Inc., for the above noted site. The groundwater samples collected were analyzed for the TPH-g, BTEX and MtBE constituents. Your letter of April 10, 1998 approved the discontinuance for the sampling of VOC's in monitoring well M-2.

The benzene constituent increased in all four monitoring wells from the previous sampling event. The increase in this constituent is unexplained unless it is an anomaly, in which additional sampling will be needed to confirm this. The highest concentration of MtBE and benzene was detected in well MW-1, and MtBE was confirmed in this well by using EPA Method 8260. These concentrations are unexplainable, as this well is located significantly away and cross gradient of the fueling facilities.

I asked Sequoia Labs to review the chromatograms and they informed me that they compared with the results shown. I also talked with Blaine Tech and they could not find any discrepancy in their sampling procedures. However, when they perform the next sampling event they will insure that there is no deviation in their quality procedures.

The depth to ground water varied from 3.49 feet to 5.42 feet below grade with a direction of flow southwesterly.

Chevron will continue to monitor the site quarterly, with the next event scheduled in December. If you have any questions call me at (925) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

Cc. Bill Scudder, Chevron

Mr. Ben Shimek
451 Hegenberger Road
Oakland, CA 94621

BLAINE
TECH SERVICES, INC.

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

October 19, 1998

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

3rd Quarter 1998 Monitoring at 9-1851

Third Quarter 1998 Groundwater Monitoring at
Chevron Service Station Number 9-1851
451 Hegenberger Rd.
Oakland, CA

Monitoring Performed on August 31, 1998

Groundwater Sampling Report **980831-H-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.

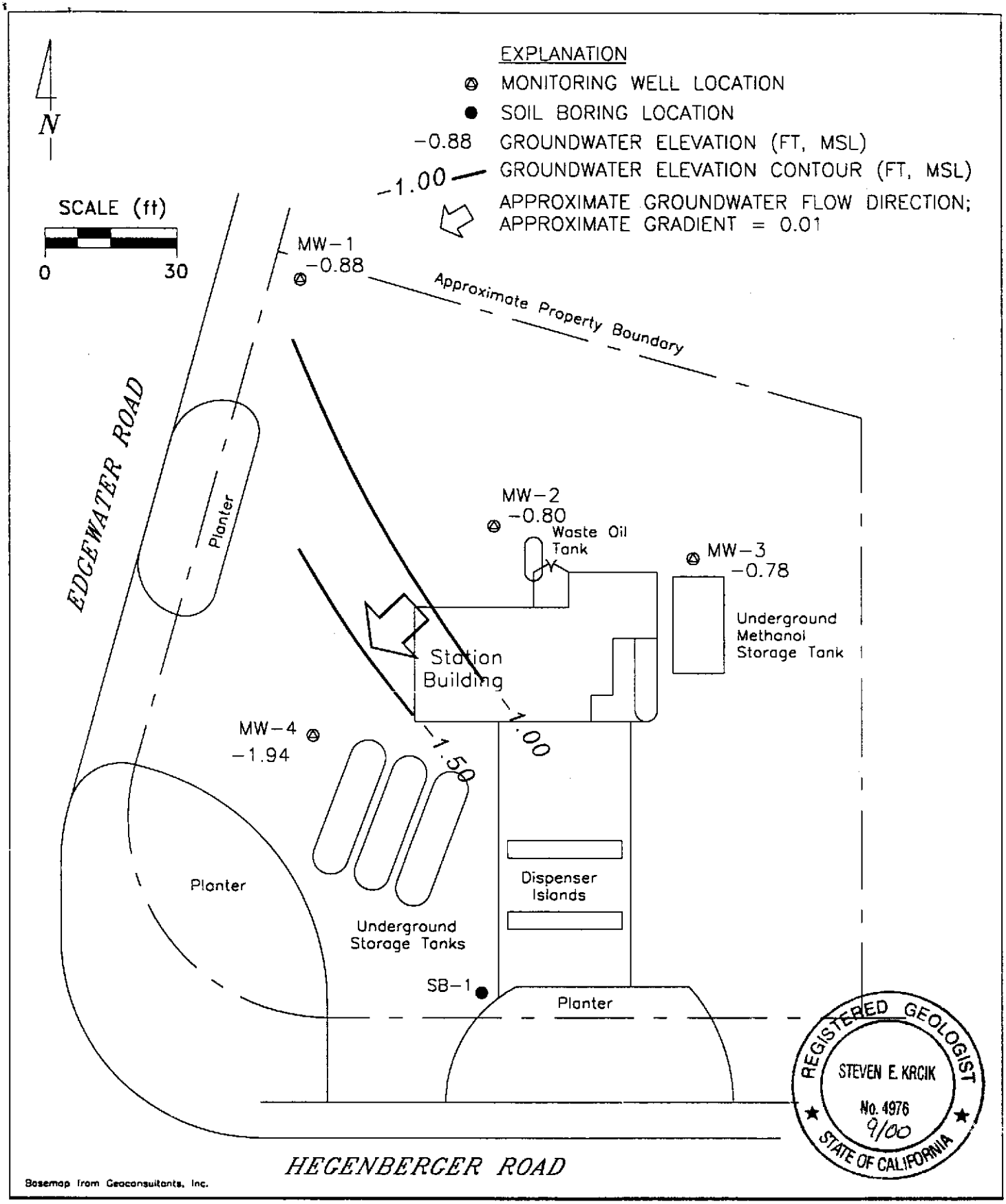
Yours truly,

Francis Thie
Vice President

FPT/dg

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

Professional Engineering Appendix



PREPARED BY RRM engineering contracting firm	**Chevron Station 9-1851** 451 Hegenberger Road Oakland, California **GROUNDWATER ELEVATION CONTOUR MAP, AUGUST 31, 1998**	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	TOG	TPH-Diesel	Benzene by (EPA 8240)	Xylene by (EPA 8240)	C-1, 2-DCE	Carbon Disulfide	Vinyl Chloride	MTBE
MW-1																	
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	--	--	--	--	--	--	--	9.5
06/26/96	2.61	-1.23	3.84	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	46
09/25/96	2.61	-1.41	4.02	--	<250	<2.5	<2.5	<2.5	<2.5	--	--	--	--	--	--	--	940
12/17/96	2.61	-0.96	3.57	--	<50	0.86	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	260
03/20/97	2.61	-1.54	4.15	--	<50	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	--	76
06/20/97	2.61	-1.72	4.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	64
09/09/97	2.61	-1.74	4.35	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	110
12/12/97	2.61	-0.39	3.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	27
02/19/98	2.61	0.78	1.83	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	14
06/23/98	2.61	-0.73	3.34	***	210	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	3400
08/31/98	2.61	-0.88	3.49	***	1400	630	<5.0	<5.0	<5.0	--	--	--	--	--	--	--	16,000
MW-2																	
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	--	5.4	21
06/26/96	3.51	-1.09	4.60	--	80	8.7	<0.5	1.2	1.3	--	2000**	11	<2.0	15	--	12	31
09/25/96	3.51	--	--	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--
12/17/96	3.51	-0.41	3.92	--	110	<0.5	<0.5	0.75	2.1	--	2400**	10	<2.0	2.3	--	5.5	27
03/20/97	3.51	-1.32	4.83	--	140	8.2	<2.0	<2.0	<2.0	--	3400**	--	--	<2.0	--	3.2	58
06/20/97	3.51	-1.53	5.04	--	62	7.7	<0.5	<0.5	<0.5	--	1600**	7.2	<2.0	4.6	2.2	5.2	38
09/09/97	3.51	-1.47	4.98	--	190	9.4	<0.5	<0.5	0.86	--	82**	11	<2.0	<2.0	<2.0	<2.0	48
12/12/97	3.51	-0.40	3.91	--	180	1.8	<0.5	<0.5	3.2	--	8500**	<2.0	<2.0	<2.0	<2.0	<2.0	34
02/19/98	3.51	0.55	2.96	--	<100	1.8	<1.0	<1.0	<1.0	--	3800**	<3.3	<3.3	<3.3	<3.3	<3.3	230
06/23/98	3.51	-0.54	4.05	***	60	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	55
08/31/98	3.51	-0.80	4.31	--	61	2.2	<0.5	<0.5	1.1	--	--	--	--	--	--	--	53

* Results of EPA 8010 test indicates that the detection of 1,1-Dichloroethane is 1.7 ppb.
** Chromatagram pattern indicates an unidentified hydrocarbon.
*** See Table of Additional Analyses

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	Benzene (EPA 8240)	Xylene (EPA 8240)	1, 2-DCE	Carbon Disulfide	Vinyl Chloride	MTBE
MW-3																	
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	--	--	--	--	--	--	--	26
06/26/96	3.08	-0.52	3.60	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	47
09/25/96	3.08	-1.06	4.14	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	--	--	--	--	--	570
12/17/96	3.08	-0.12	3.20	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	--	680
03/20/97	3.08	-0.22	3.30	--	<50	<5.7	<5.7	<5.7	<5.7	--	--	--	--	--	--	--	430
06/20/97	3.08	-0.78	3.86	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	--	1400
09/09/97	3.08	-1.11	4.19	--	76**	22	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	920
12/12/97	3.08	0.12	2.96	--	52	15	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	710
02/19/98	3.08	0.86	2.22	--	<50	6.6	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	380
06/23/98	3.08	-0.17	3.25	*	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	390
08/31/98	3.08	-0.78	3.86	--	<50	19	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	830
MW-4																	
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	--	--	--	--	--	--	--	6700
06/26/96	3.48	-0.82	4.30	--	<2000	<20	<20	<20	<20	--	--	--	--	--	--	--	7200
09/25/96	3.48	-1.85	5.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/17/96	3.48	0.67	2.81	--	<2000	120	<20	<20	<20	--	--	--	--	--	--	--	11,000
03/20/97	3.48	-1.02	4.50	--	250**	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	--	10,000
03/20/97	3.48	-1.02	4.50	Conf. run	--	--	--	--	--	--	--	--	--	--	--	--	8600
06/20/97	3.48	-2.20	5.68	--	<2500	<25	<25	<25	<25	--	--	--	--	--	--	--	9300
09/09/97	3.48	-2.02	5.50	--	460**	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	6600
12/12/97	3.48	-1.55	5.03	--	430**	120	<2.5	<2.5	<2.5	--	--	--	--	--	--	--	7800
02/19/98	3.48	0.13	3.35	--	510**	130	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	6600
06/23/98	3.48	-1.50	4.98	*	550**	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	6800
08/31/98	3.48	-1.94	5.42	--	<500	450	<5.0	<5.0	<5.0	--	--	--	--	--	--	--	14,000

* See Table of Additional Analyses

** Chromatagram pattern indicates an unidentified hydrocarbon.

*** Results of EPA 8015 test indicates that levels of Methanol and Methyl ethyl ketone are respetively <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	Benzene (EPA 8240)	Xylene (EPA 8240)	1, 2-DCE	Carbon Disulfide	Vinyl Chloride	MTBE
TRIP BLANK																	
10/17/95																	
03/29/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
06/26/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
09/25/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/17/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
03/20/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
06/20/97	--	--	--	--	<50	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	--	--
09/09/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/12/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
02/19/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
06/23/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
08/31/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5

Cumulative Table of Well Data and Analytical Results

ADDITIONAL ANALYSES

Vertical Measurements are in feet. Analytical values are in parts per billion (ppb)

DATE	Notes	Ethanol	t-Butanol	MTBE	DIPE	ETBE	TAME
MW-1							
06/23/98	--	<50000	<10000	4500	<200	<200	<200
08/31/98	--	--	--	17,000	--	--	--
			VS	16000	(8020)		
MW-2							
06/23/98	--	<500	<100	56	<2.0	<2.0	<2.0
			VS	53	(8020)		
MW-3							
06/23/98	--	<5000	<1000	420	<20	<20	26
			VS	450	(8020)		
MW-4							
06/23/98	--	<50000	<10000	11000	<200	<200	860
			VS	14000	(8020)		

8260

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
DIPE = Di-Isopropl Ether
ETBE = Ethyl t-Butyl Ether
TAME = t-Amyl Methyl Ether
C-1,2 DCE = Cis-1,2-Dichloroethylene
Conf. run = Confirmation run

Analytical Appendix

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services	Client Proj. ID: Chevron 9-1851/980831-H2	Sampled: 08/31/98
1680 Rogers Avenue	Sample Descript: MW-1	Received: 09/01/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/09/98
Attention: Fran Thie	Lab Number: 9809034-01	Reported: 09/17/98

QC Batch Number: GC090998802002A
Instrument ID: HP2

Total Purgeable Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**1400**
Methyl t-Butyl Ether	**100**	**16000**
Benzene	**5.0**	**630**
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	120

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
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, (925) 988-9600, FAX (925) 988-9673
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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron 9-1851/980831-H2
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: EPA 8260
Lab Number: 9809034-01

Sampled: 08/31/98
Received: 09/01/98

Analyzed: 09/17/98
Reported: 09/17/98

QC Batch Number: MS0917988260S2A

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	**200**	**17000**

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	Q
Toluene-d8	88	110	Q
4-Bromofluorobenzene	86	115	Q

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
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, (925) 988-9600, FAX (925) 988-9673
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Blaine Tech Services	Client Proj. ID: Chevron 9-1851/980831-H2	Sampled: 08/31/98
1680 Rogers Avenue	Sample Descript: MW-2	Received: 09/01/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/09/98
Attention: Fran Thie	Lab Number: 9809034-02	Reported: 09/17/98

QC Batch Number: GC090998802002A
Instrument ID: HP2

Total Purgeable Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**61**
Methyl t-Butyl Ether	**2.5**	**53**
Benzene	**0.50**	**2.2**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**1.1**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	116

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
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, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron 9-1851/980831-H2
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9809034-03

Sampled: 08/31/98
Received: 09/01/98

Analyzed: 09/09/98
Reported: 09/17/98

QC Batch Number: GC090998802002A
Instrument ID: HP2

Total Purgeable 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	**50**	**830**
Benzene	**0.50**	**19**
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	124

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
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, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services	Client Proj. ID: Chevron 9-1851/980831-H2	Sampled: 08/31/98
1680 Rogers Avenue	Sample Descript: MW-4	Received: 09/01/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/14/98
Attention: Fran Thie	Lab Number: 9809034-04	Reported: 09/17/98

QC Batch Number: GC091498802002A
Instrument ID: HP2

Total Purgeable Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	**100**	**14000**
Benzene	**5.0**	**450**
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	120

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Chevron 9-1851/980831-H2	Sampled: 08/31/98
1680 Rogers Avenue	Sample Descript: TB	Received: 09/01/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/09/98
Attention: Fran Thie	Lab Number: 9809034-05	Reported: 09/17/98

QC Batch Number: GC090998802002A
Instrument ID: HP2

Total Purgeable 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	125

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Chevron 9-1851/980831-H2	Received: 09/01/98
1680 Rogers Avenue		
San Jose, CA 95112	Lab Proj. ID: 9809034	Reported: 09/17/98
Attention: Fran Thie		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 11 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Surrogate Note:
For MTBE confirmation, the surrogate used was Dibromofluoromethane which had a recovery of 97% with control limits 50-150.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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Blaine Tech Services, Inc.	Client Project ID:	Chevron 9-1851/ 980831-H2	
1680 Rogers Ave.	Matrix:	Liquid	
San Jose, CA 95112			
Attention: Fran Thie	Work Order #:	9809034 -01-03, 05	Reported: Sep 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC090998802002A	GC090998802002A	GC090998802002A	GC090998802002A	GC090998802002A
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:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	8090291	8090291	8090291	8090291	8090291
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/9/98	9/9/98	9/9/98	9/9/98	9/9/98
Analyzed Date:	9/9/98	9/9/98	9/9/98	9/9/98	9/9/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	310 µg/L
Result:	17	18	18	55	310
MS % Recovery:	85	90	90	92	100
Dup. Result:	19	19	20	59	300
MSD % Recov.:	95	95	100	98	97
RPD:	11.1	5.4	10.5	7.0	3.3
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS090998	LCS090998	LCS090998	LCS090998	LCS090998
Prepared Date:	9/9/98	9/9/98	9/9/98	9/9/98	9/9/98
Analyzed Date:	9/9/98	9/9/98	9/9/98	9/9/98	9/9/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	310 µg/L
LCS Result:	17	17	17	54	290
LCS % Recov.:	85	85	85	90	94
MS/MSD Control Limits	60-140	60-140	60-140	60-140	
LCS Control Limits	70-130	70-130	70-130	70-130	60-140

SEQUOIA ANALYTICAL
Elap #1271

Mike Gregory
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

Sequoia Analytical

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Blaine Tech Services, Inc.	Client Project ID:	Chevron 9-1851 / 980831-H2	
1680 Rogers Ave.	Matrix:	Liquid	
San Jose, CA 95112			
Attention: Fran Thie	Work Order #:	9809034-04	Reported: Sep 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC0914988O2002A	GC091498802002A	GC091498802002A	GC0914988O2002A	GC091498802002A
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:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	8090862	8090862	8090862	8090862	8090862
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Analyzed Date:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	280 µg/L
Result:	24	23	23	68	360
MS % Recovery:	120	115	115	113	129
Dup. Result:	22	22	22	65	340
MSD % Recov.:	110	110	110	108	121
RPD:	8.7	4.4	4.4	4.5	5.7
RPD Limit:	0-20	0-20	0-20	0-20	0-50

LCS #:	LCS091498	LCS091498	LCS091498	LCS091498	LCS091498
Prepared Date:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Analyzed Date:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	280 µg/L
LCS Result:	24	23	23	69	340
LCS % Recov.:	120	115	115	115	121

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

SEQUOIA ANALYTICAL
Elap #1271

Mike Gregory
Project Manager

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

Sequoia Analytical

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Blaine Tech Services, Inc.	Client Project ID:	Chevron 9-1851/ 980831-H2	
1680 Rogers Ave.	Matrix:	Liquid	
San Jose, CA 95112			
Attention: Fran Thie	Work Order #:	9809034-01	Reported: Sep 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS0917988260S2A
Analy. Method:	EPA 8260
Prep. Method:	EPA 5030
Analyst:	N. Nelson
MS/MSD #:	
Sample Conc.:	
Prepared Date:	
Analyzed Date:	
Instrument I.D.#:	
Conc. Spiked:	
Result:	
MS % Recovery:	
Dup. Result:	
MSD % Recov.:	
RPD:	
RPD Limit:	

LCS #:	LCS091798
Prepared Date:	9/17/98
Analyzed Date:	9/17/98
Instrument I.D.#:	GCMS2
Conc. Spiked:	66 µg/L
LCS Result:	78
LCS % Recov.:	118

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

SEQUOIA ANALYTICAL
Elap #1271

Mike Gregory
Project Manager

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

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

98-09-034

Chevron Facility Number 9-1851
Facility Address 451 Hegenberger Rd., Oakland, CA
Consultant Project Number 980831-H2
Consultant Name Blaine Tech Services, Inc.
Address 1680 Rogers Ave., San Jose, CA 95112
Project Contact (Name) Fran Thie
(Phone) (408)573-0555 (Fax Number) (408)573-7771

Chevron Contact (Name) Phil Briggs
(Phone) (510)842-9136
Laboratory Name
Laboratory Release Number 9034738
Samples Collected by (Name) Morgan Hargrave
Collection Date 8-31-98
Signature [signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015) / MTBE	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)						Remarks
MW-1		3	W	D	1400	HCl	Yes	X													
MW-2		↓	↓	↓	1345	↓	↓	↓													
MW-3		↓	↓	↓	1330	↓	↓	↓													
MW-4		↓	↓	↓	1416	↓	↓	↓													
TB		2	↓	↓	—	↓	↓	↓													

Analyses To Be Performed

DO NOT BILL FOR TB-LB

Remarks: Run 8260 confirmation on highest MTBE hit.

1 2 29

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	BTS	9/1/98 11:54	[signature]	Sequoia	9/1/98 11:54
[signature]		9/1/98			
			Received For Laboratory By (Signature): [signature]		9/1/98 14:29

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted (circled)

Field
Data
Sheets

WELL GAUGING DATA

Project # 950831-H2 Date 8/31/98 Client Chevron

Site 451 Hagenberger, Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
MW-1	2					3.49	14.64	TOC	
MW-2	↓					4.31	14.95	↓	
MW-3						3.86	14.74		
MW-4	↓					5.42	15.11	↓	

CHEVRON WELL MONITORING DATA SHEET

Project #: 980831-H2	Station #: 9-1851
Sampler: MH	Date: 8/31/98
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 14.64	Depth to Water: 3.49
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	radius² * 0.163

Purge Method:
- Bailer
- X Disposable Bailer
- Middleburg
- Electric Submersible
- Extraction Pump
- Other: ___

Sampling Method:
- Bailer
- X Disposable Bailer
- Extraction Port
- Other: ___

1.8 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 5.4 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1349	80.2	6.6	3074	2	Slight odor
1352	79.6	6.6	3104	4	↓
1356	79.6	6.6	3105	6	↓

Did well dewater? Yes (No)		Gallons actually evacuated: 6	
Sampling Time: 1400		Sampling Date: 8/31	
Sample I.D.: MW-1		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 #: 980831-H2	Station #: 9-1851
Sampler: MH	Date: 8/31/98
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 14.95	Depth to Water: 4.31
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	radius² * 0.163

Purge Method:
- Bailer
- (X) Disposable Bailer
- Middleburg
- Electric Submersible
- Extraction Pump
- Other: _____

Sampling Method:
- Bailer
- (X) Disposable Bailer
- Extraction Port
- Other: _____

1.7 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 5.1 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1336	79.1	6.2	7421	2	sheen / slight odor
1339	78.4	6.4	7586	4	↓
1342	78.3	6.4	7571	5	↓

Did well dewater? Yes (No)		Gallons actually evacuated: 5	
Sampling Time: 1345		Sampling Date: 8/31	
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 #: 980831-H2	Station #: 9-1851
Sampler: MH	Date: 8/31/98
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 14.74	Depth to Water: 3.86
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	radius² * 0.163

Purge Method:
- Bailer
- (X) Disposable Bailer
- Middleburg
- Electric Submersible
- Extraction Pump
- Other: ___

Sampling Method:
- Bailer
- (X) Disposable Bailer
- Extraction Port
- Other: ___

1.7 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 5.1 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1321	79.5	6.3	5240	2	
1324	76.4	6.5	5198	4	
1328	76.1	6.5	5061	5	

Did well dewater? Yes (No)		Gallons actually evacuated: 5	
Sampling Time: 1330		Sampling Date: 8/31	
Sample I.D.: MW-3		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 #: 980831-H2	Station #: 9-1851
Sampler: MH	Date: 8/31/98
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 15.11	Depth to Water: 5.42
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	radius² * 0.163

Purge Method:
- Bailer
- (X) Disposable Bailer
- Middleburg
- Electric Submersible
- Extraction Pump
- Other: ___

Sampling Method:
- Bailer
- (X) Disposable Bailer
- Extraction Port
- Other: ___

1.6 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 4.8 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1406	77.1	6.8	3825	2	Slight Odor
1410	76.8	6.7	3831	4	↓
1414	76.9	6.7	3830	5	↓

Did well dewater? Yes (No) Gallons actually evacuated: 5

Sampling Time: 1416 Sampling Date: 8/31

Sample I.D.: MW-4 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