Chevron

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

February 24, 1997

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 , Alameda, California

Dear Mr. Chan:

Enclosed is the Third and Fourth Quarter 1996 Groundwater Monitoring Reports that were prepared by our consultant Blaine Tech Services Inc., for the above noted site. 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 continue to be detected in monitoring well MW-2. There was a slight increase in concentrations of BTEX constituents in monitoring wells MW-1 and MW-3 from the second quarter sampling event. Monitoring well MW-4 was below method detection levels in the third quarter for all constituents, but concentrations of all constituents were detected in the fourth quarter.

The ground water depth varied from 4.02 to 5.33 feet below grade in the third quarter and with a ground water flow to the southwest. In the fourth quarter the water depth varied from 2.81 to 3.92 feet below grade and with a ground water flow northerly. There was a reversal in groundwater flow direction in the fourth quarter from the third quarter, however the fourth quarter is similar in direction as the first quarter. The second quarter is similar to the third quarter in flow direction.

recent
-shallow
release
piping @
dispenser

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.

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

541

January 20, 1997

Phil Briggs
Chevron U.S.A. Products Company
P. 0. Box 5004
San Ramon, CA 94583-0804

4th Quarter 1996 Monitoring at 9-1851

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

Monitoring Performed on December 17, 1996

Groundwater Sampling Report **961217-C-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.

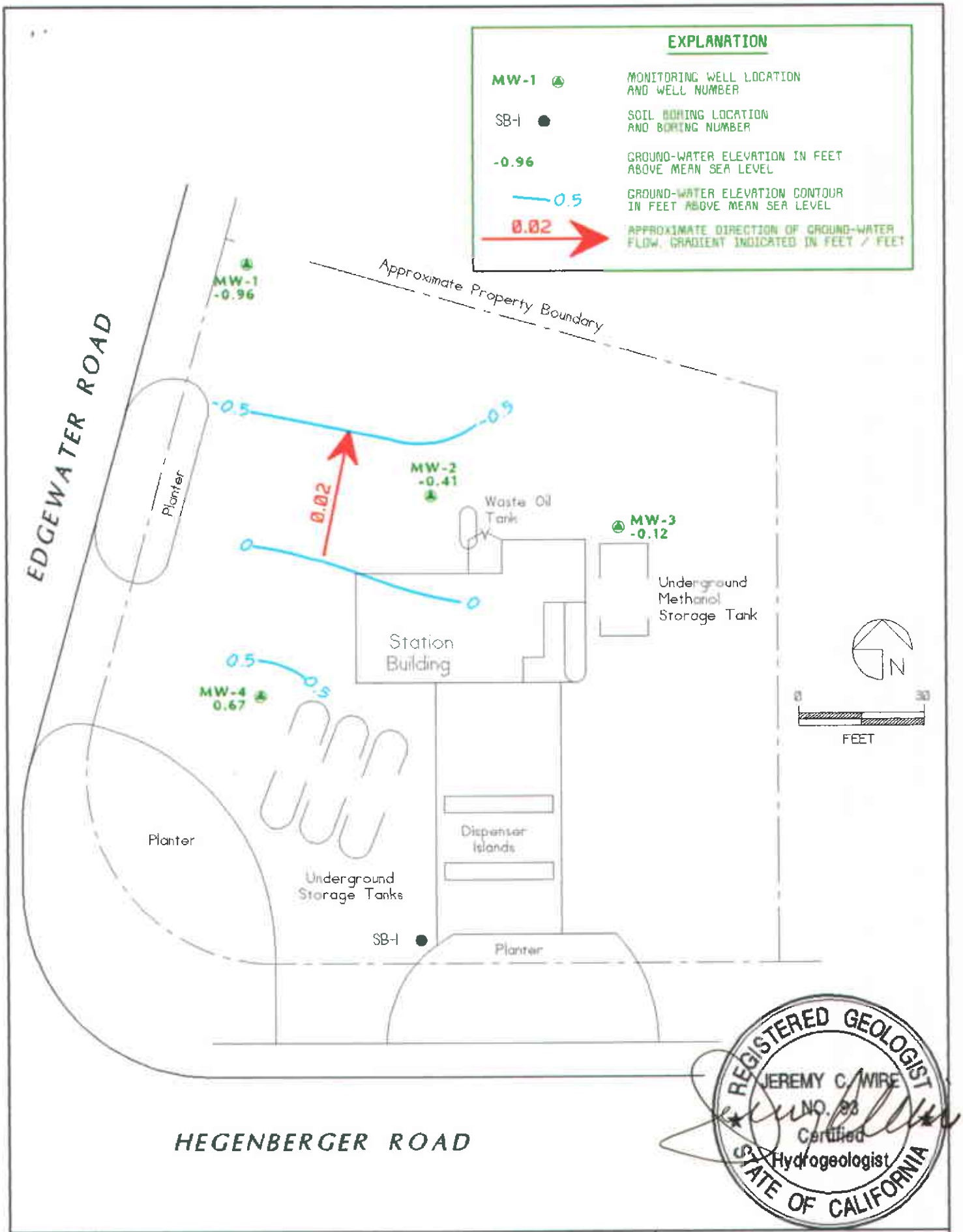
Yours truly,

James Keller
Vice President

JPK/cg

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

Professional Engineering Appendix



TITLE : GROUND-WATER ELEVATION CONTOUR MAP - DECEMBER 17, 1996

LOCATION : CHEVRON SERVICE STATION No.: 9-1851
451 HEGENBERGER ROAD, OAKLAND, CALIFORNIA

SOURCE : GETTLER-RYAN INC.

GEOCONSULTANTS, INC
SAN JOSE, CALIFORNIA
Project No. G758-09

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	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
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
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
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

* Results of EPA 8010 test indicates that the detection of 1,1-Dichloroethane is 1.7 ppb.
** 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	Vinyl Chloride	MTBE
TRIP BLANK																
10/17/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
03/29/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	<2.5
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

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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 Technical Services	Client Proj. ID: Chevron 9-1851/961217-C-2	Sampled: 12/17/96
1680 Rogers Avenue	Sample Descript: MW-1	Received: 12/18/96
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/20/96
Attention: Jim Keller	Lab Number: 9612B24-01	Reported: 12/31/96

QC Batch Number: GC121996BTEX21A
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**	**260**
Benzene	**0.50**	**0.86**
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	99

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, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Chevron 9-1851/961217-C-2	Sampled: 12/17/96
1680 Rogers Avenue	Sample Descript: MW-2	Received: 12/18/96
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/23/96
Attention: Jim Keller	Lab Number: 9612B24-02	Reported: 12/31/96

QC Batch Number: GC122396BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**110**
Methyl t-Butyl Ether	**2.5**	**27**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**0.75**
Xylenes (Total)	**0.50**	**2.1**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Technical Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Jim Keller

Client Proj. ID: Chevron 9-1851/961217-C-2
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9612B24-02

Sampled: 12/17/96
Received: 12/18/96

Analyzed: 12/20/96
Reported: 12/31/96

QC Batch Number: MS1220968240F3A
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	**2.0**	**10**
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	**2.0**	**2.3**
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	**2.0**	**5.5**

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Jim Keller

Client Proj. ID: Chevron 9-1851/961217-C-2
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9612B24-02

Sampled: 12/17/96
Received: 12/18/96

Analyzed: 12/20/96
Reported: 12/31/96

QC Batch Number: MS1220968240F3A
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
Total Xylenes	2.0	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	100
Toluene-d8	88	110	96
4-Bromofluorobenzene	86	115	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Chevron 9-1851/961217-C-2	Sampled: 12/17/96
1680 Rogers Avenue	Sample Descript: MW-2	Received: 12/18/96
San Jose, CA 95112	Matrix: LIQUID	Extracted: 12/24/96
	Analysis Method: EPA 8015 Mod	Analyzed: 12/26/96
Attention: Jim Keller	Lab Number: 9612B24-02	Reported: 12/31/96

QC Batch Number: GC1223960HBPEXA
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**50**	**2400**
Chromatogram Pattern:	**C9-C24**	**Unidentified HC**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	198 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

Sequoia Analytical

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Blaine Technical Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Jim Keller

Client Proj. ID: Chevron 9-1851/961217-C-2
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612B24-03

Sampled: 12/17/96
Received: 12/18/96

Analyzed: 12/23/96
Reported: 12/31/96

QC Batch Number: GC122396BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum 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	**25**	**680**
Benzene	5.0	N.D.
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	82

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, (415) 364-9600, FAX (415) 364-9233
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Blaine Technical Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Jim Keller

Client Proj. ID: Chevron 9-1851/961217-C-2
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612B24-04

Sampled: 12/17/96
Received: 12/18/96

Analyzed: 12/27/96
Reported: 12/31/96

QC Batch Number: GC122696BTEX02B
Instrument ID: GCHP2

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**	**11000**
Benzene	**20**	**120**
Toluene	20	N.D.
Ethyl Benzene	20	N.D.
Xylenes (Total)	20	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	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, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Blaine Technical Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Jim Keller

Client Proj. ID: Chevron 9-1851/961217-C-2
Sample Descript: TB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612B24-05

Sampled: 12/17/96
Received: 12/18/96

Analyzed: 12/23/96
Reported: 12/31/96

QC Batch Number: GC122396BTEX02A
Instrument ID: GCHP2

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	95

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, (415) 364-9600, FAX (415) 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 Technical Services	Client Proj. ID: Chevron 9-1851/961217-C-2	Received: 12/18/96
1680 Rogers Avenue San Jose, CA 95112	Lab Proj. ID: 9612B24	Reported: 12/31/96
Attention: Jim Keller		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 13 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPPH Note: Sample 9612B24-03 was diluted 10-fold.
Sample 9612B24-04 was diluted 40-fold.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112
Attention: Jim Keller

Client Project ID: Chevron 9-1851/961217-C-2
Matrix: Liquid
Work Order #: 9612B24 -01
Reported: Jan 2, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC121996BTEX21A	GC121996BTEX21A	GC121996BTEX21A	GC121996BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	961275003	961275003	961275003	961275003
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/19/96	12/19/96	12/19/96	12/19/96
Analyzed Date:	12/19/96	12/19/96	12/19/96	12/19/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.7	9.7	29
MS % Recovery:	100	97	97	97
Dup. Result:	10	9.7	9.6	29
MSD % Recov.:	100	97	96	97
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK121996	BLK121996	BLK121996	BLK121996
Prepared Date:	12/19/96	12/19/96	12/19/96	12/19/96
Analyzed Date:	12/19/96	12/19/96	12/19/96	12/19/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.5	9.4	28
LCS % Recov.:	100	95	94	93
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Reggy 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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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, Inc.
1680 Rogers Avenue
San Jose, CA 95112
Attention: Jim Keller

Client Project ID: Chevron 9-1851/961217-C-2
Matrix: Liquid
Work Order #: 9612B24-02-03,-05

Reported: Jan 2, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC122396BTEX02A	GC122396BTEX02A	GC122396BTEX02A	GC122396BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	961268308	961268308	961268308	961268308
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/23/96	12/23/96	12/23/96	12/23/96
Analyzed Date:	12/23/96	12/23/96	12/23/96	12/23/96
Instrument I.D.#:	GCHP02	GCHP02	GCHP02	GCHP02
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.2	9.1	9.9	30
MS % Recovery:	92	91	99	100
Dup. Result:	9.4	9.3	10	31
MSD % Recov.:	94	93	100	103
RPD:	2.2	2.2	1.0	3.3
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK122396	BLK122396	BLK122396	BLK122396
Prepared Date:	12/23/96	12/23/96	12/23/96	12/23/96
Analyzed Date:	12/23/96	12/23/96	12/23/96	12/23/96
Instrument I.D.#:	GCHP02	GCHP02	GCHP02	GCHP02
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.3	8.4	8.6	28
LCS % Recov.:	83	84	86	93
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
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Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112
Attention: Jim Keller

Client Project ID: Chevron 9-1851/961217-C-2
Matrix: Liquid
Work Order #: 9612B24-02
Reported: Jan 2, 1997

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1220968240F3A	MS1220968240F3A	MS1220968240F3A	MS1220968240F3A	MS1220968240F3A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	0	0	0
Analyst:	M. Williams	M. Williams	M. Williams	M. Williams	M. Williams
MS/MSD #:	961295702	961295702	961295702	961295702	961295702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/20/96	12/20/96	12/20/96	12/20/96	12/20/96
Analyzed Date:	12/20/96	12/20/96	12/20/96	12/20/96	12/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
Result:	47	51	50	52	50
MS % Recovery:	94	102	100	104	100
Dup. Result:	42	45	45	45	44
MSD % Recov.:	84	90	90	90	88
RPD:	11	13	11	14	13
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	LCS122096				
Prepared Date:	12/20/96	12/20/96	12/20/96	12/20/96	12/20/96
Analyzed Date:	12/20/96	12/20/96	12/20/96	12/20/96	12/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
LCS Result:	42	46	45	46	47
LCS % Recov.:	84	92	90	92	94
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	65-135	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
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

Chevron Facility Number: 9-1851
Facility Address: 451 Hegenberger Rd., Oakland, CA
Consultant Project Number: 9612-17-C-2
Consultant Name: Blaine Tech Services, Inc.
Address: 985 Timothy Dr., San Jose, CA 95133
Project Contact (Name): Jim Keller
(Phone) 408 995-5535 (Fax Number) 408 293-8773

Chevron Contact (Name): Phil Briggs
(Phone) (510)842-9136
Laboratory Name:
Laboratory Release Number: 3741480
Samples Collected by (Name): Kevin Carlin
Collection Date: 12-17-96
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)	Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015)	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)	MTBE	9612B24				DO NOT BILL FOR TB-LB Remarks
MW-1	1 A-C	3	W		13:25	HCL	Y	X								X					
MW-2	2 A-H	8	W		12:34	HCL	Y	X	X				X			X					
MW-3	3 A-C	3	W		13:00	HCL	Y	X								X					
MW-4	4	3	W		12:05	HCL	Y	X								X					
TB	5	3	W		12:15	HCL	Y	X								X					

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	BTS	12/18/96 10:00 AM		SEQ	12/18/96 1055
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
		12/18/96			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
					12-18-96 1903

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

DEC 20 93

Field
Data
Sheets

WELL GAUGING DATA

Project # 961217-C-2 Date 12-17-96 Client Chevron

Site 451 HEGENBERGER RD OAKLAND CA

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (feet)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
MW-1	2					3.57	14.50	TOC
MW-2	2					3.92	14.95	↓
MW-3	2					3.20	14.62	↓
MW-4	2					2.81	14.99	↓

CHEVRON WELL MONITORING DATA SHEET

Project #: 961217-C-2	Station #: 9-1851
Sampler: Kevin C.	Date: 12-17-96
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 14.52	Depth to Water: 3.57
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 / Disposable Bailer X / Middleburg / Electric Submersible / Extraction Pump / Other: ____

Sampling Method: Bailer / Disposable Bailer X / 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
13:13	65.6	7.4	~~4~~ 4000,	2	
13:15	65.2	7.2	3800	4	
13:17	65.2	7.0	3700	5.5	

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

Sampling Time: ~~13:24~~ 13:25 Sampling Date: 12-17-96

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 #: 961217-C-2	Station #: 9-1851
Sampler: Kevin C	Date: 12-17-96
Well I.D.: MW-2	Well Diameter: ② 3 4 6 8 ____
Total Well Depth: 14.95	Depth to Water: 3.92
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 / Disposable Bailer ✓ / Middleburg / Electric Submersible / Extraction Pump / Other: _____

Sampling Method: Bailer / 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
12:20	68.0	7.4	5400	2	
12:22	69.6	7.0	5600	4	
12:24	70.0	6.8	5600	5.5	

Did well dewater? Yes (No)		Gallons actually evacuated: 5.5	
Sampling Time: 12:34		Sampling Date: 12-17-96	
Sample I.D.: MW-2		Laboratory: (Sequoia) GTEL N. Creek Assoc. Labs	
Analyzed for: (TPH-G) (BTEX) (MTBE) (TPH-D)		Other: 8240	
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 #: 961217-C-2	Station #: 9-1851
Sampler: Kevin C	Date: 12-17-96
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 14.62	Depth to Water: 3.20
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 / Disposable Bailer ✓ / Middleburg / Electric Submersible / Extraction Pump / Other: ____

Sampling Method: Bailer / Disposable Bailer ✓ / Extraction Port / Other: ____

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

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
12:49	68.4	7.2	5800	2	
12:51	66.8	7.2	5600	4	
12:52	66.4	7.2	5200	5.5	

Did well dewater? Yes (No)		Gallons actually evacuated: 5.5	
Sampling Time: 13:00		Sampling Date: 12-17-96	
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 #: 961217-C-2	Station #: 9-1851
Sampler: Kevin C	Date: 12-17-96
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 14.99	Depth to Water: 2.81
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 / Disposable Bailer (X) / Middleburg / Electric Submersible / Extraction Pump / Other: ___

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

1.9 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 5.7 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
11:53	70.2	7.0	5400	2	
11:55	71.2	6.8	5400	4	
11:57	71.2	70	5600	6	

Did well dewater? Yes (No)		Gallons actually evacuated: 6	
Sampling Time: 12:05		Sampling Date: 12-17-96	
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

CHEVRON WELL MONITORING DATA SHEET

Project #: 760906161	Station #: 9-0978
Sampler: KCB	Start Date: 9/6
Well I.D.: C-7	Well Diameter: (circle one) (2) 3 4 6 ___
Total Well Depth: Before 5433 After	Depth to Water: Before 2835 After
Depth to Free Product: —	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

4.2 (1 Case Volume) x 3 (Specified Volumes) = 12.6 gallons

Purging: Bailer / Disposable Bailer / Middleburg / Electric Submersible / Extraction Pump / Other ____

Sampling: Bailer / Disposable Bailer / Extraction Port / Other ____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
938	67.6	6.8	1100	—	4.5	Strong H_2S & gas
942	67.4	6.6	1100	—	9.0	odor
946	67.0	6.6	1100	—	13.0	-greyish

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 13.0

Sampling Time: 950 Sampling Date: 9/6

Sample I.D.: C-7 Laboratory: STL

Analyzed for: (TPH-G) (BTEX) TPH-D (OTHER: XYLENE) (Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)

CHEVRON WELL MONITORING DATA SHEET

Project #:	960906-K1	Station #:	9-0576
Sampler:	KCB	Start Date:	9/6
Well I.D.:	C-8	Well Diameter: (circle one)	(2) 3 4 6 ____
Total Well Depth: Before	5650 After	Depth to Water: Before	2870 After
Depth to Free Product:	____	Thickness of Free Product (feet):	
Measurements referenced to:	(TOC) Grade	Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1 Case Volume	x	Specified Volumes	=	gallons
4.4	x	3	=	132

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other_____

Sampling: Bailer
Disposable Bailer
Extraction Port
Other_____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
720	65.8	6.6	1900	—	4.5	slight/clear
725	66.2	6.5	1900	—	9.0	
731	66.0	6.6	1800	—	135	

Did Well Dewater? N If yes, gals. ← Gallons Actually Evacuated: 135

Sampling Time: 735 Sampling Date: 9/6

Sample I.D.: C8 Laboratory: Sey

Analyzed for: (TPH-G) (BTEX) TPH-D (OTHER: MTBE)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER:

CHEVRON WELL MONITORING DATA SHEET

Project #:	960906-161	Station #:	9-0026
Sampler:	KCB	Start Date:	9/6
Well I.D.:	C-9	Well Diameter: (circle one)	(2) 3 4 6 ____
Total Well Depth: Before	45.14 After	Depth to Water: Before	28.47 After
Depth to Free Product:	____	Thickness of Free Product (feet):	
Measurements referenced to:	(PVC) Grade	Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1 Case Volume	x	Specified Volumes	=	gallons
2.7	x	3	=	8.1

Purging: Bailer / ~~Disposable Bailer~~ / ~~Middleburg~~ / Electric Submersible / Extraction Pump / Other ____

Sampling: Bailer / Disposable Bailer / Extraction Port / Other ____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
847	69.4	6.6	850	—	3.0	very silty
851	69.4	6.8	830	—	6.0	(well Developed?)
854	69.6	6.6	840	—	8.5	

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 8.5

Sampling Time:	900	Sampling Date:	9/6
Sample I.D.:	C-9	Laboratory:	Seq
Analyzed for: (Circle)	(TPH-G) (BTEX) TPH-D (OTHER: MTBE)		
Duplicate I.D.:		Cleaning Blank I.D.:	
Analyzed for: (Circle)	TPH-G BTEX TPH-D OTHER:		