



**Chevron**

**Chevron Products Company**  
P.O. Box 6004  
San Ramon, CA 94583

March 7, 1998

Ms. Susan Hugo  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Re: Former Chevron Service Station #9-0329  
340 Highland Avenue  
Piedmont, California**

Dear Ms. Hugo:

Enclosed is the First Quarter Groundwater Monitoring report for 1998, prepared by our consultant Blaine Tech Services Inc. for the above noted facility. Ground water samples were analyzed for TPH-g, BTEX, and MtBE.

The concentrations detected in monitoring wells C-5 and C-6 continue to be below method detection levels for all constituents, while well C-4 was below method detection limits for the benzene, ethyl-benzene, xylene and TPH-g constituents. Well C-3 was below method detection limits for the BTEX and TPH-g constituents. Well C-2 continues to detect concentrations of all constituents, with the MtBE concentration decreasing from the previous sampling event. This is the second straight sampling event where the MtBE concentration has declined.

The depth to the groundwater varied from 0.00 feet to 4.26 feet below grade with a direction of flow southerly and southeasterly. Note that well C-3 was flooded.

It appears that the dissolved hydrocarbons are localized around monitoring well C-2 and are not migrating, as the downgradient well C-6 has been below method detection limits for all six of its sampling events. Therefore, it does not appear that continuing quarterly monitoring for all wells provides any pertinent data. Therefore, **Chevron requests that wells C-3 and C-5 be monitored annually and C-4 and C-6 semi-annually. Well C-2 would remain quarterly.**

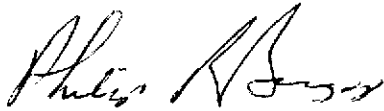
Well C-3 is upgradient of well C-2 and the BTEX and TPH-g concentrations have been below method detection limits for at least the last nine sampling events. MtBE has only

March 7, 1998  
Ms. Susan Hugo  
Former Chevron Service Station #9-0329  
Page 2

been detected in two of these nine events. Well C-5 is cross-gradient from well C-2 and has been below method detection limits for all constituents in the six sampling events that well C-5 has been sampled. Well C-4 is also upgradient of well C-2 and has been below method detection limits for benzene and ethyl-benzene for the last ten sampling events.

Annual sampling would be performed in the first quarter with semi-annual sampling performed in the first and third quarters. If you have any questions or comments to the request to change the monitoring frequency, please call me at (510) 842-9136.

Sincerely,  
**CHEVRON PRODUCTS COMPANY**



Philip R. Briggs  
Site Assessment and Remediation Project Manager

Enclosure

Cc. Mr. Steven Hill  
RWQCB-San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, CA 94612

Mr. Frank Hoffman  
Hoffman Investment Company  
1760 Willow Road  
Hillsborough, CA 94010

Mir Ghafari & Fred Manoucheri  
Service Station  
340 Highland Avenue  
Piedmont, CA 94611

Ms. Bette Owen, Chevron

Ms. Anne Payne, Chevron, ChvPkv/V-1156

**BLAINE**  
TECH SERVICES INC

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



March 3, 1998

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

**1st Quarter 1998 Monitoring at 9-0329**

First Quarter 1998 Groundwater Monitoring at  
Chevron Service Station Number 9-0329  
340 Highland Avenue  
Piedmont, CA

Monitoring Performed on January 22, 1998

Groundwater Sampling Report 980122-M-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

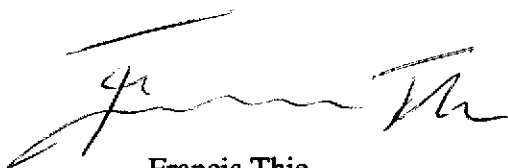
also contains new groundwater elevation calculations taken from the computer plotted gradient map which is located in the **Professional Engineering Appendix**.

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,

A handwritten signature in black ink, appearing to read 'Francis Thie', written in a cursive style.

Francis Thie  
Vice President

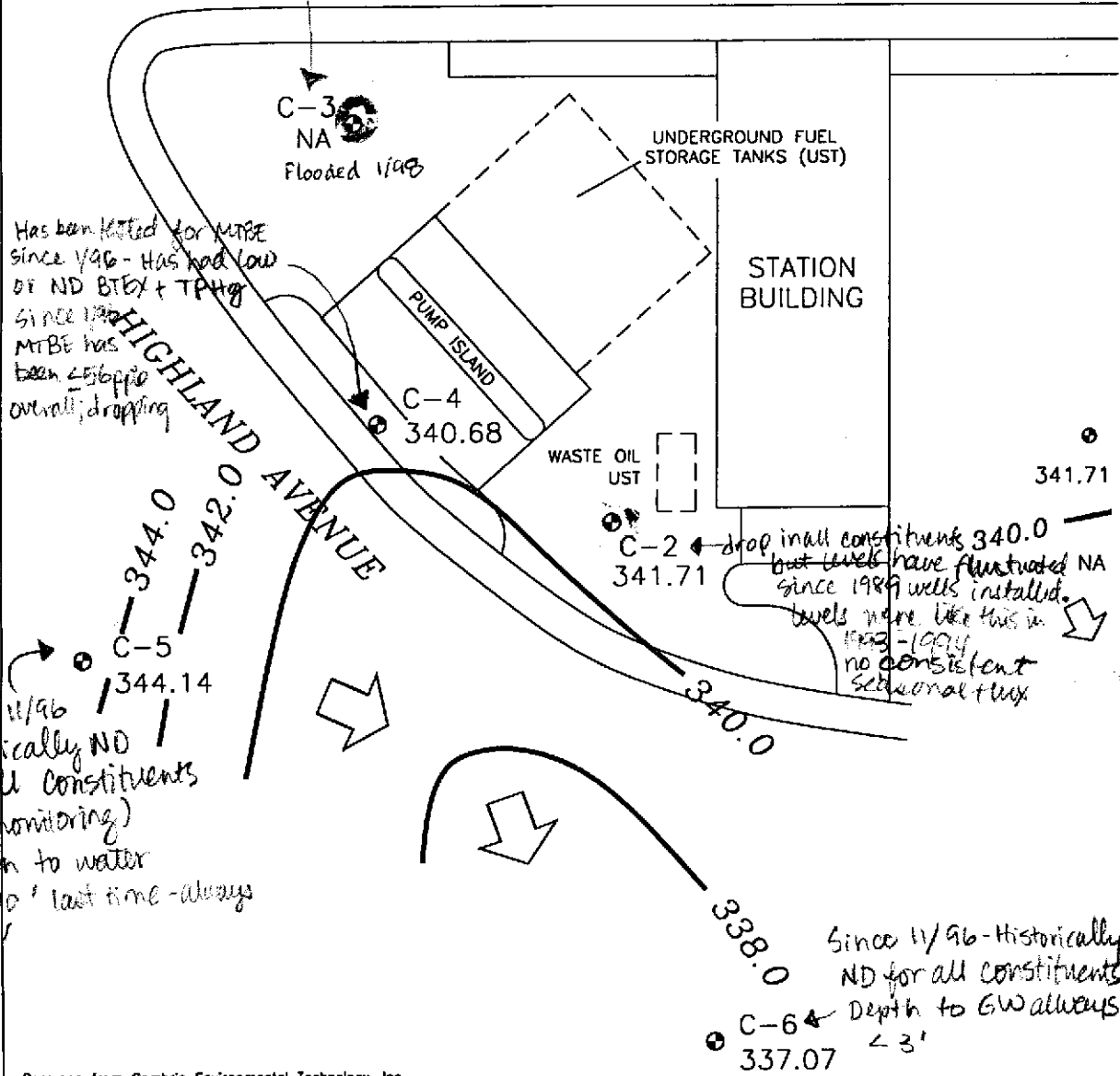
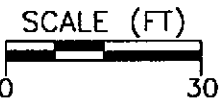
FPT/ew

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

# **Professional Engineering Appendix**

Has been ND for all constituents since 1/95. Last test - 40ppb MBE

HIGHLAND WAY



Has been tested for MBE since 1/96 - Has had low or ND BTEX + TPH since 1/96. MBE has been stopping overall, dropping

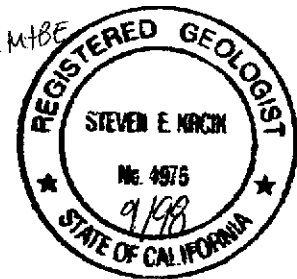
Since 11/96 Historically ND for all constituents (a monitoring) Depth to water ~1.00' last time - always < 4'

drop in all constituents 340.0 but levels have fluctuated NA since 1989 wells installed. levels were like this in 1983-1994 no consistent seasonal flux

Since 11/96 - Historically ND for all constituents Depth to GW always < 3'

**EXPLANATION**

- MONITORING WELL
- 341.71 GROUNDWATER ELEVATION (FT, MSL)
- GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- DATA NOT AVAILABLE
- APPROXIMATE GROUNDWATER FLOW DIRECTION; APPROXIMATE GRADIENT = 0.05
- = All constituents
- = ND oil constituents
- = Toluene, MBE
- = MBE



Borelog from Cambrio Environmental Technology, Inc.

<p>PREPARED BY</p>	<p>Chevron Station 9-0329 340 Highland Avenue Piedmont, California</p>	<p>GROUNDWATER ELEVATION CONTOUR MAP, JANUARY 22, 1998</p>	<p>FIGURE: 1 PROJECT: DAC04</p>
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# **Table of Well Data and Analytical Results**

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-3</b>										
08/07/89	97.65	93.36	4.29	--	<50	<0.5	<1.0	<1.0	<3.0	--
11/15/89	97.65	92.48	5.17	--	<500	<0.5	2.8	<0.5	1.1	--
02/01/91	97.65	91.27	6.38	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/16/91	97.65	93.93	3.72	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/16/91	97.65	89.45	8.20	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/08/92	97.65	90.97	6.68	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/10/92	97.65	93.15	4.50	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/14/92	97.65	91.44	6.21	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/05/92	97.65	88.34	9.31	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/06/93	97.65	94.24	3.41	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/29/93	97.65	97.15	0.50	--	<50	<0.5	<0.5	<0.5	0.8	--
07/02/93	97.65	95.06	2.59	--	<50	4.0	3.0	<0.5	3.0	--
10/11/93	97.65	92.75	4.90	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/10/94	97.65	93.26	4.39	--	<50	<0.5	1.0	<0.5	0.8	--
04/06/94	97.65	94.97	2.68	--	<50	<0.5	1.0	0.7	4.5	--
07/06/94	97.65	95.55	2.10	--	<50	2.2	4.1	<0.5	2.8	--
11/11/94	97.65	96.42	1.23	--	<50	<0.5	0.8	<0.5	<0.5	--
01/06/95	97.65	97.05	0.60	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/13/95	97.65	97.05	0.60	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/25/95	97.65	96.00	1.65	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/05/95	97.65	94.02	3.63	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/02/96	97.65	94.53	3.12	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/11/96	97.65	96.83	0.82	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/08/96	97.65	96.15	1.50	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/03/96	97.65	95.17	2.48	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/23/97	347.08	346.87	0.21	--	<50	<0.5	<0.5	<0.5	<0.5	3.2
04/08/97	347.08	346.33	0.75	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	347.08	345.61	1.47	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/08/97	347.08	345.04	2.04	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/22/98	347.08	347.08	0.00	Well flooded	<50	<0.5	<0.5	<0.5	<0.5	40



## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-4</b>										
08/07/89	95.60	--	--	Dry	--	--	--	--	--	Dry
11/15/89	95.60	90.65	4.95	--	1300	2.9	310	0.5	2.9	--
02/01/91	95.60	90.82	4.78	--	72	<0.5	9.0	<0.5	<0.5	--
04/16/91	95.60	95.60	4.83	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/16/91	95.60	91.37	4.23	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/08/92	95.60	90.79	4.81	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/10/92	95.60	91.34	4.26	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/14/92	95.60	91.32	4.28	--	<50	<0.5	3.8	<0.5	<0.5	--
10/05/92	95.60	91.31	4.29	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/06/93	95.60	91.31	4.29	--	<50	0.7	<0.5	<0.5	<0.5	--
03/29/93	95.60	91.30	4.30	--	<50	0.5	1.0	<0.5	2.0	--
07/02/93	95.60	91.38	4.22	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/11/93	95.60	91.30	4.30	--	<50	0.6	<0.5	<0.5	<0.5	--
01/10/94	95.60	91.16	4.44	--	<50	0.7	3.0	<0.5	1.0	--
04/06/94	95.60	91.36	4.24	--	130	2.2	5.4	3.3	24	--
07/06/94	95.60	91.36	4.24	--	99	5.9	7.5	2.0	12	--
11/11/94	95.60	91.39	4.21	--	<50	<0.5	9.5	<0.5	<0.5	--
01/06/95	95.60	91.18	4.42	--	<50	0.7	1.0	<0.5	1.1	--
04/13/95	95.60	91.36	4.24	--	67	0.54	7.2	<0.5	1.1	--
07/25/95	95.60	91.36	4.24	--	390	<2.0	150	<2.0	<2.0	--
10/05/95	95.60	91.22	4.38	--	130	<0.5	66	<0.5	<0.5	--
01/02/96	95.60	91.34	4.26	--	<50	<0.5	<0.5	<0.5	<0.5	34
04/11/96	95.60	91.21	4.39	--	<50	<0.5	0.93	<0.5	<0.5	56
07/08/96	95.60	91.32	4.28	--	<50	<0.5	<0.5	<0.5	<0.5	21
10/03/96	95.60	91.38	4.22	--	80	<0.5	31	<0.5	<0.5	9.9
01/23/97	344.94	340.55	4.39	--	<50	<0.5	<0.5	<0.5	<0.5	23
04/08/97	344.94	340.69	4.25	--	87	<0.5	3.6	<0.5	1.7	7.0
07/09/97	344.94	340.73	4.21	--	93	<0.5	32	<0.5	<0.5	26
10/08/97	344.94	340.60	4.34	--	<50	<0.5	0.63	<0.5	<0.5	12
01/22/98	344.94	340.68	4.26	--	<50	<0.5	4.3	<0.5	<0.5	10

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-5</b>										
11/25/96	--	--	3.30	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/23/97	345.14	343.69	1.45	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/08/97	345.14	342.82	2.32	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	345.14	342.84	2.30	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/08/97	345.14	342.14	3.00	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/22/98	345.14	344.14	1.00	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
<b>C-6</b>										
11/25/96	--	--	2.13	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/23/97	338.61	--	0.00	Well flooded	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/08/97	338.61	--	0.00	Well flooded	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	338.61	335.84	2.77	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/08/97	338.61	337.17	1.44	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/22/98	338.61	337.07	1.54	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
<b>Backfill Well: A</b>										
08/07/89	--	--	2.10	--	1000	50	6.0	5.0	22	--
11/15/89	--	--	2.04	--	3700	98	2.1	4.3	55	--
02/01/91	--	--	3.05	--	36,000	1100	750	130	6100	--
04/16/91	--	--	2.01	--	8000	370	6.0	86	750	--
10/16/91	--	--	4.15	--	--	--	--	--	--	--
<b>Backfill Well: B</b>										
08/07/89	--	--	4.12	--	--	--	--	--	--	--
11/15/89	--	--	--	--	--	--	--	--	--	--
02/01/91	--	--	5.03	--	--	--	--	--	--	--
04/16/91	--	--	4.00	--	--	--	--	--	--	--
10/16/91	--	--	6.24	--	--	--	--	--	--	--

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>TRIP BLANK</b>										
01/06/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/29/93	--	--	--	--	<50	<0.5	<0.5	<0.5	1.0	--
07/02/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/11/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/10/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/06/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/06/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
11/11/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/06/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/13/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/25/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/05/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/02/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/11/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/08/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/03/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/23/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/08/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/08/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/22/98	--	--	--	--	<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 April 13, 1995.  
 Earlier field data and analytical results provided by Sierra Environmental.  
 Survey performed on March 20, 1997 by Ron Archer, Civil Engineer Inc.

**ABBREVIATIONS:**

TPH = Total Petroleum Hydrocarbons

MTBE = Methyl t-butyl ether

# **Analytical Appendix**



# Sequoia Analytical

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

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

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

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

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-0329/980122-M2 Sample Descript: C-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801D12-01	Sampled: 01/22/98 Received: 01/23/98  Analyzed: 01/28/98 Reported: 02/02/98
--	--	---

QC Batch Number: GC012898BTEX04A  
Instrument ID: GCHP4

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	100	10000
Methyl t-Butyl Ether	5.0	70000
Benzene	1.0	860
Toluene	1.0	10
Ethyl Benzene	1.0	140
Xylenes (Total)	1.0	37
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	178 Q

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





# Sequoia Analytical

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

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

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

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

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-0329/980122-M2 Sample Descript: C-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801D12-02	Sampled: 01/22/98 Received: 01/23/98  Analyzed: 01/28/98 Reported: 02/02/98
Attention: Fran Thie		

QC Batch Number: GC012898BTEX04A  
Instrument ID: GCHP4

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	40
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	77

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





# Sequoia Analytical

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

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

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

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

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-0329/980122-M2 Sample Descript: C-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801D12-03	Sampled: 01/22/98 Received: 01/23/98 Analyzed: 01/28/98 Reported: 02/02/98
--	--	---

QC Batch Number: GC012898BTEX04A  
Instrument ID: GCHP4

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
<b>Methyl t-Butyl Ether</b>	<b>2.5</b>	<b>10</b>
Benzene	0.50	N.D.
<b>Toluene</b>	<b>0.50</b>	<b>4.3</b>
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	74

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 Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-0329/980122-M2 Sample Descript: C-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801D12-04	Sampled: 01/22/98 Received: 01/23/98 Analyzed: 01/28/98 Reported: 02/02/98
--	--	---

QC Batch Number: GC012898BTEX04A  
Instrument ID: GCHP4

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	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  
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FAX (916) 921-0100

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-0329/980122-M2 Sample Descript: C-6 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801D12-05	Sampled: 01/22/98 Received: 01/23/98 Analyzed: 01/28/98 Reported: 02/02/98
--	--	---

QC Batch Number: GC012898BTEX04A  
Instrument ID: GCHP4

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	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

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(916) 921-9600

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

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-0329/980122-M2 Sample Descript: TB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801D12-06	Sampled: 01/22/98 Received: 01/23/98 Analyzed: 01/28/98 Reported: 02/02/98
--	---	---

QC Batch Number: GC012898BTEX07A  
Instrument ID: GCHP7

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	75

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Peggy Penner  
Project Manager





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

Client Project ID: Chevron 9-0329 / 980122-M2  
Matrix: Liquid

Work Order #: 9801D12 -01-05

Reported: Feb 4, 1998

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC012898802004A	GC012898802004A	GC012898802004A	GC012898802004A	GC012898802004A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	S.L.	S.L.	S.L.	S.L.	S.L.
MS/MSD #:	98010685	98010685	98010685	98010685	-
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	-
Prepared Date:	1/28/98	1/28/98	1/28/98	1/28/98	-
Analyzed Date:	1/28/98	1/28/98	1/28/98	1/28/98	-
Instrument I.D.#:	GC4	GC4	GC4	GC4	-
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	-
Result:	16.2	17	18	55.1	-
MS % Recovery:	81	85	90	92	-
Dup. Result:	17	17.8	18.9	57.5	-
MSD % Recov.:	85	89	95	96	-
RPD:	4.8	4.6	4.9	4.3	-
RPD Limit:	0-25	0-25	0-25	0-25	-

LCS #:	LCS012898	LCS012898	LCS012898	LCS012898	LCS012898
Prepared Date:	1/28/98	1/28/98	1/28/98	1/28/98	1/28/98
Analyzed Date:	1/28/98	1/28/98	1/28/98	1/28/98	1/28/98
Instrument I.D.#:	GC4	GC4	GC4	GC4	GC4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	500 µg/L
LCS Result:	16.2	17.3	15.5	56.7	416
LCS % Recov.:	81	87	78	95	83

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

SEQUOIA ANALYTICAL  
Elap #2142

**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.

*Peggy Penner*  
Project Manager

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

9801D12.BLA <1>



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

Client Project ID: Chevron 9-0329 / 980122-M2  
Matrix: Liquid

Work Order #: 9801D12-06

Reported: Feb 4, 1998

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC012898802007A	GC012898802007A	GC012898802007A	GC012898802007A	GC012898802007A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	S.L.	S.L.	S.L.	S.L.	S.L.
MS/MSD #:	98010695	98010695	98010695	98010695	-
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	-
Prepared Date:	1/28/98	1/28/98	1/28/98	1/28/98	-
Analyzed Date:	1/28/98	1/28/98	1/28/98	1/28/98	-
Instrument I.D.#:	GC7	GC7	GC7	GC7	-
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	-
Result:	16.4	16.6	17.4	52.5	-
MS % Recovery:	82	83	87	88	-
Dup. Result:	17.6	17.8	18.6	56.7	-
MSD % Recov.:	88	89	93	95	-
RPD:	7.1	7.0	6.7	7.7	-
RPD Limit:	0-25	0-25	0-25	0-25	-

LCS #:	LCS012898	LCS012898	LCS012898	LCS012898	LCS012898
Prepared Date:	1/28/98	1/28/98	1/28/98	1/28/98	1/28/98
Analyzed Date:	1/28/98	1/28/98	1/28/98	1/28/98	1/28/98
Instrument I.D.#:	GC7	GC7	GC7	GC7	GC7
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	500 µg/L
LCS Result:	16	16.4	15.5	52.5	457
LCS % Recov.:	80	82	78	88	91

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

SEQUOIA ANALYTICAL  
Elap #2142

Peggy Penner  
Project Manager

**Please Note:**

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

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

9801D12.BLA <2>





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

Client Proj. ID: Chevron 9-0329/980122-M2

Received: 01/23/98

Lab Proj. ID: 9801D12

Reported: 02/02/98

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPPH Note: Sample 9801D12-01 was diluted 2-fold.

**SEQUOIA ANALYTICAL**

  
Peggy Fenner  
Project Manager





# Field Data Sheets





## CHEVRON WELL MONITORING DATA SHEET

Project #: 980122-m2	Station #: 9-0329
Sampler: Jm	Date: 1-22
Well I.D.: C-4	Well Diameter: (2) 3 4 6 8 _____
Total Well Depth: 10.10	Depth to Water: 4.26
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method:	Sampling Method:
Bailer	Bailer
Disposable Bailer <input checked="" type="checkbox"/>	Disposable Bailer <input checked="" type="checkbox"/>
Middleburg	Extraction Port
Electric Submersible	Other: _____
Extraction Pump	
Other: _____	

<u>0.9</u>	x	<u>3</u>	=	<u>2.7</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1344	50.0	6.8	260	1	Grey + Turbid / Black particles suspended in Sol.
1345	49.8	6.7	240	2	Black + Turbid / ↓
1346	49.8	6.7	240	3	↓ ↓

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 3
Sampling Time: 1350	Sampling Date: 1-22
Sample I.D.: C-4	Laboratory: Sequoia GTEL N. Creek Assoc. Labs
Analyzed for: <del>TPH-G</del> <del>BTEX</del> <del>MTBE</del> TPH-D Other:	
Duplicate I.D.:	Analyzed for: TPH-G BTEX MTBE TPH-D Other:
D.O. (if req'd):	Pre-purge: <span style="float: right;">mg/L</span>
O.R.P. (if req'd):	Pre-purge: <span style="float: right;">mV</span>
	Post-purge: <span style="float: right;">mg/L</span>
	Post-purge: <span style="float: right;">mV</span>

## CHEVRON WELL MONITORING DATA SHEET

Project #: 980122-m2	Station #: 9-0329
Sampler: JM	Date: 1-22
Well I.D.: C-5	Well Diameter: (2) 3 4 6 8 _____
Total Well Depth: 17.50	Depth to Water: 1.00
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer Disposable Bailer <del>X</del> Middleburg Electric Submersible Extraction Pump Other: _____	Sampling Method: Bailer Disposable Bailer <del>X</del> Extraction Port Other: _____
---	--

2.6	x	3	=	7.8	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1248	53.0	7.0	780	3	Tan + Turbid
1252	52.6	6.5	700	6	↓
1256	52.4	6.8	720	4	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 9
Sampling Time: 1300	Sampling Date:
Sample I.D.: C-5	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 #: 980127-M2	Station #: 9-0329
Sampler: JM	Date: 1-22
Well I.D.: C-6	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 17.40	Depth to Water: 1.54
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method:	Sampling Method:
Bailer Disposable Bailer <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other: _____	Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other: _____

2.5	x	3	=	7.5	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1309	56.0	7.0	600	2.5	Tan & Turbid
1312	55.8	6.9	580	5.0	↓
1315	55.6	6.9	570	7.5	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 7.5
Sampling Time: 1319	Sampling Date: 1-22
Sample I.D.: C-6	Laboratory: Sequoia GTEL N. Creek Assoc. Labs

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other:
Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE TPH-D Other:
D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: _____ mg/L
O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV