

RO 256

ENVIRONMENTAL  
PROTECTION



**Chevron**

99 MAY -4 AM 8:52

April 29, 1999

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

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

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

**Re: Chevron Service Station #9-1740**  
**9550 Moraga Avenue**  
**Oakland, California**

Dear Ms. Hugo:

Enclosed is the First Quarter Groundwater Monitoring report for 1999 prepared by our consultant Blaine Tech Services Inc. for the above noted facility. Ground water samples were analyzed for TPH-g, BTEX, and MtBE constituents.

Monitoring wells C-2 and C-4 showed a decrease in the benzene constituent from the previous sampling event while well C-3 was below method detection limits for the TPH-g and BTEX constituents.

The depth to groundwater varied from 4.36 feet to 7.23 feet below grade with a direction of flow southeasterly.

Chevron will introduce Oxygen Releasing Compound's (ORC's) into wells C-2 and C-4 prior to or at the time of the next sampling event. This is expected to assist in the natural attenuation process. The addition of ORC's had been recommended in the last cover letter (4<sup>th</sup> Quarter 1998) with any questions or comments on utilizing ORC's, with an expected response in thirty days. Since there has been no response, Chevron believes you have concurred with this procedure and will proceed with the introduction of ORC's as noted above.

Chevron also proposed that the monitoring frequency for well C-3 be changed to annually (1<sup>st</sup> quarter) and wells C-2 and C-4 too semi-annually (1<sup>st</sup> and 3<sup>rd</sup> quarters). Since no response was received to our recommendation, Chevron believes you have concurred to this procedure and will change the sampling frequency to the 1<sup>st</sup> and 3<sup>rd</sup> quarter.

April 29, 1999  
Ms. Susan Hugo  
Chevron Service Station #9-1740  
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If you have any questions or comments, call me at (925) 842-9136.

Sincerely,  
**CHEVRON PRODUCTS COMPANY**



Philip R. Briggs  
Site Assessment and Remediation Project Manager

Enclosure

Cc. Mr. Bill Scudder, Chevron

Mr. Eddie So  
RWQCB-San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, CA 94612

**BLAINE**  
TECH SERVICES, INC.



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

April 22, 1999

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

### 1st Quarter 1999 Monitoring at 9-1740

First Quarter 1999 Groundwater Monitoring at  
Chevron Service Station Number 9-1740  
6550 Moraga Avenue  
Oakland, CA

Monitoring Performed on March 9, 1999

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### Groundwater Sampling Report 990309-P-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

# **Professional Engineering Appendix**

# **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-1</b>										
03/25/91	595.82	592.54	3.28	--	54	0.7	<0.5	<0.5	2.0	--
07/01/91	595.82	592.39	3.43	--	730	250	3.0	16	4.8	--
09/25/91	595.82	591.67	4.15	--	160	68	1.3	6.1	1.3	--
12/23/91	595.82	592.11	3.71	--	170	70	1.6	3.5	2.4	--
03/24/92	595.82	592.80	3.02	--	60	39	4.4	3.9	9.1	--
06/23/92	595.82	592.06	3.76	--	60	19	1.1	1.1	1.0	--
NO LONGER MONITORED OR SAMPLED										
<b>C-2</b>										
03/25/91	594.57	571.68	22.89	--	<50	1.0	<0.5	<0.5	2.0	--
07/01/91	594.57	587.20	7.37	--	660	190	2.5	28	22	--
09/25/91	594.57	587.59	6.98	--	110	200	1.9	21	1.7	--
12/23/91	594.57	589.56	5.01	--	<50	1.2	1.2	<0.5	1.8	--
03/24/92	594.57	577.30	17.27	--	100	5.9	7.9	4.0	14	--
06/23/92	594.57	590.75	3.82	--	190	45	4.5	9.5	10	--
09/30/92	594.57	580.56	14.01	--	240	99	2.3	11	6.1	--
12/16/92	594.57	580.05	14.52	--	280	160	6.2	7.4	5.0	--
03/30/93	594.57	583.49	11.08	--	110	21	<0.5	0.8	<1.5	--
06/10/93	594.57	583.08	11.49	--	180	53	2.6	8.0	5.8	--
09/02/93	594.57	580.49	14.08	--	51	18	0.8	4.4	<1.5	--
12/06/93	594.57	579.87	14.70	--	<50	20	1.3	2.7	<0.5	--
03/02/94	594.57	579.70	14.87	--	<50	9.9	1.6	<0.5	0.8	--
06/03/94	594.57	579.35	15.22	--	440	300	2.7	61	2.1	--
09/07/94	594.57	587.27	7.30	--	80	30	<0.5	1.6	<0.5	--
12/06/94	594.57	589.29	5.28	--	120	51	<0.5	4.7	<0.5	--
03/31/95	594.57	589.13	5.44	--	770	250	<5.0	74	<5.0	--
06/15/95	594.57	589.62	4.95	--	240	76	<1.0	26	<1.0	--
09/25/95	594.57	587.78	6.79	--	<50	1.2	<0.5	<0.5	<0.5	--
12/19/95	594.57	588.94	5.63	--	<250	23	<2.5	<2.5	<2.5	860
03/31/97	594.57	589.74	4.83	--	<500	48	<5.0	<5.0	<5.0	2900
06/23/97	594.57	589.98	4.59	--	1200	240	<10	<10	<10	4900

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## 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-2 (CONT'D)</b>										
09/02/97	594.57	590.02	4.55	--	1400	340	<5.0	54	6.9	2500
12/15/97	594.57	590.26	4.31	--	540	100	<2.5	8.7	<2.5	2400
03/10/98	594.57	590.00	4.57	--	<500	<5.0	<5.0	<5.0	<5.0	3000
06/16/98	594.57	589.99	4.58	--	120	6.6	<1.0	<1.0	<1.0	2500
08/25/98	594.57	589.67	4.90	--	140	<0.5	<0.5	<0.5	<0.5	2600
12/29/98	594.57	589.77	4.80	--	1830	17.7	<10.0	<10.0	14.9	4600
12/29/98	594.57	589.77	4.80	Confirmation Run	--	--	--	--	--	4890
03/09/99	594.57	590.21	4.36	--	120	16	<1.0	<1.0	<1.0	3400
<b>C-3</b>										
03/25/91	597.14	591.98	5.16	--	<50	<0.5	<0.5	<0.5	0.5	--
07/01/91	597.14	591.30	5.84	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/91	597.14	591.20	5.94	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/23/91	597.14	591.20	5.94	--	<50	1.0	<0.5	<0.5	1.5	--
03/24/92	597.14	592.37	4.77	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/23/92	597.14	591.47	5.67	--	<50	0.9	1.1	0.5	1.6	--
09/30/92	597.14	590.84	6.30	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	597.14	591.57	5.57	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/30/93	597.14	592.08	5.06	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	597.14	591.85	5.29	--	<50	0.6	1.9	0.6	3.5	--
09/02/93	597.14	591.22	5.92	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/06/93	597.14	591.38	5.76	--	<50	<0.5	0.6	<0.5	<0.5	--
03/02/94	597.14	591.97	5.17	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/03/94	597.14	591.74	5.40	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/07/94	597.14	591.14	6.00	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	597.14	591.95	5.19	--	<50	<0.5	0.8	<0.5	<0.5	--
03/31/95	597.14	592.04	5.10	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/15/95	597.14	591.78	5.36	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/95	597.14	591.04	6.10	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	597.14	591.46	5.68	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

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## 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(CONT'D)</b>										
03/31/97	597.14	590.65	6.49	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/23/97	597.14	590.63	6.51	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/02/97	597.14	591.07	6.07	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/15/97	597.14	590.86	6.28	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/10/98	597.14	590.89	6.25	--	<50	<0.5	<0.5	<0.5	<0.5	3.5
06/16/98	597.14	590.80	6.34	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/25/98	597.14	590.61	6.53	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/29/98	597.14	590.59	6.55	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
03/09/99	597.14	591.20	5.94	--	<50	<0.5	<0.5	<0.5	<0.5	2.8



## 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>										
03/25/91	593.10	588.65	4.45	--	2700	240	16	<0.5	350	--
07/01/91	593.10	587.77	5.33	--	7900	1500	230	340	350	--
09/25/91	593.10	587.60	5.50	--	3200	850	160	150	220	--
12/23/91	593.10	588.18	4.92	--	4100	390	52	42	340	--
03/24/92	593.10	589.06	4.19	Free Product (0.19')	--	--	--	--	--	--
06/23/92	593.10	588.43	4.91	Free Product (0.30')	--	--	--	--	--	--
09/30/92	593.10	584.44	8.66	--	450	97	14	12	29	--
12/16/92	593.10	583.30	9.80	--	590	130	18	5.6	29	--
03/30/93	593.10	583.20	10.00	Free Product (0.12')	--	--	--	--	--	--
06/10/93	593.10	583.46	9.64	--	1300	290	36	17	73	--
09/02/93	593.10	583.02	10.08	--	630	97	12	6.6	21	--
12/06/93	593.10	582.85	10.25	--	1900	600	68	27	130	--
03/02/94	593.10	584.36	8.74	--	2600	1200	110	43	180	--
06/03/94	593.10	583.27	9.83	--	780	180	13	8.5	26	--
09/07/94	593.10	582.80	10.30	--	<50	14	<0.5	0.7	<0.5	--
12/06/94	593.10	583.90	9.20	--	980	270	21	12	38	--
03/31/95	593.10	582.86	10.24	--	1500	450	25	11	49	--
06/15/95	593.10	582.78	10.32	--	960	250	15	4.5	37	--
09/25/95	593.10	584.72	8.38	--	<500	18	<5.0	<5.0	<5.0	--
12/19/95	593.10	582.94	10.16	--	<500	32	<5.0	<5.0	<5.0	2400
03/31/97	593.10	588.42	4.68	--	3400	960	51	64	140	2100
06/23/97	593.10	588.36	4.74	--	1600	580	19	8.2	27	2300
09/02/97	593.10	588.33	4.77	--	6900	1400	59	130	410	3100
12/15/97	593.10	588.60	4.50	--	3300	1200	37	74	130	3700
03/10/98	593.10	588.92	4.18	--	1100	250	19	13	62	4000
06/16/98	593.10	586.53	6.57	--	1200	350	<10	12	39	4500
08/25/98	593.10	586.30	6.80	--	290	24	0.72	0.87	1.9	3600
12/29/98	593.10	586.80	6.30	--	3190	957	<25	<25	<25	8100
12/29/98	593.10	586.80	6.30	Confirmation Run	--	--	--	--	--	8500
03/09/99	593.10	585.87	7.23	--	2200	850	15	35	56	5900

## 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>										
03/25/91	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/01/91	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/91	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/23/91	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/24/92	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/23/92	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/30/92	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/30/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/02/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/06/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/02/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/03/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/07/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/15/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--

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## 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 (CONT'D)</b>										
03/31/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/23/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/02/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/15/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/10/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/16/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/25/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/29/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
03/09/99	--	--	--	--	<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 31, 1995.

Earlier field data and analytical results provided by Sierra Environmental.

ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons

MTBE = Methyl t-Butyl Ether

# **Analytical Appendix**



**Sequoia  
Analytical**

680 Chesapeake Drive  
404 N. Wiger Lane  
819 Striker Avenue, Suite 8  
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834  
Petaluma, CA 94954

(650) 364-9600  
(925) 988-9600  
(916) 921-9600  
(707) 792-1865

FAX (650) 364-9233  
FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Christine Lillie

Client Proj. ID: Chevron 9-1740/990309-P2

Received: 03/10/99

Lab Proj. ID: 9903637

Reported: 03/24/99

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 4 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPGM2W: Sample 9908637-01 was run twice per client's request, MTBE was reported from GCHP03 on 3/22/99.

BTEX: Sample #1 was diluted 2-fold.  
Sample #3 was diluted 20-fold.

**SEQUOIA ANALYTICAL**

Mei Mei Shin  
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1740/990309-P2 Sample Descript: C-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9903637-01	Sampled: 03/09/99 Received: 03/10/99 Analyzed: 03/23/99 Reported: 03/24/99
--	--	---

QC Batch Number: GC032399BTEX02A  
Instrument ID: GCHP02

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

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	100	120
Methyl t-Butyl Ether	50	3400
Benzene	1.0	16
Toluene	1.0	N.D.
Ethyl Benzene	1.0	N.D.
Xylenes (Total)	1.0	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	124

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Mei Mei Shin  
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1740/990309-P2 Sample Descript: C-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9903637-02	Sampled: 03/09/99 Received: 03/10/99 Analyzed: 03/20/99 Reported: 03/24/99
Attention: Christine Lillie		

QC Batch Number: GC032099BTEX30A  
Instrument ID: GCHP30

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

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>2.8</b>
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	96

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Mei Mei Shin  
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1740/990309-F2 Sample Descript: C-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9903637-03	Sampled: 03/09/99 Received: 03/10/99 Analyzed: 03/22/99 Reported: 03/24/99
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QC Batch Number: GC032299BTEX03A  
Instrument ID: GCHP03

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

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2200
Methyl t-Butyl Ether	50	5900
Benzene	10	850
Toluene	10	15
Ethyl Benzene	10	35
Xylenes (Total)	10	56
Chromatogram Pattern:		GAS
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	120

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Mei Mei Shin  
Project Manager







# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8  
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834  
Petaluma, CA 94954

(650) 364-9600  
(925) 988-9600  
(916) 921-9600  
(707) 792-1865

FAX (650) 364-9233  
FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1740/990309-P2 Sample Descript: TB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9903637-04	Sampled: 03/09/99 Received: 03/10/99 Analyzed: 03/20/99 Reported: 03/24/99
Attention: Christine Lillie		

QC Batch Number: GC032099BTEX30A  
Instrument ID: GCHP30

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

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

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
\_\_\_\_\_  
Mei Mei Shin  
Project Manager



# Sequoia Analytical

680 Chesapeake Drive  
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819 Striker Avenue, Suite B  
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063  
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FAX (916) 921-0100  
FAX (707) 792-0342

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Chrisitne Lillie	Client Project ID: Chevron 9-1740/990309-P2  QC Sample Group: 9903637-01	Reported: Mar 24, 1999
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## QUALITY CONTROL DATA REPORT

<b>Matrix:</b>	Liquid			
<b>Method:</b>	EPA 8020			
<b>Analyst:</b>	MM			
<b>ANALYTE</b>	Benzene	Toluene	Ethylbenzene	Xylenes

QC Batch #: GC032399BTEX02A

Sample No.: 9903653-05

<b>Date Prepared:</b>	3/23/99	3/23/99	3/23/99	3/23/99
<b>Date Analyzed:</b>	3/23/99	3/23/99	3/23/99	3/23/99
<b>Instrument I.D.#:</b>	GCHP02	GCHP02	GCHP02	GCHP02
<b>Sample Conc., ug/L:</b>	N.D.	N.D.	0.6	N.D.
<b>Conc. Spiked, ug/L:</b>	10	10	10	30
<b>Matrix Spike, ug/L:</b>	9.4	9.1	9.6	28
<b>% Recovery:</b>	94	91	90	93
<b>Matrix Spike Duplicate, ug/L:</b>	9.9	9.6	10	29
<b>% Recovery:</b>	99	96	94	97
<b>Relative % Difference:</b>	5.2	5.3	4.3	4.2
<b>RPD Control Limits:</b>	0-25	0-25	0-25	0-25

LCS Batch#: GC032399BTEX02A

<b>Date Prepared:</b>	3/23/99	3/23/99	3/23/99	3/23/99
<b>Date Analyzed:</b>	3/23/99	3/23/99	3/23/99	3/23/99
<b>Instrument I.D.#:</b>	GCHP02	GCHP02	GCHP02	GCHP02
<b>Conc. Spiked, ug/L:</b>	10	10	10	30
<b>LCS Recovery, ug/L:</b>	9.6	9.6	9.5	29
<b>LCS % Recovery:</b>	96	96	95	97

Percent Recovery Control Limits:

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

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Mei Mei Shin  
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.



# Sequoia Analytical

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Redwood City, CA 94063  
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FAX (916) 921-0100  
FAX (707) 792-0342

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Chrisitne Lillie	Client Project ID: Chevron 9-1740/990309-P2  QC Sample Group: 9903637-02,04	Reported: Mar 24, 1999
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## QUALITY CONTROL DATA REPORT

<b>Matrix:</b>	Liquid			
<b>Method:</b>	EPA 8020			
<b>Analyst:</b>	BTF			
<b>ANALYTE</b>	Benzene	Toluene	Ethylbenzene	Xylenes

QC Batch #: GC032099BTEX30A

Sample No.: GW9903637-2

<b>Date Prepared:</b>	3/20/99	3/20/99	3/20/99	3/20/99
<b>Date Analyzed:</b>	3/20/99	3/20/99	3/20/99	3/20/99
<b>Instrument I.D.#:</b>	GCHP30	GCHP30	GCHP30	GCHP30
<b>Sample Conc., ug/L:</b>	N.D.	N.D.	N.D.	N.D.
<b>Conc. Spiked, ug/L:</b>	10	10	10	30
<b>Matrix Spike, ug/L:</b>	8.1	8.2	8.1	24
<b>% Recovery:</b>	81	82	81	80
<b>Matrix Spike Duplicate, ug/L:</b>	8.4	8.3	8.3	25
<b>% Recovery:</b>	84	83	83	83
<b>Relative % Difference:</b>	3.6	1.2	2.4	3.7
<b>RPD Control Limits:</b>	0-25	0-25	0-25	0-25

LCS Batch#: GWLCS032099A

<b>Date Prepared:</b>	3/20/99	3/20/99	3/20/99	3/20/99
<b>Date Analyzed:</b>	3/20/99	3/20/99	3/20/99	3/20/99
<b>Instrument I.D.#:</b>	GCHP30	GCHP30	GCHP30	GCHP30
<b>Conc. Spiked, ug/L:</b>	10	10	10	30
<b>LCS Recovery, ug/L:</b>	8.5	8.6	8.7	26
<b>LCS % Recovery:</b>	85	86	87	87
<b>Percent Recovery Control Limits:</b>				
MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

  
Mei Mei Shin  
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.



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FAX (707) 792-0342

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Chrisitne Lillie

Client Project ID: Chevron 9-1740/990309-P2

QC Sample Group: 9903637-03

Reported: Mar 24, 1999

## QUALITY CONTROL DATA REPORT

Matrix: Liquid  
Method: EPA 8020  
Analyst: MM

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
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QC Batch #: GC032399BTEX03A

Sample No.: 9903668-01

	3/23/99	3/23/99	3/23/99	3/23/99
Date Prepared:	3/23/99	3/23/99	3/23/99	3/23/99
Date Analyzed:	3/23/99	3/23/99	3/23/99	3/23/99
Instrument I.D.#:	GCHP03	GCHP03	GCHP03	GCHP03

Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30

Matrix Spike, ug/L:	11	11	11	33
% Recovery:	110	110	110	110

Matrix				
Spike Duplicate, ug/L:	11	11	11	33
% Recovery:	110	110	110	110

Relative % Difference:	0.0	0.0	0.0	0.0
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RPD Control Limits:	0-25	0-25	0-25	0-25
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LCS Batch#: GC032399BTEX03A

	3/23/99	3/23/99	3/23/99	3/23/99
Date Prepared:	3/23/99	3/23/99	3/23/99	3/23/99
Date Analyzed:	3/23/99	3/23/99	3/23/99	3/23/99
Instrument I.D.#:	GCHP03	GCHP03	GCHP03	GCHP03

Conc. Spiked, ug/L:	10	10	10	30
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LCS Recovery, ug/L:	9.4	10	10	31
LCS % Recovery:	94	100	100	103

Percent Recovery Control Limits:

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

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Mei Mei Shin  
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.

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

# Chain-of-Custody-Record

Chevron Products Co.  
P.O. BOX 6004  
San Ramon, CA 94583  
FAX (925)842-8370

Chevron Facility Number 9-1740  
Facility Address 6550 Moraga Ave., Oakland  
Consultant Project Number 990309-P2  
Consultant Name BLAINE TECH SERVICE, INC.  
Address 1680 ROGERS AVE., SAN JOSE  
Project Contact (Name) CHRISTINE LILLIE  
(Phone) 408-573-0555 (Fax Number) 408-573-7771

Chevron Contact (Name) PHIL BRIGGS  
(Phone) (925) 842-9136  
Laboratory Name SEQUOIA  
Laboratory Service Order 9144488  
Laboratory Service Code ZZ02800  
Samples Collected by (Name) PAUL SAWWA  
Signature

State Method:  CA  OR  WA  NW Series  CO  UT

Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Sample Preservation	Date/Time	BTEX/MTBE/TPH GAS (8020 + 8015)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oxygenates (8260)	Purgeable Halocarbons (8010)	Purgeable Organics (8260)	Extractable Organics (8270)	Oil and Grease (8520)	Metals (ICAP or AA) Cd, Cr, Pb, Zn, Ni	BTEX (8020)	BTEX/MTBE/Naph. (8020)	TPH - HCID	TPH-D Extended	Remarks
					Lab Sample No.													
C-2	3	W		3/14/95	X													990309/27  10 1 28
C-3	↓	↓		14:22	↓													
C-4	↓	↓		15:00	↓													
TB	2			3/9	X													

Relinquished By (Signature) 	Organization <b>Blaine</b>	Date/Time 3/10/95	Received By (Signature) 	Organization <b>Seq</b>	Date/Time 2/9/95	Iced Y/N	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature) 	Organization <b>Seq</b>	Date/Time 3-10-95	Received By (Signature)	Organization	Date/Time	Iced Y/N	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) 		Date/Time 3/29/95	Iced Y/N	

# **Field Data Sheets**



## CHEVRON WELL MONITORING DATA SHEET

Project #: <b>990309-P2</b>	Station #: <b>9-1740</b>
Sampler: <b>PAUL</b>	Date: <b>3-9-99</b>
Well I.D.: <b>C-2</b>	Well Diameter: <b>(2)</b> 3 4 6 8 <u>    </u>
Total Well Depth: <b>26.84</b>	Depth to Water: <b>4.36</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>(PVC)</b> Grade	D.O. Meter (if req'd): YSI HACH

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

Purge Method:  Bailer      Sampling Method:  Bailer  
 Disposable Bailer       Disposable Bailer  
 Middleburg       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump

<b>3.5</b>	x	<b>3</b>	=	<b>10.7</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
14:30	60.2	7.4	1297	3.5	
14:35	59.8	7.3	1268	7.0	
14:40	59.6	7.3	1215	10.0	

Did well dewater?    Yes    **(No)**    Gallons actually evacuated: **10.0**

Sampling Time: **14:45**    Sampling Date: **3-9-99**

Sample I.D.: **C-2**    Laboratory: **(Sequoia)** CORE 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 #: <b>990309-P2</b>	Station #: <b>9-1740</b>
Sampler: <b>PAUL</b>	Date: <b>3-9-99</b>
Well I.D.: <b>C-3</b>	Well Diameter: <b>(2)</b> 3 4 6 8
Total Well Depth: <b>18.65</b>	Depth to Water: <b>5.94</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>(PVC)</b> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multplier	Well Diameter	Multplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.165

Purge Method:  Bailer      Sampling Method:  Bailer  
 Disposable Bailer       Disposable Bailer  
                                  Middleburg      Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump  
 Other: \_\_\_\_\_

<b>2.0</b>	X	<b>3</b>	=	<b>6.0</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
14:12	60.8	7.2	1205	2	
14:15	60.4	7.2	1225	4	
14:18	60.2	7.1	1236	6	

Did well dewater?    Yes    **(No)**    Gallons actually evacuated: **6**

Sampling Time: **14:22**    Sampling Date: **3-9-99**

Sample I.D.: **C-3**    Laboratory: **(Sequoia)** CORE 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
C.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## CHEVRON WELL MONITORING DATA SHEET

Project #: <b>990309-P2</b>	Station #: <b>9-1740</b>
Sampler: <b>PAV1</b>	Date: <b>3-9-99</b>
Well I.D.: <b>C-4</b>	Well Diameter: <b>(2)</b> 3 4 6 8
Total Well Depth: <b>24.63</b>	Depth to Water: <b>7.23</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>(PVC)</b> 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> * 0.165

Purge Method:  Bailer      Sampling Method:  Bailer  
 Disposable Bailer       Disposable Bailer  
                                  Middleburg       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump

<b>2.7</b>	X	<b>3</b>	=	<b>8.3</b>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<b>14:51</b>	<b>59.6</b>	<b>6.7</b>	<b>1032</b>	<b>2.5</b>	
<b>14:54</b>	<b>59.4</b>	<b>6.8</b>	<b>1012</b>	<b>5.0</b>	
<b>14:57</b>	<b>59.2</b>	<b>6.8</b>	<b>978</b>	<b>8.0</b>	

Did well dewater?    Yes    **(No)**    Gallons actually evacuated: **8.0**

Sampling Time: **15:00**    Sampling Date: **3-9-99**

Sample I.D.: **C-4**    Laboratory: **(Sequoia)** CORE 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