

#4249



**Chevron**

July 13, 1999

**Chevron Products Company**  
6001 Bollinger Canyon Road  
Building L, Room 1080  
PO Box 6004  
San Ramon, CA 94583-0904

Mr. Barney Chan  
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: Former Chevron Service Station # 9-4612  
3616 San Leandro Street  
Oakland, California**

Dear Mr. Chan:

Enclosed is the Second Quarter Groundwater Monitoring report for 1999 that was prepared by Blaine Tech Services, Inc. for the above noted site. The groundwater samples were analyzed for TPH-g, BTEX and MtBE constituents with monitoring well MW-3 also analyzed for the TPH-d constituent.

In accordance with your letter of May 4, 1998, ORC was added to wells VH-1, MW-2 and MW-3 on July 25 with sampling of the wells on July 29. The addition of the ORC is expected to increase the availability of oxygen in the soil and groundwater thereby providing an agent for biological reaction and the breakdown of hydrocarbon compounds to natural by products. Based on the results in this event, it appears that additional time will be required to see the effect of adding ORC.

The pre-purge dissolved oxygen (DO) reading in wells VH-1, MW-2, MW-3 and MW-4 were 1.7, 0.2, 0.4, 2.8 mg/l respectively. The DO reading was similar in well VH-1 in the previous sampling event, while declining in wells MW-2 and MW-3. The DO reading increased in well MW-4 from the previous sampling event. Since the concentration of DO in wells VH-1, MW-2 and MW-3 continue to remain low it will be necessary to install additional ORC into these wells to increase the availability of oxygen for biological reaction. Additional ORC will be added to these wells at the next sampling event.

The benzene constituent increased in monitoring wells VH-1, MW-2 and MW-3 from the previous sampling event. All of the constituents in well MW-4 were below method detection levels.

July 13, 1999

Mr. Barney Chan

Former Chevron Service Station #9-4612

Page 2

Monitoring wells VH-1, MW-2 and MW-3 confirmed the presence of MtBE by EPA Method 8260. There is no explanation for the detection of MtBE at this site, as Chevron did not use this oxygenate in gasoline until 1991, while the tanks were removed in 1983.

The analysis for the TPH-d constituent in well MW-3 detected the presence of an unidentified hydrocarbon by its chromatogram pattern. This was in a concentration of 160 ppb, which is a decrease from the previous sampling event. Note that the concentration was not recorded in the analytical results, but is found on page 10 of the Analytical Appendix.

Depth to ground water varied from 7.95 feet to 9.30 feet below grade with the direction of flow south southwesterly.

Chevron will continue to monitor the site quarterly. 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. Jack Ratto  
PO Box 6104  
Oakland, CA. 94603-0104

Mr. Terry McIlraith  
407 Castello Road  
Lafayette, CA 94549

Ms. Bette Owen, Chevron

**BLAINE**  
TECH SERVICES INC.



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

- MTBE (a) low levels is comparable by 8020/8200  
    " " hi levels is very different " "

#### MTBE

- need to include cumulative data for MW-4,  
    " " need to add new ORC socks in UH-1, MW-2 & 3

July 7, 1999

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

#### 2nd Quarter 1999 Monitoring at 9-4612

Second Quarter 1999 Groundwater Monitoring at  
Chevron Service Station Number 9-4612  
3616 San Leandro St.  
Oakland, CA

Monitoring Performed on May 13, 1999

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#### Groundwater Sampling Report 990513-J-3

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.

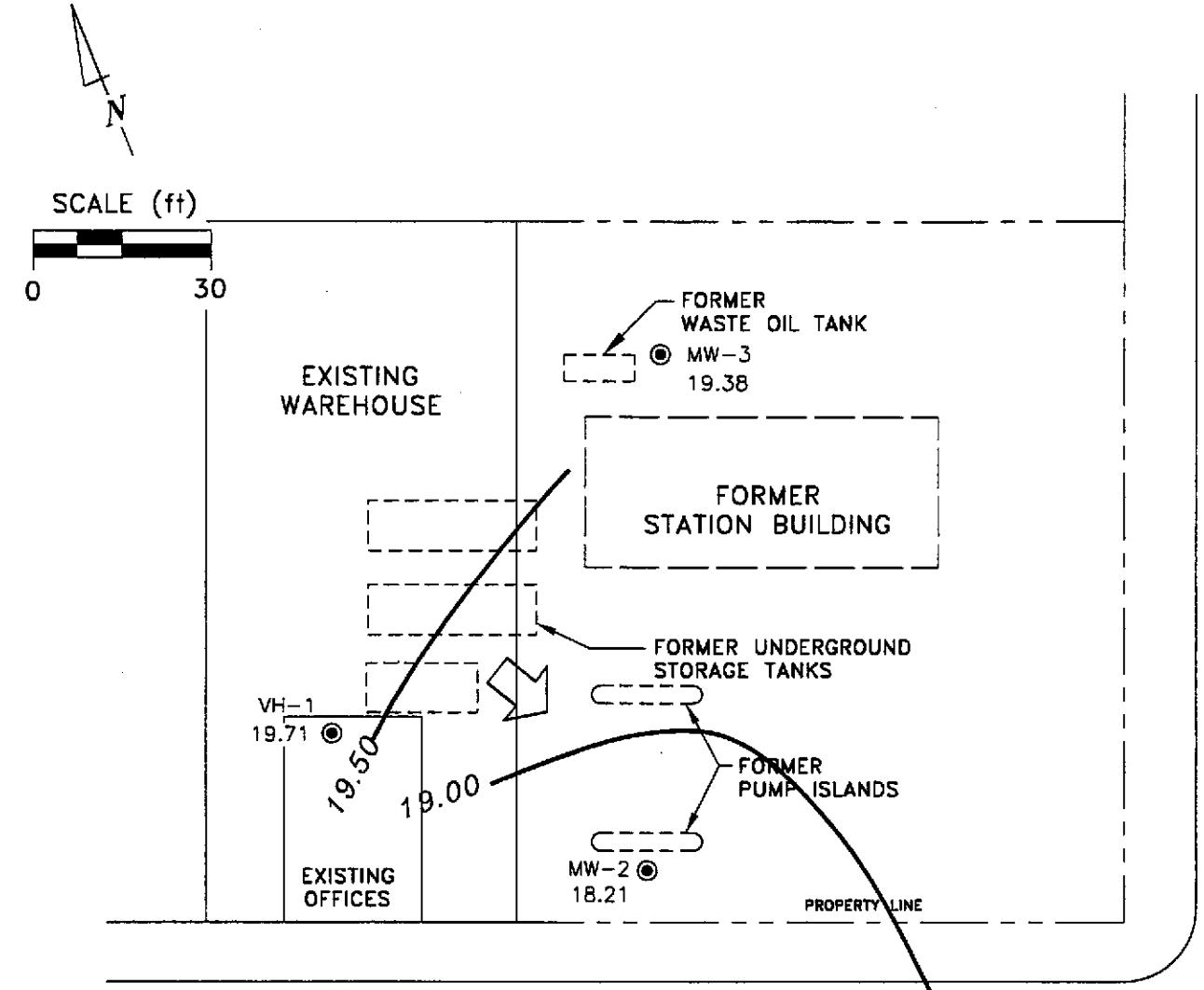
Yours truly,



Christine Lillie  
Project Coordinator

CAL/sb

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



EXPLANATION

- MONITORING WELL
- 19.32 GROUNDWATER ELEVATION (FT, MSL)
- 19.50 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- ↗ APPROXIMATE GROUNDWATER FLOW DIRECTION;  
APPROXIMATE GRADIENT = 0.03



Basemap from Cambrio Environmental Technology, Inc.

PREPARED BY

**RRM**  
engineering contracting firm

Chevron Station 9-4612  
3616 San Leandro Street  
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP,  
MAY 13, 1999

FIGURE:  
1  
PROJECT:  
DAC04

# **Table of Well Data and Analytical Results**

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TPH-Diesel	TOG	HVOC	MTBE	MTBE by 8260
<b>VH-1</b>														
08/10/88	--	--	13.00	--	11,000	3300	200	520	540	--	--	--	--	--
06/01/89	--	--	10.32	--	15,000	2200	120	540	310	--	--	--	--	--
09/15/89	--	--	15.69	--	5600	1900	90	350	160	--	--	--	--	--
12/08/89	--	--	14.77	--	11,000	1900	69	270	99	--	--	--	--	--
03/07/91	--	--	11.26	--	4500	820	39	120	77	--	--	--	--	--
09/24/91	--	--	12.98	--	3300	520	19	39	27	--	--	--	--	--
01/08/92	--	--	13.77	--	5000	600	34	81	76	--	--	--	--	--
04/20/92	--	--	8.18	--	7400	670	60	110	140	--	--	--	--	--
03/26/93	27.85	21.14	6.71	--	4900	600	40	72	94	--	--	--	--	--
05/27/93	27.85	19.27	8.58	--	13,000	1600	120	230	220	--	--	--	--	--
08/18/93	27.85	17.39	10.46	--	2700	210	10	8.1	18	--	--	--	--	--
11/03/93	27.85	15.28	12.57	--	4600	680	42	35	68	--	--	--	--	--
02/10/94	27.85	18.77	9.08	--	1900	260	19	22	29	--	--	--	--	--
05/12/94	27.85	19.76	8.09	--	2000	390	28	3.9	29	--	--	--	--	--
08/26/94	27.85	17.10	10.75	--	4900	500	<5.0	23	31	--	--	--	--	--
11/14/94	27.85	18.40	9.45	--	760	69	<2.0	<2.0	2.2	300	--	--	--	--
02/01/95	27.85	21.88	5.97	--	1300	120	5.9	<0.5	13	--	--	--	--	--
05/12/95	27.85	20.14	7.71	--	4400	460	31	45	49	--	--	--	--	--
08/22/95	27.85	18.59	9.26	--	2900	310	15	28	32	--	--	--	--	--
12/19/95	27.85	19.05	8.80	--	930	53	<2.5	<2.5	<2.5	--	--	--	39	--
01/31/96	27.85	22.35	5.50	--	3700	320	<10	41	40	--	--	--	180	--
04/30/96	27.85	19.81	8.04	--	3900	270	<20	<20	<20	--	--	--	120	--
08/01/96	27.85	18.67	9.18	--	2700	140	11	18	28	--	--	--	200	--
10/30/96	27.85	18.67	10.76	--	2700	140	<12	<12	<12	--	--	--	280	--
02/07/97	27.85	19.75	8.10	--	220	13	0.6	<0.5	1.6	--	--	--	15	--
05/07/97	27.85	18.33	9.52	--	5200	33	12	21	26	--	--	--	330	--
07/22/97	27.85	17.43	10.42	--	4200	80	<10	16	24	--	--	--	400	--
11/03/97	27.85	16.85	11.00	--	2400	150	6.8	6.5	9.5	--	--	--	510	--
01/28/98	27.85	20.75	7.10	--	850	69	4.8	5.0	11	--	--	--	38	48
05/08/98	27.85	20.14	7.71	--	4200	200	30	40	42	--	--	--	310	200
07/29/98	27.85	18.40	9.45	--	3800	54	10	27	30	--	--	--	35	290
11/06/98	27.85	17.15	10.70	--	4800	100	20	12	23	--	--	--	360	210
02/09/99	27.85	21.87	5.98	ORC socks installed	2950	79.5	<10	<10	<10	--	--	--	435	312
05/13/99	27.85	19.71	8.14	--	4180	147	12.8	16.5	20.3	--	--	--	433	245

## 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	TPH-Diesel	TOG	HVOC	MTBE	MTBE by 8260
<b>MW-2</b>														
02/16/93	27.51	--	--	--	9200	720	110	250	170	--	--	--	--	--
03/26/93	27.51	19.89	7.62	--	--	--	--	--	--	--	--	--	--	--
05/27/93	27.51	18.04	9.47	--	360	5.3	2.1	1.8	2.5	--	--	--	--	--
08/18/93	27.51	16.46	11.05	--	9400	1100	76	110	100	--	--	--	--	--
11/03/93	27.51	14.56	12.95	--	8600	390	20	2.7	120	--	--	--	--	--
02/10/94	27.51	17.72	9.79	--	2700	370	38	44	41	--	--	--	--	--
05/12/94	27.51	18.59	8.92	--	3800	650	76	15	62	--	--	--	--	--
08/26/94	27.51	16.14	11.37	--	16,000	1300	270	28	120	--	--	--	--	--
11/14/94	27.51	17.48	10.03	--	5100	390	10	43	27	--	--	--	--	--
02/01/95	27.51	20.47	7.04	--	6900	520	82	170	110	--	--	--	--	--
05/12/95	27.51	18.76	8.75	--	7700	510	83	110	100	--	--	--	--	--
08/22/95	27.51	17.35	10.16	--	4500	220	16	61	47	--	--	--	--	--
12/19/95	27.51	18.05	9.46	--	2900	240	<10	19	18	--	--	--	220	--
01/31/96	27.51	21.91	5.60	--	3900	320	18	72	39	--	--	--	<25	--
04/30/96	27.51	18.68	8.83	--	5600	200	36	55	47	--	--	--	170	--
08/01/96	27.51	17.25	10.26	--	6200	190	15	62	59	--	--	--	220	--
10/30/96	27.51	17.25	11.48	--	5700	190	<25	67	36	--	--	--	260	--
02/07/97	27.51	18.11	9.40	--	8300	210	34	70	59	--	--	--	330	--
05/07/97	27.51	17.57	9.94	--	6900	190	12	38	37	--	--	--	530	--
07/22/97	27.51	16.36	11.15	--	10,000	18	25	62	41	--	--	--	630	--
11/03/97	27.51	15.93	11.58	--	6500	260	8.5	26	14	--	--	--	590	--
11/03/97	27.51	15.93	11.58	Confirmation run	--	--	--	--	--	--	--	--	--	96
01/28/98	27.51	19.38	8.13	--	6700	65	13	67	54	--	--	--	280	94
05/08/98	27.51	18.89	8.62	--	5500	91	38	43	61	--	--	--	220	62
07/29/98	27.51	17.06	10.45	--	3600	41	8.9	3.6	14	--	--	--	16	94
11/06/98	27.51	15.89	11.62	--	6900	77	<5.0	14	17	--	--	--	290	110
02/09/99	27.51	20.61	6.90	ORC socks installed	8070	75.6	<10	<10	<10	--	--	--	397	144
05/13/99	27.51	18.21	9.30	--	5890	120	<5.0	12.5	26.6	--	--	--	401	69.4

## 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	TPH-Diesel	TOG	HVOC	MTBE	MTBE by 8260
<b>MW-3</b>														
02/16/93	28.50	--	--	--	3500	<0.5	8.1	4.6	7.7	--	--	--	--	--
03/26/93	28.50	21.32	7.18	--	--	--	--	--	--	--	--	--	--	--
05/27/93	28.50	19.17	9.33	--	4200	580	84	150	100	--	--	--	--	--
08/18/93	28.50	16.50	12.00	--	910	12	3.7	6.2	3.8	1400	<5000	ND	--	--
11/03/93	28.50	15.21	13.29	--	5300	29	1.9	0.6	27	--	--	--	--	--
02/10/94	28.50	18.87	9.63	--	63	<0.5	0.7	<0.5	<0.5	<50	--	--	--	--
05/12/94	28.50	19.73	8.77	--	<50	<0.5	0.5	<0.5	<0.5	84	--	--	--	--
08/26/94	28.50	17.08	11.42	--	2100	12	<0.5	5.0	0.5	--	--	--	--	--
11/14/94	28.50	18.43	10.07	--	140	0.78	<0.5	<0.5	<0.5	--	--	--	--	--
02/01/95	28.50	22.21	6.29	--	<50	<0.5	<0.5	<0.5	<0.5	<50	--	--	--	--
05/12/95	28.50	20.43	8.07	--	330	13	1.1	1.9	0.69	540*	--	--	--	--
08/22/95	28.50	18.55	9.95	--	980	32	<1.0	<1.0	<1.0	550*	--	--	--	--
12/19/95	28.50	19.10	9.40	--	<50	<0.5	<0.5	<0.5	<0.5	<50	--	--	--	--
01/31/96	28.50	23.45	5.05	--	<50	<0.5	<0.5	<0.5	<0.5	<50	--	--	<2.5	--
04/30/96	28.50	20.10	8.40	--	320	2.4	<0.5	0.75	<0.5	240*	--	--	<2.5	--
08/01/96	28.50	18.70	9.80	--	980	9.6	<0.5	0.98	2.2	470*	--	--	7.8	--
10/30/96	28.50	18.70	11.48	--	2000	14	<10	<10	<10	760*	--	--	54	--
02/07/97	28.50	19.90	8.60	--	200*	<0.5	<0.5	<0.5	<0.5	61*	--	--	140	--
05/07/97	28.50	19.49	9.01	--	3500	14	3.9	3.6	8.0	550*	--	--	8.9	--
07/22/97	28.50	17.38	11.12	--	3500	55	<10	<10	<10	800*	--	--	160	--
11/03/97	28.50	16.99	11.51	--	4100	140	<5.0	<5.0	<5.0	910*	--	--	150	--
01/28/98	28.50	21.16	7.34	--	1100	24	<1.2	<1.2	2.8	--	--	--	380	--
05/08/98	28.50	20.44	8.06	--	990	3.6	7.7	0.70	2.2	250*	--	--	6.1	6.1
07/29/98	28.50	18.25	10.25	--	1200	13	<0.5	<0.5	1.4	290*	--	--	37	7.5
11/06/98	28.50	17.11	11.39	--	2600	5.3	<2.5	<2.5	3.0	390*	--	--	11	28
02/09/99	28.50	22.40	6.10	ORC socks installed	406	<1.0	4.03	<1.0	<1.0	184*	--	--	91	41
05/13/99	28.50	19.38	9.12	--	615	13.8	1.05	<0.5	<0.5	--	--	--	17.7	1.97
													43.5	21.2

\* Chromatogram pattern indicates an unidentified hydrocarbon.



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8  
1455 McDowell Blvd. North, Ste. D  
1551 Industrial Road

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834  
Petaluma, CA 94954  
San Carlos, CA 94070-4111

(650) 364-9600  
(925) 988-9600  
(916) 921-9600  
(707) 792-1865  
(650) 232-9600

FAX (650) 364-9233  
FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342  
FAX (650) 232-9612

Sequoia Analytical  
1551 Industrial Blvd.  
San Carlos, CA. 94070  
Attention: Mike Gregory

Client Project ID: L905229- Blaine Tech Services, Inc.  
Sample Matrix: Water  
Analysis Method: EPA 3510/8015 Mod.  
First Sample #: 905-1184

Sampled: May 13, 1999  
Received: May 17, 1999  
Reported: May 24, 1999

QC Batch Number: SP051999 SP051999

8015EXA 8015EXA

## TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 905-1184 MW-3	Sample I.D. Method Blank
---------	-------------------------	---------------------------------	--------------------------------

Extractable Hydrocarbons 50 160 N.D.

Chromatogram Pattern: Unidentified Hydrocarbons --  
C10 - C24

### Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	5/19/99	5/19/99
Date Analyzed:	5/19/99	5/19/99
Instrument Identification:	HP-3A	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.  
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Charlie Westwater  
Project Manager





# Sequoia Analytical

Sequoia Analytical  
1551 Industrial Blvd.  
San Carlos, CA. 94070  
Attention: Mike Gregory

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8  
1455 McDowell Blvd. North, Ste. D  
1551 Industrial Road

Redwood City, CA 94063  
Walnut Creek, CA 94598  
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FAX (650) 364-9233  
FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342  
FAX (650) 232-9612

Client Project ID: L905229- Blaine Tech Services, Inc.  
Matrix: Liquid

QC Sample Group: 905-1184

Reported: May 24, 1999

## QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	SP051999
	8015EXA
Anal. Method:	EPA 8015M.
Prep. Method:	EPA 3510

Analyst:	K. Grubb
MS/MSD #:	BLK051999
Sample Conc.:	N.D.
Prepared Date:	5/19/99
Analyzed Date:	5/19/99
Instrument I.D. #:	HP-3B
Conc. Spiked:	500 µg/L

Result:	370
MS % Recovery:	74
Dup. Result:	410
MSD % Recov.:	82
RPD:	10
RPD Limit:	0-50

LCS #:	LCS051999
Prepared Date:	5/19/99
Analyzed Date:	5/19/99
Instrument I.D. #:	HP-3B
Conc. Spiked:	500 µg/L

LCS Result:	330
LCS % Recov.:	66
LCSD Result:	300
LCSD % Recov.:	60
MS/MSD	50-150
LCS	60-140
Control Limits	

### 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, #1271

Charlie Westwater  
Project Manager



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

Chain-of-Custody-Record

<b>Chevron Products Co.</b> P.O. BOX 6004 San Ramon, CA 94583 FAX (925)842-8370	Chevron Facility Number <u>9-4612</u> Facility Address <u>3616 San Leandro St.</u> Consultant Project Number <u>990513-03</u> Consultant Name <u>BLAINE TECH SERVICE, INC.</u> Address <u>1680 ROGERS AVE., SAN JOSE</u> Project Contact (Name) <u>CHRISTINE LILLIE</u> (Phone) <u>408-573-0555</u> (Fax Number) <u>408-573-7771</u>
--	--

1. **Chevron Contact (Name)** PHIL BRIGGS  
**(Phone)** (925) 842-9136

2. **Laboratory Name** SEQUOIA

3. **Laboratory Service Order** 9144488

4. **Laboratory Service Code** ZZ02800

5. **Samples Collected by (Name)** Ton Powers &  
**Signature** Ton Powers

Gas/BTEX/MTBE  
8260

5

TPHD - WC

Shed By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/H	Turn Around Time (Circle Choices)
<i>Bob</i>	<i>BTS</i>	<i>5/14/99 11:45</i>	<i>Steve Ten</i>	<i>SEQ</i>	<i>5/14/99 11:50</i>		<input type="checkbox"/> 24 hrs. <input type="checkbox"/> 48 hrs. <input type="checkbox"/> 5 Days <input checked="" type="checkbox"/> 10 Days <input type="checkbox"/> As Contracted
By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/H	
<i>John</i>	<i>SEQ</i>	<i>5/14/99 8:50</i>					

**Field  
Data  
Sheets**

## WELL GAUGING DATA

Project # 99-0513~J3 Date 5-13-99 Client CUSA

CUSA

Site 3616 San Leandro

# CHEVRON WELL MONITORING DATA SHEET

Project #:	990513-53	Station #:	9-4612			
Sampler:	Ton P	Date:	5-13-99			
Well I.D.:	VH1	Well Diameter:	2	3	4	6
Total Well Depth:	28.37	Depth to Water:	8.14			
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      Sampling Method: Bailer  
 Disposable Bailer      Disposable Bailer   
 Middleburg      Extraction Port  
 Electric Submersible       Other: \_\_\_\_\_  
 Extraction Pump  
 Other: \_\_\_\_\_

$$\frac{13.1}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{39.4}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
*	well	contains	ORC		
6/10	68.4	6.0	1100	14	rusty red color
6/12	67.6	7.0	1090	27	clear no color
6/14	67.6	8.0	1090	40	no color

Did well dewater? Yes  Gallons actually evacuated: 40

Sampling Time: 1620      Sampling Date: 5-13-99

Sample I.D.: VH1      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:	1.7 mg/L	Post-purge:	mg/L
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D.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
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# CHEVRON WELL MONITORING DATA SHEET

Project #:	990513-53	Station #:	9-4612
Sampler:	Ton P	Date:	5-13-99
Well I.D.:	MW2	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	19.50	Depth to Water:	9.30
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 X  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer X  
 Extraction Port  
 Other: \_\_\_\_\_

$$\frac{1.6}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{4.8}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
* ORC	in well				
1655	65.2	6.4	880	1.75	
1658	64.2	7.4	840	3.25	
701	64.4	7.0	820	5	

Did well dewater? Yes  No Gallons actually evacuated: 5

Sampling Time: 1705 Sampling Date: 15-13-99

Sample I.D.: MW2 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: 0.2 mg/L Post-purge: mg/L

R.P. (if req'd): Pre-purge: mV Post-purge: mV

# CHEVRON WELL MONITORING DATA SHEET

Project #:	990513-53	Station #:	9-4612
Sampler:	Ton P	Date:	5-13-99
Well I.D.:	MW3	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	19.08	Depth to Water:	9.12
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 X  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer X  
 Extraction Port

$$\begin{array}{r}
 1.5 \\
 \times \quad 3 \\
 \hline
 \end{array} = 4.5 \text{ Gals.}$$

1 Case Volume (Gals.)      Specified Volumes      Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
724	63.6	6.0	1090	1.5	
727	62.2	6.0	1090	3.0	
730	63.0	6.0	1080	4.75	

Did well dewater? Yes  No  Gallons actually evacuated: 4.75

Sampling Time: 1735 Sampling Date: 5-13-99

Sample I.D.: MW3 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: 0.4 mg/L Post-purge: mg/L

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

# CHEVRON WELL MONITORING DATA SHEET

Project #:	990513-53	Station #:	9-4612
Sampler:	Tom P	Date:	5-13-99
Well I.D.:	MW4	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	18.85	Depth to Water:	7.95
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   
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer   
 Extraction Port  
 Other: \_\_\_\_\_

$$\begin{array}{r}
 1.7 \\
 \times \quad 3 \\
 \hline
 \end{array} = \frac{5.2}{\text{Gals.}}$$

1 Case Volume (Gals.)      Specified Volumes      Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1531	62.6	7.0	480	1.75	
1534	63.8	6.0	700	3.50	
1537	64.0	7.0	720	5.25	

Did well dewater? Yes  No Gallons actually evacuated: 5.25

Sampling Time: 1542 Sampling Date: 5-13-99

Sample I.D.: MW4 Laboratory: Sequoia CORE N. Creek Assoc. Labs

Analyzed for: TPH-G BTEX MTBE TPH-D Other: MTBE by 8020 & 8260

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: 2.8 mg/L Post-purge: mg/L

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



# Sequoia Analytical

1551 Industrial Road  
San Carlos, CA 94070-4111  
(650) 232-9600  
FAX (650) 232-9612

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron(8) Project Number: Chevron/9-4612/990513-J3 Project Manager: Christine Lillie	Sampled: 5/13/99 Received: 5/14/99 Reported: 5/28/99
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**Sample Description:** MW3  
**Laboratory Sample Number:** L905229-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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### Sequoia Analytical - San Carlos

#### Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Purgeable Hydrocarbons as Gasoline	9050113	5/25/99	5/25/99		50.0	<b>615</b>	ug/l	1
Benzene	"	"	"		0.500	<b>13.8</b>	"	
Toluene	"	"	"		0.500	<b>1.05</b>	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	<b>43.5</b>	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		97.2	%	

#### MTBE by EPA Method 8260A

Methyl tert-butyl ether	9050090	5/19/99	5/20/99		2.00	<b>21.2</b>	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		105	%	





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**Sample Description:** MW4  
**Laboratory Sample Number:** L905229-04

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>Sequoia Analytical - San Carlos</u>								
<b>Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT</b>								
Purgeable Hydrocarbons as Gasoline	9050113	5/25/99	5/25/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		113	%	
<b>MTBE by EPA Method 8260A</b>								
Methyl tert-butyl ether	9050090	5/19/99	5/20/99		2.00	ND	ug/l	
Surrogate: <i>1,2-Dichloroethane-d4</i>	"	"	"	76.0-114		105	%	





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**Sample Description:** TB  
**Laboratory Sample Number:** L905229-05

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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### Sequoia Analytical - San Carlos

#### Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Purgeable Hydrocarbons as Gasoline	9050113	5/25/99	5/25/99		50.0	ND	ug/l
Benzene	"	"	"		0.500	ND	"
Toluene	"	"	"		0.500	ND	"
Ethylbenzene	"	"	"		0.500	ND	"
Xylenes (total)	"	"	"		0.500	ND	"
Methyl tert-butyl ether	"	"	"		5.00	ND	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	"	"	70.0-130		88.5	%

#### MTBE by EPA Method 8260A

Methyl tert-butyl ether	9050090	5/19/99	5/20/99		2.00	ND	ug/l
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	"	"	76.0-114		105	%





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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS/LUFL/Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD % Notes*
<b>Batch: 9050113</b>									
<b>Blank</b>									
<b>Purgeable Hydrocarbons as Gasoline</b>									
Benzene	5/25/99			ND	ug/l	50.0			
Toluene	"			ND	"	0.500			
Ethylbenzene	"			ND	"	0.500			
Xylenes (total)	"			ND	"	0.500			
Methyl tert-butyl ether	"			ND	"	5.00			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		8.51	"	70.0-130	85.1		
<b>LCS</b>									
<b>9050113-BS1</b>									
Benzene	5/25/99	10.0		10.3	ug/l	70.0-130	103		
Toluene	"	10.0		10.6	"	70.0-130	106		
Ethylbenzene	"	10.0		11.0	"	70.0-130	110		
Xylenes (total)	"	30.0		31.4	"	70.0-130	105		
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		8.06	"	70.0-130	80.6		
<b>Matrix Spike</b>									
<b>9050113-MS1      L905245-07</b>									
Benzene	5/25/99	10.0	ND	10.6	ug/l	60.0-140	106		
Toluene	"	10.0	ND	10.3	"	60.0-140	103		
Ethylbenzene	"	10.0	ND	10.8	"	60.0-140	108		
Xylenes (total)	"	30.0	ND	30.8	"	60.0-140	103		
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		9.52	"	70.0-130	95.2		
<b>Matrix Spike Dup</b>									
<b>9050113-MSD1      L905245-07</b>									
Benzene	5/25/99	10.0	ND	11.2	ug/l	60.0-140	112	25.0	5.50
Toluene	"	10.0	ND	11.0	"	60.0-140	110	25.0	6.57
Ethylbenzene	"	10.0	ND	11.4	"	60.0-140	114	25.0	5.41
Xylenes (total)	"	30.0	ND	32.5	"	60.0-140	108	25.0	4.74
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		8.96	"	70.0-130	89.6		



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**MTBE by EPA Method 8260A/Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit	Recov. Recov. Limits %	RPD Limit	RPD % Notes*
<b>Batch: 9050090</b>									
<b>Date Prepared: 5/19/99</b>									
<b>9050090-BLK1</b>									
Methyl tert-butyl ether	5/19/99			ND	ug/l	2.00			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		51.2	"	76.0-114	102		
<b>Blank</b>									
<b>9050090-BLK2</b>									
Methyl tert-butyl ether	5/20/99			ND	ug/l	2.00			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.5	"	76.0-114	109		
<b>Blank</b>									
<b>9050090-BLK3</b>									
Methyl tert-butyl ether	5/21/99			ND	ug/l	2.00			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		49.8	"	76.0-114	99.6		
<b>LCS</b>									
<b>9050090-BS1</b>									
Methyl tert-butyl ether	5/19/99	50.0		49.8	ug/l	70.0-130	99.6		
Surrogate: 1,2-Dichloroethane-d4	"	50.0		51.9	"	76.0-114	104		
<b>LCS</b>									
<b>9050090-BS2</b>									
Methyl tert-butyl ether	5/20/99	50.0		45.8	ug/l	70.0-130	91.6		
Surrogate: 1,2-Dichloroethane-d4	"	50.0		50.6	"	76.0-114	101		
<b>LCS</b>									
<b>9050090-BS3</b>									
Methyl tert-butyl ether	5/21/99	50.0		45.9	ug/l	70.0-130	91.8		
Surrogate: 1,2-Dichloroethane-d4	"	50.0		52.1	"	76.0-114	104		
<b>Matrix Spike</b>									
<b>9050090-MS1</b>									
Methyl tert-butyl ether	5/19/99	50.0	5.18	53.7	ug/l	60.0-140	97.0		
Surrogate: 1,2-Dichloroethane-d4	"	50.0		51.2	"	76.0-114	102		
<b>Matrix Spike Dup</b>									
<b>9050090-MSD1</b>									
Methyl tert-butyl ether	5/19/99	50.0	5.18	56.6	ug/l	60.0-140	103	25.0	6.00
Surrogate: 1,2-Dichloroethane-d4	"	50.0		52.0	"	76.0-114	104		





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Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron(8) Project Number: Chevron/9-4612/990513-J3 Project Manager: Christine Lillie	Sampled: 5/13/99 Received: 5/14/99 Reported: 5/28/99
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## Notes and Definitions

#	Note
1	Chromatogram Pattern: Gasoline C6-C12
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference
NOTE:	Diesel was subcontracted to Sequoia Walnut Creek. Hard copy attached.





# Sequoia Analytical

1551 Industrial Road  
San Carlos, CA 94070-4111  
(650) 232-9600  
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May 28, 1999

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

RE: Chevron(8)/L905229

Dear Christine Lillie:

Enclosed are the results of analyses for sample(s) received by the laboratory on May 14, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Gregory  
Project Manager D.M.

CA ELAP Certificate Number I-2360





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron(8) Project Number: Chevron/9-4612/990513-J3 Project Manager: Christine Lillie	Sampled: 5/13/99 Received: 5/14/99 Reported: 5/28/99
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**ANALYTICAL REPORT FOR L905229**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
VH1	L905229-01	Water	5/13/99
MW2	L905229-02	Water	5/13/99
MW3	L905229-03	Water	5/13/99
MW4	L905229-04	Water	5/13/99
TB	L905229-05	Water	5/13/99





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Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron(8) Project Number: Chevron/9-4612/990513-J3 Project Manager: Christine Lillie	Sampled: 5/13/99 Received: 5/14/99 Reported: 5/28/99
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**Sample Description:** VH1  
**Laboratory Sample Number:** L905229-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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### Sequoia Analytical - San Carlos

#### Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Purgeable Hydrocarbons as Gasoline	9050113	5/25/99	5/25/99		500	4180	ug/l	1
Benzene	"	"	"		5.00	147	"	
Toluene	"	"	"		5.00	12.8	"	
Ethylbenzene	"	"	"		5.00	16.5	"	
Xylenes (total)	"	"	"		5.00	20.3	"	
Methyl tert-butyl ether	"	"	"		50.0	433	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		109	%	

#### MTBE by EPA Method 8260A

Methyl tert-butyl ether	9050090	5/19/99	5/20/99		5.00	245	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		108	%	





# Sequoia Analytical

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(650) 232-9600  
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Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Project: Chevron(8) Project Number: Chevron/9-4612/990513-J3 Project Manager: Christine Lillie	Sampled: 5/13/99 Received: 5/14/99 Reported: 5/28/99
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**Sample Description:** MW2  
**Laboratory Sample Number:** L905229-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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#### Sequoia Analytical - San Carlos

#### Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Purgeable Hydrocarbons as Gasoline	9050113	5/25/99	5/25/99		500	<b>5890</b>	ug/l	1
Benzene	"	"	"		5.00	<b>120</b>	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	<b>12.5</b>	"	
Xylenes (total)	"	"	"		5.00	<b>26.6</b>	"	
Methyl tert-butyl ether	"	"	"		50.0	<b>401</b>	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		93.5	%	

#### MTBE by EPA Method 8260A

Methyl tert-butyl ether	9050090	5/19/99	5/20/99		2.00	<b>69.4</b>	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		98.4	%	

