



97 OCT 14 PM 4:16

October 11, 1997

RO464

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

Chevron Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 6004
San Ramon, CA 94583-0904

Marketing - Sales West
Phone 510 842-9500

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

Dear Mr. Chan:

Enclosed is the Third Quarter 1997 Groundwater Monitoring Report that was prepared by our consultant Blaine Tech Services Inc., for the above noted site. The groundwater samples collected were analyzed for TPH-g, BTEX, MtBE, TPH-d and VOC constituents, in monitoring well M-2 and analyzed for TPH-g, BTEX, and MtBE constituents for the remaining three wells.

The TPH-g and BTEX constituents for monitoring well MW-1 were below the method detection limits, while the concentrations of the benzene constituent increased in wells MW-2 and MW-3. The BTEX concentrations for well MW-4 were below method detection limits for all constituents. No dilution factor was involved to get the MtBE results as was the case in the previous sampling event.

The depth to ground water varied from 4.19 feet to 5.50 feet below grade with a direction of flow westerly.

Due to the belief that a preferential pathway may be intercepting groundwater at the site, a work plan will be submitted to your office to address these concerns, refer to your letter of October 8, 1997.

Based on the continual impact of dissolved hydrocarbons in the groundwater, Chevron will continue to sample quarterly. If you have any questions, I can be contacted at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

October 10, 1997
Mr. Barney Chan
Chevron Service Station # 9-1851
Page 2

cc. Bill Scudder, Chevron

Mr. Ben Shimek
451 Hegenberger Road
Oakland, CA 94621

BLAINE
TECH SERVICES INC.



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

October 6, 1997

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

3rd Quarter 1997 Monitoring at 9-1851

Third Quarter 1997 Groundwater Monitoring at
Chevron Service Station Number 9-1851
451 Hegenberger Rd.
Oakland, CA

Monitoring Performed on September 9, 1997

Groundwater Sampling Report 970909-A-1

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,

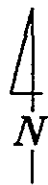
A handwritten signature in black ink, appearing to read "Francis Thie", written in a cursive style.

Francis Thie
Vice President

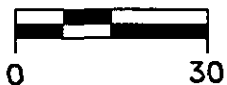
FPT/ew

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

Professional Engineering Appendix



SCALE (ft)



EXPLANATION

⊙ MONITORING WELL LOCATION

● SOIL BORING LOCATION

-1.11 GROUNDWATER ELEVATION (FT, MSL)

-1.50 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)

⇨ APPROXIMATE GROUNDWATER FLOW DIRECTION;
APPROXIMATE GRADIENT = 0.01

EDGEWATER ROAD

Planter

MW-1
-1.74

Approximate Property Boundary

MW-2
-1.47

Waste Oil Tank

MW-3
-1.11

Underground Methanol Storage Tank

Station Building

MW-4
-2.02

Planter

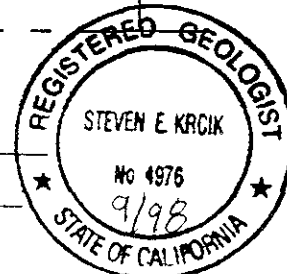
Underground Storage Tanks

Dispenser Islands

SB-1

Planter

HEGENBERGER ROAD



Basemap from Geoconsultants, Inc.

PREPARED BY



Chevron Station 9-1851
451 Hegenberger Road
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP,
SEPTEMBER 9, 1997

FIGURE:

1

PROJECT:

DAC04

Table of Well Data and Analytical Results

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TOG	TPH- Benzene by Diesel (EPA 8240)	Xylene by (EPA 8240)	C-1, 2-DCE	Carbon Disulfide	Vinyl Chloride	MTBE
MW-1																
10/17/95	2.61	-1.51	4.12	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
03/29/96	2.61	-0.72	3.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
06/26/96	2.61	-1.23	3.84	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	9.5
09/25/96	2.61	-1.41	4.02	--	<250	<2.5	<2.5	<2.5	<2.5	--	--	--	--	--	--	46
12/17/96	2.61	-0.96	3.57	--	<50	0.86	<0.5	<0.5	<0.5	--	--	--	--	--	--	940
03/20/97	2.61	-1.54	4.15	--	<50	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	260
06/20/97	2.61	-1.72	4.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	76
09/09/97	2.61	-1.74	4.35	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	64
																110
MW-2																
10/17/95	3.51	-1.82	5.33	*	170	3.5	<0.5	1.0	6.1	<5000	1600**	--	--	11	--	--
03/29/96	3.51	-0.44	3.95	--	89	4.7	<0.5	0.64	0.74	--	3000**	11	2.5	17	--	5.4
06/26/96	3.51	-1.09	4.60	--	80	8.7	<0.5	1.2	1.3	--	2000**	11	<2.0	15	--	12
09/25/96	3.51	--	--	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	31
12/17/96	3.51	-0.41	3.92	--	110	<0.5	<0.5	0.75	2.1	--	2400**	10	<2.0	2.3	--	5.5
03/20/97	3.51	-1.32	4.83	--	140	8.2	<2.0	<2.0	<2.0	--	3400**	--	--	<2.0	--	3.2
06/20/97	3.51	-1.53	5.04	--	62	7.7	<0.5	<0.5	<0.5	--	1600**	7.2	<2.0	4.6	--	5.2
09/09/97	3.51	-1.47	4.98	--	190	9.4	<0.5	<0.5	0.86	--	82**	11	<2.0	<2.0	<2.0	48
MW-3																
10/17/95	3.08	-1.34	4.42	***	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
03/29/96	3.08	0.08	3.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
06/26/96	3.08	-0.52	3.60	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	26
09/25/96	3.08	-1.06	4.14	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	--	--	--	--	47
12/17/96	3.08	-0.12	3.20	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	570
03/20/97	3.08	-0.22	3.30	--	<50	<5.7	<5.7	<5.7	<5.7	--	--	--	--	--	--	680
06/20/97	3.08	-0.78	3.86	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	430
09/09/97	3.08	-1.11	4.19	--	76+	22	<0.5	<0.5	<0.5	--	--	--	--	--	--	1400
																920

* Results of EPA 8010 test indicates that the detection of 1,1-Dichloroethane is 1.7 ppb.

** Chromatogram pattern indicates an unidentified hydrocarbon.

*** Results of EPA 8015 test indicates that levels of Methanol and Methyl ethyl ketone are respectively <1000 and <200 ppb.

+ Chromatogram pattern indicates an unidentified hydrocarbon.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TOG	TPH-Diesel (EPA 8240)	Benzene (EPA 8240)	Xylene (EPA 8240)	1, 2-DCE	Carbon Disulfide	Vinyl Chloride	MTBE
MW-4																	
10/17/95	3.48	-1.60	5.08	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	--	--	--	--	--	--
03/29/96	3.48	-1.13	4.61	--	<1000	<10	<10	<10	<10	--	--	--	--	--	--	--	6700
06/26/96	3.48	-0.82	4.30	--	<2000	<20	<20	<20	<20	--	--	--	--	--	--	--	7200
09/25/96	3.48	-1.85	5.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/17/96	3.48	0.67	2.81	--	<2000	120	<20	<20	<20	--	--	--	--	--	--	--	11,000
03/20/97	3.48	-1.02	4.50	--	250**	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	--	10,000
03/20/97	3.48	-1.02	4.50	Conf. run	--	--	--	--	--	--	--	--	--	--	--	--	8600
06/20/97	3.48	-2.20	5.68	--	<2500	<25	<25	<25	<25	--	--	--	--	--	--	--	9300
09/09/97	3.48	-2.02	5.50	--	460**	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	6600

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10/17/95																	
03/29/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
06/26/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
09/25/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/17/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
03/20/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
06/20/97	--	--	--	--	<50	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	--	--
09/09/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5

** Chromatogram pattern indicates an unidentified hydrocarbon.

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on March 29, 1996. Earlier field data and analytical results are drawn from the December 29, 1995 Gettler-Ryan, Inc. report.

ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons

ND = Not detected at or above the minimum quantitation limit. See laboratory reports for minimum quantitation limits.

TOG = Total Oil Grease

MTBE = Methyl t-butyl ether

C-1,2 DCE = Cis-1,2-Dichloroethylene

Conf. run = Confirmation run

Analytical Appendix



Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1851 Sample Descript: MW1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709614-01	Sampled: 09/09/97 Received: 09/10/97 Analyzed: 09/18/97 Reported: 09/23/97
Attention: Fran Thie		

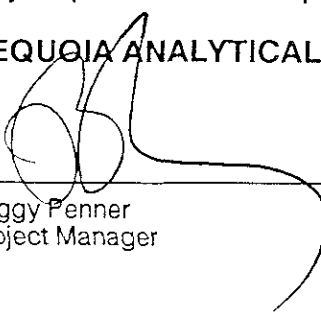
QC Batch Number: GC091897BTEX17A
Instrument ID: GCHP17

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	110
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





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1851 Sample Descript: MW2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709614-02	Sampled: 09/09/97 Received: 09/10/97 Analyzed: 09/18/97 Reported: 09/23/97
Attention: Fran Thie		

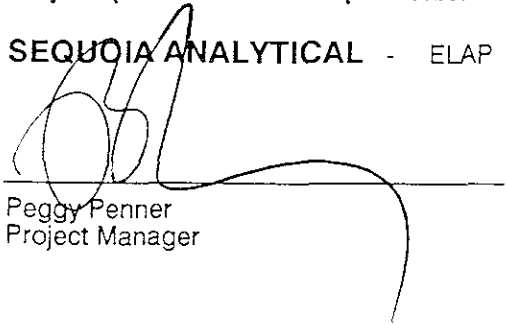
QC Batch Number: GC091897BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	190
Methyl t-Butyl Ether	2.5	48
Benzene	0.50	9.4
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	0.86
Chromatogram Pattern: Weathered Gas		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	81

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 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Proj. ID: Chevron 9-1851 Sample Descript: MW2 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9709614-02	Sampled: 09/09/97 Received: 09/10/97 Extracted: 09/15/97 Analyzed: 09/18/97 Reported: 09/23/97
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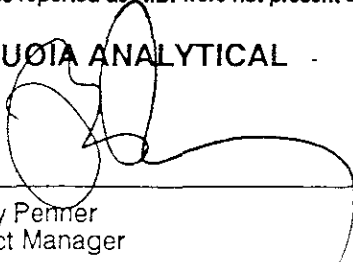
QC Batch Number: GC0915970HBPEXZ
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	200 C9-C24	82 Unidentified HC
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 196 Q

Results quantitated against a diesel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Peggy Penner
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1851 Sample Descript: MW2 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9709614-02	Sampled: 09/09/97 Received: 09/10/97 Analyzed: 09/15/97 Reported: 09/23/97
Attention: Fran Thie		

QC Batch Number: MS0915978240F3A
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	2.0	11
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.





Sequoia Analytical

680 Chesapeake Drive	Redwood City, CA 94063	(650) 364-9600	FAX (650) 364-9233
404 N. Wiget Lane	Walnut Creek, CA 94598	(510) 988-9600	FAX (510) 988-9673
819 Striker Avenue, Suite 8	Sacramento, CA 95834	(916) 921-9600	FAX (916) 921-0100

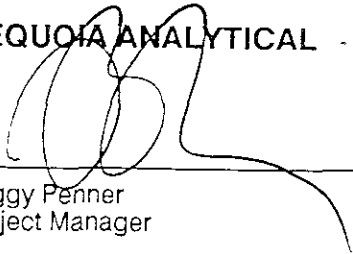
Blaine Tech Services	Client Proj. ID: Chevron 9-1851	Sampled: 09/09/97
1680 Rogers Avenue	Sample Descript: MW2	Received: 09/10/97
San Jose, CA 95112	Matrix: LIQUID	
Attention: Fran Thie	Analysis Method: EPA 8240	Analyzed: 09/15/97
	Lab Number: 9709614-02	Reported: 09/23/97

QC Batch Number: MS0915978240F3A
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115

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 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1851 Sample Descript: MW3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709614-03	Sampled: 09/09/97 Received: 09/10/97 Analyzed: 09/17/97 Reported: 09/23/97
Attention: Fran Thie		

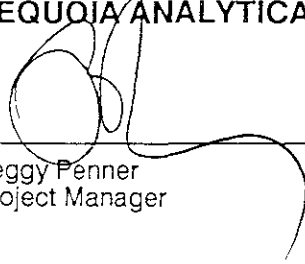
QC Batch Number: GC091797BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	76
Methyl t-Butyl Ether	12	920
Benzene	0.50	22
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern: Unidentified HC		< C8
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	93

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 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1851 Sample Descript: MW4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709614-04	Sampled: 09/09/97 Received: 09/10/97 Analyzed: 09/17/97 Reported: 09/23/97
Attention: Fran Thie		

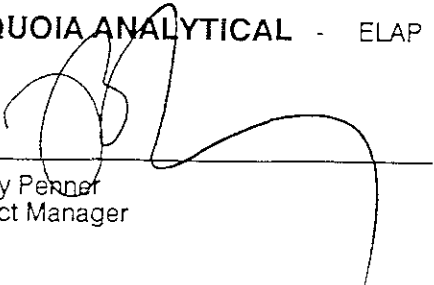
QC Batch Number: GC091797BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	460
Methyl t-Butyl Ether	125	6600
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern: Unidentified HC		< C8
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	91

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 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Chevron 9-1851 Sample Descript: TB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709614-05	Sampled: 09/09/97 Received: 09/10/97 Analyzed: 09/17/97 Reported: 09/23/97
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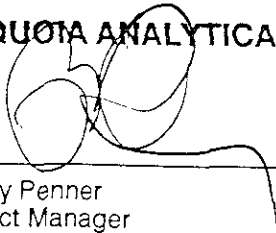
QC Batch Number: GC091797BTEX17A
Instrument ID: GCHP17

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:		N.D.
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	89

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 9-1851**
Matrix: **Liquid**

Work Order #: **9709614 -01-02**

Reported: **Sep 24, 1997**

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC091897BTEX17A	GC091897BTEX17A	GC091897BTEX17A	GC091897BTEX17A	GC091897BTEX17A
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:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	970968902	970968902	970968902	970968902	970968902
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/18/97	9/18/97	9/18/97	9/18/97	9/18/97
Analyzed Date:	9/18/97	9/18/97	9/18/97	9/18/97	9/18/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	11	10	10	30	62
MS % Recovery:	110	100	100	100	103
Dup. Result:	11	9.9	9.9	30	61
MSD % Recov.:	110	99	99	100	102
RPD:	0.0	1.0	1.0	0.0	1.6
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK091897	BLK091897	BLK091897	BLK091897	BLK091897
Prepared Date:	9/18/97	9/18/97	9/18/97	9/18/97	9/18/97
Analyzed Date:	9/18/97	9/18/97	9/18/97	9/18/97	9/18/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	10	10	10	30	60
LCS % Recov.:	100	100	100	100	100

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

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

9709614 BLA < 1 >





Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

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

Client Project ID: Chevron 9-1851
 Matrix: Liquid

Work Order #: 9709614-03-05

Reported: Sep 24, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC091797BTEX17A	GC091797BTEX17A	GC091797BTEX17A	GC091797BTEX17A	GC091797BTEX17A
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:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	970930704	970930704	970930704	970930704	970930704
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/17/97	9/17/97	9/17/97	9/17/97	9/17/97
Analyzed Date:	9/17/97	9/17/97	9/17/97	9/17/97	9/17/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	10	10	30	60
MS % Recovery:	100	100	100	100	100
Dup. Result:	11	10	10	31	61
MSD % Recov.:	110	100	100	103	102
RPD:	9.5	0.0	0.0	3.3	1.7
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK091797	BLK091797	BLK091797	BLK091797	BLK091797
Prepared Date:	9/17/97	9/17/97	9/17/97	9/17/97	9/17/97
Analyzed Date:	9/17/97	9/17/97	9/17/97	9/17/97	9/17/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	10	10	10	30	59
LCS % Recov.:	100	100	100	100	98

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

Peggy Penner
 Project Manager

Please Note.

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

9709614.BLA <2>





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

Client Project ID: **Chevron 9-1851**
Matrix: **Liquid**

Work Order #: **9709614-02**

Reported: **Sep 24, 1997**

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC0915970HBPEXZ
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3520

Analyst: B. Sullivan
MS/MSD #: 970956101
Sample Conc.: 170
Prepared Date: 9/15/97
Analyzed Date: 9/18/97
Instrument I.D.#: GCHP4
Conc. Spiked: 1000 µg/L

Result: 950
MS % Recovery: 78

Dup. Result: 980
MSD % Recov.: 81

RPD: 3.1
RPD Limit: 0-50

LCS #: BLK091597

Prepared Date: 9/15/97
Analyzed Date: 9/18/97
Instrument I.D.#: GCHP4
Conc. Spiked: 1000 µg/L

LCS Result: 680
LCS % Recov.: 68

MS/MSD	50-150
LCS	60-140
Control Limits	

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note

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

9709614 BLA <3>





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

Client Project ID: Chevron 9-1851
 Matrix: Liquid

Work Order #: 9709614-02

Reported: Sep 24, 1997

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0915978240F3A	MS0915978240F3A	MS0915978240F3A	MS0915978240F3A	MS0915978240F3A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	M. Williams	M. Williams	M. Williams	M. Williams	M. Williams
MS/MSD #:	970945001	970945001	970945001	970945001	970945001
Sample Conc.:	N.D.	53	N.D.	N.D.	N.D.
Prepared Date:	9/15/97	9/15/97	9/15/97	9/15/97	9/15/97
Analyzed Date:	9/15/97	9/15/97	9/15/97	9/15/97	9/15/97
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
Result:	48	100	47	48	47
MS % Recovery:	96	94	94	96	94
Dup. Result:	49	100	48	50	47
MSD % Recov.:	98	94	96	100	94
RPD:	2.1	0.0	2.1	4.1	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	VB091597	VB091597	VB091597	VB091597	VB091597
Prepared Date:	9/15/97	9/15/97	9/15/97	9/15/97	9/15/97
Analyzed Date:	9/15/97	9/15/97	9/15/97	9/15/97	9/15/97
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
LCS Result:	47	48	47	46	47
LCS % Recov.:	94	96	94	92	94

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

 Peggy Penner
 Project Manager

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





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

Client Proj. ID: Chevron 9-1851

Received: 09/10/97

Lab Proj. ID: 9709614

Reported: 09/23/97

LABORATORY NARRATIVE

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

TPPH Note: Sample 9709614-03 was diluted 1-fold and 5-fold.
Sample 9709614-04 was diluted 1-fold and 50-fold.

TEPH Note: Sample 9709614-02 was diluted 4-fold.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager



Field Data Sheets

CHEVRON WELL MONITORING DATA SHEET

Project #: 970909 #1	Station #: 9-1857
Sampler: SA	Date: 9-9-97
Well I.D.: MU 1	Well Diameter: 2 3 4 6 8
Total Well Depth: 14.62	Depth to Water: 4.75
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 ² * 0.163

Purge Method: Bailer Sampling Method: Bailer

Disposable Bailer X Disposable Bailer X

Middleburg Extraction Port

Electric Submersible Other: _____

Extraction Pump

Other: _____

1.6	x	3	=	4.9	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
0840	77.4	7.4	2700	1.6	
0844	76.9	6.7	2600	3.2	
0848	76.6	6.5	2600	4.9	

Did well dewater? Yes No Gallons actually evacuated: 4.9

Sampling Time: 0850 Sampling Date: 9-9-97

Sample I.D.: MW 1 Laboratory: Sequoia GTEL N. Creek Assoc. Labs

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

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

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

CHEVRON WELL MONITORING DATA SHEET

Project #: <u>970909-A1</u>	Station #: <u>9-1851</u>
Sampler: <u>SA</u>	Date: <u>9-9-97</u>
Well I.D.: <u>MW2</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u> </u>
Total Well Depth: <u>14.79</u>	Depth to Water: <u>4.98</u>
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
Referenced to: <u>PVC</u> 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 ² * 0.163

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

<u>1.6</u>	x	<u>3</u>	=	<u>4.7</u> Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1032</u>	<u>76.4</u>	<u>7.6</u>	<u>5200</u>	<u>1.6</u>	<u>odor</u>
<u>1037</u>	<u>74.1</u>	<u>7.2</u>	<u>5500</u>	<u>3.2</u>	
<u>1040</u>	<u>73.2</u>	<u>7.2</u>	<u>5550</u>	<u>4.7</u>	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>4.7</u>	
Sampling Time: <u>1043</u>	Sampling Date: <u>9-9-97</u>	
Sample I.D.: <u>MW2</u>	Laboratory: <u>Sequoia</u> GTEL N. Creek Assoc. Labs	
Analyzed for: <u>TPH-G BTEX MTBE TPH-D</u> Other: <u> </u>		
Duplicate I.D.: <u> </u>	Analyzed for: TPH-G BTEX MTBE TPH-D Other: <u> </u>	
D.O. (if req'd):	Pre-purge: <u> </u> mg/L	Post-purge: <u> </u> mg/L
O.R.P. (if req'd):	Pre-purge: <u> </u> mV	Post-purge: <u> </u> mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 970909-A1	Station #: 9-1857
Sampler: SA	Date: 9-9-97
Well I.D.: MW3	Well Diameter: ② 3 4 6 8
Total Well Depth: 14.66	Depth to Water: 4.19
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 ² * 0.163

Purge Method: Bailer Sampling Method: Bailer

Disposable Bailer Disposable Bailer

Middleburg Extraction Port

Electric Submersible Other: _____

Extraction Pump

Other: _____

1.7	x	3	=	5.0	Gals.
1. Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
0905	78.2	6.8	3200	1.7	
0908	78.0	6.7	3100	3.2	
0912	77.8	6.5	300	5.0	

Did well dewater? Yes No Gallons actually evacuated: 5.0

Sampling Time: 0920 Sampling Date: 9-9-97

Sample I.D.: MW3 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 #: <u>970909-A1</u>	Station #: <u>9-1857</u>
Sampler: <u>SA</u>	Date: <u>9-9-97</u>
Well I.D.: <u>MW4</u>	Well Diameter: <u>2</u> 3 4 6 8 <u> </u>
Total Well Depth: <u>14.97</u>	Depth to Water: <u>5.50</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> 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 ² * 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: _____

<u>1.5</u>	x	<u>3</u>	=	<u>4.5</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>0953</u>	<u>76.0</u>	<u>7.7</u>	<u>4000</u>	<u>1.5</u>	
<u>0957</u>	<u>74.8</u>	<u>7.5</u>	<u>5100</u>	<u>3.0</u>	
<u>1000</u>	<u>74.2</u>	<u>7.4</u>	<u>5200</u>	<u>4.5</u>	

Did well dewater? Yes <input checked="" type="checkbox"/> <u>No</u>	Gallons actually evacuated: <u>4.5</u>
Sampling Time: <u>1004</u>	Sampling Date: <u>9-9-97</u>
Sample I.D.: <u>MW 4</u>	Laboratory: <u>Sequoia</u> GTEL N. Creek Assoc. Labs
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other:	
Duplicate I.D.:	Analyzed for: TPH-G BTEX MTBE TPH-D Other:
D.O. (if req'd):	Pre-purge: <u> </u> mg/L Post-purge: <u> </u> mg/L
O.R.P. (if req'd):	Pre-purge: <u> </u> mV Post-purge: <u> </u> mV