



GETTLER - RYAN INC.

December 2, 1997

Job #6346.80

Ms. Tammy Hodge
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

Re: Fourth Quarter Groundwater Monitoring & Sampling Report
Chevron Service Station #9-8341
3530 MacArthur Boulevard
Oakland, California

Dear Ms. Hodge:

This report documents the quarterly groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On October 29, 1997, field personnel were on-site to monitor and sample three wells (MW-1, MW-2 and MW-3) at Chevron Service Station #9-8341 located at 3530 MacArthur Boulevard in Oakland, California.

Static groundwater levels were measured on October 29, 1997. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets for this event are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are presented in Table 1. The chain of custody document and laboratory analytical reports are attached.

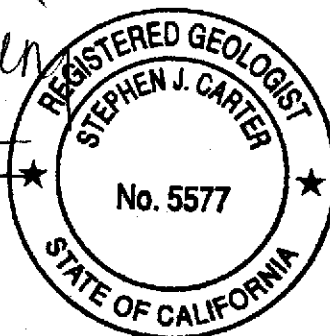
Thank you for allowing Gettler-Ryan Inc. to provide environmental services to Chevron. Please call if you have any questions or comments regarding this report.

Sincerely,

Deanna L. Harding

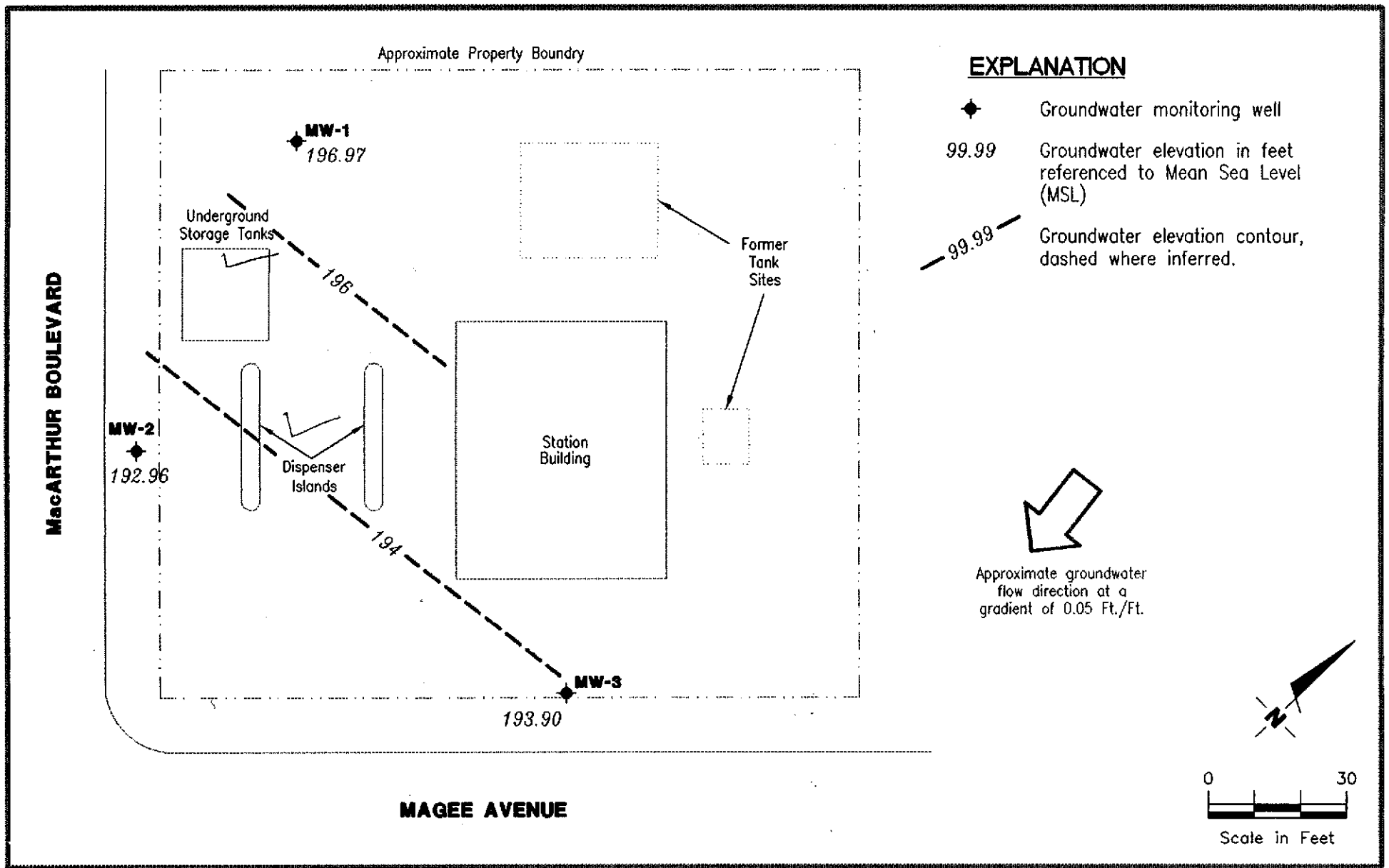
Deanna L. Harding
Project Coordinator

Stephen J. Carter
Stephen J. Carter
Senior Geologist, R.G. No. 5577



DLH/SJC/dlh
6346.QML

Figure 1: Potentiometric Map
Table 1: Water Level Data and Groundwater Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports



Gertler - Ryan Inc.

6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Chevron Service Station No. 9-8341
3530 MacArthur Boulevard
Oakland, California

FIGURE

1

JOB NUMBER
6346

REVIEWED BY

DATE
October 29, 1997

REVISED DATE



Table 1. Water Level Data and Groundwater Analytical Results - Chevron Service Station #9-8341, 3530 MacArthur Blvd., Oakland, California

Well ID/ TOC	Date Sampled	Depth to Water (ft)	GWE (msl)	Product Thickness (ft)	←-----ppb----->					
					TPH(G)	B	T	E	X	MTBE
MW-1 202.47	04/04/96	3.82	198.65	—	<50	<0.50	<0.50	<0.50	<0.50	ND
	11/01/96	5.02	197.45	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	01/06/97	2.75	199.72	0.00	<50	<0.50	<0.50	<0.50	<0.50	14
	04/14/97	4.76	197.71	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	07/17/97	5.75	196.72	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	10/29/97	5.50	196.97	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
MW-2 198.88	04/04/96	2.81	196.07	—	<50	<0.50	<0.50	<0.50	<0.50	6,100
	11/01/96	3.61	195.27	0.00	<500	<5.0	<5.0	<5.0	<5.0	2,600
	01/06/97	2.91	195.97	0.00	<2,000	31	<20	<20	<20	4,000
	04/14/97	3.45	195.43	0.00	<2,000	<20	<20	<20	<20	5,100/5,800 ¹
	07/17/97	3.90	194.98	0.00	<500	<5.0	<5.0	<5.0	<5.0	2,300/2,900 ¹
	10/29/97	5.92	192.96	0.00	120 ²	12	<0.50	<0.50	<0.50	810/900 ¹
MW-3 199.10	04/04/96	3.88	195.22	—	<50	<0.50	<0.50	<0.50	<0.50	ND
	11/01/96	4.19	194.91	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	01/06/97	3.81	195.29	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	04/14/97	4.17	194.93	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	07/17/97	4.18	194.92	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	10/29/97	5.20	193.90	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
Trip Blank	11/01/96	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	01/06/97	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	04/14/97	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	07/17/97	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	10/29/97	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5



Table 1. Water Level Data and Groundwater Analytical Results - Chevron Service Station #9-8341, 3530 MacArthur Blvd., Oakland, California (continued)

EXPLANATION:

TOC = Top of casing elevation
(ft) = feet
GWE = Groundwater elevation
(msl) = Measurement referenced relative to mean sea level
TPH(G) = Total Petroleum Hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary-butyl ether
ppb = Parts per billion
--- = Not analyzed, not measured
ND = Not-detected at or above laboratory detection limit

NOTES:

Water level elevation data and laboratory analytical results prior to November 1, 1996, were provided by Chevron Products Company.

- ¹ MTBE by EPA Method 8260.
- ² Laboratory report indicates gas & unidentified hydrocarbons <C8.



STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using Chevron-designated disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Products Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Chevron Facility # 9-8341
 Address: 3530 MacArthur Blvd.
 City: Oakland, CA

Job#: 6346.80
 Date: 10-29-97
 Sampler: F.Cline

Well ID: MW-1
 Well Diameter: 2" in.
 Total Depth: 27.14 ft.
 Depth to Water: 5.50 ft.

Well Condition: okay

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

21.64 X VF 0.17 = 3.7 X 3 (case volume) = Estimated Purge Volume: 11 (gal.)

Purge Equipment: ~~Stack~~
Disposable Bailer
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 11:15
 Sampling Time: 11:18
 Purging Flow Rate: 20 gpm.
 Did well de-water? _____

Weather Conditions: _____
 Water Color: _____ Odor: _____
 Sediment Description: _____
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:17</u>	<u>4</u>	<u>6.95</u>	<u>187</u>	<u>21.1</u>			
<u>11:19</u>	<u>8</u>	<u>6.96</u>	<u>192</u>	<u>22.9</u>			
<u>11:21</u>	<u>12</u>	<u>6.94</u>	<u>177</u>	<u>21.3</u>			
<u>11:23</u>	<u>13</u>	<u>6.75</u>	<u>178</u>	<u>21.5</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3 x 40m/VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH-G/BTEX/MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Chevron Facility # 9-8341
 Address: 3530 MacArthur Blvd.
 City: Oakland, CA

Job#: 6346.80
 Date: 10-29-97
 Sampler: E. Cline

Well ID MW-2
 Well Diameter 2" in.
 Total Depth 33.20 ft.
 Depth to Water 5.92 ft.

Well Condition: okay
 Hydrocarbon Thickness: 0 in.
 Amount Bailed (product/water): _____ (gal.)

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

27.28 X VF 0.17 = 4.6 X 3 (case volume) = Estimated Purge Volume: 13.9 (gal.)

Purge Equipment: Stack
 Disposable Bailer
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 11:33
 Sampling Time: 11:44
 Purging Flow Rate: 1.3 gpm.
 Did well de-water? _____

Weather Conditions: okay
 Water Color: clear Odor: none
 Sediment Description: clear
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:36</u>	<u>4.5</u>	<u>6.78</u>	<u>196</u>	<u>24.4</u>			
<u>11:39</u>	<u>9.0</u>	<u>6.84</u>	<u>184</u>	<u>23.5</u>			
<u>11:42</u>	<u>13.5</u>	<u>6.85</u>	<u>176</u>	<u>22.1</u>			
<u>11:44</u>	<u>14.0</u>	<u>6.83</u>	<u>180</u>	<u>22.4</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3 x 40m/VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH-G/BTEX/MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Chevron Facility # 9-8341
 Address: 3530 MacArthur Blvd.
 City: Oakland, CA

Job#: 6346.80
 Date: 10-29-97
 Sampler: E. Cline

Well ID MW-3

Well Condition: okay

Well Diameter 2" in.

Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): _____ (gal.)

Total Depth 32.84 ft.

Depth to Water 5.20 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

27.64 X VF 0.17 = 4.7 X 3 (case volume) = Estimated Purge Volume: 14.0 (gal.)

Purge Equipment: Stack
 Disposable Bailer
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 1101
 Sampling Time: 1112
 Purging Flow Rate: 2.5 gpm.
 Did well de-water? _____

Weather Conditions: Clear warm
 Water Color: Clear Odor: Na
 Sediment Description: None
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1104</u>	<u>4.5</u>	<u>7.06</u>	<u>290</u>	<u>22.7</u>	_____	_____	_____
<u>1107</u>	<u>9.0</u>	<u>6.87</u>	<u>244</u>	<u>23.3</u>	_____	_____	_____
<u>1110</u>	<u>13.5</u>	<u>6.96</u>	<u>219</u>	<u>22.4</u>	_____	_____	_____
<u>1112</u>	<u>14.0</u>	<u>6.95</u>	<u>220</u>	<u>22.6</u>	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 x 40m/VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH-G/BTEX/MTBE</u>

COMMENTS: _____



Gettler Ryan/Geostrategies 6747 Sierra Court Suite G Dublin, CA 94568	Client Proj. ID: Chevron 9-8341, Oakland Sample Descript: TB-LB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9710H87-01	Sampled: 10/29/97 Received: 10/30/97 Analyzed: 11/03/97 Reported: 11/10/97
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QC Batch Number: GC110397BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite G Dublin, CA 94568	Client Proj. ID: Chevron 9-8341, Oakland Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9710H87-03	Sampled: 10/29/97 Received: 10/30/97 Analyzed: 11/03/97 Reported: 11/10/97
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QC Batch Number: GC110397BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	77

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-8341, Oakland	Sampled: 10/29/97
6747 Sierra Court Suite G	Sample Descript: MW-2	Received: 10/30/97
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 11/03/97
Attention: Deanna Harding	Lab Number: 9710H87-04	Reported: 11/10/97

QC Batch Number: GC110397BTEX06A
Instrument ID: GCHP06


Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	120
Methyl t-Butyl Ether	10	810
Benzene	0.50	12
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Gas & Unidentified HC		<C8

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	97

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite G Dublin, CA 94568	Client Proj. ID: Chevron 9-8341, Oakland Sample Descript: MW-2 Matrix: LIQUID Analysis Method: EPA 8260 Lab Number: 9710H87-04	Sampled: 10/29/97 Received: 10/30/97 Analyzed: 11/06/97 Reported: 11/10/97
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QC Batch Number: MS1104978260F3A
Instrument ID: F3

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	17	900
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	114

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite G Dublin, CA 94568	Client Proj. ID: Chevron 9-8341, Oakland Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9710H87-02	Sampled: 10/29/97 Received: 10/30/97 Analyzed: 11/04/97 Reported: 11/10/97
Attention: Deanna Harding		

QC Batch Number: GC110497BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Sequoia Analytical

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

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

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

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

Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Chevron 9-8341, Oakland
Matrix: Liquid

Work Order #: 9710H87 -01, 03, 04

Reported: Nov 11, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC110397BTEX06A	GC110397BTEX06A	GC110397BTEX06A	GC110397BTEX06A	GC110397BTEX06A
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. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9710G1301	9710G1301	9710G1301	9710G1301	9710G1301
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/3/97	11/3/97	11/3/97	11/3/97	11/3/97
Analyzed Date:	11/3/97	11/3/97	11/3/97	11/3/97	11/3/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.9	8.7	8.8	26	57
MS % Recovery:	89	87	88	87	95
Dup. Result:	11	10	11	32	69
MSD % Recov.:	110	100	110	107	115
RPD:	21	14	22	21	19
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK110397	BLK110397	BLK110397	BLK110397	BLK110397
Prepared Date:	11/3/97	11/3/97	11/3/97	11/3/97	11/3/97
Analyzed Date:	11/3/97	11/3/97	11/3/97	11/3/97	11/3/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	10	10	10	31	68
LCS % Recov.:	100	100	100	103	113

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

Mike Gregory
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

9710H87.GET <1>



Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Chevron 9-8341, Oakland
Matrix: Liquid

Work Order #: 9710H87-02

Reported: Nov 11, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC110497BTEX07A	GC110497BTEX07A	GC110497BTEX07A	GC110497BTEX07A	GC110497BTEX07A
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. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9710F6604	9710F6604	9710F6604	9710F6604	9710F6604
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Analyzed Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	10	10	30	59
MS % Recovery:	100	100	100	100	98
Dup. Result:	11	11	11	32	63
MSD % Recov.:	110	110	110	107	105
RPD:	9.5	9.5	9.5	6.5	6.6
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK110497	BLK110497	BLK110497	BLK110497	BLK110497
Prepared Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Analyzed Date:	11/4/97	11/4/97	11/4/97	11/4/97	11/4/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	12	11	11	34	67
LCS % Recov.:	120	110	110	113	112

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

Mike Gregory
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

9710H87.GET <2>



Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Chevron 9-8341, Oakland
Matrix: Liquid

Work Order #: 9710H87-04

Reported: Nov 11, 1997

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS1104978260F3A
Analy. Method:	EPA 8260
Prep. Method:	N.A.

Analyst: L. Duong
MS/MSD #: 9710G3601
Sample Conc.: N.D.
Prepared Date: 11/4/97
Analyzed Date: 11/4/97
Instrument I.D.#: F3
Conc. Spiked: 50 µg/L

Result: 53
MS % Recovery: 106

Dup. Result: 53
MSD % Recov.: 106

RPD: 0.0
RPD Limit: 0-25

LCS #: LCS110697
Prepared Date: 11/6/97
Analyzed Date: 11/6/97
Instrument I.D.#: F3
Conc. Spiked: 50 µg/L

LCS Result: 51
LCS % Recov.: 102

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

SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
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

9710H87.GET <3>



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Gettler Ryan/Geostrategies
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Attention: Deanna Harding

Client Proj. ID: Chevron 9-8341, Oakland
Lab Proj. ID: 9710H87

Received: 10/30/97
Reported: 11/10/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPGM2W: SAMPLE #4 WAS SHOT TWICE FOR MTBE. GC110497BTEX07A.

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager