GETTLER-RYAN INC.

October 15, 1998 Job #6395.80

Mr. Phill Briggs
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

Re: Third Quarter 1998 Groundwater Monitoring & Sampling Report
Chevron Service Station #9-9708
5910 MacArthur Boulevard
Oakland, California

Dear Mr. Briggs:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On September 7, 1998, field personnel were on-site to monitor and sample three wells (MW-1, MW-2 and MW-3) at the above referenced site.

Static groundwater levels were measured and 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,

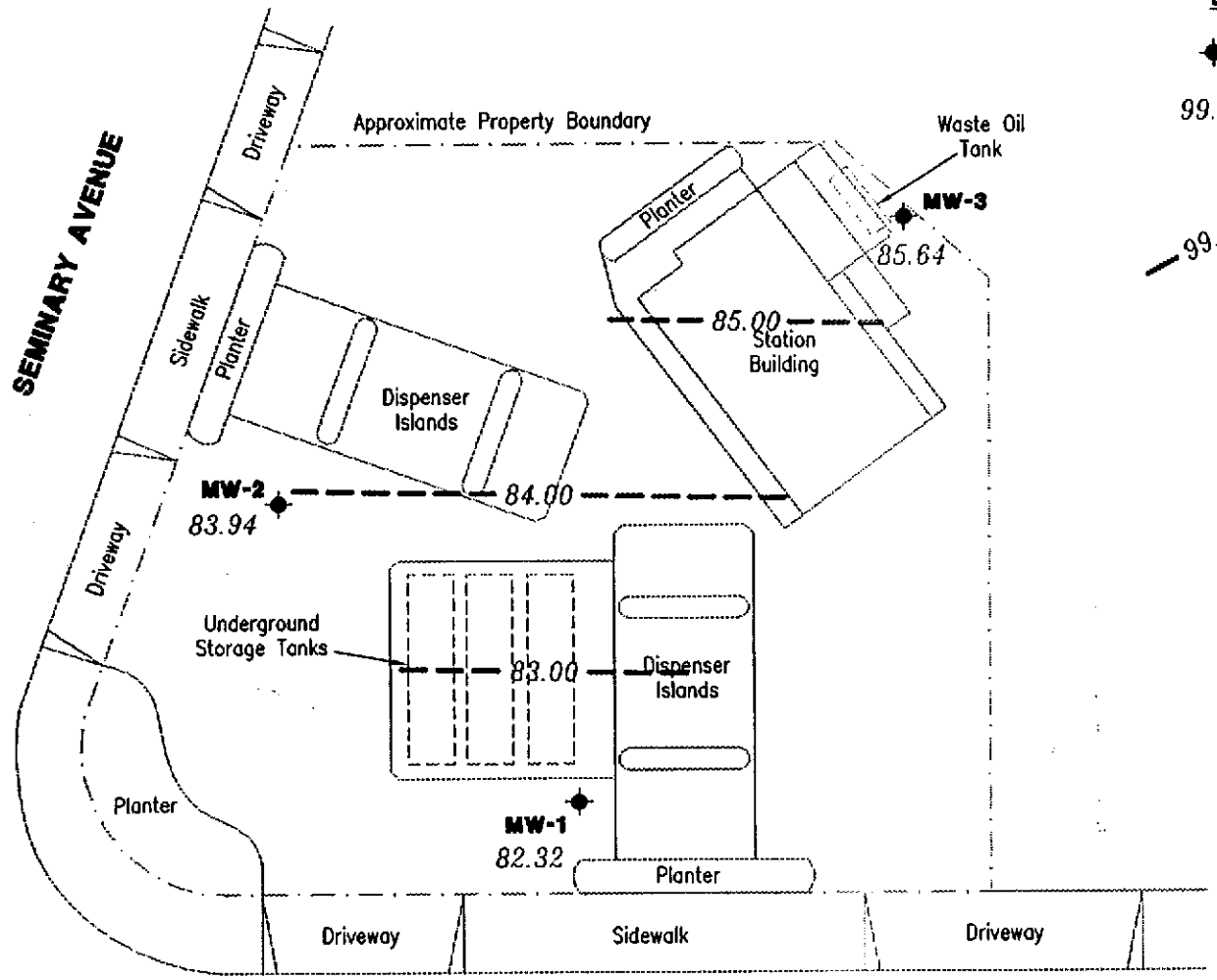
Deanna L. Harding
Project Coordinator

Barbara Sieminski
Project Geologist, R.G. No. 6676

REGISTERED GEOLOGIST
BARBARA SIEMINSKI
No. 6676
STATE OF CALIFORNIA

DLH/bs/dlh
6395.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



EXPLANATION

- Groundwater monitoring well
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 — Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.04 Ft./Ft.

N

0 30

Scale in Feet

FIGURE 1

Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Chevron Service Station No. 9-9708
5910 MacArthur Boulevard
Oakland, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
6395		September 7, 1998	

Table 1. Water Level Data and Groundwater Analytical Results - Chevron Service Station #9-9708, 5910 MacArthur Blvd., Oakland, California

Well ID/ TOC(ft)	Date Sampled	Depth to Water (ft)	GWE (msl)	Product Thickness (ft)	TPH(D)	TPH(G)	B	T	E	X	MTBE
					<---ppb--->						
MW-1											
96.61[1]	05/29/97	12.20	84.41	0.00	---	---	---	---	---	---	---
	06/04/97	12.21	84.40	0.00	---	380	58	1.2	5.4	40	85
	09/16/97	12.77	83.84	0.00	---	420[3]	120	<0.5	19	2.7	28
	12/17/97	11.18	85.43	0.00	---	210[5]	43	0.61	11	0.61	69
	03/18/98	12.02	84.59	0.00	---	210[8]	47	<0.50	8.2	<0.50	92
	06/28/98	12.62	83.99	0.00	---	<50	<0.50	<0.50	<0.50	<0.50	66
	09/07/98	**14.29**	**82.32**	**0.00**	**---**	**<50**	**6.7**	**<0.50**	**<0.50**	**<0.50**	**92**
MW-2											
96.91[1]	05/29/97	13.06	83.85	0.00	---	---	---	---	---	---	---
	06/04/97	12.95	83.96	0.00	---	1,600	120	5.9	32	15	2,100
	09/16/97	12.99	83.92	0.00	---	1,100[3]	23	3.2	7.0	2.5	1,200
	12/17/97	12.18	84.73	0.00	---	7,100[5]	650	69	610	69	4,700/2,600[6]
	03/18/98	12.70	84.21	0.00	---	5,900[9]	250	<50	98	<50	12,000/7,100[6]
	06/28/98	12.93	83.98	0.00	---	4,300	400	<10	<10	<10	3,000/4,000[6]
	09/07/98	**12.97**	**83.94**	**0.00**	**---**	**3,700**	**220**	**5.1**	**38**	**7.6**	**1,300/1,400[6]**
MW-3											
97.86[1]	05/29/97	11.45	86.41	0.00	---	---	---	---	---	---	---
	06/04/97[2]	11.28	86.58	0.00	1,200	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	09/16/97	12.19	85.67	0.00	2,700[4]	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/17/97	10.80	87.06	0.00	1,200[7]	<50	0.90	0.53	<0.50	<0.50	<2.5
	03/18/98	10.88	86.98	0.00	820[7]	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	06/28/98[10]	11.60	86.26	0.00	1,100[7]	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	09/07/98[11]	**12.22**	**85.64**	**0.00**	**1,100[7]**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**
Trip Blank	06/04/97	---	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	09/16/97	---	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/17/97	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	03/18/98	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	06/28/98	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	09/07/98	**---**	**---**	**---**	**---**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**

Table 1. Water Level Data and Groundwater Analytical Results - Chevron Service Station #9-9708, 5910 MacArthur Blvd., Oakland, California (continued)

EXPLANATION:

TOC = Top of casing elevation
(ft) = feet
GWE = Groundwater elevation
(msl) = Mean Sea Level
TPH(D) = Total Petroleum Hydrocarbons as diesel
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
HVOs = Halogenated Volatile Organics

ANALYTICAL METHODS:

EPA Method 8015 Modified for TPH(D)
EPA Method 8015 for TPH(G)
EPA Method 8020 for BTEX & MTBE
EPA Method 8260 for MTBE
EPA Method 8010 for HVOs

NOTES:

1 MW-1 through MW-3 were surveyed on June 18, 1997, by Virgil Chavez Land Surveying (PLS #6323). Benchmark Elevation =95.88' (msl).

2 Sample also analyzed for the following: Total Oil & Grease by EPA Method 5520F was ND; Semivolatile Organics by EPA Method 8270B were ND; Volatile Organics by EPA Method 8010B were ND except 1,2-Dichloroethane was detected at 1 ppb.

3 Laboratory report indicates the concentration of MTBE has not been included in the reported concentration of TPH(G).

4 Laboratory report indicates the material present is qualitatively uncertain. Therefore, all material in the C9 to C22 range was quantitated against diesel fuel without respect to pattern. Chromatographic data indicates the presence of material, which is heavier than diesel fuel in this sample.

5 Laboratory report indicates gas & unidentified hydrocarbons >C6.

6 MTBE by EPA Method 8260.

7 Laboratory report indicates unidentified hydrocarbons C9-C24.

8 Laboratory report indicates unidentified hydrocarbons C6-C12.

9 Laboratory report indicates gas & unidentified hydrocarbons + C6-C12.

10 Sample was also analyzed for HVOs. 1,2-Dichlorobenzene (0.99 ppb) was detected. Concentrations of all other compounds were below method detection limits ranging from 0.5 ppb to 5.0 ppb.

11 Sample was also analyzed for HVOs. 1,2-Dichlorobenzene (0.79 ppb) and 1,2-Dichloroetane (0.54 ppb) were detected. Concentrations of all other compounds were below method detection limits ranging from 0.50 ppb to 5.0 ppb.

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 # 9-9708 Job#: 6395.80

Address: 5910 MacArthur Blvd. Date: 9-7-95

City: Oakland, CA Sampler: F.Cline

Well ID MW- 1 Well Condition: Okay

Well Diameter 2" in. Hydrocarbon Thickness: e in. Amount Bailed (product/water): e (gal.)

Total Depth 20.2 ft.

Depth to Water 14.29 ft.

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

5.91 X VF 0.17 = 1 X 3 (case volume) = Estimated Purge Volume: 3.0 (gal.)

Purge Equipment: Disposable Bailer, Bailer, (Stack), (Suction), Grundfos, Other:

Sampling Equipment: (Disposable Bailer), Bailer, Pressure Bailer, Grab Sample, Other:

Starting Time: 1615 Weather Conditions: Clear Hot

Sampling Time: 1625 Water Color: Clear Odor: Mild

Purging Flow Rate: 1 gpm. Sediment Description: Clear

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1619	1	7.00	844	24.8			
1621	2	7.09	844	22.3			
1623	3	7.10	852	22.6			
1627	3.5	7.10	850	22.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 1	3 x 40m/VOA	Y	HCL	~~NEI/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE
MW-	2 X Liter	Y	NONE	~~NEI/GTEL~~ SEQUOIA	~~TPH-Diesel~~

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-9708 Job#: 6395.80

Address: 5910 MacArthur Blvd. Date: 9-7-98

City: Oakland, CA Sampler: E.Cline

Well ID MW- 2 Well Condition: Okay

Well Diameter 2" in. Hydrocarbon Thickness: — in. Amount Bailed (product/water): — (gal.)

Total Depth 20.1 ft

Depth to Water 12.97 ft

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

7.13 X VF 0.17 = 1.2 X 3 (case volume) = Estimated Purge Volume: 3.6 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; ~~Suction~~; Grundfos; Other: ____

Sampling Equipment: ~~Disposable Bailer~~; Bailer; Pressure Bailer; Grab Sample; Other: ____

Starting Time: 1623 Weather Conditions: Clear Wet

Sampling Time: 1637 Water Color: Clear Odor: None

Purging Flow Rate: 1.2 gpm. Sediment Description: Clear

Did well de-water? No If yes; Time: ____ Volume: ____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1624	1.2	7.21	655	22.2			
1627	2.4	7.03	686	21.1			
1634	3.6	7.03	690	19.6			
1637	4.8	7.04	684	20.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 2	3 x 40m/VOA	Y	HCL	~~NEI/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE
MW-	2 X Liter	Y	NONE	~~NEI/GTEL~~ Sequoia	TPH-Diesel

COMMENTS: ____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-9708 Job#: 6395.80

Address: 5910 MacArthur Blvd. Date: 9-7-9E

City: Oakland, CA Sampler: E Cline

Well ID MW-3 Well Condition: okay

Well Diameter 2" in. Hydrocarbon Thickness: € in. Amount Bailed (product/water): € (gal.)

Total Depth 20.1 ft.

Depth to Water 12.22 ft.

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

7.88 X VF 0.17 = 1.33 X 3 (case volume) = Estimated Purge Volume: 4.C (gal.)

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

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

Starting Time: 1552 Weather Conditions: Clear

Sampling Time: 1600 Water Color: Clear Odor: No

Purging Flow Rate: 1.0 gpm. Sediment Description: No

Did well de-water? No If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1554	~~1.52~~	7.35	69E	23.1			
1559	~~2.04~~	7.07	772	22.1			
1538	~~3.96~~	7.02	772	21.E			
1600	~~4.57~~	7.09	775	22.C			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3 x 40m/VOA	Y	HCL	~~NEI/GTEL~~ Sequoia	TPH-Gas/BTEX/MTBE
MW-3	2 X Liter	Y	NONE	~~NEI/GTEL~~ Sequoia	TPH-Diesel
MW-3	3 x 40ml VOA	Y	HCL	SEQ	HVOC 8010

COMMENTS:

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

Chain-of-Custody-Recor

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

98-09-401

Chevron Facility Number #9-9708
Facility Address 5910 MACARTHUR BLVD., OAKLAND, CA
Consultant Project Number 6395
Consultant Name Gettler-Ryan
Address 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name) Deanna Harding
(Phone) 551-7555 (Fax Number) 551-7888

Chevron Contact (Name) MR. PHIL BRIGGS
(Phone) (510) 842-9136
Laboratory Name Sequoia Service Code: 2202790
Laboratory Service Order 9144488
Samples Collected by (Name) F. Cline
Collection Date 9-7-98
Signature

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	TPH Gas + BTEX w/MTBE (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					
								Analyses To Be Performed												
TB-LB		1	W	TB	—	HCl	Y	X												
MW-3		7		G	1600			X	X		X									
MW-1		3			1610			X												
MW-2		3			1628			X												

DO NOT BILL TB-LB ANALYSI
Confirm highes hit of (8020)- MTBE by 8260.

Remarks

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	9-8-98/0830	D. Harding	G-R Inc.	9/8/98
Relinquished By (Signature) D. Harding	Organization GR	Date/Time 9/8/98	Received By (Signature) Charles Grimshaw	Organization Sequoia	Date/Time 9/8 11:45
Relinquished By (Signature)	Organization	Date/Time 9/8	Received For Laboratory By (Signature)		Date/Time 9/8/98 12:57

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RECEIVED

Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron 9-9708, Oakland
Sample Descript: TB-LB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9809401-01

Sampled: 09/07/98
Received: 09/08/98
Analyzed: 09/11/98
Reported: 09/23/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/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	98

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
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-9708, Oakland	Sampled: 09/07/98
6747 Sierra Court Suite J	Sample Descript: MW-1	Received: 09/08/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/11/98
Attention: Deanna Harding	Lab Number: 9809401-03	Reported: 09/23/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**92**
Benzene	**0.50**	**6.7**
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	104

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron 9-9708, Oakland
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9809401-04

Sampled: 09/07/98
Received: 09/08/98

Analyzed: 09/11/98
Reported: 09/23/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	3700
Methyl t-Butyl Ether	25	1300
Benzene	5.0	220
Toluene	5.0	5.1
Ethyl Benzene	5.0	38
Xylenes (Total)	5.0	7.6
Chromatogram Pattern:		GAS

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron 9-9708, Oakland
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8260
Lab Number: 9809401-04

Sampled: 09/07/98
Received: 09/08/98

Analyzed: 09/16/98
Reported: 09/23/98

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	100	1400

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	115 Q

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
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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron 9-9708, Oakland
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809401-02

Sampled: 09/07/98
Received: 09/08/98
Extracted: 09/14/98
Analyzed: 09/19/98
Reported: 09/23/98

QC Batch Number: GC0914980HBPEXZ
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	1100
Chromatogram Pattern:	C9-C24	Unid.-HC

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	241 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron 9-9708, Oakland
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9809401-02

Sampled: 09/07/98
Received: 09/08/98

Analyzed: 09/11/98
Reported: 09/23/98

Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/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	104

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

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron 9-9708, Oakland
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9809401-02

Sampled: 09/07/98
Received: 09/08/98

Analyzed: 09/15/98
Reported: 09/23/98

QC Batch Number: GC091498OVOA24A
Instrument ID: GCHP24_2

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	**0.50**	**0.79**
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	**0.50**	**0.54**
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

Surrogates	Control Limits %		% Recovery
4-Bromofluorobenzene	70	130	95

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

SEQUOIA ANALYTICAL - ELAP #1210

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

Client Proj. ID: Chevron 9-9708, Oakland
Lab Proj. ID: 9809401

Received: 09/08/98
Reported: 09/23/98

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.).

MTBE(8260):
The control limits are 80-120.

TPH-GAS/BTEX:
Sample 9809401-04 was diluted 10-fold.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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

Client Project ID: Chevron 9-9708, Oakland

QC Sample Group: 9809401-02

Reported: Sep 23, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015A
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC0914980HBPEXZ

Sample No.:	9809402-2
Date Prepared:	9/14/98
Date Analyzed:	9/18/98
Instrument I.D.#:	GCHP4B
Sample Conc., ug/L:	94
Conc. Spiked, ug/L:	1000
Matrix Spike, ug/L:	770
% Recovery:	68
Matrix Spike Duplicate, ug/L:	780
% Recovery:	69
Relative % Difference:	1.5
RPD Control Limits:	0-50

LCS Batch#: BLK091498ZS

Date Prepared:	9/14/98
Date Analyzed:	9/18/98
Instrument I.D.#:	GCHP4B
Conc. Spiked, ug/L:	1000
Recovery, ug/L:	720
LCS % Recovery:	72

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

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

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.

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

Client Project ID: Chevron 9-9708, Oakland

QC Sample Group: 9809401-02

Reported: Sep 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8010/8020, 601/602
Analyst: L. Kim

ANALYTE	1,1-DCE	TCE	Chlorobenzene	Benzene	Toluene	Chlorobenzene
QC Batch #:	GC0914980VOA24A					
Sample No.:	9809438-01					
Date Prepared:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Date Analyzed:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Instrument I.D.#:	gchp24_2	gchp24_2	gchp24_2	gchp24_2	gchp24_2	gchp24_2
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	25	25	25	25	25	25
Matrix Spike, ug/L:	20	21	25	24	25	24
% Recovery:	80	84	100	96	100	96
Matrix Spike Duplicate, ug/L:	22	22	25	26	25	25
% Recovery:	88	88	100	104	100	100
Relative % Difference:	9.5	4.7	0.0	8.0	0.0	4.1
RPD Control Limits:	0-50	0-50	0-50	0-50	0-50	0-50

LCS Batch#:	VWLCS091498A					
Date Prepared:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Date Analyzed:	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98	9/14/98
Instrument I.D.#:	gchp24.2	gchp24.2	gchp24.2	gchp24.2	gchp24.2	gchp24.2
Conc. Spiked, ug/L:	25	25	25	25	25	25
Recovery, ug/L:	21	21	24	25	25	25
LCS % Recovery:	84	84	96	100	100	100
Percent Recovery Control Limits:						
MS/MSD	60-140	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130	70-130

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

Please Note:
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SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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

Client Project ID: Chevron 9-9708, Oakland
Matrix: Liquid
Work Order #: 9809401 -01-04

Reported: Sep 23, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	8090169	8090169	8090169	8090169
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 8015M	EPA 8015M	EPA 8015M	EPA 8015M
Analyst:	M. Sakai	M. Sakai	M. Sakai	M. Sakai
MS/MSD #:	P809115-02	P809115-02	P809115-02	P809115-02
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/11/98	9/11/98	9/11/98	9/11/98
Analyzed Date:	9/11/98	9/11/98	9/11/98	9/11/98
Instrument I.D.#:	-	-	-	-
Conc. Spiked:	100 µg/L	100 µg/L	100 µg/L	300 µg/L
Result:	92.4	96.7	94.1	292
MS % Recovery:	92.4	96.7	94.1	97.3
Dup. Result:	90.6	94.9	92.5	288
MSD % Recov.:	90.6	94.9	92.5	96
RPD:	1.97	1.88	1.71	1.38
RPD Limit:	0-5	0-6	0-4	0-5
LCS #:	LCS091198	LCS091198	LCS091198	LCS091198
Prepared Date:	9/11/98	9/11/98	9/11/98	9/11/98
Analyzed Date:	9/11/98	9/11/98	9/11/98	9/11/98
Instrument I.D.#:	-	-	-	-
Conc. Spiked:	100 µg/L	100 µg/L	100 µg/L	300 µg/L
LCS Result:	93.8	98	95.8	29.8
LCS % Recov.:	93.8	98	95.8	9.93
MS/MSD Control Limits	82-119	80-117	66-125	73-119
LCS Control Limits	84-116	81-117	79-115	80-114

SEQUOIA ANALYTICAL
Elap #2245

Mike Gregory
Project Manager

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

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Gettler Ryan/Geostrategies	Client Project ID:	Chevron 9-9708, Oakland	
6747 Sierra Court, Ste J	Matrix:	Liquid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9809401-04	Reported: Sep 23, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Dibromofluoro-methane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluoro-benzene
QC Batch#:	8090363	8090363	8090363	8090363
Analy. Method:	EPA 8260	EPA 8260	EPA 8260	EPA 8260
Prep. Method:	N.A.	N.A.	N.A.	N.A.
Analyst:	M. Sakai	M. Sakai	M. Sakai	M. Sakai
MS/MSD #:				
Sample Conc.:				
Prepared Date:				
Analyzed Date:				
Instrument I.D.#:				
Conc. Spiked:				
Result:				
MS % Recovery:				
Dup. Result:				
MSD % Recov.:				
RPD:				
RPD Limit:				

LCS #:	LCS091698	LCS091698	LCS091698	LCS091698
Prepared Date:	9/16/98	9/16/98	9/16/98	9/16/98
Analyzed Date:	9/16/98	9/16/98	9/16/98	9/16/98
Instrument I.D.#:	-	-	-	-
Conc. Spiked:	5.0 µg/L	5.0 µg/L	5.0 µg/L	5.0 µg/L
LCS Result:	4.88	5.19	5.09	5.18
LCS % Recov.:	97.6	104	102	104
MS/MSD LCS Control Limits	86-118	80-120	88-110	86-115

SEQUOIA ANALYTICAL
Elap #2245

Mike Gregory
Project Manager

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