ENVIRONMENTAL
PROTECTION

97 APR 22 PM 3:42

Chevron

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

April 20, 1997

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

Re: Former Chevron Service Station #9-0191
900 Otis Drive , Alameda, California

Dear Ms. Shin:

Enclosed is the First Quarter Groundwater Monitoring Report for 1997, prepared by our consultant Gettler-Ryan Inc., for the above noted site. Groundwater samples were analyzed for TPH-g, BTEX and MtBE constituents.

Only monitoring well MW-3 was sampled and analyzed for the constituents, as it had detected a low concentration of the benzene and ethyl-benzene constituents in the last sampling event. The other wells were measured for groundwater depth to determine the direction of flow. Well MW-3 detected 11.0 ppb and 0.55 ppb for the benzene and toluene constituents respectively, while the ethyl benzene and Xylene constituents were below method detection limits.

Groundwater depth varied from 2.40 to 4.36 feet below grade with a direction of flow northwesterly.

This still appears to be a low risk site, however, since there continues to be a minimal impact of the benzene constituent detected in well MW-3, Chevron will continue to monitor this well for another quarter. Chevron has no explanation for the slight increase in the benzene concentration, unless it is related to the changing groundwater depth. After the next quarter results are received, they will be reviewed to determine if closer will be requested.

If you have any questions, call me at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc. Ms. Bette Owen, Chevron

Harsch Investment Corp.
dba South Shore Center
235 W. MacArthur Boulevard, #63
Oakland, CA 94611

Mr. Phil Eyring
Eyring Reality Inc.
500 Ygnacio Valley Road, # 225
Walnut Creek, CA 94596

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

GETTLER-RYAN INC.

April 9, 1997

Job #6324.80

Mr. Phillip Briggs
Chevron Products Company
P.O. Box 5004
San Ramon, CA 94583

Re: First Quarter Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-0191
900 Otis Drive
Alameda, California

Dear Mr. Briggs:

This report documents the quarterly groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On March 5, 1997, field personnel were on-site to monitor six wells (MW-2 through MW-7) and sample one well (MW-3) at the Former Chevron Service Station #9-0191 located at 900 Otis Drive in Alameda, California.

Static groundwater levels were measured on March 5, 1997. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the site 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 well 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,

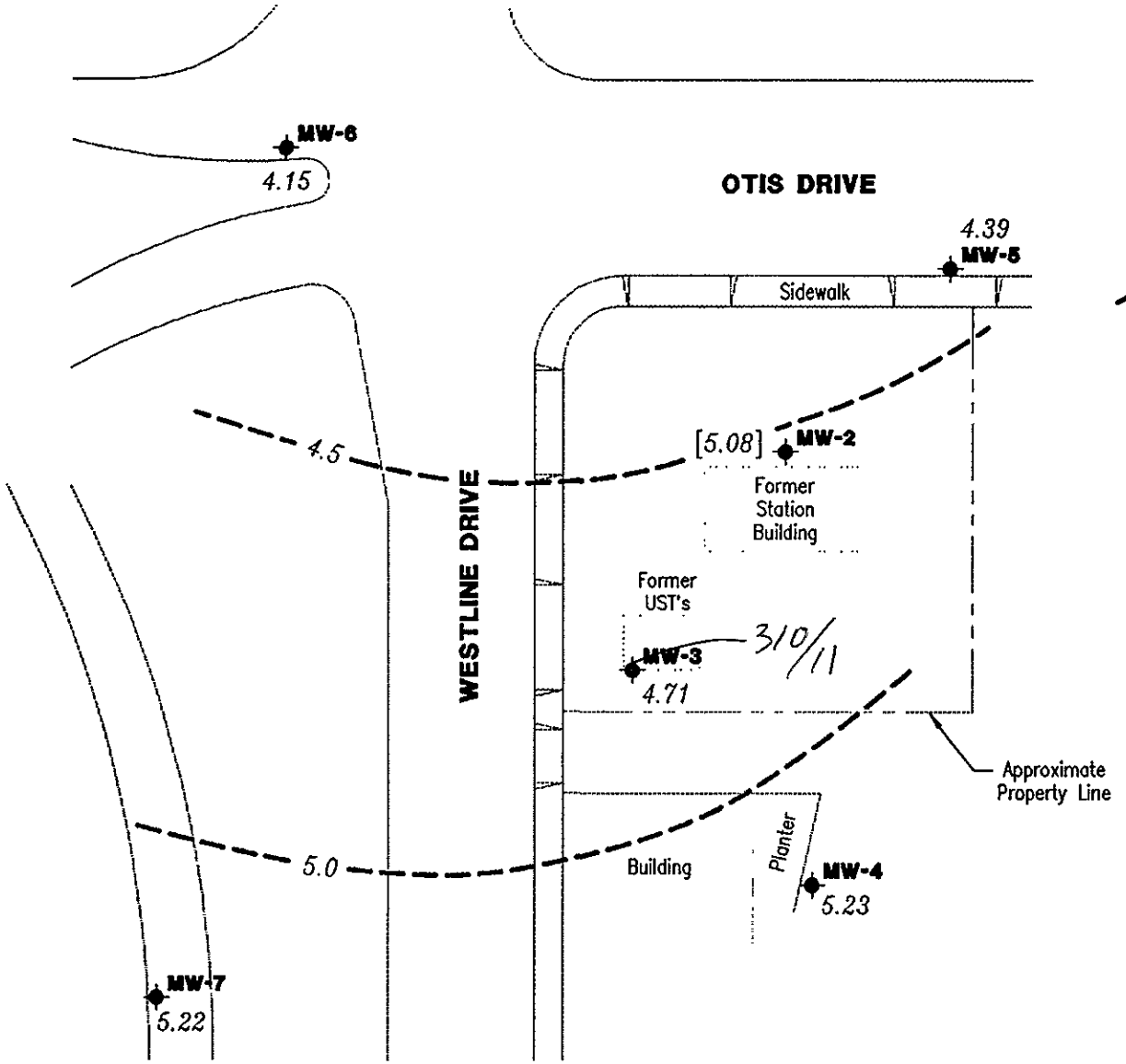
Deanna L. Harding
Project Coordinator

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

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

DLH/SJC/dlh
6324.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.
- [99.99] Not used in contouring

Approximate groundwater flow direction at a gradient of 0.004 Ft./Ft.

N

0 60

Scale in Feet

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

POTENTIOMETRIC MAP
Former Chevron Service Station No. 9-0191
900 Otis Drive
Alameda, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
6324		March 5, 1997	

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-0191, 900 Otis Drive, Alameda, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
						<ppb>				
MW-2/ 9.17	2/8/96	2.75	6.42	—	94	ND	ND	ND	ND	—
	6/27/96	4.99	4.18	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/3/96	5.21	3.96	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/3/96	4.54	4.63	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	3/5/97	4.09	5.08	0	—	—	—	—	—	—
MW-3/ 7.11	2/8/96	1.36	5.75	—	460	26	ND	5.8	ND	—
	6/27/96	3.22	3.89	0	130[1]	<0.50	<0.50	<0.50	0.51	16
	9/3/96	3.08	4.03	0	160[2]	<0.50	<0.50	<0.50	<0.50	<2.5
	12/3/96	2.68	4.43	.0	260[2]	4.3	<0.50	0.62	<0.50	50
	3/5/97	2.40	4.71	0	310[2]	11	0.55	<0.50	<0.50	6.7
MW-4/ 7.78	2/8/96	1.32	6.46	—	ND	ND	ND	ND	ND	—
	6/28/96	2.99	4.79	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/3/96	3.50	4.28	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/3/96	2.95	4.83	0	—	—	—	—	—	—
	3/5/97	2.55	5.23	0	—	—	—	—	—	—
MW-5/ 7.37	2/8/96	0.75	6.62	—	ND	ND	ND	ND	ND	—
	6/27/96	2.66	4.71	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/3/96	3.29	4.08	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/3/96	2.66	4.71	0	—	—	—	—	—	—
	3/5/97	2.98	4.39	0	—	—	—	—	—	—
MW-6/ 7.30	2/8/96	2.10	5.20	—	ND	ND	ND	ND	ND	—
	6/27/96	3.98	3.32	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/3/96	3.50	3.80	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/3/96	3.31	3.99	0	—	—	—	—	—	—
	3/5/97	3.15	4.15	0	—	—	—	—	—	—
MW-7/ 9.58	2/8/96	3.24	6.34	—	ND	ND	ND	ND	ND	—
	6/27/96	5.07	4.51	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/3/96	5.29	4.29	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/3/96	4.95	4.63	0	—	—	—	—	—	—
	3/5/97	4.36	5.22	0	—	—	—	—	—	—
Trip Blank	6/27/96	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/3/96	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/3/96	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	3/5/97	—	—	—	—	—	—	—	—	—

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-0191, 900 Otis Drive, Alameda, California (continued)

EXPLANATION:

TOC = Top of casing elevation
(ft) = feet
DTW = Depth to water
GWE = Groundwater elevation
msl = Measurements referenced relative to mean sea level
TPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-tertiary-butyl-ether
ppb = Parts per billion
ND = Not-Detected
— = Not analyzed/Not applicable

ANALYTICAL METHODS:

EPA Method 8015/5030 for TPH(G)
EPA Method 8020 for BTEX & MTBE

NOTES:

Water level elevation data and laboratory analytical results prior to June 27, 1996, were compiled from Quarterly Monitoring Reports prepared for Chevron by Pacific Environmental Group.

* Product thickness was measured on and after June 27, 1996, with a MMC Flexi-Dip interface probe.

1 Laboratory report indicates unidentified hydrocarbons C6-C12.
2 Laboratory report indicates unidentified hydrocarbons <C8.

6324.TQM

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 SAMPLING FIELD DATA SHEET

SAMPLER F. Cline DATE 3-5-97

ADDRESS 900 Otis Drive JOB # 6324.85

CITY Alameda CA SS# 9-0191

Well ID MW-2 Well Condition okay

Well Location Description

Well Diameter 2" in Hydrocarbon Thickness 0

Total Depth ft

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

Depth to Liquid 4.09 ft

# of casing Volume 3X x 0.17 x(VF) = #Estimated purge Volume gal.

Purge Equipment Bailer Sampling Equipment Bailer

Did well dewater No If yes, Time ____ Volume

Starting Time Purging Flow Rate gpm.

Sampling Time

Time	pH	Conductivity	Temperature	Volume
	WNL	WNL		

Weather Conditions Sunny clear & warm

Water Color: Clear Odor: None

Sediment Description None

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW-2	3x40 ml VOA	Y	HCL	STL	8015 BTXE
					MTBE

Comments

WELL SAMPLING FIELD DATA SHEET

SAMPLER F. Cline DATE 3-5-97

ADDRESS 900 Otis Drive JOB # 6324.85

CITY Alameda CA SS# 9-0191

Well ID MW-3 Well Condition okay

Well Location Description

Well Diameter 2" in Hydrocarbon Thickness 0

Total Depth 14 ft

Depth to Liquid 2.40 ft

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

# of casing Volume 3X 11.60 x 0.17 x(VF) 1.47 #Estimated purge Volume 5.1 gal.

Purge Equipment Bailer Sampling Equipment Bailer

Did well dewater No If yes, Time ___ Volume ___

Starting Time 12:21 Purging Flow Rate ___ gpm.

Sampling Time 1227

Time	pH	Conductivity	Temperature	Volume
1223	7.75	172	13.8	2
1225	7.89	173	14.0	4
1227	7.90	194	14.0	6

Weather Conditions Sunny clear & warm

Water Color: Clear Odor: Non-

Sediment Description None

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW-3	3x40 ml VOA	Y	HCL	STL	6 cos BTXE
					MTBE

Comments ___

WELL SAMPLING FIELD DATA SHEET

SAMPLER: F. Cline | DATE: 3-5-97

ADDRESS: 900 Otis Drive | JOB #: 6324.85

CITY: Alameda CA | SS#: 4-0191

Well ID: MW-4 | Well Condition: okay

Well Location Description:

Well Diameter: 2" in | Hydrocarbon Thickness: 0

Total Depth: ft | Volume Factor (VF): 2" = 0.17, 3" = 0.38, 4" = 0.66, 6" = 1.50, 12" = 5.80

Depth to Liquid: 2.55 ft

# of casing Volume: 3X x 0.17 x(VF) = #Estimated purge Volume: gal.

Purge Equipment: Bailer | Sampling Equipment: Bailer

Did well dewater: No | If yes, Time: | Volume:

Starting Time: | Purging Flow Rate: gpm.

Sampling Time:

Time	pH	Conductivity	Temperature	Volume
	N/C	CANCELLED		

Weather Conditions: Sunny clear & warm

Water Color: Clear | Odor: None

Sediment Description: None

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW-4	3x40 mlVOA	Y	HCL	STL	8020 BTXE
					MTBE

Comments:

WELL SAMPLING FIELD DATA SHEET

SAMPLER: F. Cline | DATE: 3-5-97

ADDRESS: 900 Otis Drive | JOB #: 6324.85

CITY: Alameda CA | SS#: 9-0191

Well ID: MW-5 | Well Condition: okay

Well Location Description:

Well Diameter: 2" in | Hydrocarbon Thickness: 0

Total Depth: ft

Depth to Liquid: 2.98 ft

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

# of casing Volume: 3x | x 0.17 x(VF) | #Estimated purge Volume: gal.

Purge Equipment: Bailer | Sampling Equipment: Bailer

Did well dewater: No | If yes, Time: | Volume:

Starting Time: | Purging Flow Rate: gpm.

Sampling Time:

Time	pH	Conductivity	Temperature	Volume
	W/L	only		

Weather Conditions: Sunny clear & warm

Water Color: Clear | Odor: Non-

Sediment Description: None

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW5-	3x40ml VOA	Y	HCL	BEG	TPHG BTEX MTBE

Comments:

WELL SAMPLING FIELD DATA SHEET

SAMPLER: F. Cline | DATE: 3-5-97

ADDRESS: 900 Otis Drive | JOB #: 6324.85

CITY: Alameda CA | SS#: 9-0191

Well ID: MW-6 | Well Condition: okay

Well Location Description:

Well Diameter: 2" in | Hydrocarbon Thickness: 0

Total Depth: ft | Volume Factor (VF): 2" = 0.17, 3" = 0.38, 4" = 0.66, 6" = 1.50, 12" = 5.80

Depth to Liquid: 3.15 ft

# of casing Volume: 3x × 0.17 x(VF) = #Estimated purge Volume: gal.

Purge Equipment: Bailer | Sampling Equipment: Bailer

Did well dewater: No | If yes, Time: | Volume:

Starting Time: | Purging Flow Rate: gpm.

Sampling Time:

Time	pH	Conductivity	Temperature	Volume
	W/L only			

Weather Conditions: Sunny clear & warm

Water Color: Clear | Odor: Non-

Sediment Description: None

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW6-	3x40ml VOA	Y	HCL	STL	602 BTXE MTBE

Comments:

WELL SAMPLING FIELD DATA SHEET

SAMPLER F. Cline DATE 3-5-97

ADDRESS 900 Otis Drive JOB # 6324.85

CITY Alameda CA SS# 4-0191

Well ID MW-7 Well Condition okay

Well Location Description

Well Diameter 2" in Hydrocarbon Thickness 0

Total Depth ft

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

Depth to Liquid 4.36 ft

# of casing Volume 3x x 0.17 x(VF) #Estimated purge Volume gal.

Purge Equipment Bailer Sampling Equipment Bailer

Did well dewater No If yes, Time Volume

Starting Time Purging Flow Rate gpm.

Sampling Time

Time	pH	Conductivity	Temperature	Volume

Weather Conditions Sunny clear & warm

Water Color: Clear Odor: Non-

Sediment Description None

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW-7	3x40 mlVOA	Y	HCL	STL	602 BTXE
					MTBE

Comments

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

Chain-of-Custody-Record

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

Chevron Facility Number #9-0191
Facility Address 900 Otis Drive, Alameda, CA
Consultant Project Number 6324.80
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: ZZ02790
Laboratory Service Order #9033187
Samples Collected by (Name) [illegible]
Collection Date 3-6-97
Signature

Analyses To Be Performed 9703268

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 (8015) (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)	Remarks
TB-W3		2	W	TB		HCl	X	X								DO NOT BILL TB-LB ANALYSIS
MW-3	(1)	3	W	G	1227	HCl	Y	X								

ER 634

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	G-R Inc.	3-6-97 0800	D. Harding	G-R Inc.	3/6/97 8:30
D. Harding	G-R Inc.	3/6/97	[signature]	SEQ.	3/6/97
[signature]	SEQ	3/6/97 1546	Received For Laboratory By (Signature) [signature]		Date/Time 3/6/97 15:46

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

COC-SLWG/03-91/rev.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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 9-0191, Alameda	Sampled: 03/06/97
6747 Sierra Court Suite G	Sample Descript: MW-3	Received: 03/06/97
Dublin, CA 94568	Matrix: LIUQID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/11/97
Attention: Deanna Harding	Lab Number: 9703268-01	Reported: 03/13/97

QC Batch Number: GC031197BTEX06A
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**	**310**
Methyl t-Butyl Ether	**2.5**	**6.7**
Benzene	**0.50**	**11**
Toluene	**0.50**	**0.55**
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	116

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, (415) 364-9600, FAX (415) 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
6747 Sierra Court Suite G
Dublin, CA 94568
Attention: Deanna Harding

Client Proj. ID: Chevron 9-0191, Alameda
Lab Proj. ID: 9703268

Received: 03/06/97
Reported: 03/13/97

LABORATORY NARRATIVE

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

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Chevron 9-0191, Alameda
Matrix: Liquid
Work Order #: 9703268 01

Reported: Mar 19, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC031197BTEX06A	GC031197BTEX06A	GC031197BTEX06A	GC031197BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	970309403	970309403	970309403	970309403
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/11/97	3/11/97	3/11/97	3/11/97
Analyzed Date:	3/11/97	3/11/97	3/11/97	3/11/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	30
MS % Recovery:	100	100	100	100
Dup. Result:	9.7	9.6	9.8	29
MSD % Recov.:	97	96	98	97
RPD:	3.0	4.1	2.0	3.4
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK031197BSA	BLK031197BSA	LK031197BSA	BLK031197BSA
Prepared Date:	3/11/97	3/11/97	3/11/97	3/11/97
Analyzed Date:	3/11/97	3/11/97	3/11/97	3/11/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.9	9.9	10	30
LCS % Recov.:	99	99	100	100

MS/MSD	60-140	60-140	60-140	60-140
LCS	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