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PE

Environmental  
PROTECTION  
97 OCT 28 PM 3:36



**Chevron**

October 24, 1997

**Chevron Products Company**  
6031 Bollinger Canyon Road  
Building L  
San Ramon, CA 94583  
P.O. Box 6004  
San Ramon, CA 94583-0904

Mr. Thomas Peacock  
Manager, Environmental Protection Division  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Marketing - Sales West**  
Phone 510 842-9500

**Re: Chevron Service Station #9-4800  
1700 Castro Street  
Oakland, California**

Dear Mr. Peacock:

Enclosed is the Third Quarter Groundwater Monitoring and Sampling Report for 1997 that was prepared by our consultant Gettler-Ryan Inc. for the above noted facility. The groundwater samples were analyzed for the presence of TPH-g, TPH-d, BTEX and MtBE. All wells are sampled quarterly.

This is the first sampling event after groundwater monitoring wells were installed to determine if the site had been impacted petroleum hydrocarbons. This investigation was initiated due to detecting petroleum hydrocarbons in the soil when the facilities were upgraded for overspill protection. Refer to the report of this investigation under Chevron's cover letter dated August 7, 1997, addressed to Jennifer Eberle of your office.

Monitoring wells MW-1 and MW-3 showed an increase in the benzene constituent while well MW-2 showed a decrease from the initial investigation. The TPH-d constituent detected in wells MW1 and MW-2 indicated the presence of an unidentified hydrocarbon.

Depth to ground water varied from 24.94 feet to 26.15 feet below grade with a direction of flow westerly.

Chevron will continue monitor the site quarterly. 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

October 24, 1997  
Mr. Thomas Peacock  
Chevron Service Station # 9-4800  
Page 2

ENVIRONMENTAL  
PROTECTION  
97 OCT 28 PM 3:35

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



# GETTLER-RYAN INC.

ENVIRONMENTAL  
PROTECTION

97 OCT 28 PM 3:35

October 20, 1997

Job #6383.80

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

Re: Quarterly Groundwater Monitoring & Sampling Report  
Chevron Service Station #9-4800  
1700 Castro Street  
Oakland, California

Dear Mr. Briggs:

This report documents the quarterly groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On September 16, 1997, field personnel were on-site to monitor and sample three wells (MW-1, MW-2 and MW-3) at Chevron Service Station #9-4800 located at 1700 Castro Street in Oakland, California.

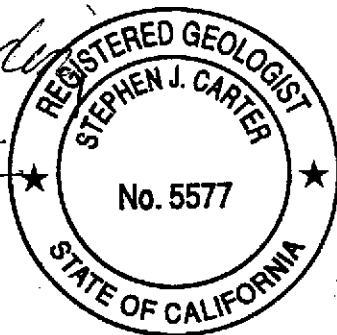
Static groundwater levels were measured on September 16, 1997. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1. A Potentiometric Map is 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.

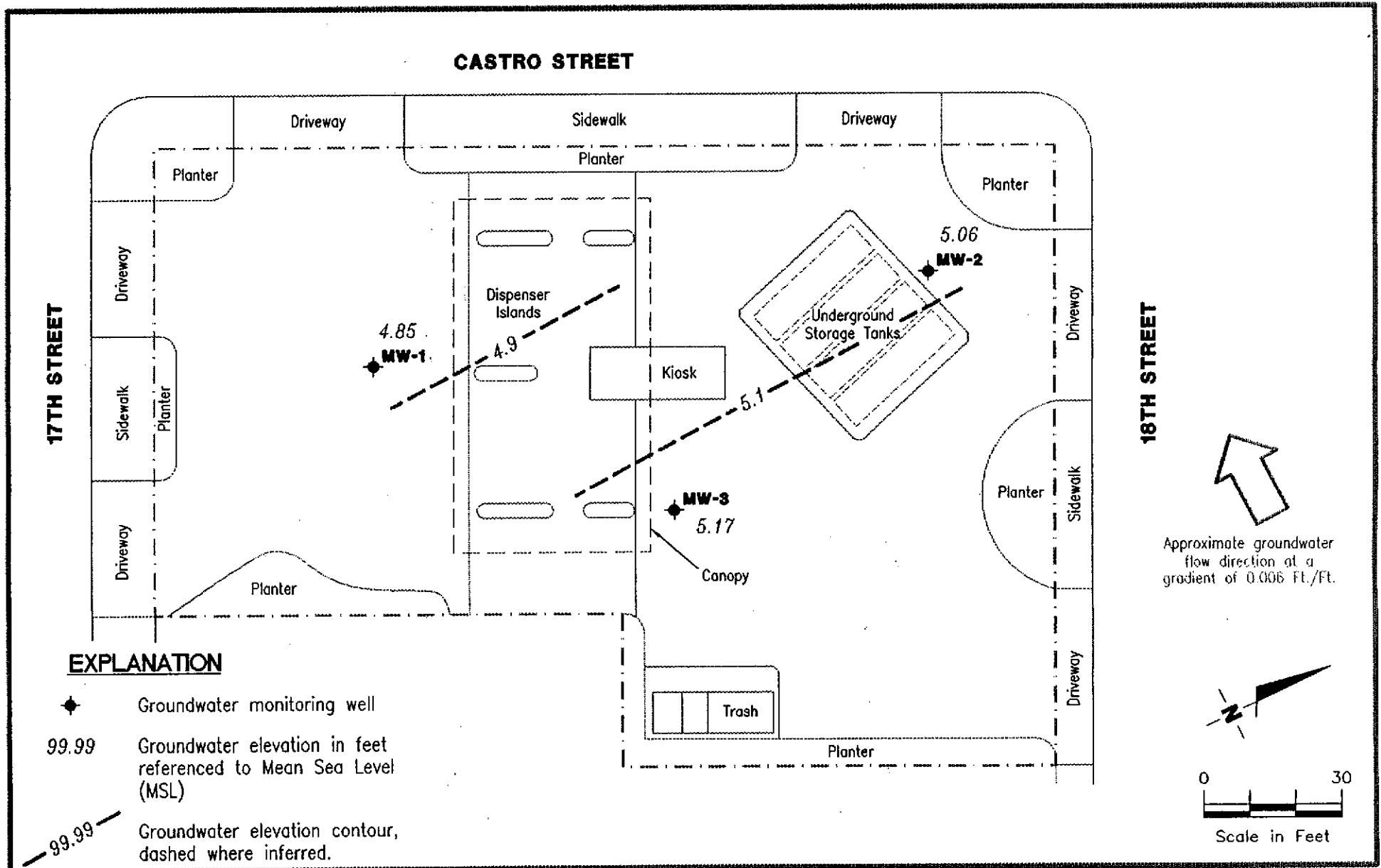
Sincerely,

Deanna L. Harding  
Project Coordinator

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

DLH/SJC/dlh  
6383.QML

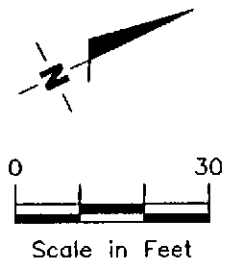
Figure 1: Potentiometric Map  
Table 1: Water Level Data and Groundwater Analytical Results  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports



**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 0.006 Ft./Ft.



**Gettler - Ryan Inc.**

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

**POTENTIOMETRIC MAP**  
Chevron Service Station No. 9-4800  
1700 Castro Street  
Oakland, California

FIGURE  
**1**

JOB NUMBER  
6383

REVIEWED BY

DATE  
September 16, 1997

REVISED DATE



Table 1. Water Level Data & Groundwater Analytical Results - Chevron Service Station #9-4800, 1700 Castro Street, Oakland, California

Well ID/ TOC	Date Sampled	Depth to Water (ft)	GWE (msl)	Product Thickness (ft)	TPH(D) <-----	TPH(G)	-----ppb-----				MTBE >
							B	T	E	X	
MW-1 30.75 <sup>1</sup>	06/04/97	25.82	4.39	0.00	71 <sup>2</sup>	890	100	110	29	150	<10
	09/16/97	25.90	4.85	0.00	75 <sup>2</sup>	1,600	210	210	60	250	<10
MW-2 30.00 <sup>1</sup>	06/04/97	24.87	5.13	0.00	4,000 <sup>2</sup>	13,000	790	30	420	1,700	4,000
	09/16/97	24.94	5.06	0.00	2,200 <sup>2</sup>	4,000	360	9.7	210	460	1,500
MW-3 31.32 <sup>1</sup>	06/04/97	26.05	5.27	0.00	<50	190	26	20	1.5	16	8.2
	09/16/97	26.15	5.17	0.00	<50	270	58	53	6.1	30	21
Trip Blank	06/04/97	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	09/16/97	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5

**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

**NOTES:**

- <sup>1</sup> MW-1 through MW-3 were surveyed on June 18, 1997, by Virgil Chavez Land Surveying (PLS #6323). Benchmark used for TOC is the back of sidewalk on 18th Street as reference line. Benchmark Elevation = 29.65' (msl).
- <sup>2</sup> Laboratory report indicates unidentified hydrocarbons C9-C24.



## 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 # 9-4800

Job#: 6383.80

Address: 1700 Castro Street

Date: 9-16-97

City: Oakland, CA

Sampler: F.Cline

Well ID: MW- 1

Well Condition: clay

Well Diameter: 2" in.

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

Total Depth: 30.3 ft.

Depth to Water: 25.90 ft.

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

4.40 X VF 0.17 2.5 = 2.24 X 3 (case volume) = Estimated Purge Volume: \_\_\_\_\_ (gal.)

Purge Equipment: Disposable Bailer  
Bailer  
Stack  
Suction  
Grundfos  
Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
Bailer  
Pressure Bailer  
Grab Sample  
Other: \_\_\_\_\_

Starting Time: 16:56

Weather Conditions: clear warm

Sampling Time: 17:03

Water Color: Brown Odor: None

Purging Flow Rate: \_\_\_\_\_ gpm.

Sediment Description: Light silt

Did well de-water? NC

If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ hos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>16:58</u>	<u>0.175</u>	<u>6.52</u>	<u>211</u>	<u>20.9</u>			
<u>17:01</u>	<u>0.50</u>	<u>6.90</u>	<u>227</u>	<u>20.6</u>			
<u>17:03</u>	<u>2.25</u>	<u>6.91</u>	<u>229</u>	<u>20.7</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-Gas/BTEX/MTBE</u>
<u>MW- 1</u>	<u>2 X Liter</u>	<u>Y</u>	<u>NONE</u>	<u>SEQUOIA</u>	<u>TPH-Diesel</u>

COMMENTS: \_\_\_\_\_

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Chevron Facility # 9-4800

Job#: 6383.80

Address: 1700 Castro Street

Date: 9-16-97

City: Oakland, CA

Sampler: F.Cline

Well ID MW-2

Well Condition: Okay

Well Diameter 2" in.

Hydrocarbon Amount Bailed  
Thickness: \_\_\_\_\_ in. (product/water): \_\_\_\_\_ (gal.)

Total Depth 3015 ft.

Depth to Water 2494 ft.

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

5156 X VF 0.17 = 0.94 X 3 (case volume) = Estimated Purge Volume: 2.8 (gal.)

Purge Equipment: Disposable Bailer  
Bailer  
Stack  
Suction  
Grundfos  
Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
Bailer  
Pressure Bailer  
Grab Sample  
Other: \_\_\_\_\_

Starting Time: 7:15

Weather Conditions: clear warm

Sampling Time: 7:23

Water Color: Brown Odor: \_\_\_\_\_

Purging Flow Rate: \_\_\_\_\_ gpm.

Sediment Description: Light Silty

Did well de-water? No

If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>7:17</u>	<u>1</u>	<u>6.27</u>	<u>267</u>	<u>21.3</u>			
<u>7:19</u>	<u>2</u>	<u>6.73</u>	<u>232</u>	<u>21.3</u>			
<u>7:23</u>	<u>3</u>	<u>6.78</u>	<u>230</u>	<u>21.2</u>			

**LABORATORY INFORMATION**

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

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Chevron Facility # 9-4800

Job #: 6383.80

Address: 1700 Castro Street

Date: 9/16-97

City: Oakland, CA

Sampler: F. Cline

Well ID MW-3

Well Condition: okay

Well Diameter 2" in.

Hydrocarbon Thickness: \_\_\_\_\_ in. Amount Bailed (product/water): \_\_\_\_\_ (gal.)

Total Depth 30.23 ft.

Depth to Water 26.15 ft.

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

4.08 X VF 0.17 = 0.69 X 3 (case volume) = Estimated Purge Volume: 2.0 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
 Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 16:38  
 Sampling Time: 16:44  
 Purging Flow Rate: \_\_\_\_\_ gpm.  
 Did well de-water? No

Weather Conditions: Clear warm  
 Water Color: Brown Odor: None  
 Sediment Description: 6.94 5.17  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>16:40</u>	<u>0.7</u>	<u>6.9</u>	<u>182</u>	<u>21.1</u>			
<u>16:42</u>	<u>1.4</u>	<u>6.96</u>	<u>194</u>	<u>20.8</u>			
<u>16:44</u>	<u>2.1</u>	<u>6.95</u>	<u>195</u>	<u>20.7</u>			

**LABORATORY INFORMATION**

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

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

Chevron Facility Number: #9-4800  
 Facility Address: 1700 CASTRO STREET, OAKLAND, CA  
 Consultant Project Number: 6383  
 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 # 9051783  
 Samples Collected by (Name) F. Clint  
 Collection Date 9/16/97  
 Signature [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	Lead (Yes or No)	Analyses To Be Performed <u>9709B62</u>											Remarks				
								TPH Gas + BTEX w/MTBE (8016)	TPH Diesel (8015)	Oil and Greases (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)								
TB-LB	1	2	W	TB	-	lte	X	X															
MW-3	2	5	↓	G	16/27	H2, N2	Y	X	X														
MW-1	3	5	↓	G	1703	↓	Y	X	X														SP 18 4 19
MW-2	4	5	↓	G	1723	↓	Y	X	X														

DO NOT BILL  
 TB-LB ANALYSIS  
~~Gettler-Ryan~~  
~~1703 (8020)~~  
~~1723 (8020)~~  
 Remarks

Relinquished By (Signature) <u>[Signature]</u>	Organization G-R Inc.	Date/Time 9-18-97	Received By (Signature) <u>D. Harding</u>	Organization G-R Inc.	Date/Time 9/18/97 19:00	Turn Around Time (Circle Choice)  24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) <u>[Signature]</u>	Organization G-R	Date/Time 9/18/97	Received By (Signature) <u>[Signature]</u>	Organization JA	Date/Time 9/18/97 230	
Relinquished By (Signature) <u>[Signature]</u>	Organization JA	Date/Time 9/18/97	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time 1-16-93 1619	

COC-3.0mg/0.3 ml/min



Gettler Ryan/Geostrategies 6747 Sierra Court Suite G Dublin, CA 94568	Client Proj. ID: Chevron 9-4800, Oakland Sample Descript: TB-LB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709B62-01	Sampled: 09/16/97 Received: 09/18/97 Analyzed: 09/26/97 Reported: 10/01/97
Attention: Deanna Harding		


QC Batch Number: GC092697BTEX18A  
Instrument ID: GCHP18

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	76

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 9-4800, Oakland Sample Descript: MW-1 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9709B62-03	Sampled: 09/16/97 Received: 09/18/97 Extracted: 09/23/97 Analyzed: 09/26/97 Reported: 10/01/97
Attention: Deanna Harding		

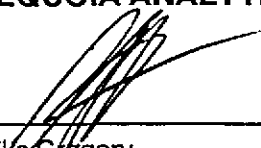
QC Batch Number: GC0923970HBPEXZ  
Instrument ID: GCHP4B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50 C9-C24	75 Unid.-HC
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	81

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 9-4800, Oakland Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709B62-03	Sampled: 09/16/97 Received: 09/18/97 Analyzed: 09/29/97 Reported: 10/01/97
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QC Batch Number: GC092997BTEX06A  
Instrument ID: GCHP06

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

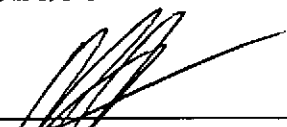
Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	200	1600
Methyl t-Butyl Ether	10	N.D.
Benzene	2.0	210
Toluene	2.0	210
Ethyl Benzene	2.0	60
Xylenes (Total)	2.0	250
Chromatogram Pattern:		Gas

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





Gettler Ryan/Geostrategies 6747 Sierra Court Suite G Dublin, CA 94568	Client Proj. ID: Chevron 9-4800, Oakland Sample Descript: MW-2 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9709B62-04	Sampled: 09/16/97 Received: 09/18/97 Extracted: 09/23/97 Analyzed: 09/26/97 Reported: 10/01/97
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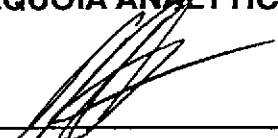
QC Batch Number: GC0923970HBPEXZ  
Instrument ID: GCHP4B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50 C9-C24	2200 Unid.-HC
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	96

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 9-4800, Oakland Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709B62-04	Sampled: 09/16/97 Received: 09/18/97 Analyzed: 09/26/97 Reported: 10/01/97
---	--	---

QC Batch Number: GC092697BTEX06A  
Instrument ID: GCHP06


**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	4000
Methyl t-Butyl Ether	25	1500
Benzene	5.0	360
Toluene	5.0	9.7
Ethyl Benzene	5.0	210
Xylenes (Total)	5.0	460
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
		95

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	Client Proj. ID: Chevron 9-4800, Oakland	Sampled: 09/16/97
6747 Sierra Court Suite G	Sample Descript: MW-3	Received: 09/18/97
Dublin, CA 94568	Matrix: LIQUID	Extracted: 09/23/97
Attention: Deanna Harding	Analysis Method: EPA 8015 Mod	Analyzed: 09/25/97
	Lab Number: 9709B62-02	Reported: 10/01/97


QC Batch Number: GC0923970HBPEXZ  
Instrument ID: GCHP4A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	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 Attention: Deanna Harding	Client Proj. ID: Chevron 9-4800, Oakland Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9709B62-02	Sampled: 09/16/97 Received: 09/18/97 Analyzed: 09/26/97 Reported: 10/01/97
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QC Batch Number: GC092697BTEX18A  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

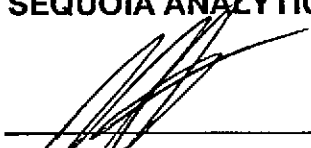
Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	270
Methyl t-Butyl Ether	2.5	21
Benzene	0.50	58
Toluene	0.50	53
Ethyl Benzene	0.50	6.1
Xylenes (Total)	0.50	30
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	95

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  
Attention: Deanna Harding

Client Proj. ID: Chevron 9-4800, Oakland  
Lab Proj. ID: 9709B62

Received: 09/18/97  
Reported: 10/01/97

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 16 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPGBMW: Sample 9709B62-3 was diluted 4-fold.  
Sample 9709B62-4 was diluted 10-fold.

SEQUOIA ANALYTICAL

  
Mike Gregory  
Project Manager

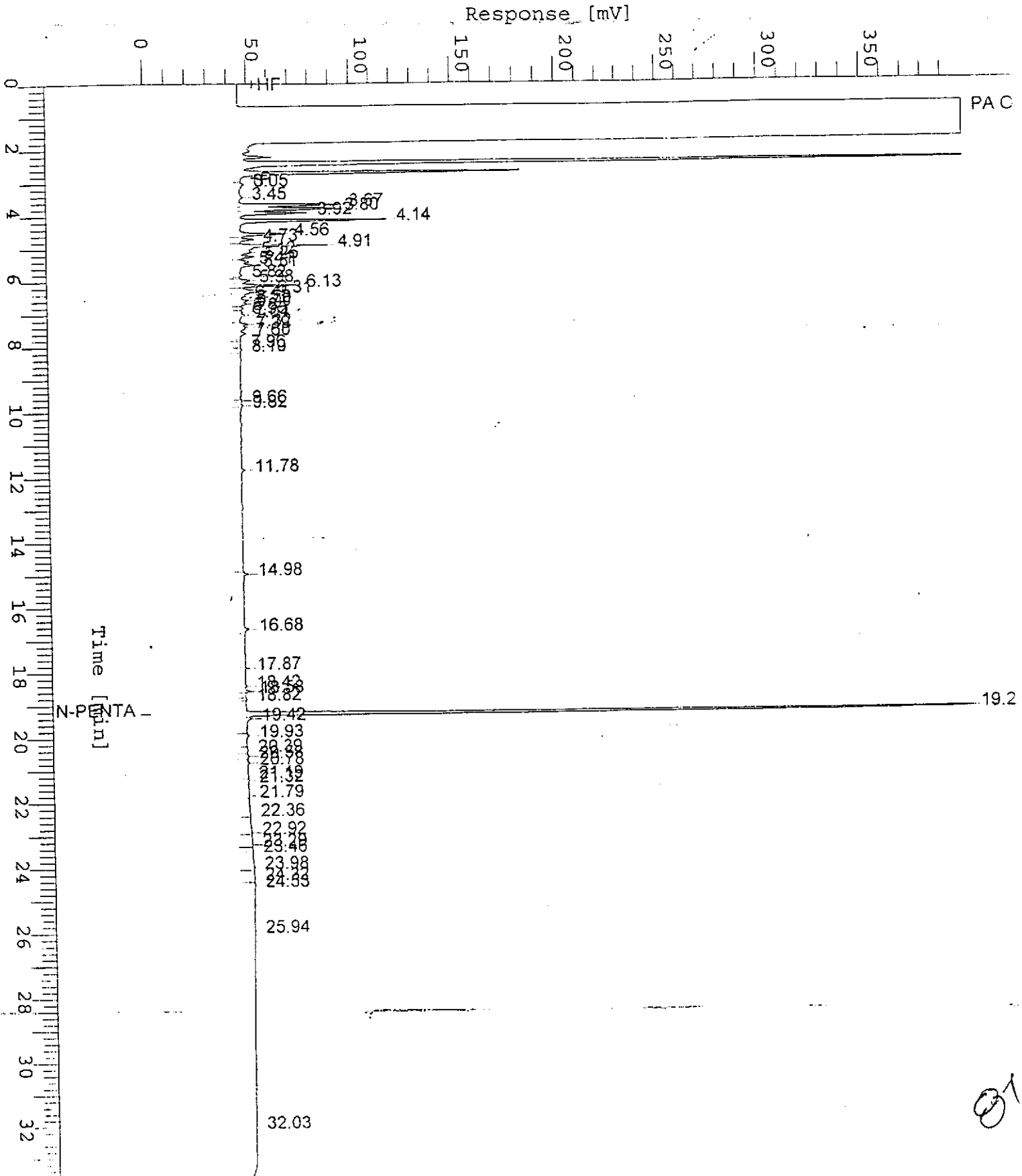


# Chromatogram

Sample Name : DW9709B62-3 (500:1)  
FileName : S:\GHP\_04\0928\9258022.raw  
Method : TPH04A  
Start Time : 0.00 min  
Scale Factor : 0.0

End Time : 33.65 min  
Plot Offset : 0 mV

Sample #: ~~mm2~~ *mw-1*  
Date : 9/26/97 16:16  
Time of Injection: 9/26/97 15:42  
Low Point : 0.00 mV  
Plot Scale: 400.0 mV  
High Point : 400.00 mV

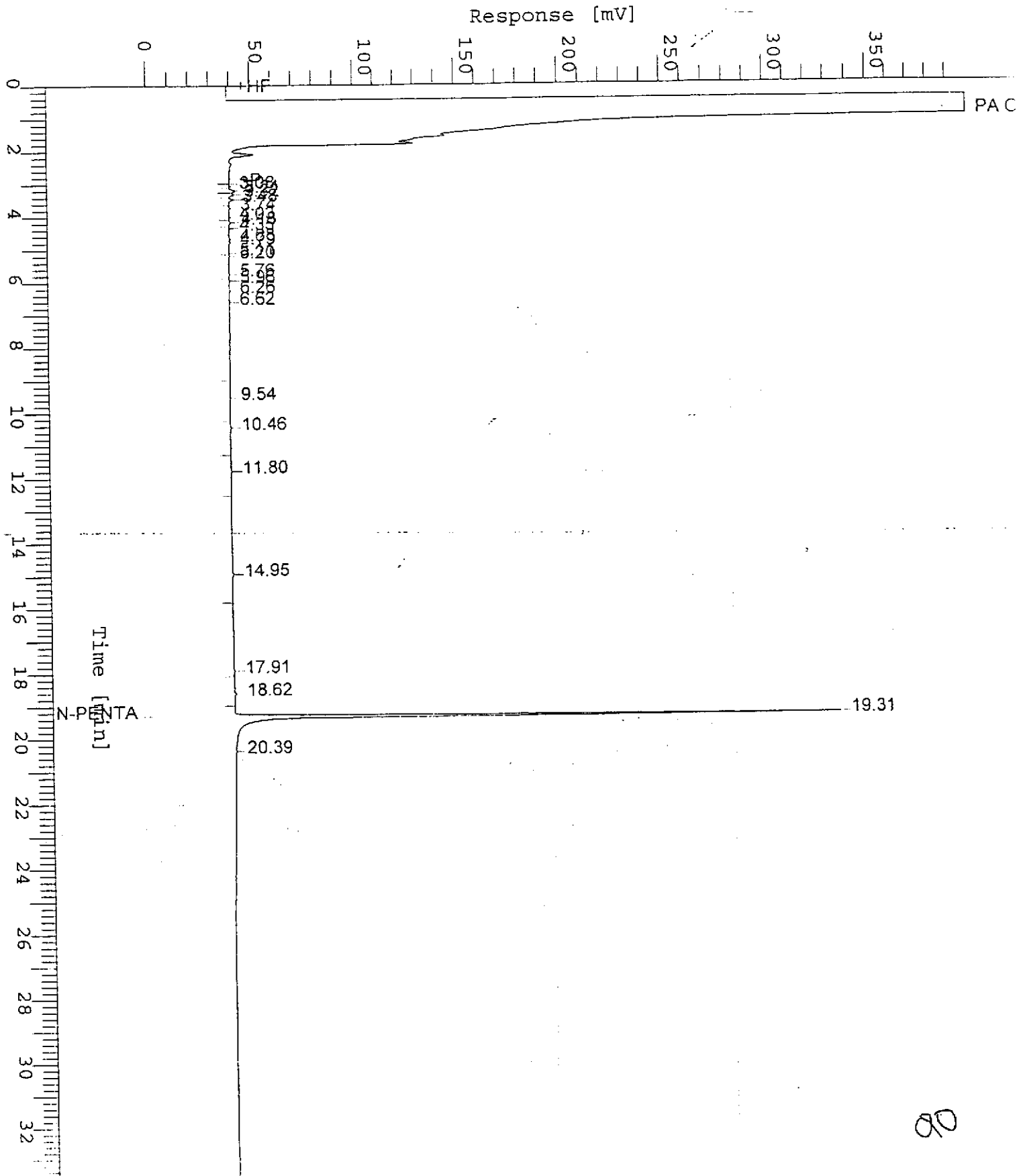


# Chromatogram

Sample Name : DW9709B62-2 (500:1)  
FileName : S:\GHP\_04\0929\925A008.raw  
Method : TPH04A  
Start Time : 0.00 min  
Scale Factor: 0.0

End Time : 33.65 min  
Plot Offset: 0 mV

Sample #: MW-3  
Date : 9/25/97 18:47  
Time of Injection: 9/25/97 18:13  
Low Point : 0.00 mV  
Plot Scale: 400.0 mV  
High Point : 400.00 mV



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Gettler Ryan/Geostrategies Client Project ID: Chevron 9-4800, Oakland  
6747 Sierra Court, Ste J Matrix: Liquid  
Dublin, CA 94568  
Attention: Deanna Harding Work Order #: 9709B62 -01, 02 Reported: Oct 3, 1997

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC092697BTEX18A	GC092697BTEX18A	GC092697BTEX18A	GC092697BTEX18A	GC092697BTEX18A
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:	R. Geckler	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	9709A3208	9709A3208	9709A3208	9709A3208	9709A3208
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/26/97	9/26/97	9/26/97	9/26/97	9/26/97
Analyzed Date:	9/26/97	9/26/97	9/26/97	9/26/97	9/26/97
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.0	9.6	10	31	60
MS % Recovery:	90	96	100	103	100
Dup. Result:	9.5	10	11	34	63
MSD % Recov.:	95	100	110	113	105
RPD:	5.4	4.1	9.5	9.2	4.9
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK092697	BLK092697	BLK092697	BLK092697	BLK092697
Prepared Date:	9/26/97	9/26/97	9/26/97	9/26/97	9/26/97
Analyzed Date:	9/26/97	9/26/97	9/26/97	9/26/97	9/26/97
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.6	8.8	8.9	28	54
LCS % Recov.:	86	88	89	93	90

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					

**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.

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager

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

9709B62.GET <1>

