

July 20, 1993  
Project No. RC11003

Mr. Stan Archacki  
Wastewater Control Representative  
East Bay Municipal Utility District  
P.O. Box 24055  
Oakland, CA 94623-1055

(510) 287-0333

SUBJECT: Quarterly System Compliance Report, Former Chevron U.S.A. Products  
Company Service Station #9-0019, 210 Grand Avenue, Oakland, California.

Dear Mr. Archacki:

Geraghty & Miller, Inc. (Geraghty & Miller) is submitting this system compliance report for the reporting period from April 1 through June 30, 1993, on behalf of Chevron U.S.A. Products Company (Chevron).

System samples were collected this reporting period on April 20, May 12, and June 10, 1993. The samples were collected from the system influent, intermediate (between Carbon Vessels 1 and 2), and the effluent immediately prior to discharge to the sewer (Effluent). Further sampling of the system will continue on a monthly basis, per permit requirements.

All samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) (USEPA Method 8015, modified) and benzene, toluene, ethylbenzene, and xylenes (BTEX) (USEPA Method 8020). All samples were submitted to Superior Precision Analytical, Inc., of San Francisco and Martinez, California, for analysis. Copies of the certified laboratory reports and the chain-of-custody documentation are included in Attachment 1.

To determine the time at which the first carbon vessel will break through, the system influent analytical results and system flow rate are used to calculate the daily carbon loading. Based upon the highest influent TPH-G concentration this operational period (6,000 parts per billion) and the average system flow rate of 0.01 gallon per minute, with a carbon loading efficiency of 5%, the carbon use rate is:

$$\frac{6,000 \mu\text{g/L TPH-G}}{1 \times 10^9 \mu\text{g/L H}_2\text{O}} \times \frac{0.01 \text{ gal H}_2\text{O}}{\text{min}} \times \frac{1,440 \text{ min}}{\text{day}} \times \frac{8.3 \text{ lb H}_2\text{O}}{\text{gal H}_2\text{O}} = \frac{0.0007 \text{ lb TPH-G}}{\text{day}}$$

Carbon loading (5% loading of TPH at low concentrations):

$$\frac{0.0007 \text{ lb TPH-G}}{\text{day}} \times \frac{30 \text{ day}}{\text{month}} \times \frac{100 \text{ lb carbon}}{5 \text{ lb TPH-G}} = \frac{0.42 \text{ lb carbon}}{\text{month}}$$

First carbon vessel breakthrough:

$$1,000 \text{ lb carbon} \div \frac{0.42 \text{ lb carbon}}{\text{month}} = 2,380 \text{ months, or 198 years}$$

The volume of water treated and discharged for this reporting period (for operation from March 30 to June 10, 1993) was 1,413 gallons. A summary of the totalizing flowmeter readings is presented in Table 1. Analytical results are presented in Table 2.

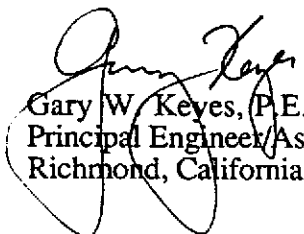
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions regarding this matter, please contact the undersigned at (510) 233-3200.

Sincerely,  
GERAGHTY & MILLER, INC.



Kent O'Brien  
Project Scientist/Project Manager



Gary W. Keyes, P.E.  
Principal Engineer/Associate  
Richmond, California Office Manager

Attachments:      Table 1      Flow Totalizer Readings  
                         Table 2      Ground-Water Analytical Results

Attachment 1      Copies of Certified Laboratory Reports and  
                         Chain-of-Custody Documentation

cc:      Mark Miller, Chevron U.S.A. Products Company

Project No. RC11003

**Table 1: Flow Totalizer Readings**  
 Former Chevron Service Station #9-0019  
 210 Grand Avenue, Oakland, California.

Date	Totalizer Reading (Gallons)	Gallons Discharged This Period	Cumulative Gallons	Days Since Previous Reading	Average Discharge Rate (GPM)	Notes
1-Jan-93	0	0	0		0	System nonoperational
11-Mar-93	16 (a)	0	0		0	Startup
12-Mar-93	16	0	0	1	0.00	Low flow; no sample taken
22-Mar-93	16	0	0	10	0.00	Sampling
30-Mar-93	300	284	284	8	0.02	Sampling
20-Apr-93	793	493	777	21	0.02	
12-May-93	1,204	412	1,188	22	0.01	
10-Jun-93	1,713	509	1,697	29	0.01	<b>1,413 gal. discharged this quarter</b>

GPM = Gallons per minute

(a) Meter not zeroed when system began operation.

**Table 2: Ground-Water Analytical Results**  
 Former Chevron Service Station #9-0019  
 210 Grand Avenue, Oakland, California

Sample	Date	TPH as Gasoline (µg/L) (a)	Benzene (µg/L) (b)	Toluene (µg/L) (b)	Ethylbenzene (µg/L) (b)	Xylenes (µg/L) (b)
Influent	22-Mar-93	6,700	3,900	590	130	600
	30-Mar-93	15,000	2,900	610	83	610
	20-Apr-93	6,000	970	260	26	400
	12-May-93	3,900	620	140	20	180
	10-Jun-93	2,000	430	46	ND(<5)	110
Intermediate	22-Mar-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	30-Mar-93	ND(<50)	0.5	ND(<0.5)	ND(<0.5)	ND(<1.5)
	20-Apr-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	12-May-93	ND(<50)	1.4	0.7	ND(<0.5)	ND(<1.5)
	10-Jun-93	71	7.2	2.7	ND(<0.5)	8.9
Effluent	22-Mar-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	30-Mar-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	20-Apr-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	12-May-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	10-Jun-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
Trip Blank	22-Mar-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	30-Mar-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	20-Apr-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	12-May-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	10-Jun-93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)

(a) Analyzed by USEPA Method 8015, modified.

(b) Analyzed by USEPA Method 8020.

TPH Total petroleum hydrocarbons

µg/L Micrograms per liter

ND( ) Laboratory method detection limit; limit in parentheses



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Geraghty & Miller Inc.  
Attn: SEAN CONDRY

Project RC11002  
Reported 04/25/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
14373- 1	INF	04/20/93	04/27/93 Water
14373- 2	INTER	04/20/93	04/23/93 Water
14373- 3	EFF	04/20/93	04/23/93 Water
14373- 4	TB-LB	04/20/93	04/23/93 Water

## RESULTS OF ANALYSIS

Laboratory Number: 14373- 1 14373- 2 14373- 3 14373- 4

Gasoline:	6000	ND<50	ND<50	ND<50
Benzene:	970	ND<0.5	ND<0.5	ND<0.5
Toluene:	260	ND<0.5	ND<0.5	ND<0.5
Ethyl Benzene:	26	ND<0.5	ND<0.5	ND<0.5
Xylenes:	400	ND<1.5	ND<1.5	ND<1.5
Concentration:	ug/L	ug/L	ug/L	ug/L



C E R T I F I C A T E   O F   A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 14373

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Water: 5000ug/L

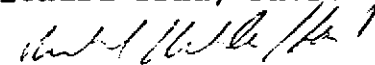
Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	93/87	7%	76-111
Benzene:	87/81	7%	78-110
Toluene:	89/83	7%	78-111
Ethyl Benzene:	93/86	8%	78-118
Xylenes:	89/83	7%	73-113

Richard Srna, Ph.D.

  
Laboratory Director

ix copy of Lab Report and COC to Chevron Contact:  No 14373 Chain-of-Custody-Record

Chevron U.S.A. Inc.  
 P.O. BOX 5004  
 Ramon, CA 94583  
 (415)842-9581

Chevron Facility Number # 9-0019  
 Facility Address 210 GRAND AVE., OAKLAND, CA  
 Consultant Project Number PC11002  
 Consultant Name GERAGHTY & MILLER INC.  
 Address 1050 MARINA WAY SOUTH, RICHMOND, CA  
 Project Contact (Name) SEAN CONDRY  
 (Phone) (510) 233-3200 (Fax Number) (510) 233-3204

Chevron Contact (Name) MARK MILLER  
 (Phone) \_\_\_\_\_  
 Laboratory Name SEPEREOR  
 Laboratory Release Number 4482030  
 Samples Collected by (Name) SEAN CONDRY  
 Collection Date 4/20/93  
 Signature Sean Condry

Sample Number	Lab Sample Number	Number of Carboys	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analysis To Be Performed										Remarks					
								BTEX + TPH GAS (8020 + 8015)	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)								
F		3	W	G		HCL	Y	✓															
ITER		3	W	G		↓	↓	✓															
FF		3	W	G		↓	↓	✓															
B-LB		1	W	G				✓															

Please initial \_\_\_\_\_  
 Samples Stored in ice \_\_\_\_\_ 40  
 Appropriate containers \_\_\_\_\_  
 Samples preserved \_\_\_\_\_  
 NO without endorsement \_\_\_\_\_  
 Comments: \_\_\_\_\_ ✓

Prepared By (Signature) <u>Sean Condry</u>	Organization <u>GBM</u>	Date/Time <u>4/21/93</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>NERO</u>	Date/Time <u>4-21-93</u>
Prepared By (Signature) <u>[Signature]</u>	Organization <u>AER</u>	Date/Time <u>4-21-93</u>	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time
Prepared By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice)

24 Hrs.  
 48 Hrs.  
 5 Days  
 10 Days  
As Contracted



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Geraghty & Miller Inc.  
Attn: SEAN CONDRY

Project RC11003  
Reported 05/18/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
14425- 1	INFLUENT	05/12/93	05/17/93 Water
14425- 2	INTER	05/12/93	05/17/93 Water
14425- 3	EFFLUENT	05/12/93	05/14/93 Water
14425- 4	TB-LB	05/12/93	05/14/93 Water

## RESULTS OF ANALYSIS

Laboratory Number: 14425- 1 14425- 2 14425- 3 14425- 4

Gasoline:	3900	ND<50	ND<50	ND<50
Benzene:	620	1.4	ND<0.5	ND<0.5
Toluene:	140	0.7	ND<0.5	ND<0.5
Ethyl Benzene:	20	ND<0.5	ND<0.5	ND<0.5
Xylenes:	180	ND<1.5	ND<1.5	ND<1.5
Concentration:	ug/L	ug/L	ug/L	ug/L





# Superior Precision Analytical, Inc.

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## C E R T I F I C A T E   O F   A N A L Y S I S

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 14425

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	96/106	10%	76-111
Benzene:	89/96	8%	78-110
Toluene:	91/97	6%	78-111
Ethyl Benzene:	96/102	6%	78-118
Xylenes:	92/98	6%	73-113

Richard Srna, Ph.D.

*[Signature]*  
Laboratory Director

ax copy of Lab Report and COC to Chevron Contact:  No

1442 Chain-of-Custody-Record

Chevron U.S.A. Inc.  
 P.O. BOX 5004  
 Richmond, CA 94583  
 X (415)842-9581

Chevron Facility Number 9-0019  
 Facility Address 210 GRAND AVE., OAKLAND, CA.  
 Consultant Project Number RC11003  
 Consultant Name GERAGHTY & MILLER, INC.  
 Address 1050 MARINA WAY SOUTH, RICHMOND, CA  
 Project Contact (Name) SEAN CONROY  
 (Phone) 510-223-3200 (Fax Number) 510-223-3204

Contact (Name) MARK MILLER  
 (Phone) \_\_\_\_\_  
 Laboratory Name GTBE SUPERIOR ANALYTICAL  
 Laboratory Release Number 4482030  
 Samples Collected by (Name) EDDIE M. ABILLANO  
 Collection Date 05-12-93  
 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	Iced (Yes or No)	Analyses To Be Performed										Remarks				
								BTEX + TPH GAS (8020 + 8015)	TPH Dissolved (8015)	Oil and Grease (5520)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (8040 or AA)							
JFLUENT		3	W	G	1310	HCL	Y	✓														
NTRER		3	W	G	1320	HCL	Y	✓														
FLUENT		3	W	G	1330	HCL	Y	✓														
UP BLANK		1	W	G			Y	✓														

Please Initial: \_\_\_\_\_  
 Samples stored in ice. \_\_\_\_\_  
 Appropriate containers. \_\_\_\_\_  
 Samples preserved. \_\_\_\_\_  
 VOA's within holding time. \_\_\_\_\_  
 Comments: \_\_\_\_\_

Analyzed By (Signature) <u>[Signature]</u> Organization <u>G &amp; M</u> Date/Time <u>05-13-93</u>	Received By (Signature) <u>[Signature]</u> Organization <u>GM</u> Date/Time <u>5/14/93 9:00</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Analyzed By (Signature) <u>[Signature]</u> Organization <u>GM</u> Date/Time <u>5/14/93 9:00</u>	Received By (Signature) <u>[Signature]</u> Organization <u>AERL</u> Date/Time <u>5-14-93</u>	
Analyzed By (Signature) _____ Organization _____ Date/Time _____	Received By (Signature) <u>[Signature]</u> Organization _____ Date/Time <u>5/14/93 1120</u>	



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Geraghty & Miller Inc.  
Attn: KENT O'BRIEN

Project RC11003  
Reported 06/17/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
14502- 1	INFLUENT	06/10/93	06/14/93 Water
14502- 2	INTERMEDIATE	06/10/93	06/14/93 Water
14502- 3	EFFLUENT	06/10/93	06/14/93 Water
14502- 4	TB-LB	06/10/93	06/14/93 Water

## RESULTS OF ANALYSIS

Laboratory Number: 14502- 1 14502- 2 14502- 3 14502- 4

Gasoline:	2000	71	ND<50	ND<50
Benzene:	430	7.2	ND<0.5	ND<0.5
Toluene:	46	2.7	ND<0.5	ND<0.5
Ethyl Benzene:	ND<5	ND<0.5	ND<0.5	ND<0.5
Xylenes:	110	8.9	ND<1.5	ND<1.5
Concentration:	ug/L	ug/L	ug/L	ug/L



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

## C E R T I F I C A T E   O F   A N A L Y S I S

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 14502

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Water: 5000ug/L

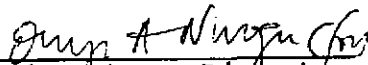
Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	102/103	1%	72-113
Benzene:	94/92	2%	71-106
Toluene:	97/94	3%	69-116
Ethyl Benzene:	99/96	3%	66-121
Xylenes:	101/99	2%	67-108

Richard Srna, Ph.D.

  
Laboratory Director

Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591	Chevron Facility Number <u>9-0019</u> Facility Address <u>Grand Ave</u> Consultant Project Number <u><del>RC11003</del> RC11003</u> Consultant Name <u>Geraghty &amp; Miller</u> Address <u>1050 Marina Way South</u> Project Contact (Name) <u>Kent O'Brien</u> (Phone) <u>5102333200</u> (Fax Number) <u>5102333204</u>	Chevron Contact (Name) <u>Mack Miller</u> (Phone) _____ Laboratory Name <u>ES&amp;L Superior</u> Laboratory Release Number <u>4482030</u> Samples Collected by (Name) <u>Kent O'Brien</u> Collection Date <u>6/11/93</u> Signature <u>[Signature]</u>
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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)	Analytes To Be Performed										Remarks			
								BTEX + TPH GAS (8020 + 8015)	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)						
<u>Influent</u>		<u>3</u>	<u>✓</u>	<u>G</u>		<u>HCl</u>	<u>Yes</u>	<u>✓</u>													
<u>In Trench/De</u>		<u>3</u>	<u>✓</u>	<u>✓</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>													
<u>Effluent</u>		<u>3</u>	<u>✓</u>	<u>✓</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>													
<u>Triphosphate</u>		<u>1</u>	<u>✓</u>			<u>✓</u>	<u>✓</u>	<u>✓</u>													

Please Initial: [Signature]

Samples Stored in ice. ✓ (room temp)

Appropriate containers. ✓

Samples preserved. ✓

VOA's without reanalysis. ✓

Comments: \_\_\_\_\_

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice)  24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	

COC-10WG/03 91/HCH