GERAGHTY
& MILLER, INC.
Environmental Services

Ground Water *Engineering* *Hydrocarbon* *Remediation* *Education*

April 15, 1992
Project No. RC06902

Mr. Clint B. Rogers
Environmental Engineer
Chevron Products Company
2410 Camino Ramon
San Ramon, California 94583-0804

SUBJECT: **Quarterly Discharge Report, March 1992, Former Chevron** Service Station #9-5607, 5269 Crow Canyon Road, Castro Valley, California.

Dear Mr. Rogers:

This quarterly discharge report has been prepared by Geraghty & Miller, Inc. (Geraghty & Miller) for Chevron Products Company (Chevron) in order to comply with the sampling and reporting requirements for the ground-water remediation and extraction system in operation at the former Chevron service station referenced above.

The sampling and reporting are required by Air Quality Permit #2114, issued by the Bay Area Air Quality Management District (BAAQMD) on September 17, 1990 (renewed October 1, 1991), and the requirements of the Special Discharge Permit issued by the Castro Valley Sanitary District (CVSD) on October 6, 1988. The permits require sampling and analysis of the influent water entering the remediation system, the effluent water leaving the oil/water separator, and the effluent water leaving the system. This is the first quarterly discharge report submitted for this project. All previous reports were on a bimonthly (every two months) basis. On December 20, 1991, the Oro Loma Sanitary District, in conjunction with the Castro Valley Sanitary District (the Oro Loma District is the actual sanitary district in which the CVSD discharge is treated), issued a letter granting a change in the sampling frequency based on a review of the past performance of the remediation system. The new sampling frequency is quarterly. A quarterly sampling interval for the CVSD will match the quarterly sampling interval originally allowed by the BAAQMD. The next quarterly sampling event for this system is scheduled during June 1992.

The sampling of the ground-water remediation system was completed by Geraghty & Miller on March 13, 1992, and the samples were analyzed by Superior Precision Analytical, Inc., located in Martinez, California. The samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline by USEPA Method 8015, modified, and for benzene, toluene, ethylbenzene, and xylene (BTEX) by USEPA Method 8020. Copies of the laboratory reports and chain-of-custody documentation are included in Attachment 1.

From January 2, 1992 through March 13, 1992, a total of 39,980 gallons of water has been discharged from the system, and the average flow rate has been less than 1 gallon per minute. Table 1 presents a summary of flow totalizer readings since the system began operation on March 26, 1990. Table 2 presents a summary of the analytical data.

Geraghty & Miller appreciates the opportunity to be of service to Chevron. If you have any questions regarding this report, please do not hesitate to call.

Sincerely,
GERAGHTY & MILLER, INC.

Paul V. Hehn
Project Geologist/Project Manager

Gary W. Keyes, P.E.
Principal Engineer/Associate

Attachments: Table 1 Total Flow Summary

Table 2 Summary of Ground-Water Analytical Results

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

cc: Mr. Walter Voeghtlin
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

Ms. Mary Ferdet
Castro Valley Sanitary District
21040 Marshall Street
Castro Valley, California 94546-6098

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TABLE 1: Total Flow Summary
Former Chevron Service Station #9-5607
5269 Crow Canyon Road, Castro Valley, California.

Date of Reading	Totalizer Reading (gallons)	Total Gallons Extracted	Total Flow (gallons)	Number of Days	Average Flow (gal/min)	Comments
26-Mar-90	693	693	693	1	0.481	Start-up date
27-Mar-90	1, 040	1, 040	347	1	0.241	
29-Mar-90	1, 230	1, 230	190	2	0.066	
4-Apr-90	1, 293	1, 293	63	6	0.007	Replace all tower motors
13-Apr-90	3, 271	3, 271	1, 978	9	0.153	
16-Apr-90	3, 959	3, 959	688	3	0.159	
25-Apr-90	4, 363	4, 363	405	9	0.031	System on
27-Apr-90	5, 250	5, 250	886	2	0.308	
28-Apr-90	NM	5, 250	NM	1	NM	
29-Apr-90	NM	5, 250	NM	1	NM	
30-Apr-90	5, 521	5, 521	271	1	0.188	
15-May-90	8, 044	8, 044	2, 523	15	0.117	
25-May-90	9, 978	9, 978	1, 934	10	0.134	
8-Jun-90	13, 602	13, 602	3, 624	14	0.18	
20-Jun-90	14, 103	14, 103	501	12	0.029	System off
26-Jun-90	14, 442	14, 442	65	1	0.039	System on
27-Jun-90	14, 507	14, 507	65	1	0.045	
6-Jul-90	14, 571	14, 571	64	9	0.005	
23-Jul-90	17, 160	17, 160	2, 589	17	0.106	
24-Jul-90	17, 167	17, 167	7	1	0.005	
30-Jul-90	17, 793	17, 793	626	6	0.072	
8-Aug-90	18, 527	18, 527	734	9	0.057	
15-Aug-90	18, 550	18, 550	23	7	0.002	System off
16-Aug-90	18, 564	18, 564	14	1	0.01	System on
23-Aug-90	19, 105	19, 105	541	7	0.054	
27-Aug-90	19, 132	19, 132	27	4	0.005	System off
2-Nov-90	19, 236	19, 236	104	67	0.001	System on
6-Nov-90	19, 698	19, 698	462	4	0.08	System off
7-Nov-90	19, 698	19, 698	0	1	0	System on
27-Nov-90	21, 376	21, 376	1, 678	20	0.058	
10-Dec-90	22, 845	22, 845	1, 469	13	0.078	
2-Jan-91	24, 443	24, 443	1, 598	23	0.048	
8-Jan-91	24, 443	24, 443	0	6	0	
29-Jan-91	29, 998	29, 998	5, 555	20	0.192	Install new flow meter
1-Feb-91	218	30, 216	218	3	0.05	Reset flow to new flow meter
28-Feb-91	2, 964	32, 962	2, 746	27	0.07	
4-Mar-91	3, 434	33, 432	470	5	0.065	
12-Mar-91	4, 722	34, 720	1, 288	8	0.112	
1-Apr-91	5, 845	35, 843	1, 123	20	0.039	System off
9-Apr-91	8, 289	38, 287	2, 444	7	0.24	System on
3-May-91	9, 444	39, 442	1, 155	23	0.04	
8-May-91	11, 424	41, 422	1, 980	5	0.28	
15-May-91	13, 657	43, 655	2, 233	6	0.26	
28-May-91	14, 165	44, 163	508	12	0.03	System off

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Date of Reading	Totalizer Reading (gallons)	Total Gallons Extracted	Total Flow (gallons)	Number of Days	Average Flow (gal/min)	Comments
13-Jun-91	14,207	44,205	42	15	0.002	System on
18-Jun-91	15,632	45, 630	1,425	4	0.25	
29-Aug-91	22,922	52,920	7,290	71	0.07	
9-Sep-91	23,846	53,844	924	10	0.06	Install additional extraction pump
10-Sep-91	24,478	54,476	632	1	0.44	
23-Sep-91	28,881	58,879	4,403	12	0.25	
16-Oct-91	30,703	60,701	1,822	22	0.06	Malfunction in extraction pump
18-Oct-91	30,919	60,917	216	2	0.08	System off
22-Oct-91	30,961	60,959	42	3	0.01	System on
29-Oct-91	32,922	62,920	1,961	6	0.23	
31-Oct-91	33,277	63,275	355	2	0.12	
27-Dec-91	55,335	85,333	22,058	56	0.27	Power accidentally shut off
31-Dec-91	56,843	86,841	1,508	4	0.26	
2-Jan-92	57,429	87,427	586	1.5	0.27	
13-Mar-92	97,409	127,407	39,980	71	0.39	

NM Not Measured
Initial start date: March 26, 1990
April 20, 1990: System down - pumps scaled.
June 26, 1990: Replaced all motors damaged by scaling.
August 27, 1990: System turned off to allow for modifications.
September 9,1991: Additional extraction pump installed in Well C-9.

Reference for Analytical Results and System Operational Data prior to April 1, 1991 - Chemical Processors, Inc., January 11, 1991.

Reference for Analytical Results and System Operational Data after April 1, 1991 - Geraghty & Miller, Inc.

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TABLE 2: Summary of Ground-Water Analytical Results
Former Chevron Service Station #9-5607
5269 Crow Canyon Road, Castro Valley, California.

Sample Location	Date	TPH (gas) (µg/L) (a)	Benzene (µg/L) (b)	Toluene (µg/L) (b)	Ethyl-benzene (µg/L) (b)	Total Xylenes (µg/L) (b)
System Influent	26-Mar-90	--	--	--	--	--
	29-Mar-90	--	--	--	--	--
	13-Apr-90	--	--	--	--	--
	27-Apr-90	--	--	--	--	--
	28-Apr-90	--	--	--	--	--
	29-Apr-90	--	--	--	--	--
	30-Apr-90	--	--	--	--	--
	25-May-90	--	--	--	--	--
	27-Jun-90	--	--	--	--	--
	6-Jul-90	--	--	--	--	--
	30-Jul-90	--	--	--	--	--
	27-Aug-90	--	--	--	--	--
	27-Sep-90	--	--	--	--	--
	28-Oct-90	--	--	--	--	--
	2-Nov-90	45,000	21,000	1	1,400	7,000
	10-Dec-90	5,100	2,500	200	140	950
	8-Jan-91	51,000	29,000	1,400	2,000	8,300
	1-Apr-91	75,000	31,000	2,000	1,700	7,900
	18-Jun-91	30,000	6,600	530	390	5,200
	29-Aug-91	51,000	13,000	920	1,300	4,800
	31-Oct-91	5,600	1,400	120	100	640
	2-Jan-92	7,700	1,700	220	130	1,100
	13-Mar-92	50,000	11,000	1,700	2,500	6,200
Oil/Water Separator Effluent	26-Mar-90	--	--	--	--	--
	29-Mar-90	--	--	--	--	--
	13-Apr-90	--	--	--	--	--
	27-Apr-90	28,000	8,100	11,000	703	6,700
	28-Apr-90	7,700	2,400	250	110	1,500
	29-Apr-90	7,200	2,300	260	100	1,600
	30-Apr-90	4,300	1,400	150	64	830
	25-May-90	3,400	1,200	190	98	780
	27-Jun-90	20,000	10,000	1,600	770	3,300
	6-Jul-90	7,200	2,300	NA	NA	NA
	30-Jul-90	7,800	3,200	250	<25	1,100
	27-Aug-90	--	--	--	--	--
	27-Sep-90	--	--	--	--	--
	28-Oct-90	--	--	--	--	--
	2-Nov-90	51,000	12,000	1,000	660	4,100
	10-Dec-90	1,600	700	35	81	480
	8-Jan-91	48,000	18,000	1,200	1,200	7,000
	1-Apr-91	77,000	31,000	2,800	1,700	11,000
	18-Jun-91	29,000	5,600	300	74	4,800
	29-Aug-91	65,000	14,000	1,400	1,200	6,700
	31-Oct-91	5,700	1,700	140	160	560
	2-Jan-92	40,000	4,900	2,400	1,400	5,700
	13-Mar-92	44,000	7,600	1,900	2,000	6,200

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Sample Location	Date	TPH (gas) (µg/L) (a)	Benzene (µg/L) (b)	Toluene (µg/L) (b)	Ethyl-benzene (µg/L) (b)	Total Xylenes (µg/L) (b)
System Effluent	26-Mar-90	86	30	1.9	1.5	12
	29-Mar-90	57	13	1.4	ND(<0.5)	5.4
	13-Apr-90	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	27-Apr-90	100	3.1	ND(<0.5)	ND(<0.5)	1.6
	28-Apr-90	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	29-Apr-90	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	<1.0
	30-Apr-90	--	--	--	--	--
	25-May-90	ND(<50)	ND(<0.3)	1	ND(<0.3)	ND(<0.6)
	27-Jun-90	430	210	22	9	67
	6-Jul-90	ND(<50)	ND(<0.5)	NA	NA	NA
	30-Jul-90	ND(<50)	ND(<0.5)	2.7	ND(<0.5)	5.1
	27-Aug-90	--	--	--	--	--
	27-Sep-90	--	--	--	--	--
	28-Oct-90	--	--	--	--	--
	2-Nov-90	ND(<50)	3.2	ND(<0.5)	ND(<0.5)	1
	10-Dec-90	ND(<50)	2.9	ND(<0.5)	0.6	2
	8-Jan-91	290	59	5.6	6.2	37
	1-Apr-91	270	110	7.4	4.1	26
	18-Jun-91	140	18	0.9	ND(<0.5)	17
	29-Aug-91	190	29	2.9	1.6	14
	31-Oct-91	140	3.8	0.8	ND(<0.5)	2.1
	2-Jan-92	ND(<50)	2.3	1.2	0.9	4.8
	13-Mar-92	390	66	15	16	50

(a) TPH as gasoline analyzed by USEPA Method 8015, modified
(b) BTEX analyzed by USEPA Method 8020

-- No Data
NA Not Analyzed
ND(<0.5) Not Detected (Detection Limit)

Reference for Analytical Results prior to April 1, 1991 - Chemical Processors, Inc., January 11, 1991.

Reference for Analytical Results after April 1, 1991 - Geraghty & Miller, Inc.

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ATTACHMENT 1

COPIES OF LABORATORY REPORTS

AND

CHAIN-OF-CUSTODY DOCUMENTATION

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 85234
CLIENT: Geraghty & Miller
CLIENT JOB NO.: RC06902

DATE RECEIVED: 03/13/92
DATE REPORTED: 03/20/92

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
85234- 1	SYS INF	03/13/92	03/19/92
85234- 2	O/WEFF	03/13/92	03/19/92
85234- 3	SYS EFF	03/13/92	03/19/92
85234- 4	TRIP BLANK	03/13/92	03/19/92

Laboratory Number:	85234 1	85234 2	85234 3	85234 4
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	50000	44000	390	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	11000	7600	66	ND<0.5
TOLUENE:	1700	1900	15	ND<0.5
ETHYL BENZENE:	2500	2000	16	ND<0.5
XYLENES:	6200	6200	50	ND<0.5

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

QA/QC INFORMATION
SET: 85234

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

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

dified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L
Standard Reference: NA

A-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Standard Reference: 10/04/91

-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L
Standard Reference: 10/11/91

ALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
l & Grease	NA	NA	NA	NA	NA
esel	NA	NA	NA	NA	NA
soline	03/03/92	200 ng	97/97	0	70-130
nzene	02/26/92	200 ng	107/104	3	70-130
luene	02/26/92	200 ng	109/107	2	70-130
hyl Benzene	02/26/92	200 ng	112/111	1	70-130
tal Xylene	02/26/92	200 ng	114/112	2	70-130

Richard Srna, Ph.D.
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No 85234

Chain-of-Custody-Record

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

Chevron Facility Number: 9-5607
Facility Address: 5269 Crow Canyon Rd. C.V. Calif.
Consultant Project Number: RC06902
Consultant Name: GERAGHTY & MILLER
Address: 1050 MARINA WAY S. RICH. 94804
Project Contact (Name): PAUL V. HEHN
(Phone) (510) 233-3200 (Fax Number)

Chevron Contact (Name): Clint B. Rogers
(Phone) (415) 842-8658
Laboratory Name: Superior Analytical Lab.
Laboratory Release Number: 4454550
Samples Collected by (Name): Rick Spencer
Collection Date: 3-13-92
Signature: Ricky Spencer

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)	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)					Remarks
SYSINF	1	3	W	G	1240	HCL	YES	X												
O/WEFF	2	3	W	G				X												
SYS.EFF	3	3	W	G				X												
TRIPOUK	4	1	W	G				X												

Please Initial: RS
Samples Stored in ice.
Appropriate containers
Samples preserved
VOA's without headspace
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Ricky Spencer	G+M Inc	3-13-92 1637	Rick Conry	Express-It	3/13 1637
Rick Conry	Express-It	3/13 1750	[illegible]	EXP IT	3/13 1805
[illegible]	EXP IT	3/13 1814	[illegible]		3-13-92 1845

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

COC-3.DWG/03 91/HCH