



**Chevron U.S.A. Products Company**

2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500  
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

92 SEP 17 11 09 20

August 28, 1992

Ms. Pamela Evans  
Alameda County Health Care Services  
Department of Environmental Health  
Hazardous Materials Program  
80 Swan Way, Room 200  
Oakland, CA 94621

Re: Chevron Service Station No. 9-6607  
2340 Otis Drive, Alameda, California

Dear Ms. Evans :

Enclosed is the groundwater monitoring and sampling report dated August 17, 1992.

Sample obtained from well MW-1 was nondetect (ND) for total petroleum hydrocarbon as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX) while MW-2 had 220 ppb TPH-G, 8.0 ppb benzene, 0.7 toluene, 4.0 ethylbenzene, and 8.6 ppb xylenes. The remaining wells MW-3 and MW-4 had the following range : ND and ND for TPH-G, 1.0 and 0.5 ppb benzene, 1.0 and 1.1 ppb toluene, 1.0 and ND ethylbenzene, and 3.4 and 0.8 ppb xylenes. Depth to water ranged from 4.18 feet to 5.34 feet. The direction of groundwater was to the southwest.

If you have any questions or comments, please feel free to contact me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan  
Engineer

LKAN/MacFile 9-6607R2

Enclosure

cc : Mr. Eddie So, RWQCB-San Francisco Bay Area  
2101 Webster Street, Suite 500, Oakland, CA 94612

Mr. Steve Willer, Chevron U.S.A. Products Co.

August 17, 1992  
Project No. RC05003

**AUG 28 '92** JST

Mr. Ken Kan  
Chevron U.S.A. Products Company  
West Central Marketing  
2410 Camino Ramon  
San Ramon, California 94583-0804

**SUBJECT:** July 1992 Quarterly Ground-Water Monitoring and Sampling Report,  
Chevron Service Station #9-6607, 2340 Otis Drive, Alameda, California.

Dear Mr. Kan:

This letter presents the quarterly ground-water sampling results for the above-referenced Chevron U.S.A. Products Company (Chevron) service station. The scope of work for this project was presented to Chevron in a previous letter from Geraghty & Miller, Inc. (Geraghty & Miller) dated November 26, 1991.

### FIELD AND LABORATORY PROCEDURES

Ground-water monitoring was performed on July 25, 1992. Prior to sampling, depth-to-water measurements were obtained and each well was checked for the presence of liquid-phase hydrocarbons. Liquid-phase hydrocarbons were not observed during this quarterly sampling event. A minimum of three casing volumes of water was purged from each well prior to sampling, using a surface diaphragm pump. Cumulative ground-water monitoring data are presented in Table 1. All equipment that entered the wells was washed in a solution of Micro<sup>TM</sup> (a nonphosphate detergent) and water, then triple rinsed in deionized water prior to entering each well. Following purging, ground-water samples were collected using a polyethylene disposable bailer. A new bailer was used for each well. The purged water was stored in 55-gallon drums and retained on-site for subsequent disposal by Erickson, Inc. of Richmond, California, under contract to Chevron.

Ground-water samples for laboratory analysis were placed in the appropriate United States Environmental Protection Agency (USEPA) approved containers, placed on ice, and transported to Superior Precision Analytical, Inc., located in Martinez, California. The water samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (USEPA Method 8015, modified) and for benzene, toluene, ethylbenzene, and xylenes (BTEX [USEPA Method 8020]).

## RESULTS OF QUARTERLY SAMPLING

### DEPTH TO WATER

The depth-to-water measurements are presented in Table 1. The ground-water elevations are presented in Figure 1. Because the maximum difference in ground-water elevations across the site is only 0.23 foot, which indicates that the ground-water surface is relatively flat (<0.002 foot per foot) within the area of the monitoring wells, small variations in the depth to water in any one well can significantly affect the apparent direction of ground-water flow. Therefore, the ground-water surface elevation has not been contoured. Regional direction of ground-water flow is toward San Francisco Bay to the west of the site.

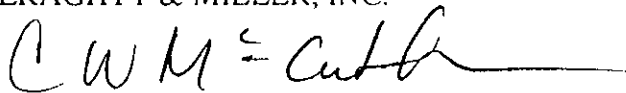
### GROUND-WATER ANALYTICAL RESULTS

The cumulative ground-water analytical results are presented in Table 2. Copies of the certified laboratory report and chain-of-custody documentation are included in Attachment 1.

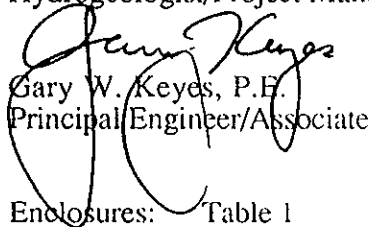
Ground-water sampling will continue on a quarterly basis, with the next sampling scheduled during October 1992.

Geraghty & Miller is pleased to be of service to Chevron. If you have any questions regarding this report, please call the undersigned at (510) 233-3200.

Sincerely,  
GERAGHTY & MILLER, INC.



Catherine W. McCutchen  
Hydrogeologist/Project Manager



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

Enclosures: Table 1 Cumulative Ground-Water Monitoring Data  
Table 2 Cumulative Ground-Water Analytical Results  
Figure 1 Ground-Water Elevation Map

Attachments: Attachment 1 Copies of Certified Analytical Report and Chain-of-Custody Documentation

**Table 1: Cumulative Ground-Water Monitoring Data**  
 Chevron Service Station #9-6607  
 2340 Otis Drive, Alameda, California.

Monitor Well	Date	TOC Elevation (feet) (a)	DTW (feet)	DTB (feet)	Actual Purge Volume (gallons)	Water Elevation (feet) (a)	LPH Thickness (feet)
MW-1	21-Aug-91	7.12	6.10	24.60	36	1.02	---
	9-Jan-92		3.96		42	3.16	---
	20-Apr-92		3.90		42	3.22	---
	25-Jul-92		4.18		41	2.94	---
MW-2	21-Aug-91	7.43	6.40	24.90	14	1.03	---
	9-Jan-92		4.23		41	3.20	---
	20-Apr-92		4.17		41	3.26	---
	25-Jul-92		4.47		42	2.96	---
MW-3	21-Aug-91	8.07	7.10	24.95	35	0.97	---
	9-Jan-92		5.03		39	3.04	---
	20-Apr-92		4.91		40	3.16	---
	25-Jul-92		5.34		40	2.73	---
MW-4	21-Aug-91	7.85	6.85	20.85	12	1.00	---
	9-Jan-92		4.70		40	3.15	---
	20-Apr-92		4.64		24	3.21	---
	25-Jul-92		4.95		40	2.90	---

(a) Elevation in feet relative to mean sea level

TOC: Top of casing.

DTW: Depth to water below top of casing

DTB: Depth to bottom below top of casing

LPH: Liquid-phase hydrocarbons.

---: No liquid-phase hydrocarbons observed.

$$\begin{array}{r} 8.07 \\ - 5.34 \\ \hline 2.73 \end{array}$$

$$\begin{array}{r} 7.85 \\ - 4.95 \\ \hline 2.90 \end{array}$$

**Table 2: Cumulative Ground-Water Analytical Results**  
 Chevron Service Station #9-6607  
 2340 Otis Drive, Alameda, California.

Monitor Well	Date Sampled	TPH as gasoline (µg/L) (a)	Benzene (µg/L) (b)	Toluene (µg/L) (b)	Ethylbenzene (µg/L) (b)	Xylenes (µg/L) (b)	Oil & Grease (µg/L) (c)
MW-1	21-Aug-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	9-Jan-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND (<5000)
	20-Apr-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	25-Jul-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
MW-2	21-Aug-91	430	170.0	0.9	1.0	3.6	NA
	9-Jan-92	58(d)	16.0	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND (<5000)
	20-Apr-92	180	9.6	ND(<0.5)	0.8	ND(<0.5)	NA
	25-Jul-92	220	8.0	0.7	4.0	8.6	NA
MW-3	21-Aug-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	9-Jan-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND (<5000)
	20-Apr-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	25-Jul-92	ND(<50)	1.0	1.0	1.0	3.4	NA
MW-4	21-Aug-91	ND(<50)	0.6	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<5000)
	9-Jan-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<5000)
	20-Apr-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<5000)
	25-Jul-92	ND(<50)	0.5	1.1	ND(<0.5)	0.8	NA (e)

(a) Analyzed by USEPA Method 8015, modified

(b) Analyzed by USEPA 8020.

(c) Analyzed by Standard Method 503E

(d) Chromatogram reported as having a single peak in the gasoline range.

(e) MW-4 analyzed for TPH as diesel, detected at 78 µg/L.

µg/L: Micrograms per liter.

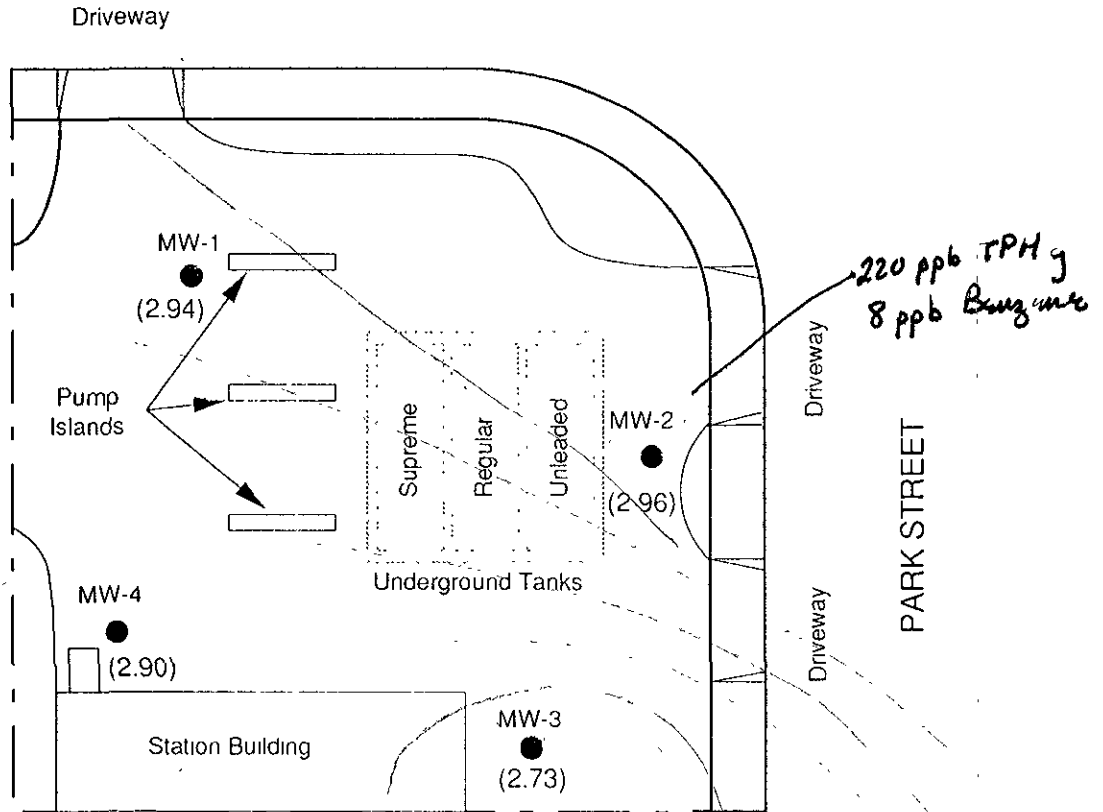
ND: Below laboratory method detection limit.

NA: Not analyzed.

Water samples analyzed by Superior Precision Analytical, Inc , Martinez, California.

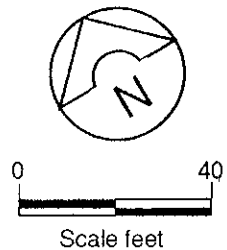
OTIS DRIVE

Regional direction of ground-water flow



EXPLANATION

- MW-4 ● Approximate Location of Monitor Well
- Property line
- (2.94) Ground-water elevation in feet above mean sea level, measured on July 25, 1992. Ground-water elevations not contoured. See text for explanation



Reference: Blaine Tech Services, Inc. Report No. 910409-J-1



Project No. RC05000

**GROUND-WATER ELEVATION MAP**

Chevron Service Station #9-6607  
2340 Otis Drive  
Alameda, California

FIGURE

**1**

ATTACHMENT 1

COPIES OF CERTIFIED ANALYTICAL REPORT  
AND CHAIN-OF-CUSTODY DOCUMENTATION





# Superior Precision Analytical, Inc.

P.O. Box 1545 • Martinez, California 94553 • (510) 229-1590 / fax (510) 229-0916

Geraghty & Miller  
Attn: KATE McCUTCHEN

Project RC05003  
Reported 08/10/92

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
86321- 1	MW-1	07/25/92	08/03/02 Water
86321- 2	MW-3	07/25/92	07/31/92 Water
86321- 3	MW-4	07/25/92	08/03/02 Water
86321- 4	MW-2	07/25/92	07/31/92 Water
86321- 5	TB-LB	07/25/92	07/31/92 Water

## RESULTS OF ANALYSIS

Laboratory Number:	86321- 1	86321- 2	86321- 3	86321- 4	86321- 5
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Gasoline:	ND<50	ND<50	ND<50	220	ND<50
Benzene:	ND<0.5	1.0	0.5	8.0	ND<0.5
Toluene:	ND<0.5	1.0	1.1	0.7	ND<0.5
Ethyl Benzene:	ND<0.5	1.0	ND<0.5	4.0	ND<0.5
Xylenes:	ND<0.5	3.4	0.8	8.6	ND<0.5
Diesel:	NA	NA	78	NA	NA
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



# Superior Precision Analytical, Inc.

PO Box 1545 • Martinez, California 94553 • (510) 229-1590 / fax (510) 229-0916

## 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: 86321

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	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	93/100	7%	70-130
Benzene:	200 ng	85/92	8%	70-130
Toluene:	200 ng	90/94	4%	70-130
Ethyl Benzene:	200 ng	94/97	3%	70-130
Xylenes:	200 ng	91/95	4%	70-130
Diesel:	200 mg	109/99	10%	70-130

Richard Srna, Ph.D.

*Selomina V. Langsting* (for)  
Laboratory Director

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

06521  
Chain-of-Custody-Record

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

Chevron Facility Number: 9-6607  
Facility Address: 2340 Otis Drive Alameda  
Chevron Contact (Name): Nancy Vukobich Ken Kan  
(Phone): \_\_\_\_\_  
Laboratory Name: Superior - Martinez  
Laboratory Release Number: 542 4780  
Consultant Project Number: RCO 5003  
Consultant Name: Geraghty & Miller, Inc.  
Address: 1050 Marina Way South, Richmond, CA 94804  
Samples Collected by (Name): Ricki Spence  
Project Contact (Name): Kate McCutchen  
Collection Date: 7-25-92  
(Phone) 510/233-3200 (Fax Number) 510/233-3204  
Signature: [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type C = Grab G = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										Remarks				
								BTX + 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)							
MW-1	-1	3	W	G	1337	HCL	yes	X														
MW-3	-2				1510																	
MW-4	-3				1625	VOL SMLY																
MW-2	-4				1627																	
TB.LB	-5	1																				

Please Initial: [Signature]  
 Samples Stored in ice. \_\_\_\_\_  
 Appropriate containers \_\_\_\_\_  
 Samples preserved \_\_\_\_\_  
 VOA's without background \_\_\_\_\_  
 Comments: \_\_\_\_\_

NOTE: Do NOT  
BILL FOR TB.LB.

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>Geraghty &amp; Miller</u>	Date/Time <u>0945 7-28-92</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>EXPI IT</u>	Date/Time <u>7-28-92</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>EXPI IT</u>	Date/Time <u>1103 7-28-92</u>	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time <u>11:00 7/28/92</u>	