



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

99 JAN 10 10 09 AM '93

January 8, 1993

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 prepared by Geraghty & Miller, Inc. and dated December 29, 1992.

Samples obtained from well MW-1 and MW-3 were again nondetect (ND) for total petroleum hydrocarbon as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX) while MW-2 had 72 ppb TPH-G, 3.2 ppb benzene, ND<0.5 toluene, 0.5 ethylbenzene, and 0.6 ppb xylenes. The remaining well MW-4 was ND<0.5 for TPH-G, ND<0.5 ppb benzene, ND<0.5 ppb for toluene, ND<0.5 for ethylbenzene, and 1.0 ppb for xylenes. Depth to water ranged from 4.72 feet to 5.82 feet. The direction of groundwater is still 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 9-6607R3

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.

December 29, 1992
Project No. RC05003

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

SUBJECT: November 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 November 24, 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™ (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 (USEPA Method 8020). In addition, a sample from MW-4, located near the waste oil tank, was analyzed for oil and grease (Standard Method 5520F).

RESULTS OF QUARTERLY SAMPLING

DEPTH TO WATER

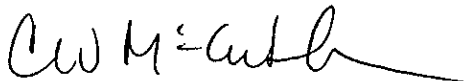
The depth-to-water measurements are presented in Table 1. A ground-water contour map based on the data collected November 24, 1992, is presented in Figure 1. Because the maximum difference in ground-water elevations across the site is only 0.67 foot, which indicates that the ground-water surface is relatively flat (<0.007 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

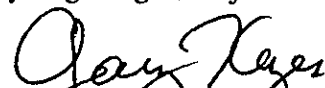
The cumulative ground-water analytical results are presented in Table 2. Copies of the certified laboratory report and chain-of-custody documentation are included in Attachment 1.

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	---
	24-Nov-92		4.72		40	2.40	---
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	---
	24-Nov-92		5.82		39	1.61	---
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	---
	24-Nov-92		5.00		40	3.07	---
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	---
	24-Nov-92		5.42		39	2.43	---

(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.

7.43
 - 5.82

 1.61

7.143
 - 5.82

 1.61

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
	24-Nov-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
	24-Nov-92	72	3.2	ND(<0.5)	0.5	0.6	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
	24-Nov-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	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)
	24-Nov-92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	1.0	ND<5000

(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.

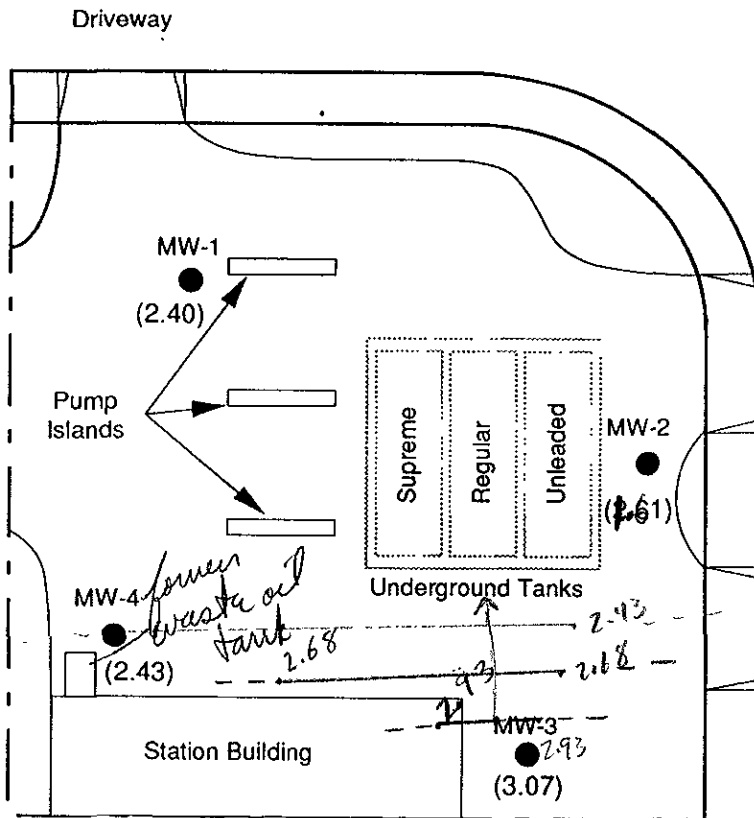
ND: Below laboratory method detection limit.

NA: Not analyzed.

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

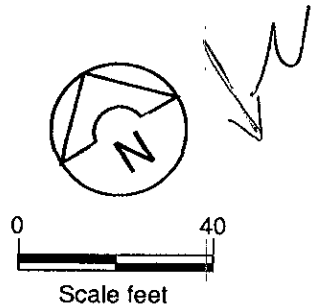
OTIS DRIVE

Regional direction of ground-water flow



EXPLANATION

- MW-4 ● Approximate Location of Monitor Well
- Property line
- (2.43) Ground-water elevation in feet above mean sea level, measured on November 24, 1992.



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 545 • Martinez, California 94553 • (510) 279-1590 / fax (510) 279-0916

Geraghty & Miller
Attn: KATE McCUTCHEN

Project RC05003
Reported 12/09/92

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
87287- 1	MW-1	11/24/92	12/05/92 Water
87287- 2	MW-2	11/24/92	12/05/92 Water
87287- 3	MW-3	11/24/92	12/08/92 Water
87287- 4	MW-4	11/24/92	12/08/92 Water
87287- 5	TB-LB	11/24/92	12/08/92 Water

RESULTS OF ANALYSIS

Laboratory Number: 87287- 1 87287- 2 87287- 3 87287- 4 87287- 5

Gasoline:	ND<50	72	ND<50	ND<50	ND<50
Benzene:	ND<0.5	3.2	ND<0.5	ND<0.5	ND<0.5
Toluene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Ethyl Benzene:	ND<0.5	0.5	ND<0.5	ND<0.5	ND<0.5
Xylenes:	ND<0.5	0.6	ND<0.5	1.0	ND<0.5
Oil and Grease:	NA	NA	NA	ND<5000	NA
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



Superior Precision Analytical, Inc.

200 E. 15th St., Martinez, CA 94553, (415) 228-1500 / Fax (415) 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: 87287

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 mg	99/91	8%	70-130
Benzene:	200 ng	99/92	7%	70-130
Toluene:	200 ng	94/90	4%	70-130
Ethyl Benzene:	200 ng	98/94	4%	70-130
Xylenes:	200 ng	95/93	2%	70-130
Oil and Grease:	200 mg	85/89	5%	56-106

Richard Srna, Ph.D.
Nancy A. Nelson for
Laboratory Director

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

Hold time Dec 8
87287 Chain-of-Custody-Record

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

Chevron Facility Number 9-6607
Facility Address 2340 Otis Drive Alameda
Consultant Project Number RC05003
Consultant Name Geraghty & Miller, Inc.
Address 1050 Marina Way South Richmond
Project Contact (Name) Kate Mc Cutchen
(Phone) 510-233-3200 (Fax Number) 510-233-3204

Chevron Contact (Name) Ken Kan
(Phone) _____
Laboratory Name Superior Precision
Laboratory Release Number 5424780
Samples Collected by (Name) Andrew Perill
Collection Date 11/24/92
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water 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 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-1	1		W	G		HCL	Y	X												
U-2	2																			
U-3	3																			
U-4	4										X									
U-LB	5		W	Lab		HCL	Y													1061 at pr. anal

Please Initial:
 Samples Stored in ice. _____
 Appropriate containers _____
 Samples preserved _____
 VCA's without heads _____
 Comments: _____

Shipped By (Signature) <u>[Signature]</u>	Organization <u>ESM</u>	Date/Time <u>11/30/92</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>EXP-IT</u>	Date/Time <u>11/30/92</u>
Shipped By (Signature) <u>[Signature]</u>	Organization <u>EXP-IT</u>	Date/Time <u>11/30/92</u>	Received By (Signature) <u>[Signature]</u>	Organization _____	Date/Time _____
Shipped By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization _____	Date/Time <u>11/30/92</u>

Turn Around Time (Circle Choice)

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