Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address. PO Box 5004, San Ramon, CA 94583-0804

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R. B Bellinger
Manager, Operations
S L Patterson
Area, Manager, Operations
C. G Trimbach
Manager, Engineering

March 14, 1991

Mr. Gil Wister
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Chevron Service Station #9-1583
5509 Martin Luther King Way
Oakland, CA 94609

Dear Mr. Wister:

Enclosed we are forwarding the results of the Quarterly Groundwater Sampling performed by our consultant Geraghty & Miller, Inc. dated March 6, 1991, for the above referenced site. As indicated in the report, hydrocarbon contaminant levels generally remained consistent with previous sampling results.

As indicated to you in our January 2, 1991, Site Assessment Report we will sample this site two (2) additional quarters and evaluate the data to assess if the wells have been purged of any surface contamination that may have infiltrated into the wells prior to the well head replacement. At this time we will recommend appropriate next actions.

Chevron will continue to sample this site and report findings on a quarterly basis.

If you have any questions or comments please do not hesitate to contact Nancy Vukelich at (415) 842-9581.

Very truly yours,
C. G. Trimbach

By _____
Nancy Vukelich

NLV/jmr
Enclosure

cc: Mr. Rich Hiett
RWQCB-Bay Area
1800 Harrison Street
Suite # 700
Oakland, CA 94612

Mr. W.T. Scudder
File (9-1583Q2 Listing)

GERAGHTY & MILLER, INC.
Environmental Services

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

March 6, 1991
Project No. RC02604

Ms. Nancy Vukelich
Chevron U.S.A., Inc.
West Central Marketing
2410 Camino Ramon
San Ramon, California 94583-0804

Re: Quarterly Ground-Water Sampling Results, February 1991, Service Station #9-1509, 5509 Martin Luther King Jr., Way, Oakland, California.

Dear Ms. Vukelich:

This letter presents the quarterly ground-water sampling results for the Chevron U.S.A. Inc. (Chevron) service station referenced above (see Figure 1). The scope of work for this project was presented to Chevron in a previous letter from Geraghty & Miller, Inc. (Geraghty & Miller) dated January 11, 1991.

FIELD AND LABORATORY PROCEDURES

The quarterly ground-water sampling was performed on February 14, 1991. Water samples were collected from each of the seven existing monitor wells (Monitor Wells #1 through #3, MW-4, MW-5, and MW-6). Prior to sampling, depth-to-water and total well depth measurements were obtained and each well was checked for the presence of liquid-phase hydrocarbons. Liquid-phase hydrocarbons were not observed during the quarterly sampling. A minimum of three casing volumes of water was purged from each well prior to sampling using a surface diaphragm pump. All equipment that entered the well was washed in a solution of tri-sodium phosphate (TSP) and water then triple rinsed in de-ionized water prior to sampling each well. Purged water was monitored for pH, temperature, and specific conductance. The field sampling results are presented in Table 1. 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 Chevron.

Ground-water samples for laboratory analysis were placed in the appropriate USEPA approved containers, placed on ice, and transported to Superior Analytical Laboratories, Inc., located in Martinez, California. One trip blank consisting of laboratory grade water which accompanied the sample bottles from the laboratory, into the field, and back to the laboratory was also analyzed. The water samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (USEPA Method 8015, modified) and benzene, toluene, ethylbenzene, and xylenes (BTEX) (USEPA Method 8020).

RESULTS OF QUARTERLY SAMPLING

DEPTH TO WATER

A summary of the depth-to-water measurements is presented in Table 2. A ground-water contour map is presented in Figure 2. Based on the data collected during February 1991, the direction of shallow ground-water flow in the vicinity of the site is toward the northwest.

GROUND-WATER ANALYTICAL RESULTS

A summary of the ground-water analytical results is presented in Table 3. Copies of the certified laboratory reports and chain-of-custody documentation are included in Attachment 1.

If you have any questions regarding this letter report, please do not hesitate to call.

Sincerely,
GERAGHTY & MILLER, INC.

James Wilmesher
Staff Geologist

Jeffrey W. Hawkins, R.G.
Senior Geologist

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

Attachments

	Table 1	Summary of Field Sampling Data
	Table 2	Summary of Depth-to-Water and Water Elevation Data
	Table 3	Ground-Water Analytical Results
	Figure 1	Site Location Map
	Figure 2	Ground-Water Contour Map, February 1991
	Attachment 1	Copies of Certified Analytical Reports and Chain of Custody Documentation

Table 1 - Summary of Field Sampling Data
Chevron Service Station #9-1583, Oakland, California

Well	Date	Calculated Purge Volume (B) (gallons)	Actual Purge Volume (gallons)	Stabilized pH	Stabilized SC (ms/cm)	Stabilized Temperature (F)	Depth to Water (A) (feet)	Measured Depth of Well (A) (feet)	Casing Diameter (inches)
Well #1	12-Mar-90	10.83	13	6.61	62	73.4	10.08	19.13	3
	8-Feb-91	11.00	19	6.35	69	65	10.11	19.30	
Well #2	12-Mar-90	9.58	13	6.28	51	74.4	11.02	19.02	3
	8-Feb-91	9.53	15	6.70	61	67	11.05	19.01	
Well #3	12-Mar-90	8.45	13	6.48	75	75.6	12.14	19.20	3
	8-Feb-91	9.13	23	6.70	88	67	12.18	19.81	
MW-4	31-Oct-90	5.81	3 (C)	8.10	93	78	13.90	24.82	2
	8-Feb-91	6.69	9	7.90	59	65	12.32	24.90	
MW-5	31-Oct-90	4.87	16	7.20	35	81	10.63	19.79	2
	8-Feb-91	5.69	10	6.90	46	64	9.17	19.87	
MW-6	31-Oct-90	5.35	13	7.80	36	78	9.69	19.74	2
(D)	8-Feb-91	—	NA	NA	NA	NA	NA	NA	

Notes:

(A) Measured from top of PVC casing.
(B) Based on three casing volumes.
(C) Monitor Well MW-4 was dry after pumping 3 gallons during purging, October 31, 1990.
(D) Access to well was prevented by parked automobile.
NA = Not Analyzed.
SC = Specific conductance.

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Table 2 - Summary of Depth-to-Water and Water Elevation Data
Chevron Service Station #9-1583, Oakland, California

Well	Date	Depth to Water (1) (feet)	Top of Casing Elevation (feet)		Water Level Elevation (feet)
Well #1	22-Dec-83	10.25	81.97	(A)	71.72
	30-Dec-83	9.17			72.80
	12-Mar-90	10.08			71.90
	25-Mar-90	10.46			71.51
	16-Nov-90	11.58	82.42	(B)	70.84
	8-Feb-91	10.11			72.31
Well #2	22-Dec-83	10.50	83.48	(A)	72.98
	30-Dec-83	9.92			73.56
	12-Mar-90	11.02			72.46
	25-Mar-90	11.33			72.15
	16-Nov-90	12.31	83.48	(B)	71.17
	8-Feb-91	11.05			72.43
Well #3	22-Dec-83	11.58	84.36	(A)	72.22
	30-Dec-83	11.17			71.81
	12-Mar-90	12.14			70.74
	25-Mar-90	12.55			72.18
	16-Nov-90	13.62	84.38	(B)	70.76
	8-Feb-91	12.18			72.20
MW-4	18-Oct-90	15.75	84.25	(B)	68.50
	31-Oct-90	13.90			70.35
	16-Nov-90	14.25			70.00
	8-Feb-91	12.32			71.93
MW-5	18-Oct-90	10.78	81.95	(B)	71.17
	31-Oct-90	10.63			71.32
	16-Nov-90	10.68			71.27
	8-Feb-91	9.17			72.78
MW-6	18-Oct-90	9.79	80.60	(B)	70.81
	31-Oct-90	9.69			70.91
	16-Nov-90	9.74			70.86
	8-Feb-91	NA			---

Notes:

(1) Measured from top of casing.
(A) Surveyed March 26, 1990, by Geraghty & Miller Inc..
(B) Surveyed November 30, 1990, by Bates & Bailey Land Surveyors.
-- Elevations are reported in feet above mean sea level.
-- Elevations were measured relative to City of Oakland Bench Mark #1967 located on the curb at the southwest corner of 55th Street and Martin Luther King Way. Reported elevation of bench mark is 84.457 feet above mean sea level.

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Table 3 - Ground-Water Analytical Results
Chevron Service Station #9-1583, Oakland, California.

Sample	Date	TPH (A) µg/l	Benzene (B) µg/l	Toluene (B) µg/l	Xylenes (B) µg/l	Ethylbenzene (B) µg/l
Well #1 (C)	12-Mar-90	50,000	3,000	7,300	18,000	1,900
	8-Feb-91	100,000	4,200	8,400	2,600	16,000
Well #2	12-Mar-90	800	400	22	55	18
	8-Feb-91	4,600	820	440	210	720
Well #3	12-Mar-90	47,000	1,000	9,900	9,800	1,700
	8-Feb-91	58,000	4,900	5,200	2,000	9,500
Well MW-4	31-Oct-90	ND(<50)	ND(<0.5)	ND(<0.5)	1	ND(<0.5)
	8-Feb-91	60	17	2	ND<0.5	12
Well MW-5	31-Oct-90	110	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	8-Feb-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
Well MW-6	31-Oct-90	ND(<50)	ND(<0.5)	ND(<0.5)	3	ND(<0.5)
	8-Feb-91	NC	NC	NC	NC	NC
Trip Blank	12-Mar-90	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.6)	ND(<0.3)
	8-Feb-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
Field Blank	31-Oct-90	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	8-Feb-91	NC	NC	NC	NC	NC

Notes:
(A) TPH - Total petroleum hydrocarbons as gasoline. Analyzed by USEPA 8015, modified.
(B) BTEX analyzed by USEPA 8020.
(C) Wells #1, #2, and #3 were installed by Gettler Ryan, Inc., December 1983.
ND - Not detected
NC - Not Collected.
( ) = Detection limit.

Project No. RC02604