4249

Chevron

93 AUG 20 PM 1:25

August 18, 1993

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583

Marketing Department
Phone 510 842 9500

Site Assessment & Remediation

Mr. Barney Chan
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Former Chevron Service Station #9-4612
3616 San Leandro Street, Oakland, CA

Dear Mr. Chan:

Enclosed is the Groundwater Monitoring and Sampling Activities report dated July 14, 1993, prepared by our consultant Groundwater Technology, Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene was detected in monitor wells VH-1, MW-2, and MW-3 at concentrations of 1600, 5.3, and 580 ppb, respectively. Depth to ground water was measured at approximately 8.6 to 9.5 feet below grade and the direction of flow is to the northeast.

I have received your letter of April 27, 1993, which outlined some observations and suggestions for the ground water monitoring program at this site. Below I have responded to those comments in the same order as given in your letter.

1) Currently, ground water elevation measurements are collected on a quarterly basis. During the past two monitoring events, the ground water gradient direction has remained the same. While the direction of ground water flow is not what would be expected, it has been consistent. At this time it does not appear that collecting data at a more frequent interval will provide any new useful information. If gradient direction should shift significantly in subsequent monitoring events, it would then be appropriate to consider monthly depth to water measurements.

2) Ground water samples collected from monitor well MW-3 will be analyzed for total oil and grease, total petroleum hydrocarbons as diesel, and chlorinated hydrocarbons during the next sampling event. If these constituents are detected in the ground water then sampling will continue on a regular basis. If laboratory analyses indicate they are not present, then I would recommend discontinuing sampling for these constituents.

3) After reviewing the boring logs with our consultant, we have found no conclusive evidence that monitor wells MW-2 and MW-3 are installed in a different aquifer than VH-1. I agree that the subsurface geology may be a contributing factor to the observed gradient direction, however I do not believe enough information exists to adequately explain the unexpected gradient direction. Any information your office could provide regarding gradient and geology characteristics at nearby sites which would indicate the existence of two distinct aquifers would be greatly appreciated.

4) It appears from PID readings shown on the boring logs that hydrocarbon impacted soils may exist at approximately 15 feet below grade in monitor wells MW-2 and MW-3. This is

below the static ground water currently measured at approximately 9.5 feet below grade. In accordance with the Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites, the hydrocarbon impacted saturated soils will be addressed as a ground water issue.

If you have any questions or comments, please do not hesitate to call me at (510) 842-8134.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

cc: Mr. Rich Hiett, RWQCB - Bay Area
Mr. Tim Watchers, Groundwater Technology, Inc.
Ms. B.C. Owen
File (9-4612 QM1)

Mr. Jack Ratto
191 98th Avenue
Oakland, CA 94603

GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387
FAX: (415) 685-9148

July 14, 1993

Project No. 020204116

Mr. Mark Miller
Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583-0804

SUBJECT: Groundwater Monitoring and Sampling Activities
Chevron Service Station No. 9-4612
3616 San Leandro Street, Oakland, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on May 27, 1993. The three groundwater monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in the monitoring wells. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled. The collected groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 2. The laboratory report and chain-of-custody record are included in Attachment 3. Monitoring-well purge water was transported by Groundwater Technology to the Chevron Terminal in Richmond, California for recycling.

Groundwater Technology is pleased to assist Chevron on this project. If you have any questions or comments, please call our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Tim Watchers
Project Geologist

Groundwater Technology, Inc.
Reviewed/Approved by

David R. Kleesattel
Registered Geologist
No. 5136

For:
John S. Gaines
Vice President, General Manager
West Region

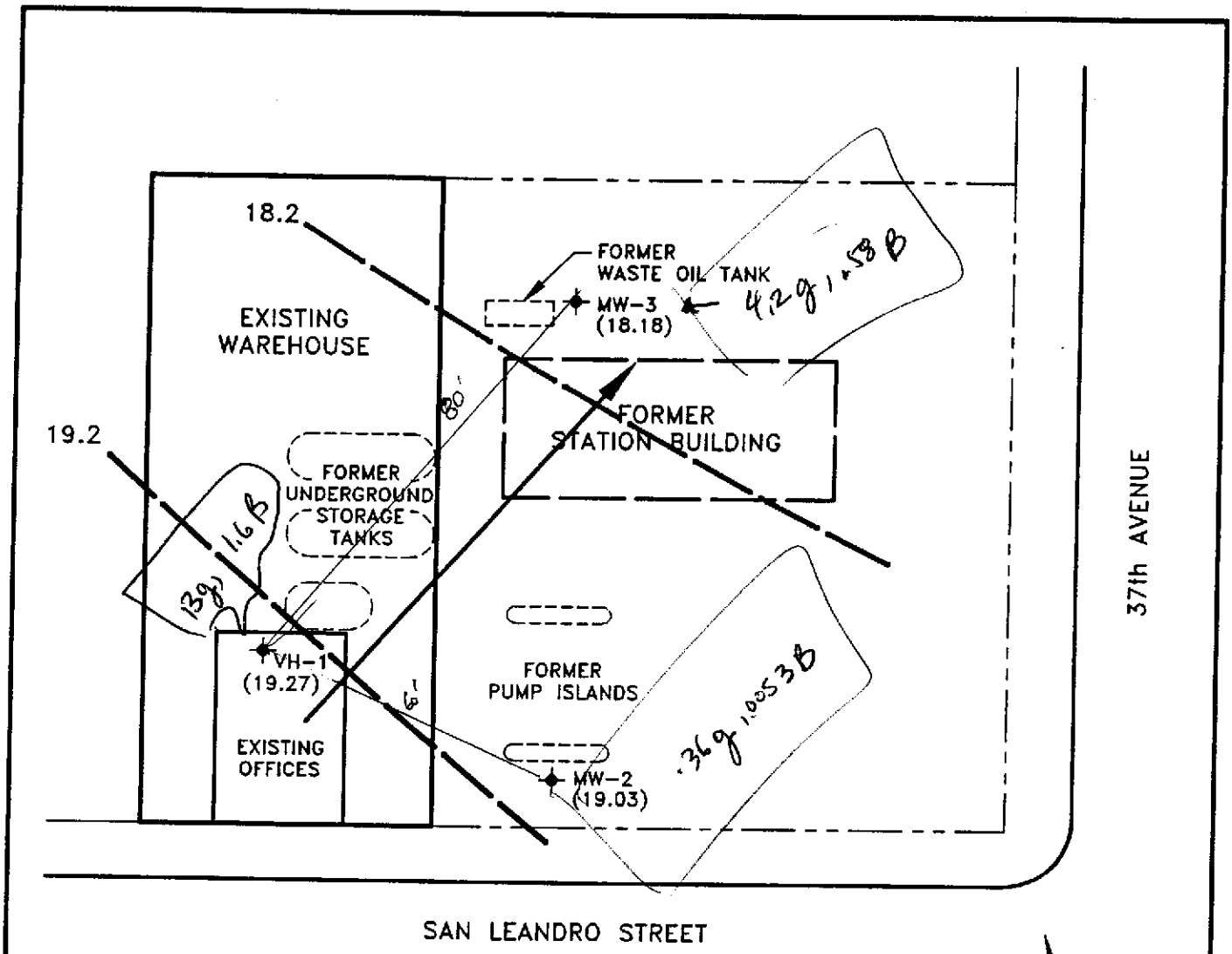
REGISTERED GEOLOGIST
DAVID R. KLEESATTEL
NO. 5136
STATE OF CALIFORNIA

Attachment 1 Figure
Attachment 2 Tables
Attachment 3 Laboratory Report

4116R013.020

ATTACHMENT 1

Figure



LEGEND

- MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

N

0 FEET 30
SCALE

GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 671-2387				POTENTIOMETRIC SURFACE MAP (5/27/93)		
CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-4612				LOCATION: 3616 SAN LEANDRO STREET OAKLAND, CALIFORNIA	REV. NO.: 0	DATE: 7/13/93
PM	PE/RG ORK	DESIGNED TW	DETAILED CY	ACAD FILE: PSM793/SP493	PROJECT NO.: 020202892	FIGURE: 1

ATTACHMENT 2

Table

TABLE 1
MONITORING DATA AND ANALYTICAL RESULTS OF GROUNDWATER
Chevron Station No. 9-4612
3616 San Leandro Street, Oakland, California

Well ID/Elev	Date	TPH-G	Benzene	Toulene	Ethyl-benzene	Xylenes	DTW (ft)	SPT (ft)	GWE (ft)
VH-1	08/10/88	11,000	3,300	200	520	540	13.00	---	---
	06/01/89	15,000	2,200	120	540	310	10.32	---	---
	09/15/89	5,600	1,900	90	350	160	15.69	---	---
	12/08/89	11,000	1,900	69	270	99	14.77	---	---
	03/07/91	4,500	820	39	120	77	11.26	---	---
	09/24/91	3,300	520	19	39	27	12.98	---	---
	01/08/92	5,000	600	34	81	76	13.77	---	---
	04/20/92	7,400	670	60	110	140	8.18	---	---
27.85	03/26/93	4,900	600	40	72	94	6.71	0.00	21.14
	05/27/93	13,000	1,600	120	230	220	8.58	0.00	19.27
MW-2	02/16/93	9,200	720	110	250	170	---	---	---
28.50	03/26/93	---	---	---	---	---	7.62	0.00	20.88
	05/27/93	360	5.3	2.1	1.8	2.5	9.47	0.00	19.03
MW-3	02/16/93	3,500	<0.5	8.1	4.6	7.7	---	---	---
27.51	03/26/93	---	---	---	---	---	7.18	0.00	20.33
	05/27/93	4,200	580	84	150	100	9.33	0.00	18.18
TRIP BLANK	05/27/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---

TPH-G = Total petroleum hydrocarbons-as-gasoline
DTW = Depth to water
SPT = Separate-phase hydrocarbons
GWE = Groundwater elevation in feet above mean sea level relative to United States Geological Survey brass disc

Data for VH-1 (August 10, 1988 to April 20, 1992) from Pacific Environmental Group Inc. Report, May 18, 1992.
Concentrations are presented in parts per billion (ppb).

ATTACHMENT 3

Laboratory Report