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Chevron

May 2, 1994

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

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

#9249

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

Dear Mr. Chan:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated March 25, 1994, prepared by our consultant Groundwater Technology, Inc. (GTI) for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Selected samples were also analyzed for total petroleum hydrocarbons as diesel. Dissolved concentrations of these constituents observed during the past quarter are consistent with historical results. Depth to ground water was measured at approximately 9.1 to 9.8 feet below grade and the direction of flow is to the southeast.

As we discussed, a work plan for additional site assessment will be forwarded to your office shortly. Chevron will continue to monitor and sample all wells at this site on a quarterly basis.

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

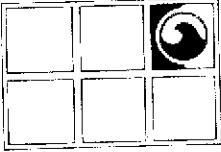
Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiatt, RWQCB - Bay Area
Ms. B.C. Owen

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

Mr. Vernon C. McIlraith
1809 Golden Rain Road, #5
Walnut Creek, CA 94595



GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387

FAX: (415) 685-9148

Project No. 020104099

March 25, 1994

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

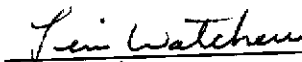
SUBJECT: *Groundwater Monitoring and Sampling Activities*
Chevron Service Station No. 9-4612
3616 San Leandro Street, Oakland, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the quarterly groundwater monitoring and sampling data collected on February 10, 1994. 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 and a summary of groundwater monitoring data are presented in Attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled. Field data sheets are presented in Attachment 3. The groundwater samples collected were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Additional samples were collected from monitoring well MW-3 and analyzed for total petroleum hydrocarbons-as-diesel. Results of the chemical analyses are summarized in Table 1. The laboratory report and chain-of-custody record are included in Attachment 4. 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 contact our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by



Tim Watchers
Project Manager

PR 

Attachment 1 Figures
Attachment 2 Table
Attachment 3 Field Data Sheets
Attachment 4 Laboratory Report

Wendell W. Lattz
Vice President, General Manager
West Region

ATTACHMENT 2

Table

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

Q.H.C.

| Well ID/Elev | Date | TPH-G | Benzene | Toulene | Ethyl-benzene | Xylenes | TPH-D | TOG | HVO | DTW (ft) | SPT (ft) | GWE (ft) |
|---|----------|--------|---------|---------|---------------|---------|-------|--------|------|----------|----------|----------|
| VH-1 27.85 | 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 | --- | --- |
| | 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 |
| | 08/18/93 | 2,700 | 210 | 10 | 8.1 | 18 | --- | --- | --- | 10.46 | 0.00 | 17.39 |
| | 11/03/93 | 4,600 | 680 | 42 | 35 | 68 | --- | --- | --- | 12.57 | 0.00 | 15.28 |
| 02/10/94 | 1,900 | 260 | 19 | 22 | 29 | --- | --- | --- | 9.08 | 0.00 | 18.77 | |
| MW-2 27.51 | 02/16/93 | 9,200 | 720 | 110 | 250 | 170 | --- | --- | --- | --- | --- | --- |
| | 03/26/93 | --- | --- | --- | --- | --- | --- | --- | --- | 7.62 | 0.00 | 19.89 |
| | 05/27/93 | 360 | 5.3 | 2.1 | 1.8 | 2.5 | --- | --- | --- | 9.47 | 0.00 | 18.04 |
| | 08/18/93 | 9,400 | 1,100 | 76 | 110 | 100 | --- | --- | --- | 11.05 | 0.00 | 16.46 |
| | 11/03/93 | 8,600 | 390 | 20 | 2.7 | 120 | --- | --- | --- | 12.95 | 0.00 | 14.56 |
| | 02/10/94 | 2,700 | 370 | 38 | 44 | 41 | --- | --- | --- | 9.79 | 0.00 | 17.72 |
| MW-3 28.50 | 02/16/93 | 3,500 | <0.5 | 8.1 | 4.6 | 7.7 | --- | --- | --- | --- | --- | --- |
| | 03/26/93 | --- | --- | --- | --- | --- | --- | --- | --- | 7.18 | 0.00 | 21.32 |
| | 05/27/93 | 4,200 | 580 | 84 | 150 | 100 | --- | --- | --- | 9.33 | 0.00 | 19.17 |
| | 08/18/93 | 910 | 12 | 3.7 | 6.2 | 3.8 | 1,400 | <5,000 | ND | 12.00 | 0.00 | 16.50 |
| | 11/03/93 | 5,300 | 29 | 1.9 | 0.6 | 27 | --- | --- | --- | 13.29 | 0.00 | 15.21 |
| | 02/10/94 | 88 | <0.5 | 0.7 | <0.5 | <0.5 | <50 | --- | --- | 9.63 | 0.00 | 18.87 |

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 | TPH-D | TOG | HVO | DTW (ft) | SPT (ft) | GWE (ft) |
|--------------|----------|-------|---------|---------|---------------|---------|-------|-----|-----|----------|----------|----------|
| Rinsate | 02/10/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- | --- |
| TBLB | 05/27/93 | <50 | <0.5 | <0.5 | <0.5 | <1.5 | --- | --- | --- | --- | --- | --- |
| | 08/18/93 | <50 | <0.5 | <0.5 | <0.5 | <1.5 | --- | --- | --- | --- | --- | --- |
| | 11/03/93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- | --- |
| | 02/10/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- | --- |

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

HVO = Halogenated volatile organics

--- = Not available, not sampled, not monitored

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

Field Data Sheets

Project Name: Chevron - San Leandro

Date: 2.10.94

Site Address: 3616 San Leandro Blvd., Oakland

Page 2 of

Project Number: 020104099.0610

Project Manager: Tim Watchers

Well ID: MW-2

DTW Measurements:

Well Diameter: 24

Initial: /

Calc Well Volume: 1.63 gal

Recharge: /

Well Volume: 3 4.7 gal

Purge Method: Submersible
 Peristaltic:
 Gear Drive:
 Pump Depth: _____ ft.
 Hand Bailed:
 Air Lift:
 Other: _____

Instruments Used:
 YSI: _____
 Hydac: _____
 Omega:

| Time | Temp | Conductivity | pH | Purge Volume Gallons | Turbidity | Comments |
|------|---|--------------|------|----------------------|-----------|----------|
| | <input checked="" type="checkbox"/> C <input type="checkbox"/> F | | | | | |
| 2:30 | 11.8 | 1.10 | 7.19 | 0 | | Clear |
| 2:31 | 11.9 | 1.10 | 7.18 | 2 | | " |
| 2:32 | 11.9 | 1.10 | 7.18 | 4 | | " |
| 2:33 | 12.1 | 1.10 | 7.17 | 5 | | " |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

ATTACHMENT 4

Laboratory Reports



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

GROUNDWATER TECHNOLOGY, INC.
Attn: TIM WATCHERS

Project 9-4612
Reported 02/21/94

TOTAL PETROLEUM HYDROCARBONS

| Lab # | Sample Identification | Sampled | Analyzed Matrix |
|----------|-----------------------|----------|-----------------|
| 30268- 1 | TB-LB | 02/10/94 | 02/16/94 Water |
| 30268- 2 | RBVH-1 | 02/10/94 | 02/16/94 Water |
| 30268- 3 | VH-1 | 02/10/94 | 02/16/94 Water |
| 30268- 5 | MW-2 | 02/10/94 | 02/16/94 Water |
| 30268- 7 | MW-3 | 02/10/94 | 02/16/94 Water |

RESULTS OF ANALYSIS

Laboratory Number: 30268- 1 30268- 2 30268- 3 30268- 5 30268- 7

| | | | | | |
|----------------|--------|--------|------|------|--------|
| Gasoline: | ND<50 | ND<50 | 1900 | 2700 | 63 |
| Benzene: | ND<0.5 | ND<0.5 | 260 | 370 | ND<0.5 |
| Toluene: | ND<0.5 | ND<0.5 | 19 | 38 | 0.7 |
| Ethyl Benzene: | ND<0.5 | ND<0.5 | 22 | 44 | ND<0.5 |
| Total Xylenes: | ND<0.5 | ND<0.5 | 29 | 41 | ND<0.5 |
| Diesel: | NA | NA | NA | NA | ND<50 |
| Concentration: | ug/L | ug/L | ug/L | ug/L | ug/L |



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

Page 2 of 2
QA/QC INFORMATION
SET: 30268

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 | MS/MSD RECOVERY | RPD | CONTROL LIMIT |
|----------------|-----------------|-----|---------------|
| Gasoline: | 102/96 | 6% | 70-130 |
| Benzene: | 85/89 | 5% | 70-130 |
| Toluene: | 98/98 | 0% | 70-130 |
| Ethyl Benzene: | 89/88 | 1% | 70-130 |
| Total Xylenes: | 93/91 | 2% | 70-130 |
| Diesel: | 100/107 | 7% | 75-125 |

Michael R. Vernon
Senior Chemist

