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Chevron

September 19, 1994

Chevron U.S.A. Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing - Northwest Region
Phone 510 842 9500

Ms. Susan Hugo
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

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

Dear Ms. Hugo:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated August 23, 1994, 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 (TPH-G) and BTEX. Benzene was detected in monitor wells MW-1, MW-3, MW-5, MW-7, and MW-8 at concentrations of 210, 660, 0.6, 15, and 3000 ppb, respectively. Depth to ground water was measured at approximately 8.9 feet to 13.5 feet below grade, and the direction of flow is to the north-northeast.

It appears that hydrocarbons detected in upgradient wells MW-5 and MW-6 most likely originated from the upgradient BP site. BP has recently requested that quarterly sampling events at both the Chevron and BP sites be conducted at the same time. We are working with BP to facilitate this request.

The downgradient extent of dissolved hydrocarbons at the Chevron site currently remains undefined. We anticipate forwarding a work plan for delineation to your office within the next 60 days.

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 contact me at (510) 842-8134.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Kevin Graves, RWQCB - Bay Area
Mr. S.A. Willer



GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

August 23, 1994

Project No. 020104101

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

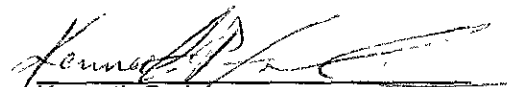
SUBJECT: *Groundwater Monitoring and Sampling Activities*
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the quarterly groundwater monitoring and sampling data collected on July 6 and August 4, 1994. The eight groundwater monitoring wells at the 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. Groundwater monitoring and sample collection protocol and field data sheets are presented in attachment 3. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in attachment 2. 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 with 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



Kenneth P. Johnson
Project Manager

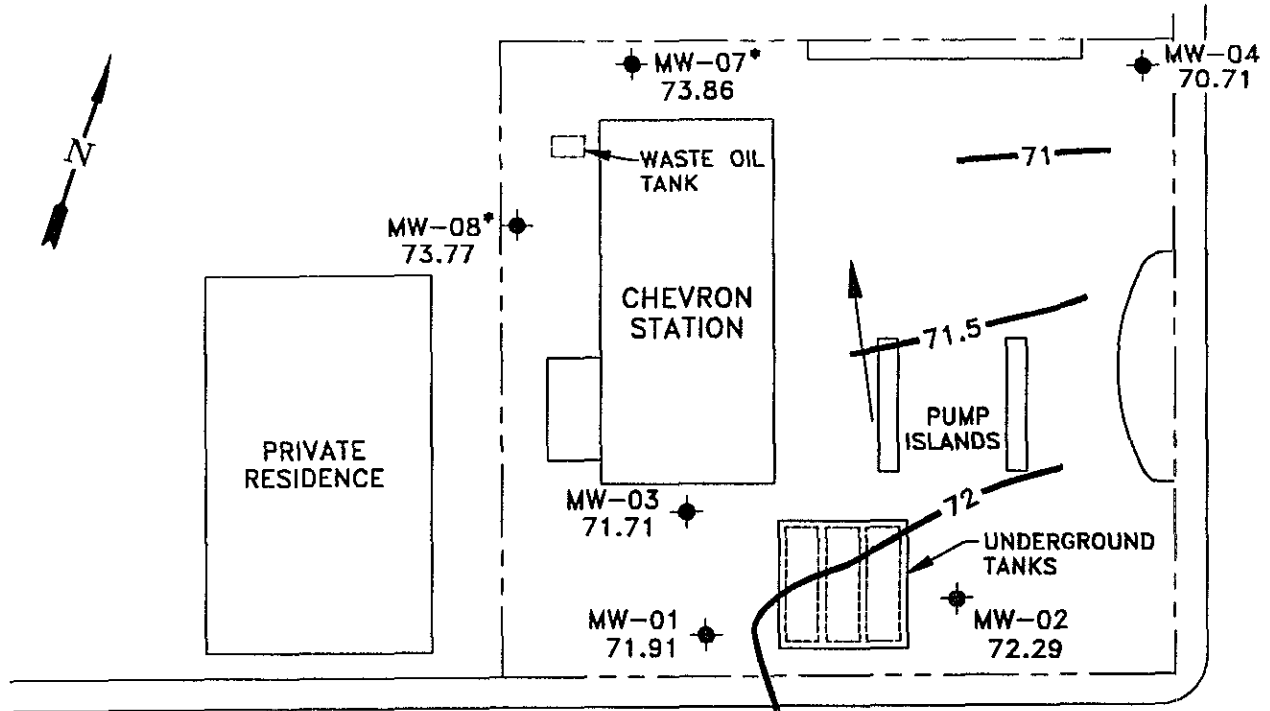
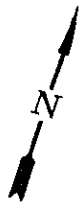
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Attachment 1 Figure
Attachment 2 Table
Attachment 3 Protocol and Field Data Sheets
Attachment 4 Laboratory Report

For:
Wendell W. Lattz
Vice President, General Manager
West Region

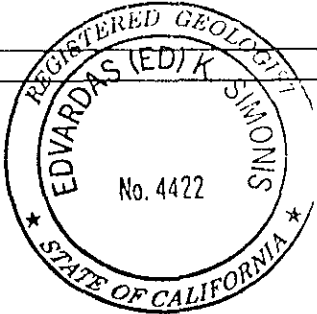
ATTACHMENT 1

Figure



MARTIN LUTHER KING JR. WAY

55th STREET



LEGEND

- PROPERTY LINE
- MONITORING WELL
- PROPOSED MONITORING WELL
- NOT USED IN CONTOURING
- POTENTIOMETRIC SURFACE ELEVATION (FT)
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.



GROUNDWATER TECHNOLOGY



POTENTIOMETRIC SURFACE MAP (8/4/94)

| | | | | | |
|----------------------------------------------------------------------|--|--------------------------|----------------------------|------------|---------------------|
| CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION NO. 9-1583 | | FILE: 4101PSM, (1:40) | PROJECT NO.: 02010-4101 | PM KS | PE/RG ZLL |
| LOCATION: 5509 MARTIN LUTHER KING JR. WAY OAKLAND, CALIFORNIA | | REV. | DES. SS | DET. SS | DATE: 8/9/94 |
| | | | | | FIGURE: 1 |

ATTACHMENT 2

Table

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | DTW (ft) | SPT (ft) | WTE (ft) |
|------------------|----------|---------------------|---------|---------|-------------------|-----------|-------------|-------------|-------------|
| MW-1 | 12/22/83 | --- | --- | --- | --- | --- | 10.25 | 0.00 | 71.72 |
| | 12/30/83 | --- | --- | --- | --- | --- | 9.17 | 0.00 | 72.80 |
| *81.97/ 82.42 | 03/12/90 | 50,000 | 3,000 | 7,300 | 1,900 | 18,000 | 10.08 | 0.00 | 71.89 |
| | 03/25/90 | --- | --- | --- | --- | --- | 10.46 | 0.00 | 71.51 |
| | 10/18/90 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 10/31/90 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/16/90 | --- | --- | --- | --- | --- | 11.58 | 0.00 | 70.84 |
| | 02/08/91 | 100,000 | 4,200 | 8,400 | 16,000 | 2,600 | 10.11 | 0.00 | 72.31 |
| | 05/08/91 | 31,000 | 200 | 66 | 670 | 2,000 | 10.45 | 0.00 | 71.97 |
| | 08/12/91 | 17,000 | 81 | 7.2 | 270 | 710 | 11.23 | 0.00 | 71.19 |
| | 11/07/91 | 7,100 | 24 | 6 | 130 | 170 | 10.70 | 0.00 | 71.72 |
| | 02/05/92 | 110,000 | 8,900 | 14,000 | 2,700 | 12,000 | 10.37 | 0.00 | 72.05 |
| | 05/13/92 | 19,000 | 450 | 85 | 480 | 870 | 10.58 | 0.00 | 71.84 |
| | 07/17/92 | 8,500 | 170 | <10 | 360 | 600 | 11.05 | 0.00 | 71.37 |
| | 10/05/92 | 22,000 | 4,300 | 5,100 | 570 | 2,900 | 11.41 | 0.00 | 71.01 |
| | 11/11/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/17/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/24/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/01/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/29/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/05/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/08/93 | 14,000,000 | 12,000 | 79,000 | 270,000 | 1,300,000 | 8.11 | 0.00 | 74.31 |
| | 02/02/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 04/14/93 | ***48,000 | 670 | 1,100 | 1,600 | 6,300 | 9.85 | 0.00 | 72.57 |
| | 08/06/93 | 44,000 | 660 | 990 | 1,600 | 6,100 | 10.83 | 0.00 | 71.59 |
| | 10/21/93 | 18,000 | 270 | 460 | 1,300 | 4,700 | 10.90 | 0.00 | 71.52 |
| | 01/05/94 | ***22,000 | 160 | 160 | 630 | 2,300 | 10.33 | 0.00 | 72.09 |
| | 04/08/94 | 21,000 | 37 | 110 | 570 | 1,400 | 10.18 | 0.00 | 72.24 |
| | 07/06/94 | 28,000 | 210 | 100 | 540 | 1,200 | 10.64 | 0.00 | 71.78 |
| | 08/04/94 | --- | --- | --- | --- | --- | 10.51 | 0.00 | 71.91 |

TABLE 1
 HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
 Chevron Service Station No. 9-1583
 5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | DTW (ft) | SPT (ft) | WTE (ft) |
|------------------|----------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|
| MW-2 | 12/22/83 | --- | --- | --- | --- | --- | 10.50 | 0.00 | 72.98 |
| | 12/30/83 | --- | --- | --- | --- | --- | 9.92 | 0.00 | 73.56 |
| 83 48 | 03/12/90 | 800 | 400 | 22 | 18 | 55 | 11.02 | 0.00 | 72.46 |
| | 03/25/90 | --- | --- | --- | --- | --- | 11.33 | 0.00 | 72.15 |
| | 10/18/90 | --- | --- | --- | --- | --- | 12.31 | 0.00 | 71.17 |
| | 10/31/90 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/16/90 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 02/08/91 | 4,600 | 820 | 440 | 720 | 210 | 11.05 | 0.00 | 72.43 |
| | 05/08/91 | <50 | 5 | <0.5 | <0.5 | <0.5 | 11.36 | 0.00 | 72.12 |
| | 08/12/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 11.97 | 0.00 | 71.51 |
| | 11/07/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 11.50 | 0.00 | 71.98 |
| | 02/05/92 | 1,700 | 390 | 170 | 60 | 200 | 11.19 | 0.00 | 72.29 |
| | 05/13/92 | **74 | 9.3 | <0.5 | <0.5 | <0.5 | 11.49 | 0.00 | 71.99 |
| | 07/17/92 | <50 | 2.0 | <0.5 | <0.5 | <0.5 | 11.85 | 0.00 | 71.63 |
| | 10/05/92 | 3,500 | 1,200 | 530 | 86 | 220 | 12.00 | 0.00 | 71.48 |
| | 11/11/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/17/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/24/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/01/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/29/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/05/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/08/93 | 390 | 140 | 0.8 | 7.7 | 26 | 8.83 | 0.00 | 74.65 |
| | 02/02/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 04/14/93 | <50 | 5 | <0.5 | <0.5 | <0.5 | 10.79 | 0.00 | 72.69 |
| | 08/06/93 | <50 | 1 | <0.5 | <0.5 | <0.5 | 11.71 | 0.00 | 71.77 |
| | 10/21/93 | ***<50 | 1 | <0.5 | 9 | <0.5 | 11.74 | 0.00 | 71.74 |
| | 01/05/94 | <50 | 0.7 | <0.5 | <0.5 | 0.9 | 11.18 | 0.00 | 72.30 |
| | 04/08/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 11.06 | 0.00 | 72.42 |
| | 07/06/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 11.68 | 0.00 | 71.80 |
| | 08/04/94 | --- | --- | --- | --- | --- | 11.19 | 0.00 | 72.29 |

TABLE 1
 HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
 Chevron Service Station No. 9-1583
 5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | DTW (ft) | SPT (ft) | WTE (ft) |
|------------------|----------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|
| MW-3 | 12/22/83 | --- | --- | --- | --- | --- | 11.58 | 0.00 | 72.78 |
| | 12/30/83 | --- | --- | --- | --- | --- | 11.17 | 0.00 | 73.19 |
| 84.36/ 84.38 | 03/12/90 | 47,000 | 1,000 | 9,900 | 1,700 | 9,800 | 12.14 | 0.00 | 72.22 |
| | 03/25/90 | --- | --- | --- | --- | --- | 12.55 | 0.00 | 71.81 |
| | 10/18/90 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 10/31/90 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/16/90 | --- | --- | --- | --- | --- | 13.62 | 0.00 | 70.76 |
| | 02/08/91 | 58,000 | 4,900 | 5,200 | 9,500 | 2,000 | 12.18 | 0.00 | 72.20 |
| | 05/08/91 | 50,000 | 2,100 | 1,400 | 2,000 | 9,400 | 12.52 | 0.00 | 71.86 |
| | 08/12/91 | 15,000 | 1,300 | 160 | 920 | 1,900 | 13.27 | 0.00 | 71.11 |
| | 11/07/91 | 26,000 | 1,000 | 310 | 1,900 | 5,900 | 12.81 | 0.00 | 71.57 |
| | 02/05/92 | 35,000 | 2,800 | 1,300 | 1,500 | 4,700 | 12.47 | 0.00 | 71.91 |
| | 05/13/92 | 47,000 | 1,500 | 1,200 | 1,100 | 4,800 | 12.62 | 0.00 | 71.76 |
| | 07/17/92 | 15,000 | 120 | 11 | 88 | 140 | 13.13 | 0.00 | 71.25 |
| | 10/05/92 | --- | --- | --- | --- | --- | 13.62 | 0.24 | 70.95 |
| | 11/11/92 | --- | --- | --- | --- | --- | 12.89 | 0.17 | 71.63 |
| | 11/17/92 | --- | --- | --- | --- | --- | 12.89 | 0.06 | 71.54 |
| | 11/24/92 | --- | --- | --- | --- | --- | 12.86 | 0.05 | 71.56 |
| | 12/01/92 | --- | --- | --- | --- | --- | 12.92 | 0.03 | 71.48 |
| | 12/29/92 | --- | --- | --- | --- | --- | 11.24 | Sheen | 73.14 |
| | 01/05/93 | --- | --- | --- | --- | --- | 11.15 | Sheen | 73.23 |
| | 01/08/93 | 250,000 | 5,000 | 17,000 | 5,500 | 28,000 | 10.10 | 0.00 | 74.28 |
| | 02/02/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 04/14/93 | --- | --- | --- | --- | --- | 11.91 | 0.01 | 72.48 |
| | 08/06/93 | 150,000 | 3,800 | 6,600 | 3,700 | 17,000 | 12.90 | 0.01 | 71.48 |
| | 10/21/93 | ***22,000 | 2,300 | 1,700 | 1,400 | 5,100 | 12.97 | 0.00 | 71.41 |
| | 01/05/94 | ***37,000 | 1,600 | 1,100 | 1,300 | 6,500 | 12.42 | 0.00 | 71.96 |
| | 04/08/94 | 16,000 | 250 | 310 | 500 | 2,500 | 11.87 | 0.00 | 72.51 |
| | 07/06/94 | 43,000 | 660 | 320 | 1,900 | 6,400 | 12.74 | 0.00 | 71.64 |
| | 08/04/94 | --- | --- | --- | --- | --- | 12.67 | 0.00 | 71.71 |

TABLE 1
 HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
 Chevron Service Station No. 9-1583
 5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | DTW (ft) | SPT (ft) | WTE (ft) |
|------------------|----------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|
| MW-4 | 10/18/90 | --- | --- | --- | --- | --- | 15.75 | 0.00 | 68.50 |
| | 10/31/90 | <50 | <0.5 | <0.5 | <0.5 | 1 | 13.90 | 0.00 | 70.35 |
| 84 25 | 11/16/90 | --- | --- | --- | --- | --- | 14.25 | 0.00 | 70.00 |
| | 02/08/91 | 60 | 17 | 2 | 12 | <0.5 | 12.32 | 0.00 | 71.93 |
| | 05/08/91 | 65 | <0.5 | <0.5 | <0.5 | <0.5 | 12.23 | 0.00 | 72.02 |
| | 08/12/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 13.93 | 0.00 | 70.32 |
| | 11/07/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 13.42 | 0.00 | 70.83 |
| | 02/05/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 12.83 | 0.00 | 71.42 |
| | 05/13/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 13.28 | 0.00 | 70.97 |
| | 07/17/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 13.98 | 0.00 | 70.27 |
| | 10/05/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 14.23 | 0.00 | 70.02 |
| | 11/11/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/17/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/24/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/01/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/29/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/05/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/08/93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 10.16 | 0.00 | 74.09 |
| | 02/02/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 04/14/93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 12.04 | 0.00 | 72.21 |
| | 08/06/93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 13.91 | 0.00 | 70.34 |
| | 10/21/93 | <50 | <0.5 | <0.5 | <0.5 | 1 | 13.99 | 0.00 | 70.26 |
| | 01/05/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 12.95 | 0.00 | 71.30 |
| | 04/08/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 12.94 | 0.00 | 71.31 |
| | 07/06/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 13.68 | 0.00 | 70.57 |
| | 08/04/94 | --- | --- | --- | --- | --- | 13.54 | 0.00 | 70.71 |

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | DTW (ft) | SPT (ft) | WTE (ft) |
|------------------|----------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|
| MW-5 | 10/18/90 | --- | --- | --- | --- | --- | 10.78 | 0.00 | 71.17 |
| | 10/31/90 | 110 | <0.5 | <0.5 | <0.5 | <0.5 | 10.63 | 0.00 | 71.32 |
| 81.95 | 11/16/90 | --- | --- | --- | --- | --- | 10.68 | 0.00 | 71.27 |
| | 02/08/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.17 | 0.00 | 72.78 |
| | 05/08/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 8.68 | 0.00 | 73.27 |
| | 08/12/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 10.33 | 0.00 | 71.62 |
| | 11/07/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.76 | 0.00 | 72.19 |
| | 02/05/92 | **69 | <0.5 | <0.5 | <0.5 | <0.5 | 9.47 | 0.00 | 72.48 |
| | 05/13/92 | **74 | <0.5 | <0.5 | <0.5 | <0.5 | 9.70 | 0.00 | 72.25 |
| | 07/17/92 | 880 | 2.6 | <1.2 | 4.6 | 11 | 10.21 | 0.00 | 71.74 |
| | 10/05/92 | 120 | <0.5 | <0.5 | 0.6 | 4.9 | 10.61 | 0.00 | 71.34 |
| | 11/11/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/17/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/24/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/01/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/29/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/05/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/08/93 | **61 | <0.5 | <0.5 | <0.5 | <0.5 | 7.34 | 0.00 | 74.61 |
| | 02/02/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 04/14/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 08/06/93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.96 | 0.00 | 71.99 |
| | 10/21/93 | <50 | <0.5 | <0.5 | 2 | 4 | 10.06 | 0.00 | 71.89 |
| | 01/05/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.43 | 0.00 | 72.52 |
| | 04/08/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.39 | 0.00 | 72.56 |
| | 07/06/94 | <50 | 0.6 | <0.5 | <0.5 | <0.5 | 9.76 | 0.00 | 72.19 |
| | 08/04/94 | --- | --- | --- | --- | --- | 9.82 | 0.00 | 72.13 |

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | DTW (ft) | SPT (ft) | WTE (ft) |
|-------------------|----------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|
| MW-6 80.60 | 10/18/90 | --- | --- | --- | --- | --- | 9.79 | 0.00 | 70.81 |
| | 10/31/90 | <50 | <0.5 | <0.5 | <0.5 | 3 | 9.69 | 0.00 | 70.91 |
| | 11/16/90 | --- | --- | --- | --- | --- | 9.74 | 0.00 | 70.86 |
| | 02/08/91 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 05/08/91 | 56 | <0.5 | <0.5 | <0.5 | <0.5 | 9.54 | 0.00 | 71.06 |
| | 08/12/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.50 | 0.00 | 71.10 |
| | 11/07/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 8.89 | 0.00 | 71.71 |
| | 02/05/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 8.59 | 0.00 | 72.01 |
| | 05/13/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 07/17/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 10/05/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/11/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/17/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/24/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/01/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/29/92 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/05/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/08/93 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 02/02/93 | <50 | 2.1 | <0.5 | <0.5 | 2.2 | 7.71 | 0.00 | 72.89 |
| 04/14/93 | **<50 | 1 | <0.5 | <0.5 | <0.5 | 8.19 | 0.00 | 72.41 | |
| 08/06/93 | ***<50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.08 | 0.00 | 71.52 | |
| 10/21/93 | ***<50 | <0.5 | <0.5 | <0.5 | <0.5 | 9.14 | 0.00 | 71.46 | |
| 01/05/94 | ***<50 | 4 | <0.5 | <0.5 | <0.5 | 8.54 | 0.00 | 72.06 | |
| 04/08/94 | --- | --- | --- | --- | --- | --- | --- | --- | |
| inaccessible | 07/06/94 | --- | --- | --- | --- | --- | --- | --- | |
| | 08/04/94 | ***<50 | <0.5 | <0.5 | <0.5 | <0.5 | 8.94 | 0.00 | 71.66 |

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | TPH-as- Diesel | TPH-as Motor Oil | DTW (ft) | SPT (ft) | WTE (ft) |
|------------------|----------|---------------------|---------|---------|-------------------|---------|-------------------|---------------------|-------------|-------------|-------------|
| MW-7 86.36 | 03/08/94 | 1,200 | 440 | 31 | 73 | 200 | <10 | 4,100 | 11.37 | 0.00 | 74.99 |
| | 07/06/94 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 08/04/94 | 120 | 15 | <0.5 | 3.8 | 1.8 | --- | --- | 12.50 | 0.00 | 73.86 |
| MW-8 85.93 | 03/08/94 | 28,000 | 2,900 | 1,300 | 1,200 | 6,800 | <10 | <100 | 10.87 | 0.00 | 75.06 |
| | 07/06/94 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 08/04/94 | 22,000 | 3,000 | 260 | 870 | 4,400 | --- | --- | 12.16 | 0.00 | 73.77 |
| TBLB | 03/12/90 | <50 | <0.3 | <0.3 | <0.3 | <0.6 | --- | --- | --- | --- | --- |
| | 02/08/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 05/08/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 08/12/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 11/07/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 02/05/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 05/13/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 07/17/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 10/05/92 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 11/11/92 | --- | --- | <0.5 | --- | --- | --- | --- | --- | --- | --- |
| | 11/17/92 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 11/29/92 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/01/92 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/29/92 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/05/93 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 01/08/93 | <50 | <0.5 | --- | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 02/02/93 | --- | --- | <0.5 | --- | --- | --- | --- | --- | --- | --- |
| | 04/14/93 | <50 | <0.5 | --- | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 08/06/93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| | 10/21/93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- |
| 01/05/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- | |
| 04/08/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- | |
| 07/06/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- | |
| 08/04/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- | --- | --- | |

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

| Well ID/ Elev | Date | TPH-as- Gasoline | Benzene | Toluene | Ethyl- benzene | Xylenes | DTW (ft) | SPT (ft) | WTE (ft) |
|------------------|----------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|
| Rinsate | 01/05/94 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | --- | --- | --- |

- TPH = Total petroleum hydrocarbons
- DTW = Depth to water
- SPT = Separate-phase hydrocarbon thickness
- WTE = Water-table elevation
- = Not applicable/not sampled/not measured
- *81 97/82.42 = March 3, 1990, survey/November 30, 1990, survey
- ** = The laboratory reported that a nonstandard gasoline pattern was observed in the chromatogram
- *** = Uncategorized compound is not included in gasoline hydrocarbon total

All elevations are presented as feet above mean sea level.
Analytical results in micrograms per liter, equivalent to parts per billion.

ATTACHMENT 3

**Groundwater Monitoring and Sample Collection Protocol
and
Field Data Sheets**

GROUNDWATER TECHNOLOGY GROUNDWATER MONITORING AND SAMPLE COLLECTION PROTOCOL

Groundwater Monitoring

Groundwater monitoring is accomplished using a INTERFACE PROBE™ Well Monitoring System. The INTERFACE PROBE™ Well Monitoring System is a hand held, battery operated device for measuring the depth to separate-phase hydrocarbons and depth to water. The INTERFACE PROBE™ Well Monitoring System consists of a dual-sensing probe which utilizes an optical liquid sensor and electrical conductivity to distinguish between water and petroleum products.

Monitoring is accomplished by measuring from the surveyed top of well casing or grade to groundwater and separate-phase hydrocarbons if present. The static water elevation is then calculated for each well and a potentiometric surface map is constructed. If separate-phase hydrocarbons are detected the water elevation is adjusted by the following calculation:

$$(\text{Product thickness}) \times (0.8) + (\text{Water elevation}) = \text{Corrected water elevation}$$

Groundwater monitoring wells are monitored in order of wells with lowest concentrations of volatile organic compounds to wells with the highest concentrations, based upon historical concentrations. If separate-phase hydrocarbons are encountered in a well, the product is visually inspected to confirm and note color, amount, and viscosity. Monitoring equipment is washed with laboratory grade detergent and rinsed with distilled or deionized water before monitoring each well.

Groundwater Sampling

Before groundwater samples are collected, sufficient water is purged from each well to ensure representative formation water is entering the well. Wells are purged and sampled in the same order as monitoring, from wells with the lowest concentrations of volatile organic compounds to wells with the highest concentrations. Wells are purged using either a polyvinyl chloride (PVC) bailer fitted with a check valve or with a stainless steel submersible Grundfos pump. The purge equipment is decontaminated before use in each well by washing with laboratory grade detergent and triple rinsing with deionized or distilled water. A minimum of 3 well-casing volumes of water are removed from each well while pH, electrical conductivity, and temperature are recorded to verify that "fresh" formation water is being sampled and the parameters have stabilized. If the well is low yielding, it may be purged dry and sampled before 3 casing volumes are purged. The wells are then allowed to recharge to approximately 80 percent of the initial water level before a sample is collected.

Groundwater samples are collected from each well using a new, prepackaged disposable bailer and string. The water sample is decanted from the bailer into laboratory-provided containers (appropriate for the analyses required) so that there is no headspace in the containers. Samples collected for benzene, toluene, ethylbenzene, xylene, and total petroleum hydrocarbons (TPH)-as-gasoline analyses are collected in 40-milliliter vials fitted with Teflon® septum lids. Samples are preserved with hydrochloric acid (HCL) to a pH of less than 2. Dissolved metals samples are filtered through a 0.45-micron paper filter in the field and preserved as required before submitting to the laboratory for analyses. All samples are labeled immediately upon collection and logged on the chain-of-custody record. Sample label and chain-of-custody recorded information includes the project name and number, sample identification, date and time of collection, analyses requested, and the sampler's name. Sample bottles are placed in plastic bags (to protect the bottles and labels) and on ice (frozen water) in an insulated cooler and are shipped under chain-of-custody protocol to the laboratory.

The chain-of-custody record documents who has possession of the samples until the analyses is performed. Other pertinent information is also noted for the laboratory use on the chain-of-custody record.

Trip blanks (TBLBs) are used for each project as a quality assurance/quality control measure. The TBLBs are prepared by the laboratory and are placed in the insulated cooler and accompany the field samples throughout the sampling event.

Project Name: Chevron - Martin Luther King

Date: 7/6/94

Site Address: 5509 MLK Jr., Oakland

Page 1 of 6

Project Number: 020104101.0610

Project Manager: Ken Johnson

Well ID: MW-1

DTW Measurements:

Initial: 10.64

Calc Well Volume: 9.75 gal

Well Diameter: 3

Recharge: _____

Well Volume: _____ gal

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

Instruments Used
 YSI:
 Hydac: _____
 Omega: _____

Other: _____

| Time | Temp C F | Conductivity | pH | Purge Volume Gallons | Turbidity | Comments |
|-------|----------------|--------------|------|----------------------------|-----------|-------------------|
| 09:54 | 19.5 | 0.44 | 6.17 | 1 | HAZY | PRODUCT ODOE ↓ |
| 09:57 | 19.7 | 0.43 | 6.49 | 3 | HAZY | |
| 10:00 | 19.6 | 0.43 | 6.54 | 7 | HAZY | |
| 10:03 | 19.7 | 0.43 | 6.61 | 10 | HAZY | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Project Name: Chevron - Martin Luther King

Date: 7/6/94

Site Address: 5509 MLK Jr., Oakland

Page 2 of 6

Project Number: 020104101.0610

Project Manager: Ken Johnson

Well ID: MW-3

DTW Measurements:

Initial: 6.89 Calc Well Volume: 6.89 gal

Well Diameter: 3

Recharge: _____ Well Volume: _____ gal

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

Instruments Used
 YSI:
 Hydac: _____
 Omega: _____
 Other: _____

| Time | Temp C F | Conductivity | pH | Purge Volume Gallons | Turbidity | Comments |
|-------|----------------|--------------|------|-------------------------|-----------|-------------|
| 10:15 | 19.5 | 0.60 | 6.40 | 1 | HAZY | PRODUCT ODR |
| 10:18 | 19.8 | 0.59 | 6.50 | 3 | HAZY | ↓ |
| 10:20 | 19.8 | 0.60 | 6.54 | 5 | HAZY | |
| 10:23 | 20.0 | 0.60 | 6.56 | 7 | HAZY | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Project Name: Chevron - Martin Luther King

Date: 7/6/94

Site Address: 5509 MLK Jr., Oakland

Page 3 of 6

Project Number: 020104101.0610

Project Manager: Ken Johnson

Well ID: MW-4

DTW Measurements:

Well Diameter: 2

Initial: 13.68

Calc Well Volume: 5.77 gal

Recharge: _____

Well Volume: _____ gal

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

Instruments Used
 YSI:
 Hydac: _____
 Omega: _____
 Other: _____

| Time | Temp C F | Conductivity | pH | Purge Volume Gallons | Turbidity | Comments |
|-------|----------------|--------------|------|-------------------------|-----------|----------|
| 08:30 | 19.0 | 0.47 | 7.21 | 1 | CLOUDY | |
| 08:32 | 19.4 | 0.52 | 7.23 | 3 | CLOUDY | |
| 08:35 | 19.5 | 0.49 | 7.15 | 4 | CLOUDY | |
| 08:38 | 19.4 | 0.48 | 7.14 | 6 | CLOUDY | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Project Name: Chevron - Martin Luther King

Date: 7/6/94

Site Address: 5509 MLK Jr., Oakland

Page 4 of 6

Project Number: 020104101.0610

Project Manager: Ken Johnson

Well ID: MW-5

DTW Measurements:

Initial: 9.76 Calc Well Volume: 5.22 gal

Well Diameter: 2

Recharge: _____ Well Volume: _____ gal

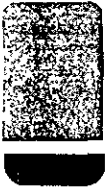
Purge Method _____ Pump Depth _____ ft.
 Peristaltic _____ Hand Bailed
 Gear Drive _____ Air Lift _____
 Submersible _____ Other _____

Instruments Used
 YSI:
 Hydac: _____
 Omega: _____

| Time | Temp | Conductivity | pH | Purge Volume Gallons | Turbidity | Comments |
|-------|---------------|--------------|------|----------------------|-----------|----------|
| | <u>C</u> F | | | | | |
| 08:55 | 18.5 | 0.41 | 6.38 | 1 | CLOUDY | |
| 08:59 | 18.8 | 0.38 | 6.40 | 2 | CLOUDY | |
| 09:04 | 18.6 | 0.39 | 6.62 | 4 | CLOUDY | |
| 09:07 | 18.6 | 0.38 | 6.57 | 6 | CLOUDY | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

ATTACHMENT 4

Laboratory Report



GTEL

ENVIRONMENTAL
LABORATORIES, INC.

4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

July 12, 1994

Ken Johnson
Groundwater Technology, Inc.
4057 Port Chicago Hwy
Concord, CA 94520

RE: GTEL Client ID: 020104101
Login Number: C4070105
Project ID (number): 020104101
Project ID (name): CHEVRON/#9-1583/Oakland, CA

Dear Ken Johnson:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 07/07/94.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the Department of Health Service under Certification Number E1075.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in cursive script, appearing to read "Rashmi Shah", with the word "For" written below it.

Rashmi Shah
Laboratory Director

GTEL Client ID: 020104101
 Login Number: C4070105
 Project ID (number): 020104101
 Project ID (name): CHEVRON/#9-1583/Oakland, CA

ANALYTICAL RESULTS

Volatile Organics
 Method: EPA 8020
 Matrix: Aqueous

| GTEL Sample Number | C4070105-01 | C4070105-02 | C4070105-03 | C4070105-04 |
|--------------------|-------------|-------------|-------------|-------------|
| Client ID | TBLB | MW-1 | MW-2 | MW-3 |
| Date Sampled | 07/06/94 | 07/06/94 | 07/06/94 | 07/06/94 |
| Date Analyzed | 07/10/94 | 07/10/94 | 07/10/94 | 07/10/94 |
| Dilution Factor | 1.00 | 10.0 | 1.00 | 10.0 |

| Analyte | Reporting | | Concentration: | | | |
|-----------------|-----------|-------|----------------|-------|-------|-------|
| | Limit | Units | | | | |
| Benzene | 0.5 | ug/L | < 0.5 | 210 | < 0.5 | 660 |
| Toluene | 0.5 | ug/L | < 0.5 | 100 | < 0.5 | 320 |
| Ethylbenzene | 0.5 | ug/L | < 0.5 | 540 | < 0.5 | 1900 |
| Xylenes (total) | 0.5 | ug/L | < 0.5 | 1200 | < 0.5 | 6400 |
| TPH as GAS | 50. | ug/L | < 50. | 28000 | < 50. | 43000 |
| BFB (Surrogate) | -- | % | 104. | 105. | 101. | 132. |

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Bromofluorobenzene surrogate recovery acceptability limits are 62-129%. Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL Concord, CA
 C4070105:1



GTEL Client ID: 020104101 ANALYTICAL RESULTS
 Login Number: C4070105
 Project ID (number): 020104101
 Project ID (name): CHEVRON/#9-1583/Oakland, CA

Volatile Organics
 Method: EPA 8020
 Matrix: Aqueous

| GTEL Sample Number | C4070105-05 | C4070105-06 |
|--------------------|-------------|-------------|
| Client ID | MW-4 | MW-5 |
| Date Sampled | 07/06/94 | 07/06/94 |
| Date Analyzed | 07/10/94 | 07/10/94 |
| Dilution Factor | 1.00 | 1.00 |

| Analyte | Reporting | | Concentration: | | | |
|-----------------|-----------|-------|----------------|-------|----|----|
| | Limit | Units | | | | |
| Benzene | 0.5 | ug/L | < 0.5 | 0.6 | -- | -- |
| Toluene | 0.5 | ug/L | < 0.5 | < 0.5 | -- | -- |
| Ethylbenzene | 0.5 | ug/L | < 0.5 | < 0.5 | -- | -- |
| Xylenes (total) | 0.5 | ug/L | < 0.5 | < 0.5 | -- | -- |
| TPH as GAS | 50. | ug/L | < 50. | < 50. | -- | -- |
| BFB (Surrogate) | -- | % | 105. | 98.3 | -- | -- |

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Bromofluorobenzene surrogate recovery acceptability limits are 62-129% Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL Concord, CA
 C4070105:2



GTEL Client ID: 020104101 QUALITY CONTROL RESULTS
Login Number: C4070105
Project ID (number): 020104101
Project ID (name): CHEVRON/#9-1583/Oakland, CA

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

Method Blank Results

QC Batch No: E071094-1
Date Analyzed: 10-JUL-94

| Analyte | Method: EPA 8020 | Concentration: ug/L |
|-----------------|------------------|---------------------|
| Benzene | < 0.30 | |
| Toluene | < 0.30 | |
| Ethylbenzene | < 0.30 | |
| Xylenes (Total) | < 0.50 | |
| TPH as Gasoline | < 10. | |

Notes

GTEL Client ID: 020104101
 Login Number: C4070105
 Project ID (number): 020104101
 Project ID (name): CHEVRON/#9-1583/Oakland, CA

QUALITY CONTROL RESULTS

Volatile Organics
 Method: EPA 8020
 Matrix: Aqueous

Matrix Spike and Matrix Spike Duplicate Results

| Analyte | Original Concentration | Spike Amount | Matrix Spike | Matrix Spike | Matrix Spike Duplicate | Matrix Spike Duplicate | RPD. % | Acceptability Limits | |
|-----------------|----------------------------|--------------|--------------------|--------------|------------------------|------------------------|--------|----------------------|-------------|
| | | | Concentration | Recovery, % | Concentration | Recovery, % | | RPD. % | Recovery, % |
| EPA 8020 | GTEL Sample ID:C4070108-05 | | Spike ID:E071094-3 | | Dup. ID:E071094-4 | | | | |
| Units: ug/L | Analysis Date:10-JUL-94 | | 10-JUL-94 | | 10-JUL-94 | | | Client ID:Batch QC | |
| Benzene | < 0.50 ** | 20.0 | 21.0 | 105. | 20.2 | 101. | 3.8 | 34 | 57.3-138% |
| Toluene | < 0.50 ** | 20.0 | 20.0 | 100. | 19.0 | 95.0 | 5.1 | 31 | 63-134% |
| Ethylbenzene | < 0.50 ** | 20.0 | 18.9 | 94.5 | 17.4 | 87.0 | 8.2 | 38 | 59.3-137% |
| Xylenes (Total) | < 0.50 | 60.0 | 52.3 | 86.6 | 46.4 | 76.8 | 12 | 31 | 59.3-144% |

Notes:

** : C4070108-05: Benzene: For data validation purposes an estimated concentration of 0.158, which is below the reporting limit, was used to calculate the spike recovery results.

C4070108-05: Toluene: For data validation purposes an estimated concentration of 0.337, which is below the reporting limit, was used to calculate the spike recovery results.

C4070108-05: Ethylbenzene: For data validation purposes an estimated concentration of 0.382, which is below the reporting limit, was used to calculate the spike recovery results.

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

Chain-of-Custody-Record

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

Chevron Facility Number 9-15E3
Facility Address 5504 MARTIN LUTHER KING HWY
Consultant Project Number 02210 4101
Consultant Name GROUNDWATER TECHNOLOGY
Address 4057 PORT CHICAGO HWY CONCORD, CA
Project Contact (Name) KEN JOHNSON
(Phone) 671-2387 (Fax Number) _____

Chevron Contact (Name) MARK MILLER
(Phone) 510/842-8134
Laboratory Name GTEL
Laboratory Release Number 870-6770
Samples Collected by (Name) MARK STOUFFER
Collection Date 7/6/94
Signature Mark Stouffer

| Sample Number | Lab Sample Number | Number of Containers | Matrix S = Soil W = Water A = Air C = Charnool | Type C = Grab C = Composites D = Discrete | Time | Sample Preservation | Iced (Yes or No) | Analysis To Be Performed | | | | | | | | | | | NOTE: Do Not Bill TB-185 3c Remarks | | | | | |
|---------------|-------------------|----------------------|------------------------------------------------------------|----------------------------------------------------|-------|---------------------|------------------|--------------------------------|----------------------|--------------------------|----------------------------------|-------------------------------|------------------------------|--------------------------------|----------------------------------------------|--|--|--|-------------------------------------------------|--|--|--|--|--|
| | | | | | | | | BTX + TPH GAS (8020 + 8015) | TPH Diesel (8015) | Oil and Grease (5520) | Purgeable Hydrocarbons (8010) | Purgeable Aromatics (8020) | Purgeable Organics (8240) | Extractable Organics (8270) | Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA) | | | | | | | | | |
| | TBLS | 01 | 2 | W | 12:00 | HCL | Y | X | | | | | | | | | | | | | | | | |
| <10 ND | MW-1 | 02 | 3 | | 11:00 | | | X | | | | | | | | | | | | | | | | |
| A10 ND | MW-2 | 03 | 3 | | 10:55 | | | X | | | | | | | | | | | | | | | | |
| ND | MW-3 | 04 | 3 | | 11:05 | | | X | | | | | | | | | | | | | | | | |
| ND | MW-4 | 05 | 3 | | 10:50 | | | X | | | | | | | | | | | | | | | | |
| | MW-5 | 06 | 3 | | 10:40 | V | V | X | | | | | | | | | | | | | | | | |
| | MW-6 | 07 | 3 | V | | | | X | | | | | | | | | | | | | | | | |

C4070105

| | | | | | | |
|-----------------------------------------------------|-----------------------------|----------------------------|----------------------------------------------|-----------------------------|----------------------------|---------------------------------------------------------------------------------------------|
| Relinquished By (Signature) <u>Mark Stouffer</u> | Organization <u>GTEL</u> | Date/Time <u>7/6/94</u> | Received By (Signature) <u>John Weber</u> | Organization <u>GTEL</u> | Date/Time <u>7-7-94</u> | Turn Around Time (Circle Check) 24 hrs. 48 hrs. 6 Days 10 Days As Contracted |
| Relinquished By (Signature) <u>John Weber</u> | Organization <u>GTEL</u> | Date/Time <u>7-7-94</u> | Received By (Signature) <u>John Weber</u> | Organization <u>GTEL</u> | Date/Time <u>7-7-94</u> | |
| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time | |



GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080 Pike Lane, Suite C
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
FAX (510) 825-0720

August 12, 1994

Ken Johnson
Groundwater Technology, Inc.
4057 Port Chicago Hwy
Concord, CA 94520

RE: GTEL Client ID: 020104101
Login Number: C4080096
Project ID (number): 020104101
Project ID (name): CHEVRON/Martin Luther King Way

Dear Ken Johnson:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 08/05/94.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the Department of Health Service under Certification Number E1075.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Rashmi Shah
Laboratory Director

GTEL Client ID: 020104101 QUALITY CONTROL RESULTS
 Login Number: C4080096
 Project ID (number): 020104101
 Project ID (name): CHEVRON/Martin Luther King Way

Volatile Organics
 Method: EPA 8020
 Matrix: Aqueous

Matrix Spike and Matrix Spike Duplicate Results

| Analyte | Original Concentration | Spike Amount | Matrix Spike | Matrix Spike | Matrix Spike Duplicate | Matrix Spike Duplicate | RPD. % | Acceptability Limits | |
|-----------------|----------------------------|--------------|--------------------|--------------|------------------------|------------------------|--------|----------------------|-------------|
| | | | Concentration | Recovery. % | Concentration | Recovery. % | | RPD. % | Recovery. % |
| EPA 8020 | GTEL Sample ID:C4080013-09 | | Spike ID:Q080694-3 | | Dup. ID:Q080694-4 | | | | |
| Units: ug/L | Analysis Date:03-AUG-94 | | 06-AUG-94 | | 07-AUG-94 | | | Client ID:Batch QC | |
| Benzene | < 0.50 | 20.0 | 17.3 | 86.0 | 18.0 | 89.5 | 3.9 | 34 | 57.3-138% |
| Toluene | < 0.50 | 20.0 | 16.8 | 83.2 | 17.5 | 86.7 | 4.1 | 31 | 63-134% |
| Ethylbenzene | < 0.50 | 20.0 | 17.4 | 87.0 | 18.1 | 90.5 | 3.9 | 38 | 59.3-137% |
| Xylenes (Total) | < 0.50 | 60.0 | 49.7 | 82.3 | 51.4 | 85.1 | 3.3 | 31 | 59.3-144% |

Notes:

GTEL Client ID: 020104101 ANALYTICAL RESULTS
 Login Number: C4080096
 Project ID (number): 020104101
 Project ID (name): CHEVRON/Martin Luther King Way

Volatile Organics
 Method: EPA 8020
 Matrix: Aqueous

| GTEL Sample Number | C4080096-01 | C4080096-02 | C4080096-03 | C4080096-04 |
|--------------------|-------------|-------------|-------------|-------------|
| Client ID | TBLB | MW 6 | MW 7 | MW 8 |
| Date Sampled | 08/04/94 | 08/04/94 | 08/04/94 | 08/04/94 |
| Date Analyzed | 08/06/94 | 08/07/94 | 08/10/94 | 08/07/94 |
| Dilution Factor | 1.00 | 1.00 | 1.00 | 1.00 |

| Analyte | Reporting | | Concentration: | | | |
|-----------------|-----------|-------|----------------|-------|-------|-------|
| | Limit | Units | | | | |
| Benzene | 0.5 | ug/L | < 0.5 | < 0.5 | 15. | 3000 |
| Toluene | 0.5 | ug/L | < 0.5 | < 0.5 | < 0.5 | 260 |
| Ethylbenzene | 0.5 | ug/L | < 0.5 | < 0.5 | 3.8 | 870 |
| Xylenes (total) | 0.5 | ug/L | < 0.5 | < 0.5 | 1.8 | 4400 |
| TPH as GAS | 50. | ug/L | < 50. | < 50. | 120 | 22000 |
| BFB (Surrogate) | -- | % | 93.3 | 90.4 | 115. | 91.6 |

Notes:

Dilution Factor.

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020

Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846, Third Edition, Revision 1, US EPA November 1986 Bromofluorobenzene surrogate recovery acceptability limits are 62-129% Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual protocols, May 1988 revision.

C4080096-02.

Heptachlorized compound is not included in gasoline concentration

C4080096-03.

Heptachlorized compound is not included in gasoline concentration

C4080096-04.

Heptachlorized compound is not included in gasoline concentration

GTEL Concord, CA
 C4080096-1



GTEL Client ID: 020104101 QUALITY CONTROL RESULTS
Login Number: C4080096
Project ID (number): 020104101
Project ID (name): CHEVRON/Martin Luther King Way

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

Method Blank Results

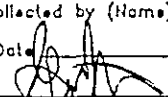
QC Batch No: Q080694-1
Date Analyzed: 06-AUG-94

| Analyte | Method: EPA 8020 | Concentration: ug/L |
|-----------------|------------------|---------------------|
| Benzene | < 0.30 | |
| Toluene | < 0.30 | |
| Ethylbenzene | < 0.30 | |
| Xylenes (Total) | < 0.50 | |
| TPH as Gasoline | < 10. | |

Notes:

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

Chain-of-Custody-Record

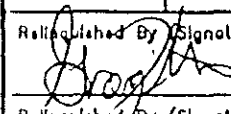
| | | |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591 | Chevron Facility Number _____ Facility Address <u>5509 M.L.K. Way</u> Consultant Project Number <u>020104101</u> Consultant Name <u>Groundwater Tech</u> Address <u>4057 port chicago Hwy Concord 94520</u> Project Contact (Name) <u>KRN Johnson</u> (Phone) <u>(510) 671-2397</u> (Fax Number) _____ | Chevron Contact (Name) <u>Mark Miller</u> (Phone) _____ Laboratory Name <u>GTEL</u> Laboratory Release Number <u>376-6770</u> Samples Collected by (Name) <u>Greg MASON</u> Collection Date <u>8/4/94</u> Signature  |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Sample Number | Lab Sample Number | Number of Containers | Matrix S = Soil W = Water C = Charcoal | Type C = Composite D = Discrete | Time | Sample Preservation | Iced (Yes or No) | Analysis To Be Performed | | | | | | | | | | | | | | | | |
|-----------------|-------------------|----------------------|----------------------------------------------|---------------------------------------|------------------|---------------------|------------------|---------------------------------|----------------------|--------------------------|---------------------------------|-------------------------------|------------------------------|--------------------------------|----------------------------------------------|--|--|--|--|--|--|--|--|--|
| | | | | | | | | 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) | | | | | | | | | |
| TBLB | 01 | 2 | W | D | 11:45 | HCl | Y | X | | | | | | | | | | | | | | | | |
| TBLB | 01 | 2 | W | D | 11:45 | HCl | Y | X | | | | | | | | | | | | | | | | |
| MW 6 | 02 | 3 | ↓ | ↓ | 12:00 | ↓ | ↓ | X | | | | | | | | | | | | | | | | |
| 7 | 03 | 3 | ↓ | ↓ | 12:15 | ↓ | ↓ | X | | | | | | | | | | | | | | | | |
| 8 | 04 | 3 | ↓ | ↓ | 12:30 | ↓ | ↓ | X | | | | | | | | | | | | | | | | |

NOTE:
 Do NOT BILL
 TB-LB SAMPLE!
40
 Remarks

U. Kellogg 8/8

C4080096

| | | | | | | |
|-------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------|----------------------------------------------------------|----------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Relinquished By (Signature)  | Organization GTEL | Date/Time 8/5/94 8:30 | Received By (Signature) John Weber | Organization GTEL | Date/Time 8:30 | Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <input checked="" type="radio"/> As Contracted |
| Relinquished By (Signature) John Weber | Organization GTEL | Date/Time 8/5/94 9:00 | Received By (Signature) | Organization | Date/Time | |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) Kevin Molander | Organization | Date/Time 8:5-94 | |