GROUNDWATER TECHNOLOGY, INC.

1401 Halyard Drive, Suite 140, West Sacramento, CA 95691, (916) 372-4700
FAX (916) 372-8781

April 24, 1992

Project No. 02320 1383

Mr. R. R. Zielinski
Texaco Environmental Services
108 Cutting Boulevard
Richmond, California 94804

RE: QUARTERLY STATUS REPORT (R-2 OF 92)
FORMER TEXACO SERVICE STATION
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Dear Mr. Zielinski:

This letter is presented as a quarterly report on groundwater conditions at the former Texaco service station site in Livermore, California for the quarter of February through April 1992. Groundwater monitoring and sampling were conducted to determine water table elevation, the thickness of any separate-phase petroleum hydrocarbons (SP), and the distribution of dissolved hydrocarbons in the 10 monitoring wells (MWs) at this site. Groundwater monitoring data and results of laboratory analyses of groundwater samples collected on April 2, 1992 are included.

## WORK PERFORMED

### GROUNDWATER MONITORING

Water table elevations at the site have increased an average of 1.04 feet from levels reported the previous quarter. The potentiometric surface map indicates that groundwater beneath the site flows to the north-northwest with a hydraulic gradient of approximately 0.04 (Figure 1). Historical and recent monitoring data are summarized in Table 1.

### *GROUNDWATER SAMPLING*

Prior to water-sample collection, the groundwater monitoring wells were purged until pH, temperature and conductivity readings were stable or until the wells bailed dry (Table 2). A Teflon® sampler, cleaned with an industrial detergent and distilled water, was used for the groundwater sampling. The water samples were transferred to 40-milliliter glass vials with Teflon® septum caps, preserved on ice, and transported to a California state-certified laboratory, accompanied by a chain-of-custody manifest.

Groundwater samples were analyzed using modified EPA methods 8020/8015, which measure concentrations of total petroleum hydrocarbons-as-gasoline (TPH-G), and benzene, toluene, ethylbenzene and xylenes (BTEX).

**GROUNDWATER ANALYTICAL RESULTS**

Concentrations of TPH-G in the April 2, 1992 groundwater samples ranged from below the method detection limit (<MDL) to 27,000 parts per billion (ppb) (Figure 2). Dissolved benzene concentrations ranged from <MDL to 1,200 ppb (Figure 3). Monitoring wells MW-A and MW-B which contained SP the past two quarters, did not contain SP this quarter. Historical and recent analytical data are summarized in Table 3. Copies of the laboratory analyses reports and the chain-of-custody manifest for the April 2, 1992 samples are included in Attachment I.

**WASTEWATER DISPOSAL**

Wastewater generated during purging and sampling of the 10 monitoring wells is stored on site in Department of Transportation (DOT)-approved 55-gallon drums. Purge water is characterized as non-hazardous waste, based on the laboratory analyses of the water samples obtained from the monitoring wells. Transportation and disposal of the wastewater is performed on a quarterly basis.

Please contact Groundwater Technology's West Sacramento office if you have questions or comments regarding this quarterly report.

Sincerely,

GROUNDWATER TECHNOLOGY, INC.

Danise M. Scriven

DANISE M. SCRIVEN
Project Geologist

John E Bower

JOHN E. BOWER, R.E.A.
Environmental Geologist
Project Manager

E K Simonis

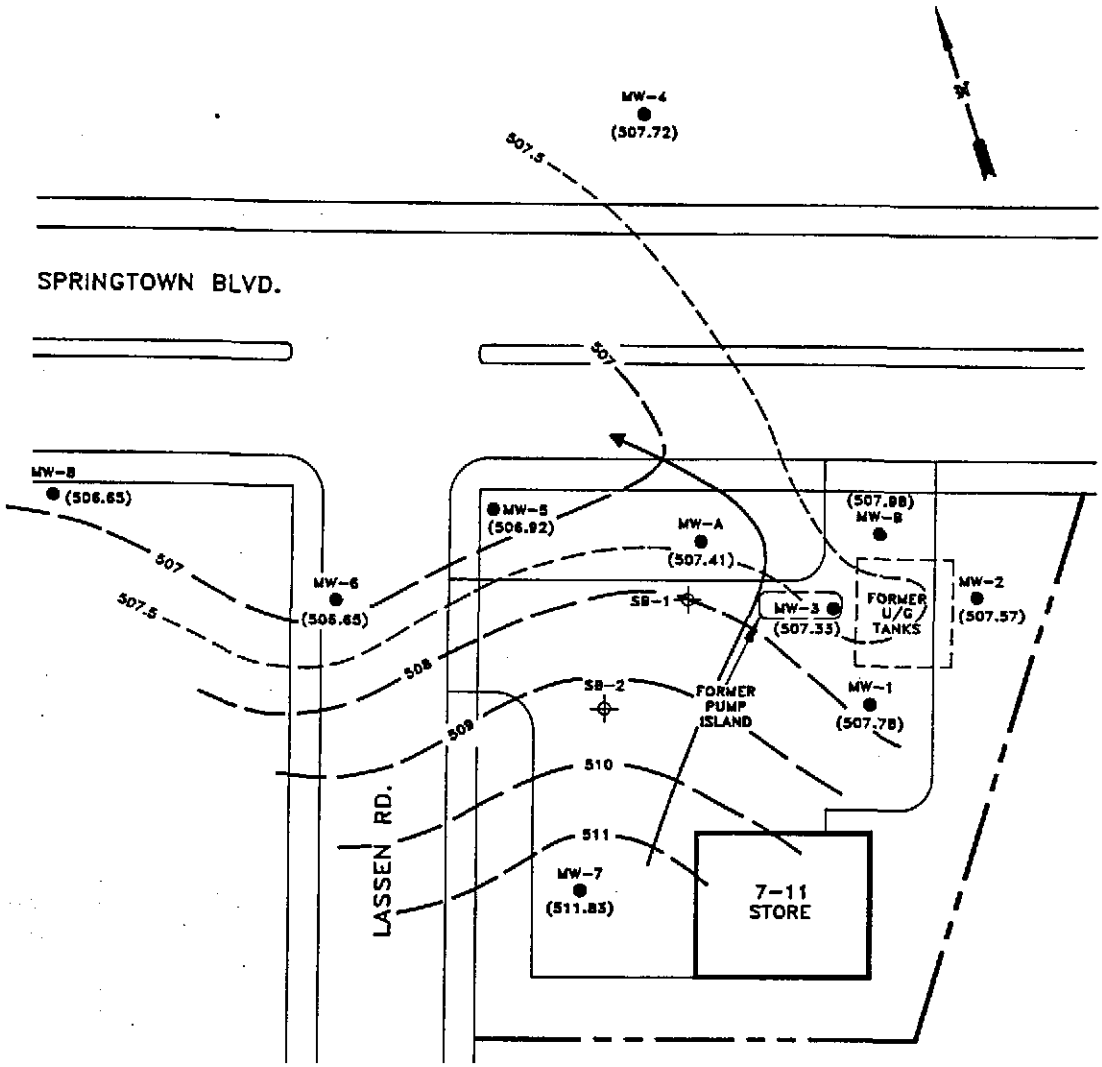
E. K. SIMONIS, R.G.
Senior Environmental Geologist

REGISTERED GEOLOGIST
EDWARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

DMS/JEB/EKS:rc

Attachments
1383QSR.R2

cc: Ms. Karel Detterman, Texaco Environmental Services




## LEGEND

- ● GROUNDWATER MONITORING WELL
- ⊕ SOIL BORING
- (506.65) POTENTIOMETRIC SURFACE ELEVATION (FT.)
- POTENTIOMETRIC SURFACE; CONTOUR INTERVAL=1FT. & 0.5 FT.
- ESTIMATED GROUNDWATER FLOW DIRECTION

0 40 80
SCALE FEET

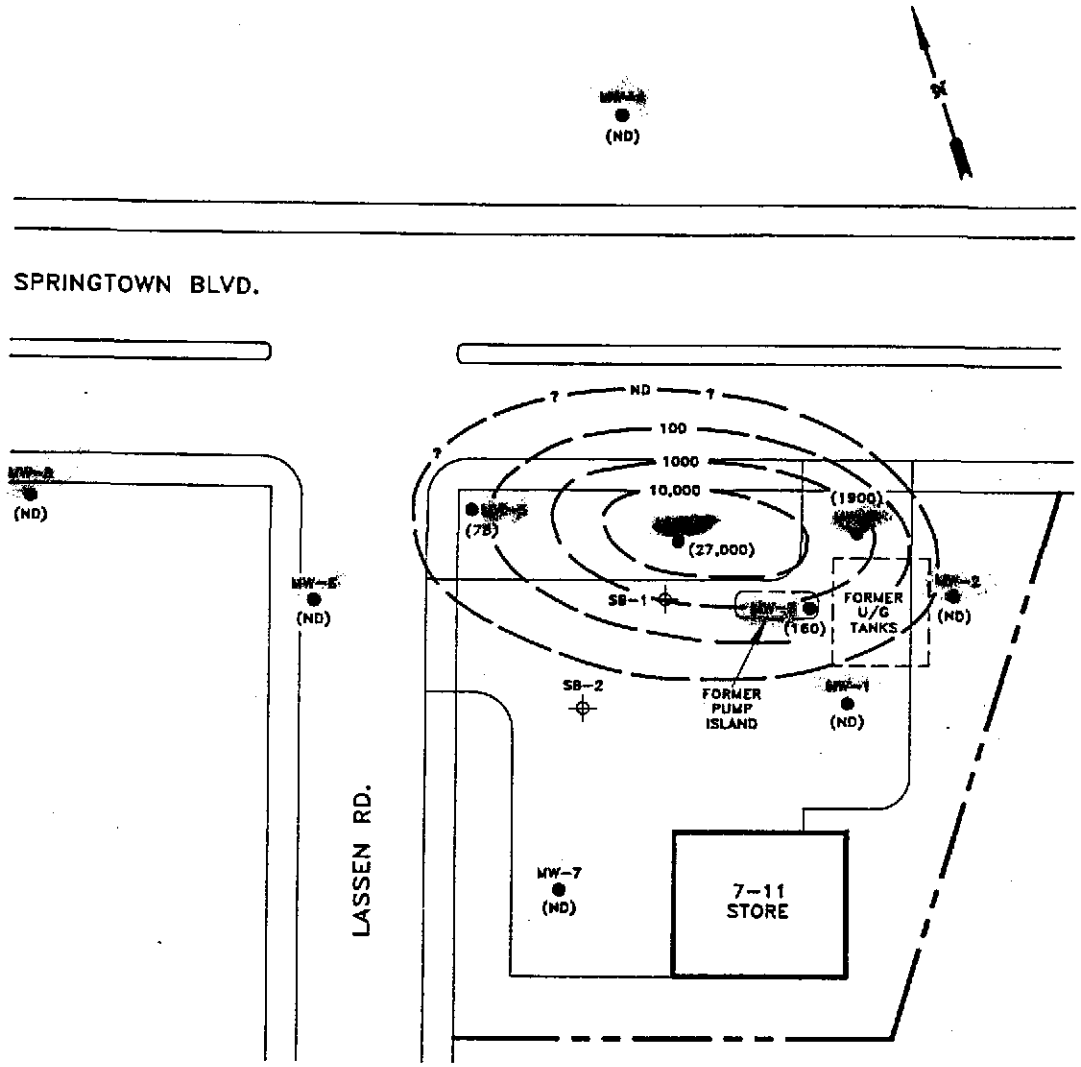
GROUNDWATER TECHNOLOGY
1401 HALYARD DR. #140
W. SACRAMENTO, CA. 95691
(916) 372-4700

| REV. NO.: | DATE: | ACAD FILE: |
|---|---|---|
| 1 | 4/10/92 | POT4292 |

# POTENTIOMETRIC SURFACE MAP
(DATUM: MEAN SEA LEVEL)
APRIL 2, 1992

| CLIENT: | PM |
|---|---|
| TEXACO REFINING & MARKETING INC. | |
| LOCATION: 930 SPRINGTOWN BLVD. LIVERMORE, CALIFORNIA | PE/RG |

| DESIGNED | DETAILED | PROJECT NO.: | FIGURE: |
|---|---|---|---|
| DS | GWS | 02320-1383 | 1 |




## LEGEND

- ● GROUNDWATER MONITORING WELL
- ⌖ SOIL BORING
- (1900) DISSOLVED TPH-G CONCENTRATION (ppb)
- (ND) NOT DETECTABLE AT OR ABOVE *METHOD DETECTION LIMIT*
- ⌒ LINE OF ESTIMATED EQUAL DISSOLVED TPH-G CONCENTRATION (ppb)

plume 95 x 175' 75 x 140

0 40 80
SCALE FEET

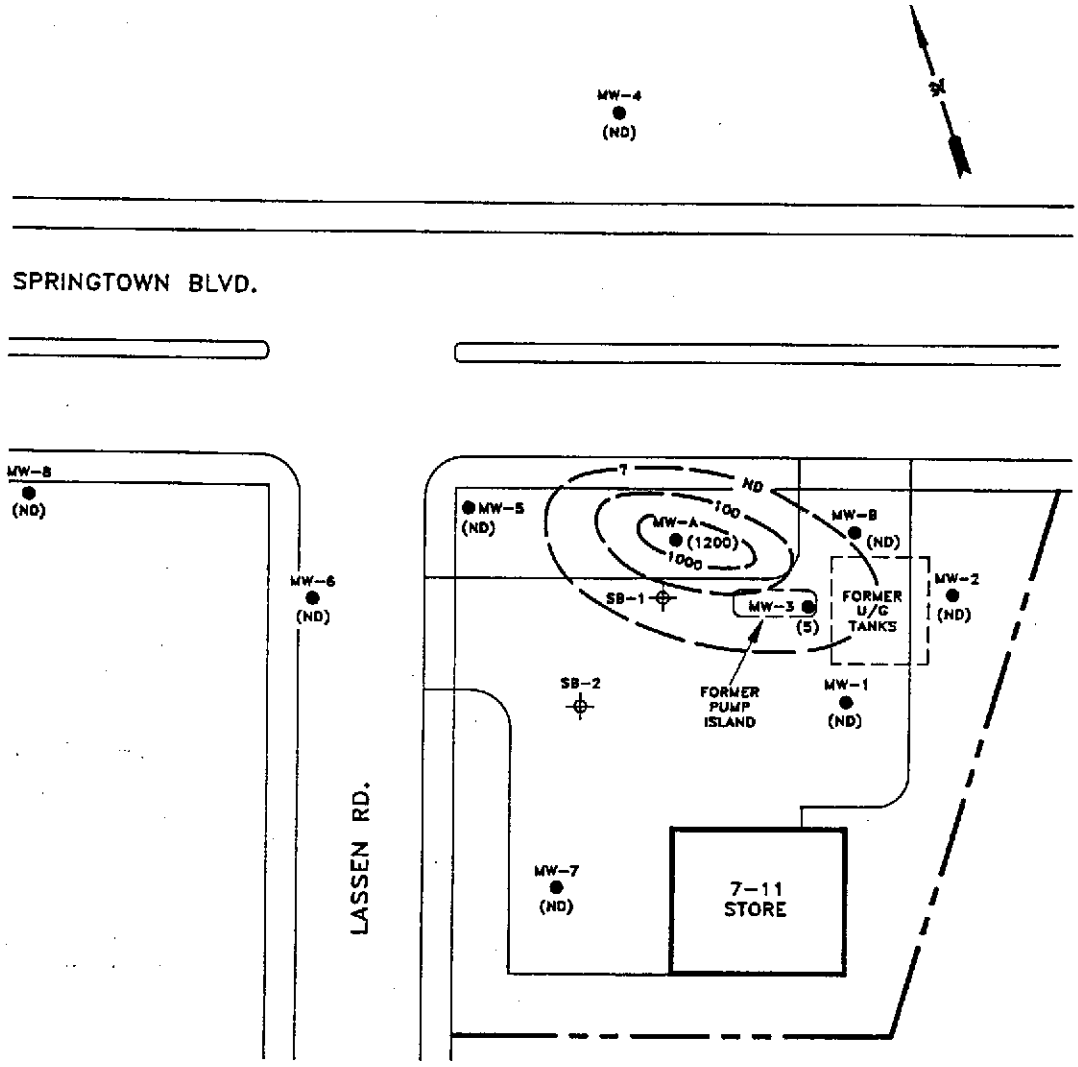
GROUNDWATER TECHNOLOGY
1401 HALYARD DR. #140
W. SACRAMENTO, CA. 95691
(916) 372-4700

| REV. NO.: | DATE: | ACAD FILE: |
|---|---|---|
| 1 | 4/22/92 | TPG4292 |

**DISSOLVED TPH-G CONCENTRATION MAP**
(IN PARTS PER BILLION [ppb])
APRIL 2, 1992

| CLIENT: | PM |
|---|---|
| TEXACO REFINING & MARKETING INC. | |
| LOCATION: 930 SPRINGTOWN BLVD. LIVERMORE, CALIFORNIA | PE/RG |

| DESIGNED | DETAILED | PROJECT NO.: | FIGURE: |
|---|---|---|---|
| DS | GWS | 02320-1383 | 2 |




## LEGEND

- ● GROUNDWATER MONITORING WELL
- ⌖ SOIL BORING
- (1200) DISSOLVED BENZENE CONCENTRATION (ppb)
- (ND) NOT DETECTABLE AT OR ABOVE METHOD DETECTION LIMIT
- ⌒ LINE OF ESTIMATED EQUAL DISSOLVED BENZENE CONCENTRATION (ppb)

0 40 80
SCALE FEET

GROUNDWATER TECHNOLOGY
1401 HALYARD DR. #140
W. SACRAMENTO, CA. 95691
(916) 372-4700

| REV. NO.: | DATE: | ACAD FILE: |
|---|---|---|
| 1 | 4/22/92 | BEN4292 |

# DISSOLVED BENZENE CONCENTRATION MAP
(IN PARTS PER BILLION [ppb])
APRIL 2, 1992

| CLIENT: | | PM |
|---|---|---|
| TEXACO REFINING & MARKETING INC. | | |
| LOCATION: 930 SPRINGTOWN BLVD. LIVERMORE, CALIFORNIA | | PE/RG |
| DESIGNED: DS | DETAILED: GWS | PROJECT NO.: 02320-1383 | FIGURE: 3 |

# Table 1
## CUMULATIVE GROUNDWATER MONITORING SUMMARY
(in feet)

Former Texaco Service Station
930 Springtown Boulevard
Livermore, California

| WELL I. D. | DATE MONITORED | WELL ELEVATION | DEPTH TO WATER | WATER TABLE ELEVATION | COMMENTS |
|---|---|---|---|---|---|
| MW-A | 01/10/91 | 519.85 | 13.28 | 506.57 | |
| | 04/04/91 | | 12.12 | 507.73 | |
| | 07/12/91 | | 12.95 | 506.90 | |
| | 10/04/91 | | 13.98 | 505.87 | Trace SP |
| | 01/02/92 | | 13.61 | 506.24 | Trace SP |
| | 04/02/92 | | 12.44 | 507.41 | |
| MW-B | 01/10/91 | 518.16 | 11.06 | 507.10 | |
| | 04/04/91 | | 10.04 | 508.12 | |
| | 07/12/91 | | 10.91 | 507.25 | |
| | 10/04/91 | | 11.82 | 506.34 | Trace SP |
| | 01/02/92 | | 11.27 | 506.89 | Trace SP |
| | 04/02/92 | | 10.18 | 507.98 | |
| MW-1 | 01/10/91 | 520.76 | 13.80 | 506.96 | |
| | 04/04/91 | | 12.70 | 508.06 | |
| | 07/12/91 | | 13.55 | 507.21 | |
| | 10/04/91 | | 14.52 | 506.24 | |
| | 01/02/92 | | 14.11 | 506.65 | |
| | 04/02/92 | | 12.98 | 507.78 | |
| MW-2 | 01/10/91 | 518.46 | 11.66 | 506.80 | |
| | 04/04/91 | | 10.61 | 507.85 | |
| | 07/12/91 | | 11.48 | 506.98 | |
| | 10/04/91 | | 12.35 | 506.11 | |
| | 01/02/92 | | 11.96 | 506.50 | |
| | 04/02/92 | | 10.89 | 507.57 | |
| MW-3 | 01/10/91 | 519.30 | 12.84 | 506.46 | |
| | 04/04/91 | | 11.71 | 507.59 | |
| | 07/12/91 | | 12.54 | 506.76 | |
| | 10/04/91 | | 13.47 | 505.83 | |
| | 01/02/92 | | 12.87 | 506.43 | |
| | 04/02/92 | | 11.97 | 507.33 | |
| MW-4 | 01/10/91 | 518.75 | 12.02 | 506.73 | |
| | 04/04/91 | | 10.72 | 508.03 | |
| | 07/12/91 | | 11.78 | 506.97 | |
| | 10/04/91 | | 12.30 | 506.45 | |
| | 01/02/92 | | 12.22 | 506.53 | |
| | 04/02/92 | | 11.03 | 507.72 | |

Table 1 (continued)



| WELL I.D. | DATE MONITORED | WELL ELEVATION | DEPTH TO WATER | WATER TABLE ELEVATION | COMMENTS |
|---|---|---|---|---|---|
| MW-5 | 01/10/91 | 520.50 | 14.33 | 506.17 | |
| | 04/04/91 | | 13.26 | 507.24 | |
| | 07/12/91 | | 14.14 | 506.36 | |
| | 10/04/91 | | 14.96 | 505.54 | |
| | 01/02/92 | | 14.56 | 505.94 | |
| | 04/02/92 | | 13.58 | 506.92 | |
| MW-6 | 01/10/91 | 522.26 | 16.31 | 505.95 | |
| | 04/04/91 | | 15.19 | 507.07 | |
| | 07/12/91 | | NA | NA | |
| | 10/04/91 | | 16.90 | 505.36 | |
| | 01/02/92 | | 16.64 | 505.62 | |
| | 04/02/92 | | 15.61 | 506.65 | |
| MW-7 | 01/10/91 | 522.17 | 9.07 | 513.10 | |
| | 04/04/91 | | 7.59 | 514.58 | |
| | 07/12/91 | | 9.26 | 512.91 | |
| | 10/04/91 | | 10.53 | 511.64 | |
| | 01/02/92 | | 11.17 | 511.00 | |
| | 04/02/92 | | 10.34 | 511.83 | |
| MW-8 | 01/10/91 | 524.04 | 18.03 | 506.01 | |
| | 04/04/91 | | 17.01 | 507.03 | |
| | 07/12/91 | | 17.82 | 506.22 | |
| | 10/04/91 | | 18.70 | 505.34 | |
| | 01/02/92 | | 18.42 | 505.62 | |
| | 04/02/92 | | 17.39 | 506.65 | |

**NOTES:**
SP = Separate-phase petroleum hydrocarbons
NA = Not Available

GMSTAB1.WK1

# Table 2
## pH, TEMPERATURE AND CONDUCTIVITY FIELD DATA
April 2, 1992

Texaco Service Station
930 Springtown Boulevard
Livermore, California

| WELL I.D. | GALLONS PURGED | pH | TEMPERATURE (°F) | CONDUCTIVITY (mhos) |
|---|---|---|---|---|
| MW-A | Initial | 7.2 | 69 | 1,180 |
| | 2 | 7.1 | 69 | 1,200 |
| | 4 | 7.0 | 68 | 1,200 |
| | 6 | 6.9 | 68 | 1,200 |
| | 8 | 6.9 | 68 | 1,200 |
| MW-B | Initial | 7.1 | 69 | 1,190 |
| | 2 | 7.0 | 69 | 1,210 |
| | 4 | 6.9 | 68 | 1,220 |
| | 6 | 6.9 | 68 | 1,230 |
| | 8 | 6.9 | 68 | 1,230 |
| MW-1 | Initial | 7.7 | 68 | 1,110 |
| | 2 | 7.7 | 67 | 1,130 |
| | 4 | 7.6 | 67 | 1,120 |
| | 6 | 7.6 | 66 | 1,110 |
| | 8 | 7.6 | 66 | 1,110 |
| MW-2 | Initial | 8.1 | 68 | 1,060 |
| | 2 | 7.9 | 67 | 1,090 |
| | 4 | 7.7 | 66 | 1,100 |
| | 6 | 7.6 | 66 | 1,080 |
| | 8 | 7.7 | 65 | 1,090 |
| | 10 | 7.7 | 65 | 1,090 |
| MW-3 | Initial | 7.4 | 69 | 1,010 |
| | 2 | 7.3 | 69 | 1,040 |
| | 4 | 7.3 | 68 | 1,050 |
| | 6 | 7.4 | 68 | 1,060 |
| | 8 | 7.4 | 68 | 1,060 |
| | 10 | Dry | Dry | Dry |
| MW-4 | Initial | 8.0 | 67 | 1,060 |
| | 2 | 7.8 | 66 | 1,090 |
| | 4 | 7.8 | 66 | 1,100 |
| | 6 | 7.7 | 65 | 1,080 |
| | 8 | 7.6 | 65 | 1,090 |
| | 10 | 7.6 | 65 | 1,090 |

Table 2 (continued)



| WELL I.D. | GALLONS PURGED | pH | TEMPERATURE (°F) | CONDUCTIVITY (mhos) |
|---|---|---|---|---|
| MW-5 | Initial | 8.0 | 68 | 1,080 |
| | 2 | 7.8 | 67 | 1,100 |
| | 4 | 7.7 | 67 | 1,110 |
| | 6 | 7.7 | 66 | 1,110 |
| | 8 | 7.7 | 66 | 1,110 |
| MW-6 | Initial | 7.9 | 68 | 1,080 |
| | 2 | 7.7 | 67 | 1,100 |
| | 4 | 7.7 | 66 | 1,110 |
| | 6 | 7.6 | 65 | 1,100 |
| | 8 | 7.6 | 65 | 1,100 |
| MW-7 | Initial | 7.9 | 68 | 1,070 |
| | 2 | 7.8 | 67 | 1,090 |
| | 4 | 7.6 | 67 | 1,100 |
| | 6 | 7.6 | 66 | 1,110 |
| | 8 | 7.5 | 65 | 1,100 |
| | 10 | 7.6 | 65 | 1,100 |
| MW-8 | Initial | 7.9 | 67 | 1,050 |
| | 2 | 7.7 | 65 | 1,070 |
| | 4 | 7.6 | 64 | 1,090 |
| | 6 | 7.6 | 64 | 1,100 |
| | 8 | 7.6 | 64 | 1,080 |
| | 10 | 7.6 | 64 | 1,090 |
| | 12 | 7.6 | 64 | 1,090 |

PTCDTAB2.WK1

# Table 3
## CUMULATIVE GROUNDWATER ANALYSES SUMMARY
(in [redacted])

Former Texaco Service Station
930 Springtown Boulevard
Livermore, California

| WELL I.D. | DATE SAMPLED | BENZENE | TOLUENE | ETHYL-BENZENE | XYLENES | TPH-G |
|---|---|---|---|---|---|---|
| MW-A | 01/10/91 | 1,900 | 3,700 | 2,600 | 8,300 | 50,000 |
| | 04/04/91 | 950 | 1,100 | 1,300 | 2,900 | 31,000 |
| | 07/12/91 | 2,000 | 4,200 | 4,600 | 13,000 | 100,000 |
| | 10/04/91 | SP | SP | SP | SP | SP |
| | 01/02/92 | SP | SP | SP | SP | SP |
| | 04/02/92 | 1,200 | 570 | 1,700 | 2,300 | [redacted] |
| MW-B | 01/10/91 | 47 | 1,300 | 770 | 3,100 | 35,000 |
| | 04/04/91 | 4 | 10 | 22 | 19 | 2,300 |
| | 07/12/91 | 88 | 1,800 | 390 | 1,300 | 18,000 |
| | 10/04/91 | SP | SP | SP | SP | SP |
| | 01/02/92 | SP | SP | SP | SP | SP |
| | 04/02/92 | ND | 39 | 24 | 35 | 1,900 |
| MW-1 | 01/10/91 | ND | ND | ND | ND | ND |
| | 04/04/91 | ND | ND | ND | ND | ND |
| | 07/12/91 | ND | ND | 3 | 16 | 390 |
| | 10/04/91 | 1 | ND | ND | ND | ND |
| | 01/02/92 | 6 | ND | ND | ND | 16 |
| | 04/02/92 | ND | ND | ND | ND | ND |
| MW-2 | 01/10/91 | ND | ND | ND | ND | ND |
| | 04/04/91 | ND | ND | ND | ND | ND |
| | 07/12/91 | ND | ND | ND | ND | ND |
| | 10/04/91 | 0.3 | ND | ND | ND | ND |
| | 01/02/92 | ND | ND | ND | ND | ND |
| | 04/02/92 | ND | ND | ND | ND | ND |
| MW-3 | 01/10/91 | ND | ND | ND | ND | 110 |
| | 04/04/91 | 4 | ND | 0.6 | 0.9 | 630 |
| | 07/12/91 | 2 | ND | ND | 1 | 230 |
| | 10/04/91 | 0.5 | 2 | ND | 0.5 | 360 |
| | 01/02/92 | 0.4 | ND | ND | ND | 340 |
| | 04/02/92 | 5 | ND | 0.3 | 0.5 | 160 |
| MW-4 | 01/10/91 | ND | ND | ND | ND | ND |
| | 04/04/91 | ND | ND | ND | ND | ND |
| | 07/12/91 | ND | ND | ND | ND | ND |
| | 10/04/91 | 0.6 | ND | ND | ND | ND |
| | 01/02/92 | ND | ND | ND | ND | ND |
| | 04/02/92 | ND | ND | ND | ND | ND |

Table 3 (continued)



| WELL I.D. | DATE SAMPLED | BENZENE | TOLUENE | ETHYL-BENZENE | XYLENES | TPH-G |
|---|---|---|---|---|---|---|
| MW-5 | 01/10/91 | 48 | 2 | 87 | 9 | 1,900 |
| | 04/04/91 | ND | ND | ND | ND | ND |
| | 07/12/91 | 13 | ND | 18 | 1 | 850 |
| | 10/04/91 | 240 | 13 | 34 | 14 | 2,000 |
| | 01/02/92 | 74 | 41 | 84 | 94 | 1,800 |
| | 04/02/92 | ND | ND | ND | ND | 78 |
| MW-6 | 01/10/91 | ND | ND | ND | ND | ND |
| | 04/04/91 | ND | ND | ND | ND | ND |
| | 07/12/91 | -- | -- | -- | -- | -- |
| | 10/04/91 | 0.3 | ND | ND | ND | ND |
| | 01/02/92 | ND | 0.3 | 0.6 | 3 | 23 |
| | 04/02/92 | ND | ND | ND | ND | ND |
| MW-7 | 01/10/91 | ND | ND | ND | ND | ND |
| | 04/04/91 | ND | ND | ND | ND | ND |
| | 07/12/91 | -- | -- | -- | -- | -- |
| | 10/04/91 | -- | -- | -- | -- | -- |
| | 01/02/92 | -- | -- | -- | -- | -- |
| | 04/02/92 | ND | ND | ND | ND | ND |
| MW-8 | 01/10/91 | ND | ND | ND | ND | ND |
| | 04/04/91 | -- | -- | -- | -- | -- |
| | 07/12/91 | -- | -- | -- | -- | -- |
| | 10/04/91 | -- | -- | -- | -- | -- |
| | 01/02/92 | 32 | 980 | 200 | 760 | 12,000 |
| | 04/02/92 | ND | ND | ND | ND | ND |

explain?

Notes:
ND = Not detected at or above the method detection limit
TPH-G = Total petroleum hydrocarbons-as-gasoline
SP = Separate-phase petroleum hydrocarbons
-- = Not sampled

GASTAB3.WK1

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

**Northwest Region**
4080-C Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California
(510) 825-0720 (FAX)

Client Number: GTI71TEX01
Consultant Project Number: 023201383
Project ID: Livermore
Work Order Number: C2-04-135

April 11, 1992

John Bower
Groundwater Technology, Inc.
1401 Halyard Dr., Ste. 140
West Sacramento, CA 95691

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 04/03/92, under chain of custody records 22165 and 22166.

A formal Quality Control/Quality Assurance (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 California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

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

Sincerely,
GTEL Environmental Laboratories, Inc.

Rose Condit for
Eileen F. Bullen
Laboratory Director

# Table 1

## ANALYTICAL RESULTS

### Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

### EPA Methods 5030, 8020, and Modified 8015[a]

| GTEL Sample Number | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|
| Client Identification | | MW 8 | MW 7 | MW 4 | MW 6 |
| Date Sampled | | 04/02/92 | 04/02/92 | 04/02/92 | 04/02/92 |
| Date Analyzed | | 04/06/92 | 04/07/92 | 04/07/92 | 04/07/92 |
| Analyte | Detection Limit, ug/L | Concentration, ug/L | | | |
| Benzene | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Toluene | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Ethylbenzene | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Xylene, total | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BTEX, total | -- | -- | -- | -- | -- |
| Gasoline | 10 | <10 | <10 | <10 | <10 |
| Detection Limit Multiplier | | 1 | 1 | 1 | 1 |

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

## Table 1 (Continued)

### ANALYTICAL RESULTS

### Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

### EPA Methods 5030, 8020, and Modified 8015[a]

| GTEL Sample Number | | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|
| Client Identification | | MW 2 | MW 1 | MW 3 | MW 5 |
| Date Sampled | | 04/02/92 | 04/02/92 | 04/02/92 | 04/02/92 |
| Date Analyzed | | 04/07/92 | 04/07/92 | 04/08/92 | 04/07/92 |
| Analyte | Detection Limit, ug/L | Concentration, ug/L | | | |
| Benzene | 0.3 | <0.3 | <0.3 | 5 | <0.3 |
| Toluene | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Ethylbenzene | 0.3 | <0.3 | <0.3 | 0.3 | <0.3 |
| Xylene, total | 0.5 | <0.5 | <0.5 | 0.5 | <0.5 |
| BTEX, total | -- | -- | -- | 6 | -- |
| Gasoline | 10 | <10 | <10 | 160 | 78 |
| Detection Limit Multiplier | | 1 | 1 | 1 | 1 |

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.



GTEL ENVIRONMENTAL LABORATORIES, INC.

## Table 1 (Continued)

### ANALYTICAL RESULTS

### Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

### EPA Methods 5030, 8020, and Modified 8015[a]

| GTEL Sample Number | | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|
| Client Identification | | MW A | MW B | RINSATE MW8 | FIELD BLANK |
| Date Sampled | | 04/02/92 | 04/02/92 | 04/02/92 | 04/02/92 |
| Date Analyzed | | 04/07/92 | 04/07/92 | 04/08/92 | 04/07/92 |
| Analyte | Detection Limit, ug/L | Concentration, ug/L | | | |
| Benzene | 0.3 | 1200 | <0.3 | <0.3 | <0.3 |
| Toluene | 0.3 | 570 | 39 | <0.3 | <0.3 |
| Ethylbenzene | 0.3 | 1700 | 24 | <0.3 | <0.3 |
| Xylene, total | 0.5 | 2300 | 35 | <0.5 | <0.5 |
| BTEX, total | -- | 5800 | 98 | -- | -- |
| Gasoline | 10 | 27000 | 1900 | <10 | <10 |
| Detection Limit Multiplier | | 1 | 1 | 1 | 1 |

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

**GTEL ENVIRONMENTAL LABORATORIES, INC.**

4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

22166

0230413 TBOX

Company Name: GroundWater Technology
Phone #: 916-372-4700
FAX #: 372-8781
Company Address: 1401 Halyard Rd St. 140 W/Sacramento, Ca
Site location: Livermore
Project Manager: John Bauer
Client Project ID: (#) 02320138303050
(NAME) Texaco
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Steven Thompson

| Field Sample ID | GTEL Lab # (Lab use only) | # Containers | Matrix: WATER | SOIL | AIR | SLUDGE | PRODUCT | OTHER | Method Preserved: HCl | $HNO_3$ | $H_2SO_4$ | ICE | UNPRESERVED | OTHER (SPECIFY) | Sampling: DATE | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW 8 | 01 | 2 | ✓ | | | | | | ✓ | | | ✓ | | | 4/2 | 1:40 |
| 7 | 02 | | | | | | | | | | | | | | | 1:50 |
| 4 | 03 | | | | | | | | | | | | | | | 2:00 |
| 6 | 04 | | | | | | | | | | | | | | | 2:10 |
| 2 | 05 | | | | | | | | | | | | | | | 2:20 |
| 1 | 06 | | | | | | | | | | | | | | | 2:30 |
| 3 | 07 | | | | | | | | | | | | | | | 2:40 |
| 5 | 08 | | | | | | | | | | | | | | | 2:50 |
| A | 09 | | | | | | | | | | | | | | | 3:00 |
| B | 10 | | | | | | | | | | | | | | | 3:10 |

| BTEX/602 ☐ 8020 ☐ with MTBE ☐ | BTEX/Gas Hydrocarbons PID/FID ☐ with MTBE ☐ | Hydrocarbons GC/FID Gas ☐ Diesel ☐ Screen ☐ | Hydrocarbon Profile (SIMDIS) ☐ | Oil and Grease 413.1 ☐ 413.2 ☐ SM 503 ☐ | TPH/IR 418.1 ☐ SM 503 ☐ | EDB by 504 ☐ DBCP by 504 ☐ | EPA 503.1 ☐ EPA 502.2 ☐ | EPA 601 ☐ EPA 8010 ☐ | EPA 602 ☐ EPA 8020 ☐ | EPA 608 ☐ 8080 ☐ PCB only ☐ | EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐ | EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐ | EPA 610 ☐ 8310 ☐ | EP TOX Metals ☐ Pesticides ☐ Herbicides ☐ | TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐ | EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐ | CAM Metals TTLC ☐ STLC ☐ | Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐ | Organic Lead ☐ | Corrosivity ☐ Flash Point ☐ Reactivity ☐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | | | | | | | | | | | | | | | | | | |

TAT
Priority (24 hr) ☐
Expedited (48 hr) ☐
7 Business Days ☐
Other ____
Business Days ☐

Special Handling
GTEL Contact ____
Quote/Contract # ____
Confirmation # ____
PO # ____

SPECIAL DETECTION LIMITS
192

SPECIAL REPORTING REQUIREMENTS

REMARKS
2 Week Turnaround

QA / QC LEVEL
BLUE ☐ CLP ☐ OTHER ____

FAX ☐

Lab Use Only Lot # ____ Storage Location ____

## CUSTODY RECORD

| | Date | Time |
|---|---|---|
| Relinquished by Sampler: | 4/2/92 | 4:55 |
| Relinquished by: | | |
| Relinquished by: | | |
| | 4/3/92 | 4:25 |

Work Order #
Received by:
Received by:
Received by Laboratory:
Waybill # 74356

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Rev. 7/91

**GTEL** ENVIRONMENTAL LABORATORIES, INC.

4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

22165

Company Name: Groundwater Technology
Phone #: 916-372-4700
FAX #: 372-8781

Company Address: 401 Halgard Rd St 140 W/Sacramento, Ca
Site location: Livermore

Project Manager: John Bower
Client Project ID: (#) 023201383 030504
(NAME) Texaco

I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Steven Thompson

| Field Sample ID | GTEL Lab # (Lab use only) | # Containers | Matrix: WATER | SOIL | AIR | SLUDGE | PRODUCT | OTHER | Method Preserved: HCl | $HNO_3$ | $H_2SO_4$ | ICE | UNPRESERVED | OTHER (SPECIFY) | Sampling: DATE | TIME | BTEX/602 ☐ 8020 ☐ with MTBE ☐ | BTEX/Gas Hydrocarbons PID/FID ☒ with MTBE ☐ | Hydrocarbons GC/FID Gas ☐ Diesel ☐ Screen ☐ | Hydrocarbon Profile (SIMDIS) ☐ | Oil and Grease 413.1 ☐ 413.2 ☐ SM 503 ☐ | TPH/IR 418.1 ☐ SM 503 ☐ | EDB by 504 ☐ DBCP by 504 ☐ | EPA 503.1 ☐ EPA 502.2 ☐ | EPA 601 ☐ EPA 8010 ☐ | EPA 602 ☐ EPA 8020 ☐ | EPA 608 ☐ 8080 ☐ PCB only ☐ | EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐ | EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐ | EPA 610 ☐ 8310 ☐ | EP TOX Metals ☐ Pesticides ☐ Herbicides ☐ | TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐ | EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐ | CAM Metals TTLC ☐ STLC ☐ | Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐ | Organic Lead ☐ | Corrosivity ☐ Flash Point ☐ Reactivity ☐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rinsate MW8 | 12 | 2 | 4 | | | | | | 4 | | | 4 | | | 4/2 | 1:30 | | 2 | | | | | | | | | | | | | | | | | |
| Field Blank | | 2 | 4 | | | | | | 4 | | | 4 | | | " | 1:35 | | 2 | | | | | | | | | | | | | | | | | |

TAT
Priority (24 hr) ☐
Expedited (48 hr) ☐
7 Business Days ☐
Other ____
Business Days ☐

Special Handling
GTEL Contact ____
Quote/Contract # ____
Confirmation # ____
PO # ____

SPECIAL DETECTION LIMITS
262

REMARKS
2 Week Turnaround

SPECIAL REPORTING REQUIREMENTS

Lab Use Only Lot # ____ Storage Location: ____

QA / QC LEVEL
BLUE ☐ CLP ☐ OTHER ____

FAX ☐

Work Order # ____

## CUSTODY RECORD

| | Date | Time | |
|---|---|---|---|
| Relinquished by Sampler: | 4/2/92 | 4:55 | Received by: |
| Relinquished by: | | | Received by: |
| Relinquished by: | 4/3/92 | 4:25 | Received by Laboratory: |

Waybill # 743560

Rev. 7/91