


97 MAR 13 PM 3:00

FIRST QUARTER 1997
**GROUNDWATER SAMPLING
AND
WATER QUALITY MONITORING**

**British Petroleum Service Station
2008 First Street
Livermore California**

**Prepared for:
DESERT PETROLEUM, INC.
P.O. Box 1601
Oxnard, CA 93032
(805) 644-6784**

**Prepared by:
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February 1997

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1.0 INTRODUCTION

This report presents the results of the February 2, 1997 groundwater monitoring for the real property located at 2008 First Street, Livermore, Alameda County, California (Figure 1). Remediation Service, Int'l. (RSI) is under contract to Desert Petroleum, Inc. to provide limited environmental services as mandated by the California Regional Water Quality Control Board (CRWQCB) and the Alameda County Department of Environmental Health (ACDEH).

The site is currently occupied by a retail gasoline station operating under the British Petroleum trade name. A site assessment conducted in February 1988 indicated that both soil and groundwater contained elevated concentrations of fuel hydrocarbons (FHCs). One groundwater monitoring well was installed in September 1988 and three additional wells were installed in June 1994.

RSI conducted further offsite soil and groundwater assessment and results are documented in RSI's March 1995 Soil and Groundwater Investigation Report. In the March 1995 assessment FHCs were discovered in groundwater at elevated levels offsite to the west. Offsite to the south FHCs were discovered in low levels in the groundwater. Soils in both locations near the soil water interface contained corresponding levels of FHCs.

After the March 1995 assessment a second recent release from the underground storage tanks on site was confirmed by the ACDEH. Due to elevated levels of MTBE discovered offsite and chromatogram analysis by other consultants it is believed the second release has impacted offsite soil and groundwater west and northwest of the site.

In October 1995, two additional wells MW-5 and MW-6 were installed (Figure 2) and a qualitative groundwater assessment was performed to the west. FHCs were discovered in capillary fringe soil and groundwater in all locations explored. (See RSI Soil and Groundwater Investigation dated October 1995).

According to discussions with ACEHD and Mr. B. J. Angle, the property owner, all tanks and piping on site have been replaced with new double walled equipment. During the course of the tank installation, the existing wells in the immediate tank area were damaged. There was no access to well MW-1 at the time of this sampling event.

2.0 GROUNDWATER MONITORING

2.1 Groundwater Monitoring Procedures

On February 2, 1997, groundwater monitoring wells MW-2, MW-3, MW-4, MW-5 and MW-6 were monitored for water quality. Depth to water was measured to an accuracy of 0.01 feet and all wells were checked for the presence of free product with an interface probe and free product bailer for verification of the presence of a sheen. There was no access to MW-1, it was reportedly damaged during tank replacement. Of the three wells sampled, MW-6 contained construction debris. Analytical results from samples from this well is considered to be qualitative.

Purging was accomplished with a truck mounted vacuum extraction unit utilizing dedicated stingers. Any purging or sampling equipment with the potential for cross contamination was triple rinsed between wells using a standard three stage method with tri-sodium phosphate followed by tap water and distilled water.

Purging continued until temperature, electrical conductivity and pH stabilized or approximately three well volumes had been purged. These measurements, along with all other pertinent data, were recorded on Water Sample Logs (Appendix A). The purged water is contained onsite pending analysis for recycling.

The wells were allowed to recharge to a minimum of 80 percent, then sampled using disposable polyethylene bailers. The samples were sealed, labeled and placed on ice for transportation under standard chain-of-custody to State-certified Onsite Laboratories Inc.. All samples were analyzed to minimum detection limits for TPH as gasoline, BTEX and MTBE using standard EPA/CDHS approved methods.

2.2 Groundwater Monitoring Results

FHCs or MTBE were present in all samples except the upgradient well (MW-4). MW-4 contained only trace levels of MTBE. Generally higher concentrations were present in samples from the wells closest to the former tank area and downgradient.

Analytical results for groundwater samples collected on February 2, 1997 are summarized in Table 2. The complete laboratory report is contained in Appendix B.

3.0 LIMITATIONS

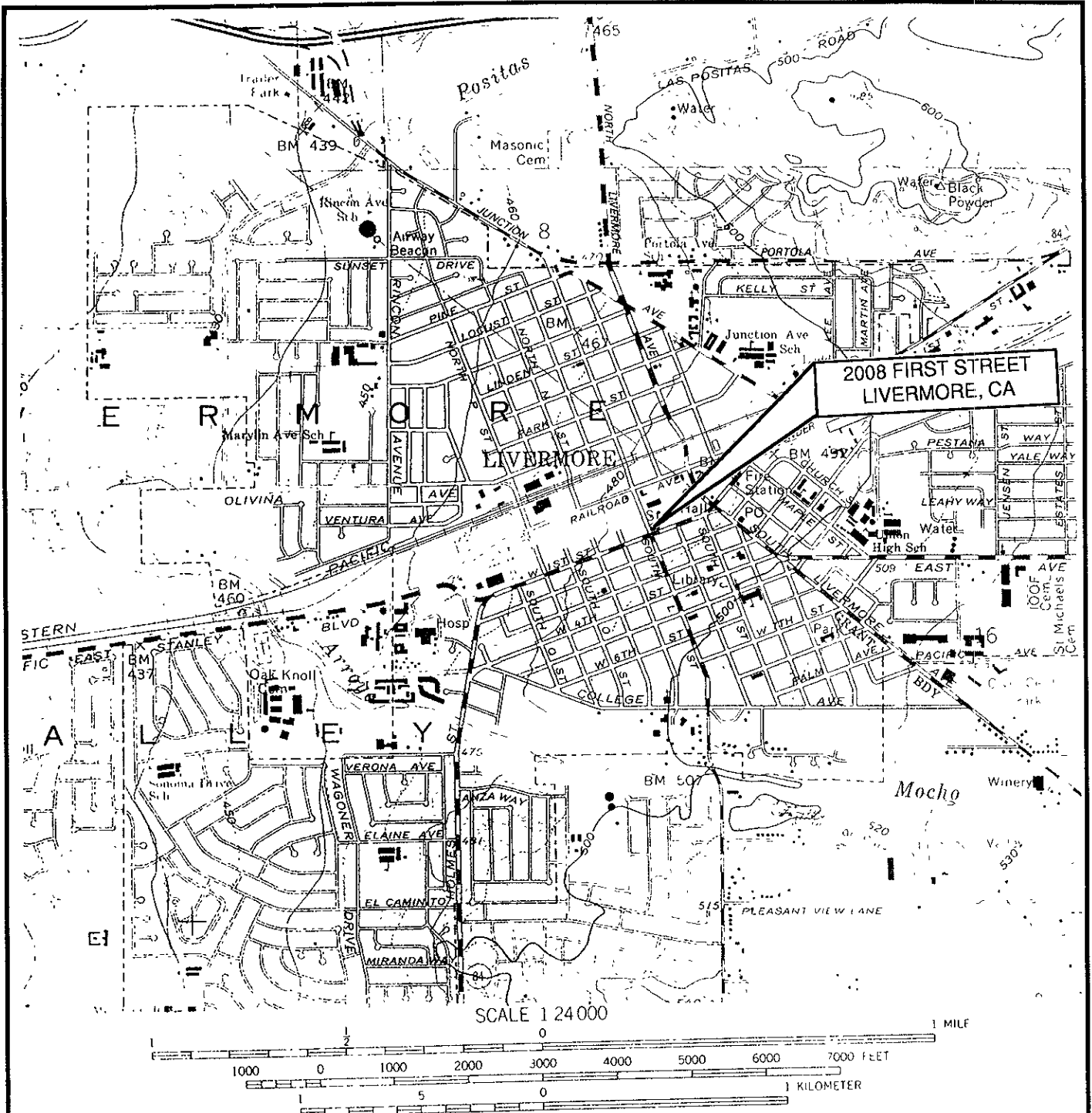
The discussion, conclusion and any recommendations presented in this report are based on the professional performance of the personnel who conducted the investigations, the observations of the field personnel, the results of laboratory analyses performed by a state certified laboratory, any referenced documents and our understanding of the regulations of the State of California and any other applicable local regulations.

Variations in the soil and groundwater conditions may exist beyond the points explored in this and previous investigations.

The services performed by Remediation Service Int'l have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the State of California.

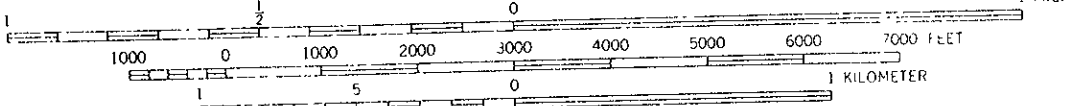
Please note that contamination of soil and/or groundwater must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

FIGURES



208 FIRST STREET
LIVERMORE, CA

SCALE 1:24,000

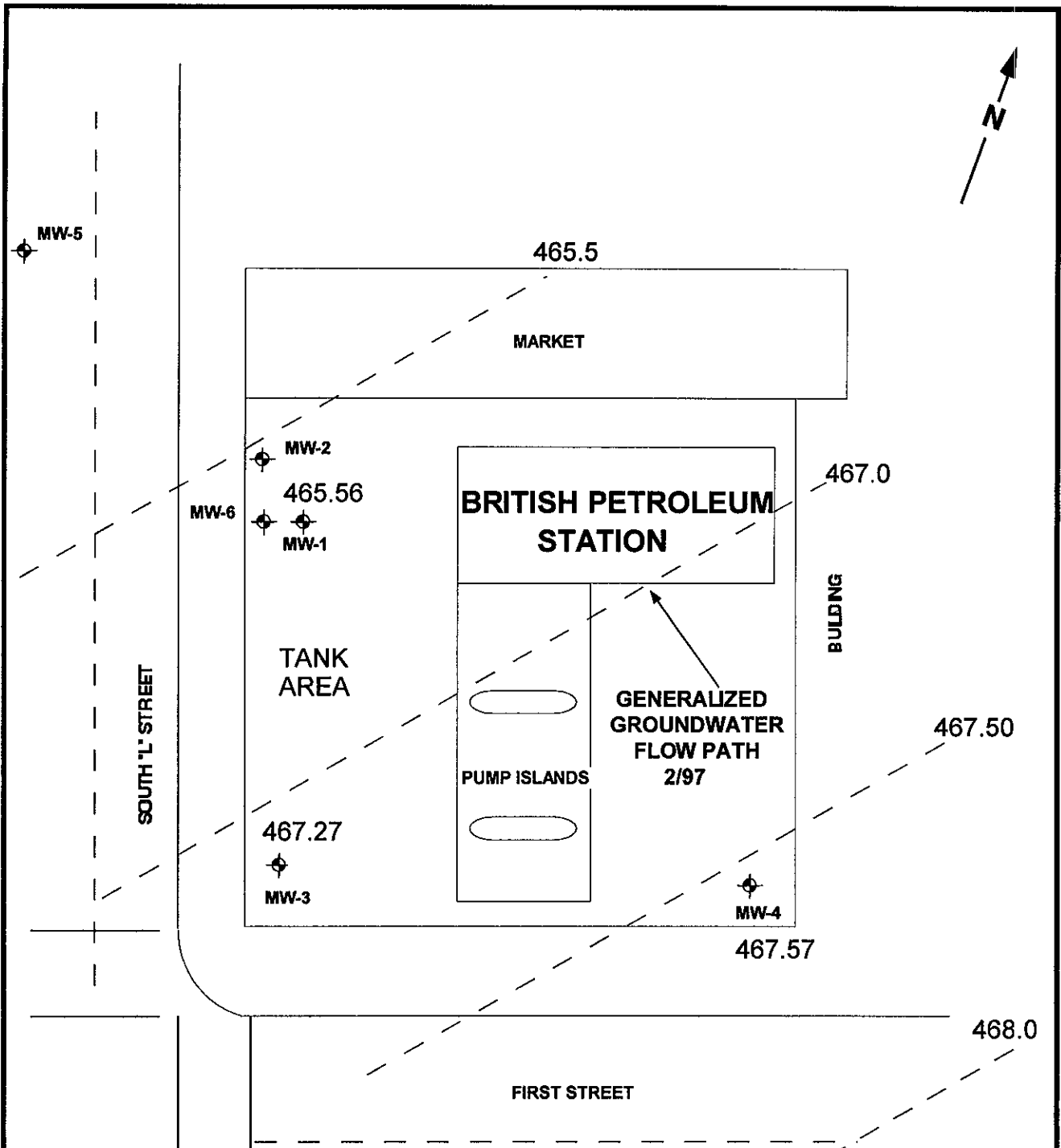


CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

FROM U.S.G.S. 7.5' TOPOGRAPHIC
QUADRANGLE "LIVERMORE,
CALIFORNIA," 1961, PHOTOREVISED
1980



208 FIRST STREET,
LIVERMORE, CA
FIGURE 1: LOCATION MAP
RSI - REMEDIATION SERVICE, INT'L



MAP NOT TO SCALE.
 SURVEYED DISTANCE BETWEEN WELLS, 1" = 25'.

LEGEND

- ⊕ GROUNDWATER MONITORING WELL LOCATION
- GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL

2008 FIRST STREET,
 LIVERMORE, CA 94550

**FIGURE 2: PLOT PLAN WITH
 GROUNDWATER FLOWPATH
 FEBRUARY 1997**



TABLES

Table 1
Summary of Groundwater Elevations
2008 FIRST STREET LIVERMORE CA

| Well | Date Measured | Depth to Free Product | Depth to Water | Free Product Thickness | Corrected Depth to Water ** | Casing Elevation* | Water Table Elevation* | Change in Elevation | |
|--------|---------------|-----------------------|----------------|------------------------|-----------------------------|-------------------|------------------------|---------------------|-------|
| MW-1 | Sep-88 | | 60.50 | | | 487.00 | 426.50 | | |
| | Aug-90 | | 43.10 | | | | 443.90 | 17.40 | |
| | Oct-91 | | 66.39 | | | | 420.61 | 23.29 | |
| | Jan-92 | | 68.72 | | | | 418.28 | 2.33 | |
| | May-93 | | 34.76 | | | | 452.24 | 33.96 | |
| | Sep-93 | | 38.70 | | | | 448.30 | 3.94 | |
| | May-94 | | 33.57 | | | | 453.43 | 5.13 | |
| | Jun-94 | | 37.51 | | | | 484.07 | 446.56 | |
| | Aug-94 | | 43.27 | | | | | 440.80 | 5.76 |
| | Nov-94 | | 40.58 | | | | | 443.49 | 2.69 |
| | Mar-95 | | 28.06 | | | | | 456.01 | 12.52 |
| | Jun-95 | | 22.10 | | | | | 461.97 | 5.96 |
| | Feb-96 | | 18.86 | | | | | 465.21 | 3.24 |
| Feb-97 | | NO ACCESS | | | | | | | |
| MW-2 | Jun-94 | | 38.15 | | | 483.86 | 445.71 | | |
| | Aug-94 | 43.47 | 44.13 | 0.66 | 43.63 | | 440.23 | 5.48 | |
| | Nov-94 | 40.92 | 40.96 | 0.04 | 40.93 | | 442.93 | 2.70 | |
| | Mar-95 | 28.47 | 29.28 | 0.81 | 28.67 | | 455.19 | 12.26 | |
| | Mar-95 | 28.29 | 28.71 | 0.42 | 28.39 | | 455.47 | 0.28 | |
| | Jun-95 | | 22.81 | | | | 461.05 | 5.58 | |
| | Feb-96 | | 20.05 | | | | 463.81 | 2.76 | |
| | Feb-97 | | 18.30 | | | | 465.56 | 1.75 | |
| MW-3 | Jun-94 | | 37.15 | | | 484.24 | 447.09 | | |
| | Aug-94 | | 42.31 | | | | 441.93 | 5.16 | |
| | Nov-94 | | 40.07 | | | | 444.17 | 2.24 | |
| | Mar-95 | | 27.94 | | | | 456.30 | 12.13 | |
| | Jun-95 | | 21.68 | | | | 462.56 | 6.26 | |
| | Feb-96 | | 18.78 | | | | 465.46 | 2.90 | |
| | Feb-97 | | 16.97 | | | | 467.27 | 1.81 | |
| MW-4 | Jun-94 | | 37.49 | | | 485.04 | 447.55 | | |
| | Aug-94 | | 42.25 | | | | 442.79 | 4.76 | |
| | Nov-94 | | 40.59 | | | | 444.45 | 1.66 | |
| | Mar-95 | | 28.00 | | | | 457.04 | 12.59 | |
| | Jun-95 | | 21.89 | | | | 463.15 | 6.11 | |
| | Feb-96 | | 18.42 | | | | 466.62 | 3.47 | |
| | Feb-97 | | 17.47 | | | | 467.57 | 0.95 | |
| Mw-5 | Feb-96 | | 19.35 | | | *** | *** | | |
| | Feb-97 | | 18.19 | | | *** | *** | 1.16 | |
| MW-6 | Feb-96 | | 20.32 | | | *** | *** | | |
| | Feb-97 | | 18.92 | | | *** | *** | 1.40 | |

*Elevations are in feet above mean sea level.

Casing elevations surveyed 6/94 to City of Livermore Bench Mark:

Bench Mark elevation = 483.82', based on USGS Sea Level Datum 1929.

**Corrected depth = Depth to water - (Free product thickness x Specific gravity of product).

*** Survey Required

Table 2**Summary of Groundwater Analytical Results****2008 FIRST STREET LIVERMORE CA**

| DATE | TPHg | BENZENE | TOLUENE | ETHYL- BENZENE | TOTAL XYLENES | MTBE | |
|--------|---------|------------------------|---------|-------------------|------------------|--------|-------|
| WELL # | SAMPLED | mg/L | ug/L | ug/L | ug/L | ug/L | |
| MW-1 | Aug-90 | 24 | 1,300 | 1,300 | 400 | 2,700 | |
| | Oct-91 | 2.20 | 430 | 170 | 100 | 290 | |
| | Jan-92 | 1.20 | 200 | 120 | 30 | 150 | |
| | May-93 | 0.96 | 66 | 8 | 41 | 90 | |
| | Sep-93 | 1.90 | 311 | 118 | 33.8 | 112 | |
| | May-94 | 10 | 690 | 1,100 | 340 | 1,200 | |
| | Aug-94 | 13 | 290 | 690 | 120 | 670 | |
| | Nov-94 | 19 | 400 | 770 | 230 | 1300 | |
| | Mar-95 | 6 | 900 | 100 | 980 | 740 | |
| | Jun-95 | 2.40 | 210 | 380 | 53 | 280 | 1.30 |
| | Feb-96 | 0.12 | 4.2 | 1.4 | 4.7 | 5.6 | 14 |
| | Feb-97 | No Access- Not Sampled | | | | | |
| MW-2 | Jun-94 | 290 | 18,000 | 36,000 | 4,600 | 26,000 | |
| | Aug-94 | NS* | NS* | NS* | NS* | NS* | |
| | Nov-94 | NS* | NS* | NS* | NS* | NS* | |
| | Mar-95 | NS* | NS* | NS* | NS* | NS* | |
| | Jun-95 | 25 | 2,300 | 3,400 | 720 | 3,100 | 16.00 |
| | Feb-96 | 57 | 2,500 | 650 | 3,700 | 3,100 | 6,500 |
| | Feb-97 | 20 | 860 | 1,500 | 480 | 1,000 | 1,300 |

TPHg - Total Petroleum Hydrocarbons (Gasoline)

MTBE - Methyl Tertiary Butyl Ether

NS* - Not sampled due to the presence of free product.

CONTINUED

Table 2 (cont.)

Summary of Groundwater Analytical Results (cont.)

2008 FIRST STREET LIVERMORE CA

| WELL # | DATE SAMPLED | TPHg | BENZENE | TOLUENE | ETHYL- BENZENE | TOTAL XYLENES | MTBE |
|--------|--------------|------|---------|---------|-------------------|------------------|--------|
| | | mg/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| MW-3 | Jun-94 | 11 | 640 | 580 | 270 | 790 | |
| | Aug-94 | 41 | 1,600 | 2,300 | 330 | 1,800 | |
| | Nov-94 | 18 | 8,000 | 10,000 | 900 | 5,000 | |
| | Mar-95 | 44 | 1,600 | 1,300 | 5,000 | 6,600 | |
| | Jun-95 | 15 | 600 | 1,900 | 490 | 2,600 | 4.20 |
| | Feb-96 | 13 | 230 | 200 | 200 | 1,100 | 1,500 |
| | Feb-97 | 11 | 260 | 550 | 170 | 600 | 900 |
| MW-4 | Jun-94 | 0.81 | 12 | 25 | ND | 22 | |
| | Aug-94 | 0.85 | 37 | 51 | 9.5 | 35 | |
| | Nov-94 | 1.70 | 110 | 110 | 5.8 | 58 | |
| | Mar-95 | 1.30 | 180.0 | 8.0 | 52.0 | 77.0 | |
| | Jun-95 | ND | 3.0 | 1.0 | ND | 1.0 | ND |
| | Feb-96 | 87 | ND | ND | ND | ND | ND |
| | Feb-97 | ND | ND | ND | ND | ND | 2.9 |
| MW-5 | Feb-96 | 47 | 3,400 | 860 | 4,200 | 4,100 | 20,000 |
| | Feb-97 | 28 | 1,300 | 1,500 | 480 | 1,000 | 2,200 |
| MW-6 | Feb-96 | 23 | 2,000 | 460 | 2,900 | 2,600 | 6,300 |
| | Feb-97 | 12 | 450 | 780 | 200 | 590 | 790 |

TPHg - Total Petroleum Hydrocarbons (Gasoline)

MTBE - Methyl Tertiary Butyl Ether

ND - Not Detected at Reporting Limit

NS* - Not sampled due to the presence of free product.

APPENDICES

WATER SAMPLE LOG

PROJECT LOCATION: British Petroleum
2001 First Street
Livermore, CA

DATE: 2/2/97

WELL NUMBER: MW-2

WEATHER CONDITIONS: Sunny Cool
FIELD OBSERVATIONS:

TOTAL DEPTH OF WELL: 56.10 feet **GAUGE TYPE:** Interface
DEPTH TO WATER: 18.30 feet **PURGING METHOD:** Vacuum

DEPTHS MEASURED FROM: Survey Point on Top of Well Casing

| WELL PURGING DATA | | | | | |
|-------------------|---------------------|------|------------|---------------------------------------|----------|
| Time | Discharge (gallons) | pH | Temp in F. | Specific Conductance (μ mhos/cm) | Comments |
| 10:52 AM | 5 | 7.30 | 68.2 | 1083 | CLR |
| 11:07 AM | 20 | 7.16 | 68.0 | 1065 | SLIGHT |
| 11:15 AM | 50 | 7.22 | 67.8 | 1057 | ODOR |
| 11:24 AM | 75 | 7.26 | 67.6 | 1064 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

TOTAL DISCHARGE: 75.00 Gallons
DEPTH TO WATER AT SAMPLE TIME: 27.85 Feet
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Cloudy
SAMPLE CONTAINER - # TYPE 3 x 40 ml. VOAs
SAMPLE TRANSPORTED TO: Onsite

SAMPLED BY: AES Walt Lubke

WATER SAMPLE LOG

PROJECT LOCATION: British Petroleum
2001 First Street
Livermore, CA

DATE: 2/2/97

WELL NUMBER: MW-3

WEATHER CONDITIONS: Sunny Cool
FIELD OBSERVATIONS: Casing Has Been Cut Off - Debris in Well - No Cap On Well

TOTAL DEPTH OF WELL: 57.70 feet **GAUGE TYPE:** Interface
DEPTH TO WATER: 16.97 feet **PURGING METHOD:** Vacuum

DEPTHS MEASURED FROM: Top of Casing

| WELL PURGING DATA | | | | | |
|-------------------|------------------------|------|------------|---------------------------------------|----------|
| Time | Discharge (gallons) | pH | Temp in F. | Specific Conductance (µmhos/cm) | Comments |
| 12:48 PM | 5 | 7.18 | 70.9 | 1232 | SLIGHT |
| 01:00 PM | 25 | 7.19 | 68.2 | 1169 | ODOR |
| 01:11 PM | 50 | 7.25 | 68.4 | 1107 | |
| 01:22 PM | 75 | 7.30 | 68.7 | 1122 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

TOTAL DISCHARGE: 80.00 Gallons
DEPTH TO WATER AT SAMPLE TIME: 17.39 Feet
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear
SAMPLE CONTAINER - # TYPE 3 x 40 ml. VOAs
SAMPLE TRANSPORTED TO: Onsite

SAMPLED BY: AES Walt Lubke

WATER SAMPLE LOG

PROJECT LOCATION: British Petroleum
2001 First Street
Livermore, CA

DATE: 2/2/97

WELL NUMBER: MW-4

WEATHER CONDITIONS: Sunny Cool
FIELD OBSERVATIONS: Christy Intact

TOTAL DEPTH OF WELL: 60.00 feet **GAUGE TYPE:** Interface
DEPTH TO WATER: 17.47 feet **PURGING METHOD:** Vacuum

DEPTHS MEASURED FROM: Top of Well Casing

| WELL PURGING DATA | | | | | |
|--------------------------|------------------------|------|------------|---------------------------------------|----------|
| Time | Discharge (gallons) | pH | Temp in F. | Specific Conductance (µmhos/cm) | Comments |
| 01:55 PM | 1 | 7.48 | 68.7 | 1190 | CLR |
| 02:06 PM | 25 | 7.28 | 67.3 | 1131 | NPO |
| 02:16 PM | 50 | 7.24 | 67.1 | 1132 | |
| 02:24 PM | 75 | 7.33 | 66.9 | 1127 | |
| 02:30 PM | 85 | 7.37 | 66.7 | 1122 | |
| | | | | | |
| | | | | | |
| | | | | | |

TOTAL DISCHARGE: 85.00 Gallons
DEPTH TO WATER AT SAMPLE TIME: 19.45 Feet
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear
SAMPLE CONTAINER - # TYPE: 6 x 40 ml. VOAs
SAMPLE TRANSPORTED TO: Onsite

SAMPLED BY: AES Walt Lubke

WATER SAMPLE LOG

PROJECT LOCATION: British Petroleum
2001 First Street
Livermore, CA

DATE: 2/2/97

WELL NUMBER: MW-5

WEATHER CONDITIONS: Sunny Cool
FIELD OBSERVATIONS: Locking Cap Broken

TOTAL DEPTH OF WELL: 40.00 feet **GAUGE TYPE:** Interface
DEPTH TO WATER: 18.19 feet **PURGING METHOD:** Vacuum

DEPTHS MEASURED FROM: Top of Well Casing

| WELL PURGING DATA | | | | | |
|-------------------|---------------------|------|------------|---------------------------------|----------|
| Time | Discharge (gallons) | pH | Temp in F. | Specific Conductance (µmhos/cm) | Comments |
| 09:45 AM | 1 | 4.90 | 64.9 | 1035 | CLR |
| 09:58 AM | 15 | 4.99 | 66.7 | 1010 | STRONG |
| 10:05 AM | 30 | 5.07 | 66.4 | 1036 | ODOR |
| 10:12 AM | 45 | 5.11 | 66.8 | 1047 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

TOTAL DISCHARGE: 70.00 Gallons
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear
SAMPLE CONTAINER - # TYPE: 6 x 40 ml. VOAs
SAMPLE TRANSPORTED TO: Onsite

SAMPLED BY: AES Walt Lubke

WATER SAMPLE LOG

PROJECT LOCATION: British Petroleum
2001 First Street
Livermore, CA

DATE: 2/2/97

WELL NUMBER: MW-6

WEATHER CONDITIONS: Hot and Sunny
FIELD OBSERVATIONS: Casing Has Been Cut Off - Debris in Well - No Cap On Well

TOTAL DEPTH OF WELL: 27.65 feet **GAUGE TYPE:** Interface
DEPTH TO WATER: 18.92 feet **PURGING METHOD:** Vacuum

DEPTHS MEASURED FROM: Top of Casing

| WELL PURGING DATA | | | | | |
|--------------------------|------------------------|------|------------|---------------------------------------|----------|
| Time | Discharge (gallons) | pH | Temp in F. | Specific Conductance (µmhos/cm) | Comments |
| 11:56 AM | 1 | 7.18 | 69.4 | 1092 | SLIGHT |
| 12:00 PM | 10 | 7.30 | 69.3 | 1100 | ODOR |
| 12:05 PM | 15 | 7.36 | 69.5 | 1058 | |
| 12:09 PM | 20 | 7.36 | 68.9 | 1060 | |
| 12:13 PM | 25 | 7.35 | 68.2 | 1071 | |
| 12:20 PM | 35 | 7.30 | 68.7 | 1052 | |
| 12:27 PM | 45 | 7.36 | 68.5 | 1073 | |
| | | | | | |

TOTAL DISCHARGE: 50.00 Gallons
DEPTH TO WATER AT SAMPLE TIME: 19.04 Feet
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear
SAMPLE CONTAINER - # TYPE 3 x 40 ml. VOAs
SAMPLE TRANSPORTED TO: Onsite

SAMPLED BY: AES Walt Lubke

Analytical Laboratory Report
MTBE, BTEX, TPH-GASOLINE
EPA Methods 8020/8015M

Date Sampled: 2/5/97
Date Received: 2/5/97
Date Analyzed: 2/7/97
Report Number: 2D022.RPT
Lab Number: 2D022
Date Reported: 2/10/97

Proj Mgr: Rick Pilat
Client: Convenience Management Group
Project: D.P.#795
Units Soil: mg/Kg
Units Water: ug/L

| Lab ID No. | Field ID No. | MTBE | Benzene | Toluene | Ethyl-benzene | Xylenes total | TPH-Gasoline | Sur Rec. % | DF | Matrix |
|------------|--------------|------|---------|---------|---------------|---------------|--------------|------------|----|--------|
| 2D022-01 | TRIP-BLANK | ND | ND | ND | ND | ND | ND | 102 | 1 | Water |
| 2D022-02 | MW#5 | 2200 | 1300 | 2500 | 540 | 2000 | 28,000 | 84 | 50 | Water |
| 2D022-03 | MW#2 | 1300 | 860 | 1500 | 480 | 1000 | 20,000 | 94 | 50 | Water |
| 2D022-04 | MW#6 | 790 | 450 | 780 | 200 | 590 | 12,000 | 94 | 50 | Water |
| 2D022-05 | MW#3 | 900 | 260 | 550 | 170 | 600 | 11,000 | 93 | 50 | Water |
| 2D022-06 | MW#4 | 2.9 | ND | ND | ND | ND | ND | 97 | 1 | Water |

| | | | | | | |
|------------------------------------|-------|-------|-------|-------|-------|----|
| Reporting Limits SOIL mg/Kg | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 1 |
| Reporting Limits WATER ug/L | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 50 |

NOTES:
(A) - Result from a 10X dilution
(B) - Result from a 50X dilution
NR - Not requested
NC - Not confirmed
COC - Chain of custody
ND - Analytes not detected at or above the reporting limit
Sur % - Percent surrogate recovery
mg/Kg - Milligrams per kilogram (PPM)
ug/L - Micrograms per liter (PPB)
PQL - Practical Quantitation Limit. Equals detection limit times the dilution factor
D - Surrogate was diluted out
M - Matrix effects
DF - Dilution Factor
* - Sample chromatogram does not match standard chromatogram

PROCEDURES:
BTEX - This analysis was performed using EPA Method 8020 and EPA Method 5030
TPH Gasoline - This analysis was performed using EPA Method 8015 Mod and EPA Method 5030

CERTIFICATION
California Department of Health Services FLAP
Onsite Environmental Laboratories, 5500 Boscell Common, Fremont CA 94538 (510) 490-8571

Harsh Voigt

Laboratory Director

MAR 6 1997

Date

QC DATA REPORT
MTBE, BTEX, TPH-GASOLINE
EPA Methods 8020/8015M

| | | | |
|-----------------------|----------------------|------------------|------------------------------|
| Date Sampled: | 2/5/97 | Proj Mgr: | Rick Pilat |
| Date Received: | 2/5/97 | Client: | Convenience Management Group |
| Date Analyzed: | 2/6/97 | Project: | D.P.#795 |
| Report Number: | 0206GB.QAC | Matrix: | Water |
| Lab Number: | 2D022-01, TRIP BLANK | Units: | ug/L |

| Parameter | Blank Result ug/L | Spike Level ug/L | LCS Result ug/L | LCS Recov. % | Sample Result ug/L | MS Result ug/L | MS Recov. % | MSD Result ug/L | MSD Recov. % | RPD % |
|---------------|-------------------|------------------|-----------------|--------------|--------------------|----------------|-------------|-----------------|--------------|-------|
| MTBE | ND | - | - | - | 1.5 | - | - | - | - | - |
| Benzene | ND | 20 | 18.9 | 95 | ND | 17.1 | 86 | 18.5 | 93 | 7.9 |
| Toluene | ND | 20 | 18.1 | 91 | 0.7 | 16.9 | 81 | 18.2 | 88 | 7.7 |
| Ethyl benzene | ND | 20 | 19.5 | 98 | ND | 17.6 | 88 | 19.1 | 96 | 8.2 |
| total Xylenes | ND | 60 | 48.4 | 81 | ND | 52.7 | 88 | 56.9 | 95 | 7.7 |
| TPH-Gas | ND | 1000 | 1270 | 127 | ND | 1230 | 123 | 1130 | 113 | 8.5 |
| surr %rec | 87 | - | - | 83 | 89 | - | 80 | - | 87 | - |

DEFINITION OF TERMS:

ND - Analytes not detected at, or above the reporting limit
MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference. $(MS - MSD) / ((MS + MSD) / 2) \times 100$
LCS - Laboratory Control Spike
LCSD - Laboratory Control Spike Duplicate

LABORATORY QC CRITERIA

| <u>Parameter</u> | <u>Acceptable % Recoveries</u> | | |
|------------------|--------------------------------|----|------|
| Benzene | 70% | to | 130% |
| Toluene | 70% | to | 130% |
| Ethylbenzene | 70% | to | 130% |
| Xylenes Total | 70% | to | 130% |
| TPH-Gasoline | 70% | to | 130% |
| %RPD | 0% | to | 30% |

Chain of Custody and Analysis Request

Company: CONVENIENCE MANAGEMENT GROUP
Address: P.O. BOX 1601
City, State, Zip: OXNARD, CA. 93032
Phone: 805-644-6784 **Fax:** 805-654-0720
Project Manager:
Alternate Contact: RICK PILOT
Project No.: D.P. 24795 **P.O. No.:**

TURN AROUND TIME
 (circle one)
 Same Day 72 Hrs.
 24 Hrs. 48 Hrs.
 Normal 5-Day

SAMPLER: B? ?
 AUTOMATIC LABORATORIAL
 209-524-6564

Section II: Analysis Request

Sampler: *[Signature]*
Regulatory Agency:

| Sample Identification | S - Soil A - Air W - Water | | 8015M/8020 | | 8010 | | 8240 | | 8270 | | 418.1 | | 5520F | | 8080 | | Metals | | Date Sampled | Time Sampled | # of Containers | Preservatives (yes or no) | Sampling Remarks Bioremediation UST Monitoring Recent Contamination Unknown Compounds COMMENTS: |
|-----------------------|-------------------------------|------------|------------|------|------|------|-------|-------|------|--|-------|--|-------|--|------|--|--------|--|--------------|--------------|-----------------|---------------------------|---|
| | Matrix | 8015M/8020 | 8015M/8020 | 8010 | 8240 | 8270 | 418.1 | 5520F | 8080 | | | | | | | | | | | | | | |
| 1 TRIP BLANK ✓ | W | | | | | | | | | | | | | | | | | | 2-5-97 | 9:05 | 2 | Y | 20029-01 |
| 2 MW # 5 ✓ | | | X | X | | | | | | | | | | | | | | | | 10:25 | 3 | | -02 |
| 3 MW # 2 ✓ | | | X | X | | | | | | | | | | | | | | | | 11:45 | 3 | | -03 |
| 4 MW # 6 ✓ | | | X | X | | | | | | | | | | | | | | | | 12:36 | 3 | | -04 |
| 5 MW # 3 ✓ | | | X | X | | | | | | | | | | | | | | | | 13:55 | 3 | | -05 |
| 6 MW # 4 ✓ | | | X | X | | | | | | | | | | | | | | | | 14:52 | 3 | | -06 |
| 7 | | | | | | | | | | | | | | | | | | | | ↓ | 3 | ↓ | -07 |
| 8 | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | |

Relinquished By: *[Signature]*
Organization: AES
Relinquished By: _____
Organization: _____
Relinquished By: _____
Organization: _____

Date/Time: 2-5-97 16:41
Date/Time: _____
Date/Time: _____

Received By: *[Signature]*
Organization: Onsite
Received By: _____
Organization: _____
Received By: _____
Laboratory: _____

Date/Time: _____
Date/Time: _____
Date/Time: _____

Lab: Please initial the following:
 Samples Stored in Ice: _____
 Appropriate Containers: _____
 Samples Preserved: _____
 VOAs without headspace: _____
 Comments: _____