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# Xtra Oil Company

November 17, 1999

Mr. Scott Seery  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Room 250  
Alameda, Calif. 94502-6577

Re: 3495 Castro Valley Blvd. Castro Valley

Dear Mr. Seery:

Please find enclosed the groundwater monitoring and sampling report for the above referenced site. P & D Environmental prepared the report. Please call if you have any questions or comments.

Sincerely,



Keith Simas  
Operations Supervisor

Retail Fueling Convenience Stores

99 NOV 22 PM 3:25

ENVIRONMENTAL PROTECTION

# P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.

4020 Panama Court

Oakland, CA 94611

(510) 658-6916

November 2, 1999  
Report 0014.R31

Mr. Ted Simas  
Mr. Keith Simas  
XTRA OIL Company  
2307 Pacific Ave.  
Alameda, CA 94501

SUBJECT: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT  
XTRA OIL Company  
3495 Castro Valley Blvd.  
Castro Valley, CA

Gentlemen:

P&D Environmental, a division of Paul H. King, Inc. (P&D) is pleased to present this report documenting the results of the most recent quarterly monitoring and sampling of the wells at the subject site. This work was performed in accordance with P&D's proposal 020599.P1 dated February 5, 1999. The wells were monitored and sampled on August 31, 1999. The reporting period is for May through August, 1999. A Site Location Map (Figure 1) and Site Plan (Figure 2) are attached with this report.

## BACKGROUND

The site is currently used as a gasoline station. Four 12,000 gallon underground fuel storage tanks are present at the site. Three of the tanks contain gasoline and the fourth tank contains diesel fuel. A 550 gallon waste oil tank was removed from the site in November, 1988. The fuel tanks were replaced during August, 1992.

Three monitoring wells, designated as MW1, MW2 and MW3 were installed at the site on February 14 and 15, 1990 by Western Geo-Engineers. The subsurface materials encountered in the boreholes consisted primarily of silt and clay. The locations of the monitoring wells are shown in Figure 2. Soil samples collected during drilling of the boreholes for the monitoring wells revealed the presence of total petroleum hydrocarbons as gasoline (TPH-G) and total petroleum hydrocarbons as diesel (TPH-D). TPH-G was encountered in borehole MW1 at depths of 5 and 10 feet below grade at concentrations of 40 and 1,400 ppm, respectively; in borehole MW2 at depths of 10 and 15 feet below grade at concentrations of 230 and 95 ppm, respectively; and in borehole MW3 at depths of 5, 10 and 15 feet at concentrations of 140, 250 and 25 ppm, respectively. In addition, 120 ppm TPH-D was detected in borehole MW3 at a depth of 5 feet. Soil samples collected at a depth of 20 feet in borehole MW1 and at a depth of 18 feet in boreholes in MW2 and MW3 did not show any detectable concentrations of TPH-G or TPH-D. Groundwater was encountered in the boreholes at depths of approximately 15 to 16 feet below grade.

On February 15, 1990 Western Geo-Engineers drilled three exploratory boreholes at the site designated as SB1, SB2 and SB3. The subsurface materials encountered in the boreholes consisted primarily of silt and clay. The approximate locations of the boreholes are shown on Figure 2. It is P&D's understanding that soil samples were collected from the exploratory boreholes at depths of 10 and 12 feet and evaluated in the field using a photo ionization detector. In borehole SB1, TPH-G was detected at the depths of 10 and 12 feet at concentrations of 1,700 and 450 ppm, respectively. In boreholes SB2 and SB3, TPH-G was detected at the depths of 10 and 12 feet in both boreholes at concentrations of 800 ppm and greater than 2,000 ppm, respectively. A groundwater monitoring and sampling program was initiated at the site on February 20, 1990.

It is P&D's understanding that during fuel tank replacement activities in August, 1992 soil surrounding the tank pit was removed and disposed of offsite. An extraction well, designated as EW1, was designed and constructed in one corner of the new tank pit by K&B Environmental at the time of installation of the new tanks. The location of EW1 is shown on Figure 2.

On February 7, 1996 well MW2 was destroyed for the purpose of widening Redwood Road. The destruction was overseen by ACC Environmental Consultants of Oakland, California.

On August 15, 1997 P&D personnel oversaw the installation of one groundwater monitoring well, designated as MW4 at the subject site. The location of the monitoring well is shown on the attached Site Plan, Figure 2. This work was performed in accordance with P&D's work plan 0014.W4 dated June 27, 1997. The work plan was approved by the Alameda County Department of Environmental Health (ACDEH) in a telephone conversation with Mr. Scott Seery on August 14, 1997. During the conversation, Mr. Seery indicated that he would record his approval of the work plan in the county file for the site.

#### FIELD ACTIVITIES

On August 31, 1999 the three groundwater monitoring wells at the site (MW1, MW3 and MW4) were monitored and sampled by P&D personnel. A joint groundwater monitoring with Allisto Engineering, Inc. was not performed this quarter.

Extraction well EW1 was not monitored or sampled at the subject site during the quarter. The wells were monitored for depth to water and the presence of free product or sheen. Depth to water was measured to the nearest 0.01 foot using an electric water level indicator. The presence of free product and sheen was evaluated using a transparent bailer. No free product was observed in any of the monitoring wells prior to purging. However, sheen was observed on the sample water from well MW1 and in the purge water coming from well MW1. A petroleum-absorbent sock was present in monitoring well MW1. Depth to water level measurements are presented in Table 1.

Prior to sampling, the monitoring wells were purged of a minimum of three casing volumes of water, or until the wells had been purged dry. During purging operations, the field parameters of electrical conductivity, temperature and pH were monitored. Once the field parameters were observed to stabilize, and a minimum of three casing volumes had been purged or the wells had been purged dry and partially recovered, water samples were collected using a clean Teflon bailer.

The water samples were transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials and 1-liter amber glass bottles which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to assure that no air bubbles were present.

The VOA vials and bottles were then transferred to a cooler with ice, until they were transported to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-certified hazardous waste testing laboratory. Chain of custody documentation accompanied the samples to the laboratory. Records of the field parameters measured during well purging are attached with this report.

#### HYDROGEOLOGY

Water levels were measured in the wells once during the monitoring period. The measured depth to water at the site in wells MW1, MW3 and MW4 on August 31, 1999 was 8.36, 7.95, and 8.28 feet, respectively. Groundwater levels have

decreased in wells MW1, MW3 and MW4 by 0.68, 0.86 and 1.14 feet, respectively, since the previous monitoring on April 29, 1999.

Based on the measured depth to groundwater in the groundwater monitoring wells, the apparent groundwater flow direction at the site on August 31, 1999 was calculated to be to the east-southeast with a gradient of 0.011. The groundwater flow direction has shifted toward the east and the gradient has increased since the previous monitoring.

#### LABORATORY RESULTS

The groundwater samples collected from the monitoring wells were analyzed for TPH-G using EPA Method 5030 and Modified EPA Method 8015; benzene, toluene, ethylbenzene, total xylenes (BTEX), and MTBE using EPA Method 8020; and for TPH-D using EPA Method 3510 in conjunction with Modified EPA Method 8015.

The laboratory analytical results for the groundwater samples from wells MW1, MW3 and MW4 show TPH-G concentrations of 66, 120, and 190 ppm, respectively; benzene concentrations of 8.7, 35, and 46 ppm, respectively; TPH-D concentrations of 22, 22, and 9.4 ppm, respectively; and MTBE concentrations of 0.71, 4.7, and 4.4 ppm, respectively. Review of the laboratory analytical reports indicates that the TPH-D results for MW1, MW3 and MW4 are both diesel-range and gasoline-range compounds.

Since the previous sampling on April 29, 1999, TPH-G concentrations have increased in MW1 and MW3 and decreased in MW4, TPH-D concentrations have decreased in MW3 and remained the same in MW1 and MW4, and benzene and MTBE concentrations have increased in all 3 wells. The laboratory analytical results of the groundwater samples are summarized in Table 2. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

#### DISCUSSION AND RECOMMENDATIONS

P&D recommends that use of absorbent socks in the wells be continued. The socks should be checked periodically and replaced as needed.

Based on the laboratory analytical results of the water samples collected from the monitoring wells, P&D recommends that groundwater monitoring and sampling be continued. In addition, P&D recommends that future monitoring and sampling efforts continue to be coordinated with other sites in the vicinity of the subject site which are presently being monitored and sampled.

#### DISTRIBUTION

Copies of this report should be sent to Mr. Chuck Headlee at the Regional Water Quality Control Board, San Francisco Bay Region, and to Mr. Scott Seery at the Alameda County Department of Environmental Health. Copies of the report should be accompanied by a transmittal letter signed by the principal executive officer of the XTRA OIL Company.

#### LIMITATIONS

This report was prepared solely for the use of XTRA OIL Company. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of

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investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the findings of this report.

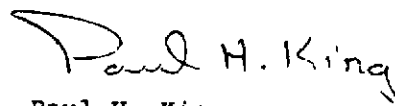
This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

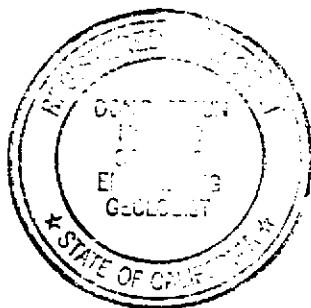
Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental



Paul H. King  
Hydrogeologist



Don R. Braun  
Certified Engineering Geologist  
Registration No.: 1310  
Expiration Date: 6/30/00

PHK/gmb  
0014.R31

Attachments: Tables 1 & 2  
Site Location Map (Figure 1)  
Site Plan (Figure 2)  
Field Parameter Forms  
Laboratory Analytical Results  
Chain of Custody Documentation

TABLE 1  
WELL MONITORING DATA

| Well No. | Date Monitored                               | Top of Casing Elev. (ft.) | Depth to Water (ft.) | Water Table Elev. (ft.) |
|----------|--|---------------------------|----------------------|-------------------------|
| MW1      | 8/31/99                                      | 177.37*                   | 8.36                 | 169.01                  |
|          | 4/29/99                                      |                           | 7.68                 | 169.69                  |
|          | 1/29/99                                      |                           | 6.99                 | 170.38                  |
|          | 4/26/98                                      |                           | 7.50                 | 169.87                  |
|          | 1/24/98                                      |                           | 6.61                 | 170.76                  |
|          | 11/06/97                                     |                           | 8.79                 | 168.58                  |
|          | 8/26/97                                      |                           | 8.51                 | 168.86                  |
|          | 7/24/97                                      | 177.43**                  | 8.71                 | 168.72                  |
|          | 4/25/97                                      |                           | 7.98                 | 169.45                  |
|          | 1/20/97                                      |                           | 7.12                 | 170.31                  |
|          | 7/26/96                                      |                           | 8.39                 | 169.04                  |
|          | 7/09/96                                      |                           | 8.16                 | 169.27                  |
|          | 4/23/96                                      |                           | 7.47                 | 169.96                  |
|          | 2/07/96                                      |                           | 6.09                 | 171.34                  |
|          | 1/29/96                                      |                           | 6.17                 | 171.26                  |
|          | 10/26/95                                     |                           | 8.45                 | 168.98                  |
|          | 7/28/95                                      |                           | 8.27                 | 169.16                  |
|          | 5/02/95                                      |                           | 6.96                 | 170.47                  |
|          | 2/23/95                                      |                           | 7.72                 | 169.71                  |
|          | 11/18/94                                     |                           | 7.14                 | 170.29                  |
|          | 8/22/94                                      |                           | 8.67                 | 168.76                  |
|          | 5/19/94                                      |                           | 8.05                 | 169.38                  |
|          | 2/28/94                                      |                           | 7.44                 | 169.99                  |
|          | 11/24/93                                     |                           | 8.74                 | 168.69                  |
|          | 8/30/93                                      |                           | 8.78                 | 168.65                  |
|          | 5/18/93                                      |                           | 8.12                 | 169.31                  |
|          | 2/23/93                                      |                           | 7.34                 | 170.09                  |
|          | 11/13/92                                     | 200.00***                 | 9.13                 | 190.87                  |
|          | 5/29/92                                      | 175.73                    | 8.59                 | 167.14                  |
|          | 1/14/92                                      |                           | 8.57                 | 167.16                  |
|          | 12/23/91                                     |                           | 9.65                 | 166.08                  |
|          | 11/25/91                                     |                           | 9.41                 | 166.32                  |
|          | 10/10/91                                     |                           | 9.70                 | 166.03                  |
| 9/17/91  |  | 9.50                      | 166.23               |                         |
| 8/19/91  |  | 9.31                      | 166.42               |                         |
| MW2      | NOT MEASURED (DESTROYED ON FEBRUARY 7, 1996) |                           |                      |                         |
|          | 2/07/96                                      | 176.04**                  | 5.70                 | 170.34                  |
|          | 1/29/96                                      |                           | 5.16                 | 170.88                  |
|          | 10/26/95                                     |                           | 8.21                 | 167.83                  |
|          | 7/28/95                                      |                           | 7.99                 | 168.05                  |
|          | 5/02/95                                      |                           | 6.79                 | 169.25                  |
|          | 2/23/95                                      |                           | 7.51                 | 168.53                  |
|          | 11/18/94                                     |                           | 6.92                 | 169.12                  |
|          | 8/22/94                                      |                           | 8.59                 | 167.45                  |
|          | 5/19/94                                      |                           | 7.70                 | 168.34                  |
|          | 2/28/94                                      |                           | 6.99                 | 169.05                  |
| 11/24/93 |  | 8.47                      | 167.57               |                         |
| 8/30/93  |  | 8.64                      | 167.40               |                         |
| 5/18/93  |  | 7.73                      | 168.31               |                         |

**NOTES:**

- \* = Surveyed on August 20, 1997
- \*\* = Surveyed on March 24, 1993
- \*\*\* = Surveyed on December 5, 1992

TABLE 1  
WELL MONITORING DATA  
(Continued)

| Well No. | Date Monitored | Top of Casing Elev. (ft.) | Depth to Water (ft.) | Water Table Elev. (ft.) |
|----------|----------------|---------------------------|----------------------|-------------------------|
| MW2      | 2/23/93        |                           | 6.39                 | 169.65                  |
|          | 11/13/92       | 198.61***                 | 8.70                 | 189.91                  |
|          | 5/29/92        | 175.45                    | 9.31                 | 166.14                  |
|          | 1/14/92        |                           | 8.97                 | 166.48                  |
|          | 12/23/91       |                           | 10.39                | 165.06                  |
|          | 11/25/91       |                           | 9.81                 | 165.64                  |
|          | 10/10/91       |                           | 10.39                | 165.06                  |
|          | 9/17/91        |                           | 10.23                | 165.22                  |
|          | 8/19/91        |                           | 9.60                 | 165.85                  |
|          | MW3            | 8/31/99                   | 176.40*              | 7.95                    |
| 4/29/99  |                |                           | 7.09                 | 169.31                  |
| 1/29/99  |                |                           | 6.42                 | 169.98                  |
| 4/26/98  |                |                           | 6.85                 | 169.55                  |
| 1/24/98  |                |                           | 5.90                 | 170.50                  |
| 11/06/97 |                |                           | 7.80                 | 168.80                  |
| 8/26/97  |                |                           | 7.67                 | 168.93                  |
| 7/24/97  |                | 176.41**                  | 7.90                 | 168.51                  |
| 4/25/97  |                |                           | 7.12                 | 169.29                  |
| 1/20/97  |                |                           | 6.35                 | 170.06                  |
| 7/26/96  |                |                           | 7.84                 | 169.57                  |
| 7/09/96  |                |                           | 7.61                 | 168.80                  |
| 4/23/96  |                |                           | 6.81                 | 169.60                  |
| 2/07/96  |                |                           | 5.05                 | 170.36                  |
| 1/29/96  |                |                           | 5.77                 | 170.64                  |
| 10/26/95 |                |                           | 7.72                 | 168.69                  |
| 7/28/95  |                |                           | 7.80                 | 168.61                  |
| 5/02/95  |                |                           | 6.50                 | 169.91                  |
| 2/23/95  |                |                           | 7.24                 | 169.17                  |
| 11/18/94 |                |                           | 6.05                 | 170.36                  |
| 8/22/94  |                |                           | 7.65                 | 168.76                  |
| 5/19/94  |                |                           | 7.15                 | 169.26                  |
| 2/24/94  |                |                           | 6.68                 | 169.73                  |
| 11/24/93 |                |                           | 7.55                 | 168.86                  |
| 8/30/93  |                |                           | 7.64                 | 168.77                  |
| 5/18/93  |                |                           | 7.12                 | 169.29                  |
| 2/23/93  |                |                           | 8.01                 | 168.40                  |
| 11/13/92 | 190.97***      | 7.86                      | 191.12               |                         |
| 5/29/92  | 175.00         | 8.45                      | 166.55               |                         |
| 1/14/92  |                | 8.24                      | 166.55               |                         |
| 12/23/91 |                | 9.37                      | 165.63               |                         |
| 11/25/91 |                | 9.19                      | 165.81               |                         |
| 10/10/91 |                | 9.43                      | 165.57               |                         |
| 9/17/91  |                | 9.20                      | 165.80               |                         |
| 8/19/91  |                | 8.95                      | 166.05               |                         |

**NOTES:**

- \* = Surveyed on August 20, 1997
- \*\* = Surveyed on March 24, 1993
- \*\*\* = Surveyed on December 5, 1992

TABLE 1  
WELL MONITORING DATA  
(Continued)

| Well No. | Date Monitored | Top of Casing Elev. (ft.) | Depth to Water (ft.) | Water Table Elev. (ft.) |
|----------|----------------|---------------------------|----------------------|-------------------------|
| MW4      | 8/31/99        | 176.35*                   | 8.28                 | 168.07                  |
|          | 4/29/99        |                           | 7.14                 | 169.21                  |
|          | 1/29/99        |                           | 6.68                 | 169.67                  |
|          | 4/26/98        |                           | 6.87                 | 169.48                  |
|          | 1/24/98        |                           | 6.61                 | 169.74                  |
|          | 11/06/97       |                           | 9.16                 | 167.19                  |
|          | 8/26/97        |                           | 8.92                 | 167.43                  |
|          | 8/20/97        |                           | 7.66                 | (prior to development)  |

NOTES:

- \* = Surveyed on August 20, 1997
- \*\* = Surveyed on March 24, 1993
- \*\*\* = Surveyed on December 5, 1992



TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS

| Well No. | TPH-D                                       | TPH-G | <del>MIBK</del> | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|----------|---|-------|-----------------|---------|---------|---------------|---------------|
|          | Samples Collected<br>on August 31, 1999     |       |                 |         |         |               |               |
| MW1+     | 22  | 66    | 0.71            | 8.7     | 2.7     | 2.4           | 10            |
| MW2      | Not Sampled (Destroyed on February 7, 1996) |       |                 |         |         |               |               |
| MW3+     | 22  | 120   | 4.7             | 35      | 3.7     | 2.4           | 14            |
| MW4+     | 9.4   | 190   | 4.4             | 46      | 30      | 2.8           | 15            |
| EW1      | Not Sampled                                 |       |                 |         |         |               |               |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not Detected.

+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds. Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
(Continued)

| Well No.                                 | TPH-D                                       | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|--|---|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>on April 29, 1999   |   |       |      |         |         |               |               |
| MW1+                                     | 22  | 48    | ND   | 8.4     | 2.8     | 2.0           | 8.1           |
| MW2                                      | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3+                                     | 48  | 100   | 2.5  | 33      | 8.0     | 2.1           | 14            |
| MW4+                                     | 9.4   | 210   | 3.2  | 42      | 35      | 2.8           | 15            |
| EW1                                      | Not Sampled                                 |       |      |         |         |               |               |
| Samples Collected<br>on January 29, 1999 |   |       |      |         |         |               |               |
| MW1+                                     | 9.1   | 47    | ND   | 9.0     | 2.9     | 1.9           | 8.0           |
| MW2                                      | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3+                                     | 240   | 84    | 1.3  | 31      | 2.8     | 1.8           | 12            |
| MW4+                                     | 7.3   | 190   | 2.4  | 44      | 40      | 3.1           | 17            |
| EW1                                      | Not Sampled                                 |       |      |         |         |               |               |
| Samples Collected<br>on April 26, 1998   |   |       |      |         |         |               |               |
| MW1++                                    | 7.8   | 60    | ND   | 9.3     | 5.7     | 2.1           | 9.1           |
| MW2                                      | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3+                                     | 380   | 100   | 9.7  | 29      | 7.1     | 1.8           | 14            |
| MW4+                                     | 13  | 190   | ND   | 49      | 37      | 3.2           | 18            |
| EW1                                      | Not Sampled                                 |       |      |         |         |               |               |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not Detected.

+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.

++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                                 | TPH-D                                       | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|--|---|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>on January 24, 1998 |   |       |      |         |         |               |               |
| MW1+                                     | 24  | 57    | ND   | 6.9     | 5.5     | 2.0           | 8.7           |
| MW2                                      | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3+                                     | 77  | 97    | ND   | 28      | 7.1     | 1.8           | 11            |
| MW4+                                     | 20  | 200   | ND   | 50      | 40      | 3.1           | 17            |
| EW1                                      | Not Sampled                                 |       |      |         |         |               |               |
| Samples Collected<br>on November 6, 1997 |   |       |      |         |         |               |               |
| MW1++                                    | 17  | 63    | ND   | 7.4     | 6.7     | 2.3           | 9.9           |
| MW2                                      | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3+                                     | 120   | 140   | ND   | 37      | 19      | 2.4           | 14            |
| MW4+                                     | 110   | 160   | ND   | 48      | 30      | 2.8           | 16            |
| EW1                                      | Not Sampled                                 |       |      |         |         |               |               |
| Samples Collected<br>on August 26, 1997  |   |       |      |         |         |               |               |
| MW1                                      | Not Sampled                                 |       |      |         |         |               |               |
| MW2                                      | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3                                      | Not Sampled                                 |       |      |         |         |               |               |
| MW4+                                     | 5.5   | 210   | 1.7  | 48      | 42      | 3.4           | 19            |
| EW1                                      | Not Sampled                                 |       |      |         |         |               |               |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.  
 TPH-D = Total Petroleum Hydrocarbons as Diesel.  
 + = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.  
 ++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.  
 Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                              | TPH-D                                       | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|---------------------------------------|---|-------|------|---------|---------|---------------|---------------|
| Samples Collected on July 24, 1997    |   |       |      |         |         |               |               |
| MW1++                                 | 28  | 66    | 1.8  | 8.6     | 8.1     | 2.2           | 10            |
| MW2                                   | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3++                                 | 91  | 120   | 1.4  | 33      | 17      | 2.2           | 12            |
| EW1                                   | Not Sampled                                 |       |      |         |         |               |               |
| Samples Collected on April 25, 1997   |   |       |      |         |         |               |               |
| MW1+                                  | 170   | 77    | ND   | 7.4     | 7.9     | 2.1           | 9.8           |
| MW2                                   | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3+                                  | 760   | 240   | 1.6  | 24      | 18      | 4.1           | 24            |
| EW1                                   | Not Sampled                                 |       |      |         |         |               |               |
| Samples Collected on January 21, 1997 |   |       |      |         |         |               |               |
| MW1++                                 | 57  | 80    | 0.25 | 7.8     | 8.3     | 1.9           | 8.9           |
| MW2                                   | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3++                                 | 34  | 150   | 1.30 | 40      | 14      | 2.6           | 12            |
| EW1                                   | Not Sampled                                 |       |      |         |         |               |               |
| Samples Collected on July 26, 1996    |   |       |      |         |         |               |               |
| MW1++                                 | 11  | 76    | ND   | 11      | 13      | 2.4           | 10            |
| MW2                                   | Not Sampled (Destroyed on February 7, 1996) |       |      |         |         |               |               |
| MW3++                                 | 24  | 130   | 0.89 | 40      | 22      | 2.4           | 12            |
| EW1                                   | Not Sampled                                 |       |      |         |         |               |               |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not Detected.

+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.

++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                                 | TPH-D                                       | TPH-G | MTBE   | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|--|---|-------|--------|---------|---------|---------------|---------------|
| Samples Collected<br>on April 23, 1996   |   |       |        |         |         |               |               |
| MW1++                                    | 5.7   | 73    | ND     | 8.6     | 12      | 2.2           | 9.8           |
| MW2                                      | Not Sampled (Destroyed on February 7, 1996) |       |        |         |         |               |               |
| MW3++                                    | 280   | 170   | 0.72   | 34      | 22      | 2.2           | 14            |
| EW1                                      | Not Sampled                                 |       |        |         |         |               |               |
| Samples Collected<br>on January 29, 1996 |   |       |        |         |         |               |               |
| MW1++                                    | 6.6   | 81    | 0.25   | 7.6     | 13      | 1.9           | 8.9           |
| MW2++                                    | 4.6   | 38    | 0.0071 | 1.9     | 5.7     | 1.1           | 5.9           |
| MW3++                                    | 45  | 150   | 0.54   | 32      | 21      | 1.9           | 12            |
| EW1                                      | Not Sampled                                 |       |        |         |         |               |               |
| Samples Collected<br>on October 26, 1995 |   |       |        |         |         |               |               |
| MW1++                                    | 62  | 89    | ND     | 7.8     | 12      | 2.4           | 11            |
| MW2                                      | 900   | 74    | ND     | 2.9     | 5.9     | 2.0           | 10            |
| MW3                                      | 33  | 130   | 0.69   | 37      | 21      | 0.21          | 11            |
| EW1                                      | Not Sampled.                                |       |        |         |         |               |               |
| Samples Collected<br>on July 28, 1995    |   |       |        |         |         |               |               |
| MW1++                                    | 2.0   | 35    | NA     | 3.8     | 8.7     | 1.1           | 6.5           |
| MW2++                                    | 2.0   | 15    | NA     | 1.4     | 2.3     | 0.62          | 3.2           |
| MW3+                                     | 1.9   | 86    | NA     | 28      | 16      | 1.3           | 7.6           |
| EW1                                      | Not Sampled.                                |       |        |         |         |               |               |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not Detected.

+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.

++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                                  | TPH-D        | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|---|--------------|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>on May 2, 1995       |              |       |      |         |         |               |               |
| MW1++                                     | 6.5          | 86    | NA   | 8.9     | 14      | 2.3           | 11            |
| MW2+                                      | 6.6          | 55    | NA   | 3.3     | 10      | 1.8           | 10            |
| MW3+                                      | 9.7          | 170   | NA   | 43      | 30      | 2.5           | 14            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |
| Samples Collected<br>on February 24, 1995 |              |       |      |         |         |               |               |
| MW1                                       | 9.1          | 90    | NA   | 7.5     | 12      | 1.5           | 11            |
| MW2                                       | 22           | 67    | NA   | 4.9     | 11      | 1.8           | 11            |
| MW3                                       | 9.2          | 130   | NA   | 31      | 19      | 1.8           | 10            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |
| Samples Collected<br>on November 18, 1994 |              |       |      |         |         |               |               |
| MW1                                       | 10           | 96    | NA   | 9.3     | 14      | 2.5           | 11            |
| MW2                                       | 5.0          | 86    | NA   | 11      | 17      | 1.8           | 12            |
| MW3                                       | 23           | 140   | NA   | 38      | 22      | 2.0           | 11            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |
| Samples Collected<br>on August 22, 1994   |              |       |      |         |         |               |               |
| MW1                                       | 8.3          | 100   | NA   | 9.0     | 11      | 2.1           | 9.4           |
| MW2                                       | 4.1          | 91    | NA   | 10      | 13      | 1.5           | 9.0           |
| MW3                                       | 5.3          | 170   | NA   | 35      | 20      | 1.8           | 10            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

+ = Review of the laboratory analytical reports indicates that the TPH-D results consist of both diesel-range and gasoline range compounds.

++ = Review of the laboratory analytical reports indicates that the TPH-D results consist of gasoline range compounds.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                                  | TPH-D        | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|---|--------------|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>on May 19, 1994      |              |       |      |         |         |               |               |
| MW1                                       | 30           | 100   | NA   | 12      | 14      | 3.5           | 17            |
| MW2                                       | 5.8          | 62    | NA   | 9.2     | 13      | 1.3           | 8.4           |
| MW3                                       | 30           | 150   | NA   | 38      | 25      | 2.4           | 14            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |
| Samples Collected<br>on February 28, 1994 |              |       |      |         |         |               |               |
| MW1                                       | 110          | 90    | NA   | 11      | 9.6     | 2.1           | 9.9           |
| MW2                                       | 13           | 91    | NA   | 13      | 16      | 1.5           | 9.0           |
| MW3                                       | 210          | 110   | NA   | 36      | 21      | 1.9           | 11            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |
| Samples Collected<br>on November 24, 1993 |              |       |      |         |         |               |               |
| MW1                                       | 8.2          | 66    | NA   | 8.3     | 8.9     | 2.0           | 11            |
| MW2                                       | 79           | 12    | NA   | 13      | 17      | 2.5           | 17            |
| MW3                                       | 24           | 160   | NA   | 48      | 26      | 2.2           | 12            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |
| Samples Collected<br>on August 30, 1993   |              |       |      |         |         |               |               |
| MW1                                       | 9.4          | 77    | NA   | 6.4     | 11      | 2.2           | 12            |
| MW2                                       | 110          | 110   | NA   | 11      | 14      | 1.8           | 11            |
| MW3                                       | 32           | 130   | NA   | 36      | 21      | 1.9           | 8.2           |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
(Continued)

| Well No.                                  | TPH-D        | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|---|--------------|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>on May 18, 1993      |              |       |      |         |         |               |               |
| MW1                                       | 30           | 92    | NA   | 4.0     | 11      | 2.5           | 15            |
| MW2                                       | 44           | 67    | NA   | 9.2     | 12      | 1.4           | 9.3           |
| MW3                                       | 7.2          | 130   | NA   | 36      | 21      | 2.1           | 12            |
| EW1                                       | Not Sampled. |       |      |         |         |               |               |
| Samples Collected<br>on February 23, 1993 |              |       |      |         |         |               |               |
| MW1                                       | 14           | 100   | NA   | 4.5     | 11      | 2.1           | 12            |
| MW2                                       | 7.0          | 76    | NA   | 12      | 17      | 1.6           | 9.6           |
| MW3                                       | 8.1          | 110   | NA   | 31      | 18      | 1.9           | 11            |
| EW1                                       | 9.6          | 66    | NA   | 14      | 8.5     | 1.4           | 9.8           |
| Samples Collected<br>on November 13, 1992 |              |       |      |         |         |               |               |
| MW1                                       | 4.4          | 120   | NA   | 5.8     | 10      | 2.1           | 13            |
| MW2                                       | 8.2          | 79    | NA   | 10      | 13      | 1.4           | 8.6           |
| MW3                                       | 4.7          | 140   | NA   | 38      | 24      | 2.0           | 12            |
| EW1                                       | 13           | 62    | NA   | 11      | 9.2     | 1.1           | 9.6           |
| Samples Collected<br>On May 27, 1992      |              |       |      |         |         |               |               |
| MW1                                       | 11           | 120   | NA   | 8.8     | 16      | 2.3           | 15            |
| MW2                                       | 130          | 89    | NA   | 18      | 19      | 1.7           | 14            |
| MW3                                       | 27           | 370   | NA   | 91      | 57      | 3.0           | 21            |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

Results in parts per million (ppm), unless otherwise indicated.



TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                                   | TPH-D | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|--|-------|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>On January 14, 1992   |       |       |      |         |         |               |               |
| MW1  | 19    | 39    | NA   | 7.3     | 8.7     | 1.3           | 8.9           |
| MW2  | 1600  | 59    | NA   | 17      | 14      | 1.8           | 15            |
| MW3  | 270   | 130   | NA   | 76      | 30      | 3.4           | 21            |
| Samples Collected<br>On December 23, 1991  |       |       |      |         |         |               |               |
| MW1  | 34    | 78    | NA   | 9.3     | 7.3     | 0.54          | 13            |
| MW2  | 700   | 2100  | NA   | 36      | 130     | 79            | 560           |
| MW3  | 540   | 740   | NA   | 30      | 61      | 31            | 180           |
| Samples Collected<br>On November 25, 1991  |       |       |      |         |         |               |               |
| MW1  | 36    | 170   | NA   | 5.5     | 5.6     | 1.6           | 8.4           |
| MW2  | 130   | 230   | NA   | 11      | 9.7     | 1.4           | 9.7           |
| MW3  | 74    | 150   | NA   | 65      | 31      | 3.4           | 18            |
| Samples Collected<br>On October 10, 1991   |       |       |      |         |         |               |               |
| MW1  | 19    | 28    | NA   | 4.1     | 4.7     | 1.0           | 4.8           |
| MW2  | 360   | 85    | NA   | 21      | 25      | 2.1           | 14            |
| MW3  | 39    | 140   | NA   | 57      | 31      | 2.2           | 14            |
| Samples Collected<br>On September 17, 1991 |       |       |      |         |         |               |               |
| MW1  | 19    | 39    | NA   | 4.9     | 4.1     | 1.2           | 5.9           |
| MW2  | 56    | 74    | NA   | 10      | 11      | 1.4           | 8.1           |
| MW3  | 140   | 180   | NA   | 47      | 25      | 2.6           | 15            |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                                | TPH-D | TPH-G | MTBE | Benzene | Toluene | Ethylbenzene | Total Xylenes |
|---|-------|-------|------|---------|---------|--------------|---------------|
| Samples Collected<br>On August 19, 1991 |       |       |      |         |         |              |               |
| MW1                                     | 47    | 48    | NA   | 13      | 8.4     | 0.99         | 29            |
| MW2                                     | 19    | 69    | NA   | 26      | 22      | 2.1          | 18            |
| MW3                                     | 150   | 170   | NA   | 82      | 31      | 4.4          | 22            |
| Samples Collected<br>On July 20, 1991   |       |       |      |         |         |              |               |
| MW1                                     | 49    | 100   | NA   | 11      | 14      | 2.3          | 17            |
| MW2                                     | 100   | 51    | NA   | 9.9     | 7.7     | 1.2          | 7.5           |
| MW3                                     | 270   | 450   | NA   | 46      | 29      | 3.5          | 21            |
| Samples Collected<br>On June 20, 1991   |       |       |      |         |         |              |               |
| MW1                                     | 42    | 76    | NA   | 4.7     | 7.1     | 1.5          | 9.8           |
| MW2                                     | 69    | 87    | NA   | 8.1     | 8.4     | 1.1          | 8.9           |
| MW3                                     | 210   | 920   | NA   | 39      | 49      | 13           | 69            |
| Samples Collected<br>On May 17, 1991    |       |       |      |         |         |              |               |
| MW1                                     | 26    | 72    | NA   | 7.7     | 9.9     | ND           | 11            |
| MW2                                     | 33    | 62    | NA   | 5.9     | 6.3     | 1.2          | 9.0           |
| MW3                                     | 70    | 170   | NA   | 32      | 22      | 2.2          | 18            |
| Samples Collected<br>On April 15, 1991  |       |       |      |         |         |              |               |
| MW1                                     | NA    | 56    | NA   | 6.5     | 8.5     | 0.41         | 9.9           |
| MW2                                     | NA    | 82    | NA   | 5.3     | 7.4     | 1.0          | 9.4           |
| MW3                                     | NA    | 110   | NA   | 31      | 15      | 0.88         | 7.4           |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

NA = Not Analyzed.

ND = Not Detected.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
SUMMARY OF LABORATORY ANALYTICAL RESULTS  
(Continued)

| Well No.                                   | TPH-D | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|--|-------|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>On March 21, 1991     |       |       |      |         |         |               |               |
| MW1  | NA    | 36    | NA   | 4.5     | 5.7     | 0.087         | 7.3           |
| MW2  | NA    | 62    | NA   | 9.3     | 11      | 0.35          | 9.7           |
| MW3  | NA    | 87    | NA   | 30      | 14      | 0.69          | 5.4           |
| Samples Collected<br>On February 15, 1991  |       |       |      |         |         |               |               |
| MW1  | NA    | 120   | NA   | 7.4     | 6.6     | ND            | 13            |
| MW2  | NA    | 200   | NA   | 12      | 12      | 1.7           | 14            |
| MW3  | NA    | 230   | NA   | 44      | 40      | ND            | 31            |
| Samples Collected<br>On January 14, 1991   |       |       |      |         |         |               |               |
| MW1  | NA    | 33    | NA   | 3.9     | 2.9     | 0.21          | 5.3           |
| MW2  | NA    | 78    | NA   | 11      | 8.7     | 0.58          | 8.0           |
| MW3  | NA    | 160   | NA   | 48      | 25      | 1.0           | 16            |
| Samples Collected<br>On September 27, 1990 |       |       |      |         |         |               |               |
| MW1  | NA    | 28    | NA   | 3.7     | 3.5     | 0.01          | 6.5           |
| MW2  | NA    | 59    | NA   | 8.4     | 12      | 0.88          | 9.0           |
| MW3  | NA    | 25    | NA   | 7.2     | 6.4     | 0.42          | 3.4           |
| Samples Collected<br>On August 23, 1990    |       |       |      |         |         |               |               |
| MW1  | NA    | 40    | NA   | 5.1     | 4.9     | 0.35          | 6.0           |
| MW2  | NA    | 96    | NA   | 8.1     | 8.4     | 1.5           | 8.6           |
| MW3  | NA    | 220   | NA   | 67      | 46      | 27            | 18            |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not Detected.

NA = Not Analyzed.

Results in parts per million (ppm), unless otherwise indicated.

TABLE 2  
 SUMMARY OF LABORATORY ANALYTICAL RESULTS  
 (Continued)

| Well No.                                  | TPH-D | TPH-G | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes |
|---|-------|-------|------|---------|---------|---------------|---------------|
| Samples Collected<br>On July 20, 1990     |       |       |      |         |         |               |               |
| MW1                                       | 44    | NA    | NA   | 5.1     | 4.2     | ND            | 9.1           |
| MW2                                       | 86    | NA    | NA   | 9.1     | 14      | 0.94          | 13            |
| MW3                                       | 88    | NA    | NA   | 25.1    | 21.1    | 0.61          | 14.1          |
| Samples Collected<br>On March 19, 1990    |       |       |      |         |         |               |               |
| MW1                                       | NA    | 40    | NA   | 3.7     | 1.1     | ND            | 3.3           |
| MW2                                       | NA    | 50    | NA   | 7.7     | 8.7     | 0.075         | 5.6           |
| MW3                                       | NA    | 210   | NA   | 38      | 28      | 1.8           | 12            |
| Samples Collected<br>On February 20, 1990 |       |       |      |         |         |               |               |
| MW1+++                                    | NA    | 7.6   | NA   | 1.6     | ND      | ND            | 1.3           |
| MW2+++                                    | NA    | 38    | NA   | 7.3     | 3.1     | 0.075         | 6.8           |
| MW3+++                                    | NA    | 46    | NA   | 20      | 15      | 1.8           | 9.7           |

**NOTES:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline.  
 TPH-D = Total Petroleum Hydrocarbons as Diesel.  
 ND = Not Detected.  
 NA = Not Analyzed.  
 +++ Indicates Organic Lead was not detected.  
 Results in parts per million (ppm), unless otherwise indicated.

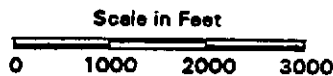
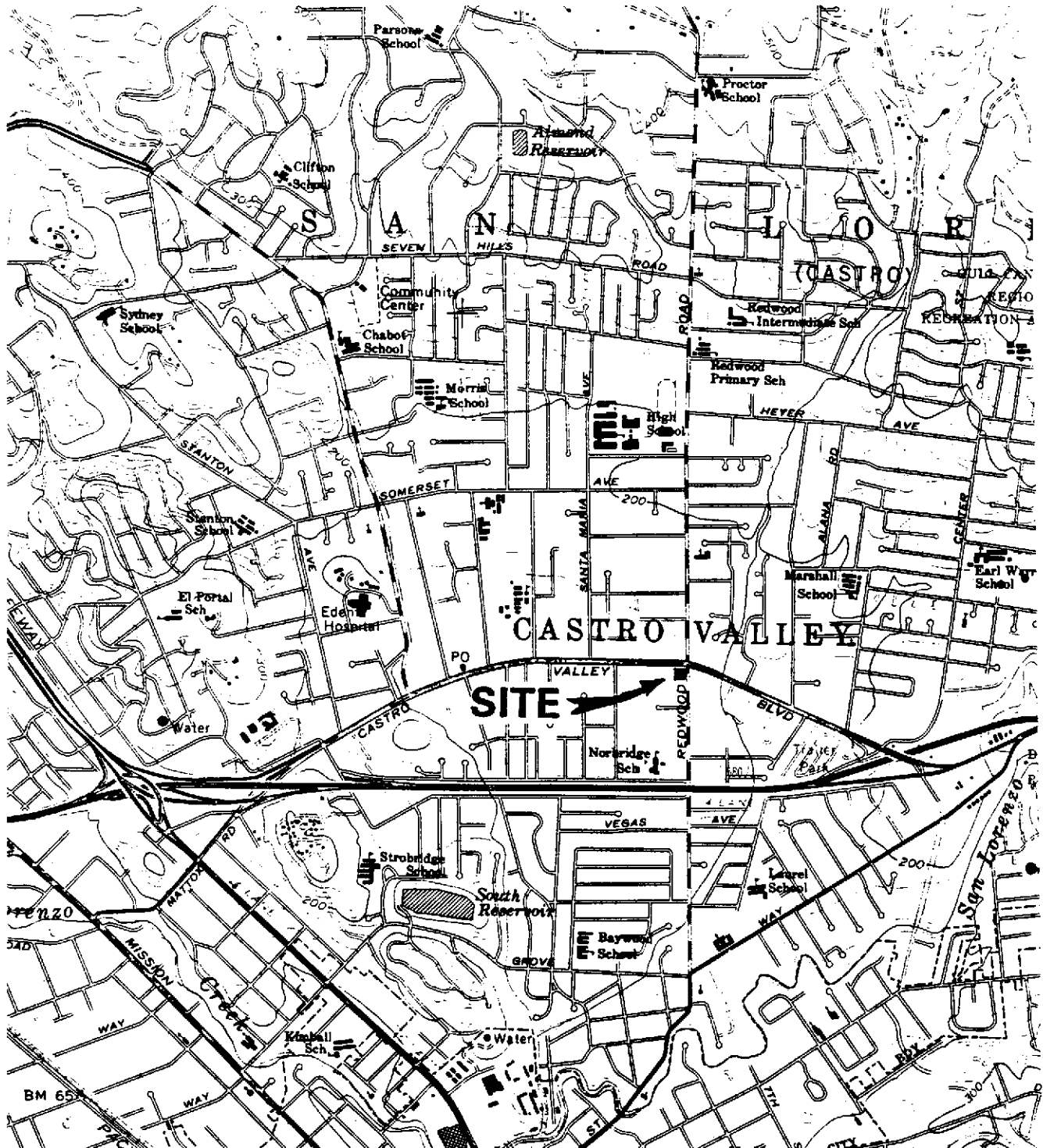
# P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.

4020 Panama Court

Oakland, CA 94611

(510) 658-6916



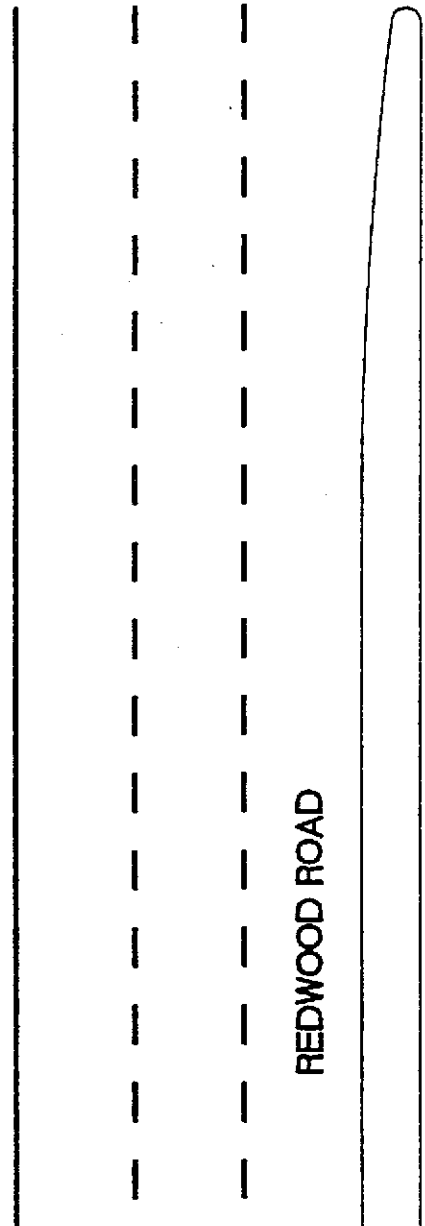
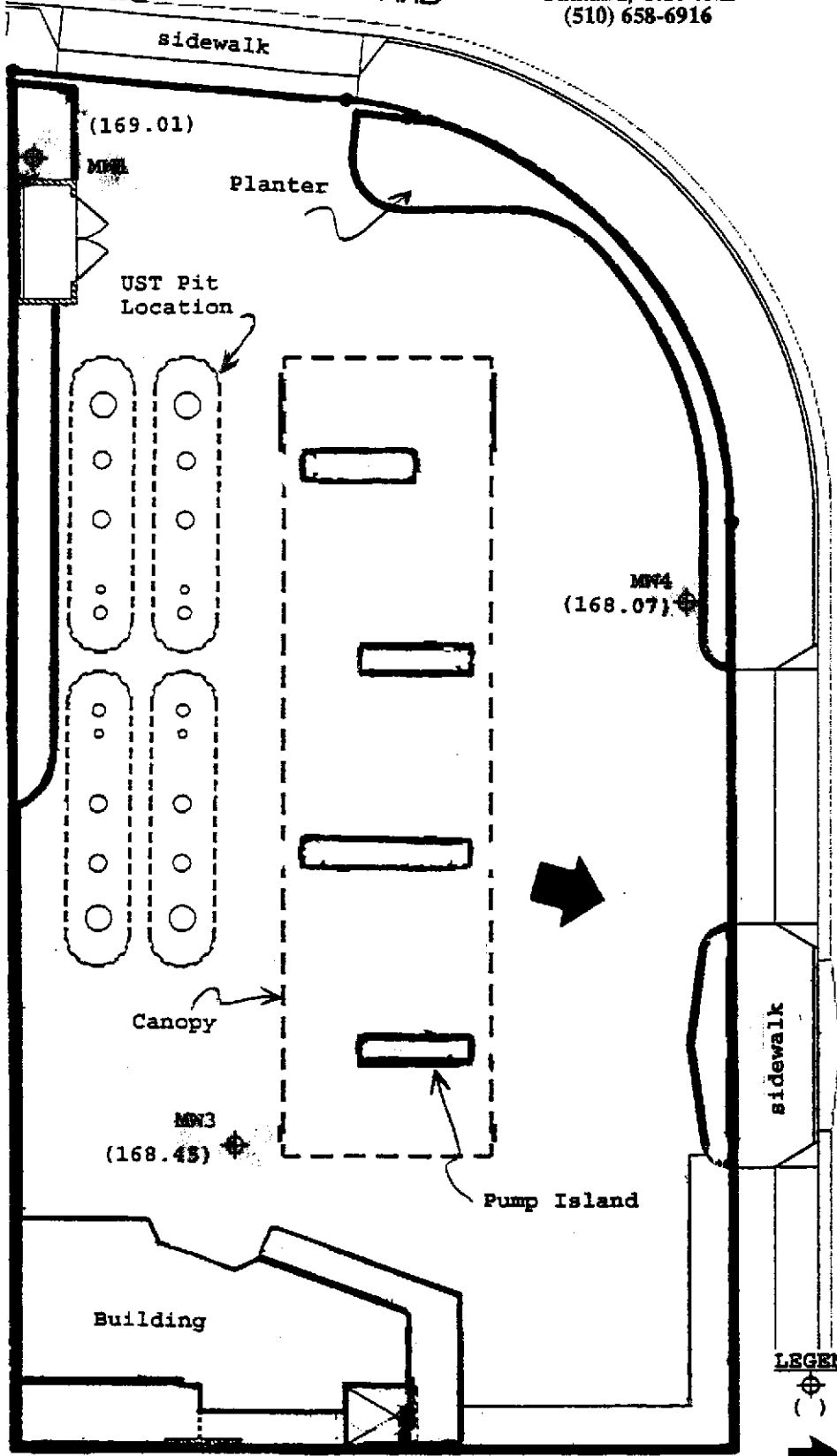
Base Map from:  
U.S. Geological Survey  
Hayward, Calif.  
7.5 Minute Quadrangle  
Photorevised 1980

Figure 1  
**SITE LOCATION MAP**  
XTRA OIL Company  
3195 Castro Valley Blvd.  
Alameda, California

# P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.  
4020 Panama Court  
Oakland, CA 94611  
(510) 658-6916

CASTRO VALLEY BOULEVARD



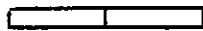
### LEGEND

- ⊕ Monitoring Well Location
- ( ) Groundwater Surface Elevation on August 31, 1999
- ➔ Groundwater Flow Direction

North



0 20



Scale in Feet

Base Map From  
RHL Design Group, Inc.  
June, 1997

Figure 2  
SITE PLAN  
XTRA OIL Company  
3459 Castro Valley Blvd.  
Castro Valley, CA

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XTR 02 Casco Valley  
 Job No. 024  
 TOC to Water (ft.) 8.36'  
 Well Depth (ft.) 20.2'  
 Well Diameter 4"  
 Gal./Casing Vol. 7.7 GAL

Well No. MW1  
 Date 2/21/99  
 Sheen ON SAMPLES  
 Free Product Thickness Ø  
 Sample Collection Method TEFLON RAILER

$\Sigma = 25 \text{ GAL}$

| TIME    | GAL. PURGED | pH                      | TEMPERATURE | ELECTRICAL CONDUCTIVITY |
|---------|-------------|-------------------------|-------------|-------------------------|
| 11:52 a | 1           | 7.22                    | 78.2        | 17.58                   |
| 11:53 a | 2.5         | 6.35                    | 72.9        | 19.21                   |
| 11:54   | 5           | 6.22                    | 71.4        | 17.74                   |
| 11:56   | 7.5         | 6.32                    | 71.1        | 17.10                   |
| 11:57   | 10          | 6.07                    | 71.1        | 17.76                   |
| 12:01   | 12.5        | 6.18                    | 72.8        | 17.06                   |
| 17:07   | 5           | 6.00                    | 72.4        | 17.79                   |
| 17:06   | 17.5        | 5.58                    | 73.2        | 18.06                   |
| 17:09   | 20          | 5.44                    | 73.9        | 17.68                   |
| 17:11   | 21          | WELL DE-WATERED, SAMPLE |             |                         |
|         |             |                         |             |                         |
|         |             |                         |             |                         |
|         |             |                         |             |                         |
|         |             |                         |             |                         |
|         |             |                         |             |                         |
|         |             |                         |             |                         |
|         |             |                         |             |                         |
|         |             |                         |             |                         |
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|         |             |                         |             |                         |
|         |             |                         |             |                         |

NOTES: GMB - 4mm mesh absorbent sock removed from well & replaced after MBS. Moderate Petroleum Hydrocarbon (PHC) odor, ~~small~~

P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name AREA 011 - Cresta Valley  
 Job No. 0014  
 TOC to Water (ft.) ~~8.28~~ 7.95  
 Well Depth (ft.) 18.3  
 Well Diameter 4"  
 Gal./Casing Vol. 6.75 GAL

Well No. MWB  
 Date 8/3/99  
 Sheen YES  
 Free Product Thickness Ø  
 Sample Collection Method TEFLON BALLER

$\Sigma = 21 \text{ GAL.}$

| TIME | GAL. PURGED            | pH   | TEMPERATURE | ELECTRICAL CONDUCTIVITY |
|------|------------------------|------|-------------|-------------------------|
| 1.54 | 1                      | 7.83 | 80.6        | 3.18                    |
| 1.56 | 2.5                    | 6.33 | 74.8        | 3.38                    |
| 1.58 | 5                      | 5.89 | 73.2        | 3.23                    |
| 2.01 | 7.5                    | 5.65 | 72.7        | 3.15                    |
| 2.03 | 10                     | 5.55 | 72.3        | 3.05                    |
| 2.05 | 12.5                   | 5.43 | 71.8        | 2.98                    |
| 2.06 | 12.5 DE-WATERED SAMPLE |      |             |                         |
|      |                        |      |             |                         |
|      |                        |      |             |                         |
|      |                        |      |             |                         |
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|      |                        |      |             |                         |

NOTES: GMS - SHEEN OBSERVED ON PURGE WATER



P&D ENVIRONMENTAL  
GROUNDWATER MONITORING/WELL PURGING  
DATA SHEET

Site Name XPR OIL - CASTRO Valley  
 Job No. 0014  
 TOC to Water (ft.) 8.28'  
 Well Depth (ft.) 20.0'  
 Well Diameter 2'  
 Gal./Casing Vol. 2 gal.

Well No. MW4  
 Date 8/3/99  
 Sheen \_\_\_\_\_  
 Free Product Thickness 0  
 Sample Collection Method TEFLON BAILER

$\Sigma = 6$

| <u>TIME</u> | <u>GAL. PURGED</u> | <u>pH</u>               | <u>TEMPERATURE</u> | <u>ELECTRICAL CONDUCTIVITY</u> |
|-------------|--------------------|-------------------------|--------------------|--------------------------------|
| 2:46        | 1                  | 7.30                    | 85.7               | 3.59                           |
| 2:49        | 2                  | <del>5.89</del>         | 79.3               | 2.63                           |
| 2:54        | 3                  | 6.62                    | 77.6               | 2.60                           |
| 2:55        | 4                  | 5.73                    | 76.9               | 2.46                           |
| 2:57        | 5                  | WELL DG WATERED, SAMPLE |                    |                                |
|             |                    |                         |                    |                                |
|             |                    |                         |                    |                                |
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|             |                    |                         |                    |                                |

NOTES: PP INDICATING  
(714) - LARGE OVERPRESSURE RELEASE UPON WELL OPENING  
OPENING WELL PRODUCES MODERATE PETROLEUM HYDROCARBON  
(PHC) EMISSIONS.



**McCAMPBELL ANALYTICAL INC.**

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

|   |   |                          |
|---|---|--------------------------|
| P&D Environmental<br>4020 Panama Court<br>Oakland, CA 94611 | Client Project ID: Xtra Oil-Castro Valley | Date Sampled: 08/31/99   |
|   | Client Contact: Paul King                 | Date Received: 08/31/99  |
|   | Client P.O:                               | Date Extracted: 08/31/99 |
|   |   | Date Analyzed: 08/31/99  |

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with Methyl tert-Butyl Ether\* & BTEX\***  
 EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

| Lab ID   | Client ID | Matrix | TPH(g) <sup>+</sup> | MTBE | Benzene | Toluene | Ethylbenzene | Xylenes | % Recovery Surrogate |
|--|-----------|--------|---------------------|------|---------|---------|--------------|---------|----------------------|
| 18299  | MW1       | W      | 66,000,a,h          | 710  | 8700    | 2700    | 2400         | 10,000  | 107                  |
| 18300  | MW3       | W      | 120,000,a,h         | 4700 | 35,000  | 3700    | 2400         | 14,000  | 108                  |
| 18301  | MW4       | W      | 190,000,a,h         | 4400 | 46,000  | 30,000  | 2800         | 15,000  | 106                  |
|  |           |        |                     |      |         |         |              |         |                      |
|  |           |        |                     |      |         |         |              |         |                      |
|  |           |        |                     |      |         |         |              |         |                      |
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|  |           |        |                     |      |         |         |              |         |                      |
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|  |           |        |                     |      |         |         |              |         |                      |
|  |           |        |                     |      |         |         |              |         |                      |
|  |           |        |                     |      |         |         |              |         |                      |
|  |           |        |                     |      |         |         |              |         |                      |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | W         |        | 50 ug/L             | 5.0  | 0.5     | 0.5     | 0.5          | 0.5     |                      |
|  | S         |        | 1.0 mg/kg           | 0.05 | 0.005   | 0.005   | 0.005        | 0.005   |                      |

\* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

\* cluttered chromatogram; sample peak coelutes with surrogate peak

\*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

 Edward Hamilton, Lab Director



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|   |   |                               |
|---|---|-------------------------------|
| P&D Environmental<br>4020 Panama Court<br>Oakland, CA 94611 | Client Project ID: Xtra Oil-Castro Valley | Date Sampled: 08/31/99        |
|   | Client Contact: Paul King                 | Date Received: 08/31/99       |
|   | Client P.O:                               | Date Analyzed: 09/01-09/07/99 |
|   |   | Date Extracted: 08/31/99      |

**Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel \***

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

| Lab ID   | Client ID | Matrix | TPH(d) <sup>+</sup> | % Recovery Surrogate |
|--|-----------|--------|---------------------|----------------------|
| 18299  | MW1       | W      | 22,000,d,b,h        | 112                  |
| 18300  | MW3       | W      | 22,000,d,b,h        | 98                   |
| 18301  | MW4       | W      | 9400,d,b,h          | 111                  |
|  |           |        |                     |                      |
|  |           |        |                     |                      |
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|  |           |        |                     |                      |
|  |           |        |                     |                      |
|  |           |        |                     |                      |
| Reporting Limit unless otherwise stated; ND means not detected above the reporting limit | W         |        | 50 ug/L             |                      |
|  | S         |        | 1.0 mg/kg           |                      |

\* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

\* cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

\*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

Edward Hamilton, Lab Director

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 08/31/99

Matrix: WATER

| Analyte             | Concentration (ug/L) |       |       | Amount Spiked | % Recovery |      |     |
|---------------------|----------------------|-------|-------|---------------|------------|------|-----|
|                     | Sample (#17000)      | MS    | MSD   |               | MS         | MSD  | RPD |
| TPH (gas)           | 0.0                  | 97.3  | 98.4  | 100.0         | 97.3       | 98.4 | 1.2 |
| Benzene             | 0.0                  | 9.2   | 9.1   | 10.0          | 92.0       | 91.0 | 1.1 |
| Toluene             | 0.0                  | 9.3   | 9.2   | 10.0          | 93.0       | 92.0 | 1.1 |
| Ethyl Benzene       | 0.0                  | 9.5   | 9.4   | 10.0          | 95.0       | 94.0 | 1.1 |
| Xylenes             | 0.0                  | 28.7  | 28.4  | 30.0          | 95.7       | 94.7 | 1.1 |
| TPH (diesel)        | 0.0                  | 7766  | 8310  | 7500          | 104        | 111  | 6.8 |
| TRPH (oil & grease) | 0                    | 24900 | 24900 | 23700         | 105        | 105  | 0.0 |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = ((\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD})) \times 2 \times 100$$

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 09/01/99

Matrix: WATER

| Analyte             | Concentration (ug/L) |      |      | Amount Spiked | % Recovery |      | RPD |
|---------------------|----------------------|------|------|---------------|------------|------|-----|
|                     | Sample (#18261)      | MS   | MSD  |               | MS         | MSD  |     |
| TPH (gas)           | 0.0                  | 96.8 | 95.5 | 100.0         | 96.8       | 95.5 | 1.3 |
| Benzene             | 0.0                  | 8.8  | 9.2  | 10.0          | 88.0       | 92.0 | 4.4 |
| Toluene             | 0.0                  | 9.0  | 9.4  | 10.0          | 90.0       | 94.0 | 4.3 |
| Ethyl Benzene       | 0.0                  | 9.4  | 9.7  | 10.0          | 94.0       | 97.0 | 3.1 |
| Xylenes             | 0.0                  | 28.1 | 29.3 | 30.0          | 93.7       | 97.7 | 4.2 |
| TPH(diesel)         | 0.0                  | 8292 | 8520 | 7500          | 111        | 114  | 2.7 |
| TRPH (oil & grease) | N/A                  | N/A  | N/A  | N/A           | N/A        | N/A  | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = ((\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD})) \times 2 \times 100$$

# P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.  
4020 Panama Court  
Oakland, CA 94611  
(510) 658-6916

## CHAIN OF CUSTODY RECORD

165517 PD 14.doc

| PROJECT NUMBER:   |         | PROJECT NAME:            |         |   | NUMBER OF CONTAINERS  | ANALYSIS(ES):              |      |                          |       | PRESERVATIVE | REMARKS            |  |
|---|---------|--------------------------|---------|---|---|----------------------------|------|--------------------------|-------|--------------|--------------------|--|
| 2014  |         | XTRA OIL - Castro Valley |         |   |   | TPH-G                      | BTEX | METALS                   | OTHER |              |                    |  |
| SAMPLED BY: (PRINTED AND SIGNATURE)   |         |                          |         |   | NUMBER OF CONTAINERS  | ANALYSIS(ES):              |      |                          |       | PRESERVATIVE | REMARKS            |  |
| [Signature] GREG BROWN  |         |                          |         |   |   | TPH-G                      | BTEX | METALS                   | OTHER |              |                    |  |
| SAMPLE NUMBER   | DATE    | TIME                     | TYPE    | SAMPLE LOCATION                         | NUMBER OF CONTAINERS  | TPH-G                      | BTEX | METALS                   | OTHER | PRESERVATIVE | REMARKS            |  |
| (+) MW1   | 8/31/99 |                          | WATER   | MONITORING WELL MW1                     | 5   | X                          | X    |                          |       | ICE          | NORMAL TURN AROUND |  |
| (+) MW3   |         |                          | "       | " " MW3                                 | 5   | X                          | X    |                          |       | "            | " " "              |  |
| (+) MW4   | "       |                          | "       | " " MW4                                 | 5   | X                          | X    |                          |       | "            | " " "              |  |
|   |         |                          |         |   |   |                            |      |                          |       |              | 18299              |  |
|   |         |                          |         |   |   |                            |      |                          |       |              | 18300              |  |
|   |         |                          |         |   |   |                            |      |                          |       |              | 18301              |  |
| RELINQUISHED BY: (SIGNATURE)  |         | DATE                     | TIME    | RECEIVED BY: (SIGNATURE)                | TOTAL NO. OF SAMPLES (THIS SHIPMENT)  | LABORATORY:                |      |                          |       |              |                    |  |
| [Signature]   |         | 8/31/99                  |         | [Signature]                             | 3   | McIMPENSE ANALYTICAL, INC. |      |                          |       |              |                    |  |
| RELINQUISHED BY: (SIGNATURE)  |         | DATE                     | TIME    | RECEIVED BY: (SIGNATURE)                | TOTAL NO. OF CONTAINERS (THIS SHIPMENT)   | LABORATORY CONTACT:        |      | LABORATORY PHONE NUMBER: |       |              |                    |  |
| [Signature]   |         | 8/31                     | 5:15 PM | Maria R. Venegas                        | 5   | Ed Hamilton                |      | (925) 798-1620           |       |              |                    |  |
| RELINQUISHED BY: (SIGNATURE)  |         | DATE                     | TIME    | RECEIVED FOR LABORATORY BY: (SIGNATURE) | SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO  |                            |      |                          |       |              |                    |  |
|   |         |                          |         |   | VOCAS/ORGANOMETALS/OTHER  |                            |      |                          |       |              |                    |  |
| REMARKS: ICE <input checked="" type="checkbox"/> GOOD CONDITION <input checked="" type="checkbox"/> HEAD SPACE ABSENT <input checked="" type="checkbox"/> |         |                          |         |   | PRESERVATION APPROPRIATE <input checked="" type="checkbox"/> CONTAINERS <input checked="" type="checkbox"/> |                            |      |                          |       | TB. MV       |                    |  |