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ALCO
HAZMAT

THIRD QUARTER 1993

GROUNDWATER MONITORING REPORT

CARNATION DAIRY FACILITY
1310 14TH STREET
OAKLAND, CALIFORNIA

PRESENTED TO:

ALAMEDA COUNTY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
DIVISION OF CLEAN WATER PROGRAM
UST LOCAL OVERSIGHT PROGRAM
80 SWAN WAY, ROOM 200
OAKLAND, CALIFORNIA 94621

ON BEHALF OF:

NESTLE USA, INC.
800 NORTH BRAND BOULEVARD
GLENDALE, CALIFORNIA 91203

PREPARED BY:

PARK ENVIRONMENTAL CORPORATION
4231 PACIFIC STREET
SUITE 7
ROCKLIN, CALIFORNIA 95677

JANUARY 4, 1994



ALCO
HAZMAT

94 FEB - 7 PM 12:42

February 3, 1994

5008.J12

Ms. Jennifer Eberle
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94601

**Re: Quarterly Groundwater Monitoring Report
Carnation Company
1310 14th Street
Oakland, CA**

Dear Ms. Eberle:

Park Environmental Corporation (**Park**) is pleased to provide this Quarterly Groundwater Monitoring Report on behalf of Nestle USA, Inc.. The report documents the work performed for the three month period of August, September and October 1993 at the Carnation site referenced above. **Park** anticipates performing groundwater sampling activities during the week of February 7, 1994 for the time period of November, December and January.

Please call **Park's** Rocklin office at 916/652-3861 if you have any questions concerning this submittal.

Sincerely,
Park Environmental Corporation

A handwritten signature in black ink, appearing to read "Peter Frank".

Peter Frank
Project Geologist

| | | |
|-----|---|--|
| cc: | Mr. Binayak Acharya Nestle USA, Inc. 800 N. Brand Blvd. Glendale, CA 91203 | Mr. Richard Hiett CRWQCB 2101 Webster Street, Suite 500 Oakland, CA 94612 |
|-----|---|--|

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| | |
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1.0 INTRODUCTION

Nestle USA, Inc., (Nestle) has retained **Park Environmental Corporation (Park)** to provide environmental services at its Carnation Company facility in Oakland, California. A site location map and plot plan are included as Figures 1 and 2 in Appendix A. Nestle has authorized Park to prepare this Quarterly Groundwater Monitoring Report, which includes brief groundwater sampling methodology and findings sections.

The Alameda County Health Agency (ACHA) is the lead environmental agency. This work was requested by Ms. Susan Hugo and Ms. Jennifer Eberle with the ACHA in accordance with the meeting between ACHA, Mr. Richard Hiett of the California Regional Water Quality Control Board, Mr. Walter Carey with Nestle, USA, and Mr. Richard Zipp with Park, on September 17, 1992. This site is referenced by the ACHA as 1310 14th Street.

1.1 Scope of Services

Specific tasks completed during this investigation included the following:

- Measure water and/or free product levels in 63 monitoring wells;
- Calculate groundwater flow direction in the vicinity of the free product plume and in the vicinity of the property boundaries;
- Purge and sample ten monitoring wells (MW-2, MW-3, MW-6, MW-13, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-32) not containing free product;
- Analyze ten groundwater samples (MW-2, MW-3, MW-6, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-32) for total petroleum hydrocarbons as gasoline and diesel, benzene, toluene, ethylbenzene, and total xylenes (BTEX) and two samples (MW-26 and MW-32) for chlorinated volatile organic compounds using EPA Methods 8015, 8020 and 601, respectively. In addition to the above mentioned analyses, EPA 8015 for gasoline tests were performed on an equipment blank and field duplicate sample for QA/QC purposes; and
- Prepare this Quarterly Monitoring Report documenting the findings.

2.0 GROUNDWATER MONITORING WELL SAMPLING METHODOLOGY

2.1 Groundwater Measurements

Prior to obtaining depth to groundwater measurements in the sampled wells, the wells were checked for the presence of free product utilizing a new disposable bailer for each well. Depth to groundwater measurements in the sampled wells and unsampled wells were made using a YSI model 3000 T-L-C Meter or Slope Indicator. The depths to water or product were measured from the top of the well casing. Groundwater elevations were calculated using measurements from surveyed monitoring wells not containing free product. Results of these measurements are included in Table I in Appendix B. Groundwater measurements taken during the October, 1992, March 23, 1993 and July 27, 1993 groundwater sampling episodes are presented in Tables II III, and IV in Appendix B.

2.2 Monitoring Well Purging

Each monitoring well was purged with a submersible pump until at least three well volumes of water had been removed. All of the wells which were purged and sampled were constructed of 4-inch diameter PVC well casing (except MW-6 which is 2-inch in diameter). All purging and sampling equipment was washed in Alconox solution or trisodium phosphate and rinsed in distilled water prior to each usage to reduce the potential for cross contamination between wells.

As groundwater was removed from the wells, pH, temperature and conductivity were monitored and recorded on a field data sheet. These field documents are kept in a permanent project file. Data obtained during the purging of the wells is presented in Table V in Appendix B.

The wells were allowed to stand for a period of time to regain equilibrium prior to sampling. Groundwater purged from the wells was placed in DOT-approved 55 gallon drums, pending receipt of analytical results to select the appropriate disposition.

2.3 Groundwater Analyses

Analyses of the groundwater were performed by a California certified laboratory in accordance with State guidelines and EPA protocols. Groundwater samples from the ten monitoring wells were analyzed for TPH as gasoline and diesel and BTEX using EPA methods 8015 and 8020, respectively. The ten wells sampled were MW-2, MW-3, MW-6, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30 and MW-32. In addition, groundwater from monitoring wells MW-26 and MW-32 was analyzed for chlorinated volatile organics using EPA method 601.

2.4 Groundwater Sampling

Proper sample collection and handling are essential to assure the quality of the data obtained from the given sample. Each groundwater sample therefore was collected using a new sterile

disposable bailer. The sampled water was placed in laboratory prepared 40 milliliter glass containers. The sample containers were filled with water to the top to expel air space and were sealed with teflon-lined caps. Water sample containers were labeled with the name of the sampler, the date, the job number, the preservative, and an identifying well number. The samples were then transported to Sierra Laboratories, in Anaheim, California. Full chain of custody protocol was followed during sample handling and delivery.

3.0 FINDINGS

3.1 Groundwater Conditions

3.1.1 Groundwater Flow Direction and Hydraulic Gradient

Groundwater monitoring wells containing free product were not used for the calculations of groundwater flow direction or hydraulic gradient. Groundwater measurements taken by Park on November 4, 1993 indicate that groundwater flow beneath the site continues to be to the north-northwest, which is consistent with previous reports. The hydraulic gradient was calculated to be approximately 0.0013 or 0.13 feet per 100 feet below the site. Figure 3 in Appendix A shows graphically the groundwater flow direction.

In October, 1992 the groundwater elevation was approximately 4.00 feet above mean sea level (msl) while in March, 1993 it was approximately 7.20 feet msl. The increase is believed to be due to recharge resulting from the normal precipitation during the winter months. The measurements taken during the summer (July, 1993) show a decrease in the water elevation to about 5.40 feet msl. The measurements taken during this quarterly sampling episode show the groundwater elevation at about 4.40 feet msl, which is consistent with the data collected in October, 1992.

3.1.2 Occurrence of Free Product

Free product was identified in 29 of the 63 wells monitored for this investigation. The maximum free product thickness measured was 1.83 feet. Free product thicknesses increased from October, 1992 to March, 1993 while decreasing from March, 1993 to July, 1993 and continued decreasing to November, 1993. This condition was anticipated due to the rising and falling of the groundwater in the subsurface. As groundwater rose into the vadose zone, petroleum hydrocarbons trapped in the pore spaces of the soil were released and floated on the top of the rising groundwater, showing an apparent increase in product thickness. Conversely, as the water level dropped from March to November, 1993, the free product thickness decreased, as it coated the soil in the vadose zone. It is not believed at this time that there is any new free product being released at the site or migrating away from the site.

Free product thicknesses from the last four groundwater monitoring programs (October, 1992, March 1993, July, 1993 and November, 1993) are presented on Tables I, II, III and IV in

Appendix B. The most recent data is shown graphically on Figure 4 in Appendix A. Free product was not observed in any of the wells off-site (MW-25 through MW-29). ✓

3.1.3 Results of Laboratory Analyses

Laboratory test results of groundwater samples collected on November 5, 1993 for this investigation are summarized in Table VI, in Appendix B. Results are also presented graphically on Figure 5 in Appendix A. ✓

Laboratory reports and chain of custody documents are included as Appendix C.

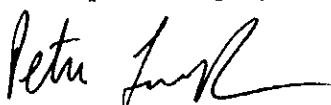
4.0 LIMITATIONS

The monitoring services performed by Park were performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions.

The findings presented in this report are based on present conditions and past written and/or oral information provided by regulatory agencies or Nestle, USA. Park will not be responsible for any use by or interpretation or subsequent damages by any third party. Conditional changes may occur through time by natural or man-made processes on this or adjacent properties. Additional changes may occur in legislative standards which may or may not be applicable to this report. These changes beyond Park's control may render this report invalid partially or wholly.

5.0 SIGNATURES

This report was prepared by:



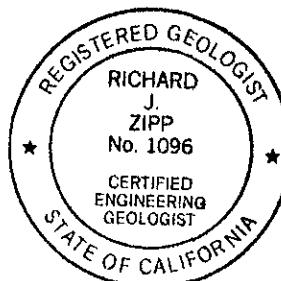
Peter Frank
Project Geologist

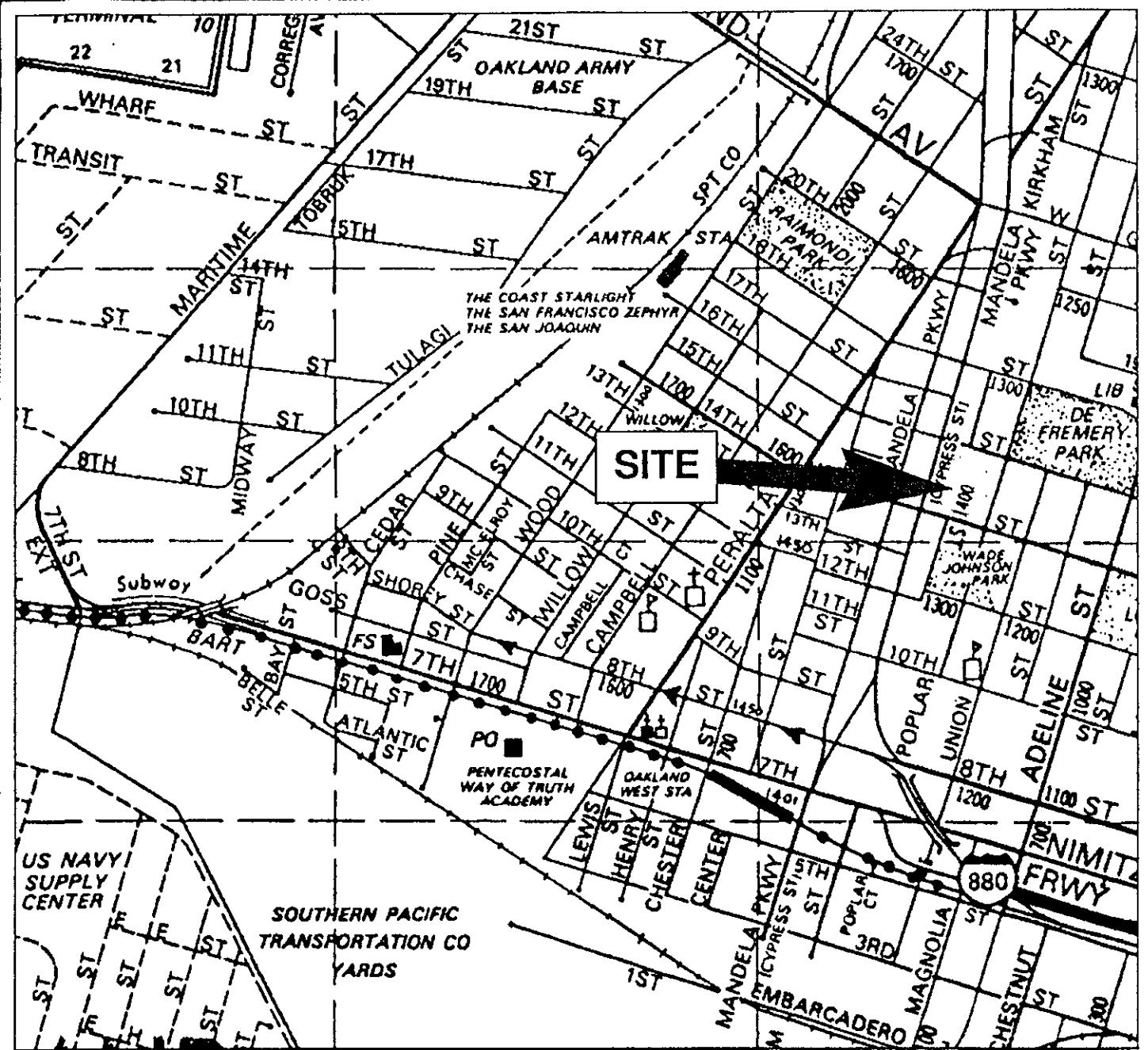
This report was reviewed for technical content by:



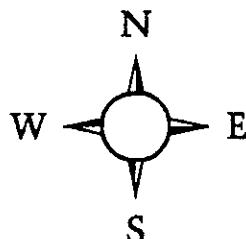
Richard J. Zipp, R.G., C.E.G.
Principal Hydrogeologist

PF:la





REFERENCE 1992, ALAMEDA COUNTY, THOMAS GUIDE MAP, PAGE 7

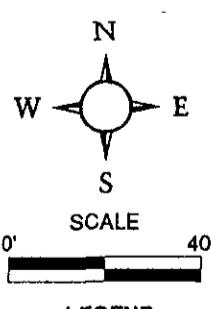
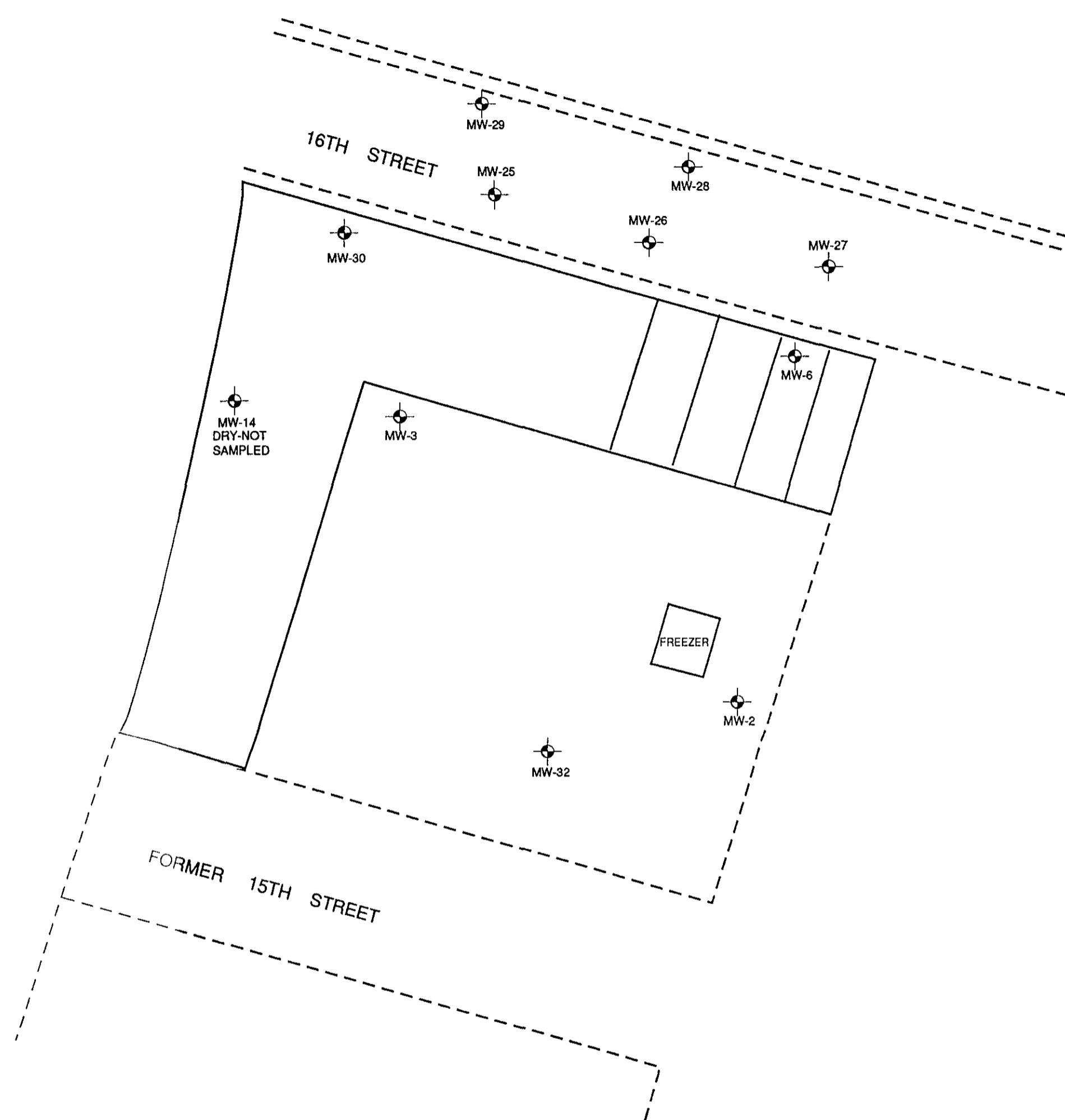


**SITE LOCATION MAP
NESTLE/CARNATION COMPANY
1310 14TH STREET
OAKLAND, CALIFORNIA
PROJECT # 5008**

SCALE: 1 INCH EQUALS
APPROXIMATELY 1,200 FEET

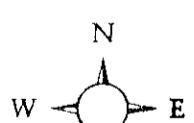
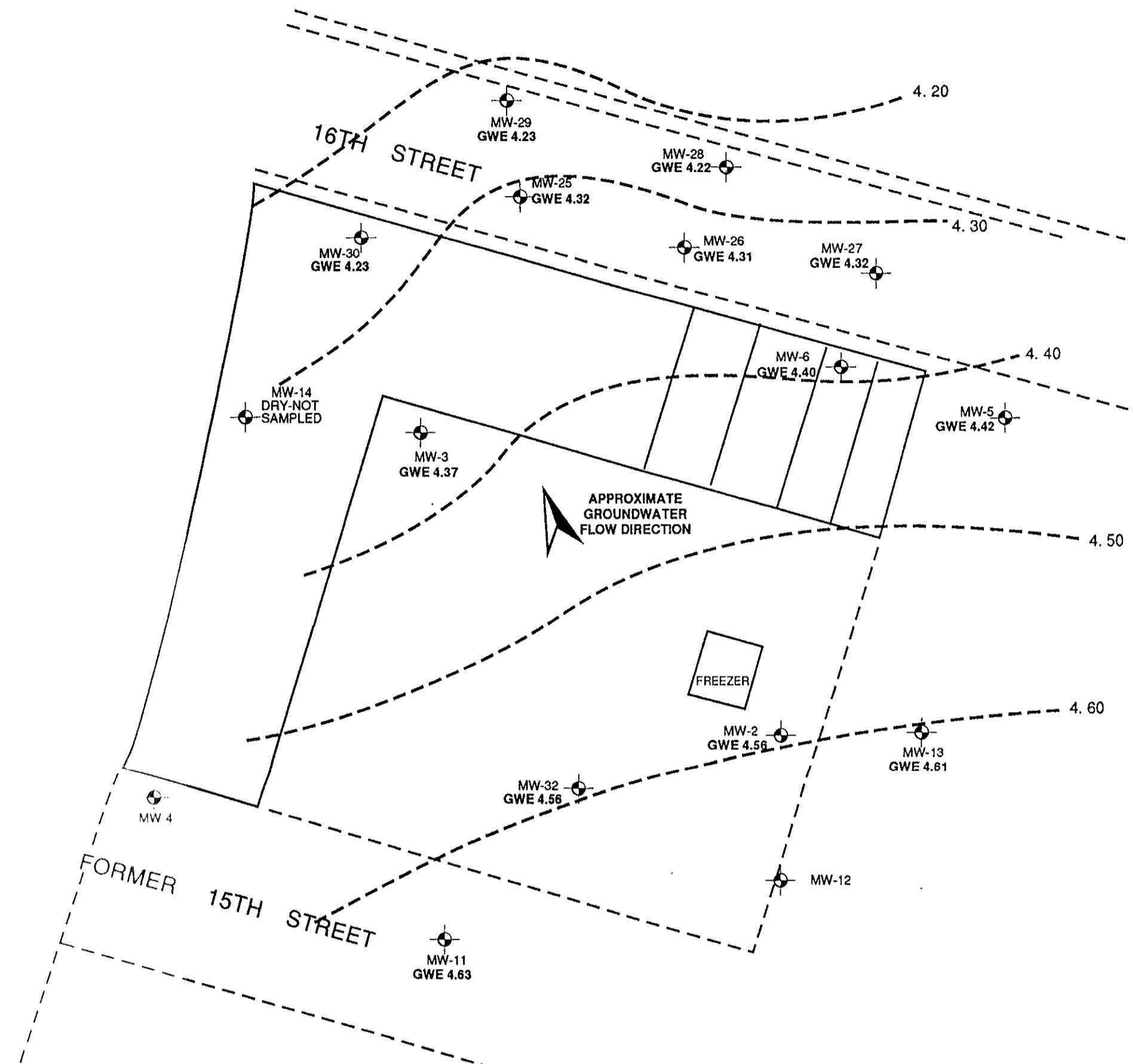


FIGURE 1



LEGEND
● GROUNDWATER MONITORING WELLS
SAMPLED NOVEMBER, 1993. ADDITIONAL
WELLS EXIST ON SITE

**SITE PLOT PLAN
SHOWING GROUNDWATER
MONITORING WELLS
SAMPLED NOVEMBER, 1993**
CARNATION COMPANY
1310 14TH STREET
OAKLAND, CALIFORNIA
PROJECT # 5008-J12
5008-J12-1



SCALE
0' 40'

LEGEND

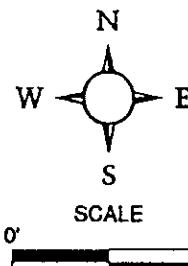
- GROUNDWATER MONITORING WELLS NOT CONTAINING FREE PRODUCT
- GWE GROUNDWATER ELEVATION
- INFERRED LINE OF EQUAL GROUNDWATER ELEVATION

GROUNDWATER
ELEVATION MAP
NOVEMBER 4, 1993
CARNATION COMPANY
1310 14TH STREET
OAKLAND, CALIFORNIA
PROJECT # 5008-J12
5008-J12-4



FIGURE 3 Leaving A Clean Environment.

OCCURENCE OF FREE PRODUCT
NOVEMBER 4, 1993
CARNATION COMPANY
1310 14TH STREET
OAKLAND, CALIFORNIA
PROJECT # 5008-J12
5008-J12-3



- GROUNDWATER MONITORING WELLS
 WELLS INSTALLED BY PREVIOUS CONSULTANT
 0'-1' OF FREE PRODUCT
 1'-2' OF FREE PRODUCT

NOTE:
ADDITIONAL WELLS EXIST ON SITE

16TH STREET

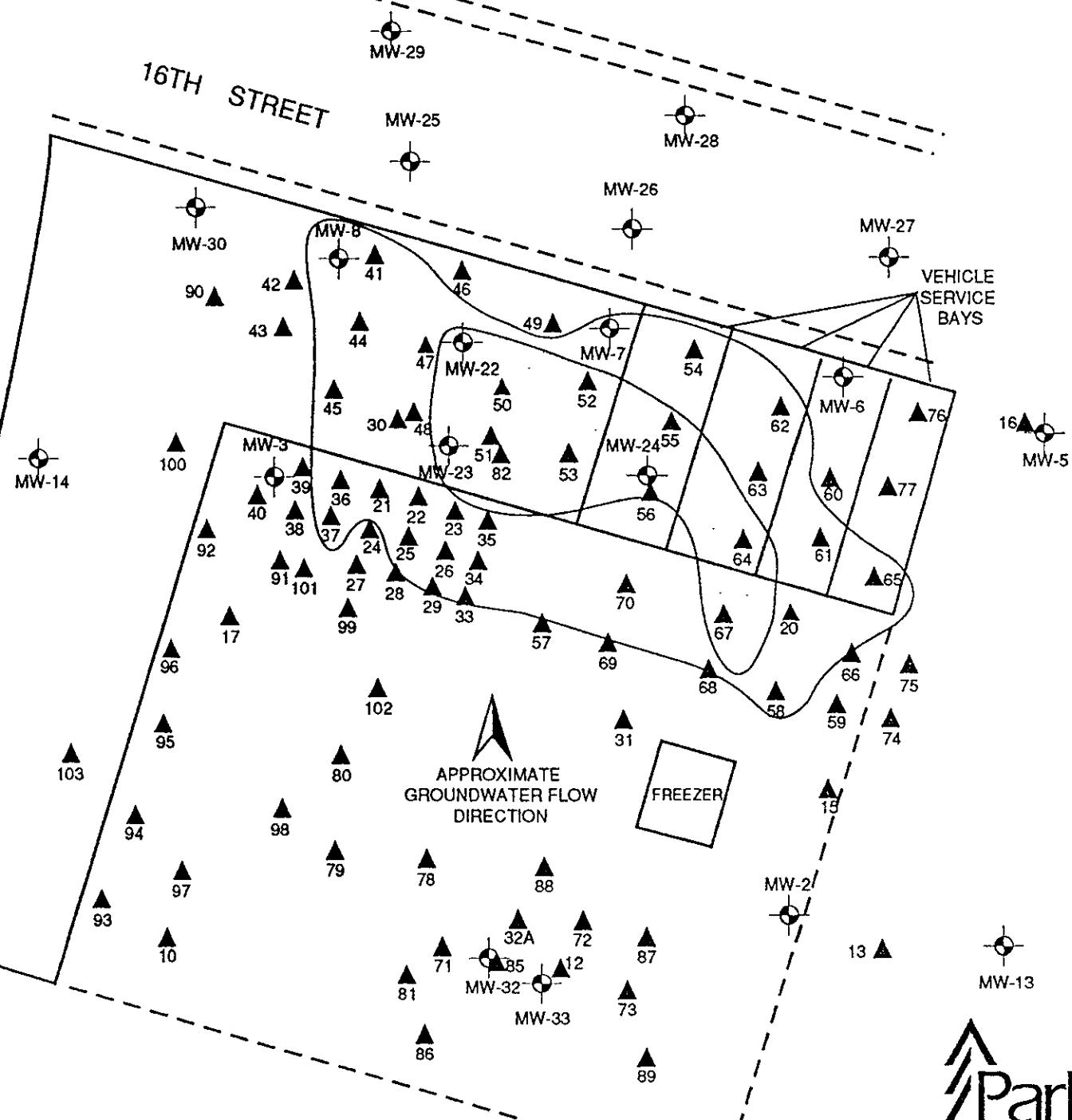


FIGURE 4

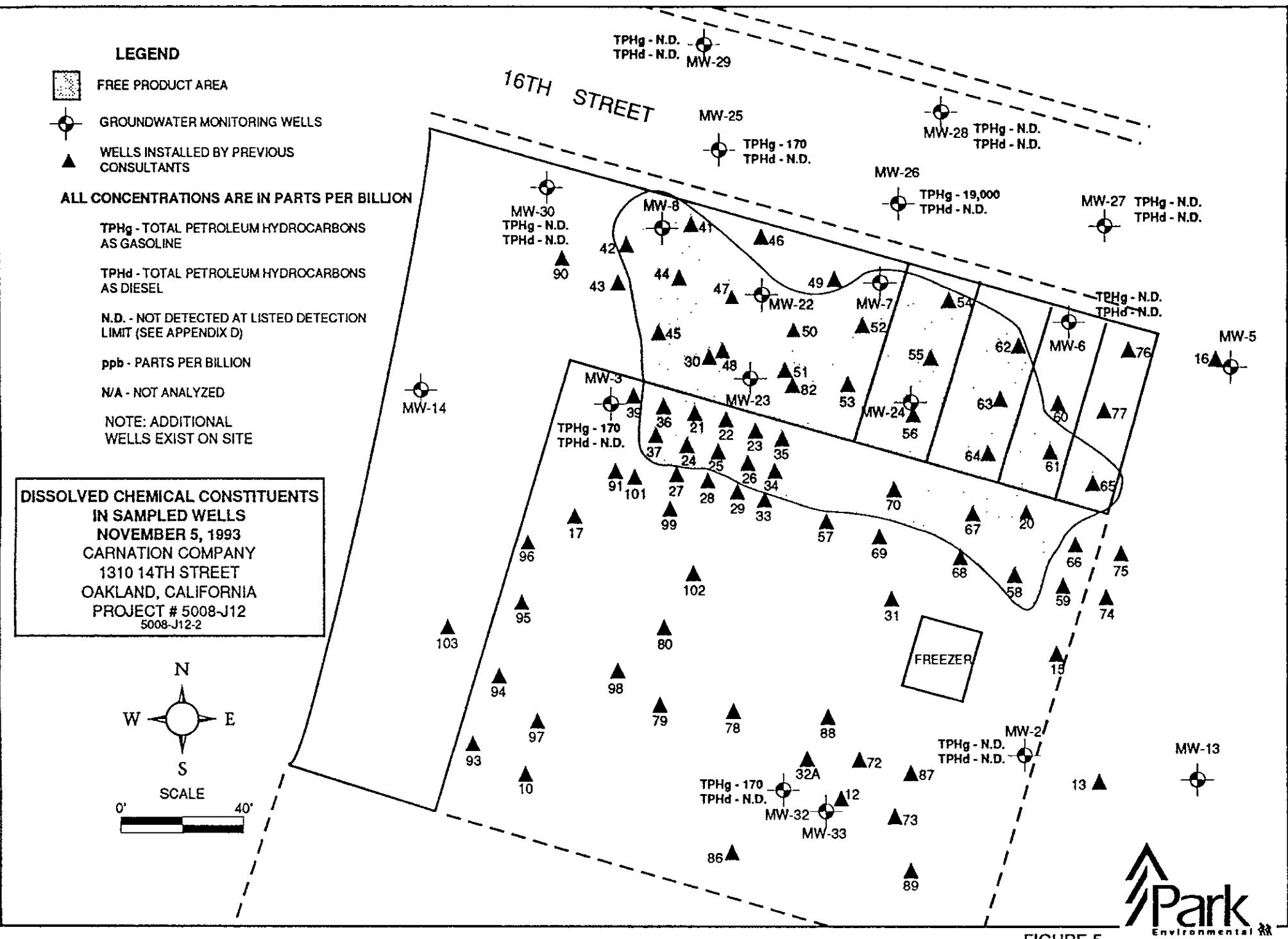


FIGURE 5

TABLE I
GROUNDWATER DATA
NOVEMBER 4, 1993

| Well No. | Depth to Product (FT)(TOC) | Depth to Water (FT)(TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|----------------------------|--------------------------|-----------------------|------------------------|--------------------|----------|
| MW-1 | - | 11.73 | 16.49 | - | 4 | 4.76 |
| MW-3* | - | 9.93 | 14.30 | - | 4 | 4.37 |
| MW-4 | - | 8.28 | 14.42 | - | 4 | - |
| MW-5 | - | 9.99 | 14.41 | - | 4 | 4.42 |
| MW-6 | - | 9.72 | 14.12 | - | 2 | 4.40 |
| MW-7 | 9.76 | 10.55 | 14.29 | .79 | 4 | - |
| MW-8 | 9.87 | 10.29 | 14.20 | .42 | - | - |
| MW-9 | - | 10.29 | - | - | 4 | - |
| MW-10 | - | 9.65 | 15.73 | - | 4 | 6.08 |
| MW-11 | - | 9.92 | 14.55 | - | 4 | 4.63 |
| MW-13 | - | 10.24 | 14.85 | - | 4 | 4.61 |
| MW-14 | - | No Water | 14.10 | - | - | - |
| MW-22 | 9.82 | 11.65 | 14.44 | <u>1.83</u> | 2 | - |
| MW-23 | 9.89 | 11.10 | - | 1.21 | 2 | - |
| MW-24 | 9.90 | 11.67 | 14.67 | 1.77 | 2 | - |
| MW-25* | - | 8.54 | 12.86 | - | 4 | 4.32 |
| MW-26* | - | 8.40 | 12.71 | - | 4 | 4.31 |
| MW-27* | - | 9.72 | 14.04 | - | 4 | 4.32 |
| MW-28* | - | 9.23 | 13.45 | - | 4 | 4.22 |
| MW-29* | - | 8.37 | 12.60 | - | 4 | 4.23 |
| MW-30* | - | 10.31 | 14.54 | - | 4 | 4.23 |
| MW-32* | - | 10.17 | 14.76 | - | 4 | 4.59 |
| PR-10 | - | - | - | - | 2 | - |
| PR-20 | 9.44 | 10.35 | 14.36 | .91 | 2 | - |
| PR-21 | 9.87 | 10.50 | 14.37 | .63 | 2 | - |
| PR-22 | 9.38 | 10.36 | 14.43 | .98 | 2 | - |

TABLE I (continued)
GROUNDWATER MEASUREMENTS
NOVEMBER 4, 1993

| Well No. | Depth to Product (FT)(TOC) | Depth to Water (FT)(TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|----------------------------|--------------------------|-----------------------|------------------------|--------------------|----------|
| PR-23 | 9.51 | 10.18 | 14.47 | .67 | 2 | - |
| PR-24 | - | 9.93 | - | - | - | - |
| PR-26 | 9.69 | 10.29 | 14.38 | .60 | 2 | - |
| PR-27 | - | 9.79 | - | - | 2 | - |
| PR-28 | - | 9.76 | - | - | 2 | - |
| PR-33 | - | 9.76 | 14.36 | - | 2 | 4.60 |
| PR-34 | 9.79 | 10.45 | 14.49 | .66 | 2 | - |
| PR-35 | 9.77 | 10.39 | 14.55 | .62 | 2 | - |
| PR-37 | 9.71 | 10.12 | - | .41 | - | - |
| PR-39 | - | 10.04 | - | - | - | - |
| PR-41 | 10.21 | 10.80 | - | .59 | 2 | - |
| PR-42 | - | 10.33 | - | - | - | - |
| PR-43 | - | 10.33 | - | - | - | - |
| PR-44 | 10.27 | 10.51 | - | .24 | 2 | - |
| PR-45 | 10.09 | 10.26 | - | .17 | 2 | - |
| PR-46 | - | 10.71 | - | - | 2 | - |
| PR-47 | 9.98 | 10.73 | - | .75 | 2 | - |
| PR-48 | 9.95' | 11.07' | - | 1.12 | 2 | - |
| PR-49 | - | 10.20 | - | - | 2 | - |
| PR-50 | 9.76 | 10.84 | - | 1.08 | 2 | - |
| PR-52 | 9.92 | 10.93 | - | 1.01 | 2 | - |
| PR-53 | 9.68 | 10.83 | - | 1.15 | 2 | - |
| PR-54 | 9.68 | 10.65 | - | .97 | 2 | - |
| PR-55 | 9.61 | 11.09 | - | 1.48 | 2 | - |
| PR-56 | 9.77 | 10.67 | - | .90 | 2 | - |
| PR-57 | - | - | - | - | 2 | - |
| PR-58 | 9.50 | 10.46 | - | .96 | 2 | - |
| PR-59 | - | 9.67 | - | - | 2 | - |

TABLE I (continued)
GROUNDWATER DATA
NOVEMBER 4, 1993

| Well No. | Depth to Product (FT)(TOC) | Depth to Water (FT)(TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|----------------------------|--------------------------|-----------------------|------------------------|--------------------|----------|
| PR-60 | - | 10.28 | - | - | 2 | - |
| PR-61 | 10.08 | 10.33 | - | .25 | 2 | - |
| PR-62 | 10.11 | 10.15 | - | .04 | 2 | - |
| PR-64 | 9.82 | 11.31 | - | 1.49 | 2 | - |
| PR-65 | 10.01 | 10.05 | - | .04 | 2 | - |
| PR-66 | - | 9.78 | - | - | 2 | - |
| PR-67 | 9.44 | 10.49 | - | 1.05 | 2 | - |
| PR-68 | - | 9.88 | - | - | 2 | - |
| PR-69 | - | 9.20 | - | - | 2 | - |
| PR-70 | - | - | - | - | 2 | - |
| PR-74 | - | - | - | - | 2 | - |
| PR-75 | - | - | - | - | 2 | - |
| PR-76 | - | 10.16 | - | - | 2 | - |
| PR-77 | - | 9.85 | - | - | 2 | - |
| V-89 | - | - | - | - | 4 | - |
| V-90 | - | - | - | - | 4 | - |

TOC - Top of Casing

GWE - Groundwater Elevation

* - Groundwater Samples Obtained for this Investigation

TABLE II
GROUNDWATER MEASUREMENTS
JULY 26 AND 27, 1993

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| MW-1 | - | 10.54 | 16.49 | - | 4 | 5.95 |
| MW-2* | - | 9.55 | 15.11 | - | 4 | 5.56 |
| MW-3* | - | 8.96 | 14.30 | - | 4 | 5.34 |
| MW-4 | - | - | 14.42 | - | 4 | - |
| MW-5* | - | 9.02 | 14.41 | - | 4 | 5.39 |
| MW-6* | - | 8.78 | 14.12 | - | 2 | 5.34 |
| MW-7 | 8.62 | 10.35 | 14.29 | 1.73 | 4 | - |
| MW-8 | 8.93 | 9.43 | 14.20 | 0.50 | - | - |
| MW-10 | - | 9.57 | 15.73 | - | 4 | 6.16 |
| MW-11 | - | 8.83 | 14.55 | - | 4 | 5.72 |
| MW-13* | - | 9.23 | 14.85 | - | 4 | 5.62 |
| MW-14 | - | No Water | 14.10 | - | - | - |
| MW-22 | 8.75 | 11.33 | 14.44 | 2.58 | 2 | - |
| MW-23 | 8.75 | 10.69 | - | 1.94 | 2 | - |
| MW-24 | 8.78 | 11.16 | 14.67 | 2.38 | 2 | - |
| MW-25* | - | 7.69 | 12.36 | - | 4 | 5.17 |
| MW-26* | - | 7.45 | 12.71 | - | 4 | 5.26 |
| MW-27* | - | 8.75 | 14.04 | - | 4 | 5.29 |
| MW-28* | - | 8.27 | 13.45 | - | 4 | 5.18 |
| MW-29* | - | 7.50 | 12.60 | - | 4 | 5.10 |
| MW-30* | - | 9.39 | 14.54 | - | 4 | 5.15 |
| MW-32* | - | 9.15 | 14.76 | - | 4 | 5.61 |
| PR-20 | 8.32 | 10.01 | 14.36 | 1.69 | 2 | - |
| PR-21 | 8.71 | 10.29 | 14.37 | 1.58 | 2 | - |
| PR-22 | 8.58 | 10.17 | 14.43 | 1.59 | 2 | - |

TABLE II (continued)
GROUNDWATER MEASUREMENTS
JULY 26 AND 27, 1993

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| PR-23 | 8.28 | 10.12 | 14.47 | 1.84 | 2 | - |
| PR-26 | 8.41 | 10.21 | 14.38 | 1.80 | 2 | - |
| PR-27 | - | 8.78 | - | - | 2 | - |
| PR-28 | - | 8.67 | - | - | 2 | - |
| PR-33 | - | 8.69 | 14.36 | - | 2 | 5.67 |
| PR-34 | 8.51 | 10.23 | 14.49 | 1.72 | 2 | - |
| PR-35 | 8.56 | 10.27 | 14.55 | 1.71 | 2 | - |
| PR-36 | 8.58 | 10.17 | - | 1.59 | 2 | - |
| PR-37 | 8.50 | 9.91 | - | 1.41 | 2 | - |
| PR-41 | 9.04 | 9.12 | - | 0.08 | 2 | - |
| PR-43 | - | 9.36 | - | - | - | - |
| PR-44 | 9.27 | 9.66 | - | 0.39 | 2 | - |
| PR-45 | 9.11 | 9.46 | - | 0.35 | 2 | - |
| PR-46 | - | 9.28 | - | - | 2 | - |
| PR-47 | 8.38 | 8.60 | - | 0.22 | 2 | - |
| PR-48 | 8.35 | 10.71 | - | 1.86 | 2 | - |
| PR-49 | - | 9.20 | - | - | 2 | - |
| PR-50 | 8.32 | 9.85 | - | 1.03 | 2 | - |
| PR-52 | 8.38 | 10.25 | - | 1.37 | 2 | - |
| PR-53 | 8.61 | 10.42 | - | 1.81 | 2 | - |
| PR-54 | 8.63 | 9.83 | - | 1.20 | 2 | - |
| PR-55 | 8.35 | 10.75 | - | 2.40 | 2 | - |
| PR-56 | 8.79 | 10.44 | - | 1.65 | 2 | - |
| PR-58 | 8.33 | 10.21 | - | 1.88 | 2 | - |
| PR-59 | - | 8.52 | - | - | 2 | - |
| PR-61 | 9.08 | 9.57 | - | 0.49 | 2 | - |

TABLE II (continued)
GROUNDWATER MEASUREMENTS
JULY 26 AND 27, 1993

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| PR-62 | 9.16 | 9.49 | - | 0.33 | 2 | - |
| PR-64 | 8.72 | 10.73 | - | 2.01 | 2 | - |
| PR-65 | 9.00 | 9.35 | - | 0.35 | 2 | - |
| PR-66 | - | 8.68 | - | - | 2 | - |
| PR-67 | 8.54 | 9.46 | - | 0.92 | 2 | - |
| PR-68 | - | 8.80 | - | - | 2 | - |
| PR-69 | - | 8.49 | - | - | 2 | - |
| PR-70 | 8.67 | 10.79 | - | 2.12 | 2 | - |
| PR-74 | - | 8.86 | - | - | 2 | - |
| PR-76 | - | 9.14 | - | - | 2 | - |
| PR-77 | - | 8.82 | - | - | 2 | - |

TOC - Top of Casing

GWE - Groundwater Elevation

* - Groundwater Samples Obtained for this Investigation

TABLE III
GROUNDWATER MEASUREMENTS
MARCH 18 AND 19, 1993

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| MW-1 | - | 8.51 | 16.49 | - | 4 | 7.98 |
| MW-2 | - | 7.47 | 15.11 | - | 4 | 7.64 |
| MW-3* | - | 7.23 | 14.30 | - | 4 | 7.07 |
| MW-4 | - | 7.00 | 14.42 | - | 4 | 7.42 |
| MW-5 | - | 7.14 | 14.41 | - | 4 | 7.27 |
| MW-6 | - | 7.04 | 14.12 | - | 2 | 7.08 |
| MW-7 | 6.56 | 9.38 | 14.29 | 2.82 | 4 | - |
| MW-8 | 7.34 | 7.64 | 14.20 | 0.30 | - | - |
| MW-10 | - | - | 15.73 | - | 4 | - |
| MW-11 | - | 6.95 | 14.55 | - | 4 | 7.60 |
| MW-12 | - | 7.62 | 15.28 | - | 4 | 7.66 |
| MW-13 | - | 8.62 | 14.85 | - | 4 | 7.47 |
| MW-14 | - | No Water | 14.10 | - | - | - |
| MW-22 | 6.98 | - | 14.44 | >3.0 | 2 | - |
| MW-23 | 7.04 | 8.44 | - | 1.40 | 4 | - |
| MW-24 | 7.45 | - | 14.67 | >3.0 | 2 | - |
| MW-25* | - | 6.14 | 12.86 | - | 4 | 6.72 |
| MW-26* | - | 5.83 | 12.71 | - | 4 | 6.88 |
| MW-27* | - | 7.23 | 14.04 | - | 4 | 6.81 |
| MW-28* | - | 6.65 | 13.45 | - | 4 | 6.80 |
| MW-29* | - | 5.82 | 12.60 | - | 4 | 6.78 |
| MW-30* | - | 7.79 | 14.54 | - | 4 | 6.75 |
| MW-32* | - | 7.25 | 14.76 | - | 4 | 7.51 |
| PR-20 | 6.28 | 9.69 | 14.36 | 3.41 | 2 | - |
| PR-21 | 6.60 | 9.36 | 14.37 | 2.76 | 2 | - |

TABLE III (continued)
GROUNDWATER MEASUREMENTS
MARCH 18 AND 19, 1993

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| PR-22 | 6.50 | - | 14.43 | >3.0 | 2 | - |
| PR-23 | 6.72 | 7.78 | 14.47 | 1.06 | 2 | - |
| PR-26 | 6.54 | 8.59 | 14.38 | 2.05 | 2 | - |
| PR-27 | - | 7.08 | - | - | 2 | - |
| PR-28 | - | 6.92 | - | - | 2 | - |
| PR-33 | - | 6.81 | 14.36 | - | 2 | 7.55 |
| PR-34 | 6.20 | 9.01 | 14.49 | 2.81 | 2 | - |
| PR-35 | 6.56 | - | 14.55 | >3.0 | 2 | - |
| PR-36 | 6.83 | 8.26 | - | 1.43 | 2 | - |
| PR-37 | 6.05 | 8.40 | - | 2.35 | 2 | - |
| PR-38 | - | 7.32 | 14.47 | - | 2 | 7.15 |
| PR-41 | 7.21 | 7.63 | - | 0.42 | 2 | - |
| PR-43 | - | 7.69 | - | - | - | - |
| PR-44 | 7.72 | 7.91 | - | 0.19 | 2 | - |
| PR-45 | 7.49 | 7.59 | - | 0.10 | 2 | - |
| PR-46 | - | 7.63 | - | - | 2 | - |
| PR-47 | 7.50 | 7.50 | - | SHEEN | 2 | - |
| PR-48 | 6.73 | - | - | >3.0 | 2 | - |
| PR-49 | - | 7.35 | - | - | 2 | - |
| PR-50 | 7.13 | 8.02 | - | 0.89 | 2 | - |
| PR-51 | 6.67 | - | - | >3.0 | 2 | - |
| PR-52 | 7.17 | 8.33 | - | 1.16 | 2 | - |
| PR-53 | 6.49 | - | - | >3.0 | 2 | - |
| PR-54 | 6.96 | 8.16 | - | 1.20 | 2 | - |
| PR-55 | 7.03 | 8.34 | - | 1.31 | 2 | - |

TABLE III
GROUNDWATER MEASUREMENTS CONT.
MARCH 18 AND 19, 1993

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| PR-61 | 7.28 | 7.63 | - | 0.5 | 2 | - |
| PR-62 | 7.38 | 7.45 | - | 0.07 | 2 | - |
| PR-64 | 6.43 | - | - | >3.0 | 2 | - |
| PR-65 | 6.89 | 6.98 | - | 0.09 | 2 | - |
| PR-66 | - | 6.77 | - | - | 2 | - |
| PR-67 | 6.95 | 7.76 | - | 0.81 | 2 | - |
| PR-68 | - | 6.84 | - | - | 2 | - |
| PR-69 | - | 5.92 | - | - | 2 | - |
| PR-70 | 6.43 | 8.02 | - | 1.59 | 2 | - |
| PR-76 | - | 7.74 | - | - | 2 | - |
| PR-77 | - | 7.52 | - | - | 2 | - |

TOC - Top of Casing

GWE - Groundwater Elevation

* - Groundwater Samples Obtained for this Investigation

TABLE IV
GROUNDWATER MEASUREMENTS
OCTOBER 20, 1992

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| MW-1 | - | 12.60 | 16.49 | - | 4 | 3.89 |
| MW-3* | - | 10.23 | 14.30 | - | 4 | 4.07 |
| MW-4 | - | No Water | 14.42 | - | 4 | - |
| MW-5 | - | 10.39 | 14.41 | - | 4 | 4.02 |
| MW-6 | - | 10.13 | 14.12 | - | 2 | 3.99 |
| MW-7 | 10.17 | 10.84 | 14.29 | 0.67 | 4 | - |
| MW-8 | 10.17 | 10.63 | 14.20 | 0.46 | - | - |
| MW-10 | - | 11.25 | 15.73 | - | 4 | 4.48 |
| MW-13 | - | 10.62 | 14.85 | - | 4 | 4.23 |
| MW-14 | - | No Water | 14.10 | - | - | - |
| MW-22 | 9.97 | 12.77 | 14.44 | 2.80 | 2 | - |
| MW-24 | 10.20 | 12.24 | 14.67 | 2.04 | 2 | - |
| MW-25* | - | 8.93 | 12.36 | - | 4 | 3.93 |
| MW-26* | - | 8.77 | 12.71 | - | 4 | 3.94 |
| MW-27* | - | 10.06 | 14.04 | - | 4 | 3.98 |
| MW-28** | - | 9.53 | 13.45 | - | 4 | 3.92 |
| MW-29** | - | 8.75 | 12.60 | - | 4 | 3.35 |
| MW-30** | - | 10.61 | 14.54 | - | 4 | 3.93 |
| MW-32** | - | 10.53 | 14.76 | - | 4 | 4.23 |
| PR-10 | - | 10.06 | - | - | 2 | - |
| PR-20 | 9.79 | 10.65 | 14.36 | 0.86 | 2 | - |
| PR-21 | 10.10 | 11.04 | 14.37 | 0.94 | 2 | - |
| PR-22 | 10.05 | 10.75 | 14.43 | 0.70 | 2 | - |
| PR-23 | 9.85 | 10.56 | 14.47 | 0.71 | 2 | - |
| PR-26 | 10.01 | 10.81 | 14.38 | 0.80 | 2 | - |
| PR-27 | - | 10.16 | - | - | 2 | - |

TABLE IV (continued)
GROUNDWATER MEASUREMENTS
OCTOBER 20, 1992

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| PR-28 | - | 10.02 | - | - | 2 | - |
| PR-33 | - | 10.01 | 14.36 | - | 2 | 4.35 |
| PR-34 | 10.10 | 10.80 | 14.49 | 0.70 | 2 | - |
| PR-35 | 10.11 | 10.71 | 14.55 | 0.60 | 2 | - |
| PR-38 | - | 10.50 | 14.47 | - | 2 | 3.97 |
| PR-41 | 10.51 | 11.19 | - | 0.68 | 2 | - |
| PR-43 | - | 10.70 | - | - | - | - |
| PR-44 | 10.50 | 11.12 | - | 0.62 | 2 | - |
| PR-45 | 10.41 | 10.70 | - | 0.29 | 2 | - |
| PR-46 | - | 10.61 | - | - | 2 | - |
| PR-47 | 10.07 | 12.52 | - | 2.45 | 2 | - |
| PR-48 | 10.30 | 11.50 | - | 1.20 | 2 | - |
| PR-49 | - | 10.56 | - | - | 2 | - |
| PR-50 | 10.03 | 11.68 | - | 1.60 | 2 | - |
| PR-52 | 10.23 | 11.52 | - | 1.29 | 2 | - |
| PR-53 | 10.02 | 11.31 | - | 1.29 | 2 | - |
| PR-54 | 10.04 | 10.83 | - | 0.79 | 2 | - |
| PR-55 | 9.97 | 11.83 | - | 1.86 | 2 | - |
| PR-56 | 10.12 | 11.29 | - | 1.17 | 2 | - |
| PR-57 | - | 9.81 | - | - | 2 | - |
| PR-58 | 9.92 | 11.02 | - | 1.10 | 2 | - |
| PR-59 | - | 9.96 | - | - | 2 | - |
| PR-60 | - | 10.64 | - | - | 2 | - |
| PR-61 | 10.44 | 10.78 | - | 0.34 | 2 | - |
| PR-62 | 10.37 | 10.89 | - | 0.52 | 2 | - |
| PR-64 | 10.14 | 11.65 | - | 1.51 | 2 | - |

TABLE IV (continued)
GROUNDWATER MEASUREMENTS
OCTOBER 20, 1992

| Well No. | Depth to Product (FT) (TOC) | Depth to Water (FT) (TOC) | Casing Elevation (FT) | Product Thickness (FT) | Well Diameter (IN) | GWE (FT) |
|----------|-----------------------------|---------------------------|-----------------------|------------------------|--------------------|----------|
| PR-65 | - | 10.55 | - | SHEEN | 2 | - |
| PR-66 | - | 10.05 | - | - | 2 | - |
| PR-68 | - | 10.22 | - | - | 2 | - |
| PR-69 | - | 9.93 | - | - | 2 | - |
| PR-70 | 10.08 | 10.37 | - | 0.29 | 2 | - |
| PR-74 | - | 10.30 | - | - | 2 | - |
| PR-75 | - | 10.36 | - | - | 2 | - |
| PR-76 | - | 10.58 | - | - | 2 | - |
| PR-77 | - | 10.11 | - | - | 2 | - |
| V-89 | - | 9.70 | - | - | 4 | - |
| V-90 | - | 9.70 | - | - | 4 | - |

TOC - Top of Casing

GWE - Groundwater Elevation

* - Groundwater Samples Obtained for this Investigation

TABLE V
GROUNDWATER PURGING DATA
NOVEMBER 4, 1993

| Well Number | Total Gallons Removed | pH | Specific Conductance x1000 | Temperature in Fahrenheit |
|-------------|-----------------------|-----|----------------------------|---------------------------|
| MW-2-P | 5 | 7.7 | 1.20 | 69.4 |
| | 20 | 7.6 | 1.24 | 71.1 |
| | 30 | 7.4 | 1.24 | 71.3 |
| MW-3-P | 10 | 7.9 | 1.67 | 71.3 |
| | 20 | 7.8 | 1.63 | 71.0 |
| | 25 | 7.5 | 1.60 | 70.5 |
| | 30 | 7.4 | 1.57 | 71.0 |
| MW-6-P* | 1 | 8.3 | 0.90 | 62.7 |
| | 2 | 7.6 | 0.83 | 63.6 |
| | 3 | 7.2 | 0.81 | 64.2 |
| | 5 | 7.1 | 0.80 | 64.4 |
| MW-25** | 10 | 7.9 | 1.22 | 67.1 |
| | 15 | 7.8 | 1.41 | 68.5 |
| MW-26 | 5 | 8.3 | 0.92 | 67.3 |
| | 20 | 8.0 | 1.03 | 68.3 |
| | 30 | 7.7 | 1.23 | 67.7 |
| | 35 | 7.6 | 1.28 | 67.7 |
| MW-27 | 5 | 9.3 | 1.08 | 71.7 |
| | 15 | 9.2 | 0.89 | 70.9 |
| | 25 | 8.9 | 0.95 | 69.1 |
| | 35 | 8.7 | 0.94 | 69.2 |
| MW-28 | 10 | 8.5 | 0.37 | 69.4 |
| | 20 | 8.5 | 0.44 | 69.7 |
| | 25 | 8.4 | 0.48 | 70.7 |
| | 35 | 8.2 | 0.50 | 69.7 |
| MW-29 | 5 | 8.4 | 0.25 | 68.2 |
| | 20 | 8.6 | 0.21 | 69.1 |
| | 30 | 8.6 | 0.21 | 69.4 |
| | 35 | 8.6 | 0.19 | 69.3 |
| MW-30 | 10 | 7.8 | 0.73 | 65.3 |
| | 20 | 7.6 | 0.95 | 66.3 |
| | 30 | 7.5 | 0.98 | 66.7 |
| MW-32 | 10 | 7.5 | 1.12 | 72.9 |
| | 20 | 7.3 | 1.12 | 72.2 |
| | 25 | 7.3 | 1.08 | 72.3 |
| | 30 | 7.3 | 1.10 | 72.8 |

* 2 inch well hand bailed using a new disposable bailer

** Well was pumped dry at approximately 17 gallons

TABLE VI
Groundwater Chemical Constituent Results
MW-2

All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PESTICIDES | 8010 OR 8240 COMPOUNDS | SAMPLER |
|-------------|-----------|------------|---------------|------------|---------|---------|---------|---------|------------|-----|------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 3/23/93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7/27/93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11/5/93 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | PARK |

MW-5

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PESTICIDES | 8010 OR 8240 COMPOUNDS | SAMPLER |
|-------------|-----------|------------|---------------|------------|---------|---------|---------|-----|------------|-----|------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 3/23/93 | 120 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | 2.2 | N/A | N/A | N/A | N/A | PARK |
| 7/27/93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | 2.2 | N/A | N/A | N/A | N/A | PARK |
| 11/5/93 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | PARK |

MW-6

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PESTICIDES | 8010 OR 8240 COMPOUNDS | SAMPLER |
|-------------|-----------|------------|---------------|------------|---------|---------|---------|---------|------------|-----|------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 3/23/93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7/27/93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11/5/93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | 3.5 | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-3

All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PESTICIDES | 8010 OR 8240 COMPOUNDS | SAMPLER |
|-------------|-------|---------|---------------|------------|------|--------|--------|--------|------------|-----|------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 6-25-91 | ND 50 | ND 50 | ND 500 | ND 5000 | 22 | ND 0.5 | ND 0.5 | ND 0.5 | N/A | N/A | N/A | N/A | HLA |
| 9-17-91 | N/A | N/A | N/A | N/A | 64 | 3.6 | 3.8 | 2.8 | N/A | N/A | N/A | N/A | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | 100 | 8.1 | 2.9 | 5.9 | N/A | N/A | N/A | N/A | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | 31 | 0.7 | ND 0.6 | 2.2 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | 2.5 | 1.0 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 3-23-93 | 300 | ND 1000 | N/A | N/A | 35 | 2.9 | 2.0 | 3.2 | N/A | N/A | N/A | N/A | PARK |
| 7-27-93 | 220 | ND 2500 | N/A | N/A | 97 | 1.0 | 4.0 | 1.1 | N/A | N/A | N/A | N/A | PARK |
| 11-5-93 | 170 | ND 1000 | N/A | N/A | 49 | ND | ND | 1.2 | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-13

All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PESTICIDES | 8010 OR 8240 COMPOUNDS | SAMPLER |
|-------------|--------|---------|---------------|------------|------|------|------|------|------------|-----|------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 3/23/93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7/27/93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11/5/93 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-14

All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PESTICIDES | 8240 COMPOUNDS | SAMPLER |
|-------------|-----------|-----------|---------------|------------|-----------|-----------|-----------|-----------|------------|-----------|------------|----------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 3-27-89 | ND 500 | ND 500 | N/A | N/A | ND 0.3 | ND 0.3 | ND 0.3 | ND 0.3 | ND 44 | N/A | N/A | N/A | AGE |
| 4-27-89 | ND 0.5 | ND 0.5 | N/A | N/A | ND 0.3 | ND 0.3 | ND 0.3 | ND 0.3 | ND 44 | N/A | N/A | N/A | AGE |
| 6-7-89 | ND 0.5 | ND 0.5 | N/A | ND 50 | ND 0.3 | ND 0.3 | ND 0.3 | ND 0.3 | ND 44 | N/A | N/A | N/A | AGE |
| 8-30-89 | ND 0.5 | ND 0.2 | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.5 | ND 0.5 | 18 | ND 1.0 | N/A | N/A | AGE |
| 6-25-91 | ND 0.5 | ND 0.5 | ND 500 | N/A | ND 5 | ND 5 | ND 5 | ND 5 | N/A | N/A | N/A | ND 5-10 | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 10-20-92* | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | PARK |
| 3-23-93* | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | PARK |
| 7-27-93* | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | PARK |
| 11-5-93* | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | PARK |

* NO WATER PRESENT IN WELL/NO SAMPLES TAKEN

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-25
All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PESTICIDES | 8010 OR 8240 COMPOUNDS | SAMPLER |
|-------------|--------|---------|---------------|------------|--------|--------|--------|--------|------------|--------|------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 9-13-89 | ND 50 | 80 | N/A | ND 1000 | 14 | 0.4 | ND 0.3 | ND 0.7 | N/A | ND 1 | ND 1 | N/A | AGE |
| 10-3-89 | 82 | ND 50 | N/A | ND 2000 | 29 | 4.7 | ND 1.0 | 1.2 | ND 50 | ND 0.5 | N/A | N/A | AGE |
| 11-15-89 | ND 50 | ND 500 | N/A | ND 20 | 30 | 2.1 | ND 1 | ND 1 | ND 50 | ND 500 | N/A | N/A | AGE |
| 6-25-91 | ND 50 | ND 50 | ND 500 | N/A | 0.8 | ND 0.5 | ND 0.5 | ND 0.5 | N/A | N/A | N/A | N/A | HLA |
| 9-17-91 | N/A | N/A | N/A | N/A | 3.5 | 5.7 | 1.3 | 6.6 | N/A | N/A | N/A | N/A | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | 2.2 | 12 | 12 | 55 | N/A | N/A | N/A | N/A | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | 28 | 100 | 19 | 110 | N/A | N/A | N/A | N/A | PARK |
| 3-23-93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7-27-93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11-5-93 | 170 | ND 1000 | N/A | N/A | 4.2 | 4.4 | 2.5 | 20 | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-26
All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PEST-ICIDES | 8010 or 8240 COM-POUND | SAMPLER |
|-------------|---------|---------|---------------|------------|--------|-------|--------|-------|------------|---------|-------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 9-13-89 | 6000 | 590 | N/A | 1000 | 1400 | 1300 | 110 | 1100 | ND 50 | ND 1 | ND 1 | N/A | AGE |
| 10-3-89 | 1900 | ND 50 | N/A | ND 2000 | 870 | 440 | 12 | 120 | ND 50 | ND 0.05 | N/A | N/A | AGE |
| 11-15-89 | 12,000 | ND 500 | N/A | 230 | 4200 | 3000 | ND 100 | 840 | ND 50 | ND 500 | N/A | N/A | AGE |
| 6-25-91 | 300,000 | 2100 | 1600 | ND 5000 | 4400 | 3600 | 260 | 4600 | N/A | N/A | N/A | 470 1,2-DCA | HLA |
| 9-17-91 | N/A | N/A | N/A | N/A | 6200 | 5800 | 1.0 | 3900 | N/A | N/A | N/A | 610 1,2-DCA | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | 5300 | 4500 | 450 | 1600 | N/A | N/A | N/A | 79 1,2-DCA | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | 19,000 | 24000 | 1600 | 8400 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | 20,000 | 21000 | 2200 | 10000 | N/A | N/A | N/A | 380 1,2-DCA | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | 3700 | 1600 | 280 | 900 | N/A | N/A | N/A | 73 1,2-DCA 1.9 TCE | PARK |
| 3-23-93 | 7000 | 1300 | N/A | N/A | 180 | 190 | 55 | 330 | N/A | N/A | N/A | ND 1 | PARK |
| 7-27-93 | 1800 | ND 2500 | N/A | N/A | 470 | 96 | 30 | 80 | N/A | N/A | N/A | 140 1,2-DCA | PARK |
| 11-5-93 | 19,000 | 9.4* | N/A | N/A | 4700 | 1300 | 9.0 | 1400 | N/A | N/A | N/A | 120 1,2-DCA | PARK |

* See Laboratory Report for result explanation - Appendix C

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-27
All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PEST-ICIDES | 8010 or 8240 COM-POUNDS | SAMPLER |
|-------------|--------|---------|---------------|------------|--------|--------|--------|--------|------------|--------|-------------|-------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 9-13-89 | ND 50 | 100 | N/A | ND 1000 | ND 0.4 | ND 0.3 | ND 0.3 | ND 0.7 | ND 50 | ND 1 | ND .01 | N/A | AGE |
| 10-3-89 | ND 50 | 51 | N/A | ND 2000 | 12 | 14 | ND 1 | 6 | ND 50 | ND .05 | N/A | N/A | AGE |
| 11-15-89 | ND 50 | ND 500 | N/A | 100 | ND 1 | 3.1 | ND 1 | ND 1 | ND 50 | ND 500 | N/A | N/A | AGE |
| 6-25-91 | ND 50 | ND 50 | N/A | N/A | 1.8 | ND 0.5 | ND 0.5 | ND 0.5 | N/A | N/A | N/A | N/A | HLA |
| 9-17-91 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | 11 | 17 | 2.1 | 11 | N/A | N/A | N/A | N/A | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | 4.6 | 5.0 | 0.6 | 1.3 | N/A | N/A | N/A | N/A | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | ND 1 | 1.5 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 3-23-93 | ND 100 | ND 100 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7-27-93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11-5-93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | 2.6 | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-28
All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PEST-ICIDES | 8010 or 8240 COM-POUNDS | SAMPLER |
|-------------|--------|---------|---------------|------------|--------|--------|--------|--------|------------|--------|-------------|-------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 9-13-89 | ND 50 | ND 50 | N/A | ND 1000 | ND 0.4 | ND 0.3 | ND 0.3 | ND 0.7 | ND 50 | ND 1 | ND 0.1 | N/A | AGE |
| 10-3-89 | 58 | ND 50 | N/A | ND 2000 | 8 | 14 | 1 | 8 | ND 50 | ND 0.5 | N/A | N/A | AGE |
| 11-15-89 | ND 50 | ND 500 | N/A | 50 | ND 1 | ND 50 | N/A | N/A | AGE |
| 6-25-91 | ND 50 | ND 50 | ND 500 | N/A | ND 0.5 | ND 0.5 | ND 0.5 | ND 0.5 | N/A | N/A | N/A | N/A | HLA |
| 9-17-91 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | N/A | 0.69 | 3.5 | ND 0.6 | 18 | N/A | N/A | N/A | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 3-23-93 | 110 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7-27-93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11-5-93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | 2.1 | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-29
All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PEST-ICIDES | 8010 or 8240 COMPOUNDS | SAMPLER |
|-------------|--------|---------|---------------|------------|--------|--------|--------|--------|------------|--------|-------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 9-13-89 | ND 50 | ND 50 | N/A | ND 1000 | ND 0.4 | ND 0.3 | ND 0.3 | ND 0.7 | ND 50 | ND 1 | ND 0.1 | N/A | AGE |
| 10-3-89 | ND 50 | 65 | N/A | ND 2000 | 2.3 | 4.7 | ND 1 | 1.2 | ND 50 | ND 0.5 | N/A | N/A | AGE |
| 11-15-89 | ND 50 | ND 500 | N/A | 150 | ND 1 | ND 1 | ND 1 | ND 1 | ND 50 | ND 500 | N/A | N/A | AGE |
| 6-25-91 | ND 50 | ND 50 | ND 500 | ND 5000 | ND 5 | ND 5 | ND 5 | ND 5 | N/A | N/A | N/A | ND 5-10 | HLA |
| 9-17-91 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | ND 0.5 | 0.62 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | ND 1 | 3.5 | ND 1 | 2.9 | N/A | N/A | N/A | N/A | PARK |
| 3-23-93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7-27-93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11-5-93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | 2.1 | 11 | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-30
All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PEST-ICIDES | 8010 or 8240 COM-POUNDS | SAMPLER |
|-------------|--------|---------|---------------|------------|--------|--------|--------|--------|------------|-----|-------------|-------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 9-17-91 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | ND 0.5 | ND 0.5 | ND 0.6 | 1.1 | N/A | N/A | N/A | N/A | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | ND 0.5 | 6.9 | ND 0.6 | ND 0.6 | N/A | N/A | N/A | N/A | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | 2.3 | 4.7 | ND 0.6 | 4.2 | N/A | N/A | N/A | N/A | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 3-23-93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 7-27-93 | ND 100 | ND 2500 | N/A | N/A | ND 1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | N/A | PARK |
| 11-5-93 | ND 100 | ND 1000 | N/A | N/A | ND 1 | ND 1 | ND 1 | 2.8 | N/A | N/A | N/A | N/A | PARK |

TABLE VI (continued)
Groundwater Chemical Constituent Results
MW-32
All values reported in micrograms per liter or ug/l

| SAMPLE DATE | TPH | | TPH MOTOR OIL | OIL/GREASE | | | | | TOTAL LEAD | PCB | PEST-ICIDES | 8010 or 8240 COMPOUNDS | SAMPLER |
|-------------|--------|---------|---------------|------------|------|------|------|------|------------|-----|-------------|------------------------|---------|
| | GAS | DIESEL | | | B | T | E | X | | | | | |
| 6-25-91 | 690 | ND 50 | ND 500 | ND 5000 | 550 | ND 5 | 7.6 | 11 | N/A | N/A | N/A | 14 1,2-DCA | HLA |
| 9-17-91 | N/A | N/A | N/A | N/A | 0.62 | 2.6 | 11 | 4.6 | N/A | N/A | N/A | 8.1 1,2-DCA | HLA |
| 12-16-91 | N/A | N/A | N/A | N/A | 64 | 0.92 | 1.5 | 1.7 | N/A | N/A | N/A | 4.2 1,2-DCA | HLA |
| 3-23-92 | N/A | N/A | N/A | N/A | 120 | 1.6 | 2 | 2.1 | N/A | N/A | N/A | 2 1,2-DCA | HLA |
| 6-23-92 | N/A | N/A | N/A | N/A | 170 | 250 | 42 | 200 | N/A | N/A | N/A | 7.9 1,2-DCA | HLA |
| 10-20-92 | N/A | N/A | N/A | N/A | 5.1 | ND 1 | ND 1 | ND 1 | N/A | N/A | N/A | 2.5 1,2-DCA | PARK |
| 3-23-93 | 440 | ND 1000 | N/A | N/A | 39 | 6.2 | 3.1 | 9.0 | N/A | N/A | N/A | 60 1,2 DCA | PARK |
| 7-27-93 | ND 100 | ND 2500 | N/A | N/A | 39 | 6.2 | 3.1 | 9.0 | N/A | N/A | N/A | 14 1,2 DCA | PARK |
| 11-5-93 | 170 | ND 1000 | N/A | N/A | 20 | ND | 1.8 | 2.1 | N/A | N/A | N/A | 7.9 1,2 DCA | PARK |

KEY TO TABLE VI

ug/l-Micrograms per liter or parts per billion

ND-Not Detected at Detection Limit Stated

N/A-Not Analyzed

TPH-Total Petroleum Hydrocarbons

BTEX-Benzene, Toluene, Ethylbenzene, Total Xylenes

1,2-DCA1,2 Dichloroethane

TCE-Trichloroethene

AGE-ANANIA GEOLOGIC ENGINEERING

HLA-HARDING LAWSON ASSOCIATES

PARK-PARK ENVIRONMENTAL CORPORATION

Note: Analytical test results provided in tables were obtained directly from sampler final reports.



Date: November 19, 1993

Park Environmental Corporation
5100 East Hunter Avenue
Anaheim, California 92807
Attention: Mr. Peter Frank

Client Project Number: 5008-J12
Client Project Name: N/A
Date Sampled: Nov-05-93
Date Samples Received: Nov-09-93
Sierra Project Number: SP-844-93

Enclosed with this letter is the report on the chemo-physical analysis of samples from the project references shown above.

The samples were received by Sierra in a chilled state, intact, and with the chain of custody record attached.

Note that N.D. means not detected at the appropriate reporting limit. The reporting limit is adjusted to reflect the dilution factor of the sample. The reporting limit is expressed in such cases in parentheses to the right of reported value. The detection limit for values without such a designation appears to the right of or at the bottom of the same page.

All halogenated compounds detected by EPA Method 8010 were confirmed by analysis with a second column of dissimilar phase or site history analytical data.

A handwritten signature of Peter Frank in black ink.

Reviewed

A handwritten signature of Michael Coley in black ink, enclosed in a large oval.

Approved

The contents of this report pertain only to the samples investigated and do not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Unauthorized reproduction of this report or use of this laboratory's name for advertising or publicity purposes is strictly prohibited.

| | | |
|---|--|---|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No.: 10000-92 Sierra Project No.: SP-844-93 Client Project No.: 5008-J12 Client Project: N/A | Date Sampled: 11/05/93 Date Received: 11/09/93 Date Prepared: 11/10/93 Date Analyzed: 11/10/93 |
| Sample Preparation: EPA Method 5030 Sample Analysis: EPA 8010 (Halogenated Volatiles) | | Report Date: 11/19/93 |

Sample Type: Liquid

Sample I.D. MW-26

| <u>Compound</u> | Sample Result ($\mu\text{g/l}$) | Method Detection Limit ($\mu\text{g/l}$) |
|---|--------------------------------------|---|
| Chloromethane | ND | 1 |
| Vinyl chloride | ND | 1 |
| Bromomethane | ND | 1 |
| Chloroethane | ND | 1 |
| Trichlorofluoromethane | ND | 1 |
| 1,1-Dichloroethene (1,1-DCE) | ND | 1 |
| Methylene chloride | ND | 1 |
| trans-1,2-Dichloroethene (t-1,2-DCE) | ND | 1 |
| 1,1-Dichloroethane (1,1-DCA) | ND | 1 |
| cis-1,2-Dichloroethene (c-1,2-DCE) | ND | 1 |
| Chloroform | ND | 1 |
| 1,1,1-Trichloroethane (1,1,1-TCA) | ND | 1 |
| Carbon tetrachloride | ND | 1 |
| 1,2-Dichloroethane (1,2-DCA) | 120 | 1 |
| Trichloroethene (TCE) | ND | 1 |
| 1,2-Dichloropropane (1,2-DCP) | ND | 1 |
| Bromodichloromethane | ND | 1 |
| 2-Chloroethylvinyl ether | ND | 1 |
| cis-1,3-Dichloropropene | ND | 1 |
| trans-1,3-Dichloropropene | ND | 1 |
| 1,1,2-Trichloroethane (1,1,2-TCA) | ND | 1 |
| Tetrachloroethene (PCE) | ND | 1 |
| Dibromo-chloromethane | ND | 1 |
| Chlorobenzene | ND | 1 |
| Bromoform | ND | 1 |
| 1,1,2,2-Tetrachloroethane (1,1,2,2-PCA) | ND | 1 |
| 1,3-Dichlorobenzene | ND | 1 |
| 1,4-Dichlorobenzene | ND | 1 |
| 1,2-Dichlorobenzene | ND | 1 |

| | | | | |
|---|--------------------------------|----------|---------------------------------|------------------------|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. SP-844-93 | 10000-92 | Date Sampled: Date Received: | .11/05/93 .11/09/93 |
| | Client Project No. | 5008-J12 | Date Prepared: | .11/10/93 |
| | Client Project: | | Date Analyzed: | .11/10/93 |
| | N/A | | | |
| Sample Preparation: EPA Method 5030 | | | | |
| Sample Analysis: EPA 8010 (Halogenated Volatiles) | | | Report Date: | .11/19/93 |

Sample Type: Liquid

Sample I.D. MW-32

| <u>Compound</u> | | <u>Sample Result</u> ($\mu\text{g/l}$) | <u>Method Detection</u> Limit ($\mu\text{g/l}$) |
|--|-----|---|--|
| Chloromethane | ND | 1 | |
| Vinyl chloride | ND | 1 | |
| Bromomethane | ND | 1 | |
| Chloroethane | ND | 1 | |
| Trichlorofluoromethane | ND | 1 | |
| 1,1-Dichloroethene (1,1-DCE) | ND | 1 | |
| Methylene chloride | ND | 1 | |
| trans-1,2-Dichloroethene (t-1,2-DCE) | ND | 1 | |
| 1,1-Dichloroethane (1,1-DCA) | ND | 1 | |
| cis-1,2-Dichloroethene (c-1,2-DCE) | ND | 1 | |
| Chloroform | ND | 1 | |
| 1,1,1-Trichloroethane (1,1,1-TCA) | ND | 1 | |
| Carbon tetrachloride | ND | 1 | |
| 1,2-Dichloroethane (1,2-DCA) | 7.9 | 1 | |
| Trichloroethene (TCE) | ND | 1 | |
| 1,2-Dichloropropane (1,2-DCP) | ND | 1 | |
| Bromodichloromethane | ND | 1 | |
| 2-Chloroethylvinyl ether | ND | 1 | |
| cis-1,3-Dichloropropene | ND | 1 | |
| trans-1,3-Dichloropropene | ND | 1 | |
| 1,1,2-Trichloroethane (1,1,2-TCA) | ND | 1 | |
| Tetrachloroethene (PCE) | ND | 1 | |
| Dibromochloromethane | ND | 1 | |
| Chlorobenzene | ND | 1 | |
| Bromoform | ND | 1 | |
| 1,1,2,2-Tetrachloroethane (1,1,2,2-PCCA) | ND | 1 | |
| 1,3-Dichlorobenzene | ND | 1 | |
| 1,4-Dichlorobenzene | ND | 1 | |
| 1,2-Dichlorobenzene | ND | 1 | |

| | | | | |
|---|--|--|---|--|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. Sierra Project No. Client Project No. Client Project: | 10000-92 SP-844-93 5008-J12 N/A | Date Sampled: Date Received: Date Prepared: Date Analyzed: | .11/05/93 .11/09/93 .11/17/93 .11/17/93 |
| Sample Preparation: Sample Analysis: | EPA Method 5030 8015-Modified (TPH as Gasoline-CADHS LUFT) and EPA 8020 (BTEX) in series | | | Report Date: .11/19/93 |

Sample Type: Liquid

| Client Sample I.D. | TPH µg/l | Benzene µg/l | Toluene µg/l | Ethylbenzene µg/l | Xylenes, Total µg/l |
|--------------------|-------------|-----------------|-----------------|----------------------|------------------------|
| MW-2 | ND | ND | ND | ND | 3.5 |
| MW-3 | 170 | 49 | ND | ND | 1.2 |
| MW-6 | ND | 11 | ND | ND | 3.7 |
| MW-25 | 170 | 4.2 | 4.4 | 2.5 | 20 |
| MW-26 | 19000 | 4700 | 1300 | 9.0 | 1400 |
| MW-27 | ND | ND | ND | ND | 2.6 |
| MW-28 | ND | ND | ND | ND | 2.1 |
| MW-29 | ND | ND | ND | 1.2 | 11 |
| MW-30 | ND | ND | ND | ND | 2.8 |
| MW-32 | 170 | 20 | ND | 1.8 | 2.1 |
| Equip Blk | ND | N/A | N/A | N/A | N/A |
| Dup | ND | N/A | N/A | N/A | N/A |

N/A - Not Analyzed

| | TPH µg/l | Benzene µg/l | Toluene µg/l | Ethylbenzene µg/l | Xylenes, Total µg/l |
|------------------|-------------|-----------------|-----------------|----------------------|------------------------|
| Detection Limit: | 100 | 1 | 1 | 1 | 1 |

| | | |
|---|---|---|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. 10000-92 Sierra Project No. SP-844-93 Client Project No. 5008-J12 Client Project: N/A | Date Sampled: 11/05/93 Date Received: 11/09/93 Date Prepared: 11/18/93 Date Analyzed: 11/18/93 |
| Sample Preparation: Solvent Extraction Sample Analysis: 8015-Modified (TPH as Diesel-CADHS LUFT) | | Report Date: 11/19/93 |

Sample Type: Liquid

TPH
Client Sample I.D. mg/l

| | |
|-------|-------|
| MW-2 | ND |
| MW-3 | ND |
| MW-6 | ND |
| MW-25 | ND |
| MW-26 | 9.4 * |
| MW-27 | ND |
| MW-28 | ND |
| MW-29 | ND |
| MW-30 | ND |
| MW-32 | ND |

* - Result quantified with respect to diesel standard. Contamination does not appear to be diesel, but more closely resembles a weathered gasoline fraction.

TPH
mg/l

Detection Limit: 1.0

| | | |
|---|---|---|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. 10000-92 Sierra Project No. SP-844-93 Client Project No. 5008-J12 Client Project: N/A | Date Sampled: 11/05/93 Date Received: 11/09/93 Date Prepared: 11/10/93 Date Analyzed: 11/10/93 |
| Sample Preparation: EPA Method 5030 Sample Analysis: EPA 8010 (Halogenated Volatiles) | | Report Date: 11/19/93 |

Matrix/Spike Duplicate Report

| | 1,1-DCE (Range) | 1,1,1-TCA (Range) | TCE (Range) | Chlorobenzene (Range) |
|-------------------------------------|--------------------|----------------------|-----------------|--------------------------|
| Matrix Spike Recovery (%) | 89 (28-167) | 104 (41-138) | 111 (35-146) | 91 (38-150) |
| Matrix Spike Duplicate Recovery (%) | 90 (28-167) | 106 (41-138) | 110 (35-146) | 93 (38-150) |
| Relative Per-cent Difference | 1 (0-30) | 2 (0-30) | 1 (0-30) | 2 (0-30) |

Quality Control Reference Number: G002-111093-G2B0014-111-112

| | | |
|---|---|---|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. 10000-92 Sierra Project No. SP-844-93 Client Project No. 5008-J12 Client Project: N/A | Date Sampled: 11/05/93 Date Received: 11/09/93 Date Prepared: 11/17/93 Date Analyzed: 11/17/93 |
| Sample Preparation: EPA Method 5030 Sample Analysis: 8015-M as Gasoline | | Report Date: 11/19/93 |

Matrix/Spike Duplicate Report

Sample Type: Liquid

TPH-Gasoline (Range)

Matrix Spike Recovery (%) 105 (50-150)

Matrix Spike Duplicate Recovery (%) 112 (50-150)

Relative Per-cent Difference 7 (0-30)

Quality Control Reference Number: G001-111793-G1B00025-189-190

| | | |
|---|---|--|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. 10000-92 Sierra Project No. SP-844-93 Client Project No. 5008-J12 Client Project: N/A | Date Sampled: 11/05/93 Date Received: 11/09/93 Date Prepared: 11/17/93 Date Analyzed: 11/17/93 Report Date: 11/19/93 |
| Sample Preparation: EPA Method 5030 | | |
| Sample Analysis: EPA 8020 (BTEX) | | |

Matrix/Spike Duplicate Report

Sample Type: Liquid

| | Benzene (Range) | Toluene (Range) | Ethylbenzene (Range) | Xylenes, Total (Range) |
|--|--------------------|--------------------|-------------------------|---------------------------|
| Matrix Spike Recovery (%) | 80 (39-150) | 98 (46-148) | 99 (32-160) | 106 (37-154) |
| Matrix Spike Duplicate Recovery (%) | 83 (39-150) | 103 (46-148) | 104 (32-160) | 107 (37-154) |
| Relative Per-cent Difference | 3 (0-30) | 5 (0-30) | 5 (0-30) | 1 (0-30) |

Quality Control Reference Number: G001-111793-G1B00025-189-190

| | | | | |
|---|---|---|---|---|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. Sierra Project No. Client Project No. Client Project: N/A | 10000-92 SP-844-93 5008-J12 Solvent Extraction 8015-Modified (TPH as Diesel-CADHS LUFT) | Date Sampled: Date Received: Date Prepared: Date Analyzed: Report Date: | .11/05/93 .11/09/93 .11/18/93 .11/18/93 .11/19/93 |
| Sample Preparation: Sample Analysis: | | | | |

Matrix/Spike Duplicate Report

Sample Type: Liquid

TPH-Diesel

| | |
|-------------------------------------|----|
| Matrix Spike Recovery (%) | 87 |
| Matrix Spike Duplicate Recovery (%) | 88 |
| Relative Per-cent Difference | 1 |

Quality Control Reference Number: G001-111893-G1B00026-021-022

| | | |
|---|---|---|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. 10000-92 Sierra Project No. SP-844-93 Client Project No. 5008-J12 Client Project: N/A | Date Sampled: 11/05/93 Date Received: 11/09/93 Date Prepared: 11/10-11/18/93 Date Analyzed: 11/10-11/18/93 |
| | | Report Date: 11/19/93 |

Surrogate Summary Report

| <u>Client Sample ID.</u> | <u>Analysis Type</u> | <u>Per-cent Recovery</u> |
|--------------------------|--|---------------------------|
| | | <u>\$1</u> <u>(Range)</u> |
| MW-2 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 96 (50-130) |
| MW-3 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 104 (50-130) |
| MW-6 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 97 (50-130) |
| MW-25 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 98 (50-130) |
| MW-26 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 102 (50-130) |
| MW-27 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 97 (50-130) |
| MW-28 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 101 (50-130) |
| MW-29 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 100 (50-130) |
| MW-30 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 99 (50-130) |
| MW-32 | 8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series | 96 (50-130) |
| | | |
| MW-2 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 124 (50-130) |
| MW-3 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 107 (50-130) |
| MW-6 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 106 (50-130) |
| MW-25 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 107 (50-130) |
| MW-26 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 124 (50-130) |
| MW-27 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 129 (50-130) |
| MW-28 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 114 (50-130) |
| MW-29 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 112 (50-130) |
| MW-30 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 111 (50-130) |
| MW-32 | 8015-Modified (TPH as Diesel-CADHS LUFT) | 114 (50-130) |
| | | |
| Equip Blk | 8015-Modified (TPH as Gasoline-CADHS LUFT) | 100 (50-130) |
| Dup | 8015-Modified (TPH as Gasoline-CADHS LUFT) | 100 (50-130) |
| | | |
| MW-26 | EPA 8010 (Halogenated Volatiles) | 100 (30-160) |
| MW-32 | EPA 8010 (Halogenated Volatiles) | 103 (30-160) |

| | | |
|---|---|---|
| Park Environmental Corporation 4231 Pacific Street, Suite 7 Anaheim, California 95677 | Sierra Client No. Sierra Project No. Client Project No. Client Project: N/A | Date Sampled: Date Received: Date Prepared: Date Analyzed: Report Date: |
|---|---|---|

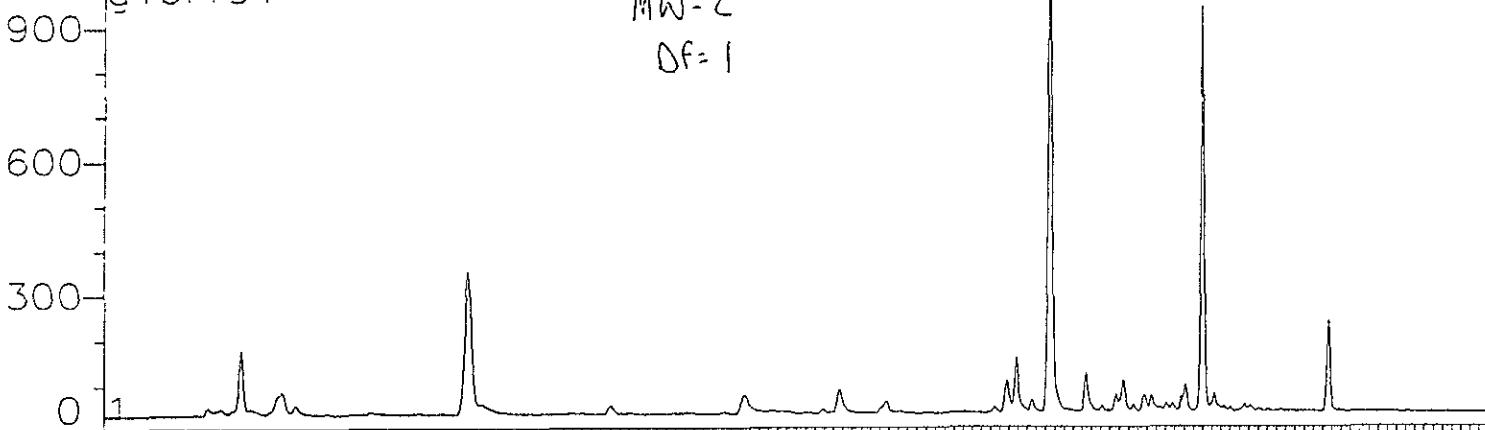
Laboratory Control Sample Report

| <u>Parameter</u> | <u>Analysis Type</u> | <u>Per-cent Recovery</u> |
|-----------------------|-----------------------------------|--------------------------|
| | | % Range |
| TPH as Gasoline | EPA 8015-M | 116 (50-150) |
| | Quality Control Reference Number: | G001-1117-G1B00025-187 |
| <u>Compound</u> | <u>Analysis Type</u> | <u>Per-cent Recovery</u> |
| Benzene | EPA 8020 (BTEX) | 83 (39-150) |
| Toluene | EPA 8020 (BTEX) | 100 (46-148) |
| Ethylbenzene | EPA 8020 (BTEX) | 103 (32-160) |
| Xylenes (Total) | EPA 8020 (BTEX) | 107 (37-154) |
| | Quality Control Reference Number: | G001-1117-G1B00025-187 |
| <u>Parameter</u> | <u>Analysis Type</u> | <u>Per-cent Recovery</u> |
| | | % Range |
| TPH as Diesel | EPA 8015-M | 113 (50-150) |
| | Quality Control Reference Number: | G001-11893-G1B00026-023 |
| <u>Compound</u> | <u>Analysis Type</u> | <u>Per-cent Recovery</u> |
| 1,1-Dichloroethene | EPA 8010 (Halogenated Volatiles) | 92 (28-167) |
| 1,1,1-Trichloroethane | EPA 8010 (Halogenated Volatiles) | 105 (41-138) |
| Chlorobenzene | EPA 8010 (Halogenated Volatiles) | 98 (38-150) |
| Trichloroethene (TCE) | EPA 8010 (Halogenated Volatiles) | 109 (35-146) |
| | Quality Control Reference Number: | G002-111093-G2B0014-115 |

g1bf191

MW-2

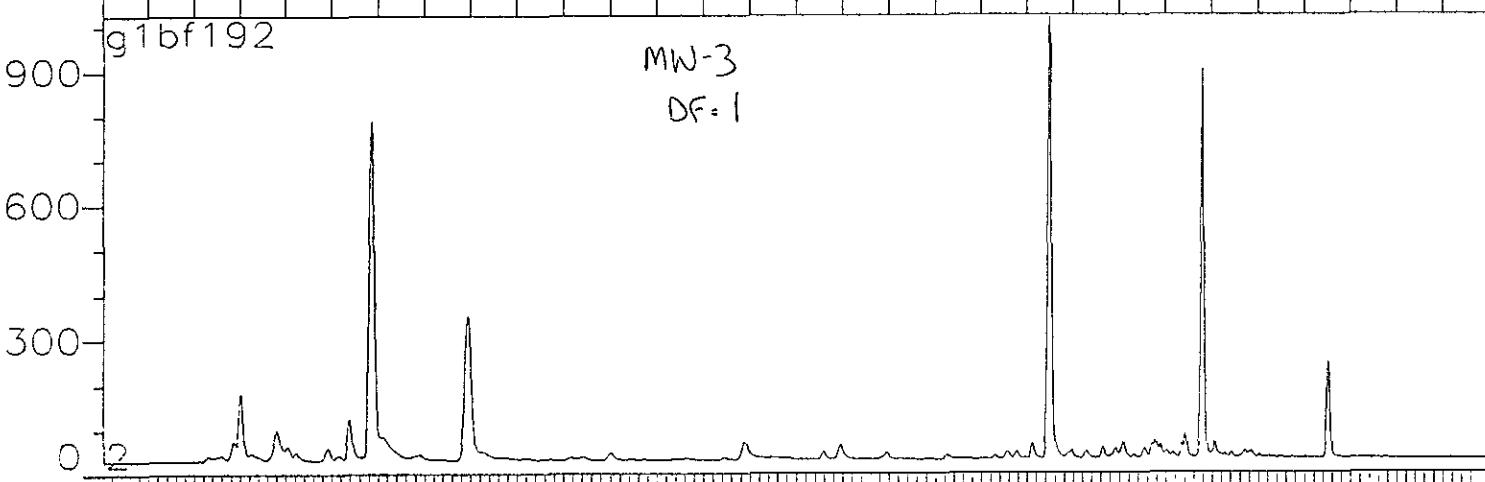
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g1bf192

MW-3

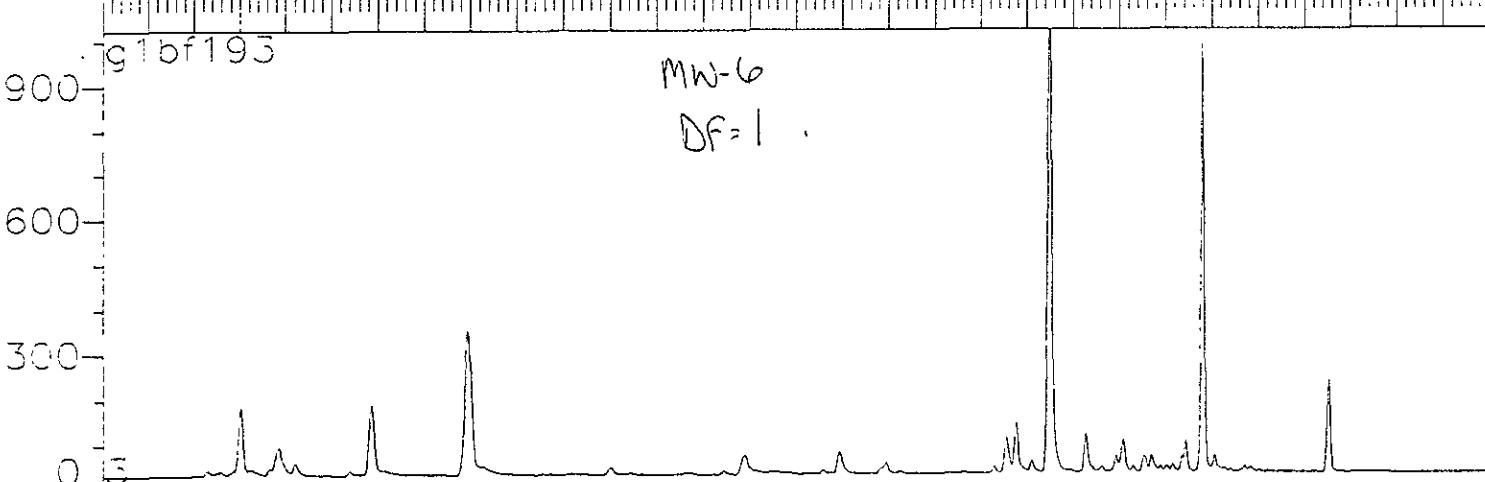
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g1bf193

MW-6

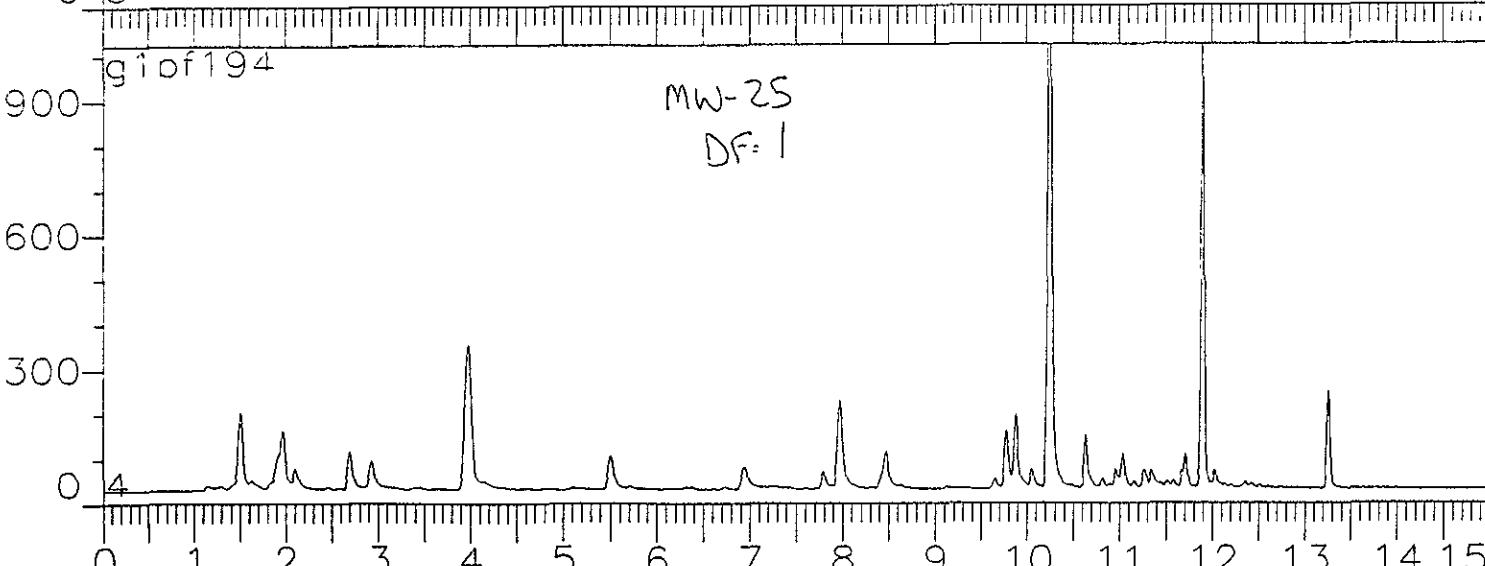
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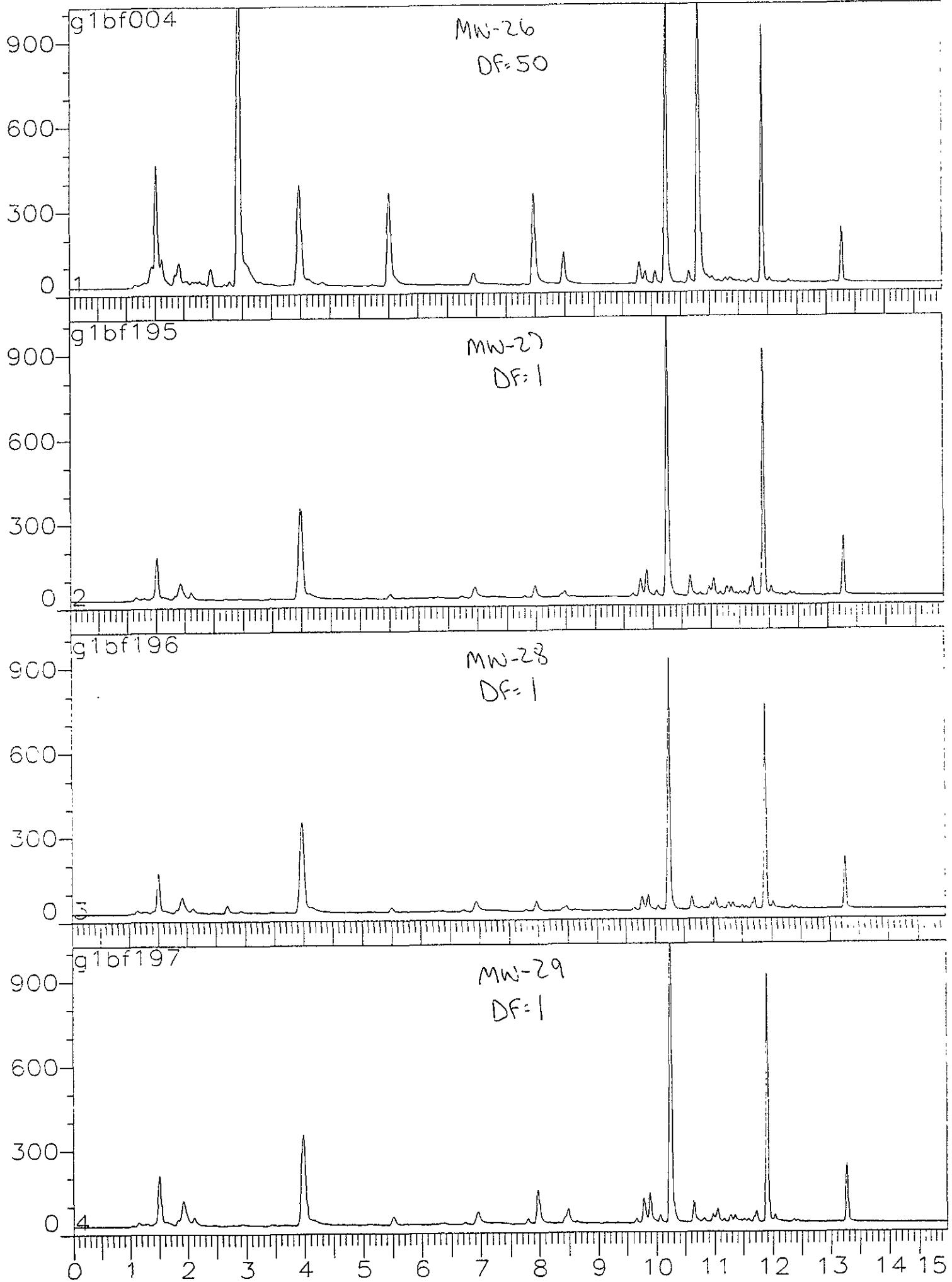


g1of194

MW-25

DF=1





g1bf198

MW-30

DF=1

600

300

0

1

g1bf199

MW-32

DF=1

900

600

300

0

2

g1bf200

Equip Blk

DF=1

900

600

300

0

3

g1bf201

Dup

DF=1

900

600

300

0

4

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



SIERRA LABORATORIES

TEL: 714 • 758 • 9988

FAX: 714 • 758 • 9692

1525 Endeavour Place • Suite D • Anaheim, CA • 92801

IN. 1000822

Date: 11/5/93 Page 2 of 2

Lab Project No.:

Client: PARK ENVIRONMENTAL

Client Address: 4231 Pacific Street Suite 7
ROCKLIN, CA 95677

Client Tel No.: 916-784-7400

Client Fax No.:

Client Proj. Mgr.:

Client Proj. Number/Proj. Name:

5008-S12

Turn Around Time Requested:

- Immediate Attention
- Rush 24-48 hours
- Rush 72-96 hours
- Normal
- Mobile

Analyses Requested

| Analyses Requested | | | | | | |
|---|---------------|----------------------------------|--|--|--|----------|
| S013-Modified (TPH & Oilsoline CADHS LUFT) | CADHS LUFT | | | | | |
| S015-Modified (TPH & Oilsoline CADHS LUFT) | CADHS LUFT | | | | | |
| S015-Nostalgia (TPH & Diesel-CADHS LUFT) | CADHS LUFT | | | | | |
| EPA 8020 (Vehicle Aromatics - BTEX) | EPA 8020 | | | | | |
| EPA 8010 (Vehicle Halogenated) | EPA 8010 | | | | | |
| EPA 8010/8020 (Vehicle Aromatics & Halogenated) | EPA 8010/8020 | | | | | |
| EPA 411 I (TPH) | EPA 411 I | | | | | |
| Total Lead EPA 6010 or EPA 7421 (Crude oil) | Total Lead | EPA 6010 or EPA 7421 (Crude oil) | | | | |
| Organic Lead (CADHS LUFT) | Organic Lead | (CADHS LUFT) | | | | |
| | | | | | | Comments |

1 Sampler Signature: Howard Hold

Shipped Via: _____

Company: PARK ENVIRONMENTAL

(Carrier/Waybill No.)

Total Number of Containers
Submitted to Laboratory

Sample Disposal:

- Return to Client
- Lab Disposal
- Archive ____ mos
- Other _____

2 Relinquished By: _____ Date: _____ Received By: _____ Date: _____

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.

Company: _____ Time: _____ Company: _____ Time: _____

3 Relinquished By: _____ Date: _____ Received By: _____ Date: _____

Total Number of Containers
Received by Laboratory

Company: _____ Time: _____ Company: _____ Time: _____

4 Relinquished By: _____ Date: _____ Received By: _____ Date: _____

Company: _____ Time: _____ Company: _____ Time: _____

Special Instructions:

FOR LABORATORY USE ONLY - Sample Receipt Conditions:

- Chilled Appropriate Sample Container
- Intact Appropriate Preservatives
- Sample Seals Other _____
- Properly Labeled Other _____