MONITORING
PURGING
DISPOSING
SAMPLING

mpds SERVICES, INCORPORATED

ENVIRONMENTAL PROTECTION

95 MAR 29 PM 1:15

March 28, 1995

Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, CA 94502

Attention: Mr. Scott Seery

RE: Unocal Service Station #7376
4191 First Street
Pleasanton, California

Dear Mr. Seery:

Per the request of the Unocal Corporation Project Manager, Mr. Robert A. Boust, enclosed please find our report (MPDS-UN7376-01), dated March 22, 1995, for the above referenced site.

Should you have any questions regarding the reporting of data, please feel free to call our office at (510) 602-5120. Any other questions may be directed to the Project Manager at (510) 277-2334.

Sincerely,

MPDS Services, Inc.

Jarrel F. Crider

/jfc

Enclosure

cc: Mr. Robert A. Boust

2401 Stanwell Drive, Suite 300, Concord, CA 94520
TEL: (510) 602-5120 FAX: (510) 689-1918

MONITORING PURGING DISPOSING SAMPLING
MPDS SERVICES, INCORPORATED



MPDS-UN7376-01
March 22, 1995

Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, California 94583

Attention: Mr. Robert A. Boust

RE: Quarterly Data Report
Unocal Service Station #7376
4191 First Street
Pleasanton, California

Dear Mr. Boust:

This data report presents the results of the most recent quarter of monitoring and sampling of the monitoring wells at the referenced site by MPDS Services, Inc.

RECENT FIELD ACTIVITIES

The monitoring wells that were monitored and sampled during this quarter are indicated in Table 1. Prior to sampling, the wells were checked for depth to water and the presence of free product or sheen. The monitoring data and the ground water elevations are summarized in Table 1. The ground water flow direction during the most recent quarter is shown on the attached Figure 1.

Ground water samples were collected on March 1, 1995. Prior to sampling, the wells were each purged of between 1 and 4 gallons of water. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded and are presented in Table 2. Once the field parameters were observed to stabilize, and where possible, a minimum of approximately four casing volumes had been removed from each well, samples were then collected using a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory. MPDS Services, Inc. transported the purged ground water to the Unocal Refinery located in Rodeo, California, for treatment and discharge to San Pablo Bay under NPDES permit.

ANALYTICAL RESULTS

The ground water samples were analyzed at Sequoia Analytical Laboratory and were accompanied by properly executed Chain of Custody documenta-

tion. The analytical results of the ground water samples collected to date are summarized in Table 3. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel, and benzene detected in the ground water samples collected this quarter are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

DISTRIBUTION

A copy of this report should be sent to Mr. Scott Seery of the Alameda County Health Care Services Agency.

If you have any questions regarding this report, please do not hesitate to call Mr. Nubar Srabian at (510) 602-5120.

Sincerely,

MPDS Services, Inc.

Sarkis Karkarian
Staff Engineer


Joel G. Greger, C.E.G.
Senior Engineering Geologist

License No. EG 1633
Exp. Date 8/31/96

/jfc

Attachments: Tables 1, 2 & 3
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Robert H. Kezerian, Kaprealian Engineering, Inc.

## TABLE 1

SUMMARY OF MONITORING DATA

| Well # | Ground Water Elevation (feet) | Depth to Water (feet)♦ | Total Well Depth (feet)♦ | Product Thickness (feet) | Sheen | Water Purged (gallons) |
|---|---|---|---|---|---|---|
| **(Monitored and Sampled on March 1, 1995)** | | | | | | |
| MW1 | 286.90 | 80.09 | 86.39 | 0 | No | 1 |
| MW2B | 284.25 | 80.80 | 85.25 | 0 | No | 2 |
| MW3 | 283.81 | 83.20 | 94.10 | 0 | No | 4 |
| **(Monitored and Sampled on December 7, 1994)** | | | | | | |
| MW1 | N/A | 81.04 | 86.46 | 0 | No | 4 |
| MW2 | WELL DAMAGED | | | | | |
| MW3 | N/A | 85.54 | 94.34 | 0 | No | 6 |

| Well # | Well Casing Elevation (feet)* |
|---|---|
| MW1 | 366.99 |
| MW2B | 365.05 |
| MW3 | 367.01 |

* The elevations of the top of the well casings were recently surveyed relative to City of Pleasanton Benchmark V1, a brass disk on the north curb of Ray Street, approximately 200 feet northwest of the centerline of First Street (elevation = 367.17 MSL).

♦ Depth to water and total well depth measurements are taken from the top of the well casings.

N/A = Not applicable.

Note: Monitoring data prior to March 1, 1995 were provided by Kaprealian Engineering, Inc.

**TABLE 2**

RECORD OF THE TEMPERATURE, CONDUCTIVITY, AND pH VALUES
IN THE MONITORING WELLS DURING PURGING AND PRIOR TO SAMPLING

**(Measured on March 1, 1995)**

| Well # | Gallons per Casing Volume | Time | Gallons Purged | Casing Volumes Purged | Temperature (°F) | Conductivity ([μmhos/cm] x100) | pH |
|---|---|---|---|---|---|---|---|
| MW1 | 1.07 | 11:05 | 0 | 0 | 70.0 | 4.46 | 7.70 |
| | | | 1 | 0.93 | 70.4 | 4.31 | 7.63 |
| | | 11:10 | WELL DEWATERED | | | | |
| MW2B | 0.76 | 12:50 | 0 | 0 | 68.2 | 3.76 | 7.95 |
| | | | 1 | 1.32 | 67.5 | 4.14 | 7.75 |
| | | | 2 | 2.63 | 67.9 | 4.09 | 7.63 |
| | | 12:55 | WELL DEWATERED | | | | |
| MW3 | 1.85 | 11:55 | 0 | 0 | 67.1 | 4.06 | 7.60 |
| | | | 2 | 1.08 | 67.5 | 4.16 | 7.46 |
| | | | 4 | 2.16 | 68.0 | 4.13 | 7.32 |
| | | 12:03 | WELL DEWATERED | | | | |

**TABLE 3**

SUMMARY OF LABORATORY ANALYSES
WATER

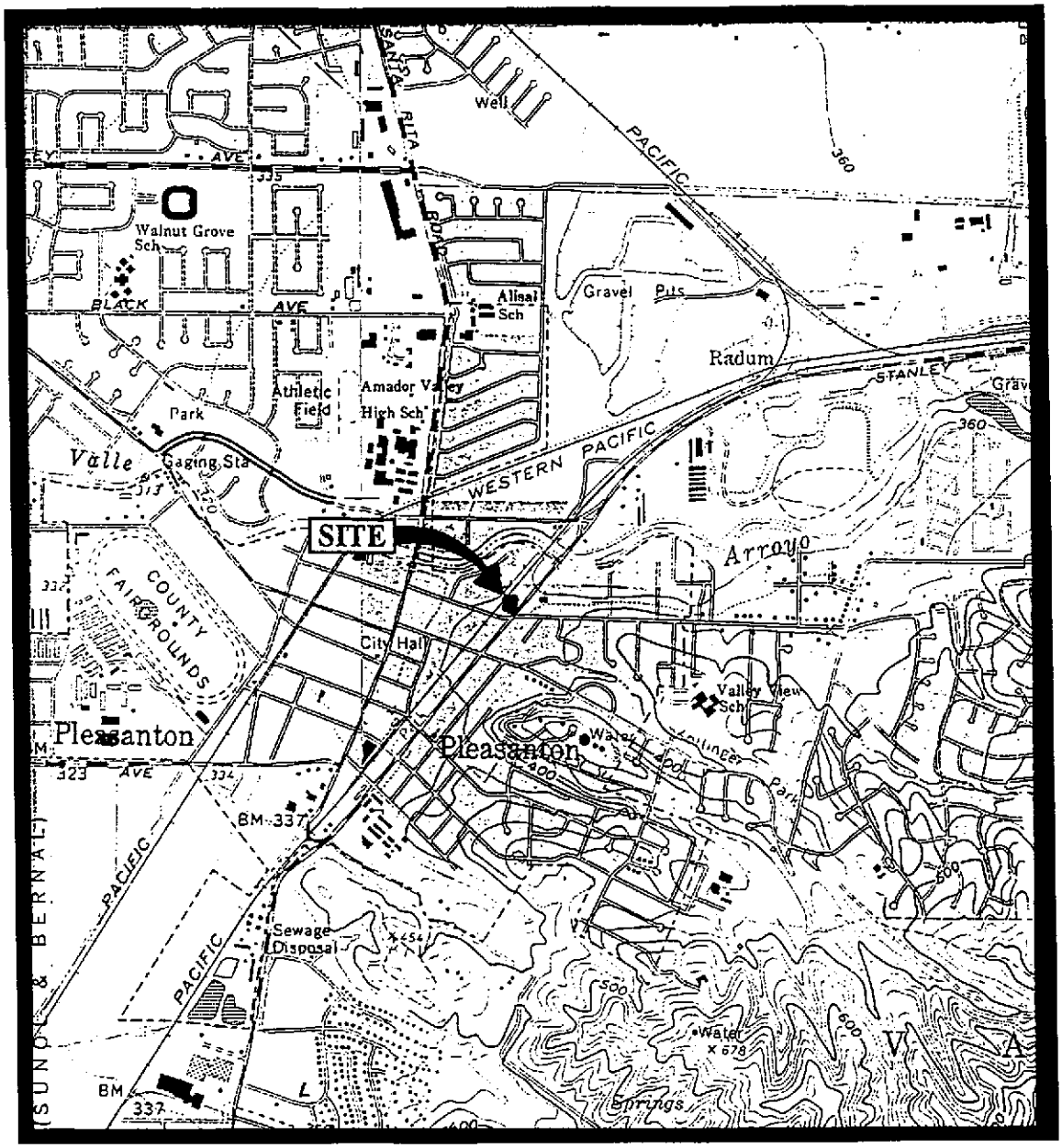
| Date | Well # | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 3/01/95 | MW1 | 120 | ND | ND | 1.1 | ND | 1.3 |
| | MW2B | 320 | ND | ND | ND | ND | ND |
| | MW3 | 140♦ | ND | ND | 1.1 | ND | 1.1 |
| 12/07/95 | MW1 | -- | ND | ND | ND | ND | ND |
| | MW2 | -- | WELL DAMAGED | | | | |
| | MW3 | -- | ND | ND | ND | ND | ND |

ND = Non-detectable.

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

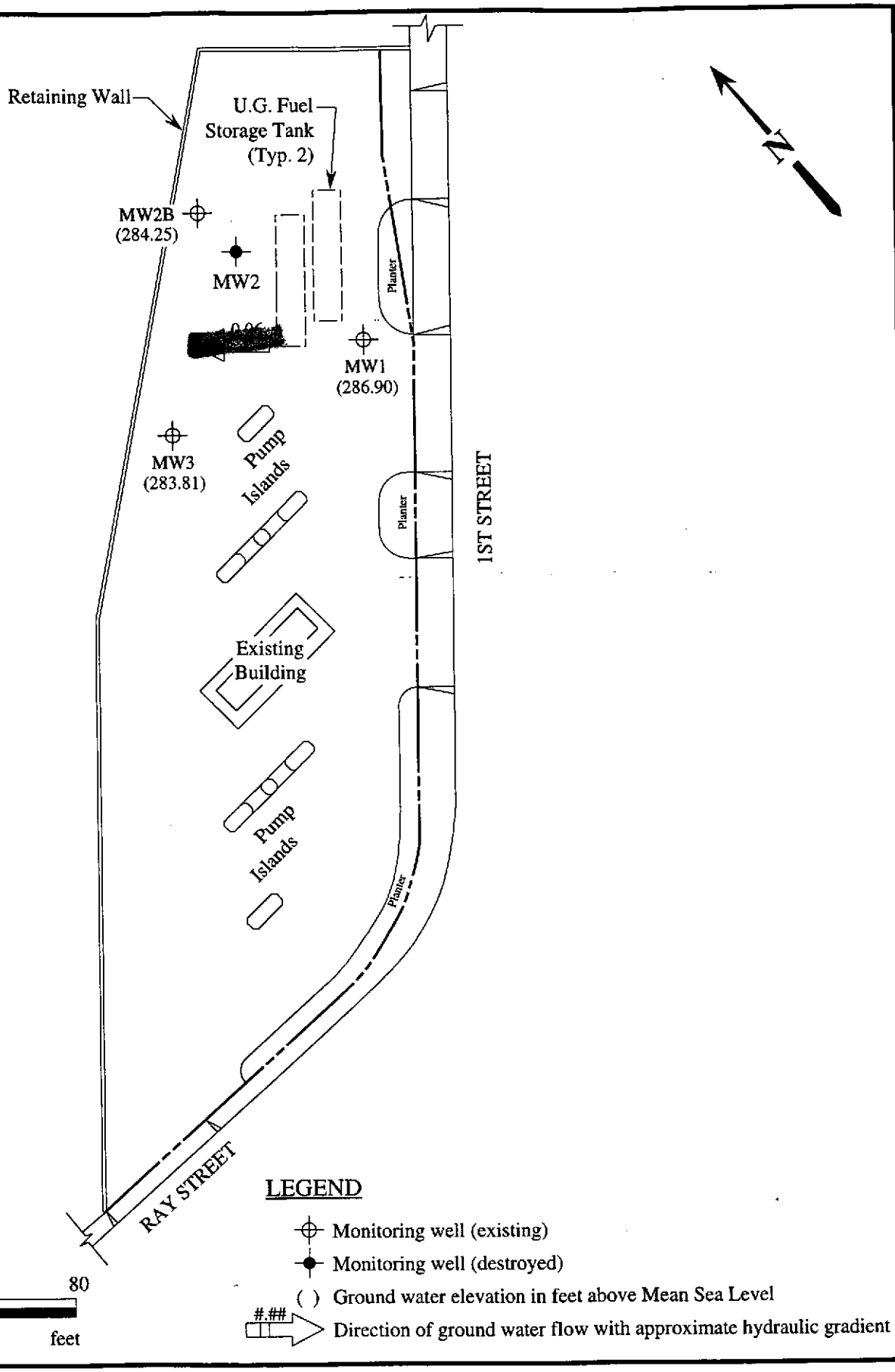
Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: Laboratory analyses data prior to March 1, 1995 were provided by Kaprealian Engineering, Inc.




Base modified from 7.5 minute U.S.G.S. Dublin and Livermore Quadrangles
(both photorevised 1980)

| | | |
|---|---|---|
| mpds SERVICES, INCORPORATED | **UNOCAL SERVICE STATION #7376**<br>**4191 1ST STREET**<br>**PLEASANTON, CALIFORNIA** | **LOCATION MAP** |

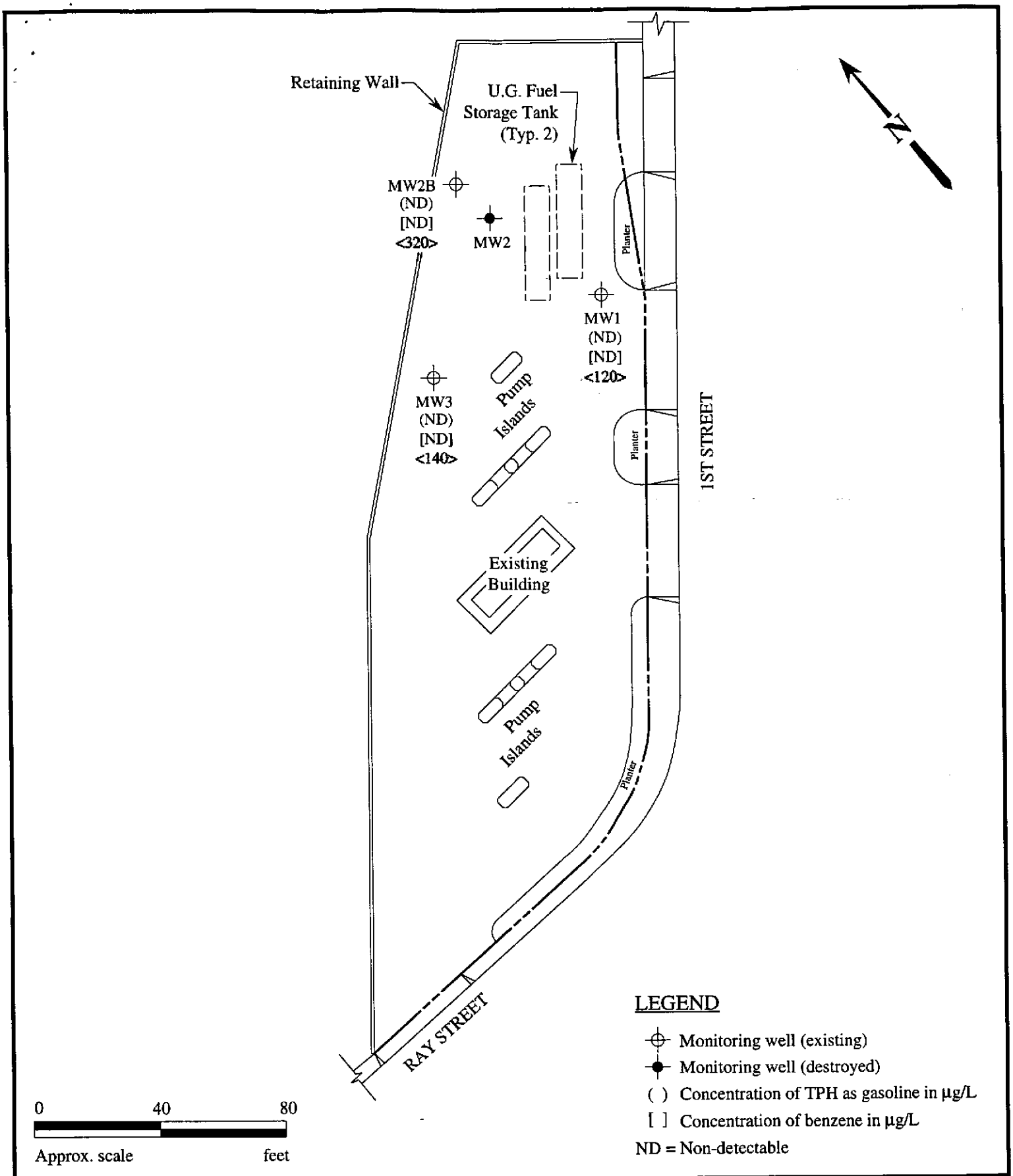



**GROUND WATER FLOW DIRECTION MAP FOR THE MARCH 1, 1995 MONITORING EVENT**

mpds SERVICES, INCORPORATED

**UNOCAL SERVICE STATION #7376**
**4191 1ST STREET**
**PLEASANTON, CALIFORNIA**

FIGURE
**1**




**PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON MARCH 1, 1995**

| | | |
|---|---|---|
| mpds SERVICES, INCORPORATED | **UNOCAL SERVICE STATION #7376**<br>**4191 1ST STREET**<br>**PLEASANTON, CALIFORNIA** | FIGURE<br>**2** |

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | | |
|---|---|---|---|
| MPDS Services | Client Project ID: | Unocal #7376, 4191 1st St., Pleasanton | Sampled: Mar 1, 1995 |
| 2401 Stanwell Dr., Ste. 300 | Matrix Descript: | Water | Received: Mar 1, 1995 |
| Concord, CA 94520 | Analysis Method: | EPA 5030/8015/8020 | Reported: Mar 21, 1995 |
| Attention: Sarkis Karkarian | First Sample #: | 503-0086 | |

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

| Sample Number | Sample Description | Purgeable Hydrocarbons µg/L | Benzene µg/L | Toluene µg/L | Ethyl Benzene µg/L | Total Xylenes µg/L |
|---|---|---|---|---|---|---|
| 503-0086 | MW1 | ND | ND | 1.1 | ND | 1.3 |
| 503-0087 | MW2B | ND | ND | ND | ND | ND |
| 503-0088 | MW3 | ND | ND | 1.1 | ND | 1.1 |
| **Detection Limits:** | | **50** | **0.50** | **0.50** | **0.50** | **0.50** |

Total Purgeable Petroleum Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as ND were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL,2000**

Signature on File

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | | |
|---|---|---|---|
| MPDS Services | Client Project ID: | Unocal #7376, 4191 1st St., Pleasanton | Sampled: Mar 1, 1995 |
| 2401 Stanwell Dr., Ste. 300 | Matrix Descript: | Water | Received: Mar 1, 1995 |
| Concord, CA 94520 | Analysis Method: | EPA 5030/8015/8020 | Reported: Mar 21, 1995 |
| Attention: Sarkis Karkarian | First Sample #: | 5030086 | |

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

| Sample Number | Sample Description | Chromatogram Pattern | DL Mult Factor | Date Analyzed | Instrument ID | Surrogate Recovery, % (QC Limits: 70-130%) |
|---|---|---|---|---|---|---|
| 503-0086 | MW1 | -- | 1.0 | 3/15/95 | HP-1 | 98 |
| 503-0087 | MW2B | -- | 1.0 | 3/15/95 | HP-1 | 91 |
| 503-0088 | MW3 | -- | 1.0 | 3/15/95 | HP-1 | 96 |

**SEQUOIA ANALYTICAL,2000**

Signature on File

Alan B. Kemp
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | | |
|---|---|---|---|
| MPDS Services | Client Project ID: | Unocal #7376, 4191 1st St., Pleasanton | Sampled: Mar 1, 1995 |
| 2401 Stanwell Dr., Ste. 300 | Sample Matrix: | Water | Received: Mar 1, 1995 |
| Concord, CA 94520 | Analysis Method: | EPA 3510/8015 | Reported: Mar 21, 1995 |
| Attention: Sarkis Karkarian | First Sample #: | 503-0086 | |

## TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

| Analyte | Reporting Limit µg/L | Sample I.D. 503-0086 MW1 | Sample I.D. 503-0087 MW2B | Sample I.D. 503-0088 MW3 |
|---|---|---|---|---|
| Extractable Hydrocarbons | 50 | 120 | 320 | 140 |
| Chromatogram Pattern: | | Diesel | Diesel | Diesel and Discrete Peaks |

**Quality Control Data**

| | | | |
|---|---|---|---|
| Report Limit Multiplication Factor: | 1.0 | 1.0 | 1.7 |
| Date Extracted: | 3/3/95 | 3/3/95 | 3/3/95 |
| Date Analyzed: | 3/6/95 | 3/6/95 | 3/6/95 |
| Instrument Identification: | HP-3B | HP-3B | HP-3B |

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp
Project Manager

Please Note:
^ This sample appears to contain diesel and non-diesel mixtures. "Discrete Peaks" refers to unidentified peaks in the EPA 8270 range.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Sarkis Karkarian

Client Project ID: Unocal #7376, 4191 1st St., Pleasanton
Matrix: Liquid
QC Sample Group: 5030086-088

Reported: Mar 21, 1995

## QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl Benzene | Xylenes | Diesel |
|---|---|---|---|---|---|
| Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8015 Mod |
| Analyst: | N. Zahedl | N. Zahedl | N. Zahedl | N. Zahedl | J. Dinsay |
| MS/MSD Batch#: | 5030115 | 5030115 | 5030115 | 5030115 | BLK030395 |
| Date Prepared: | 3/15/95 | 3/15/95 | 3/15/95 | 3/15/95 | 3/3/95 |
| Date Analyzed: | 3/15/95 | 3/15/95 | 3/15/95 | 3/15/95 | 3/6/95 |
| Instrument I.D.#: | HP-1 | HP-1 | HP-1 | HP-1 | HP-3B |
| Conc. Spiked: | 10 µg/L | 10 µg/L | 10 µg/L | 60 µg/L | 300 µg/L |
| Matrix Spike % Recovery: | 100 | 101 | 103 | 105 | 113 |
| Matrix Spike Duplicate % Recovery: | 103 | 105 | 107 | 109 | 107 |
| Relative % Difference: | 2.0 | 3.9 | 3.8 | 3.7 | 1.0 |
| LCS Batch#: | LCS031595 | LCS031595 | LCS031595 | LCS031595 | BLK030395 |
| Date Prepared: | 3/15/95 | 3/15/95 | 3/15/95 | 3/15/95 | 3/3/95 |
| Date Analyzed: | 3/15/95 | 3/15/95 | 3/15/95 | 3/15/95 | 3/6/95 |
| Instrument I.D.#: | HP-1 | HP-1 | HP-1 | HP-1 | HP-3B |
| LCS % Recovery: | 91 | 92 | 95 | 98 | 113 |
| % Recovery Control Limits: | 71-133 | 72-128 | 72-130 | 71-120 | 75-125 |

**SEQUOIA ANALYTICAL, #6000**

Signature on File

Alan B. Kemp
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.