

MPDS-UN7176-06  
February 24, 1997

76 Products Company  
2000 Crow Canyon Place, Suite 400  
P.O. Box 5155  
San Ramon, California 94583

Attention: Mr. Edward C. Ralston

RE: Quarterly Data Report  
Unocal Service Station #7176  
7850 Amador Valley Boulevard  
Dublin, California

Dear Mr. Ralston:

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. Oxygen Release Compound (ORC®) filter socks were present in monitoring wells U-1, U-2, and U-3. 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 January 27, 1997. Dissolved oxygen concentrations were measured and are presented in Table 3. 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 documentation. The analytical results of the ground water samples collected to date are summarized in Table 2. 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 Ms. Eva Chu of the Alameda County Health Care Services Agency.

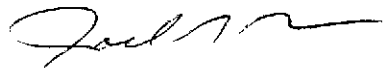
If you have any questions regarding this report, please do not hesitate to call Joel G. Greger at (510) 602-5120.

Sincerely,

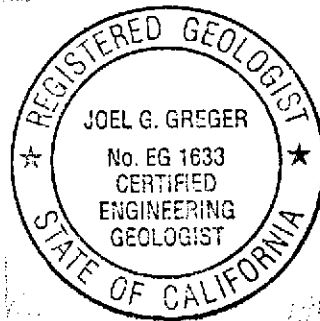
MPDS Services, Inc.



Haig (Gary) Tejirian  
Senior Staff Geologist



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



License No. EG 1633  
Exp. Date 8/31/98

/aab

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

cc: Mr. Kieth Romstad, ERI

**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)
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**(Monitored and Sampled on January 27, 1997)**

U-1	343.42	12.20	28.00	0	--	0
U-2	343.68	12.91	26.56	0	--	0
U-3	343.72	14.41	28.90	0	--	0

**(Monitored and Sampled on October 30, 1996)**

U-1	339.77	15.85	27.98	0	--	0
U-2	339.77	16.82	26.55	0	--	0
U-3	339.89	18.24	28.89	0	--	0

**(Monitored and Sampled on July 10, 1996)**

U-1	341.78	13.84	28.03	0	--	0
U-2	342.17	14.42	26.57	0	--	0
U-3	342.15	15.98	28.85	0	--	0

**(Monitored and Sampled on April 11, 1996)**

U-1	343.42	12.20	28.60	0	No	12
U-2	343.84	12.75	26.70	0	No	10
U-3	344.93	13.20	29.26	0	No	11

Well #	Well Casing Elevation (feet)*
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U-1	355.62
U-2	356.59
U-3	358.13

- ♦ The depth to water level and total well depth measurements were taken from the top of the well casings.
- \* The elevations of the top of the well casings are relative to Mean Sea Level (MSL), per the Benchmark AM-STW1977 located at the easterly return at the most easterly corner of intersection of Amador Valley Blvd. and Starward Street (Elevation = 344.17 feet MSL).
- Sheen determination was not performed.

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
1/27/97	U-1	2,300♦	4,600	98	ND	360	290	150
	U-2	660♦	1,600	14	ND	130	7.0	100
	U-3	ND	ND	ND	ND	ND	ND	ND
10/30/96	U-1	560♦	2,200	67	19	140	150	360
	U-2	1,800♦	7,700	67	35	1,000	54	260
	U-3	ND	70	ND	ND	ND	ND	ND
7/10/96	U-1	2,200♦	2,600	81	4.4	210	230	510
	U-2	2,300♦	5,600	59	15	610	42	250
	U-3	ND	ND	ND	ND	ND	ND	ND
4/11/96	U-1*	630♦	3,200	110	ND	180	290	790
	U-2*	1,900♦	7,700	130	27	1,100	110	340
	U-3	ND	68*	ND	ND	ND	ND	ND
1/11/96‡	U-1	8,200♦	8,300	690	11	680	1,500	††
	U-2	8,600♦	10,000	210	55	1,400	240	††
	U-3	260♦♦	230	0.62	0.91	0.97	1.9	--
10/12/95	U-1	4,200♦	33,000	1,400	ND	1,400	3,100	†
	U-2	3,600♦	24,000	310	60	1,900	190	†
	U-3	470♦♦	560	ND	0.87	0.7	1.1	--
7/8/95	U-1	9,400*	39,000	1,500	19	1,600	5,200	--
	U-2	4,700*	17,000	430	ND	2,200	590	--
	U-3	710*	1,100**	0.57	2.1	1.7	2.4	--

\* On April 11, 1996, all PNA compounds were non-detectable.

‡ On January 11, 1996, PNA compound naphthalene was detected in well U-1 at a concentration of 320 µg/L, and at a concentration of 310 µg/L in well U-2. All other PNA compounds were non-detectable in both wells.

† Sequoia Analytical Laboratory has potentially identified the presence of MTBE at reportable levels in the ground water sample collected from this well.

†† Sequoia Analytical Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 µg/L in the sample collected from this well.

\* Unidentified Hydrocarbon C9-C26

\*\* Gas and Unidentified Hydrocarbons >C12

**Table 2**  
**Summary of Laboratory Analyses**  
**Water**

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- ★ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.
- ◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- ◆◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.

PNA = Polynuclear aromatic hydrocarbons (EPA method 8100).

MTBE = methyl tert butyl ether.

ND = Non-detectable.

Results are in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise indicated.

Note: The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection limit times the dilution factor indicated on the laboratory analytical sheets.

Prior to August 1, 1995, the total purgeable petroleum hydrocarbon (TPH as gasoline) quantification range used by Sequoia Analytical Laboratory was C4 - C12. Since August 1, 1995, the quantification range used by Sequoia Analytical Laboratory is C6 - C12.

Laboratory analyses data prior to October 12, 1995, were provided by Enviros, Inc.

**Table 3**  
 Summary of Monitoring Data

Date	Well #	Dissolved Oxygen Concentrations	
		Before Purging	After Purging
1/27/97★	U-1	1.34	--
	U-2	1.29	--
	U-3	2.61	--
10/30/96★	U-1	1.41	--
	U-2	1.42	--
	U-3	2.18	--
7/10/96★	U-1	1.22	--
	U-2	1.01	--
	U-3	3.44	--
4/11/96	U-1	3.77	3.78
	U-2	3.32	3.41
	U-3	5.16	4.96
1/11/96	U-1	--	3.41
	U-2	--	3.99
	U-3	--	5.05
10/2/95	CC1*	2.83	--

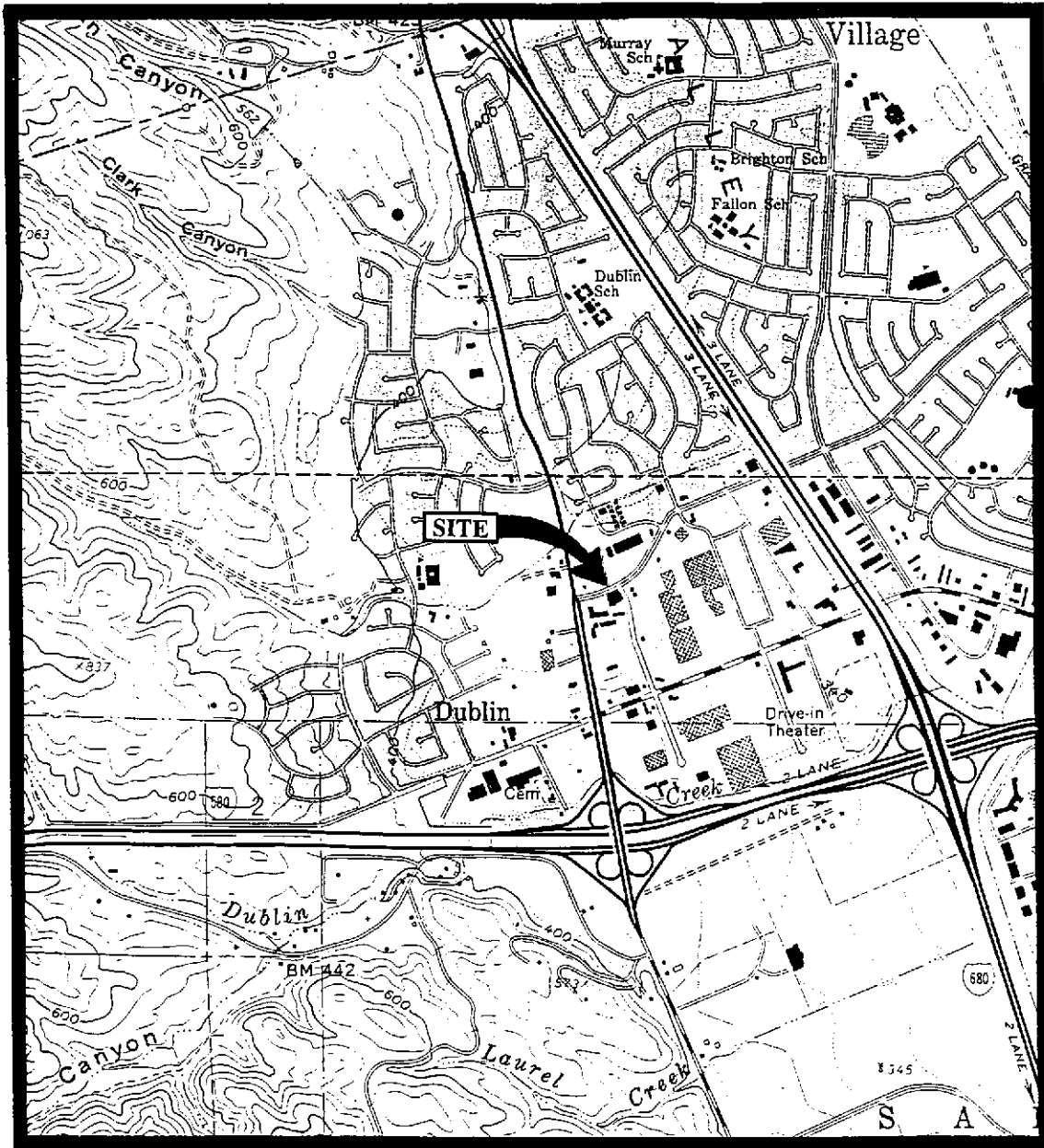
\* For the location of sample point CC1, see Figure 1.

★ The wells were not purged on this date.

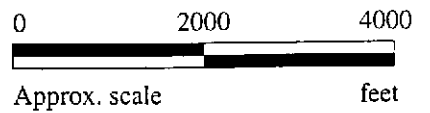
-- Measurement was not taken.

Results are in milligrams per liter (mg/L).

Note: Measurements were taken using a LaMotte DO4000 dissolved oxygen meter.



Base modified from 7.5 minute U.S.G.S. Dublin Quadrangle  
(photorevised 1980)

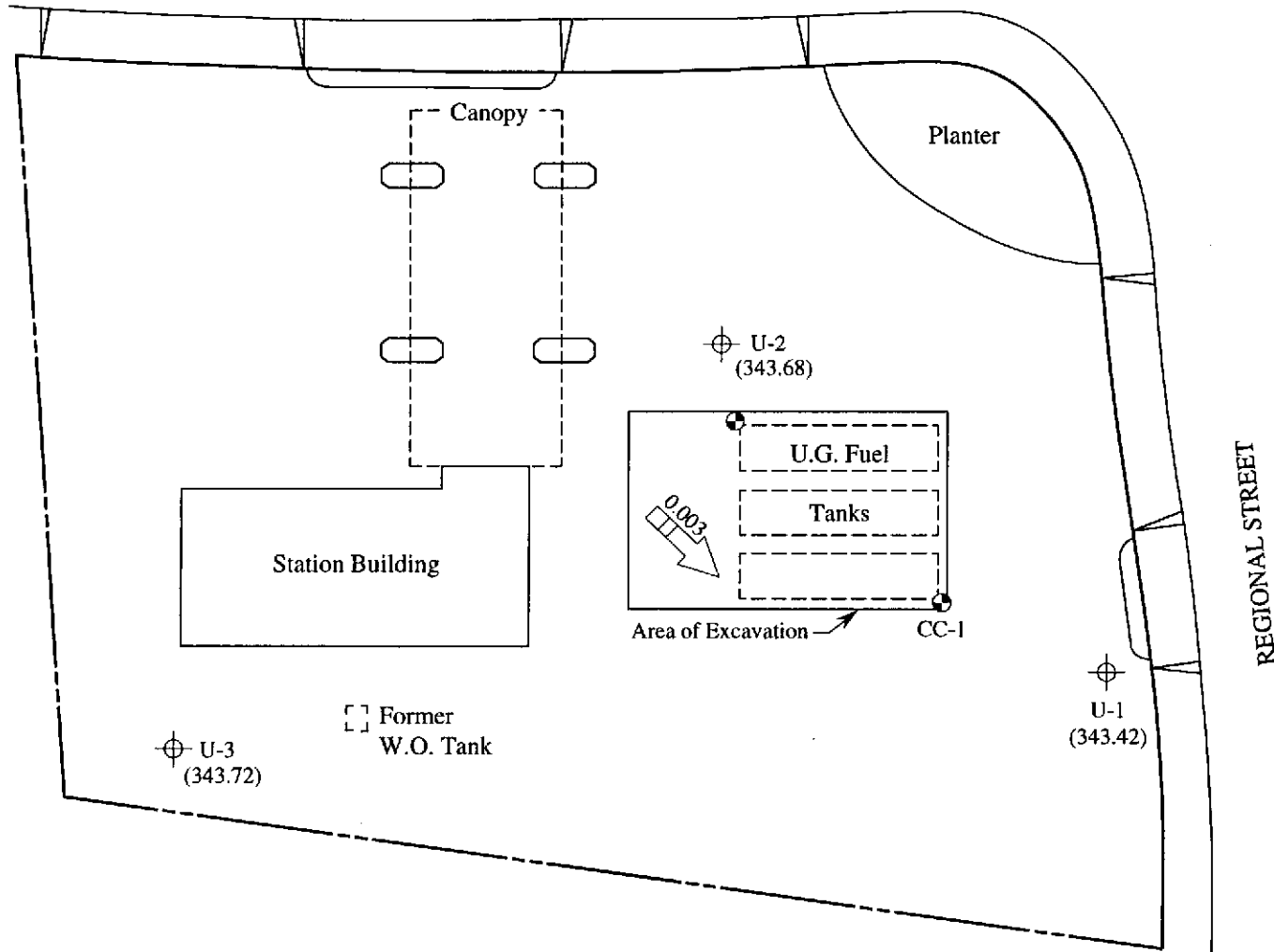


**MPDS** SERVICES, INCORPORATED

UNOCAL SERVICE STATION #7176  
7850 AMADOR VALLEY BOULEVARD  
DUBLIN, CALIFORNIA

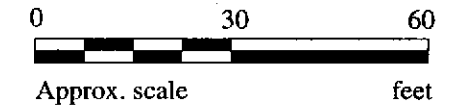
LOCATION  
MAP

AMADOR VALLEY BOULEVARD



**LEGEND**

- Monitoring well
- Conductor casing
- Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow with approximate hydraulic gradient



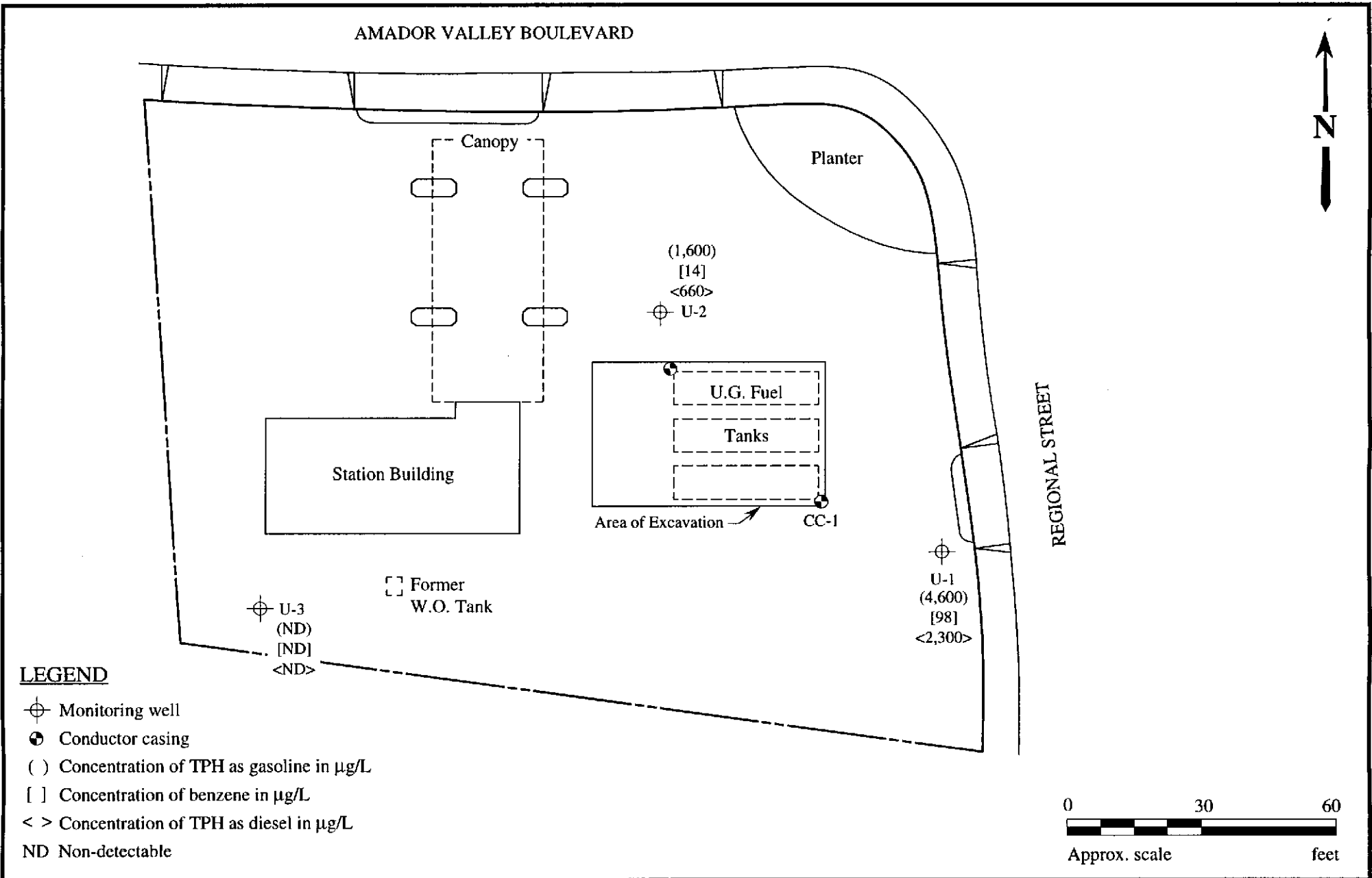
**GROUND WATER FLOW DIRECTION MAP FOR THE JANUARY 27, 1997 MONITORING EVENT**

UNOCAL SERVICE STATION #7176  
7850 AMADOR VALLEY BOULEVARD  
DUBLIN, CALIFORNIA



FIGURE  
**1**





PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON JANUARY 27, 1997

UNOCAL SERVICE STATION #7176  
 7850 AMADOR VALLEY BOULEVARD  
 DUBLIN, CALIFORNIA



FIGURE  
 2



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd. Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 701-1554	Dublin	Sampled: Jan 27, 1997 Received: Jan 28, 1997 Reported: Feb 11, 1997
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**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
701-1554	U-1	4,600	98	ND	360	290
701-1555	U-2	1,600	14	ND	130	7.0
701-1556	U-3	ND	ND	ND	ND	ND

**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, #1271**

Signature on File

Alan B. Kemp  
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd. Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 701-1554	Dublin	Sampled: Jan 27, 1997 Received: Jan 28, 1997 Reported: Feb 11, 1997
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**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
701-1554	U-1	Gasoline	5.0	1/31/97	HP-5	80
701-1555	U-2	Gasoline	10	1/31/97	HP-5	88
701-1556	U-3	--	1.0	2/3/97	HP-2	82

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager





# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(415) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

MPDS Services  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Jarrel Crider

Client Project ID: Unocal #7176, 7850 Amador Valley Blvd.  
Sample Descript: Water  
Analysis for: MTBE (Modified EPA 8020)  
First Sample #: 701-1554

Sampled: Jan 27, 1997  
Received: Jan 28, 1997  
Dublin  
Analyzed: Jan 31-Feb 3, 97  
Reported: Feb 11, 1997

## LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
701-1554	U-1	13	150
701-1555	U-2	25	100
701-1556	U-3	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

### SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp  
Project Manager





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FAX (916) 921-0100

MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd. Sample Matrix: Water Analysis Method: EPA 3510/8015 Mod. First Sample #: 701-1554	Dublin	Sampled: Jan 27, 1997 Received: Jan 28, 1997 Reported: Feb 11, 1997
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## TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 701-1554 U-1 <sup>^</sup>	Sample I.D. 701-1555 U-2 <sup>^</sup>	Sample I.D. 701-1556 U-3
Extractable Hydrocarbons	50	2,300	660	N.D.
Chromatogram Pattern:		Diesel & Unidentified Hydrocarbons <C15	Diesel & Unidentified Hydrocarbons <C15	--

### Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	1/30/97	1/30/97	1/30/97
Date Analyzed:	1/31/97	1/31/97	1/31/97
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:

<sup>^</sup> This sample appears to contain diesel and non-diesel mixtures. "Unidentified Hydrocarbons <C15" are probably gasoline.





MPDS Services  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Jarrel Crider

Client Project ID: Unocal #7176, 7850 Amador Valley Blvd., Dublin  
Matrix: Liquid

QC Sample Group: 7011554-556

Reported: Feb 11, 1997

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
<b>Analyst:</b>	K. Nill	K. Nill	K. Nill	K. Nill	D. Sharma

<b>MS/MSD Batch#:</b>	7011486	7011486	7011486	7011486	BLK013097
<b>Date Prepared:</b>	1/30/97	1/30/97	1/30/97	1/30/97	1/30/97
<b>Date Analyzed:</b>	1/30/97	1/30/97	1/30/97	1/30/97	1/31/97
<b>Instrument I.D.#:</b>	HP-5	HP-5	HP-5	HP-5	HP-3A
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
<b>Matrix Spike % Recovery:</b>	90	80	90	83	103
<b>Matrix Spike Duplicate % Recovery:</b>	90	85	90	85	100
<b>Relative % Difference:</b>	0.0	6.1	0.0	2.0	3.3

<b>LCS Batch#:</b>	5LCS013197	5LCS013197	5LCS013197	5LCS013197	LCS013097
<b>Date Prepared:</b>	1/31/97	1/31/97	1/31/97	1/31/97	1/30/97
<b>Date Analyzed:</b>	1/31/97	1/31/97	1/31/97	1/31/97	1/31/97
<b>Instrument I.D.#:</b>	HP-5	HP-5	HP-5	HP-5	HP-3A
<b>LCS % Recovery:</b>	90	85	90	85	90

<b>% Recovery Control Limits:</b>	60-140	60-140	60-140	60-140	60-140
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**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.

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager





MPDS Services  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Jarrel Crider

Client Project ID: Unocal #7176, 7850 Amador Valley Blvd., Dublin  
Matrix: Liquid

QC Sample Group: 7011554-556

Reported: Feb 11, 1997

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020
<b>Analyst:</b>	K. Nill	K. Nill	K. Nill	K. Nill

<b>MS/MSD Batch#:</b>	7011478	7011478	7011478	7011478
<b>Date Prepared:</b>	1/31/97	1/31/97	1/31/97	1/31/97
<b>Date Analyzed:</b>	1/31/97	1/31/97	1/31/97	1/31/97
<b>Instrument I.D.#:</b>	HP-2	HP-2	HP-2	HP-2
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L
<b>Matrix Spike % Recovery:</b>	85	100	95	90
<b>Matrix Spike Duplicate % Recovery:</b>	85	100	95	93
<b>Relative % Difference:</b>	0.0	0.0	0.0	3.6

<b>LCS Batch#:</b>	2LCS020397	2LCS020397	2LCS020397	2LCS020397
<b>Date Prepared:</b>	2/3/97	1/31/97	1/31/97	1/31/97
<b>Date Analyzed:</b>	2/3/97	1/31/97	1/31/97	1/31/97
<b>Instrument I.D.#:</b>	HP-2	HP-2	HP-2	HP-2
<b>LCS % Recovery:</b>	80	90	85	83

<b>% Recovery Control Limits:</b>	60-140	60-140	60-140	60-140
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**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.

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager



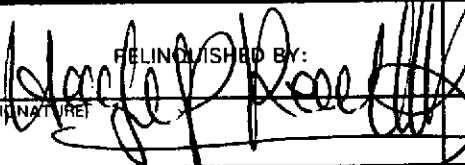
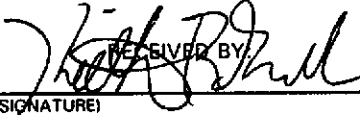
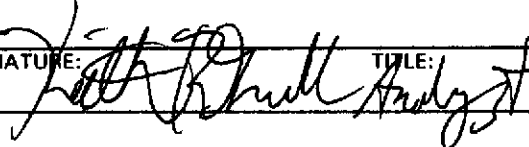
**M P D S Services, Inc.**

2401 Stanwell Drive, Suite 400, Concord, CA 94520  
 Tel: (510) 602-5120 Fax: (510) 689-1918

**CHAIN OF CUSTODY**

9701370

SAMPLER			UNOCAL					ANALYSES REQUESTED								TURN AROUND TIME:
HAIG KEVORK			S/S # <u>4176</u> CITY: <u>DUBLIN</u>					TPH-G	BTEX	TPH-D	MTBE					REGULAR
WITNESSING AGENCY			ADDRESS: <u>7850 AMADOR VALLEY BLV.</u>													
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION									
U-1	1/27/97		✓	✓		2 VOAs 1 AMBER	monitoring Well	✓	✓	✓	✓			7011554	A-C ↓	
U-2	↓		✓	✓		↓	↓	✓	✓	✓	✓			7011555		
U-3	↓		✓	✓		↓	↓	✓	✓	✓	✓			7011556		

RELINQUISHED BY:  (SIGNATURE)	DATE/TIME 1/28/97 1515	RECEIVER BY:  (SIGNATURE)	THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:		
			1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE?	Y	
			2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED?	Y	
			3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?	N	
(SIGNATURE)	(SIGNATURE)	(SIGNATURE)	4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED?	Y	
(SIGNATURE)	(SIGNATURE)	(SIGNATURE)	SIGNATURE: 	TITLE: Analyst	DATE: 1/28/97