

MONITORING  
PURGING  
DISPOSING  
SAMPLING



RECEIVED  
8:27 am, May 18, 2009  
Alameda County  
Environmental Health

MPDS-UN7176-09  
November 17, 1997

Tosco Marketing Company  
Environmental Compliance Department  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94583

Attention: Ms. Tina R. Berry

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

FILE #	7176	SS	<input checked="" type="checkbox"/>	BP	
RPT		QM	<input checked="" type="checkbox"/>	TRANSMITTAL	
1	2	3	4	5	6

Dear Ms. Berry:

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<sup>®</sup>) 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 October 17, 1997. Dissolved oxygen concentrations were measured and are presented in Table 3. The samples were 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.

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.

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DEC 04 1997  
ENV. COMPLIANCE

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.

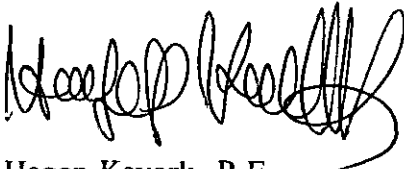
If you have any questions regarding this report, please do not hesitate to call Mr. Nubar Srabian at (510) 602-5120.

Sincerely,

MPDS Services, Inc.



Haig (Gary) Tejirian  
Senior Staff Geologist



Hagop Kevork, P.E.  
Senior Staff Engineer



License No. C 55734  
Exp. Date December 31, 2000

- 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 #	Date	Ground Water Elevation (feet)	Depth to Water (feet)*	Total Well Depth (feet)*	Product Thickness (feet)	Sheen	Water Purged (gallons)
U-1	1/27/97	343.42	12.20	28.00	0	--	0
	4/8/97	342.16	13.46	27.98	0	--	0
	7/17/97	340.32	15.30	27.95	0	--	0
	10/17/97	339.29	16.33	27.96	0	No	0
U-2	1/27/97	343.68	12.91	26.56	0	--	0
	4/8/97	342.52	14.07	26.54	0	--	0
	7/17/97	340.63	15.96	26.51	0	--	0
	10/17/97	339.56	17.03	26.53	0	No	0
U-3	1/27/97	343.72	14.41	28.90	0	--	0
	4/8/97	342.40	15.73	28.88	0	--	0
	7/17/97	340.59	17.54	28.58	0	--	0
	10/17/97	339.49	18.64	28.80	0	No	0

Well #	Well Casing Elevation (feet)*
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

Well #	Date	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
U-1	7/8/95	9,400*	39,000	1,500	19	1,600	5,200	--
	10/12/95	4,200♦	33,000	1,400	ND	1,400	3,100	†
	1/11/96‡	8,200♦	8,300	690	11	680	1,500	††
	4/11/96●	630♦	3,200	110	ND	180	290	790
	7/10/96	2,200♦	2,600	81	4.4	210	230	510
	10/30/96	560♦	2,200	67	19	140	150	360
	1/27/97	2,300♦	4,600	98	ND	360	290	150
	4/8/97	1,300♦	2,800	50	ND	220	140	ND
	7/17/97	460♦♦	2,300	30	4.5	140	94	190
	10/17/97	510♦♦	1,500	31	6.7	110	88	220
U-2	7/8/95	4,700*	17,000	430	ND	2,200	590	--
	10/12/95	3,600♦	24,000	310	60	1,900	190	†
	1/11/96‡	8,600♦	10,000	210	55	1,400	240	††
	4/11/96●	1,900♦	7,700	130	27	1,100	110	340
	7/10/96	2,300♦	5,600	59	15	610	42	250
	10/30/96	1,800♦	7,700	67	35	1,000	54	260
	1/27/97	660♦	1,600	14	ND	130	7.0	100
	4/8/97	2,000♦	4,300	35	ND	400	16	ND
	7/17/97	1,300♦♦	6,200	17	22	410	ND	130
	10/17/97	1,400♦♦	7,100	71	26	520	50	ND
U-3	7/8/95	710*	1,100**	0.57	2.1	1.7	2.4	--
	10/12/95	470♦♦	560	ND	0.87	0.7	1.1	--
	1/11/96‡	260♦♦	230	0.62	0.91	0.97	1.9	--
	4/11/96	ND	68★	ND	ND	ND	ND	ND
	7/10/96	ND	ND	ND	ND	ND	ND	ND
	10/30/96	ND	70	ND	ND	ND	ND	ND
	1/27/97	ND	ND	ND	ND	ND	ND	ND
	4/8/97	ND	ND	ND	ND	ND	ND	ND
	7/17/97	ND	ND	ND	ND	ND	ND	ND
	10/17/97	63♦♦	ND	ND	ND	ND	ND	ND

- 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.

**Table 2**  
Summary of Laboratory Analyses  
Water

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- \* Unidentified Hydrocarbon C9-C26
- \*\* Gas and Unidentified Hydrocarbons > C12
- ★ 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

Well#	Date	Dissolved Oxygen Concentrations	
		Before Purging	After Purging
U-1	1/11/96	--	3.41
	4/11/96	3.77	3.78
	7/10/96★	1.22	--
	10/30/96★	1.41	--
	1/27/97★	1.34	--
	4/8/97★	2.09	--
	7/17/97★	2.00	--
	10/17/97★	1.86	--
U-2	1/11/96	--	3.99
	4/11/96	3.32	3.41
	7/10/96★	1.01	--
	10/30/96★	1.42	--
	1/27/97★	1.29	--
	4/8/97★	1.69	--
	7/17/97★	2.08	--
	10/17/97★	1.80	--
U-3	1/11/96	--	5.05
	4/11/96	5.16	4.96
	7/10/96★	3.44	--
	10/30/96★	2.18	--
	1/27/97★	2.61	--
	4/8/97★	3.73	--
	7/17/97★	2.65	--
	10/17/97★	2.44	--
CC1*	10/2/95	2.83	--

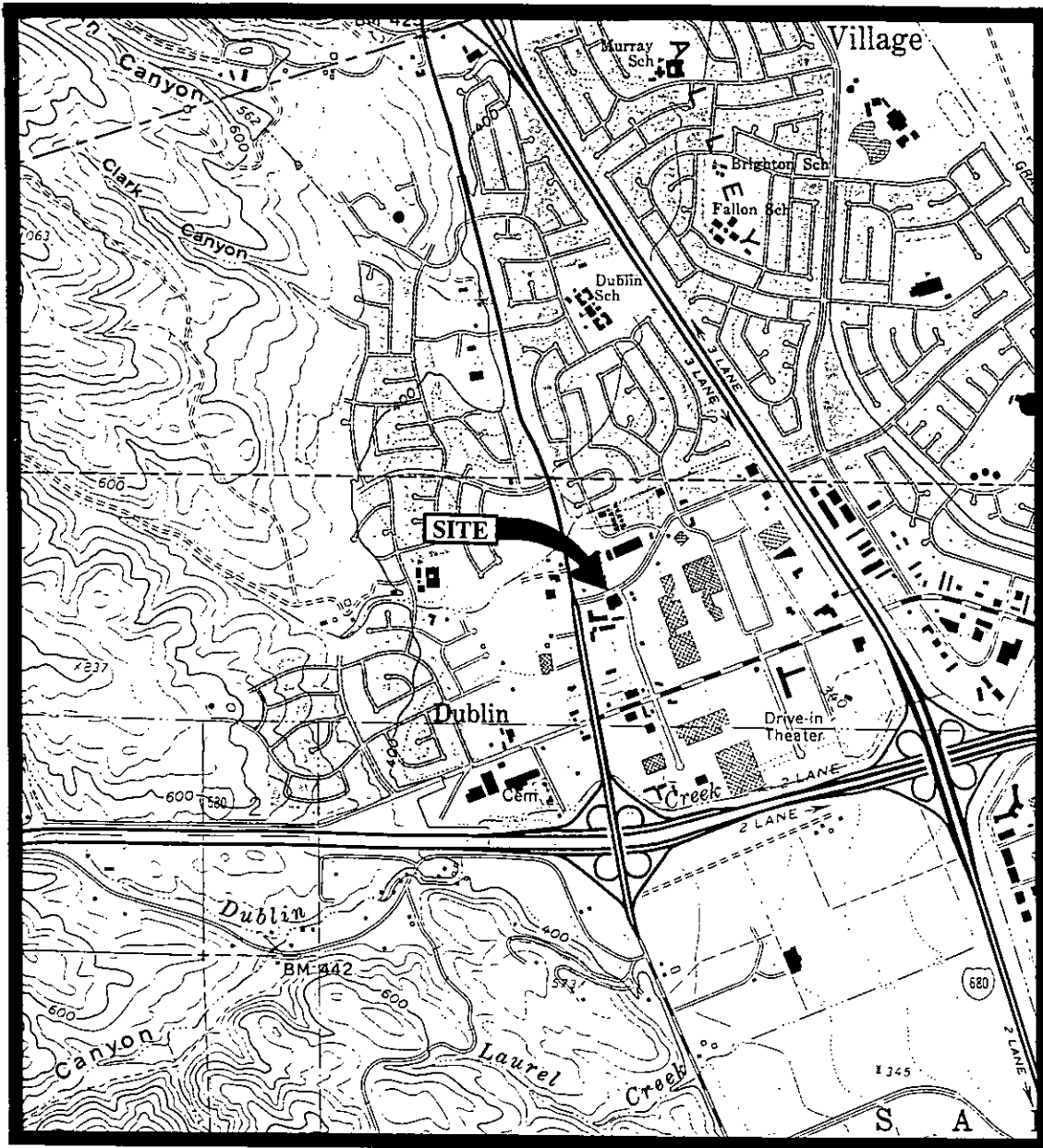
\* For the location of sample point CC1, see Figure 1.

★ The wells were not purged on this date.

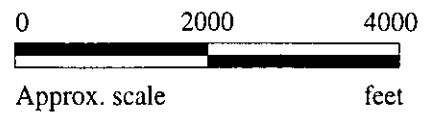
-- Measurement was not taken.

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)

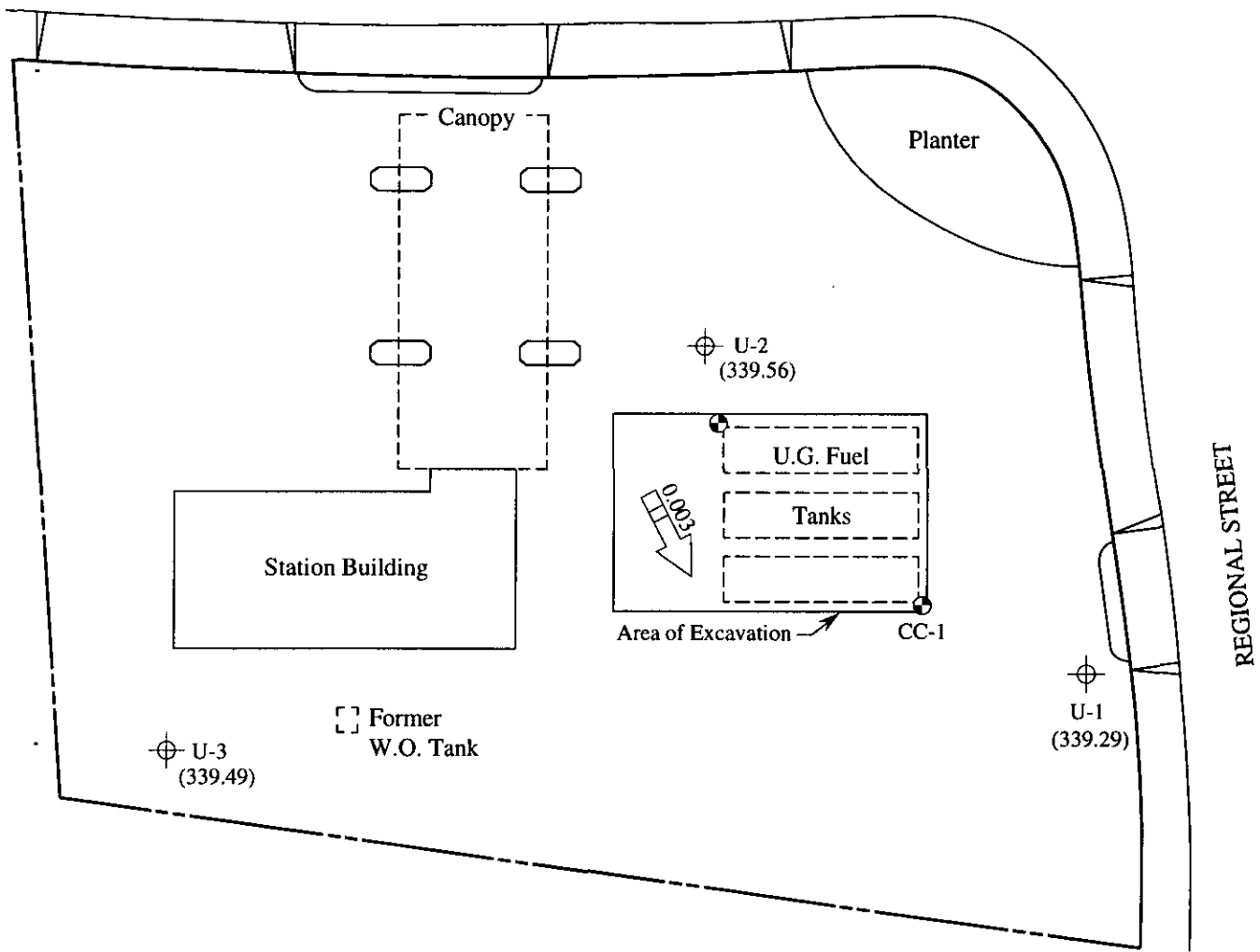


**MPDS** SERVICES, INCORPORATED



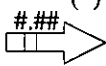
**UNOCAL SERVICE STATION #7176  
 7850 AMADOR VALLEY BOULEVARD  
 DUBLIN, CALIFORNIA**

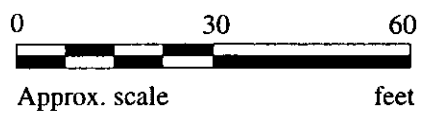
**LOCATION  
 MAP**

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 OCTOBER 17, 1997 MONITORING EVENT**

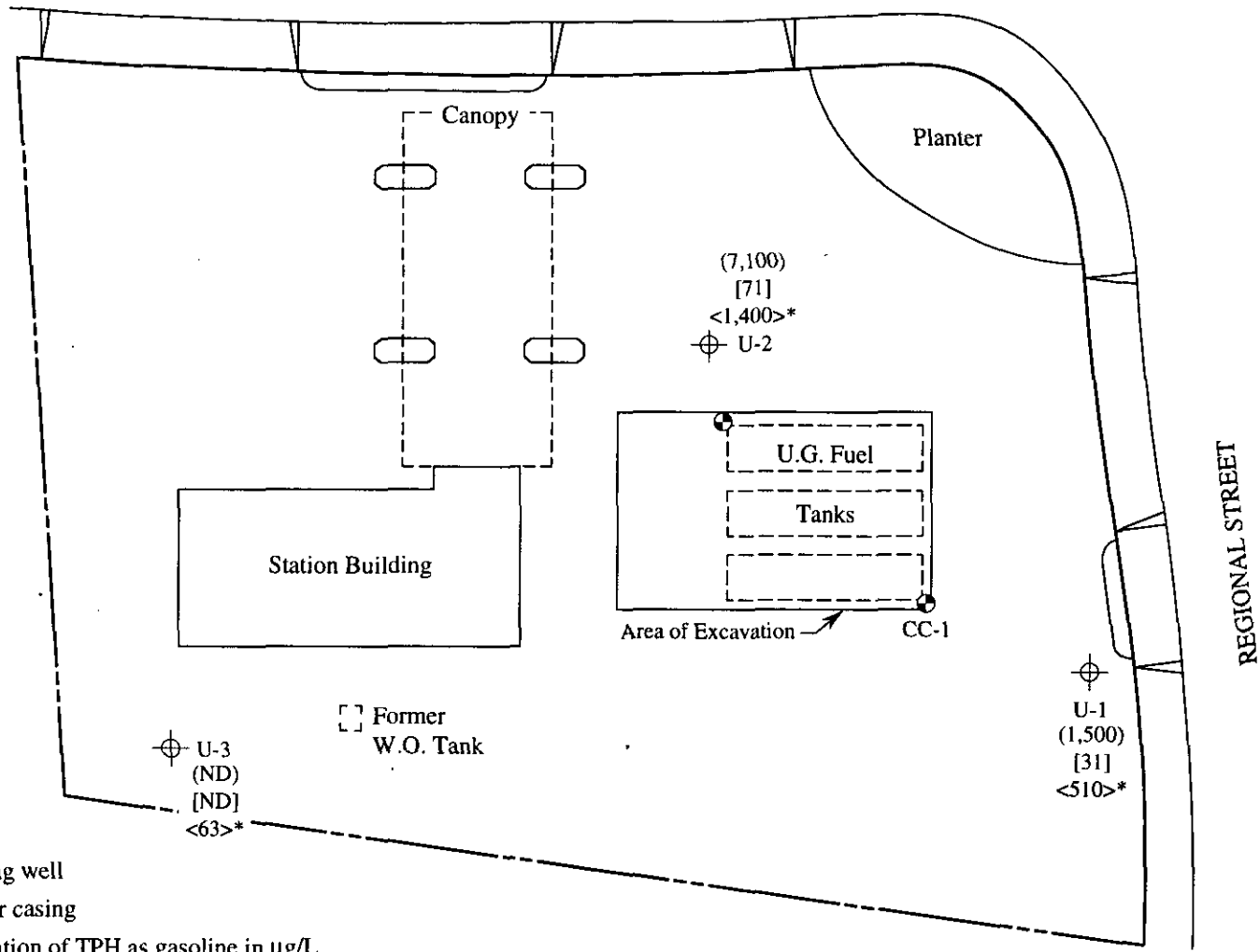
**UNOCAL SERVICE STATION #7176  
 7850 AMADOR VALLEY BOULEVARD  
 DUBLIN, CALIFORNIA**



**FIGURE  
 1**



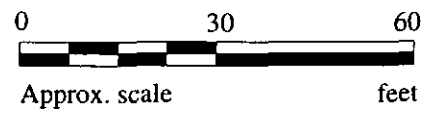
AMADOR VALLEY BOULEVARD



**LEGEND**

- ⊕ Monitoring well
- Conductor casing
- ( ) Concentration of TPH as gasoline in  $\mu\text{g/L}$
- [ ] Concentration of benzene in  $\mu\text{g/L}$
- < > Concentration of TPH as diesel in  $\mu\text{g/L}$
- ND Non-detectable

\* The lab reported that the hydrocarbons detected did not appear to be diesel.



**PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON OCTOBER 17, 1997**

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



FIGURE  
**2**



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	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd.	Sampled: Oct 17, 1997
2401 Stanwell Dr., Ste. 300	Matrix Descript: Water	Received: Oct 21, 1997
Concord, CA 94520	Analysis Method: EPA 5030/8015 Mod./8020	Reported: Nov 3, 1997
Attention: Jarrel Crider	First Sample #: 710-1566	

**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
710-1566	U-1	1,500	31	6.7	110	88
710-1567	U-2	7,100	71	26	520	50
710-1568	U-3	ND	ND	ND	ND	ND

<b>Detection Limits:</b>	<b>50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>
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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





**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  
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(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. Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 710-1566	Sampled: Oct 17, 1997 Received: Oct 21, 1997 Reported: Nov 3, 1997
---	---	--

### 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
710-1566	U-1	Gasoline	5.0	10/28/97	HP-9	106
710-1567	U-2	Gasoline	40	11/3/97	HP-4	100
710-1568	U-3	--	1.0	10/28/97	HP-9	92

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp  
Project Manager





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 #: 710-1566	Sampled: Oct 17, 1997 Received: Oct 21, 1997 Analyzed: Oct 28 - Nov 3, 97 Reported: Nov 3, 1997
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**LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)**

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
710-1566	U-1	13	220
710-1567	U-2	100	N.D.
710-1568	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





**Sequoia  
Analytical**

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

Redwood City, CA 94063 (415) 364-9600  
Walnut Creek, CA 94598 (510) 988-9600  
Sacramento, CA 95834 (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 Matrix: Water  
Analysis Method: EPA 3510/8015 Mod.  
First Sample #: 710-1566

Sampled: Oct 17, 1997  
Received: Oct 21, 1997  
Reported: Nov 3, 1997

**TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS W/SILICA GEL CLEANUP**

Analyte	Reporting Limit µg/L	Sample I.D. 710-1566 U-1 *	Sample I.D. 710-1567 U-2 *	Sample I.D. 710-1568 U-3 *
Extractable Hydrocarbons	50	510	1,400	63
Chromatogram Pattern:		Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons >C22

**Quality Control Data**

Report Limit Multiplication Factor:	1.1	1.0	1.0
Date Extracted:	10/24/97	10/24/97	10/24/97
Date Analyzed:	10/29/97	10/29/97	10/29/97
Instrument Identification:	GCHP-3A	GCHP-3A	GCHP-3A

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 does not appear to contain diesel. "Unidentified Hydrocarbons <C16" are probably gasoline; "> C22" refers to unidentified peaks in the total oil and grease range.





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: 7101566-568

Reported: Nov 3, 1997

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel w/Silica Gel
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
<b>Analyst:</b>	K. Nill	K. Nill	K. Nill	K. Nill	K. Grubb

<b>MS/MSD Batch#:</b>	LCS/LCSD	LCS/LCSD	LCS/LCSD	LCS/LCSD	BLK102497
<b>Date Prepared:</b>	10/28/97	10/28/97	10/28/97	10/28/97	10/24/97
<b>Date Analyzed:</b>	10/28/97	10/28/97	10/28/97	10/28/97	10/27/97
<b>Instrument I.D.#:</b>	HP-9	HP-9	HP-9	HP-9	HP-3B
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L	500 µg/L
<b>Matrix Spike % Recovery:</b>	120	105	105	110	65
<b>Matrix Spike Duplicate % Recovery:</b>	110	120	120	120	63
<b>Relative % Difference:</b>	8.7	13	13	8.7	2.8

<b>LCS Batch#:</b>	-	-	-	-	-
<b>Date Prepared:</b>	-	-	-	-	-
<b>Date Analyzed:</b>	-	-	-	-	-
<b>Instrument I.D.#:</b>	-	-	-	-	-
<b>LCS % Recovery:</b>	-	-	-	-	-

<b>% Recovery Control Limits:</b>	70-130	70-130	70-130	70-130	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



Consultant Company: **MPDS** Project Name: **UNOCAL #M176 - DUBLIN**  
 Address: **2401 STANWELL DR. #420** UNOCAL Project Manager: **TINA BERRY**  
 City: **CONCORD** State: **CA** Zip Code: **94520** AFE #:  
 Telephone: **602-5120** FAX #: **687-0602** Site #, City, State: **7850 AMADOR VALLEY BLVD.**  
 Report To: **TINA BERRY** Sampler: **HAIG KEVORK** QC Data:  Level D (Standard)  Level C  Level B  Level A

Turnaround  10 Work Days  5 Work Days  3 Work Days  
 Time:  2 Work Days  1 Work Day  2-8 Hours  
 CODE:  Misc.  Detect.  Eval.  Remed.  Demol.  Closure

Analyses Requested  
 Drinking Water  
 Waste Water  
 Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTEX	MTBE/SPB	TPH-D*	Comments
U-1	10/17/97	WATER	2	VOA'S AMBER	7101566	✓	✓	✓		<del>Filter</del>
U-2	↓	↓	↓	↓	7101567	✓	✓	✓		TPH-D
U-3	↓	↓	↓	↓	7101568	✓	✓	✓		WITH SILICA GEL

Relinquished By: <i>[Signature]</i>	Date: 10-21	Time: 10:30	Received By: <i>[Signature]</i>	Date: 10-20	Time: 10:30
Relinquished By: <i>[Signature]</i>	Date: 10-21	Time: 11:30	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 10/21/97	Time: 1130

Were Samples Received in Good Condition?  Yes  No      Samples on Ice?  Yes  No      Method of Shipment \_\_\_\_\_      Page \_\_\_ of \_\_\_

To be completed upon receipt of report:  
 1) Were the analyses requested on the Chain of Custody reported?  Yes  No If no, what analyses are still needed? \_\_\_\_\_  
 2) Was the report issued within the requested turnaround time?  Yes  No If no, what was the turnaround time? \_\_\_\_\_  
 Approved by: \_\_\_\_\_ Signature: \_\_\_\_\_ Company: \_\_\_\_\_ Date: \_\_\_\_\_

Pink - Client  
Yellow - Laboratory  
White - Laboratory

Please review and return form BY FAX within 15 days of this report to:  
**MPDS Services, Inc., (510) 687-0602.**

**REPORT: MPDS-UN7176-09**

**DATE SENT: DECEMBER 2, 1997      RETURN BY: DECEMBER 17, 1997**

UNOCAL SS #	ADDRESS	CITY
#7176	7850 AMADOR VALLEY ROAD	DUBLIN

No change to current monitoring/sampling frequency or analyses.  
 Change in monitoring schedule. Specify change: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Change in sampling schedule. Specify change: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Change in analyses requested. Specify change: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

I authorize release of this report to the proper agencies and individuals.

Please hold this report until further notice.

**Tosco Project Manager: Ms. Tina R. Berry**

**Signature: T. Berry**

**APPROVED**  
**DEC 22 1997**  
**TINA R. BERRY**