

MPDS-UN7176-08
August 18, 1997

APPROVED
SEP 04 1997
TINA R. BERRY

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	<input type="checkbox"/>
RPT		QM	<input checked="" type="checkbox"/>	TRANSMITTAL	<input type="checkbox"/>
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®) 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 July 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.

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.

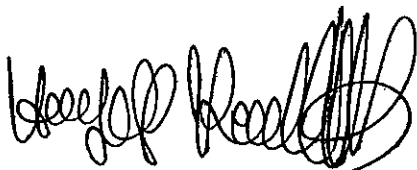
If you have any questions regarding this report, please do not hesitate to call Mr. Nubar Srabian at (510) 602-5120.

Sincerely,

MPDS Services, Inc.



Armond A. Balaian
Staff Engineer



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 #	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 July 17, 1997)

U-1	340.32	15.30	27.95	0	--	0
U-2	339.66	15.96	26.51	0	--	0
U-3	338.08	17.54	28.58	0	--	0

(Monitored and Sampled on April 8, 1997)

U-1	342.16	13.46	27.98	0	--	0
U-2	342.52	14.07	26.54	0	--	0
U-3	342.40	15.73	28.88	0	--	0

(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

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
7/17/97	U-1	460♦♦	2,300	30	4.5	140	94	190
	U-2	1,300♦♦	6,200	17	22	410	ND	130
	U-3	ND	ND	ND	ND	ND	ND	ND
4/8/97	U-1	1,300♦	2,800	50	ND	220	140	ND
	U-2	2,000♦	4,300	35	ND	400	16	ND
	U-3	ND	ND	ND	ND	ND	ND	ND
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	--

Table 2
Summary of Laboratory Analyses
Water

- 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
- ★ 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 (µg/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
7/17/97★	U-1	2.00	--
	U-2	2.08	--
	U-3	2.65	--
4/8/97★	U-1	2.09	--
	U-2	1.69	--
	U-3	3.73	--
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	--

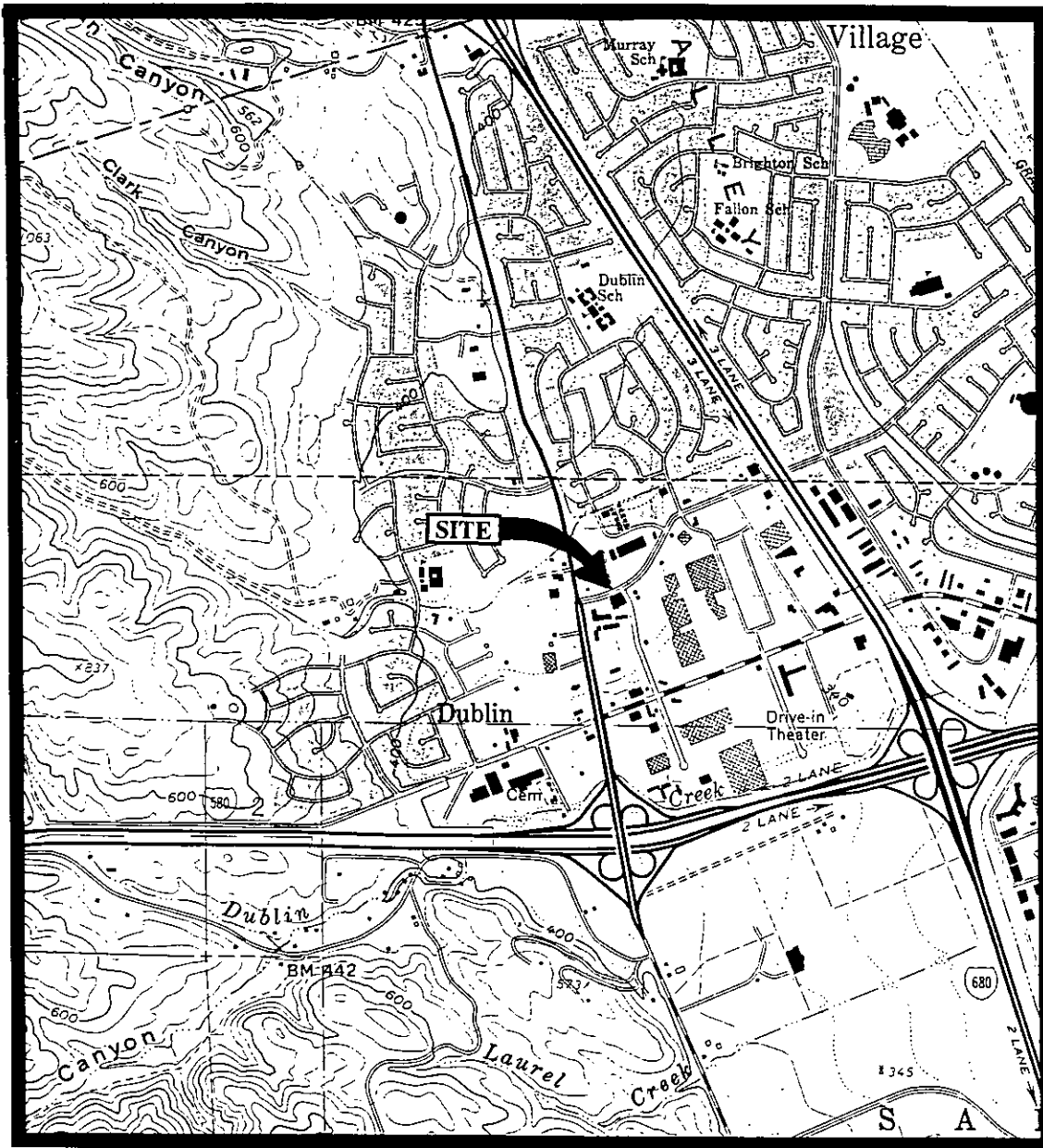
* For the location of sample point CC1, see Figure 1.

★ The wells were not purged on this date.

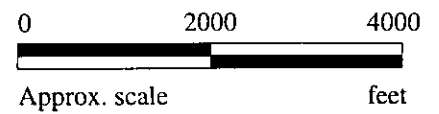
-- Measurement was not taken.

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)

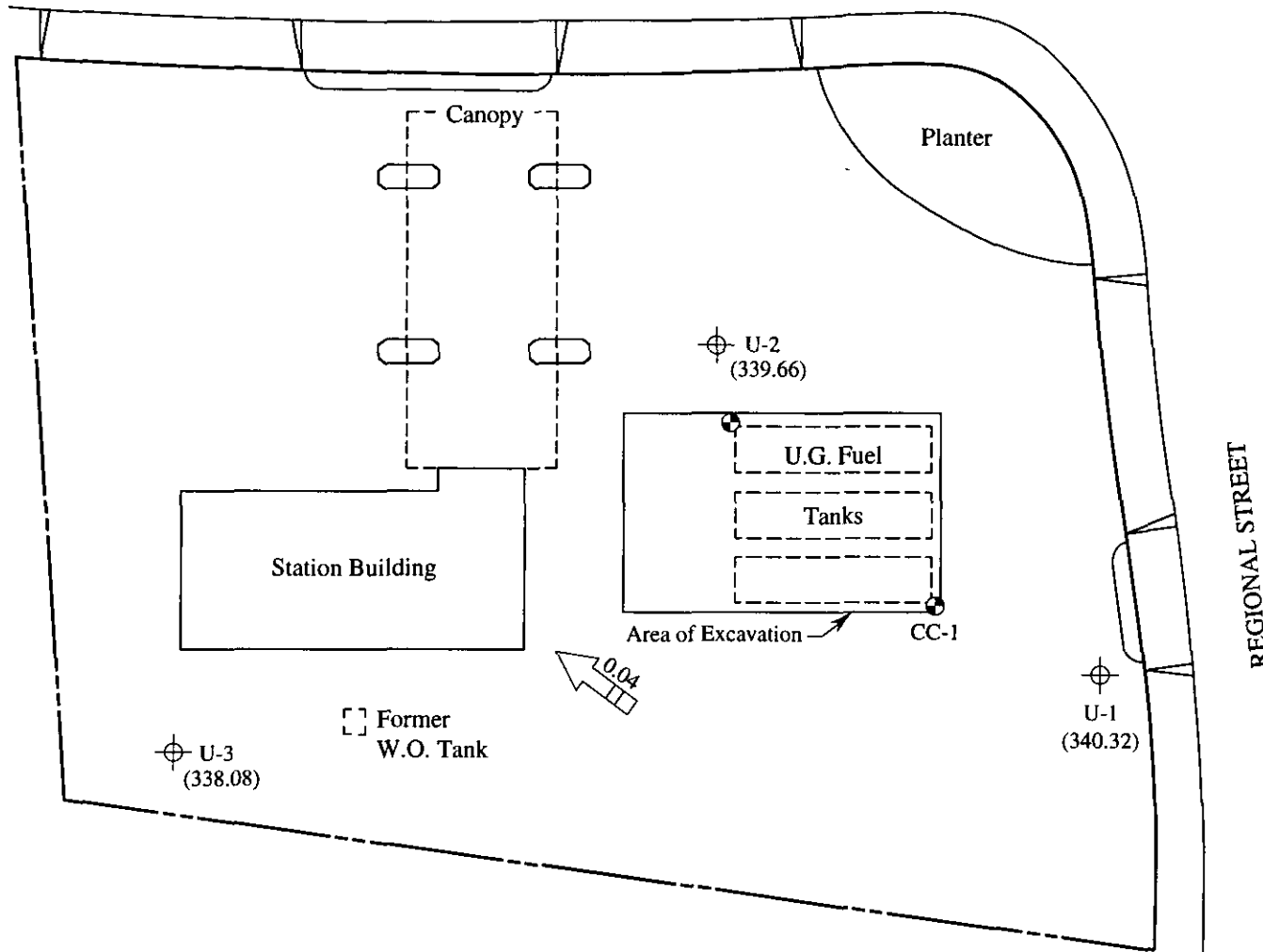


MPDS SERVICES, INCORPORATED

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

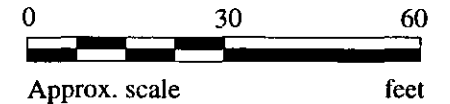
**LOCATION
 MAP**

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



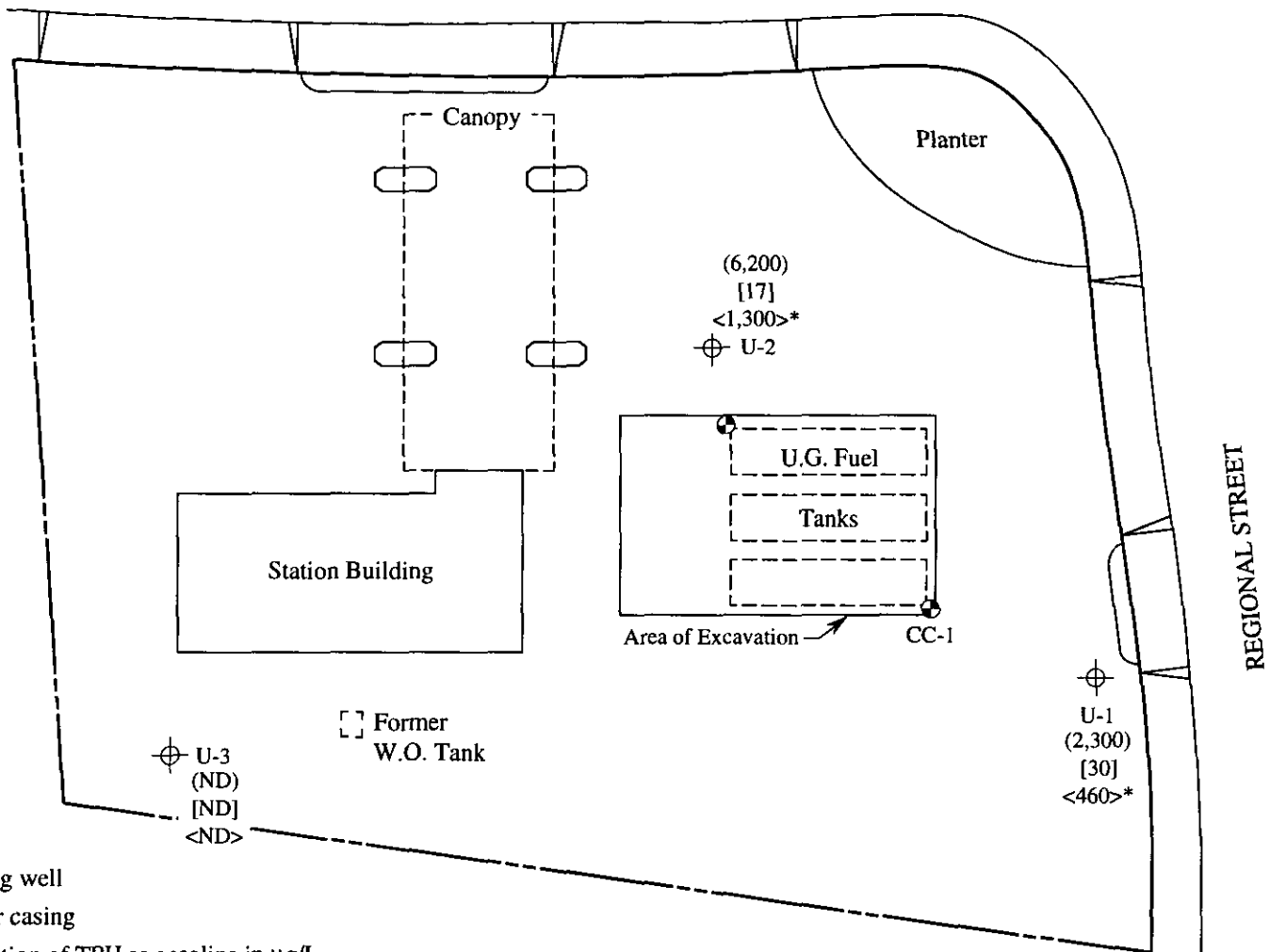
GROUND WATER FLOW DIRECTION MAP FOR THE JULY 17, 1997 MONITORING EVENT

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



FIGURE
1

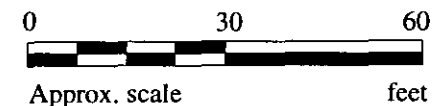
AMADOR VALLEY BOULEVARD



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 JULY 17, 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: Tosco #7176, 7850 Amador Vly, Dublin Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 707-0921	Sampled: Jul 17, 1997 Received: Jul 17, 1997 Reported: Jul 31, 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
707-0921	U-1	2,300	30	4.5	140	94
707-0922	U-2	6,200	17	22	410	ND
707-0923	U-3	ND	ND	ND	ND	ND

Detection Limits:	50	0.50	0.50	0.50	0.50
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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





MPDS Services	Client Project ID:	Tosco #7176, 7850 Amador Vly, Dublin	Sampled:	Jul 17, 1997
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received:	Jul 17, 1997
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Jul 31, 1997
Attention: Jarrel Crider	First Sample #:	707-0921		

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
707-0921	U-1	Gasoline	5.0	7/25/97	HP-2	89
707-0922	U-2	Gasoline	10	7/25/97	HP-2	137
707-0923	U-3	--	1.0	7/24/97	HP-9	90

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: Tosco #7176, 7850 Amador Vly, Dublin
Sample Descript: Water
Analysis for: MTBE (Modified EPA 8020)
First Sample #: 707-0921

Sampled: Jul 17, 1997
Received: Jul 17, 1997
Analyzed: Jul 24-25, 1997
Reported: Jul 31, 1997

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
707-0921	U-1	13	190
707-0922	U-2	25	130
707-0923	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

7070921.MPD <3>





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Tosco #7176, 7850 Amador Vly, Dublin Sample Matrix: Water Analysis Method: EPA 3510/8015 Mod. First Sample #: 707-0921	Sampled: Jul 17, 1997 Received: Jul 17, 1997 Reported: Jul 31, 1997
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TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 707-0921 U-1 *	Sample I.D. 707-0922 U-2 *	Sample I.D. 707-0923 U-3
Extractable Hydrocarbons	50	460	1,300	N.D.
Chromatogram Pattern:		Unidentified Hydrocarbons <C15 >C24	Unidentified Hydrocarbons <C15 >C24	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	7/24/97	7/24/97	7/24/97
Date Analyzed:	7/25/97	7/25/97	7/25/97
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:

* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C15" are probably gasoline: "> C24 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: Tosco #7176, 7850 Amador Vly, Dublin
Matrix: Liquid

QC Sample Group: 7070921-923

Reported: Jul 31, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill

MS/MSD

Batch#: 7070938 7070938 7070938 7070938

Date Prepared: 7/25/97 7/25/97 7/25/97 7/25/97

Date Analyzed: 7/25/97 7/25/97 7/25/97 7/25/97

Instrument I.D.#: HP-2 HP-2 HP-2 HP-2

Conc. Spiked: 20 µg/L 20 µg/L 20 µg/L 60 µg/L

Matrix Spike

% Recovery: 85 105 95 102

Matrix Spike Duplicate %

Recovery: 80 95 95 92

Relative %

Difference: 6.1 10 0.0 10

LCS Batch#: 2LCS072597 2LCS072597 2LCS072597 2LCS072597

Date Prepared: 7/25/97 7/25/97 7/25/97 7/25/97

Date Analyzed: 7/25/97 7/25/97 7/25/97 7/25/97

Instrument I.D.#: HP-2 HP-2 HP-2 HP-2

LCS %

Recovery: 85 100 95 97

% Recovery Control Limits: 60-140 60-140 60-140 60-140

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: Tosco #7176, 7850 Amador Vly, Dublin
Matrix: Liquid

QC Sample Group: 7070921-923

Reported: Jul 31, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	K. Grubb

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Batch#:	7070888	7070888	7070888	7070888	BLK072497
Date Prepared:	7/24/97	7/24/97	7/24/97	7/24/97	7/24/97
Date Analyzed:	7/24/97	7/24/97	7/24/97	7/24/97	7/29/97
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9	HP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	115	120	120	118	63
Matrix Spike Duplicate % Recovery:	115	120	120	118	63
Relative % Difference:	0.0	0.0	0.0	0.0	0.0

LCS Batch#:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Date Prepared:	7/24/97	7/24/97	7/24/97	7/24/97	7/24/97
Date Analyzed:	7/24/97	7/24/97	7/24/97	7/24/97	7/29/97
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9	HP-3A
LCS % Recovery:	110	115	115	118	40

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
	60-140	60-140	60-140	60-140	60-140

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



CHAIN OF CUSTODY

SAMPLER			TOSCO					ANALYSES REQUESTED							TURN AROUND TIME:	
STEVE BALIAN			SIS # 7176 CITY: DUBLIN												REGULAR	
WITNESSING AGENCY			ADDRESS: 7850 AMAODR VALLEY BLVD					TPH-G	BTEX	TPH-D	MTBE	80/0	TOG			REMARKS
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTEX	TPH-D	MTBE	80/0	TOG			REMARKS
U-1	7-17-97	11:05	X	X		3	WELL	X	X	X						MTBE
U-2	"	10:35	X	X		3	"	X	X	X						S-PPJ
U-3	"	10:10	X	X		3	"	X	X	X						
																TPH-D
																FILTER WITH
																SILICA GEL

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:	
STEVE BALIAN	12:10 7-17-97	<i>Mharma</i>	12:10 7/17/97	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <u>Y</u>	
(SIGNATURE)		(SIGNATURE)		2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <u>Y</u>	
(SIGNATURE)		(SIGNATURE)		3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <u>N</u>	
(SIGNATURE)		(SIGNATURE)		4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <u>Y</u>	
(SIGNATURE)		(SIGNATURE)		SIGNATURE: <u>Mharma</u> TITLE: <u>7/17/97</u> DATE: <u>7/17/97</u>	

Please review and return form BY FAX within 15 days of this report to:
MPDS Services, Inc., (510) 689-1918.

REPORT: MPDS-UN7176-08

DATE SENT: AUGUST 21, 1997 RETURN BY: SEPTEMBER 5, 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: _____

APPROVED
SEP 04 1997
TINA R. BERRY

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* Date: 9/4/97