MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

April 24, 1996

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

RE: Unocal Service Station #6419
6401 Dublin Boulevard
Dublin, California

Per the request of the Unocal Corporation Project Manager, Mr. Edward C. Ralston, enclosed please find our most recent data report 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) 277-2311.

Sincerely,

MPDS Services, Inc.

Jarrel F. Crider

/jfc

Enclosure

cc: Mr. Edward C. Ralston

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

MONITORING
PURGING
DISPOSING
SAMPLING
MPDS SERVICES, INCORPORATED

MPDS-UN6419-07
March 25, 1996

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

Attention: Mr. Edward C. Ralston

RE: Semi-Annual Data Report
Unocal Service Station #6419
6401 Dublin Boulevard
Dublin, California

Dear Mr. Ralston:

This data report presents the results of the most recent 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 semi-annual period 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 directions during the most recent semi-annual period are shown on the attached Figure 1.

Ground water samples were collected on February 26, 1996. In addition, dissolved oxygen concentrations were also measured and are presented in Table 4. Prior to sampling, the wells were each purged of between 9 and 10 gallons of water. 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. Equipment blank, Trip blank and Field blank samples (denoted as ES1, ES2 and ES3 respectively) were also collected for quality assurance and control. 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 Tables 2 and 3. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected

in the ground water samples collected this semi-annual period 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

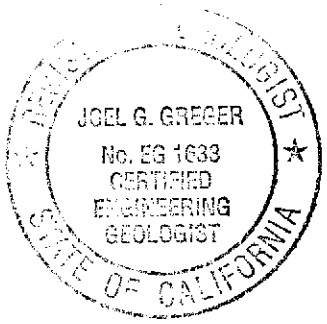
A copy of this report should be sent to Ms. Eva Chu of the Alameda County Health Care Services.

If you have any questions regarding this report, please do not hesitate to call Mr. 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 8/31/96

/bp

Attachments: Tables 1 through 4
Location Map
Figures 1 and 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Timothy R. Ross, 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 February 26, 1996)						
MW1	324.68	5.77	19.33	0	No	9.5
MW2	324.91	5.49	19.80	0	No	10
MW3	324.86	6.25	19.01	0	No	9
(Monitored and Sampled on November 28, 1995)						
MW1	321.42	9.03	19.36	0	No	7.5
MW2	321.55	8.85	19.82	0	No	7.5
MW3	321.59	9.52	19.05	0	No	6.5
(Monitored and Sampled on August 25, 1995)						
MW1	322.54	7.91	19.35	0	No	8
MW2	322.95	7.45	19.82	0	No	8.5
MW3	322.91	8.20	19.03	0	No	7.5
(Monitored and Sampled on May 17, 1995)						
MW1	324.19	6.26	19.35	0	No	9
MW2	324.25	6.15	19.52	0	No	10
MW3	324.23	6.88	19.03	0	No	8.5

Well #	Well Casing Elevation (feet)*
MW1	330.45
MW2	330.40
MW3	331.11

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

♦ 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 have been surveyed relative to Mean Sea Level, per the benchmark on the northwest corner of Dougherty Road and Sierra Way (elevation = 331.728 feet MSL).

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
2/26/96	MW1★	--	560	9.3	ND	22	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3▼	--	ND	ND	ND	ND	ND
11/28/95	MW1▼	--	1,400	18	3.0	98	3.6
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
8/25/95	MW1▼	--	490	9.1	ND	21	2.0
	MW2	--	ND	ND	ND	ND	ND
	MW3▼	--	ND	ND	ND	ND	ND
5/17/95	MW1	200♦♦	130	0.75	ND	1.5	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	99**	ND	ND	ND	ND
2/15/95	MW1	660♦	3,300	13	ND	180	5.2
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	130**	ND	ND	ND	ND
11/18/94	MW1	910♦♦	5,100	33	ND	560	38
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	130**	ND	ND	ND	ND
8/25/94	MW1	910♦♦	9,200*	48	ND	540	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	130**	ND	ND	ND	ND
3/14/94	MW1	810♦	1,800*	17	ND	ND	ND
	MW2	--	ND	ND	2.8	1.1	8.0
	MW3	--	150**	ND	ND	ND	ND

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

♦ 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.

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

** Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

▼ 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.

★ MTBE was detected On February 26, 1996 in well MW1 at a concentration of 1,300 µg/L.

ND = Non-detectable.

-- Indicates analysis was not performed.

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 August 25, 1994, were provided by Kaprealian Engineering, Inc.

TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	Cadmium	Chromium	Lead	Nickel	Zinc
5/17/95	MW1	ND	ND	ND	0.021	ND
2/15/95	MW1	ND	ND	ND	ND	ND
11/18/94	MW1	ND	0.076	ND	0.067	ND
8/25/94	MW1	ND	ND	0.024	ND	ND
3/14/94	MW1	ND	0.012	ND	0.030	0.039

ND = Non-detectable.

Results are in milligrams per liter (mg/L), unless otherwise indicated.

Note: Laboratory analyses data prior to August 25, 1994, were provided by Kaprealian Engineering, Inc.

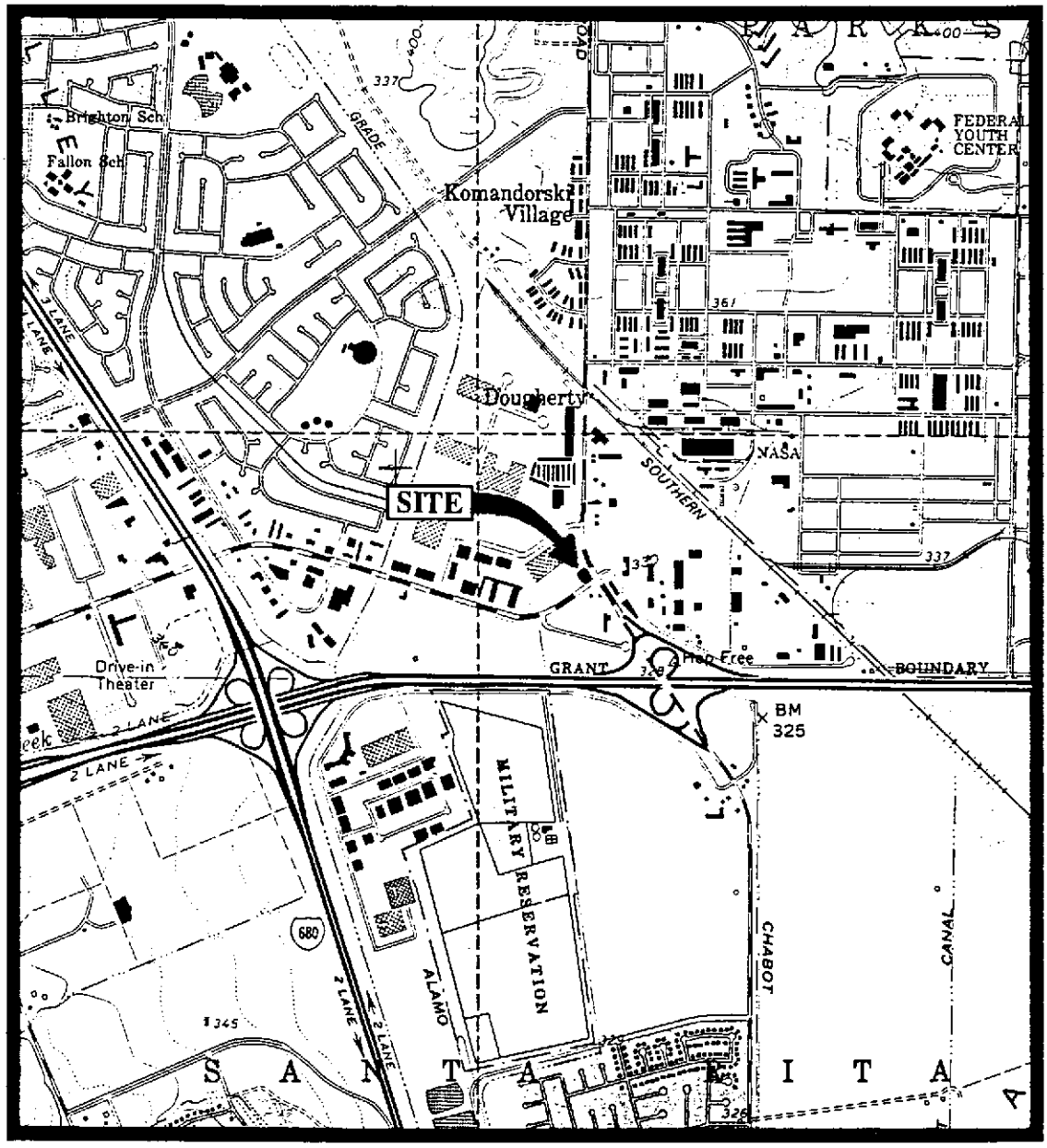
TABLE 4

SUMMARY OF LABORATORY ANALYSES

Dissolved Oxygen Concentration (DO) Measurement

Date	Well #	DO Readings (mg/L) Before Purging	DO Readings (mg/L) After Purging
2/26/96	MW1	5.23	1.41
	MW2	0.62	0.43
	MW3	16.83	1.11
11/28/95	MW1	--	3.25
	MW3	--	6.81
8/25/95	MW1	--	2.71
	MW3	--	1.86
5/17/95	MW1	--	1.2
	MW3	--	1.13
2/15/95	MW1	--	4.3
	MW2	--	1.9
	MW3	--	2.6

-- Reading not taken.

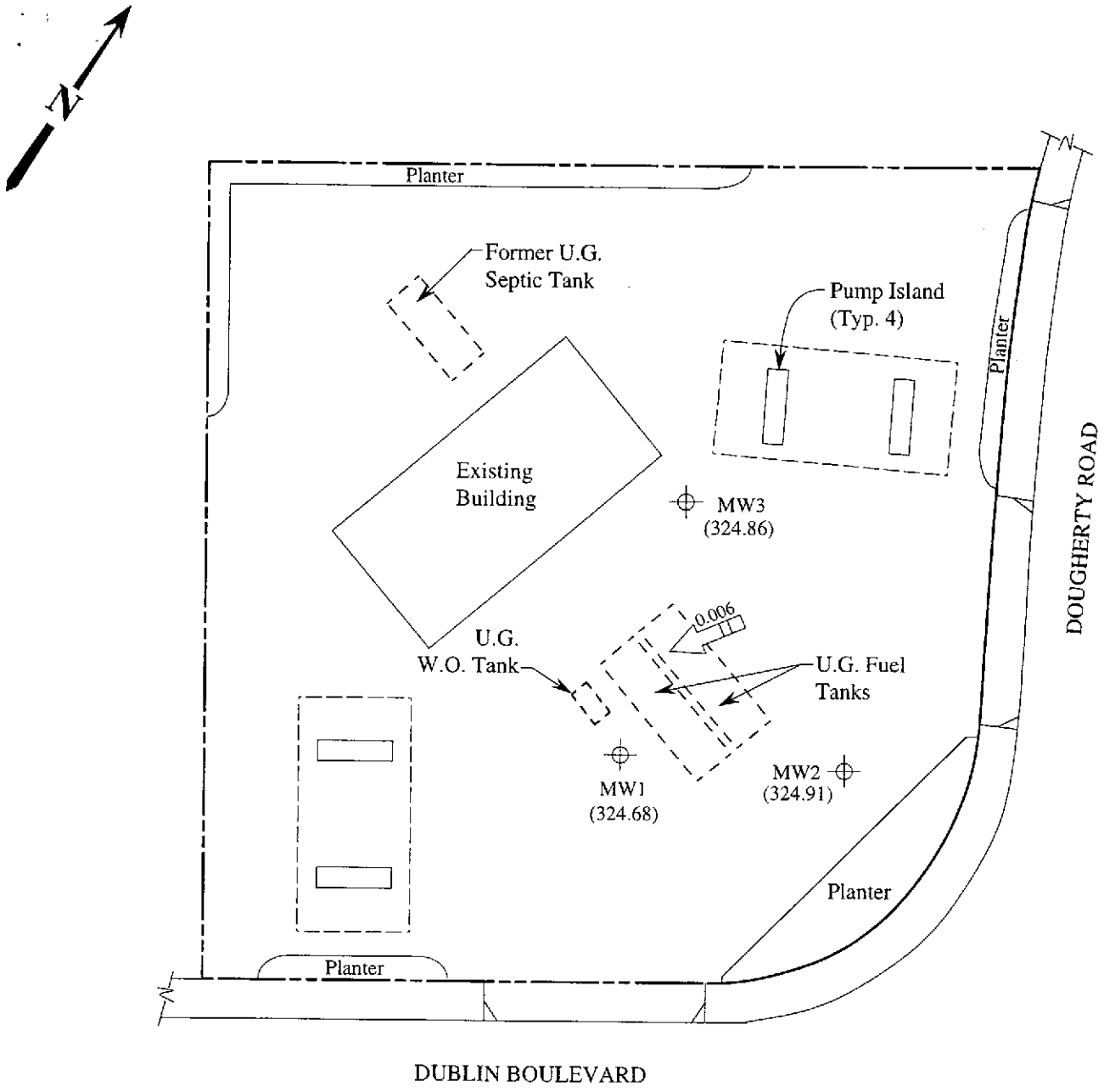


Base modified from 7.5 minute U.S.G.S. Dublin Quadrangle
(photorevised 1980)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #6419** **6401 DUBLIN BOULEVARD** **DUBLIN, CALIFORNIA**	**LOCATION MAP**



LEGEND

- Monitoring well
- ( ) Ground water elevation in feet above Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient

0 30 60

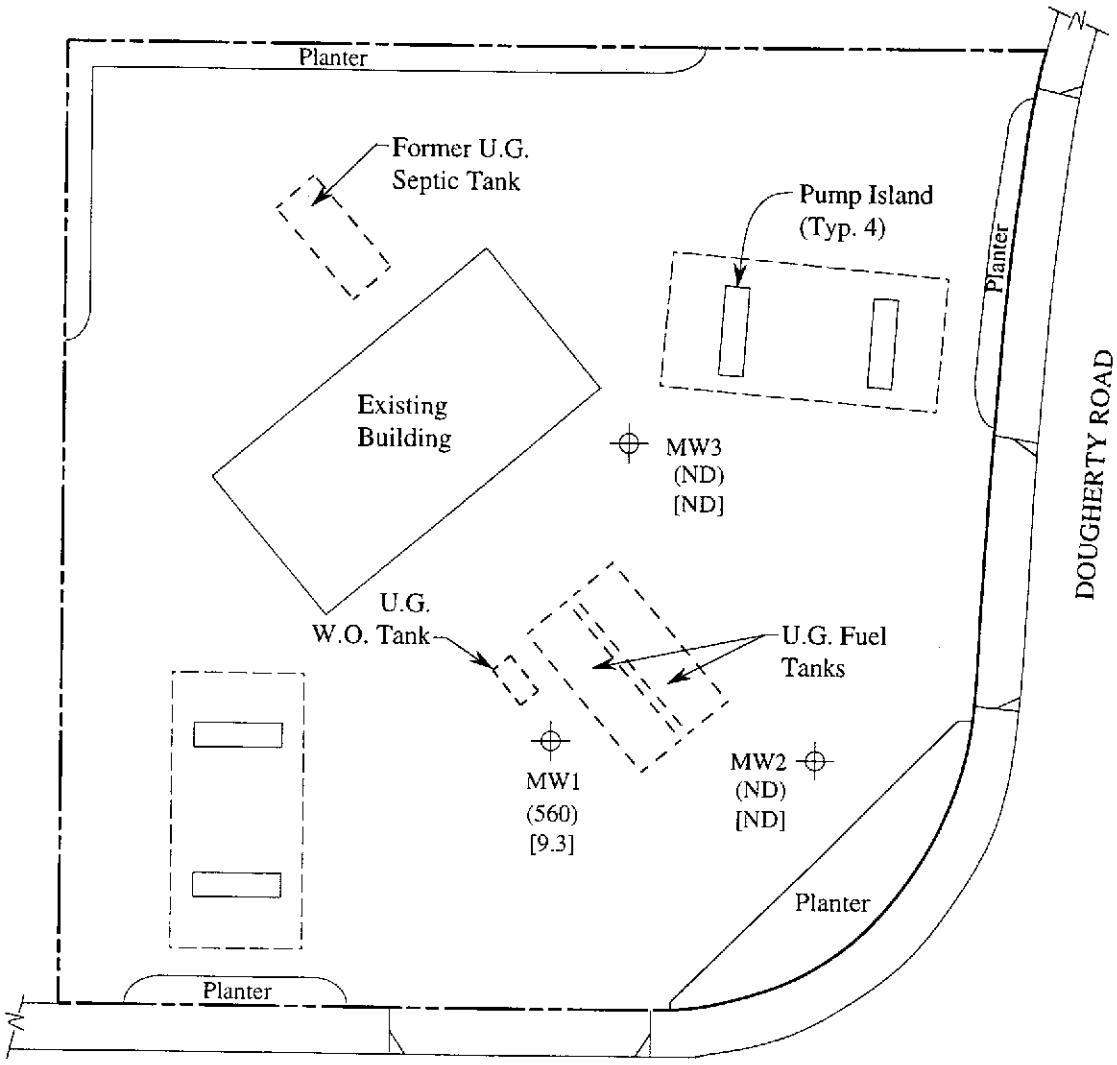
Approx. scale feet

GROUND WATER FLOW DIRECTION MAP FOR THE FEBRUARY 26, 1996 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #6419
6401 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

FIGURE
1



LEGEND

- ⊕ Monitoring well
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- ND Non-detectable

0 30 60

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON FEBRUARY 26, 1996

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #6419
6401 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

FIGURE
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 #6419, 6401 Dublin Blvd., Dublin	Sampled: Feb 26, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received: Feb 26, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Mar 14, 1996
Attention: Jarrel Crider	First Sample #:	602-1784	

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	MTBE µg/L
602-1784	MW-1	560	9.3	ND	22	ND	1,300
602-1785	MW-2	ND	ND	ND	ND	ND	--
602-1786	MW-3	ND	ND	ND	ND	ND	--
602-1787	ES-1	ND	ND	ND	ND	ND	--
602-1788	ES-2	ND	ND	ND	ND	ND	--
602-1789	ES-3	ND	ND	ND	ND	ND	--
Detection Limits:		**50**	**0.50**	**0.50**	**0.50**	**0.50**	**40**

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, #1210

Signature on File

Alan B. Kemp
Project Manager

6021784.MPD <1>

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 #6419, 6401 Dublin Blvd., Dublin	Sampled:	Feb 26, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received:	Feb 26, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Mar 14, 1996
Attention: Jarrel Crider	First Sample #:	602-1784		

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
602-1784	MW-1	Gasoline	1.0	3/6/96	GCHP-22	119
602-1785	MW-2	--	1.0	3/6/96	GCHP-22	109
602-1786	MW-3	--	1.0	3/6/96	GCHP-22	105
602-1787	ES-1	--	1.0	3/6/96	GCHP-22	106
602-1788	ES-2	--	1.0	3/6/96	GCHP-22	106
602-1789	ES-3	--	1.0	3/6/96	GCHP-22	111

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp
Project Manager

6021784.MPD <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
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #6419, 6401 Dublin Blvd., Dublin
Matrix: Liquid
QC Sample Group: 6021784-789

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD Batch#:	9603143-01A	9603143-01A	9603143-01A	9603143-01A
Date Prepared:	3/6/96	3/6/96	3/6/96	3/6/96
Date Analyzed:	3/6/96	3/6/96	3/6/96	3/6/96
Instrument I.D.#:	GCHP-22	GCHP-22	GCHP-22	GCHP-22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	100	110	100	100
Matrix Spike Duplicate % Recovery:	100	110	100	100
Relative % Difference:	0.0	0.0	0.0	0.0
LCS Batch#:	BLK030696	BLK030696	BLK030696	BLK030696
Date Prepared:	3/6/96	3/6/96	3/6/96	3/6/96
Date Analyzed:	3/6/96	3/6/96	3/6/96	3/6/96
Instrument I.D.#:	GCHP-22	GCHP-22	GCHP-22	GCHP-22
LCS % Recovery:	97	97	99	97
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1210

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.

Sequoia Analytical

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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: Jarrel Crider

Date: 3/14/96

Sequoia Analytical has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 µg/L in the following site(s):

Client Project I.D. - **Unocal #6419- Dublin**

Sequoia Work Order # - **9602460**

Sample Number:	Sample Description:
6021784	MW-1
6021786	MW-3

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

mpds SERVICES, INCORPORATED
2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: (510) 602-5100, Fax: (510) 689-1918

CHAIN OF CUSTODY

9602460

SAMPLER: NICHOLAS PERROW

WITNESSING AGENCY:

UNOCAL S/S # 6419 CITY: DUBLIN

ADDRESS: 6401 DUBLIN BLVD.

ANALYSES REQUESTED

TURN AROUND TIME: Normal

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010	MTBE				REMARKS
MW_1	2/26/96	13:50	✓	✓		4	WELL	✓				✓		6021784		AD
MW-2	"	12:30	✓	✓		2	"	✓						6021785		AB
MW-3	"	13:05	✓	✓		2	"	✓						6021786		↓

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
(SIGNATURE)	2/26/96 15:00	(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	2/26/96 15:00

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
4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? Y

SIGNATURE: TITLE: SC DATE: 2/26/96

Note: All water containers to be sampled for TPHG/BTEX, 8010 & 8240 are preserved with HCL. All water containers to be sampled for Lead or Metals are preserved with HNO3. All other containers are unpreserved.

mpds SERVICES, INCORPORATED
2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: (510) 602-5100, Fax: (510) 689-1918

CHAIN OF CUSTODY

9602460

SAMPLER: NICHOLAS PERROW

WITNESSING AGENCY:

UNOCAL S/S # 6419 CITY: DUBLIN

ADDRESS: 6401 DUBLIN BLVD

ANALYSES REQUESTED

TURN AROUND TIME: RE GULAR

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010				REMARKS
FS-1	2/26/96		✓			1 VOA		✓						6021787	
FS-2	"		✓			"		✓						6021788	
FS-3	"		✓			"		✓						6021789	

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
(SIGNATURE)	2/26/96 15:00	(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE) Kein Melanka	2/26/96 15:00

THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:

1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? _____
2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? _____
3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? _____
4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? _____

SIGNATURE: TITLE: DATE:

Note: All water containers to be sampled for TPHG/BTEX, 8010 & 8240 are preserved with HCL. All water containers to be sampled for Lead or Metals are preserved with HN03. All other containers are unpreserved.