

1059

MPDS-UN5325-12
October 24, 1996

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

Attention: Mr. David De Witt

RE: Quarterly Data Report
Unocal Service Station #5325
3220 Lakeshore Avenue
Oakland, California

Dear Mr. De Witt:

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. A skimmer was present in well U-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 September 26, 1996. Prior to sampling, the wells were each purged of between 9 and 25.5 gallons of water. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded on the purging/sampling data sheets which are attached to this report. Once the field parameters were observed to stabilize, and where possible, a minimum of approximately three 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, 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 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 the Alameda County Health Care Services Agency.

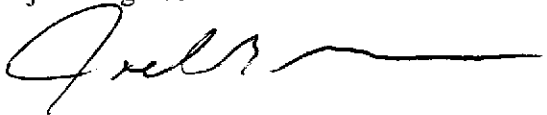
If you have any questions regarding this report, please do not hesitate to call Mr. Joel G. Greger at (510) 602-5120.

Sincerely,

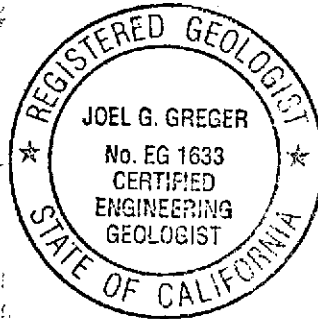
MPDS Services, Inc.



Thomas J. Berkins
Project Engineer



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



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

- Attachments:
- Tables 1 & 2
 - Location Map
 - Figures 1 & 2
 - Laboratory Analyses
 - Chain of Custody documentation
 - Purging/Sampling Data Sheets

cc: Mr. Greg Gurss, GeoStrategies, Inc., Rancho Cordova

Table 1
 Summary of Monitoring Data

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Total Well Depth (feet)*	Product Thickness (feet)	Sheet	Water Purged (gallons)
--------	-------------------------------	------------------------	--------------------------	--------------------------	-------	------------------------

(Monitored and Sampled on September 26, 1996)

U-1*	-0.63**	9.10	19.83	0.02	N/A	0 (<1)
U-2	-0.28	7.90	19.59	0	No	13.5
U-3	-0.57	11.55	19.85	0	No	9.5
U-4	1.01	10.14	20.20	0	No	20
U-5	-0.15	7.13	20.12	0	No	25.5
U-6	-0.48	7.62	23.84	0	No	9

(Monitored and Sampled on June 27, 1996)

U-1	0.54	7.92	19.85	<0.01	N/A	31
U-2	0.21	7.41	19.54	0	No	18
U-3	-0.18	11.16	19.81	0	No	10
U-4	1.41	9.74	20.25	0	No	15
U-5	0.49	6.49	20.07	0	No	36
U-6	0.62	6.52	23.80	0	No	12

(Monitored and Sampled on March 18, 1996)

U-1	0.21	8.25	19.80	0	No	14
U-2	1.17	6.45	19.60	0	No	10
U-3	-0.12	11.10	19.85	0	No	12
U-4	1.49	9.66	20.20	0	No	20
U-5	0.33	6.65	20.15	0	No	36
U-6	0.28	6.86	23.85	0	No	12

(Monitored and Sampled on December 19, 1995)

U-1*	-0.50**	8.98	19.80	0.03	N/A	0 (<1)
U-2	0.32	7.30	19.61	0	No	9
U-3	-0.47	11.45	19.85	0	No	12.5
U-4	1.17	9.98	20.20	0	No	20
U-5	-0.19	7.17	20.15	0	No	34
U-6	-0.61	7.75	23.85	0	No	11

Table 2
Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	
U-1	9/26/96	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	6/27/96	120,000	540	4,300	2,600	26,000	ND	
	3/18/96	27,000	ND	2,300	1,400	11,000	4,900	
	12/19/96	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--
	9/19/95	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--
	6/21/95	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--
	3/25/95	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--
	12/24/94	50,000	2,500	9,700	2,400	17,000	--	
	9/22/94	6,100♦	ND	ND	ND	ND	--	
	6/22/94	200	ND	ND	5.9	21	--	
	2/16/94	6,800♦♦	ND	ND	ND	ND	--	
	11/16/93	690♦	ND	ND	ND	ND	--	
	8/8/93	4,900**	79	ND	832	270	--	
	5/7/93	8,700	600	240	650	3,300	--	
	2/22/93	34,000	1,400	5,500	910	7,300	--	
	8/20/92	400*	1.0	ND	ND	0.6	--	
	6/11/92	1,000	80	1.4	6.7	41	--	
	5/5/92	230	1.2	ND	ND	ND	--	
	2/12/92	250	ND	ND	ND	ND	--	
	10/9/91	ND	ND	ND	ND	ND	--	
	7/3/91	140	21	4.3	0.36	17	--	
	4/1/91	160	13	8.6	1.0	15	--	
	1/7/91	250	22	16	4.2	17	--	
	8/10/90	690	38	75	8.6	130	--	
U-2	9/26/96	5,900	750	ND	ND	ND	18,000	
	6/27/96	28,000	3,400	ND	2,800	3,100	3,000	
	3/18/96	12,000	2,200	ND	1,200	2,200	22,000	
	12/19/95	1,600	140	55	52	270	††	
	9/19/95	3,000	610	ND	78	240	†	
	6/21/95	16,000	2,100	ND	1,800	1,700	--	
	3/25/95	170,000	1,900	21,000	4,800	33,000	--	
	12/24/94	32,000	1,500	890	1,300	5,000	--	
	9/22/94	8,500♦	29	ND	ND	ND	--	
	6/22/94	31,000	2,200	62	1,500	3,500	--	
	2/16/94	980♦♦	49	13	2.7	40	--	
	11/16/93	510♦	ND	ND	ND	ND	--	
	8/8/93	5,600**	420	ND	410	670	--	
	5/7/93	17,000	1,800	660	1,700	4,000	--	
	2/22/93	3,400	2,400	2,100	1,200	5,800	--	
	8/20/92	700	28	6.5	1.3	4.6	--	
	6/11/92	620	17	2.1	ND	37	--	
	5/5/92	1,600	120	52	6.2	290	--	
	2/12/92	410	1.9	ND	0.36	0.4	--	

Table 2
 Summary of Laboratory Analyses
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
U-5	9/26/96	ND	ND	0.57	ND	0.96	ND
	6/27/96	16,000	280	150	1,400	4,600	530
	3/18/96	100	0.67	0.5	0.51	5.4	--
	12/19/95	ND	ND	ND	ND	ND	--
	9/19/95	850	14	7.1	13	66	†
	6/21/95	400	2.3	ND	9.1	3.5	--
	3/25/95	44,000	390	960	1,500	7,600	--
	12/24/94	8,700	560	70	670	430	--
	9/22/94	170	8.4	10	8.5	18	--
	6/22/94	210	7.1	13	4.5	26	--
U-6	9/26/96	ND	ND	ND	ND	ND	1,400
	6/27/96	ND	ND	ND	ND	ND	510
	3/18/96	ND	ND	ND	ND	ND	--
	12/19/95	210	2.5	1.0	2.9	17	--
	9/19/95	ND	ND	ND	ND	ND	†
	6/21/95	ND	ND	ND	ND	ND	--
	3/25/95	47,000	450	1,300	1,700	8,200	--
	12/24/94	6,900	500	59	600	380	--
	9/22/94	130	1.3	0.8	ND	0.73	--
	6/22/94	ND	ND	ND	ND	ND	--

- ◆ 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 gasoline and non-gasoline mixture.
- * The positive result for gasoline does not appear to have a typical gasoline pattern.
- ** The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
- † Sequoia Analytical Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater 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

MTBE = methyl tert butyl ether.

ND = Non-detectable.

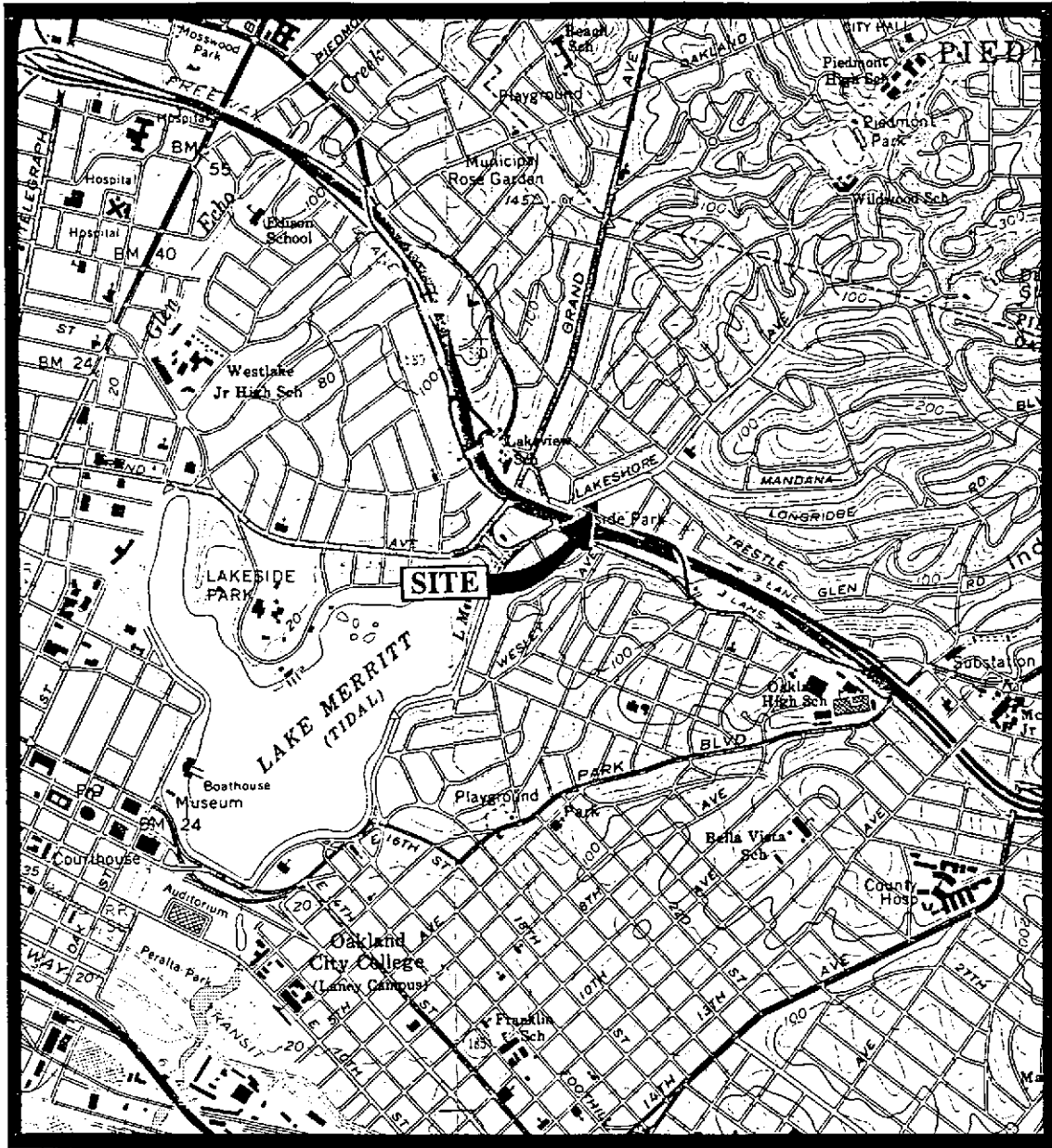
-- Indicates analyses was not performed.

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

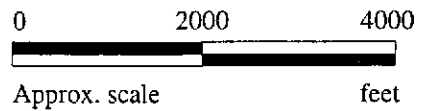
Note: The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection limit times the dilution factor indicated on the laboratory analytical sheets.

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 November 16, 1993, were provided by GeoStrategies, Inc.



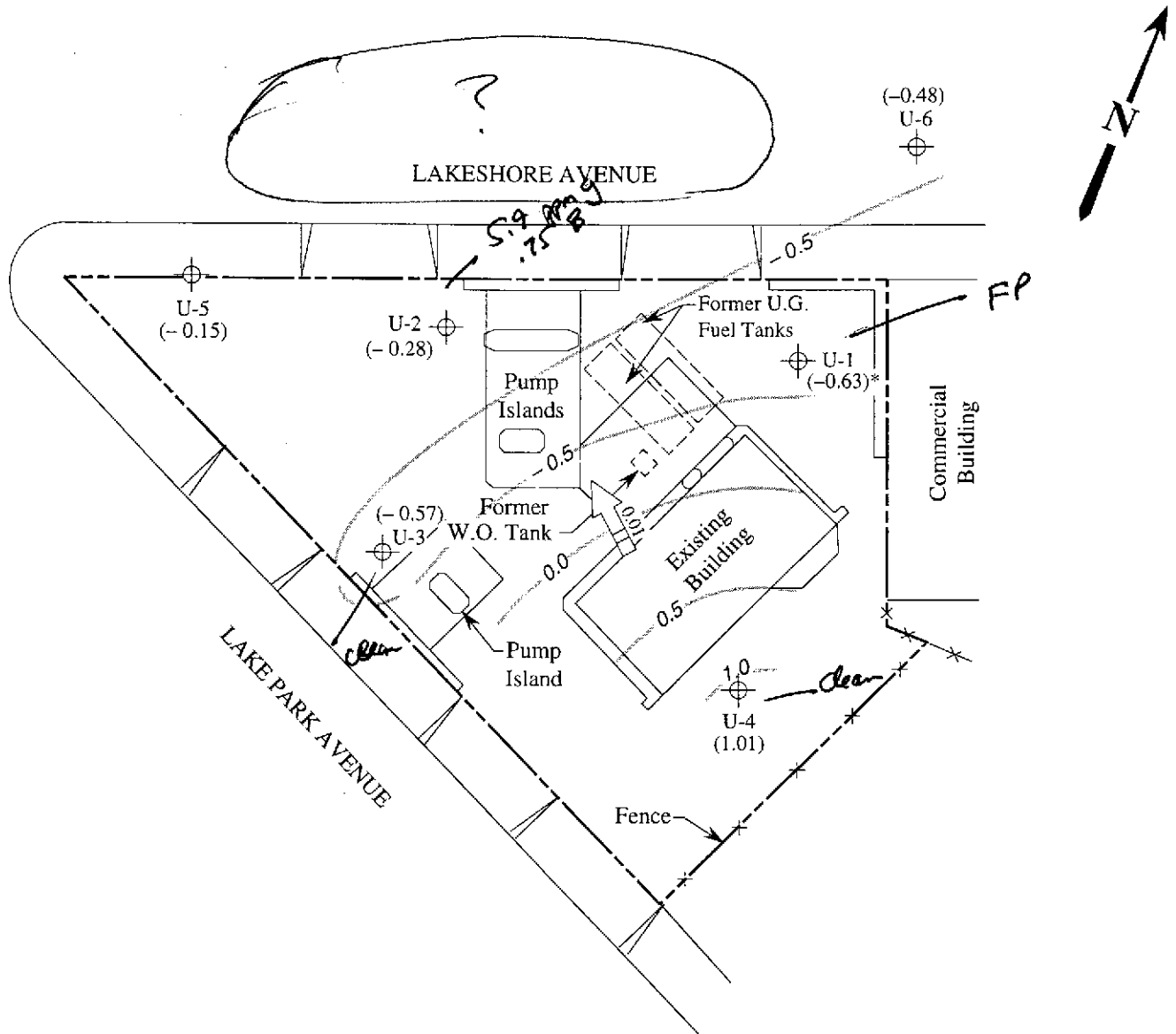
Base modified from 7.5 minute U.S.G.S.
 Oakland East and West Quadrangles
 (both photorevised 1980)



mpds SERVICES, INCORPORATED

**UNOCAL SERVICE STATION #5325
 3220 LAKESHORE AVENUE
 OAKLAND, CALIFORNIA**

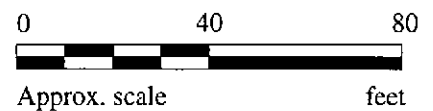
**LOCATION
 MAP**



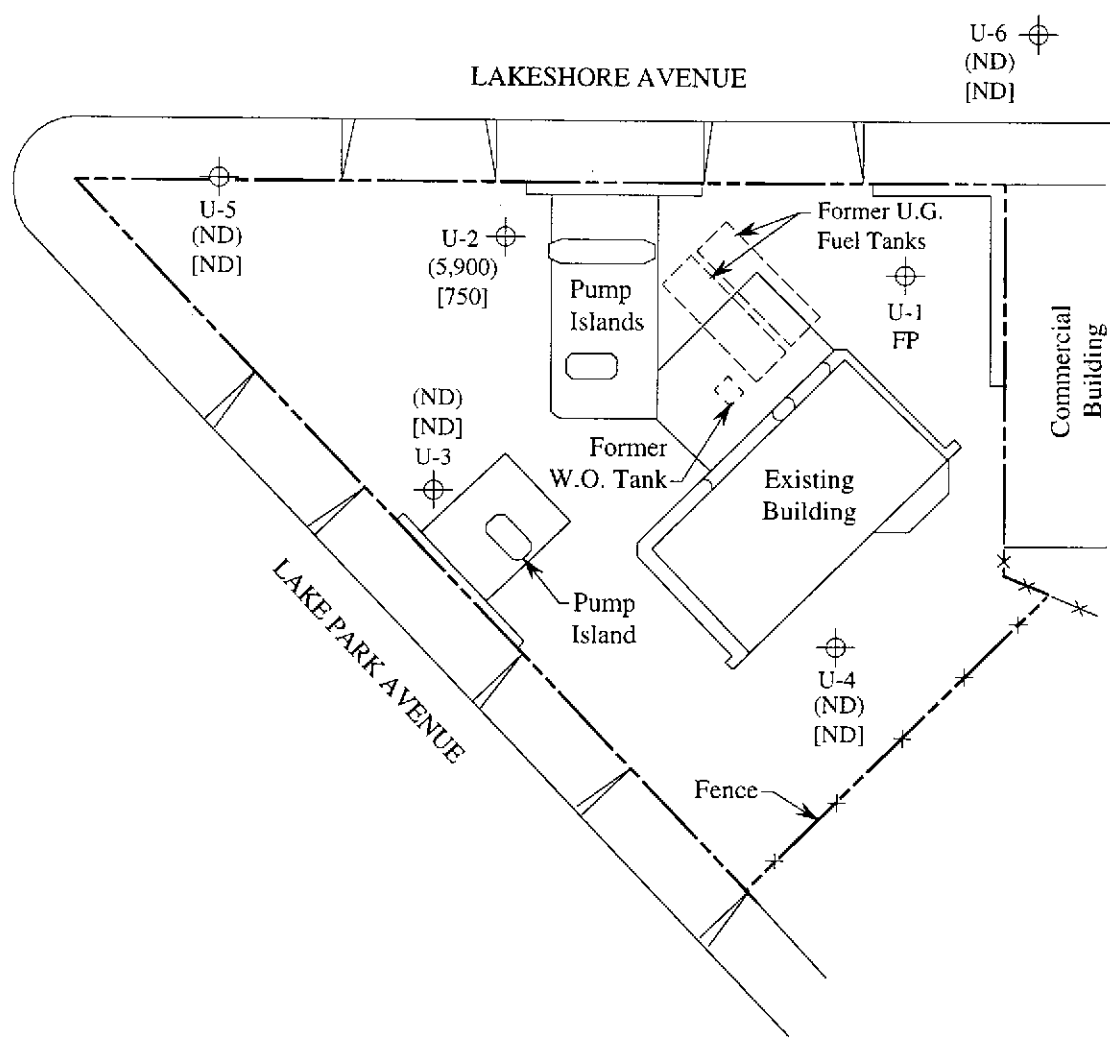
LEGEND

- ⊕ Monitoring well
- () Ground water elevation relative to Mean Sea Level
- ### → Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

* Ground water elevation corrected due to the presence of free product.

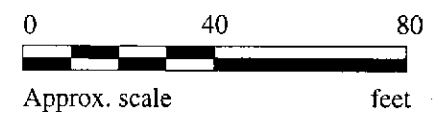


POTENTIOMETRIC SURFACE MAP FOR THE SEPTEMBER 26, 1996 MONITORING EVENT



LEGEND

- ⊕ Monitoring well
- () Concentration of TPH as gasoline in $\mu\text{g/L}$
- [] Concentration of benzene in $\mu\text{g/L}$
- ND Non-detectable, FP Free product



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON SEPTEMBER 26, 1996



**UNOCAL SERVICE STATION #5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA**

**FIGURE
2**



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #5325, 3220 Lakeshore Ave. Oakland Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 610-0039	Sampled: Sep 26, 1996 Received: Sep 27, 1996 Reported: Oct 15, 1996
---	--	---

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
610-0039	U-2	5,900	750	ND	ND	ND
610-0040	U-3	ND	ND	ND	ND	ND
610-0041	U-4	ND	ND	ND	ND	ND
610-0042	U-5	ND	ND	0.57	ND	0.96
610-0043	U-6	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	Client Project ID: Unocal #5325, 3220 Lakeshore Ave. Oakland	Sampled: Sep 26, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript: Water	Received: Sep 27, 1996
Concord, CA 94520	Analysis Method: EPA 5030/8015 Mod./8020	Reported: Oct 15, 1996
Attention: Jarrel Crider	First Sample #: 610-0039	

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
610-0039	U-2	Gasoline	100	10/10/96	HP-11	103
610-0040	U-3	--	1.0	10/10/96	HP-11	119
610-0041	U-4	--	1.0	10/8/96	HP-2	92
610-0042	U-5	--	1.0	10/8/96	HP-2	94
610-0043	U-6	--	10	10/10/96	HP-11	190

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 #5325, 3220 Lakeshore Ave. Oakland Sample Descript: Water Analysis for: MTBE (Modified EPA 8020) First Sample #: 610-0039	Sampled: Sep 26, 1996 Received: Sep 27, 1996 Analyzed: Oct 8-10, 1996 Reported: Oct 15, 1996
--	--	---

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
610-0039	U-2	60	18,000
610-0040	U-3	40	N.D.
610-0041	U-4	40	N.D.
610-0042	U-5	40	N.D.
610-0043	U-6	40	1,400

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





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

Client Project ID: Unocal #5325, 3220 Lakeshore Ave. Oakland
Matrix: Liquid

QC Sample Group: 6100039-046

Reported: Oct 15, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb

MS/MSD Batch#:	6091910	6091910	6091910	6091910
Date Prepared:	10/8/96	10/8/96	10/8/96	10/8/96
Date Analyzed:	10/8/96	10/8/96	10/8/96	10/8/96
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:	90	105	120	115
Matrix Spike Duplicate % Recovery:	90	100	115	115
Relative % Difference:	0.0	4.9	4.3	0.0

LCS Batch#:	2LCS100896	2LCS100896	2LCS100896	2LCS100896
Date Prepared:	10/8/96	10/8/96	10/8/96	10/8/96
Date Analyzed:	10/8/96	10/8/96	10/8/96	10/8/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	90	100	110	115

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

SEQUOIA ANALYTICAL, #1271

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.



CHAIN OF CUSTODY

SAMPLER ARMOND BALAIAN			UNOCAL S/S # 5325 CITY: OAKLAND				ANALYSES REQUESTED						TURN AROUND TIME:	
WITNESSING AGENCY			ADDRESS: 3220 LAKESHORE AVE.				TPH-GAS BTEX	TPH-DIESEL	TOG	8010	MTSE			REGULAR
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.								SAMPLING LOCATION
U-2	9-26-94		X			2	WELL	X					6100039A,B	
U-3	"		X			2	"	X					6100040	
U-4	"		X			2	"	X					6100041	
U-5	"		X			2	"	X					6100042	
U-6	"		X			2	"	X					6100043V	
RELINQUISHED BY:			DATE/TIME		RECEIVED BY:			THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:						
(SIGNATURE) <i>Armond Balian</i>			10:30 16:30 9-27-94		(SIGNATURE) <i>[Signature]</i>			1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <input checked="" type="checkbox"/>						
(SIGNATURE)					(SIGNATURE)			2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <input checked="" type="checkbox"/>						
(SIGNATURE)					(SIGNATURE)			3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <input checked="" type="checkbox"/>						
(SIGNATURE)					(SIGNATURE)			4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <input checked="" type="checkbox"/>						
(SIGNATURE)					(SIGNATURE)			SIGNATURE: <i>[Signature]</i> TITLE: Analyst DATE: 9/27/96						

CHAIN OF CUSTODY

SAMPLER ARMOND BALAIAN			UNOCAL S/S # <u>5325</u> CITY: <u>OAKLAND</u>					ANALYSES REQUESTED							TURN AROUND TIME: REGULAR	
WITNESSING AGENCY			ADDRESS: <u>3220 LAKESHORE AVE.</u>					TPH-GAS BTEX	TPH-DIESEL	TOG	8010					REMARKS
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION									
ES1			X			1		X							610044	
ES2			X			1		X							610045	
ES3			X			1		X							610046	

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:
(SIGNATURE) <i>Armond Balian</i>	10:30 9-27-96	(SIGNATURE) <i>Kath R. Shubert</i>	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? Y
(SIGNATURE)	9-27-96	(SIGNATURE)	2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? Y
(SIGNATURE)		(SIGNATURE)	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? N
(SIGNATURE)		(SIGNATURE)	4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? Y
(SIGNATURE)		(SIGNATURE)	SIGNATURE: <i>Kath R. Shubert</i> TITLE: <i>Analyst</i> DATE: <i>9/27/96</i>

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: UNOCAL # 5325 DATE & TIME SAMPLED 9-26-96 13:50 A.M. P.M.

OAKLAND, CA FIELD TECHNICIAN ARMOND B.

PURGE METHOD PUMP DATE(S) PURGED 9-26-96

WELL NUMBER U-2

WATER LEVEL-INITIAL 7.90 SAMPLING METHOD BAIL

WATER LEVEL-FINAL 9.05 CONTAINERS 2

WELL DEPTH 19.59 PRESERVATIVES HCl

WELL CASING VOLUME 4.33 †CASING DIAMETER 3"

TIME	GALLONS PURGED	TEMPERATURE (°F) (± 1°F)	ELECTRICAL CONDUCTIVITY/1000 ([μmhos/cm]x100) (± 10% of TOTAL)	pH (± 0.2)
13:25	0	80.9	3.54	7.05
↓	4.5	78.3	2.54	6.92
↓	9	77.0	2.88	6.69
13:35	13.5	77.0	2.89	6.67

† Correction Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.6
12"	5.87

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: UNOCAL # 5325 DATE & TIME SAMPLED 9-26-96 12:10 A.M.
P.M.

OAKLAND, CA FIELD TECHNICIAN ARMOND B.

PURGE METHOD PUMP DATE(S) PURGED 9-26-96

WELL NUMBER V-3

WATER LEVEL-INITIAL 11.55 SAMPLING METHOD BAIL

WATER LEVEL-FINAL 12.49 CONTAINERS 2

WELL DEPTH 19.85 PRESERVATIVES HCl

WELL CASING VOLUME 3.07 †CASING DIAMETER 3"

TIME	GALLONS PURGED	TEMPERATURE (°F) (± 1°F)	ELECTRICAL CONDUCTIVITY ([μmhos/cm]x100) (± 10% of TOTAL)	pH (± 0.2)
11:50	0	75.5	14.05	8.06
↓	3	75.2	8.17	7.57
↓	6	75.0	8.13	7.43
11:55	9.5	74.8	8.11	7.42

† Correction Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.6
12"	5.87

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: UNOCAL # 5325 DATE & TIME SAMPLED 9-26-96 10:50 A.M.
P.M.

OAKLAND, CA FIELD TECHNICIAN ARMOND G.

PURGE METHOD PUMP DATE(S) PURGED 9-26-96

WELL NUMBER U-4

WATER LEVEL-INITIAL 10.14 SAMPLING METHOD BAIL

WATER LEVEL-FINAL 11.05 CONTAINERS 2

WELL DEPTH 20.20 PRESERVATIVES HCl

WELL CASING VOLUME 6.54 †CASING DIAMETER 4"

TIME	GALLONS PURGED	TEMPERATURE (°F) (± 1°F)	ELECTRICAL CONDUCTIVITY ([μmhos/cm]x100) (± 10% of TOTAL)	pH (± 0.2)
10:15	0	67.3	8.89	7.92
	6.5	74.3	7.28	7.58
	13	73.9	7.27	7.56
↓	19.5	DEWATERED		
10:35	20	74.2	7.27	7.53

† Correction Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.6
12"	5.87

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: UNOCAL # 5325 DATE & TIME SAMPLED 9-26-96 13:05 A.M. P.M.

OAKLAND, CA FIELD TECHNICIAN ARMOND B.

PURGE METHOD PUMP DATE(S) PURGED 9-26-96

WELL NUMBER V-5

WATER LEVEL-INITIAL 7.13 SAMPLING METHOD BAIL

WATER LEVEL-FINAL 8.18 CONTAINERS 2

WELL DEPTH 20.12 PRESERVATIVES HCl

WELL CASING VOLUME 8.44 †CASING DIAMETER 4"

TIME	GALLONS PURGED	TEMPERATURE (°F) (± 1°F)	ELECTRICAL CONDUCTIVITY/1000 ([μmhos/cm]x100) (± 10% of TOTAL)	pH (± 0.2)
12:30	0	78.1	3.26	6.76
↓	8.5	74.0	4.33	6.52
↓	17	74.6	4.14	6.59
12:50	25.5	73.7	4.17	6.62

† Correction Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.6
12"	5.87

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: UNOCAL # 5325 DATE & TIME SAMPLED 9-26-96 11:30 A.M.
P.M.

OAKLAND, CA FIELD TECHNICIAN ARMOND B.

PURGE METHOD PUMP DATE(S) PURGED 9-26-96

WELL NUMBER U-6

WATER LEVEL-INITIAL 7.62 SAMPLING METHOD BAIL

WATER LEVEL-FINAL 8.25 CONTAINERS 2

WELL DEPTH 23.84 PRESERVATIVES HCl

WELL CASING VOLUME 2.76 †CASING DIAMETER 2"

TIME	GALLONS PURGED	TEMPERATURE (°F) (± 1°F)	ELECTRICAL CONDUCTIVITY ([μmhos/cm]x100) (± 10% of TOTAL)	pH (± 0.2)
11:10	0	71.8	16.41	7.71
↓	3	70.1	17.25	7.35
↓	6	70.0	17.37	7.16
11:15	9	69.7	17.45	7.15

† Correction Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.6
12"	5.87