MPDS

SERVICES, INCORPORATED

ALCO
HAZMAT
94 FEB 10 PM 2:04

February 9, 1994

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Mr. Scott Seery

RE: Unocal Service Station #5430
1935 Washington Avenue
San Leandro, California

Dear Mr. Seery:

Per the request of the Project Manager, Mr. David J. Camille of Unocal Corporation, enclosed please find our report (MPDS-UN5430-01) dated January 17, 1994, 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) 277-2335.

Sincerely,

MPDS Services, Inc.

Deanna L. Harding
Technical Assistant

/dlh

Enclosure

cc: Mr. David J. Camille

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

PACIFIC
ENVIRONMENTAL
GROUP, INC.

ALCO
HAZMAT
94 JAN 18 PM 2:32

January 14, 1994
Project 310-38.01

Mr. John Jang
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Re: Unocal Corporation
Quarterly Summary Reports
Fourth Quarter 1993

Dear Mr. Jang:

As directed by Mr. Ed Ralston of Unocal Corporation, Pacific Environmental Group, Inc. is forwarding the quarterly summary report for the following location:

Service Station	Location
5430	1935 Washington Avenue, San Leandro

If you have questions or comments, please do not hesitate to contact our office at (408) 441-7500.

Sincerely,

Pacific Environmental Group, Inc.

Joseph Muzzio
Project Geologist

Enclosures

cc: Mr. Dave Camille, Unocal Corporation
Mr. Scott Seery, Alameda County Environmental Health Care Services

2025 Gateway Place, Suite 440, San Jose, California 95110 (408) 441-7500 FAX (408) 441-7539

Quarterly Summary Report
Fourth Quarter 1993

Unocal Service Station 5430
1935 Washington Avenue at Castro Street
San Leandro, California

County STID #: 1747
County: Alameda

BACKGROUND

Unocal files suggest that a product line leak occurred in June 1976, and that one of the original underground gasoline storage tanks failed a precision test in October 1981. In December 1981, the two original steel gasoline storage tanks were replaced with two fiberglass gasoline storage tanks. Groundwater Monitoring Wells U-1 through U-3 and Borings U-A through U-E were installed by PACIFIC in August 1993. Hydrocarbons were detected in the groundwater samples collected from all wells. Quarterly groundwater sampling of the wells was recommended.

RECENT QUARTER ACTIVITIES

Quarterly groundwater monitoring and sampling were performed by MPDS Services on December 16, 1993.

NEXT QUARTER ACTIVITIES

Quarterly groundwater monitoring and sampling will be performed by MPDS Services in March 1994. A report documenting the December 1993 quarterly groundwater monitoring and sampling event will be submitted.

CHARACTERIZATION/REMEDIAL STATUS

Soil contamination delineated? None encountered.
Dissolved groundwater delineated? No.
Free product delineated? Not applicable.
Amount of groundwater contaminant recovered this quarter? None
Soil remediation in progress? Not Applicable.
Anticipated start date? Not Applicable.
Anticipated completion date? Not Applicable.
Dissolved/free product remediation in progress? No.
Anticipated start? Unknown.
Anticipated completion? Unknown.

CONSULTANT: Pacific Environmental Group, Inc.

M P D S
SERVICES, INCORPORATED

MPDS-UN5430-01
January 17, 1994

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

Attention: Mr. David J. Camille

RE: Quarterly Data Report
Unocal Service Station #5430
1935 Washington Avenue
San Leandro, California

Dear Mr. Camille:

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. 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 December 16, 1993. Prior to sampling, the wells were each purged of between 2.5 and 5 gallons of water. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded and are presented in Table 2. Once the field parameters were observed to stabilize, and where possible, a minimum of approximately four 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 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.

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

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 3. 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.

DISTRIBUTION

A copy of this report should be sent to Mr. Scott Seery of the Alameda County Environmental Health Care Services, Mr. Michael Bakaldin of the San Leandro Fire Department, and to Mr. John Jang of the Regional Water Quality Control Board, San Francisco Bay Region.

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

Sincerely,

MPDS Services, Inc.

Talin Kaloustian
Staff Engineer

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

License No. EG 1633
Exp. Date 6/30/94

/dlh

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

cc: Mr. Joe Muzzio, Pacific Environmental Group, Inc.

TABLE 1

SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)	Total Well Depth (feet)◆
(Monitored and Sampled on December 16, 1993)						
U-1	22.91	33.19	0	No	2.5	39.56
U-2	23.08	32.19	0	No	5	39.28
U-3	23.16	32.08	0	No	4.5	38.38
(Monitored on September 7, 1993)						
U-1	24.98	31.60				
U-2	24.90	30.87				
U-3	24.96	30.70				

Well #	Well Cover Elevation (feet)*	Well Casing Elevation (feet)**
U-1	56.58	56.10
U-2	55.77	55.27
U-3	55.66	55.24

* The elevations of the top of the well covers have been surveyed relative to Mean Sea Level (MSL).

** Relative to MSL.

◆ The depth to water level and total well depth measurements were taken from the top of the well casings. Prior to December 16, 1993, the depth to water level and total well depth measurements were taken from the top of the well covers.

Note: Monitoring data prior to December 16, 1993, were provided by Pacific Environmental Group, Inc.

TABLE 2

RECORD OF THE TEMPERATURE, CONDUCTIVITY, AND pH VALUES
IN THE MONITORING WELLS DURING PURGING AND PRIOR TO SAMPLING

(Measured on December 16, 1993)

Well #	Gallons per Casing Volume	Time	Gallons Purged	Casing Volumes Purged	Temperature (°F)	Conductivity ([μmhos/cm] x100)	pH
U-1	1.08	11:45	0	0	61.2	11.08	7.58
			1	0.93	64.6	11.26	7.42
			1.5	1.39	59.1	10.43	7.78
			WELL DEWATERED				
		12:35	2	1.85	58.7	11.34	7.63
			WELL DEWATERED				
		13:10	2.5	2.31			
U-2	1.20	12:45	0	0	64.0	7.24	7.50
			1	0.83	66.1	7.26	7.33
			2	1.67	66.6	7.26	7.26
			3	2.50	66.8	7.19	7.11
			4	3.33	67.3	7.16	7.08
		12:55	5	4.17	67.4	7.20	7.05
U-3	1.07	12:15	0	0	64.1	10.59	7.63
			1	0.93	67.2	11.15	7.14
			2	1.87	67.4	11.22	6.95
			3	2.80	67.2	11.00	6.78
		12:25	4.5	4.21	67.3	10.98	6.75

TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Diesel	TOG mg/L
12/16/93	U-1	ND	ND	ND	ND	ND	130**	ND
	U-2	330	1.7	ND	11	8.5	--	--
	U-3	15,000	570	ND	940	670	--	--
8/13/93	U-1	310	0.84	ND	2.6	1	50*	ND
	U-2	1,400	ND	ND	ND	ND	--	--
	U-3	23,000	1,000	ND	1,700	1,600	--	--

TOG = Total Oil and Grease

* Not a typical diesel pattern; lower boiling hydrocarbons in the boiling range of stoddard calculated as diesel.

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

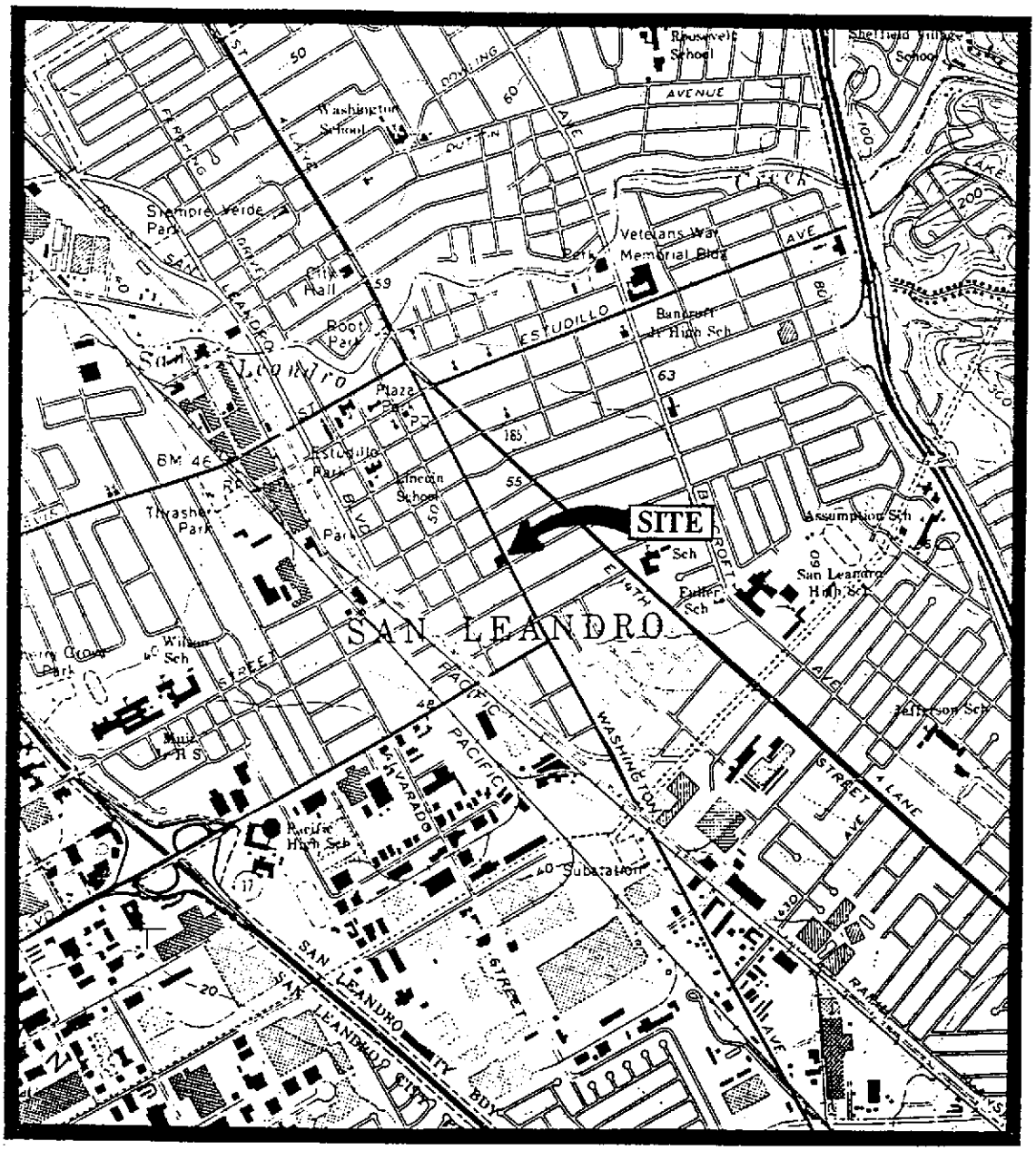
ND = Non-detectable.

-- Indicates analysis was not performed.

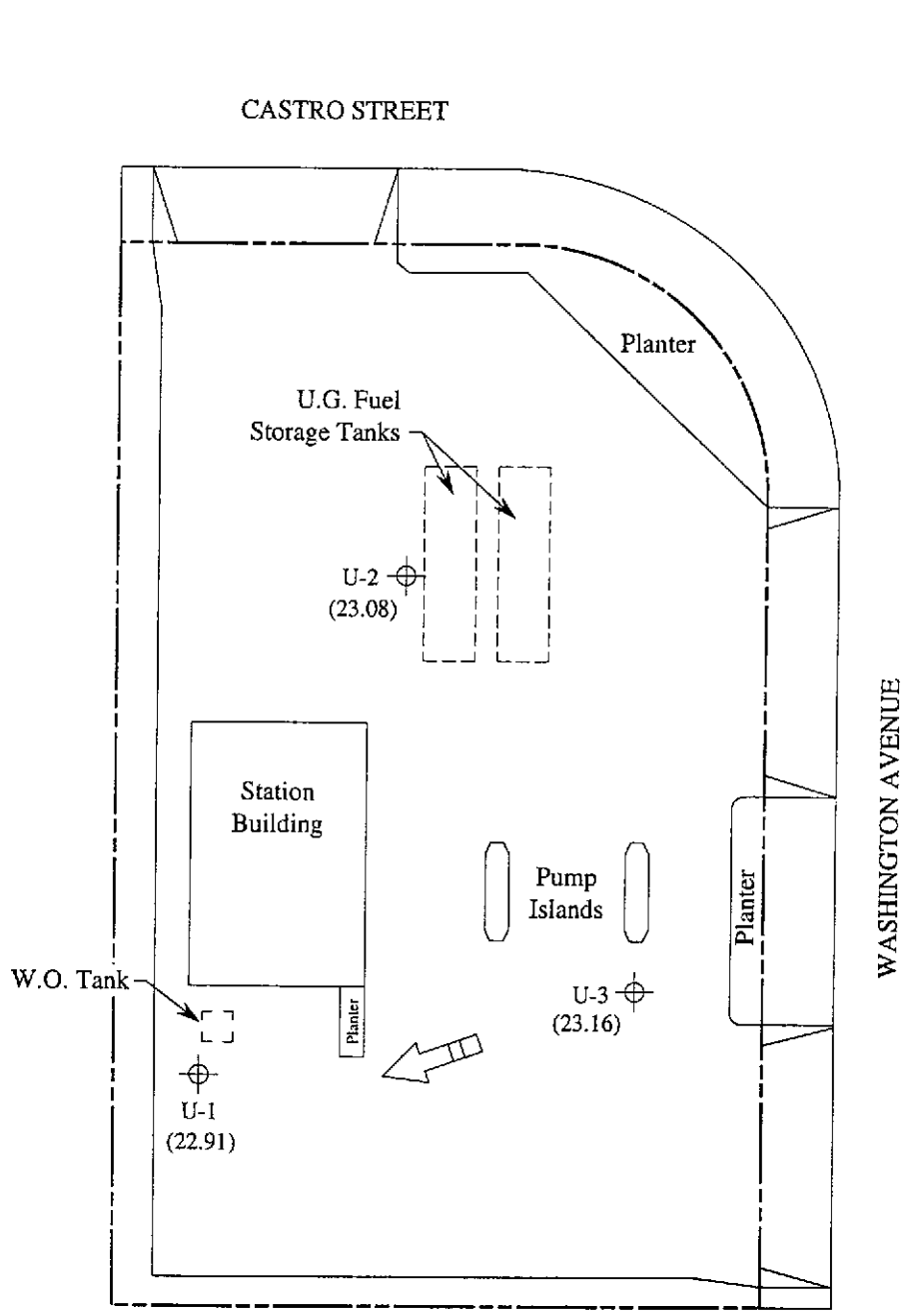
mg/L = milligrams per liter.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: Laboratory analyses data prior to December 16, 1993, were provided by Pacific Environmental Group, Inc.



MPDS SERVICES, INC.	**UNOCAL SERVICE STATION #5430** **1935 WASHINGTON AVENUE** **SAN LEANDRO, CALIFORNIA**	**LOCATION MAP**



LEGEND

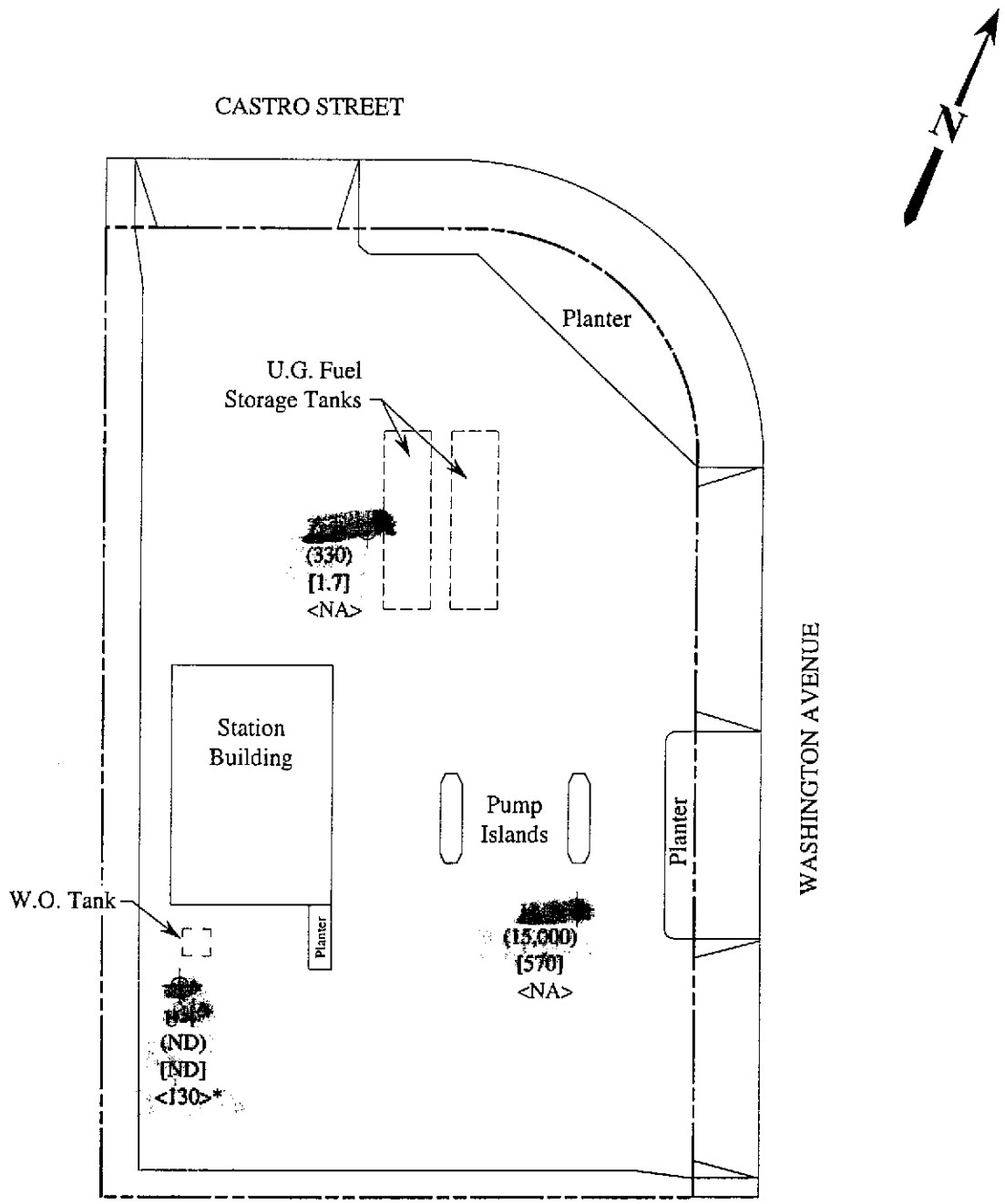
- Monitoring well
- ( ) Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow

0 30 60

Approx. scale feet

GROUND WATER FLOW DIRECTION MAP FOR THE DECEMBER 16, 1993 MONITORING EVENT

MPDS SERVICES, INC.	**UNOCAL SERVICE STATION #5430** **1935 WASHINGTON AVENUE** **SAN LEANDRO, CALIFORNIA**	FIGURE **1**



LEGEND

- ⊕ Monitoring well
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- < > Concentration of TPH as diesel in µg/L

ND = Non-detectable, NA = Not analyzed

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

0 30 60

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON DECEMBER 16, 1993

MPDS SERVICES, INC.	**UNOCAL SERVICE STATION #5430** **1935 WASHINGTON AVENUE** **SAN LEANDRO, CALIFORNIA**	FIGURE **2**

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services	Client Project ID:	Unocal 5430, 1935 Washington Ave.,		Sampled:	Dec 16, 1993
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	San Leandro	Received:	Dec 16, 1993
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020		Reported:	Jan 4, 1994
Attention: Avo Avedissian	First Sample #:	312-1168			

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 312-1168 U 1	Sample I.D. 312-1169 U 2	Sample I.D. 312-1170 U 3	Sample I.D. Method Blank
Purgeable Hydrocarbons	50	N.D.	330	15,000	
Benzene	0.5	N.D.	1.7	570	
Toluene	0.5	N.D.	N.D.	N.D.	
Ethyl Benzene	0.5	N.D.	11	940	
Total Xylenes	0.5	N.D.	8.5	670	
Chromatogram Pattern:		--	Gasoline	Gasoline	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	20	1.0
Date Analyzed:	12/30/93	12/30/93	12/30/93	12/30/93
Instrument Identification:	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	94	93	82	97

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

SEQUOIA ANALYTICAL

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(510) 686-9600 • FAX (510) 686-9689

MPDS Services	Client Project ID:	Unocal 5430, 1935 Washington Ave.,		Sampled:	Dec 16, 1993
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	San Leandro	Received:	Dec 16, 1993
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015		Reported:	Jan 4, 1994
Attention: Avo Avedissian	First Sample #:	312-1168			

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 312-1168 U 1*	Sample I.D. Method Blank
Extractable Hydrocarbons	50	130	
Chromatogram Pattern:		Non-Diesel Mixture (<C14)	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	12/23/94	12/23/94
Date Analyzed:	12/28/94	12/28/94
Instrument Identification:	HP-3A	HP-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

Alan B. Kemp
Project Manager

Please Note:

* Non-Diesel Mixture < C14 is probably Gasoline.

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services	Client Project ID:	Unocal 5430, 1935 Washington Ave., San Leandro	Sampled:	Dec 16, 1993
2401 Stanwell Dr., Ste. 400	Matrix Descript:	Water	Received:	Dec 16, 1993
Concord, CA 94520	Analysis Method:	SM 5520 B&F (Gravimetric)	Extracted:	Dec 16, 1993
Attention: Avo Avedissian	First Sample #:	312-1168	Analyzed:	Dec 30, 1993
			Reported:	Jan 4, 1994

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
312-1168	U 1	N.D.

Detection Limits:	**5.0**

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

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services	Client Project ID:	Unocal 5430, 1935 Washington Ave.,San Leandro
2401 Stanwell Dr., Ste. 400	Matrix:	Liquid
Concord, CA 94520		
Attention: Avo Avedissian	QC Sample Group: 3121168-70	Reported: Jan 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	SM 5520
Analyst:	A.T./J.F.	A.T./J.F.	A.T./J.F.	A.T./J.F.	K. Wimer	K. Wimer
MS/MSD Batch#:	3121488	3121488	3121488	3121488	BLK122393	BLK121693
Date Prepared:	12/30/93	12/30/93	12/30/93	12/30/93	12/23/93	12/16/93
Date Analyzed:	12/30/93	12/30/93	12/30/93	12/30/93	12/28/93	12/30/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A	N.A.
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L	5,000 mg/L
Matrix Spike % Recovery:	85	95	100	98	88	92
Matrix Spike Duplicate % Recovery:	85	95	100	98	88	94
Relative % Difference:	0.0	0.0	0.0	0.0	0.0	2.2
LCS Batch#:	2LCS123093	2LCS123093	2LCS123093	2LCS123093	BLK122393	BLK121693
Date Prepared:	12/30/93	12/30/93	12/30/93	12/30/93	12/23/93	12/16/93
Date Analyzed:	12/30/93	12/30/93	12/30/93	12/30/93	12/28/93	12/30/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A	N.A.
LCS % Recovery:	85	90	90	92	88	92
% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122	75-125

SEQUOIA ANALYTICAL

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
1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedissian

Client Project ID: Unocal 5430, 1935 Washington Ave.,San Leandro

QC Sample Group: 312-1168

Reported: Jan 4, 1994

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015
Analyst:	K. Wimer	K. Wimer
Reporting Units:	µg/L	µg/L
Date Analyzed:	12/28/93	12/28/93
Sample #:	312-1168	Method Blank
Surrogate % Recovery:	89	83

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}}$	x 100
Relative % Difference:	$\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}}$	x 100

MPDS
Services, Inc.

CHAIN OF CUSTODY

SAMPLER: Ray
WITNESSING AGENCY:

SITE NAME & ADDRESS: UNOCAL 5430 SAN LEANDRO 1935 WASHINGTON AVE

ANALYSES REQUESTED: TPH GAS / BTEX / TPH D / TOG

TURN AROUND TIME: REGULAR

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH GAS / BTEX / TPH D	TOG	REMARKS
U1	12.16			x	x		2 2	VOA AMB	x	x	3121168 A-D
U2	"			x	x		2	VOA	x		1169 A-B
U3	"			x	x		"	"	x		1170

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
12-16-93	Ray 12/16/93 4:45p	Melissa Cressure
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:

1. Have all samples received for analysis been stored in ice? yes
2. Will samples remain refrigerated until analyzed? yes
3. Did any samples received for analysis have head space? no
4. Were samples in appropriate containers and properly packaged? yes

Melissa Cressure — Sample Control — 12/16/93
Signature — Title — Date

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510 602 5100 Fax: 510 687 0602