MPDS

SERVICES, INCORPORATED

ALCO HAZMAT

94 MAR 30 PM 2:24

March 29, 1994

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

RE: **Unocal Service Station #5781**
3535 Pierson Street
Oakland, California 94619

Per the request of the Unocal Corporation Project Manager, Mr. Edward C. Ralston, enclosed please find our report (MPDS-UN5781-01) dated March 14, 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) 277-2311.

Sincerely,

MPDS Services, Inc.

for: Deanna L. Harding
Technical Assistant

/bp

Enclosure

cc: Mr. Edward C. Ralston

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

M P D S

SERVICES, INCORPORATED

MPDS-UN5781-01
March 14, 1994

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

Attention: Mr. Edward C. Ralston

RE: Annual Data Report
Unocal Service Station #5781
3535 Pierson Street
Oakland, California

Dear Mr. Ralston:

This data report presents the results of the most recent monitoring and sampling of the monitoring well at the referenced site by MPDS Services, Inc.

RECENT FIELD ACTIVITIES

Monitoring well MWA was monitored and sampled once during this annual period as indicated in Table 1. Prior to sampling, the well was 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 monitoring well location and ground water elevation is shown on the attached Figure 1.

A ground water sample was collected on February 10, 1994. Prior to sampling, the well was purged of 21 gallons of water. A sample was then collected using a clean Teflon bailer. The sample was decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which was 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 sample was analyzed at Sequoia Analytical Laboratory and was 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 sample collected this 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.

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

DISTRIBUTION

A copy of this report should be sent to the Alameda County Health Care Services Agency, and to 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
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Thomas Berkins, Kaprealian Engineering, 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 February 10, 1994)						
MWA	136.55	15.25	0	No	21	44.93
(Monitored and Sampled on February 10, 1993)						
MWA	134.34	17.71	0	No	19	
(Monitored and Sampled on August 4, 1992)						
MWA	133.10	18.95	0	No	18	
(Monitored and Sampled on February 6, 1992)						
MWA	132.17	19.88	0	No	17	

Well #	Well Cover Elevation (feet)*	Well Casing Elevation (feet)**
MWA	152.05	151.80

◆ The depth to water level and total well depth measurement was taken from the top of the well casing. Prior to February 10, 1994, the depth to water level and total well depth measurement was taken from the top of the well cover.

* The elevation of the top of the well cover has been surveyed relative to Mean Sea Level (MSL) (elevation = 119.80 MSL).

** Relative to MSL.

Note: Monitoring data prior to February 10, 1994, were provided by Kaprealian Engineering, Inc.

TABLE 2

SUARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
2/10/94	MWA*	ND	ND	ND	0.52	ND	0.92
2/10/93	MWA*	ND	ND	ND	ND	ND	ND
8/04/92	MWA*	ND	ND	ND	ND	ND	0.51
2/06/92	MWA*	ND	ND	ND	ND	ND	ND
11/08/91	MWA*	ND	ND	ND	ND	ND	ND
8/07/91	MWA*	ND	ND	ND	ND	ND	ND
5/03/91	MWA*	ND	ND	ND	ND	ND	ND
12/18/90	MWA*	73	ND	ND	ND	ND	ND

* TOG and all EPA method 8010 compounds were non-detectable.

ND = Non-detectable.

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

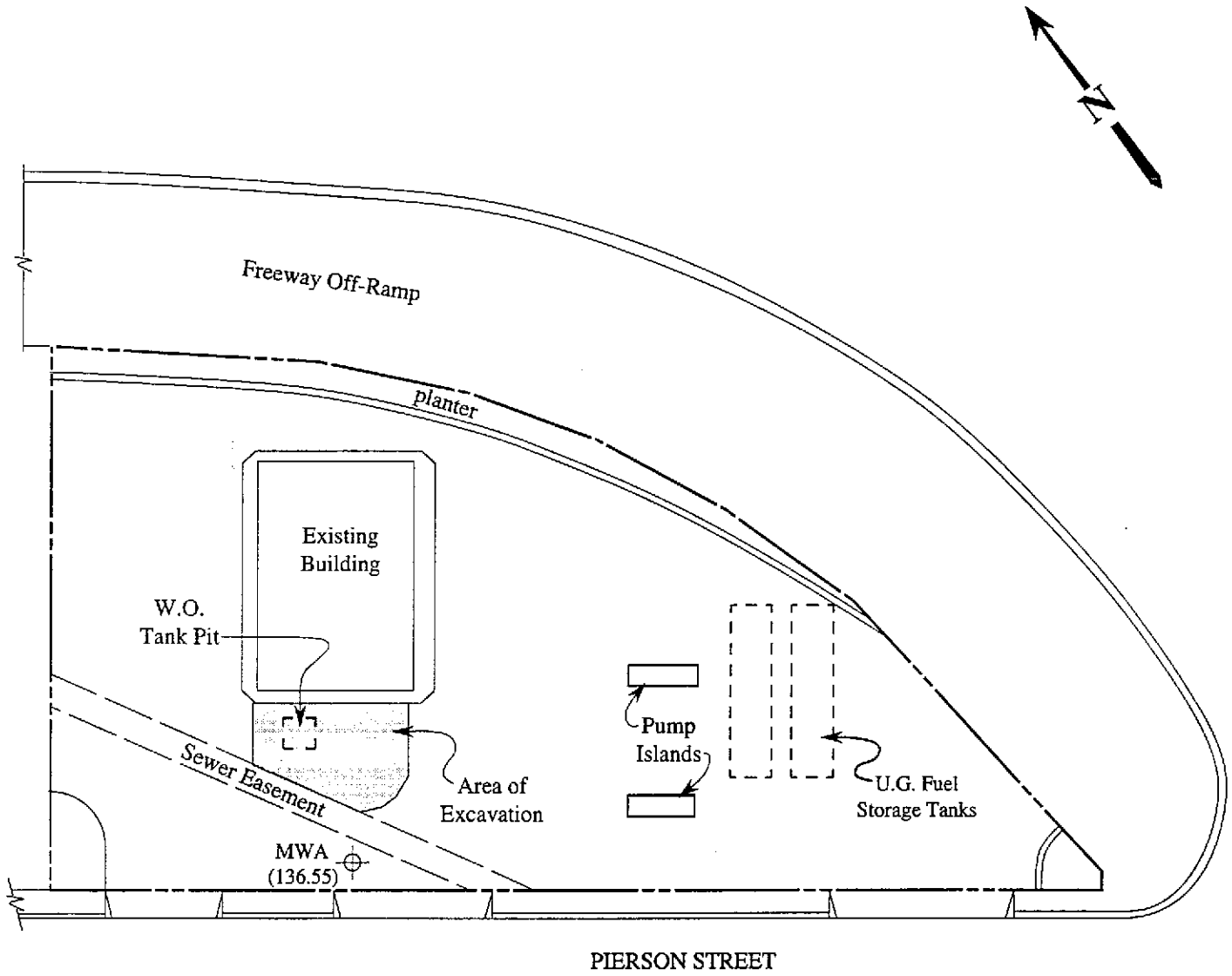
Note: Laboratory analyses data prior to February 10, 1994, were provided by Kaprealian Engineering, Inc.

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

0 2000 4000

Approx. scale feet

M P D S SERVICES, INC.	**UNOCAL SERVICE STATION #5781** **3535 PIERSON STREET** **OAKLAND, CALIFORNIA**	**LOCATION MAP**



LEGEND

⊕ Monitoring well

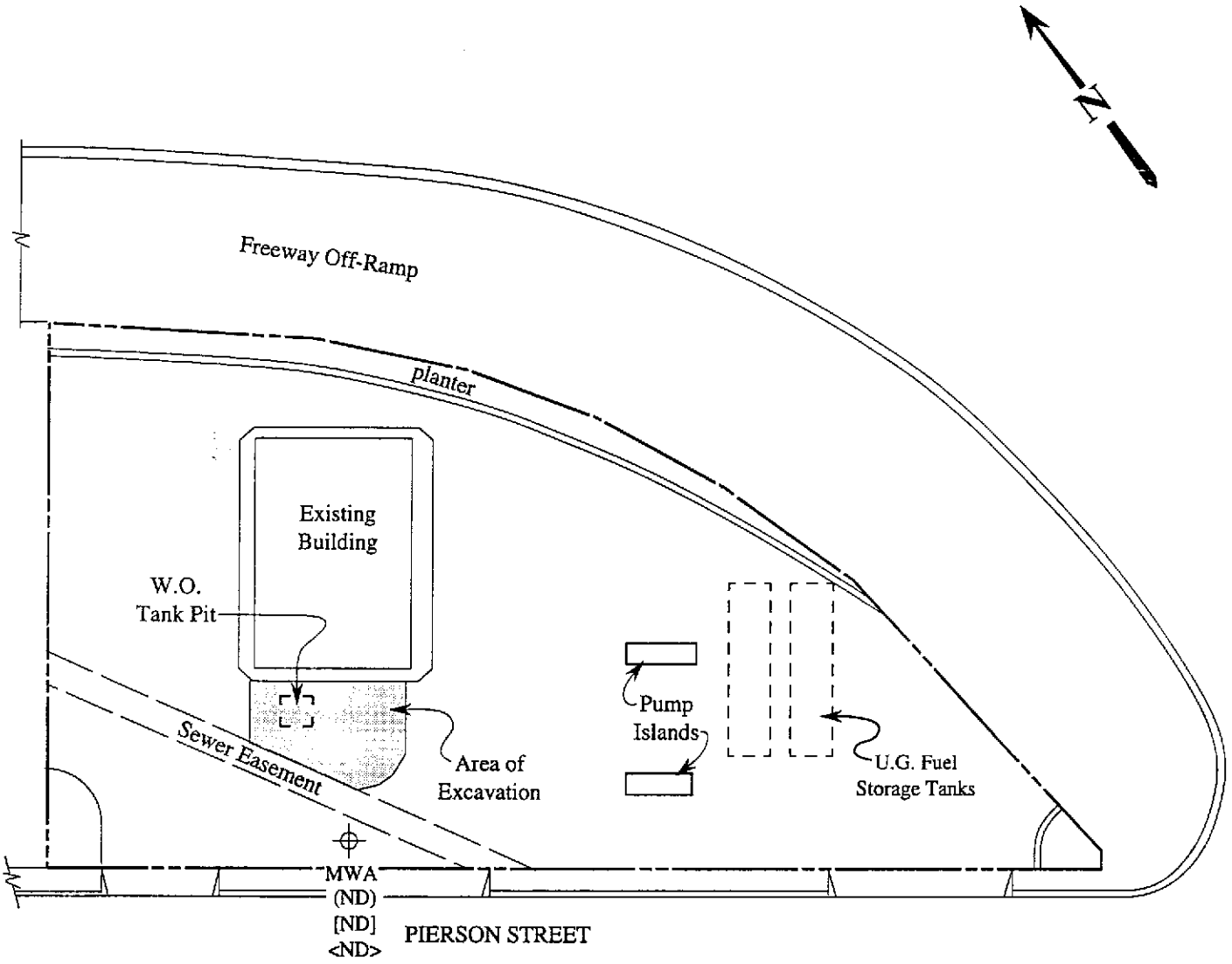
( ) Ground water elevation in feet above Mean Sea Level

0 30 60

Approx. scale feet

GROUND WATER ELEVATION MAP FOR THE FEBRUARY 10, 1994 MONITORING EVENT

MPDS SERVICES, INC.	**UNOCAL SERVICE STATION #5781** **3535 PIERSON STREET** **OAKLAND, 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

0 30 60

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON FEBRUARY 10, 1994

M P D S SERVICES, INC.	**UNOCAL SERVICE STATION #5781** **3535 PIERSON STREET** **OAKLAND, CALIFORNIA**	FIGURE **2**

SEQUOIA ANALYTICAL

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

MPDS Services, Inc.	Client Project ID:	Unocal #5781, 3535 Pierson St., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Feb 10, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Feb 28, 1994
Attention: Avo Avedissian	First Sample #:	402-0785		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 402-0785 MWA	Sample I.D. Matrix Blank
Purgeable Hydrocarbons	50	N.D.	
Benzene	0.5	N.D.	
Toluene	0.5	0.52	
Ethyl Benzene	0.5	N.D.	
Total Xylenes	0.5	0.92	
Chromatogram Pattern:		--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	2/24/94	2/24/94
Instrument Identification:	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	99	103

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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MPDS Services, Inc.	Client Project ID:	Unocal #5781, 3535 Pierson St., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Feb 10, 1994
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported:	Feb 28, 1994
Attention: Avo Avedissian	First Sample #:	402-0785		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 402-0785 MWA	Sample I.D. Matrix Blank
Extractable Hydrocarbons	50	N.D.	
Chromatogram Pattern:		--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	2/17/94	2/17/94
Date Analyzed:	2/22/94	2/22/94
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.

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Alan B. Kemp
Project Manager

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MPDS Services, Inc.	Client Project ID:	Unocal #5781, 3535 Pierson St., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Matrix Descript:	Water	Received:	Feb 10, 1994
Concord, CA 94520	Analysis Method:	SM 5520 BF (Gravimetric)	Extracted:	Feb 23, 1994
Attention: Avo Avedissian	First Sample #:	402-0785	Analyzed:	Feb 25, 1994
			Reported:	Feb 28, 1994

TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
402-0785	MWA	N.D.

Detection Limits:	**5.0**

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

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Project Manager

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MPDS Services, Inc.	Client Project ID:	Unocal #5781, 3535 Pierson St., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Sample Descript:	Water; MWA	Received:	Feb 10, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Feb 22, 1994
Attention: Avo Avedissian	Lab Number:	402-0785	Reported:	Feb 28, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

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Project Manager

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MPDS Services, Inc.	Client Project ID:	Unocal #5781, 3535 Pierson St., Oakland
2401 Stanwell Dr., Ste. 400	Matrix:	Liquid
Concord, CA 94520		
Attention: Avo Avedissian	QC Sample Group: 402-0785	Reported: Feb 28, 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 BF
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	K. Wimer	K. Wimer
MS/MSD Batch#:	4021120	4021120	4021120	4021120	BLK021794	BLK022394
Date Prepared:	2/24/94	2/24/94	2/24/94	2/24/94	2/17/94	2/23/94
Date Analyzed:	2/24/94	2/24/94	2/24/94	2/24/94	2/22/94	2/25/94
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:	100	110	115	115	94	93
Matrix Spike Duplicate % Recovery:	100	110	110	112	93	98
Relative % Difference:	0.0	0.0	4.4	2.6	1.8	5.2
LCS Batch#:	2LCS022494	2LCS022494	2LCS022494	2LCS022494	BLK021794	BLK022394
Date Prepared:	2/24/94	2/24/94	2/24/94	2/24/94	2/17/94	2/23/94
Date Analyzed:	2/24/94	2/24/94	2/24/94	2/24/94	2/22/94	2/25/94
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A	N.A.
LCS % Recovery:	85	85	88	89	94	93
% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122	75-125

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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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MPDS Services, Inc.	Client Project ID:	Unocal #5781, 3535 Pierson St., Oakland
2401 Stanwell Dr., Ste. 400	Matrix:	Liquid
Concord, CA 94520		
Attention: Avo Avedissian	QC Sample Group: 402-0785	Reported: Feb 28, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	K. Nill	K. Nill	K. Nill
MS/MSD Batch#:	4020954	4020954	4020954
Date Prepared:	2/22/94	2/22/94	2/22/94
Date Analyzed:	2/22/94	2/22/94	2/22/94
Instrument I.D.#:	HP5890/6	HP5890/6	HP5890/6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L
Matrix Spike % Recovery:	76	96	93
Matrix Spike Duplicate % Recovery:	76	91	85
Relative % Difference:	0.0	5.4	9.0
LCS Batch#:	LCS022294	LCS022294	LCS022294
Date Prepared:	2/22/94	2/22/94	2/22/94
Date Analyzed:	2/22/94	2/22/94	2/22/94
Instrument I.D.#:	HP5890/6	HP5890/6	HP5890/6
LCS % Recovery:	69	96	90
% Recovery Control Limits:	28-167	35-146	38-150

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.

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

Client Project ID: Unocal #5781, 3535 Pierson St., Oakland

QC Sample Group: 402-0785

Reported: Feb 28, 1994

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015
Analyst:	K. Wimer	K. Wimer
Reporting Units:	µg/L	µg/L
Date Analyzed:	2/22/94	2/22/94
Sample #:	402-0785	Matrix Blank
Surrogate % Recovery:	99	92

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

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

Client Project ID: Unocal #5781, 3535 Pierson St., Oakland

QC Sample Group: 402-0785

Reported: Feb 28, 1994

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8010	EPA 8010
Analyst:	K.Nill	K.Nill
Reporting Units:	µg/L	µg/L
Date Analyzed:	2/22/94	2/22/94
Sample #:	402-0785	Matrix Blank
Surrogate #1 % Recovery:	99	95
Surrogate #2 % Recovery:	107	102

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

MPDS
Services, Inc.

CHAIN OF CUSTODY

SAMPLER	SITE NAME & ADDRESS	ANALYSES REQUESTED							TURN AROUND TIME:
RAY MARANGOSIAN	UNOCAL # 5781 OAKLAND	TPHG BTXE	TPHD	TOG	8010				REGULAR
WITNESSING AGENCY	3535 PIERSON ST								

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPHG BTXE	TPHD	TOG	8010				REMARKS
MW A	2-10			x	x		4 2	VOA AMB	X	X	X	X				4020785 A-F

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Ray	2-10-94	[signature] 2-10-94 19:45
[signature]	2-11 1135	[signature]
[signature]	2-11 3:30	[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

Signature: [signature] Title: Analyst Date: 2-10-94

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