MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

HAZMAT

94 OCT 17 PM 3:57

October 14, 1994

Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, CA 94501

RE: Unocal Service Station #5484
18950 Lake Chabot Road
Castro Valley, California

Per the request of the Unocal Corporation Project Manager, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN5484-04) dated October 5, 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) 277-2321.

Sincerely,

MPDS Services, Inc.

Jarrel F. Crider

/jfc

Enclosure

cc: Ms. Tina R. Berry

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

MONITORING
PURGING
DISPOSING
SAMPLING
mpds SERVICES, INCORPORATED

MPDS-UN5484-04
October 5, 1994

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

Attention: Ms. Tina R. Berry

RE: Quarterly Data Report
Unocal Service Station #5484
18950 Lake Chabot Road
Castro Valley, California

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. 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 2, 1994. Prior to sampling, the wells were each purged of between 6 and 26 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. 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,

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

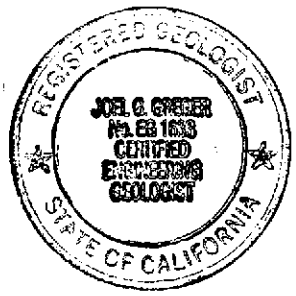
A copy of this report should be sent to the Alameda County Health Care Services Agency.

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 8/31/96

/bp

Attachments: Tables 1, 2 & 3
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)♦	Total Well Depth (feet)♦	Product Thickness (feet)	Sheen	Water Purged (gallons)
(Monitored and Sampled on September 2, 1994)						
MW2	221.83	7.05	19.20	0	No	8.5
MW4	217.69	10.08	27.29	0	No	26
MW5	215.88	9.23	23.85	0	No	25
MW6*	232.06	6.98	26.98	0	--	0
MW7	220.39	11.00	19.55	0	No	6
(Monitored and Sampled on June 3, 1994)						
MW2	223.17	5.71	19.23	0	No	9.5
MW4	219.51	8.26	27.32	0	No	50
MW5	216.10	9.01	23.80	0	No	38.5
MW6	233.23	5.81	27.00	0	No	55.5
MW7	222.66	8.73	19.60	0	No	7.5
(Monitored and Sampled on March 3, 1994)						
MW2	223.97	4.91	19.21	0	No	10
MW4	220.79	6.98	27.31	0	No	55
MW5	217.24	7.87	23.78	0	No	42
MW6*	232.59	6.45	26.98	0	--	0
MW7	223.22	8.17	19.58	0	No	8
(Monitored and Sampled on December 9, 1993)						
MW2	221.94	6.94	19.20	0	No	8.5
MW4	WELL WAS INACCESSIBLE					
MW5	215.14	9.97	23.85	0	No	36
MW6	231.61	7.43	27.00	0	--	51
MW7	220.74	10.65	19.56	0	No	6.5

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Well Casing Elevation (feet)**
MW2	228.88
MW4	227.77
MW5	225.11
MW6	239.04
MW7	231.39

◆ The depth to water level and total well depth measurements were taken from the top of the well casings.

* Monitored only.

** The elevations of the top of the well casings are relative to Mean Sea Level (MSL), per the Alameda County Benchmark (elevation = 219.68 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
9/02/94	MW2	--	720	ND	ND	ND	4.6	--
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	130♦	ND	ND	ND	ND	ND	--
	MW6	SAMPLED SEMI-ANNUALLY						
	MW7	490♦	3,800	77	ND	180	42	--
6/03/94	MW2	--	190*	ND	ND	ND	ND	--
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	80♦♦	ND	ND	ND	ND	ND	--
	MW6	--	ND	ND	ND	ND	ND	--
	MW7	2,000♦	9,400	380	5.0	820	240	--
3/03/94	MW2	--	240*	ND	ND	ND	ND	--
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	ND	ND	ND	ND	0.71	1.7	ND
	MW6	SAMPLED SEMI-ANNUALLY						
	MW7	1,400♦	9,300	290	ND	590	400	1.7
12/09/93	MW2	--	96*	ND	ND	ND	ND	--
	MW4	WELL WAS INACCESSIBLE						
	MW5	87♦♦	ND	ND	ND	ND	ND	--
	MW6	--	150	ND	ND	ND	1.7	--
	MW7	250♦	980	54	4.6	71	5.6	--
9/09/93	MW2	--	210*	ND	ND	ND	ND	--
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	58♦♦	ND	ND	ND	ND	ND	--
	MW6	SAMPLED SEMI-ANNUALLY						
	MW7	550♦♦	2,600**	160	19	250	120	--
6/09/93	MW2	--	120*	ND	ND	ND	ND	300
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	64	ND	ND	ND	ND	ND	--
	MW6	--	ND	ND	ND	ND	ND	--
	MW7	830♦♦	4,600	430	ND	510	430	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
3/10/93	MW2	--	110*	ND	ND	ND	ND	350
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	69♦	ND	ND	ND	ND	ND	--
	MW6	SAMPLED SEMI-ANNUALLY						
	MW7	1,100♦	4,400	310	ND	300	330	--
12/10/92	MW2	--	100*	ND	ND	ND	ND	170
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	83♦♦	ND	ND	ND	ND	ND	--
	MW6	--	ND	ND	ND	ND	ND	--
	MW7	200♦♦	1,200	28	ND	37	13	--
9/10/92	MW2	--	61*	ND	ND	ND	ND	110
	MW4	SAMPLED SEMI-ANNUALLY						
	MW5	110♦	ND	ND	ND	ND	ND	--
	MW6	SAMPLED SEMI-ANNUALLY						
	MW7	290♦	2,100	160	1.9	140	150	--
6/18/92	MW2	--	140*	ND	ND	ND	ND	--
	MW4	--	ND	0.41	0.84	ND	0.55	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	--	ND	ND	ND	ND	ND	--
	MW7	990♦	5,500	340	4.2	380	410	--
3/20/92	MW2	--	120	ND	ND	ND	ND	--
	MW4	SAMPLED SEMI-ANNUALLY						
	MW5	170	ND	ND	ND	ND	ND	--
	MW6	SAMPLED SEMI-ANNUALLY						
	MW7	3,200	11,000	980	ND	990	1,600	--
12/19/91	MW2	--	140	0.66	ND	0.64	1.2	--
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	--	ND	ND	ND	ND	ND	--
	MW6	--	ND	ND	ND	ND	ND	--
	MW7	770	3,900	240	2.4	280	270	--
10/10/91	MW5	ND	--	--	--	--	--	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
9/20/91	MW2	--	ND	ND	ND	ND	ND	--
	MW4	SAMPLED SEMI-ANNUALLY						
	MW5	450	ND	ND	ND	ND	ND	--
	MW6	SAMPLED SEMI-ANNUALLY						
	MW7	580	1,400	160	0.75	89	130	--
5/23/91	MW2	--	ND	ND	ND	ND	ND	--
	MW4	--	ND	ND	ND	ND	ND	--
	MW5	--	ND	ND	ND	ND	ND	--
	MW6	--	ND	ND	ND	ND	ND	--
	MW7	540	3,000	160	1.2	25	120	--

MTBE = Methyl tert butyl ether.

♦ 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 diesel and non-diesel mixture.

* 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.

ND = Non-detectable.

-- Indicates analysis was not performed.

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

Note: Laboratory analyses data prior to December 9, 1993, were provided by Kaprealian Engineering, Inc.

TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	Total Oil & Grease (mg/L)	Bis(2-ethylhexyl) phthalate	2-Methyl-naphthalene	Naph-thalene	1,2-Dichloro-ethane
9/02/94	MW5	--	--	--	--	ND
	MW7	--	ND	ND	ND	1.1
6/03/94	MW5	--	--	--	--	ND
	MW7	--	ND	18	61	1.4
3/03/94	MW5	--	--	--	--	ND
	MW7	--	ND	34	130	1.7
12/09/93	MW5	--	--	--	--	ND
	MW7	--	ND	ND	15	1.5
9/09/93	MW5	--	--	--	--	ND
	MW7♦	--	ND	11	48	1.5
6/09/93	MW5	--	--	--	--	ND
	MW7♦♦	--	13	19	83	1.3
3/10/93	MW5	--	ND	ND	ND	ND
	MW7♦♦♦	--	13	19	83	1.3
12/10/92	MW7	--	--	--	--	2.0
9/10/92	MW7	--	--	--	--	2.3
6/18/92	MW7	ND	--	--	--	ND
3/20/92	MW7	ND	--	--	--	ND
12/19/91	MW7	ND	--	--	--	3.1
9/20/91	MW7	ND	--	--	--	ND
5/23/91	MW7	ND	--	--	--	3.4

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

- ♦ Seven "tentatively identified compounds" were detected by the EPA method 8270 open scan at concentrations ranging 11 µg/L to 88 µg/L. Refer to laboratory analysis sheets for the specific compounds and concentrations.

- ♦♦ Ten "tentatively identified compounds" were detected by the EPA method 8270 open scan at concentrations ranging from 14 µg/L to 150 µg/L. Refer to laboratory analysis sheets for the specified compounds and concentrations.

- ♦♦♦ Nine "tentatively identified compounds" were detected by the EPA method 8270 open scan at concentrations ranging from 10 µg/L to 59 µg/L. Refer to laboratory analysis sheets for the specific compounds and concentrations.

ND = Non-detectable.

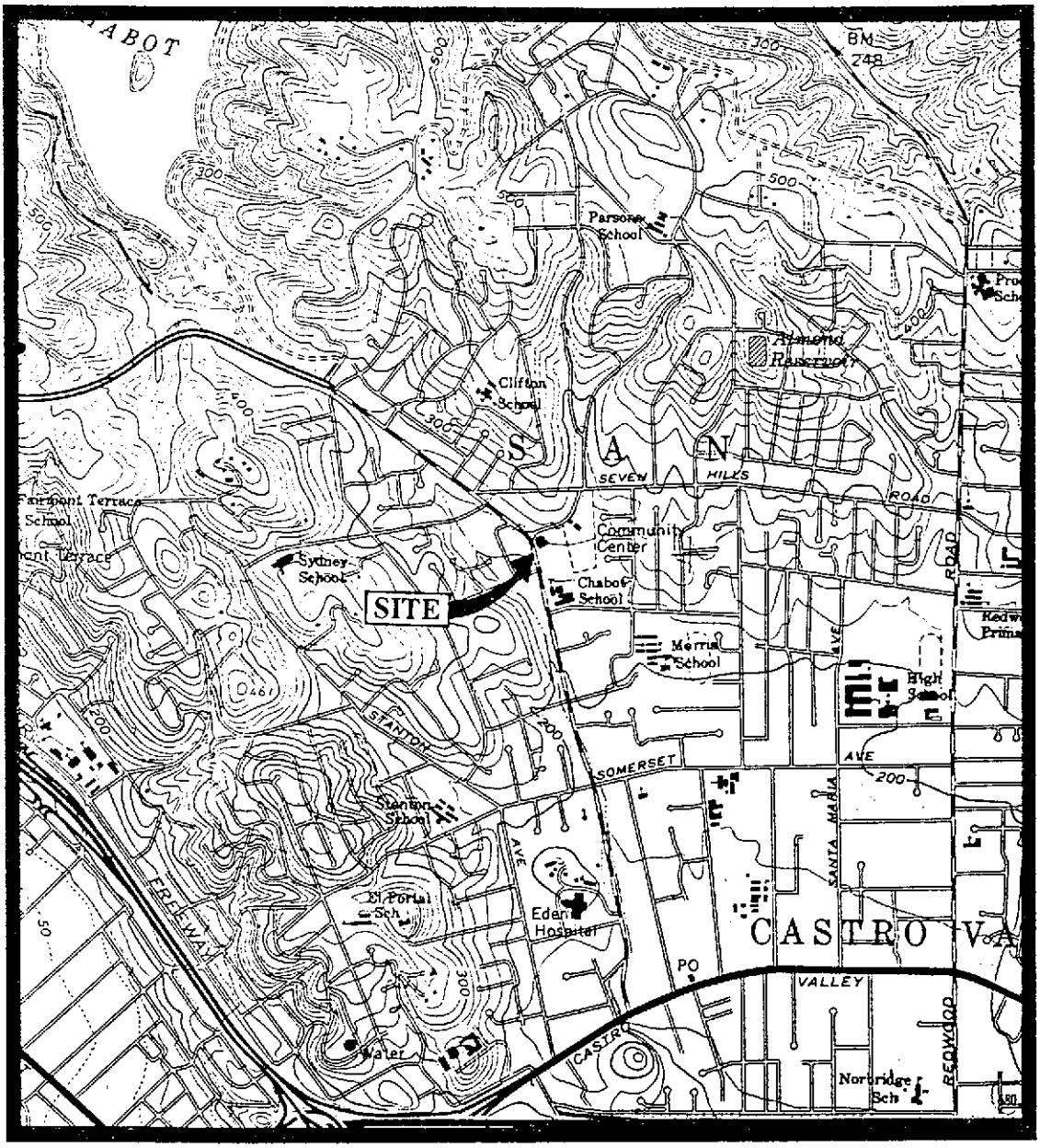
-- Indicates analysis was not performed.

mg/L = milligrams per liter.

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

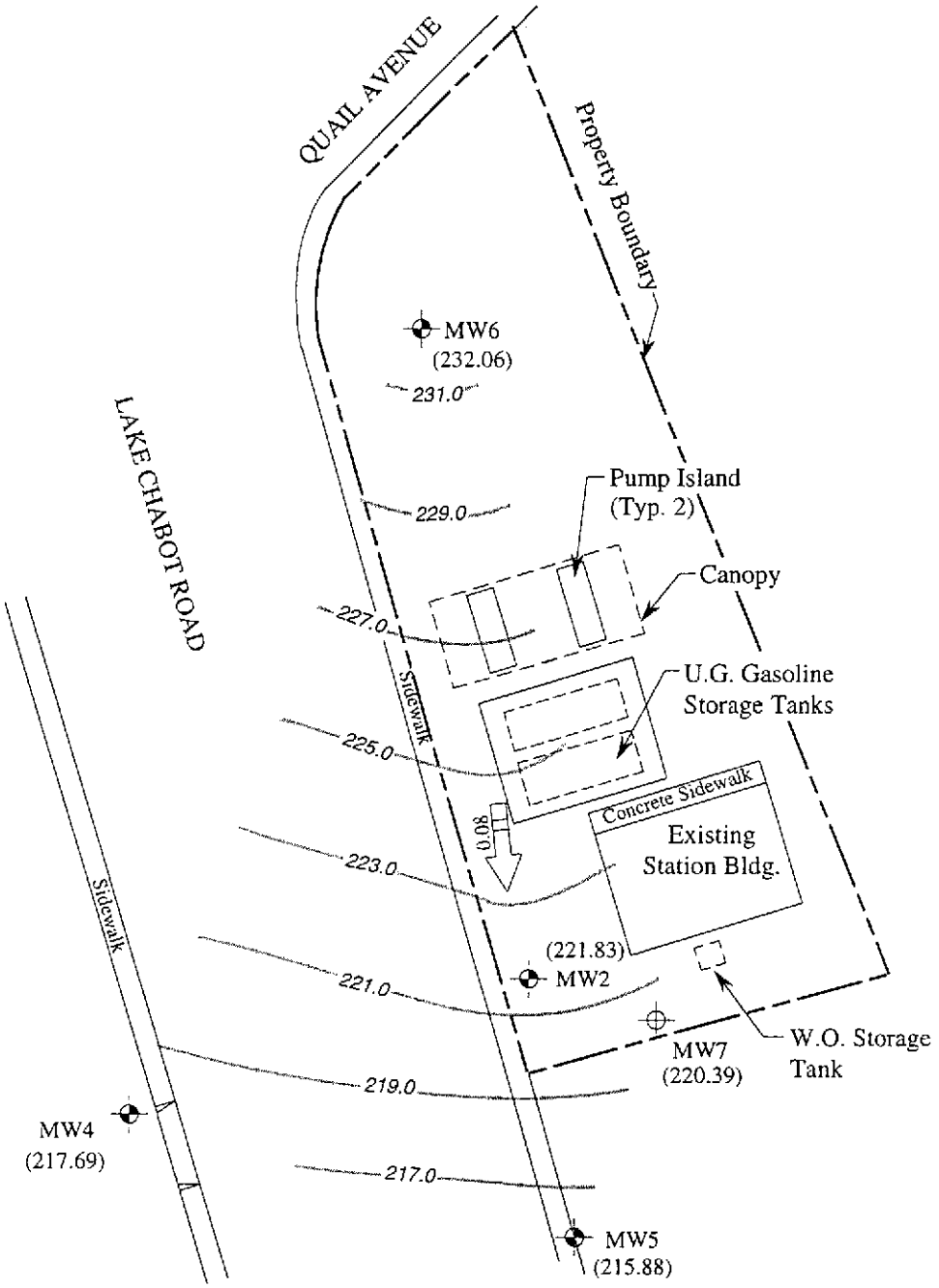
Note: - All EPA methods 8010 and 8270 compounds were non-detectable, except for the compounds listed.

- Laboratory analyses data prior to December 9, 1993, were provided by Kaprealian Engineering, Inc.



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

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #5484** **18950 LAKE CHABOT ROAD** **CASTRO VALLEY, CALIFORNIA**	**LOCATION MAP**



LEGEND

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

0 40 80

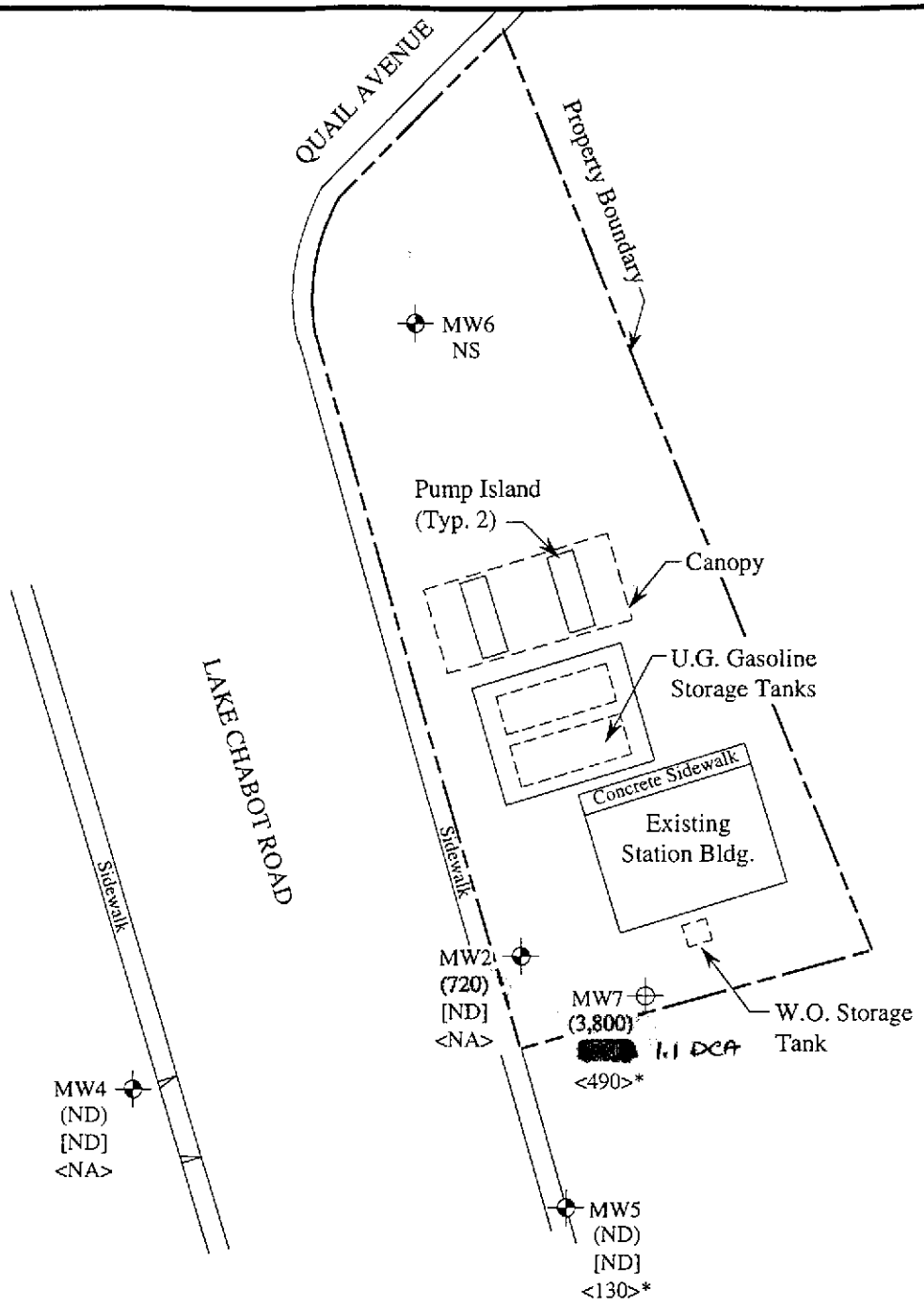
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE SEPTEMBER 2, 1994 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #5484
18950 LAKE CHABOT ROAD
CASTRO VALLEY, CALIFORNIA

FIGURE
1



LEGEND

- Monitoring well (by KEI)
- Monitoring well (by AGS)
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of [redacted] µg/L
- < > Concentration of TPH as diesel in µg/L

ND = Non-detectable, NA = Not analyzed , NS = Not sampled

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

0 40 80

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON SEPTEMBER 2, 1994

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #5484
18950 LAKE CHABOT ROAD
CASTRO VALLEY, CALIFORNIA

FIGURE
2

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #5484, 18950 Lake Chabot Rd., Castro Valley	Sampled: Sep 2, 1994
2401 Stanwell Dr., Ste. 400	Matrix Descript:	Water	Received: Sep 2, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported: Sep 19, 1994
Attention: Avo Avedessian	First Sample #:	409-0204	

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
409-0204	MW-2	720	ND	ND	ND	4.6
409-0205	MW-4	ND	ND	ND	ND	ND
409-0206	MW-5	ND	ND	ND	ND	ND
409-0207	MW-7	3,800	77	ND	180	42
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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #5484, 18950 Lake Chabot Rd., Castro Valley	Sampled:	Sep 2, 1994
2401 Stanwell Dr., Ste. 400	Matrix Descript:	Water	Received:	Sep 2, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 19, 1994
Attention: Avo Avedessian	First Sample #:	409-0204		

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%)
409-0204	MW-2	Gasoline	5.0	9/9/94	HP-2	91
409-0205	MW-4	--	1.0	9/8/94	HP-5	102
409-0206	MW-5	--	1.0	9/8/94	HP-5	100
409-0207	MW-7	Gasoline	20	9/14/94	HP-2	105

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #5484, 18950 Lake Chabot Rd., Castro Valley	Sampled:	Sep 2, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Sep 2, 1994
Concord, CA 94520	Analysis Method:	EPA 3510/8015	Reported:	Sep 19, 1994
Attention: Avo Avedessian	First Sample #:	409-0206		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 409-0206 MW-5*	Sample I.D. 409-0207 MW-7*
Extractable Hydrocarbons	50	130	490
Chromatogram Pattern:		Discrete Peaks	Unidentified Hydrocarbons <C14

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	9/9/94	9/9/94
Date Analyzed:	9/14/94	9/14/94
Instrument Identification:	HP-3B	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, #1271

Signature on File

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydroacarbons <C14" are probably gasoline; "Discrete Peaks" refers to unidentified peaks in the EPA 8270 range.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #5484, 18950 Lake Chabot Rd., Castro Valley	Sampled: Sep 2, 1994
2401 Stanwell Dr., Ste. 400	Sample Descript:	Water; MW-5	Received: Sep 2, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed: Sep 9, 1994
Attention: Avo Avedessian	Lab Number:	409-0206	Reported: Sep 19, 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.

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #5484, 18950 Lake Chabot Rd., Castro Valley	Sampled: Sep 2, 1994
2401 Stanwell Dr., Ste. 400	Sample Descript:	Water; MW-7	Received: Sep 2, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed: Sep 9, 1994
Attention: Avo Avedessian	Lab Number:	409-0207	Reported: Sep 19, 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	1.1
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.

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #5484, 18950 Lake Chabot Rd., Castro Valley	Sampled:	Sep 2, 1994
2401 Stanwell Dr., Ste. 400	Sample Descript:	Water; MW-7	Received:	Sep 2, 1994
Concord, CA 94520	Analysis Method:	EPA 8270	Extracted:	Sep 7, 1994
Attention: Avo Avedessian	Lab Number:	4099-0207	Analyzed:	Sep 9, 1994
			Reported:	Sep 19, 1994

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene	2.0	N.D.
Acenaphthylene	2.0	N.D.
Aniline	2.0	N.D.
Anthracene	2.0	N.D.
Benzidine	50	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	2.0	N.D.
Benzo(b)fluoranthene	2.0	N.D.
Benzo(k)fluoranthene	2.0	N.D.
Benzo(g,h,i)perylene	2.0	N.D.
Benzo(a)pyrene	2.0	N.D.
Benzyl alcohol	2.0	N.D.
Bis(2-chloroethoxy)methane	2.0	N.D.
Bis(2-chloroethyl)ether	2.0	N.D.
Bis(2-chloroisopropyl)ether	2.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	2.0	N.D.
Butyl benzyl phthalate	2.0	N.D.
4-Chloroaniline	2.0	N.D.
2-Chloronaphthalene	2.0	N.D.
4-Chloro-3-methylphenol	2.0	N.D.
2-Chlorophenol	2.0	N.D.
4-Chlorophenyl phenyl ether	2.0	N.D.
Chrysene	2.0	N.D.
Dibenz(a,h)anthracene	2.0	N.D.
Dibenzofuran	2.0	N.D.
Di-N-butyl phthalate	10	N.D.
1,3-Dichlorobenzene	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	2.0	N.D.
Diethyl phthalate	2.0	N.D.
2,4-Dimethylphenol	2.0	N.D.
Dimethyl phthalate	2.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	2.0	N.D.
2,6-Dinitrotoluene	2.0	N.D.
Di-N-octyl phthalate	2.0	N.D.

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MPDS Services	Client Project ID:	Unocal #5484, 18950 Lake Chabot Rd., Castro Valley	Sampled:	Sep 2, 1994
2401 Stanwell Dr., Ste. 400	Sample Descript:	Water; MW-7	Received:	Sep 2, 1994
Concord, CA 94520	Analysis Method:	EPA 8270	Extracted:	Sep 7, 1994
Attention: Avo Avedessian	Lab Number:	4099-0207	Analyzed:	Sep 9, 1994
			Reported:	Sep 19, 1994

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L	Sample Results µg/L
Fluoranthene	2.0	N.D.
Fluorene	2.0	N.D.
Hexachlorobenzene	2.0	N.D.
Hexachlorobutadiene	2.0	N.D.
Hexachlorocyclopentadiene	2.0	N.D.
Hexachloroethane	2.0	N.D.
Indeno(1,2,3-cd)pyrene	2.0	N.D.
Isophorone	2.0	N.D.
2-Methylnaphthalene	2.0	N.D.
2-Methylphenol	2.0	N.D.
4-Methylphenol	2.0	N.D.
Naphthalene	2.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	2.0	N.D.
2-Nitrophenol	2.0	N.D.
4-Nitrophenol	10	N.D.
N-Nitrosodiphenylamine	2.0	N.D.
N-Nitroso-di-N-propylamine	2.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	2.0	N.D.
Phenol	2.0	N.D.
Pyrene	2.0	N.D.
1,2,4-Trichlorobenzene	2.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	2.0	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

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

Client Project ID: Unocal #5484, 18950 Lake Chabot Rd., Castro Valley
Matrix: Liquid
QC Sample Group: 4090204-07

Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	K.V.S.
MS/MSD Batch#:	4090233	4090233	4090233	4090233	BLK090994
Date Prepared:	9/8/94	9/8/94	9/8/94	9/8/94	9/9/94
Date Analyzed:	9/8/94	9/8/94	9/8/94	9/8/94	9/14/94
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	90	100	100	103	84
Matrix Spike Duplicate % Recovery:	95	110	110	105	83
Relative % Difference:	5.4	9.5	9.5	1.9	1.2
LCS Batch#:	3LCS090894	3LCS090894	3LCS090894	3LCS090894	BLK090994
Date Prepared:	9/8/94	9/8/94	9/8/94	9/8/94	9/9/94
Date Analyzed:	9/8/94	9/8/94	9/8/94	9/8/94	9/14/94
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
LCS % Recovery:	88	95	96	94	84
% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122

SEQUOIA ANALYTICAL, #1271

Signature on File

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Project Manager

Please Note:
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MPDS Services
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedessian

Client Project ID: Unocal #5484, 18950 Lake Chabot Rd., Castro Valley
Matrix: Liquid
QC Sample Group: 4090204-07
Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha
MS/MSD Batch#:	4090203	4090203	4090203	4090203
Date Prepared:	9/9/94	9/9/94	9/9/94	9/9/94
Date Analyzed:	9/9/94	9/9/94	9/9/94	9/9/94
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:	105	105	110	110
Matrix Spike Duplicate % Recovery:	100	105	105	108
Relative % Difference:	4.9	0.0	4.7	1.8
LCS Batch#:	1LCS090994	1LCS090994	1LCS090994	1LCS090994
Date Prepared:	9/9/94	9/9/94	9/9/94	9/9/94
Date Analyzed:	9/9/94	9/9/94	9/9/94	9/9/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	98	103	112	110
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Signature on File

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Project Manager

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

Client Project ID: Unocal #5484, 18950 Lake Chabot Rd., Castro Valley
Matrix: Liquid
QC Sample Group: 4090204-07
Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha
MS/MSD Batch#:	4090444	4090444	4090444	4090444
Date Prepared:	9/14/94	9/14/94	9/14/94	9/14/94
Date Analyzed:	9/14/94	9/14/94	9/14/94	9/14/94
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:	109	109	114	115
Matrix Spike Duplicate % Recovery:	114	114	119	120
Relative % Difference:	4.5	4.5	4.3	4.3
LCS Batch#:	1LCS091494	1LCS091494	1LCS091494	1LCS091494
Date Prepared:	9/14/94	9/14/94	9/14/94	9/14/94
Date Analyzed:	9/14/94	9/14/94	9/14/94	9/14/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	106	108	114	115
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

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Project Manager

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

Client Project ID: Unocal #5484, 18950 Lake Chabot Rd., Castro Valley
Matrix: Liquid

QC Sample Group: 4090206-07

Reported: Sep 19, 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#:	4090178	4090178	4090178
Date Prepared:	9/8/94	9/8/94	9/8/94
Date Analyzed:	9/8/94	9/8/94	9/8/94
Instrument I.D.#:	HP5890/7	HP5890/7	HP5890/7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L
Matrix Spike % Recovery:	82	78	94
Matrix Spike Duplicate % Recovery:	72	66	86
Relative % Difference:	13	17	8.9
LCS Batch#:	LCS090994	LCS090994	LCS090994
Date Prepared:	9/9/94	9/9/94	9/9/94
Date Analyzed:	9/9/94	9/9/94	9/9/94
Instrument I.D.#:	HP5890/7	HP5890/7	HP5890/7
LCS % Recovery:	67	62	90
% Recovery Control Limits:	28-167	35-146	38-150

SEQUOIA ANALYTICAL, #1271

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

Client Project ID: Unocal #5484, 18950 Lake Chabot Rd., Castro Valley
Matrix: Liquid
QC Sample Group: 409-0207
Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	S. Le	S. Le	S. Le	S. Le	S. Le	S. Le
MS/MSD Batch#:	BLK090794	BLK090794	BLK090794	BLK090794	BLK090794	BLK090794
Date Prepared:	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94
Date Analyzed:	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	200 µg/L	200 µg/L	100 µg/L	100 µg/L	100 µg/L	200 µg/L
Matrix Spike % Recovery:	67	69	70	74	72	72
Matrix Spike Duplicate % Recovery:	74	75	76	78	78	77
Relative % Difference:	9.9	8.3	8.2	5.3	8.0	6.7
LCS Batch#:	LCS090794	LCS090794	LCS090794	LCS090794	LCS090794	LCS090794
Date Prepared:	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94
Date Analyzed:	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
LCS % Recovery:	67	69	70	74	72	72
% Recovery Control Limits:	12-89	27-123	36-97	41-116	39-98	23-97

SEQUOIA ANALYTICAL, #1271

Signature on File

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Project Manager

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4090204.MPD <12>

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

Client Project ID: Unocal #5484, 18950 Lake Chabot Rd., Castro Valley
Matrix: Liquid
QC Sample Group: 409-0207

Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	S. Le	S. Le	S. Le	S. Le	S. Le
MS/MSD Batch#:	BLK090794	BLK090794	BLK090794	BLK090794	BLK090794
Date Prepared:	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94
Date Analyzed:	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	100 µg/L	200 µg/L	100 µg/L	200 µg/L	100 µg/L
Matrix Spike % Recovery:	76	54	66	75	82
Matrix Spike Duplicate % Recovery:	82	50	68	72	98
Relative % Difference:	7.6	7.7	3.0	4.1	18
LCS Batch#:	LCS090794	LCS090794	LCS090794	LCS090794	LCS090794
Date Prepared:	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94
Date Analyzed:	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
LCS % Recovery:	76	54	66	75	82
% Recovery Control Limits:	46-118	10-80	24-96	9-103	26-127

SEQUOIA ANALYTICAL, #1271

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M P D S Services, Inc.
2401 Stanwell Drive, Suite 400, Concord, CA 94520
Tel: (510) 602-5120 Fax: (510) 689-1918

CHAIN OF CUSTODY

SAMPLER: (JOE) HOVSIA AJEMIAN
WITNESSING AGENCY:

UNOCAL S/S # 5484 CITY: Castro Valley
ADDRESS: 18950 Lake Chabot Rd.

ANALYSES REQUESTED

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010	8270				REMARKS
MW-2	9-2-94	10:30 A.M	✓	✓		2 (VOA)	Wells	✓								4090204 A1
MW-4	"	10:15 A.M	✓	✓		2 (VOA)	"	✓								4090205 ↓
MW-5	"	10:05 A.M	✓	✓		4 (VOA) 1 Amber	"	✓	✓		✓					4090206 A2
MW-7	"	10:45 A.M	✓	✓		4 (VOA) 2 Amber	"	✓	✓		✓	✓				4090207 A3

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
(SIGNATURE) Joe Ajemian	9-2-94 11:30 A.M	(SIGNATURE)
(SIGNATURE) 9/6/94 1100	9-6-94 1230	(SIGNATURE)
(SIGNATURE)	9-6-94 3:30 p.m	(SIGNATURE) RJ Kelley 9/6/94 3:30 p.m
(SIGNATURE)		(SIGNATURE)

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

1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON 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: TITLE: Analyst DATE: 9/2/94