MONITORING
PURGING
DISPOSING
SAMPLING
MPDS SERVICES, INCORPORATED

ENVIRONMENTAL
PROTECTION
95 MAY -9 PM 2:24

May 8, 1995

Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

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

Per the request of the Unocal Corporation Project Manager, Mr. David J. Camille, enclosed please find our report (MPDS-UN5430-06) dated April 14, 1995 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.

Jarrel F. Crider

Jarrel F. Crider

/jfc

Enclosure

cc: Mr. David J. Camille

2401 Stanwell Drive, Suite 300, Concord, CA 94520
TEL: (510) 602-5120 FAX: (510) 689-1918

PACIFIC
ENVIRONMENTAL
GROUP, INC.

ENVIRONMENTAL
PROTECTION
95 APR 21 PM 1:54

April 19, 1995
Project 310-038.1A

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 Report
First Quarter 1995

Dear Mr. Jang:

As directed by Mr. Dave Camille 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

Enclosure

cc: Mr. Dave Camille, Unocal Corporation
Mr. Michael Bakaldin, San Leandro Fire Department
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
First Quarter 1995

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. Monthly groundwater monitoring and quarterly groundwater sampling of the wells was initiated in December 1993.

RECENT QUARTER ACTIVITIES

Four additional groundwater monitoring wells were installed on February 21 and 22, 1995. Quarterly groundwater monitoring and sampling were performed on March 14, 1995.

NEXT QUARTER ACTIVITIES

Second quarter 1995 groundwater monitoring and sampling will be performed. A report will be submitted documenting the findings of the recent installation of the four additional groundwater monitoring wells.

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.

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

MPDS-UN5430-06
April 14, 1995

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 directions during the most recent quarter are shown on the attached Figures 1 and 2.

Ground water samples were collected on March 14, 1995. Prior to sampling, the wells were each purged of between 8.5 and 10 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. 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 3 and 4. 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 3. 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 Mr. Scott Seery of the Alameda County Environmental Health Care Services, Mr. Michael Bakaldin of the San Leandro Fire Department.

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

Sincerely,

MPDS Services, Inc.

Sarkis Karkarian
Sarkis A. Karkarian
Staff Engineer

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, 2 & 3
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)◆	Total Well Depth (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)
(Monitored and Sampled on March 14, 1995)						
U-1	28.23	27.86	39.70	0	No	8.5
U-2	28.93	26.36	39.40	0	No	9
U-3	29.79	25.44	38.62	0	No	9
U-4	28.87	26.52	39.42	0	No	9
U-5	28.98	25.20	39.22	0	No	10
U-6	28.42	26.94	40.22	0	No	9.5
U-7	28.92	26.13	38.00	0	No	8.5
(Monitored on January 10, 1995)						
U-1	24.81	31.29	★	0	--	0
U-2	25.02	30.25	★	0	--	0
U-3	25.01	30.23	★	0	--	0
(Monitored and Sampled on December 6, 1994)						
U-1	23.73	32.37	39.64	0	No	5
U-2	23.83	31.44	39.35	0	No	5.5
U-3	23.90	31.34	38.44	0	No	5
(Monitored and Sampled on September 15, 1994)						
U-1	22.17	33.93	39.68	0	No	2
U-2	22.27	33.00	39.38	0	No	4.5
U-3	22.40	32.84	38.48	0	No	4
(Monitored and Sampled on June 19, 1994)						
U-1	23.84	32.26	39.65	0	No	4
U-2	23.96	31.31	39.36	0	No	5.5
U-3	24.05	31.19	38.46	0	No	5

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Well Casing Elevation (feet)*	Well Casing Elevation (feet)**
U-1	56.10	56.09
U-2	55.27	55.29
U-3	55.24	55.23
U-4	-	55.39
U-5	-	54.18
U-6	-	55.36
U-7	-	55.05

◆ 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 are relative to Mean Sea Level. These elevations were used prior to March 1995.

** The elevation of the top of the well casings were resurveyed on March 1995, based on benchmark provided by City San Leandro, City Engineers Office, Datum 1929, USGS adjusted.

★ Total well depth not measured.

-- Sheen determination was not performed.

TABLE 2

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

(Measured on March 14, 1995)

Well #	Gallons per Casing Volume	Time	Gallons Purged	Casing Volumes Purged	Temperature (°F)	Conductivity ([μmhos/cm] x100)	pH
U-1	2.01	10:00	0	0	63.3	4.99	7.14
			2	1.00	64.9	5.75	6.95
			4	1.99	66.0	6.25	6.92
			6	2.99	66.0	6.70	6.92
		10:10	8.5	3.76	66.0	6.85	6.91
U-2	2.22	14:00	0	0	67.3	6.17	7.60
			2	0.90	68.1	7.76	7.27
			4	1.80	68.0	7.34	7.20
			6	2.70	68.1	7.26	7.11
		14:10	9	4.05	68.0	7.46	7.07
U-3	2.24	15:00	0	0	66.2	7.89	7.32
			2	0.89	68.2	10.40	6.94
			4	1.79	68.3	10.20	7.03
			6	2.68	68.1	10.49	6.89
		15:10	9	4.02	68.3	10.74	6.80
U-4	2.19	13:20	0	0	66.8	6.39	7.50
			2	0.91	67.3	8.70	7.20
			4	1.83	67.3	8.65	7.13
			6	2.74	67.1	8.97	7.07
		13:30	9	4.11	67.0	9.08	7.05
U-5	2.38	12:30	0	0	67.5	5.84	7.61
			2.5	1.05	68.4	8.19	7.22
			5	2.10	68.1	7.48	7.19
			7.5	3.15	68.1	8.77	7.13
		12:40	10	4.20	68.0	8.42	7.16

TABLE 2 (Continued)

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

(Measured on March 14, 1995)

Well #	Gallons per Casing Volume	Time	Gallons Purged	Casing Volumes Purged	Temperature (°F)	Conductivity ([μmhos/cm] x100)	pH
U-6	2.26	10:45	0	0	65.5	6.58	7.20
			2	0.89	67.2	8.99	6.99
			4	1.77	67.5	12.31	6.95
			6	2.65	67.6	12.18	6.90
		10:55	9.5	4.20	67.7	12.49	6.90
U-7	2.02	11:50	0	0	72.3	5.20	7.60
			2	0.99	69.7	6.80	7.41
			4	1.98	69.2	7.42	7.30
			6	2.97	68.8	7.22	7.18
		12:00	8.5	4.21	68.5	7.57	7.15

TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well#	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
3/14/95	U-1	71**	380	20	ND	ND	10
	U-2	--	89	ND	ND	ND	1.2
	U-3	--	13,000	860	120	1,300	1,700
	U-4	--	490	3.2	2.1	0.79	1.2
	U-5	--	ND	ND	ND	ND	1.2
	U-6	--	14,000	170	36	790	1,500
	U-7	--	ND	ND	ND	ND	ND
12/06/94	U-1▲	ND	ND	ND	ND	ND	ND
	U-2	--	250	19	ND	ND	ND
	U-3	--	17,000	390	ND	990	560
9/15/94	U-1▲	83**	ND	0.50	0.85	ND	0.77
	U-2	--	1,000♦♦	44	ND	ND	ND
	U-3	--	12,000	370	ND	970	610
6/19/94	U-1▲	61**	51	ND	1.4	ND	2.7
	U-2	--	180♦	ND	ND	ND	0.86
	U-3	--	17,000	580	ND	1,300	90
3/25/94	U-1▲	57**	58	0.63	0.79	ND	0.65
	U-2	--	130	0.70	0.78	0.65	0.64
	U-3	--	18,000	560	40	1,000	770
12/16/93	U-1▲	130**	ND	ND	ND	ND	ND
	U-2	--	330	1.7	ND	11	8.5
	U-3	--	15,000	570	ND	940	670
8/13/93	U-1▲	50*	310	0.84	ND	2.6	1
	U-2	--	1,400	ND	ND	ND	ND
	U-3	--	23,000	1,000	ND	1,700	1,600

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

▲ Total Oil and Grease was non-detectable.

♦ 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.

* 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.

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.

TABLE 4

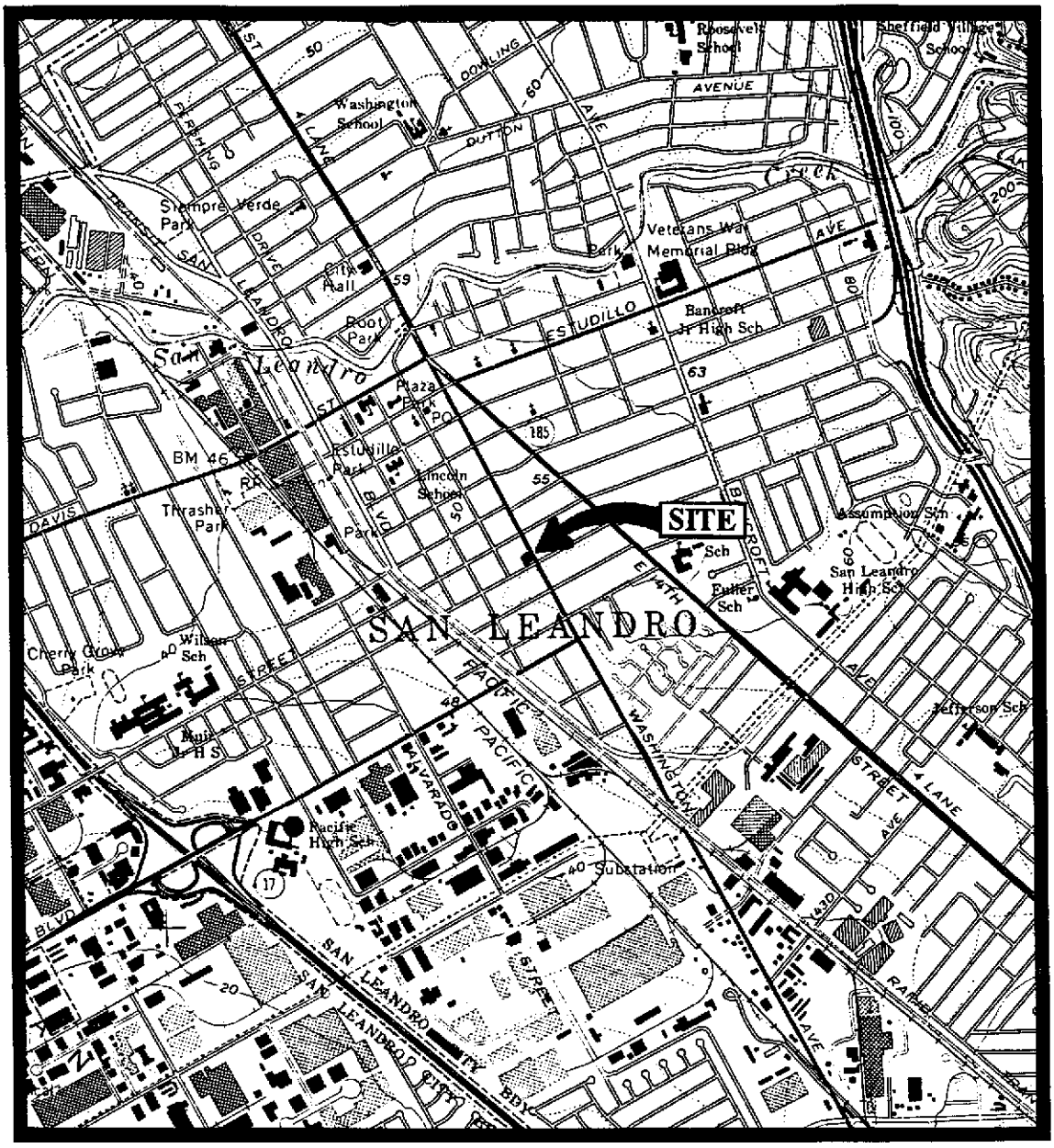
SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	1,2-Dichloro-benzene	1,2-Dichloro-ethane
3/14/95	U-4	ND	ND
	U-5	ND	ND
	U-6	ND	210
	U-7	ND	ND
12/06/94	U-1	ND	5.8
	U-2	ND	ND
	U-3	ND	430
9/15/94	U-1	ND	9.5
	U-2	ND	0.66
	U-3	ND	420
6/19/94	U-1	ND	7.4
	U-2	ND	0.54
	U-3	ND	410
3/25/94	U-1	ND	11
	U-2	ND	ND
	U-3	ND	480

ND = Non-detectable.

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

Note: All EPA method 8010 constituents were non-detectable, except as indicated above.

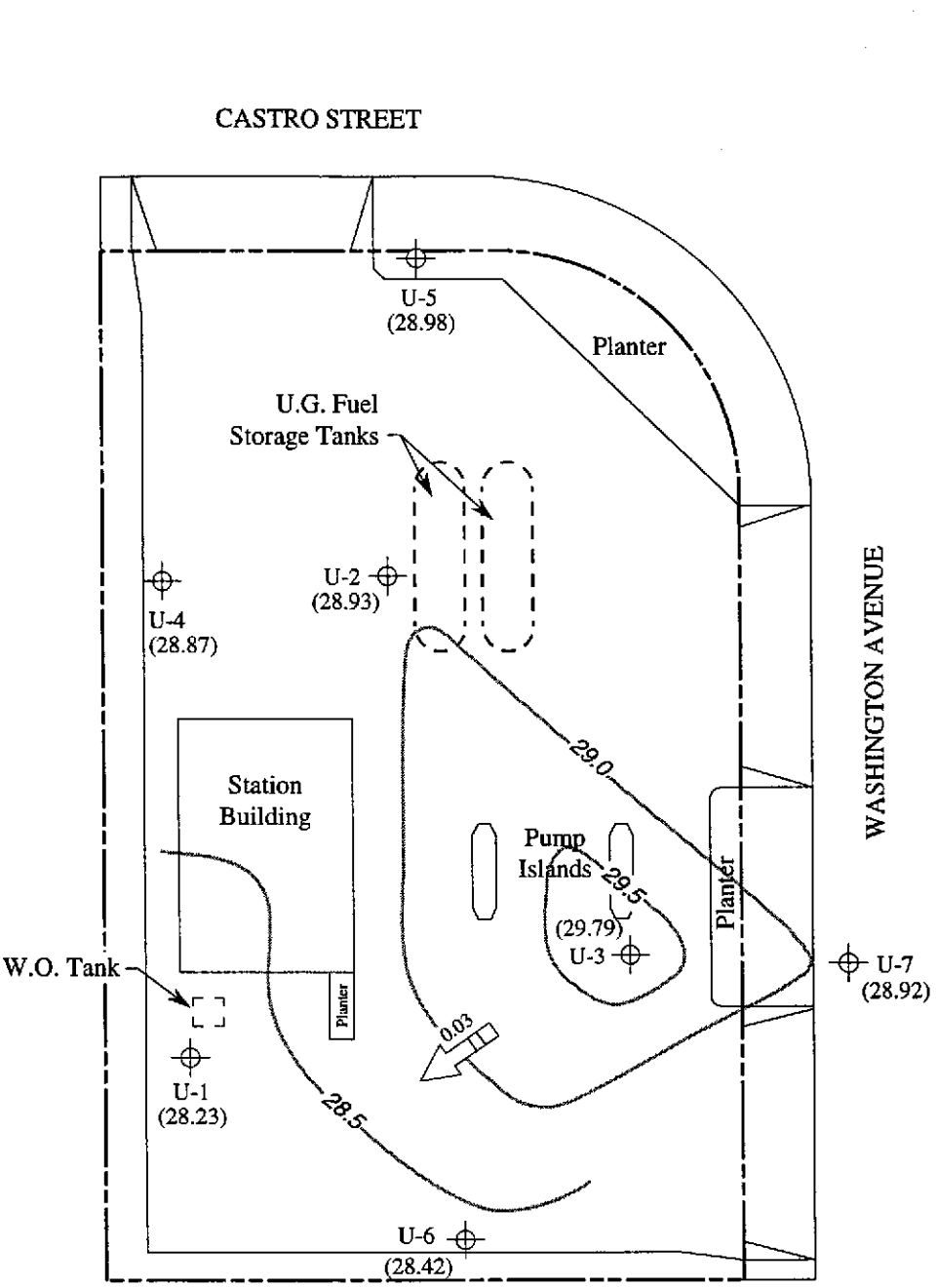


Base modified from 7.5 minute U.S.G.S. San Leandro Quadrangle
(photorevised 1980)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	**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 with approximate hydraulic gradient
- Contours of ground water elevation

0 30 60

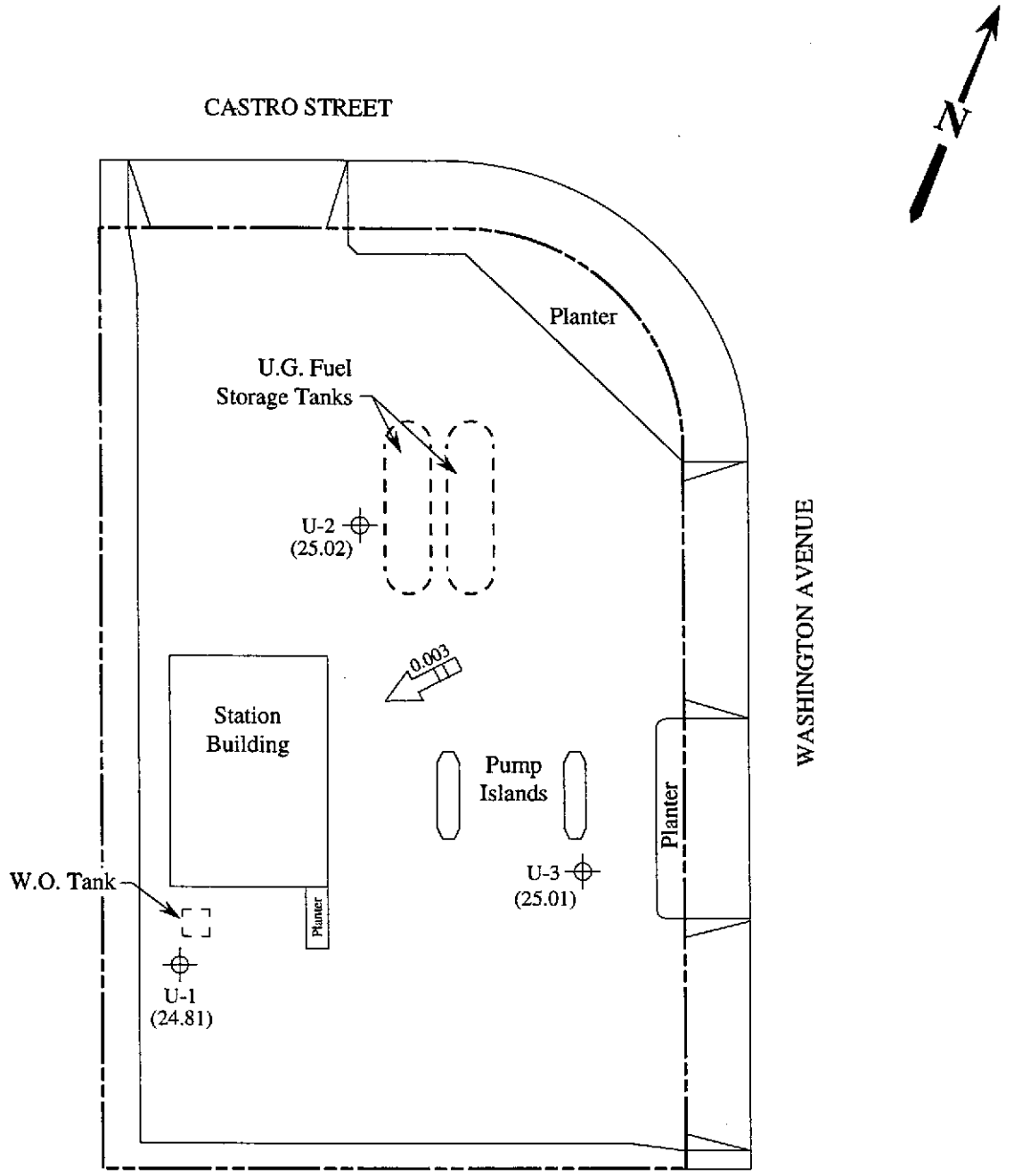
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE MARCH 14, 1995 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #5430
1935 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

FIGURE
1



LEGEND

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

0 30 60

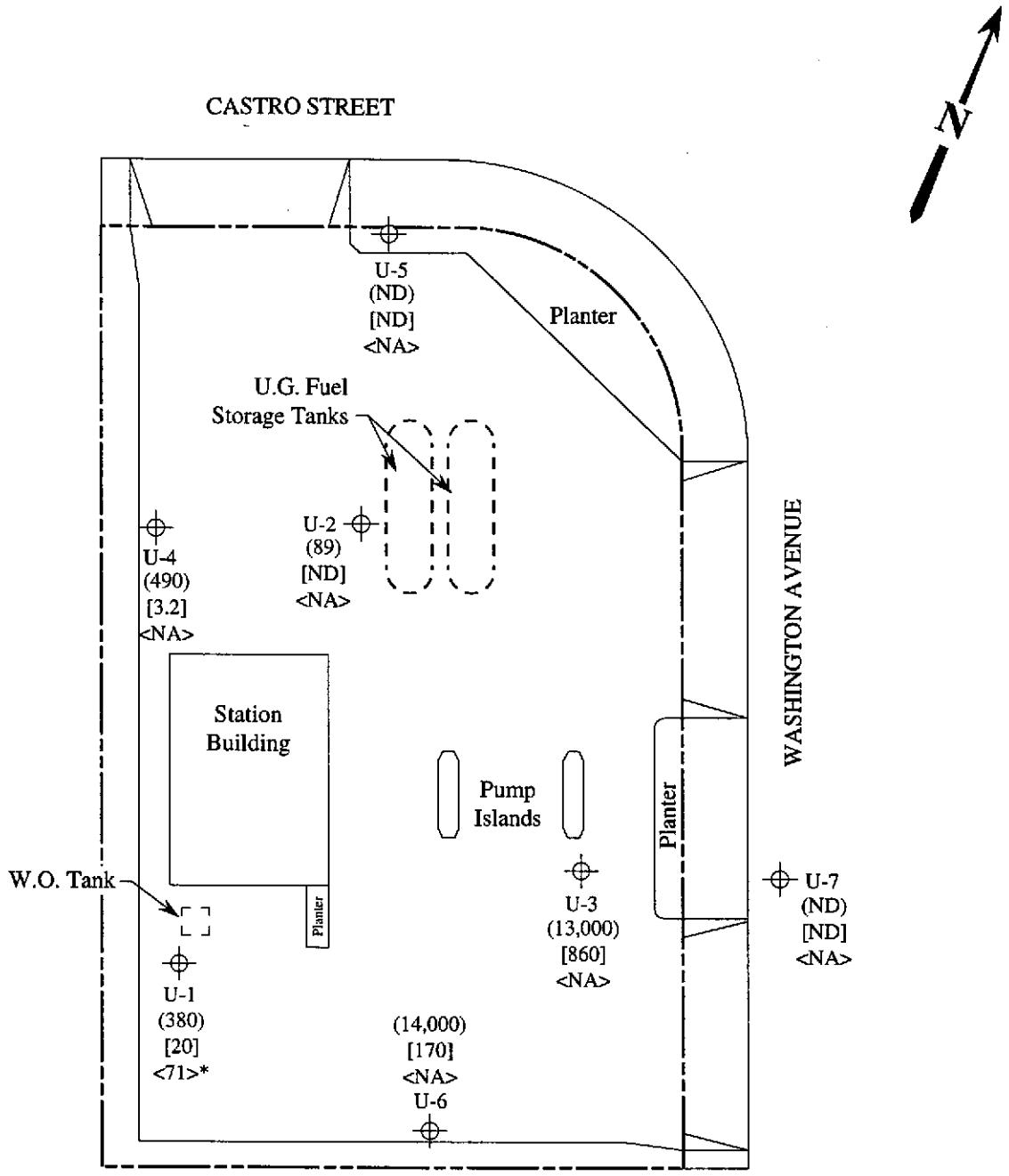
Approx. scale feet

GROUND WATER FLOW DIRECTION MAP FOR THE JANUARY 10, 1995 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #5430
1935 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

FIGURE
2



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 MARCH 14, 1995

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #5430** **1935 WASHINGTON AVENUE** **SAN LEANDRO, CALIFORNIA**	FIGURE **3**

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: Sarkis Karkarian

Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
Matrix Descript: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 503-0719

Sampled: Mar 14, 1995
Received: Mar 14, 1995
Reported: Mar 29, 1995

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
503-0719	U1	380	20	ND	ND	10
503-0720	U2	89	ND	ND	ND	1.2
503-0721	U3	13,000	860	120	1,300	1,700
503-0722	U4	490	3.2	2.1	0.79	1.2
503-0723	U5	ND	ND	ND	ND	1.2
503-0724	U6	14,000	170	36	790	1,500
503-0725	U7	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

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: Sarkis Karkarian

Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
Matrix Descript: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 503-0719

Sampled: Mar 14, 1995
Received: Mar 14, 1995
Reported: Mar 29, 1995

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%)
503-0719	U1	Gasoline	1.0	3/24/95	HP-5	80
503-0720	U2	Gasoline	1.0	3/24/95	HP-5	84
503-0721	U3	Gasoline	1.0	3/28/95	HP-2	125
503-0722	U4	Gasoline	1.0	3/24/95	HP-5	70
503-0723	U5	--	1.0	3/24/95	HP-2	100
503-0724	U6	Gasoline	20	3/24/95	HP-5	69
503-0725	U7	--	1.0	3/24/95	HP-2	101

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
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 #5430, 1935 Washington Ave., San Leandro	Sampled:	Mar 14, 1995
2401 Stanwell Dr., Ste. 300	Sample Matrix: Water	Received:	Mar 14, 1995
Concord, CA 94520	Analysis Method: EPA 3510/8015	Reported:	Mar 29, 1995
Attention: Sarkis Karkarian	First Sample #: 503-0719		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 503-0719 U1*
Extractable Hydrocarbons	50	71
Chromatogram Pattern:		Unidentified Hydrocarbons <C14

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	3/20/95
Date Analyzed:	3/21/95
Instrument Identification:	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:
* "Unidentified Hydrocarbons <C14" are probably gasoline.

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: Sarkis Karkarian

Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
Sample Descript: Water, U4
Analysis Method: EPA 5030/8010
Lab Number: 503-0722

Sampled: Mar 14, 1995
Received: Mar 14, 1995
Analyzed: Mar 21, 1995
Reported: Mar 29, 1995

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, #1210

Signature on File

Alan B. Kemp
Project Manager

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 #5430, 1935 Washington Ave., San Leandro	Sampled:	Mar 14, 1995
2401 Stanwell Dr., Ste. 300	Sample Descript: Water, U5	Received:	Mar 14, 1995
Concord, CA 94520	Analysis Method: EPA 5030/8010	Analyzed:	Mar 21, 1995
Attention: Sarkis Karkarian	Lab Number: 503-0723	Reported:	Mar 29, 1995

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, #1210

Signature on File

Alan B. Kemp
Project Manager

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MPDS Services	Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro	Sampled:	Mar 14, 1995
2401 Stanwell Dr., Ste. 300	Sample Descript: Water, U6	Received:	Mar 14, 1995
Concord, CA 94520	Analysis Method: EPA 5030/8010	Analyzed:	Mar 21, 1995
Attention: Sarkis Karkarian	Lab Number: 503-0724	Reported:	Mar 29, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	5.0	N.D.
2-Chloroethylvinyl ether	5.0	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	2.5	N.D.
1,2-Dichloroethane	**2.5**	**210**
1,1-Dichloroethene	2.5	N.D.
cis-1,2-Dichloroethene	2.5	N.D.
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	2.5	N.D.
1,1,1-Trichloroethane	2.5	N.D.
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	2.5	N.D.
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp
Project Manager

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MPDS Services	Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro	Sampled:	Mar 14, 1995
2401 Stanwell Dr., Ste. 300	Sample Descript: Water, U7	Received:	Mar 14, 1995
Concord, CA 94520	Analysis Method: EPA 5030/8010	Analyzed:	Mar 22, 1995
Attention: Sarkis Karkarian	Lab Number: 503-0725	Reported:	Mar 29, 1995

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, #1210

Signature on File

Alan B. Kemp
Project Manager

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Sarkis Karkarian

Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
Matrix: Liquid
QC Sample Group: 5030719-725
Reported: Mar 30, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon
MS/MSD Batch#:	5030898	5030898	5030898	5030898
Date Prepared:	2/28/95	2/28/95	2/28/95	2/28/95
Date Analyzed:	2/28/95	2/28/95	2/28/95	2/28/95
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:	125	120	130	125
Matrix Spike Duplicate % Recovery:	120	120	125	125
Relative % Difference:	4.1	0.0	3.9	0.0
LCS Batch#:	1LCS032895	1LCS032895	1LCS032895	1LCS032895
Date Prepared:	2/28/95	2/28/95	2/28/95	2/28/95
Date Analyzed:	2/28/95	2/28/95	2/28/95	2/28/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	124	122	130	128
% Recovery Control Limits:	71-133	72-128	72-130	71-120

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.

Sequoia Analytical

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Sarkis Karkarian

Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
Matrix: Liquid
QC Sample Group: 5030719-725
Reported: Mar 30, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon
MS/MSD Batch#:	5030562	5030562	5030562	5030562
Date Prepared:	3/24/95	3/24/95	3/24/95	3/24/95
Date Analyzed:	3/24/95	3/24/95	3/24/95	3/24/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	95	95	90	92
Matrix Spike Duplicate % Recovery:	85	85	85	87
Relative % Difference:	11	11	5.7	5.6
LCS Batch#:	3LCS032495	3LCS032495	3LCS032495	3LCS032495
Date Prepared:	3/24/95	3/24/95	3/24/95	3/24/95
Date Analyzed:	3/24/95	3/24/95	3/24/95	3/24/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	89	87	88	89
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Sarkis Karkarian

Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
Matrix: Liquid
QC Sample Group: 5030719-725
Reported: Mar 30, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay
MS/MSD Batch#:	5030523	5030523	5030523	5030523	BLK037095
Date Prepared:	3/24/95	3/24/95	3/24/95	3/24/95	3/20/95
Date Analyzed:	3/24/95	3/24/95	3/24/95	3/24/95	3/21/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	105	100	105	107	54
Matrix Spike Duplicate % Recovery:	105	105	110	107	63
Relative % Difference:	0.0	4.9	4.7	0.0	15
LCS Batch#:	1LCS032495	1LCS032495	1LCS032495	1LCS032495	BLK032095
Date Prepared:	3/24/95	3/24/95	3/24/95	3/24/95	3/20/95
Date Analyzed:	3/24/95	3/24/95	3/24/95	3/24/95	3/21/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A
LCS % Recovery:	118	117	122	122	63
% Recovery Control Limits:	71-133	72-128	72-130	71-120	75-125

SEQUOIA ANALYTICAL, #1271

Signature on File

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Project Manager

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Sarkis Karkarian

Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
Matrix: Liquid
QC Sample Group: 5030719-725
Reported: Mar 30, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	H. Porter	H. Porter	H. Porter
MS/MSD Batch#:	9503c14-07	9503c14-07	9503c14-07
Date Prepared:	3/20/95	3/20/95	3/20/95
Date Analyzed:	3/21/95	3/21/95	3/21/95
Instrument I.D.#:	GCHP08	GCHP08	GCHP08
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
Matrix Spike % Recovery:	96	52	92
Matrix Spike Duplicate % Recovery:	112	64	108
Relative % Difference:	8.0	4.5	16
LCS Batch#:	VBLK032095BS	VBLK032095BS	BLK032095BS
Date Prepared:	3/20/95	3/20/95	3/20/95
Date Analyzed:	3/21/95	3/21/95	3/21/95
Instrument I.D.#:	GCHP08	GCHP08	GCHP08
LCS % Recovery:	116	112	108
% Recovery Control Limits:	28-167	35-146	38-150

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp
Project Manager

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

CHAIN OF CUSTODY

SAMPLER: RAY MARANGOSIAN

WITNESSING AGENCY:

UNOCAL S/S # 5430 CITY: SAN LEANDRO

ADDRESS: 1935 WASHINGTON AVE

ANALYSES REQUESTED

TURN AROUND TIME: 5 DAYS

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010					REMARKS
U1	3-14-95	10:20	X	X		3	Well	X	X							5020719 AC
U2	"	14:20	X	X		2	"	X								5020720 AB
U3	"	15:20	X	X		4	"	X								5020721 ↓
U4	"	13:40	X	X		4	"	X			X					5020722 AD
U5	"	12:50	X	X		4	"	X			X					5020723
U6	"	11:10	X	X		4	"	X			X					5020724
U7	"	12:10	X	X		4	"	X			X					5020725 ↓

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
Ray Marangosian	3.14.95 17:45	D.I	3/14/95 1745
(SIGNATURE)	1320 3-15	(SIGNATURE)	1320 3-15
(SIGNATURE)	3-15	(SIGNATURE) RB Kelley	3/15/95 3:00 pm
(SIGNATURE)		(SIGNATURE)	
(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: D.I TITLE: 3/14/95 Analyst DATE: 3/14/95

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.