

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS

SERVICES, INCORPORATED

August 9, 1994

Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

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

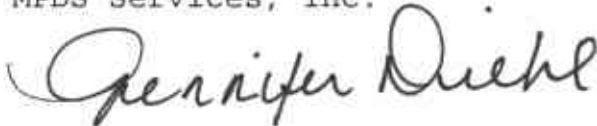
HAZARDOUS
9th AUG 11 PM 3:50

Per the request of the Unocal Corporation Project Manager,
Mr. David J. Camille, enclosed please find our report (MPDS-UN5430-
03) dated July 20, 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.



Jennifer Diehl

/jd

Enclosure

cc: Mr. David J. Camille



PACIFIC
ENVIRONMENTAL
GROUP, INC.

ALCO
HAZMAT
94 JUL 25 PM 3:01

July 18, 1994
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
Second Quarter 1994

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:

<u>Service Station</u>	<u>Location</u>
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. Michael Bakaldin, San Leandro Fire Department
Mr. Scott Seery, Alameda County Environmental Health Care Services

**Quarterly Summary Report
Second Quarter 1994**

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

Second quarter 1994 groundwater monitoring was performed by MPDS Services in June 1994.

NEXT QUARTER ACTIVITIES

Quarterly groundwater monitoring and sampling will be performed by MPDS Services in September 1994.

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.

MPDS-UN5430-03
July 20, 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 directions during the most recent quarter are shown on the attached Figures 1 and 2.

Ground water samples were collected on June 19, 1994. Prior to sampling, the wells were each purged of between 4 and 5.5 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. 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 at (510) 602-5120.

Sincerely,

MPDS Services, Inc.



Sarkis A. Karkarian
Staff Engineer



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

License No. EG 1633
Exp. Date 8/31/96

/dlh

Attachments: Tables 1 through 4
Location Map
Figures 1 through 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)♦	Product Thickness (feet)	Sheen	Water Purged (gallons)	Total Well Depth (feet)♦
--------	-------------------------------	------------------------	--------------------------	-------	------------------------	--------------------------

(Monitored and Sampled on June 19, 1994)

U-1	23.84	32.26	0	No	4	39.65
U-2	23.96	31.31	0	No	5.5	39.36
U-3	24.05	31.19	0	No	5	38.46

(Monitored on May 18, 1994)

U-1	24.34	31.76	0	--	0	
U-2	24.54	30.73	0	--	0	
U-3	24.58	30.66	0	--	0	

April?

(Monitored and Sampled on March 25, 1994)

U-1	25.03	31.07	0	No	6	39.62
U-2	25.18	30.09	0	No	6.5	39.33
U-3	25.21	30.03	0	No	6	38.45

(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 and Sampled on August 13, 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

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

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

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 June 19, 1994)

Well #	Gallons per Casing Volume	Time	Gallons Purged	Casing Volumes Purged	Temper- ature (°F)	Conductivity ([μmhos/cm] x1000)	pH	
U-1	1.26	9:50	0	0	69.2	1.30	6.99	
			1.5	1.19	69.1	1.26	6.74	
			2.5	1.98	68.7	1.29	6.54	
	WELL DEWATERED							
			10:10	3.5	2.78	69.1	1.27	6.54
			10:12	4	3.17			
WELL DEWATERED								
U-2	1.37	10:55	0	0	75.4	0.92	6.83	
			1.5	1.09	72.0	0.86	6.65	
			3	2.19	70.4	0.88	6.57	
			4	2.92	70.2	0.88	6.49	
			11:05	5.5	4.01	70.0	0.90	6.42
U-3	1.24	11:30	0	0	77.0	1.40	6.31	
			1	0.81	72.2	1.33	6.27	
			2.5	2.02	70.8	1.30	6.26	
			3.5	2.82	70.5	1.32	6.25	
			11:40	5	4.03	69.9	1.29	6.22

TABLE 3

**SUMMARY OF LABORATORY ANALYSES
WATER**

<u>Date</u>	<u>Well#</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
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

▲ Total Oil and Grease (TOG) was non-detectable.

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

* 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 ($\mu\text{g/L}$), unless otherwise indicated.

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

TABLE 4

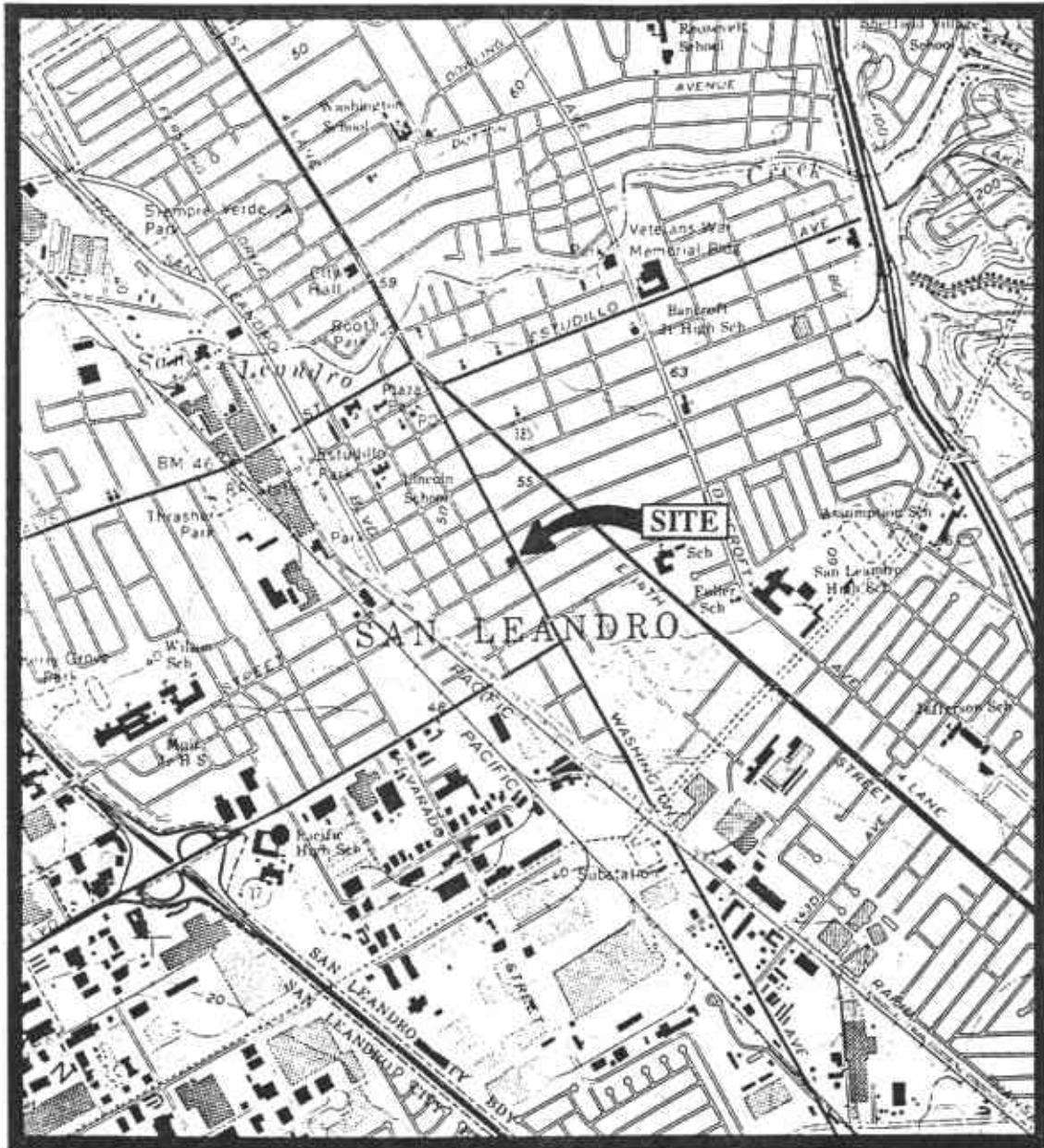
**SUMMARY OF LABORATORY ANALYSES
WATER**

<u>Date</u>	<u>Well #</u>	<u>1,2-Dichloro- benzene</u>	<u>1,2-Dichloro- ethane</u>
6/19/94	U-1	ND	7.4
	U-2	ND	0.54
	U-3	410	ND
3/25/94	U-1	ND	11
	U-2	ND	ND
	U-3	ND	480

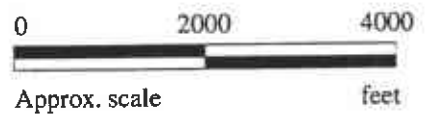
ND = Non-detectable.

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

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



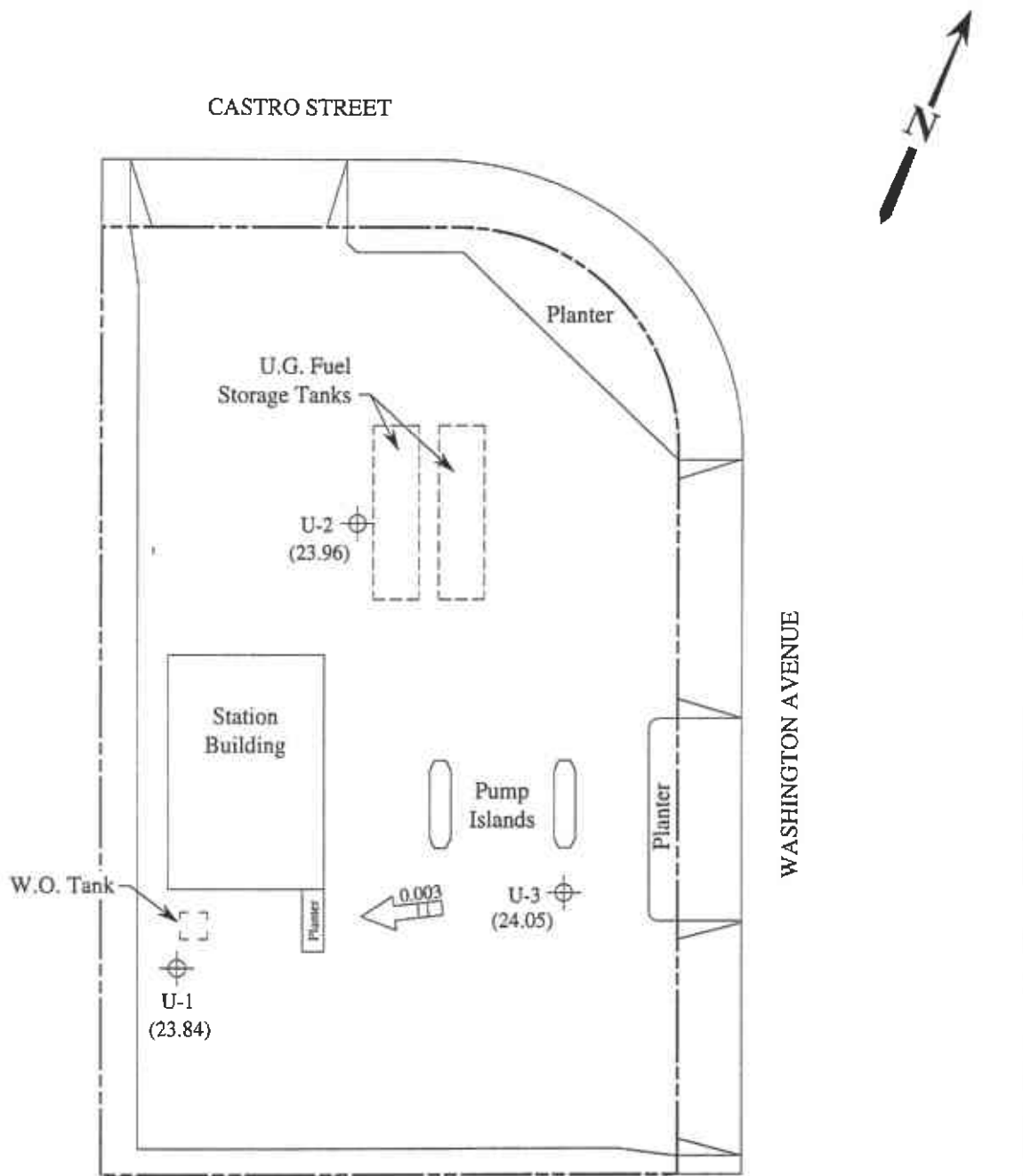
Base modified from 7.5 minute U.S.G.S. San Leandro Quadrangle
(photorevised 1980)



MPDS
SERVICES, INCORPORATED

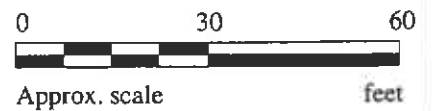
**UNOCAL SERVICE STATION #5430
1935 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA**

**LOCATION
MAP**



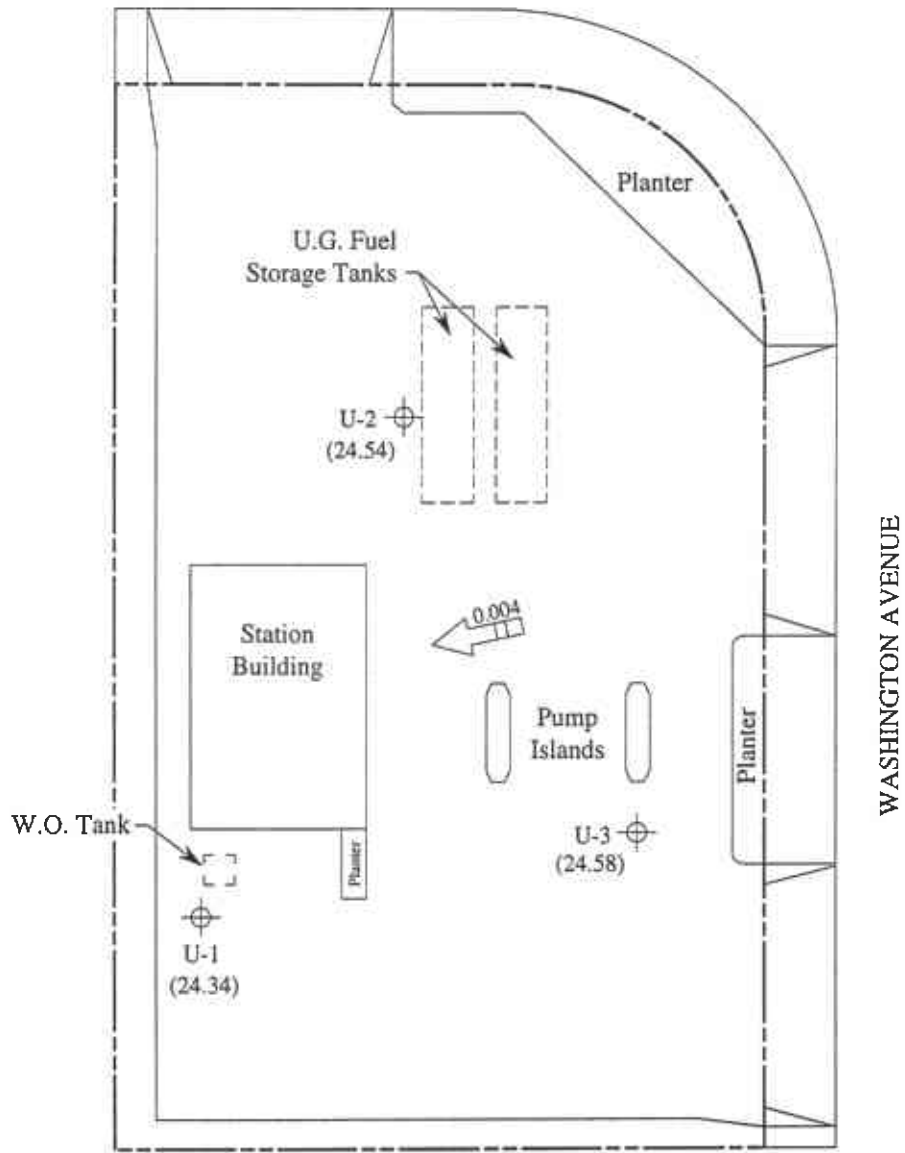
LEGEND

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






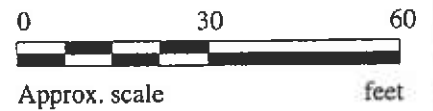
GROUND WATER FLOW DIRECTION MAP FOR THE UNOCAL SERVICE STATION #5430 MONITORING EVENT

CASTRO STREET



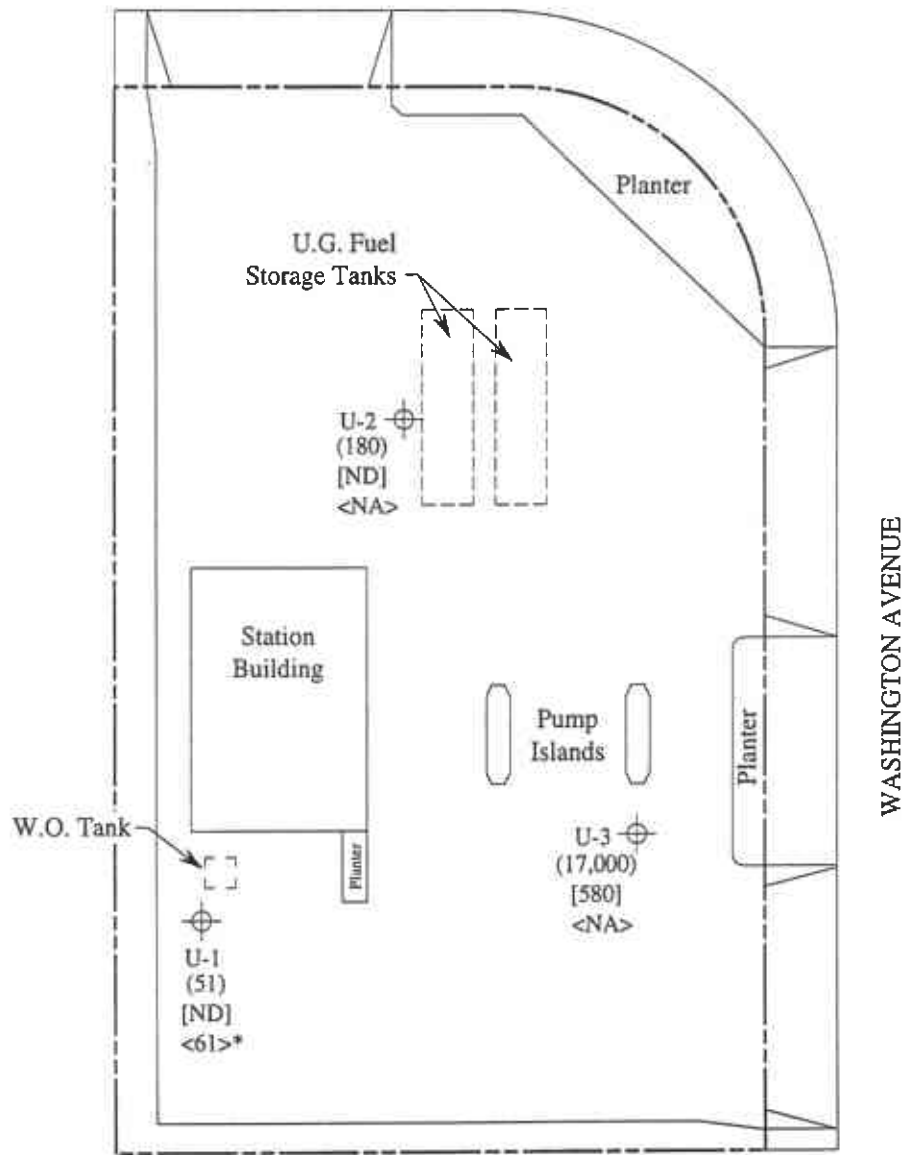
LEGEND

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



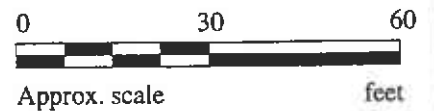
GROUND WATER FLOW DIRECTION MAP FOR THE [REDACTED] MONITORING EVENT

CASTRO STREET



LEGEND

- ⊕ Monitoring well
- () Concentration of TPH as gasoline in $\mu\text{g/L}$
- [] Concentration of benzene in $\mu\text{g/L}$
- < > Concentration of TPH as diesel in $\mu\text{g/L}$
- ND = Non-detectable, NA = Not analyzed
- * The lab reported that the hydrocarbons detected did not appear to be diesel.



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER



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

**FIGURE
3**



MPDS Services Client Project ID: Unocal #5430, 1935 Washington Ave., Sampled: Jun 19, 1994
2401 Stanwell Dr., Ste. 400 Sample Matrix: Water San Leandro Received: Jun 20, 1994
Concord, CA 94520 Analysis Method: EPA 5030/8015/8020 Reported: Jul 5, 1994
Attention: Avo Avedessian First Sample #: 406-0852

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Table with 5 columns: Analyte, Reporting Limit (µg/L), Sample I.D. (406-0852 U-1), Sample I.D. (406-0853 U-2*), Sample I.D. (406-0854 U-3). Rows include Purgeable Hydrocarbons, Benzene, Toluene, Ethyl Benzene, Total Xylenes, and Chromatogram Pattern.

Quality Control Data

Table with 4 columns: Parameter, Sample 1, Sample 2, Sample 3. Rows include Report Limit Multiplication Factor, Date Analyzed, Instrument Identification, and Surrogate Recovery, %.

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

SEQUOIA ANALYTICAL, #1271

Signature of Alan B. Kemp, Project Manager

Please Note: *This sample appears to contain Gasoline and Non-Gasoline Mixtures. Decrete Peak refers to an unidentified Peak in the MTBE Range





MPDS Services	Client Project ID: Unocal #5430, 1935 Washington Ave.,	Sampled: Jun 19, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix: Water	Received: Jun 20, 1994
Concord, CA 94520	Analysis Method: EPA 3510/3520/8015	Reported: Jul 5, 1994
Attention: Avo Avedessian	First Sample #: 406-0852	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 406-0852 U-1 *
Extractable Hydrocarbons	50	61
Chromatogram Pattern: Unidentified Hydrocarbons <C14		

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	6/20/94
Date Analyzed:	6/22/94
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


 Alan B. Kemp
 Project Manager

Please Note:
 *This sample does not appear to contain diesel. Unidentified hydrocarbons <C14 is probably gasoline.





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

Client Project ID: Unocal #5430, 1935 Washington Ave.,
Matrix Descript: Water San Leandro
Analysis Method: SM 5520 B&F (Gravimetric)
First Sample #: 406-0852

Sampled: Jun 19, 1994
Received: Jun 20, 1994
Extracted: Jun 20, 1994
Analyzed: Jun 21, 1994
Reported: Jul 5, 1994

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
406-0852	U-1	N.D.

Detection Limits: 5.0

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





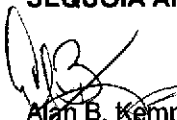
MPDS Services 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Avo Avedessian	Client Project ID: Unocal #5430, 1935 Washington Ave., Sample Descript: Water, U-1 Analysis Method: EPA 5030/8010 Lab Number: 406-0852	San Leandro Received: Jun 20, 1994 Analyzed: Jun 28, 1994 Reported: Jul 5, 1994
--	---	--

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	7.4
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


Alan B. Kemp
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Avo Avedessian	Client Project ID: Unocal #5430, 1935 Washington Ave., Sample Descript: Water, U-2 Analysis Method: EPA 5030/8010 Lab Number: 406-0853	San Leandro Received: Jun 20, 1994 Analyzed: Jun 28, 1994 Reported: Jul 5, 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	0.54
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

Alan B. Kemp
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Avo Avedessian	Client Project ID: Unocal #5430, 1935 Washington Ave., Sample Descript: Water, U-3 Analysis Method: EPA 5030/8010 Lab Number: 406-0854	San Leandro Sampled: Jun 19, 1994 Received: Jun 20, 1994 Analyzed: Jun 29, 1994 Reported: Jul 5, 1994
--	---	---

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	50	N.D.
Bromoform.....	50	N.D.
Bromomethane.....	100	N.D.
Carbon tetrachloride.....	50	N.D.
Chlorobenzene.....	50	N.D.
Chloroethane.....	100	N.D.
2-Chloroethylvinyl ether.....	100	N.D.
Chloroform.....	50	N.D.
Chloromethane.....	100	N.D.
Dibromochloromethane.....	50	N.D.
1,3-Dichlorobenzene.....	50	N.D.
1,4-Dichlorobenzene.....	50	N.D.
1,2-Dichlorobenzene.....	50	410
1,1-Dichloroethane.....	50	N.D.
1,2-Dichloroethane.....	50	N.D.
1,1-Dichloroethene.....	50	N.D.
cis-1,2-Dichloroethene.....	50	N.D.
trans-1,2-Dichloroethene.....	50	N.D.
1,2-Dichloropropane.....	50	N.D.
cis-1,3-Dichloropropene.....	50	N.D.
trans-1,3-Dichloropropene.....	50	N.D.
Methylene chloride.....	500	N.D.
1,1,2,2-Tetrachloroethane.....	50	N.D.
Tetrachloroethene.....	50	N.D.
1,1,1-Trichloroethane.....	50	N.D.
1,1,2-Trichloroethane.....	50	N.D.
Trichloroethene.....	50	N.D.
Trichlorofluoromethane.....	50	N.D.
Vinyl chloride.....	100	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, #1271


Alan B. Kemp
Project Manager





MPDS Services Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
 2401 Stanwell Dr., Ste. 400 Matrix: Liquid
 Concord, CA 94520
 Attention: Avo Avedessian QC Sample Group: 406-0852 Reported: Jul 5, 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:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	K. Wimer	K. Wimer

MS/MSD Batch#:	4060857	4060857	4060857	4060857	BLK062094	BLK062094
Date Prepared:	6/27/94	6/27/94	6/27/94	6/27/94	6/22/94	6/20/94
Date Analyzed:	6/27/94	6/27/94	6/27/94	6/27/94	6/22/94	6/21/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A	N/A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L	5000 mg/L
Matrix Spike % Recovery:	100	100	100	100	94	100
Matrix Spike Duplicate % Recovery:	100	100	100	100	92	90
Relative % Difference:	0.0	0.0	0.0	0.0	2.5	11

LCS Batch#:	1LCS062794	1LCS062794	1LCS062794	1LCS062794	BLK062094	BLK062094
Date Prepared:	6/27/94	6/27/94	6/27/94	6/27/94	6/22/94	6/20/94
Date Analyzed:	6/27/94	6/27/94	6/27/94	6/27/94	6/22/94	6/21/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A	N/A
LCS % Recovery:	95	95	94	96	94	100

% Recovery Control Limits:	71-133	72-128	72-130	71-120	82-122	75-125
-----------------------------------	--------	--------	--------	--------	--------	--------

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, #1271

Alan B. Kemp
 Project Manager





MPDS Services Client Project ID: Unocal #5430, 1935 Washington Ave., San Leandro
 2401 Stanwell Dr., Ste. 400 Matrix: Liquid
 Concord, CA 94520
 Attention: Avo Avedessian QC Sample Group: 4060852-54 Reported: Jul 5, 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#:	4061203	4061203	4061203
Date Prepared:	Jun 28, 1994	Jun 28, 1994	Jun 28, 1994
Date Analyzed:	Jun 28, 1994	Jun 28, 1994	Jun 28, 1994
Instrument I.D.#:	HP5890/6	HP5890/6	HP5890/6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L
Matrix Spike % Recovery:	49	92	93
Matrix Spike Duplicate % Recovery:	49	105	100
Relative % Difference:	0.0	13	7.3

LCS Batch#:	LCS062894	LCS062894	LCS062894
Date Prepared:	Jun 28, 1994	Jun 28, 1994	Jun 28, 1994
Date Analyzed:	Jun 28, 1994	Jun 28, 1994	Jun 28, 1994
Instrument I.D.#:	HP5890/6	HP5890/6	HP5890/6
LCS % Recovery:	93	87	91

% Recovery Control Limits:	28-167	35-146	38-150
-----------------------------------	--------	--------	--------

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, #1271

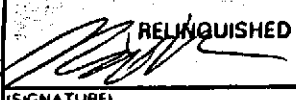
Alan B. Kemp
 Alan B. Kemp
 Project Manager



CHAIN OF CUSTODY

SAMPLER NICHOLAS PERROW			UNOCAL S/S # <u>5430</u> CITY: <u>SAN LEANDRO</u>					ANALYSES REQUESTED								TURN AROUND TIME: REGULAR REMARKS
WITNESSING AGENCY			ADDRESS: <u>1935 WASHINGTON AVE</u>					TPH-GAS BTEX	TPH-DIESEL	TOG	8010					
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010					
U-1	6/19/94	10:30 AM	✓	✓		4 VOAS 2 AMBERS	WELL	✓	✓	✓	✓					
U-2	"	11:15 AM	✓	✓		4 VOAS	"	✓			✓					
U-3	"	11:55 AM	✓	✓		4 VOAS	"	✓			✓					

4060852 AF
 4060853 AD
 4060854 ↓

RELINQUISHED BY:  (SIGNATURE)	DATE/TIME 6/19/94 8:50 AM	RECEIVED BY: Melissa Crouse (SIGNATURE)	THE FOLLOWING <u>MUST BE</u> 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: Melissa Crouse		TITLE: Sample Control		DATE: 6/20/94