

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS

SERVICES, INCORPORATED

95 JUN -6 AM 11:22

RM/02

June 5, 1995

Ms. Cynthia Chapman
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

RE: Unocal Service Station #3135
845 - 66th Avenue
Oakland, California

Dear Ms. Chapman:

Per the request of the Unocal Corporation Project Manager, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN3135-06) dated May 23, 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) 277-2321.

Sincerely,

MPDS Services, Inc.


Jarrel F. Crider

/jfc

Enclosure

cc: Ms. Tina R. Berry

95 JUN -6 AM 11:22

MPDS-UN3135-06
May 23, 1995

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 #3135
845 - 66th Avenue
Oakland, 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 directions during the most recent quarter are shown on the attached Figures 1 & 2.

Ground water samples were collected on May 2, 1995. Prior to sampling, the wells were each purged of between 11 and 14 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 Table 2. 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 Ms. Cynthia Chapman of the Alameda County Health Care Services Agency.

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

cc: Mr. Robert H. Kezerian, 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)
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(Monitored and Sampled on May 2, 1995)

MW1	-1.58	6.57	22.71	0	No	11
MW2	-1.46	5.03	22.55	0	No	12
MW3	-0.99	4.11	21.67	0	No	12
MW4	-0.81	5.74	25.08	0	No	13.5
MW5*	-1.58	5.85	26.11	0	--	0
MW6	-1.55	5.58	25.80	0	No	14
MW7*	-1.31	5.73	19.86	0	--	0
MW8*	-1.30	5.73	23.10	0	--	0
MW9*	-1.26	5.86	23.08	0	--	0
MW10	-2.11	4.80	23.10	0	No	12.5

(Monitored on March 3, 1995)

MW1	-1.74	6.73	★	0	--	0
MW2	-1.60	5.17	★	0	--	0
MW3	-1.15	4.27	★	0	--	0
MW4	-1.89	6.82	★	0	--	0
MW5	-1.72	5.99	★	0	--	0
MW6	-1.68	5.71	★	0	--	0
MW7	-1.55	5.97	★	0	--	0
MW8	-1.38	5.81	★	0	--	0
MW9	-1.30	5.90	★	0	--	0
MW10	-2.25	4.94	★	0	--	0

(Monitored and Sampled on February 1, 1995)

MW1	-1.05	6.04	22.75	0	No	11.5
MW2	-0.97	4.54	22.60	0	No	12.5
MW3	-0.72	3.84	21.64	0	No	12.5
MW4	-0.80	5.73	25.26	0	No	13.5
MW5	-0.97	5.24	26.06	0	No	15
MW6	-0.95	4.98	25.82	0	No	14.5
MW7	-1.01	5.43	19.74	0	No	10
MW8	-0.59	5.02	23.13	0	No	12.5
MW9	-0.58	5.18	23.10	0	No	12.5
MW10	-1.57	4.26	23.14	0	No	13

TABLE 1 (Continued)

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 November 7, 1994)

MW1	-3.27	8.26	22.74	0	No	10
MW2	-2.47	6.04	22.44	0	No	11.5
MW3	-2.93	6.05	21.64	0	No	11
MW4	-3.71	8.64	25.24	0	No	11.5
MW5*	-3.29	7.56	26.05	0	--	0
MW6	-2.75	6.78	25.81	0	No	13
MW7*	-3.44	7.86	19.75	0	--	0
MW8*	-2.13	6.56	23.12	0	--	0
MW9*	-1.84	6.44	23.14	0	--	0
MW10	-3.39	6.08	23.14	0	No	12

(Monitored and Sampled on August 2, 1994)

MW1	-3.77	8.76	22.71	0	No	9.5
MW2	-3.18	6.75	22.43	0	No	11
MW3	-2.72	5.84	21.60	0	No	11
MW4	-3.98	8.91	25.23	0	No	11.5
MW5	-3.78	8.05	26.03	0	No	12.5
MW6	-3.63	7.66	25.71	0	No	12.5
MW7	-3.56	7.98	19.70	0	No	8
MW8	-3.80	8.23	23.10	0	No	10.5
MW9	-3.74	8.34	23.10	0	No	10.5
MW10	-3.98	6.67	23.09	0	No	11.5

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Well Casing Elevation (feet)**</u>
MW1	4.99
MW2	3.57
MW3	3.12
MW4	4.93
MW5	4.27
MW6	4.03
MW7	4.42
MW8	4.43
MW9	4.60
MW10	2.69

- ◆ 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 City of Oakland Benchmark No. 3881 (elevation = 4.72 feet MSL).
- Sheen determination was not performed.
- * Total well depth not measured.

TABLE 2

**SUMMARY OF LABORATORY ANALYSES
 WATER**

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
5/02/95	MW1	120♦	460	14	ND	14	13
	MW2	2,300♦♦	5,600	150	ND	150	180
	MW3	56	360*	ND	ND	ND	ND
	MW4	2,500♦	5,400	36	ND	130	710
	MW5	SAMPLED SEMI-ANNUALLY					
	MW6	3,600♦♦	59,000	4,700	4,400	4,000	18,000
	MW7	SAMPLED SEMI-ANNUALLY					
	MW8	SAMPLED SEMI-ANNUALLY					
	MW9	SAMPLED SEMI-ANNUALLY					
	MW10	99	840*	ND	ND	ND	9.5
2/01/95	MW1	ND	120	1.7	ND	ND	ND
	MW2	1,800♦	9,300	300	210	630	2,600
	MW3	ND	100*	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND	ND
	MW5	ND	ND	ND	ND	ND	ND
	MW6	2,700♦♦	55,000	7,700	9,100	4,500	20,000
	MW7	ND	ND	ND	ND	ND	ND
	MW8	ND	ND	ND	ND	ND	ND
	MW9	65♦	ND	ND	ND	ND	ND
	MW10	72♦	560*	ND	ND	ND	ND
11/07/94	MW1	270♦	890	16	ND	31	21
	MW2	3,100♦♦	49,000	1,700	2,000	3,000	10,000
	MW3	ND	94*	ND	ND	ND	ND
	MW4	2,200♦	20,000	84	17	1,500	3,000
	MW5	SAMPLED SEMI-ANNUALLY					
	MW6	770♦	23,000	3,800	970	1,400	4,700
	MW7	SAMPLED SEMI-ANNUALLY					
	MW8	SAMPLED SEMI-ANNUALLY					
	MW9	SAMPLED SEMI-ANNUALLY					
	MW10	120♦♦	1,100*	ND	ND	ND	ND
8/02/94	MW1	130♦♦	700	13	0.62	2.0	3.6
	MW2	8,500♦	32,000	2,400	2,200	2,900	12,000
	MW3	76	150*	ND	ND	ND	ND
	MW4	2,500♦♦	17,000	38	ND	1,800	4,300
	MW5	ND	ND	ND	ND	ND	ND
	MW6	2,400♦♦	28,000	2,200	940	1,600	7,500
	MW7	ND	ND	ND	ND	ND	0.63
	MW8	ND	ND	ND	ND	ND	ND
	MW9	ND	ND	ND	ND	ND	ND
	MW10	110	95*	ND	ND	ND	ND

TABLE 2 (Continued)

**SUMMARY OF LABORATORY ANALYSES
 WATER**

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
5/05/94	MW1	ND	96*	ND	ND	ND	ND
	MW2	3,100♦♦	36,000	3,200	670	2,700	9,600
	MW3	66	62*	ND	ND	ND	ND
	MW4	2,000♦♦	6,900	17	ND	480	1,300
	MW5	SAMPLED	SEMI-ANNUALLY				
	MW6	630♦♦	2,600	430	99	24	420
	MW7	SAMPLED	SEMI-ANNUALLY				
	MW8	SAMPLED	SEMI-ANNUALLY				
	MW9	SAMPLED	SEMI-ANNUALLY				
	MW10	55	1,000*	ND	ND	ND	ND
2/10/94	MW1	ND	170*	0.90	2.3	ND	ND
	MW2	2,000♦♦	12,000	1,000	17	880	940
	MW3	50♦♦	ND	ND	ND	ND	0.84
	MW4	170♦	830	3.5	1.4	36	80
	MW5	ND	ND	ND	ND	ND	0.59
	MW6	ND	ND	3.5	ND	1.5	ND
	MW7	ND	ND	ND	ND	ND	ND
	MW8	ND	ND	ND	ND	ND	ND
	MW9	ND	ND	ND	ND	ND	ND
	MW10	71	1,480*	ND	ND	ND	ND
11/11/93	MW1	160♦♦	930	7.3	ND	25	19
	MW2	7,000♦♦	36,000	4,800	970	3,000	8,100
	MW3	51	ND	ND	ND	ND	ND
	MW4	4,000♦	16,000	110	12	1,800	3,800
	MW5	ND	ND	ND	ND	ND	ND
	MW6	650♦♦	3,000	470	ND	220	270
	MW7	66	ND	ND	ND	ND	ND
	MW8	ND	ND	ND	ND	ND	ND
	MW9	ND	ND	ND	ND	ND	ND
	MW10	88♦♦	1,600*	ND	ND	ND	ND
8/13/93	MW1	170♦♦	860	3.5	ND	17	20
	MW2	2,800♦♦	44,000	5,100	600	2,900	8,500
	MW3	ND	ND	ND	ND	ND	ND
	MW4	2,000♦♦	19,000	ND	ND	1,600	4,100
	MW5	ND	ND	ND	ND	ND	ND
	MW6	440♦♦	2,300	330	ND	95	40
	MW7	ND	ND	ND	ND	ND	ND
	MW8	ND	ND	ND	ND	ND	ND
	MW9	ND	ND	ND	ND	ND	ND
	MW10	97♦♦	1,500**	ND	ND	41	21

TABLE 2 (Continued)

**SUMMARY OF LABORATORY ANALYSES
 WATER**

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
5/17/93	MW1	490♦♦	960**	39	ND	57	60
	MW2	5,500♦♦	46,000	4,400	510	2,900	9,900
	MW3	53	ND	ND	ND	ND	ND
	MW4	3,100♦	2,500	ND	ND	170	410
	MW5	ND	ND	ND	ND	ND	ND
	MW6	1,400♦	4,900	890	46	210	530
	MW7	ND	ND	ND	ND	ND	ND
	MW8	ND	ND	ND	ND	ND	ND
	MW9	ND	ND	ND	ND	ND	ND
	MW10	ND	1,200*	ND	ND	ND	ND
2/03/93	MW1	ND	94**	ND	ND	1.4	1.6
	MW2▲	3,900♦	9,300	780	68	830	1,200
	MW3	ND	ND	ND	ND	ND	ND
	MW4	720♦♦	370	2.6	ND	1.2	53
	MW5	ND	ND	ND	ND	ND	ND
	MW6▲	ND	ND	1.2	ND	ND	ND
	MW8	ND	ND	ND	ND	ND	ND
	MW9	ND	ND	ND	ND	ND	ND
	MW10	ND	1,200*	ND	ND	ND	ND
	11/03/92	MW1	400♦	1,100	28	ND	80
MW2▲		9,600♦	40,000	5,600	130	3,000	6,100
MW3		52♦	ND	ND	ND	ND	ND
MW4		8,300♦	36,000	69	ND	3,000	7,400
MW5		ND	ND	ND	ND	ND	ND
MW6		220♦	920	45	0.76	12	110
MW8		ND	ND	ND	ND	ND	ND
MW9		ND	ND	ND	ND	ND	ND
MW10		160♦	740	11	2.1	32	56
8/03/92		MW1	220♦	980	22	0.69	77
	MW2▲	3,300♦♦	37,000	4,500	480	3,300	9,700
	MW3	58	ND	ND	ND	ND	ND
	MW4	2,400♦	24,000	61	ND	2,100	5,400
	MW5	ND	ND	ND	ND	ND	ND
	MW6▲	170♦	1,100	180	1.1	62	78
5/05/92	MW1	120	310	5.7	ND	7.1	15
	MW2▲	4,600	26,000	2,300	110	2,700	6,900
	MW3	56	ND	ND	ND	0.43	1.8
	MW4	3,200	15,000	82	12	2,000	5,600
	MW5	72	ND	ND	ND	0.42	1.4
	MW6▲	47	ND	ND	ND	ND	1.3

TABLE 2 (Continued)

**SUMMARY OF LABORATORY ANALYSES
 WATER**

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
2/07/92	MW1	ND	220	2.1	ND	10	16
	MW2▲	2,300	11,000	1,400	30	1,900	1,400
	MW3	ND	ND	ND	ND	ND	ND
	MW4	2,300	8,100	24	4.9	1,800	3,200
	MW5	ND	ND	ND	ND	0.36	0.94
	MW6▲	ND	180	22	0.68	22	20
11/05/91	MW1	260	4,900	80	ND	150	160
	MW2▲▲	3,900	110,000	4,200	200	3,400	8,600
	MW3	ND	31	ND	ND	ND	0.65
	MW4	7,700	140,000	320	ND	4,800	13,000
	MW5	ND	ND	ND	ND	ND	ND
	MW6▲	300	7,100	200	ND	190	580
8/05/91	MW1	200	1,200	95	6.2	230	80
	MW2▲	4,200	33,000	2,900	190	3,400	7,900
	MW3	63	ND	ND	ND	ND	ND
	MW4	6,200	37,000	310	70	3,600	9,700
	MW5	ND	ND	ND	ND	ND	ND
	MW6▲	130	860	130	11	92	150
2/21/91	MW1	690	26,000	280	39	1,200	1,900
	MW2▲	7,000	3,400	160	61	200	490
	MW3	--	ND	ND	ND	ND	0.64
	MW4	4,100	33,000	210	21	3,800	12,000
	MW5	--	56	ND	ND	ND	4.7
	MW6▲	160	750	77	14	23	140
	MWD	--	740	74	12	33	140
Duplicate (MW6)							
11/26/90	MW1	--	2,900	160	2.3	330	320
	MW2▲	3,800	15,000	1,600	450	1,100	2,100
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	49,000	360	36	3,800	11,000
	MW5	--	ND	ND	ND	ND	ND
	MW6▲	320	4,800	1,000	200	340	650
	MW7	--	4,000	800	120	250	440
Duplicate (MW6)							

TABLE 2 (Continued)

**SUMMARY OF LABORATORY ANALYSES
 WATER**

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
8/28/90	MW1	--	1,700	140	1.4	180	150
	MW2▲	3,100	27,000	2,600	1,300	1,900	3,000
	MW3	--	ND	ND	ND	ND	0.70
	MW4	--	62,000	810	72	4,400	4,600
	MW5	--	ND	ND	ND	ND	1.2
	MW6▲▲	1,000	12,000	1,700	1,400	230	2,100
	MW7	--	2,600	180	3.0	810	270
Duplicate (MW1)							
5/11/90	MW1	--	22,000	590	42	1,200	3,600
	MW2	--	65,000	3,300	3,300	4,100	12,000
	MW3	--	ND	ND	ND	ND	ND

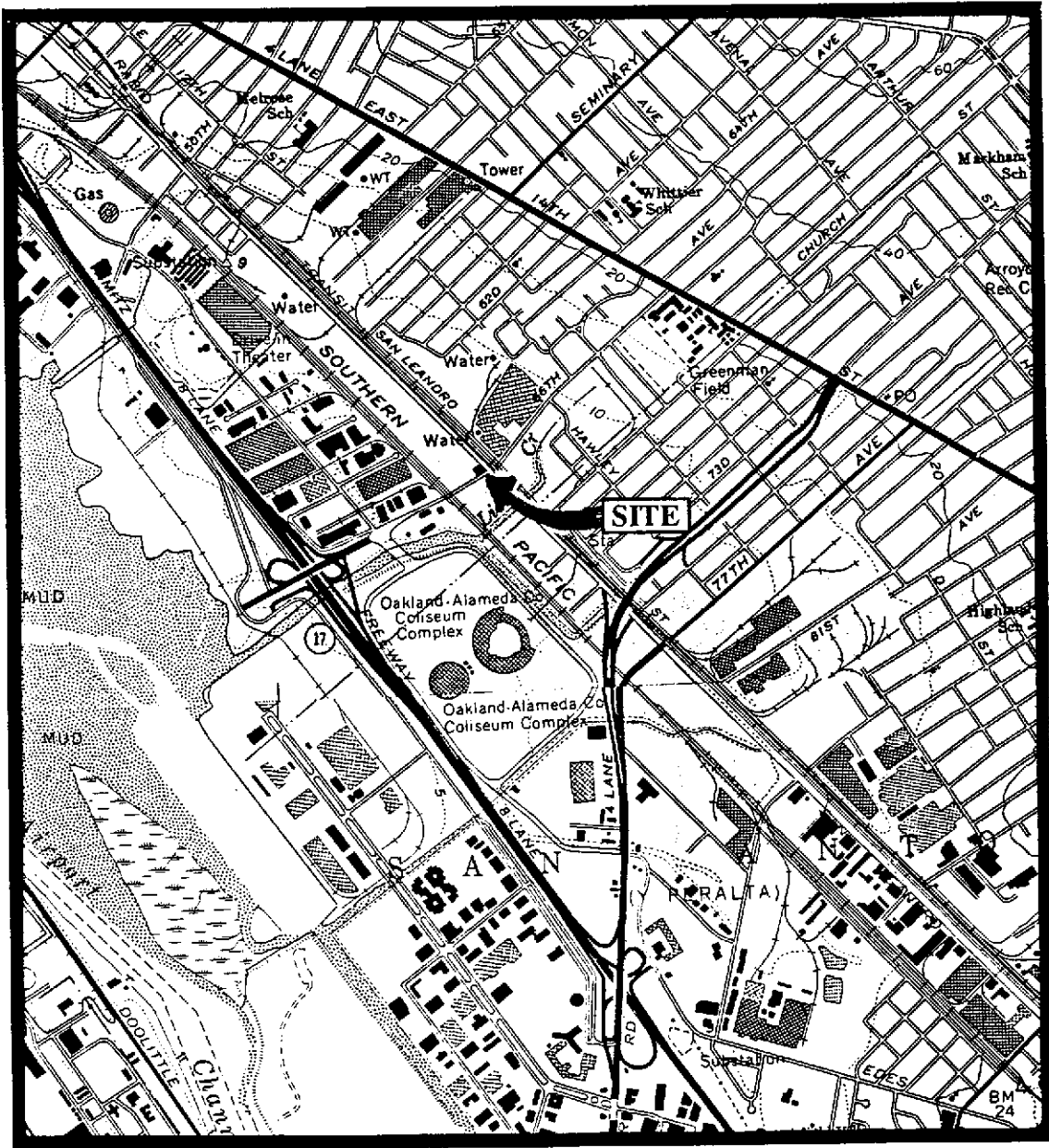
- * Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.
- ** Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- ◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.
- ◆◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- ▲ Total Oil and Grease (TOG) was non-detectable.
- ▲▲ TOG was detected at a concentration of 78 µg/L (Nov. 91)
 TOG was detected at a concentration of 16 µg/L (Aug. 90)

ND = Non-detectable.

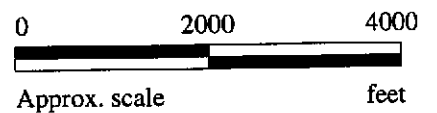
-- Indicates analysis was not performed.

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

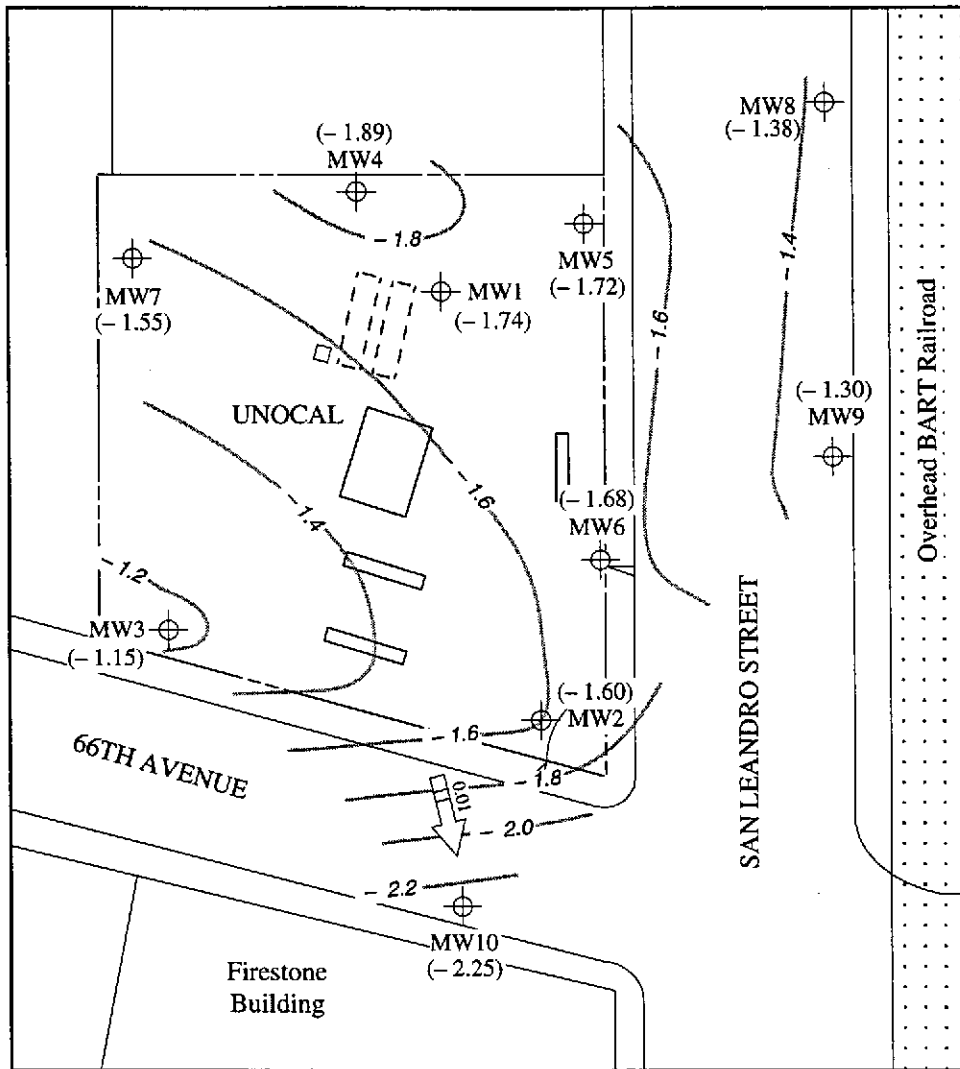
Note: Laboratory analyses data prior to February 10, 1994, were provided by Kaprealian Engineering, Inc.

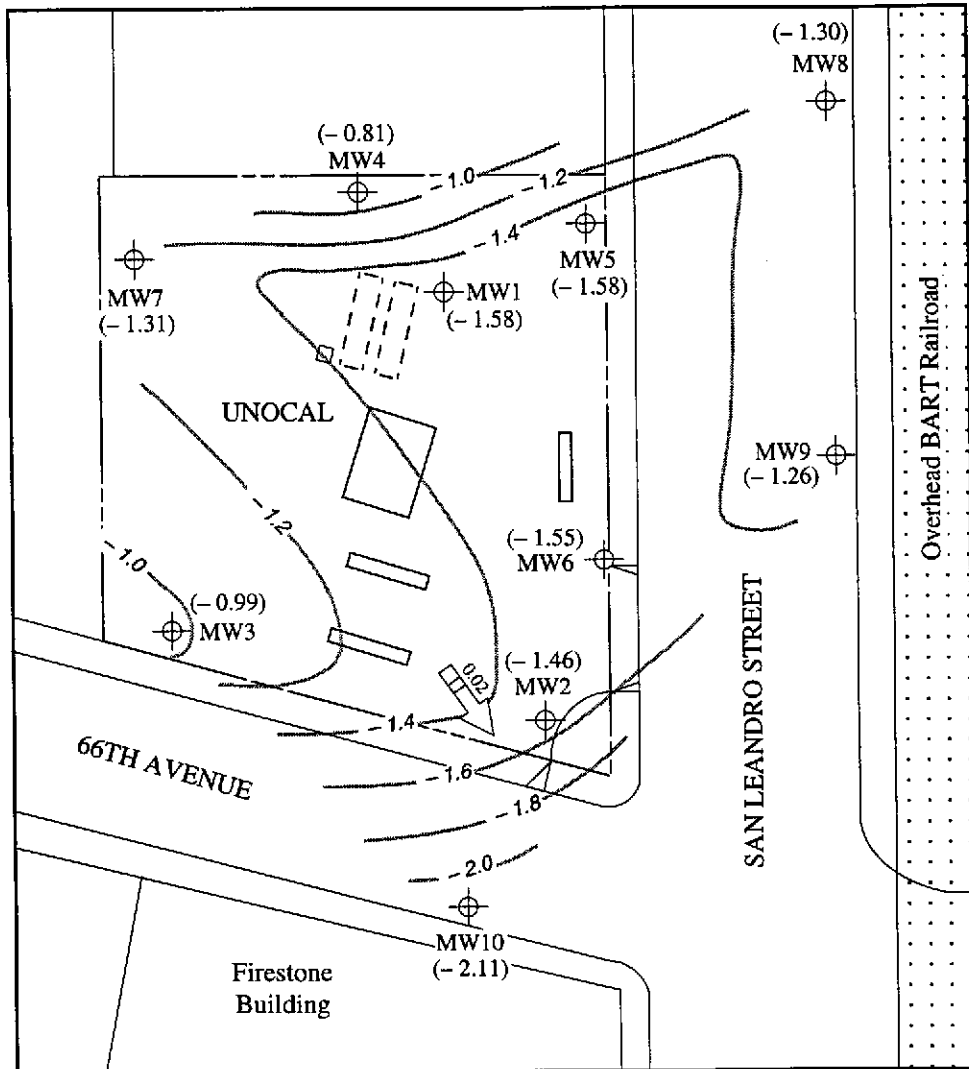


Base modified from 7.5 minute U.S.G.S.
 Oakland East and San Leandro Quadrangles
 (both photorevised 1980)



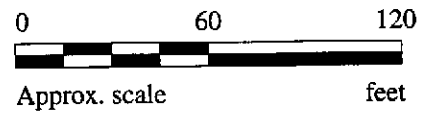
	<p>UNOCAL SERVICE STATION #3135 845 - 66TH AVENUE OAKLAND, CALIFORNIA</p>	<p>LOCATION MAP</p>
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LEGEND

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

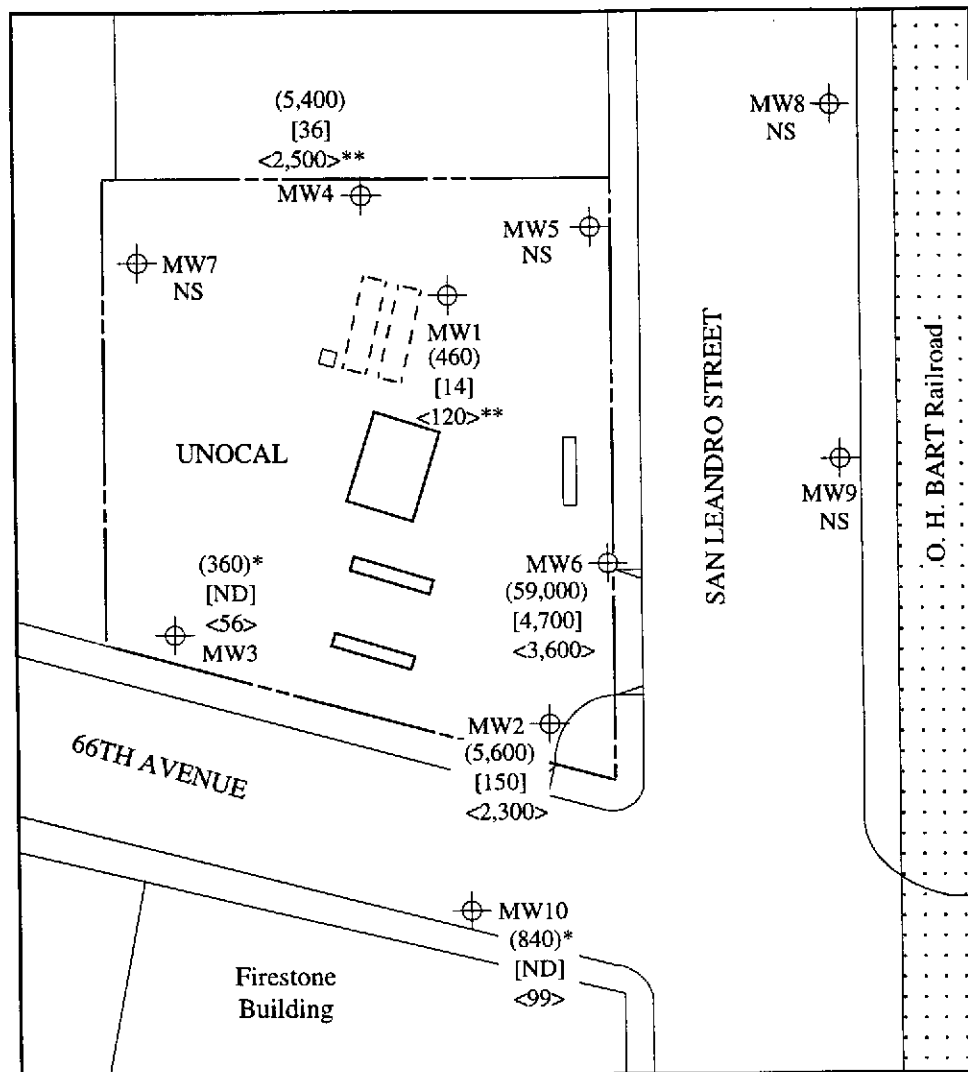


POTENTIOMETRIC SURFACE MAP FOR THE MAY 2, 1995 MONITORING EVENT

MPDS SERVICES, INCORPORATED

**UNOCAL SERVICE STATION #3135
845 - 66TH AVENUE
OAKLAND, CALIFORNIA**

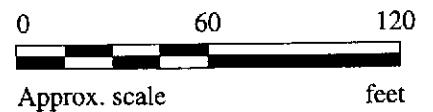
**FIGURE
1**



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, NS = Not sampled

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



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON MAY 2, 1995



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Sarkis Karkarian	Client Project ID: Unocal #3135, 845 66th Ave., Oakland Matrix Descript: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 505-0150	Sampled: May 2, 1995 Received: May 2, 1995 Reported: May 16, 1995
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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
505-0150	MW-1	460	14	ND	14	13
505-0151	MW-2	5,600	150	ND	150	180
505-0152	MW-3	360*	ND	ND	ND	ND
505-0153	MW-4	5,400	36	ND	130	710
505-0154	MW-6	59,000	4,700	4,400	4,000	18,000
505-0155	MW-10	840*	ND	ND	ND	9.5

* Hydrocarbons detected did not appear to be gasoline.

Detection Limits:	50	0.50	0.50	0.50	0.50
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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
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

Client Project ID: Unocal #3135, 845 66th Ave., Oakland
Matrix Descript: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 505-0150

Sampled: May 2, 1995
Received: May 2, 1995
Reported: May 16, 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
505-0150	MW-1	Gasoline	5.0	5/10/95	HP-5	76
505-0151	MW-2	Gasoline	50	5/9/95	HP-9	71
505-0152	MW-3	Discrete Peak*	5.0	5/10/95	HP-5	87
505-0153	MW-4	Gasoline	20	5/9/95	HP-9	84
505-0154	MW-6	Gasoline	400	5/9/95	HP-9	92
505-0155	MW-10	Discrete Peak*	10	5/9/95	HP-9	91

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

5050150.MPD <2>





MPDS Services	Client Project ID: Unocal #3135 - Oakland	Sampled: May 2, 1995
2401 Stanwell Dr., Ste. 300	Sample Matrix: Water	Received: May 2, 1995
Concord, CA 94520	Analysis Method: EPA 3510/8015	Reported: May 16, 1995
Attention: Sarkis Karkarian	First Sample #: 505-0150	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 505-0150 MW-1	Sample I.D. 505-0151 MW-2	Sample I.D. 505-0152 MW-3	Sample I.D. 505-0153 MW-4	Sample I.D. 505-0154 MW-6	Sample I.D. 505-0155 MW-10
Extractable Hydrocarbons	50	120	2,300	56	2,500	3,600	99
Chromatogram Pattern:		Unidentified Hydrocarbons <C15	Diesel and Unidentified Hydrocarbons <C15	Diesel	Unidentified Hydrocarbons <C15	Diesel and Unidentified Hydrocarbons <C15	Diesel

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	5/3/95	5/3/95	5/3/95	5/3/95	5/3/95	5/3/95
Date Analyzed:	5/4/95	5/4/95	5/4/95	5/4/95	5/4/95	5/4/95
Instrument identification:	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A

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

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

Please Note:

*~Unidentified hydrocarbons <C15 are probably gasoline.





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

Client Project ID: Unocal #3135, 845 66th Ave., Oakland
Matrix: Liquid

QC Sample Group: 5050150-155

Reported: May 18, 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#:	5050562	5050562	5050562	5050562	BLK050395
Date Prepared:	5/10/95	5/10/95	5/10/95	5/10/95	5/3/95
Date Analyzed:	5/10/95	5/10/95	5/10/95	5/10/95	5/4/95
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:	95	100	100	105	69
Matrix Spike Duplicate % Recovery:	90	95	95	100	70
Relative % Difference:	5.4	5.1	5.1	4.9	1.4

LCS Batch#:	3LCS051095	3LCS051095	3LCS051095	3LCS051095	BLK050395
Date Prepared:	5/10/95	5/10/95	5/10/95	5/10/95	5/3/95
Date Analyzed:	5/10/95	5/10/95	5/10/95	5/10/95	5/4/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
LCS % Recovery:	93	97	97	100	69

% Recovery Control Limits:	71-133	72-128	72-130	71-120	38-122
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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

Signature on File

Alan B. Kemp
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Sarkis Karkarian	Client Project ID: Unocal #3135, 845 66th Ave., Oakland Matrix: Liquid QC Sample Group: 5050150-155	Reported: May 18, 1995
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QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. Creusere	M. Creusere	M. Creusere	M. Creusere

MS/MSD

Batch#:	5050152	5050152	5050152	5050152
Date Prepared:	5/9/95	5/9/95	5/9/95	5/9/95
Date Analyzed:	5/9/95	5/9/95	5/9/95	5/9/95
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	110	110	110	113
Matrix Spike Duplicate % Recovery:	95	100	105	112
Relative % Difference:	15	9.5	4.7	0.89

LCS Batch#:	4LCS050995	4LCS050995	4LCS050995	4LCS050995
Date Prepared:	5/9/95	5/9/95	5/9/95	5/9/95
Date Analyzed:	5/9/95	5/9/95	5/9/95	5/9/95
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
LCS % Recovery:	105	107	108	113

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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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

Signature on File

Alan B. Kemp
Project Manager



CHAIN OF CUSTODY

SAMPLER			UNOCAL					ANALYSES REQUESTED							TURN AROUND TIME:	
NICHOLAS PERROW			S/S # <u>3135</u> CITY: <u>CALLAUD</u>					TPH-GAS BTEX	TPH- DIESEL	TOG	8010					REGULAR REMARKS
			ADDRESS: <u>245 66TH AVE</u>													
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION									
MW-1	5/2/95	11:45A	✓	✓		2 VOAS 1 AMBER	WELL	✓	✓					5050150	A-C	
MW-2	"	12:20P	✓	✓		"	"	✓	✓					5050151		
MW-3	"	10:20A	✓	✓		"	"	✓	✓					5050152		
MW-4	"	9:45AM	✓	✓		"	"	✓	✓					5050153		
MW-6	"	12:55P	✓	✓		"	"	✓	✓					5050154		
MW-10	"	11:05A	✓	✓		"	"	✓	✓					5050155		
RELINQUISHED BY:			DATE/TIME		RECEIVED BY:			DATE/TIME		THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:						
(SIGNATURE)			5/2/95		(SIGNATURE)			14:10 5/2		1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <u>yes</u>						
(SIGNATURE)			14:10		(SIGNATURE)					2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <u>yes</u>						
(SIGNATURE)					(SIGNATURE)					3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <u>NO</u>						
(SIGNATURE)					(SIGNATURE)					4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <u>yes</u>						
(SIGNATURE)					(SIGNATURE)					SIGNATURE: <u>Chris Caud</u> TITLE: <u>Analyst</u> DATE: <u>5-2-95</u>						

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 HN03. All other containers are unpreserved.

CHAIN OF CUSTODY

9508029

SAMPLER			UNOCAL					ANALYSES REQUESTED					TURN AROUND TIME:		
RAY MARANGOSIAN			S/S # <u>3135</u> CITY: <u>OAKLAND</u>					TPH-GAS BTEX	TPH-DIESEL	TOG	8010				REGULAR
WITNESSING AGENCY			ADDRESS: <u>845 66TH Ave</u>												
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION								
MW1	8.1.95	13:40	X	X		3	Well	X	X			5080109	A-C	REGULAR	
MW2	4	14:45	L	L		1	4	X	X			5080110			
MW3	4	13:10	X	X		4	4	X	X			5080111			
MW4	4	14:20	X	X		4	4	X	X			5080112			
MW5	4	10:25	X	X		4	4	X	X			5080113			
MWC	4	15:30	X	X		4	4	X	X			5080114			
MW7	4	11:00	X	L		4	4	X	X			5080115			
MW8	4	12:05	X	L		4	4	X	X			5080116			
MW9	4	12:35	X	L		4	4	X	X			5080117			
MW10		11:30	X	X		4	4	X	X			5080118	↓		

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:
Ray Marangosian	8.1.95	[Signature]	8-2	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <u>Yes</u>
[Signature]	8-2	[Signature]		2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <u>Yes</u>
[Signature]		[Signature]		3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <u>No</u>
[Signature]		[Signature]		4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <u>Yes</u>
[Signature]		[Signature]		SIGNATURE: [Signature] TITLE: Analyst DATE: 8-1-95

Note: All water containers to be sampled for TPH/G/BTEX, 8010 & 8240 are preserved with HCL. All water containers to be sampled for Lead or Metals are preserved with HN03. All other containers are unpreserved.

Relinquished: [Signature] 8-2-95 1250

[Signature] 8-2-95 1530