MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

MPDS-UN5325-15
August 1, 1997

Tosco Marketing Company
Environmental Compliance Department
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Attention: Mr. David De Witt

RE: Quarterly Data Report
Unocal Service Station #5325
3220 Lakeshore Avenue
Oakland, California

Dear Mr. De Witt:

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. A skimmer was present in well U-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 June 30, 1997. Prior to sampling, the wells were each purged of between 8 and 20 gallons of water. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded on the purging/sampling data sheets which are attached to this report. Once the field parameters were observed to stabilize, and where possible, a minimum of approximately three 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, 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 Tosco 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 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 Mr. Nubar Srabian at (510) 602-5120.

Sincerely,

MPDS Services, Inc.

Haig (Gary) Tejirian
Senior Staff Geologist

Hagop Kevork, P.E.
Senior Staff Engineer

License No. C 55734
Exp. Date December 31, 2000

/aab

Attachments:
Tables 1 through 4
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation
Purging/Sampling Data Sheets

cc: Mr. Greg Gurss, GeoStrategies, Inc., Rancho Cordova

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 June 30, 1997)						
U-1*	0.07**	8.41	19.80	0.02	N/A	0
U-2*	1.43	6.19	19.53	<0.01	N/A	0
U-3	-0.10	11.08	19.80	0	No	9.5
U-4	1.26	9.89	20.20	0	No	13
U-5	-0.10	7.08	20.08	0	No	20
U-6	-0.21	7.35	23.81	0	No	8
(Monitored and Sampled on March 14, 1997)						
U-1*	-0.15**	9.02	★	0.55	N/A	0 (13.5)
U-2*	0.52**	7.12	★	0.03	N/A	0
U-3	0.11	10.87	19.80	0	No	9
U-4	1.80	9.35	20.21	0	No	15
U-5	-0.01	6.99	20.10	0	No	25
U-6	-0.16	7.30	23.80	0	No	9.5
(Monitored and Sampled on December 9, 1996)						
U-1*	1.60**	6.88	19.82	0.03	N/A	0 (1.5)
U-2	0.86	6.76	19.55	0	No	14.5
U-3	0.86	10.12	19.78	0	No	11
U-4	2.48	8.67	20.22	0	No	22
U-5	1.08	5.90	20.05	0	No	28
U-6	1.26	5.88	23.80	0	No	9.5
(Monitored and Sampled on September 26, 1996)						
U-1*	-0.63**	9.10	19.83	0.02	N/A	0 (<1)
U-2	-0.28	7.90	19.59	0	No	13.5
U-3	-0.57	11.55	19.85	0	No	9.5
U-4	1.01	10.14	20.20	0	No	20
U-5	-0.15	7.13	20.12	0	No	25.5
U-6	-0.48	7.62	23.84	0	No	9

Table 1

Summary of Monitoring Data

Well #	Well Casing Elevation (feet)***
U-1	8.46
U-2	7.62
U-3	10.98
U-4	11.15
U-5	6.98
U-6	7.14

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

★ Well depth measurements were not taken.

* Monitored only.

** Ground water elevation corrected due to the presence of free product (correction factor = 0.75).

*** The elevations of the top of the well casings are surveyed relative to City of Oakland benchmark, at the northeasterly corner of Weller and Cheney Avenue (elevation = 9.055 feet, city datum; add 3.00' to U.S.G.S. datum).

(x) Amount of product purged in ounces.

N/A = Not applicable.

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
U-1	6/30/97	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	3/14/97	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	12/9/96	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	9/26/96	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	6/27/96	120,000	540	4,300	2,600	26,000	ND
	3/18/96	27,000	ND	2,300	1,400	11,000	4,900
	12/19/96	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	9/19/95	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	6/21/95	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	3/25/95	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/24/94	50,000	2,500	9,700	2,400	17,000	--
	9/22/94	6,100♦	ND	ND	ND	ND	--
	6/22/94	200	ND	ND	5.9	21	--
	2/16/94	6,800♦♦	ND	ND	ND	ND	--
	11/16/93	690♦	ND	ND	ND	ND	--
	8/8/93	4,900**	79	ND	832	270	--
	5/7/93	8,700	600	240	650	3,300	--
	2/22/93	34,000	1,400	5,500	910	7,300	--
	8/20/92	400*	1.0	ND	ND	0.6	--
	6/11/92	1,000	80	1.4	6.7	41	--
	5/5/92	230	1.2	ND	ND	ND	--
	2/12/92	250	ND	ND	ND	ND	--
	10/9/91	ND	ND	ND	ND	ND	--
	7/3/91	140	21	4.3	0.36	17	--
	4/1/91	160	13	8.6	1.0	15	--
	1/7/91	250	22	16	4.2	17	--
	8/10/90	690	38	75	8.6	130	--
U-2	6/30/97	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	3/14/97	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	12/9/96	13,000	5,100	290	980	370	2,700
	9/26/96	5,900	750	ND	ND	ND	18,000
	6/27/96	28,000	3,400	ND	2,800	3,100	3,000
	3/18/96	12,000	2,200	ND	1,200	2,200	22,000
	12/19/95	1,600	140	55	52	270	††
	9/19/95	3,000	610	ND	78	240	†
	6/21/95	16,000	2,100	ND	1,800	1,700	--
	3/25/95	170,000	1,900	21,000	4,800	33,000	--
	12/24/94	32,000	1,500	890	1,300	5,000	--
	9/22/94	8,500♦	29	ND	ND	ND	--
	6/22/94	31,000	2,200	62	1,500	3,500	--
	2/16/94	980♦♦	49	13	2.7	40	--
	11/16/93	510♦	ND	ND	ND	ND	--
	8/8/93	5,600**	420	ND	410	670	--

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
U-2	5/7/93	17,000	1,800	660	1,700	4,000	--
(Cont.)	2/22/93	3,400	2,400	2,100	1,200	5,800	--
	8/20/92	700	28	6.5	1.3	4.6	--
	6/11/92	620	17	2.1	ND	37	--
	5/5/92	1,600	120	52	6.2	290	--
	2/12/92	410	1.9	ND	0.36	0.4	--
	10/9/91	230	7.1	ND	ND	11	--
	7/3/91	2,100	150	25	3.1	290	--
	4/1/91	1,700	250	89	34	190	--
	1/7/91	1,900	67	5.8	58	69	--
	8/10/90	780	27	46	15	130	--
U-3	6/30/97	ND	ND	ND	ND	ND	ND
	3/14/97	ND	ND	ND	ND	ND	ND
	12/9/96	ND	ND	ND	ND	ND	29
	9/26/96	ND	ND	ND	ND	ND	ND
	6/27/96	440	49	50	51	140	50
	3/18/96	ND	ND	ND	ND	ND	--
	12/19/95	ND	ND	ND	ND	ND	--
	9/19/95	ND	ND	ND	ND	ND	†
	6/21/95	ND	ND	ND	ND	ND	--
	3/25/95	ND	ND	ND	ND	ND	--
	12/24/94	ND	ND	ND	ND	ND	--
	9/22/94	ND	ND	ND	ND	ND	--
	6/22/94	ND	ND	ND	ND	ND	--
	2/16/94	ND	ND	ND	ND	ND	--
	11/16/93	ND	ND	ND	ND	ND	--
	8/8/93	210	5.0	9.7	0.7	4.1	--
	5/7/93	ND	ND	ND	ND	ND	--
	2/22/93	ND	ND	ND	ND	ND	--
	8/20/92	ND	ND	ND	ND	ND	--
	6/11/92	ND	ND	ND	ND	ND	--
	5/5/92	ND	ND	ND	ND	ND	--
	2/12/92	ND	ND	ND	ND	ND	--
	10/9/91	ND	ND	ND	ND	ND	--
	7/3/91	ND	ND	ND	ND	ND	--
	4/1/91	ND	1.0	2.9	0.53	5.4	--
	1/7/91	ND	ND	ND	ND	1.8	--
	8/10/90	ND	ND	ND	ND	ND	--
U-4	6/30/97	ND	ND	ND	ND	ND	ND
	3/14/97	ND	ND	ND	ND	ND	ND
	12/9/96	ND	ND	ND	ND	ND	33
	9/26/96	ND	ND	ND	ND	ND	ND

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
U-4	6/27/96	ND	ND	ND	ND	ND	ND
(Cont.)	3/18/96	ND	ND	ND	ND	ND	--
	12/19/95	ND	ND	ND	ND	ND	--
	9/19/95	ND	ND	ND	ND	ND	--
	6/21/95	ND	ND	ND	ND	ND	--
	3/25/95	ND	ND	ND	ND	ND	--
	12/24/94	ND	ND	ND	ND	ND	--
	9/22/94	ND	0.78	1.3	ND	1.4	--
	6/22/94	ND	ND	ND	ND	ND	--
U-5	6/30/97	4,200	74	51	180	980	270
	3/14/97	ND	ND	ND	ND	ND	14
	12/9/96	1,300	29	46	ND	140	97
	9/26/96	ND	ND	0.57	ND	0.96	ND
	6/27/96	16,000	280	150	1,400	4,600	530
	3/18/96	100	0.67	0.5	0.51	5.4	--
	12/19/95	ND	ND	ND	ND	ND	--
	9/19/95	850	14	7.1	13	66	†
	6/21/95	400	2.3	ND	9.1	3.5	--
	3/25/95	44,000	390	960	1,500	7,600	--
	12/24/94	8,700	560	70	670	430	--
	9/22/94	170	8.4	10	8.5	18	--
	6/22/94	210	7.1	13	4.5	26	--
U-6	6/30/97	ND	ND	ND	ND	ND	990
	3/14/97	ND	ND	ND	ND	ND	1,500
	12/9/96	1,200	29	48	6.4	140	58
	9/26/96	ND	ND	ND	ND	ND	1,400
	6/27/96	ND	ND	ND	ND	ND	510
	3/18/96	ND	ND	ND	ND	ND	--
	12/19/95	210	2.5	1.0	2.9	17	--
	9/19/95	ND	ND	ND	ND	ND	†
	6/21/95	ND	ND	ND	ND	ND	--
	3/25/95	47,000	450	1,300	1,700	8,200	--
	12/24/94	6,900	500	59	600	380	--
	9/22/94	130	1.3	0.8	ND	0.73	--
	6/22/94	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.

Table 2

Summary of Laboratory Analyses
Water

---

* The positive result for gasoline does not appear to have a typical gasoline pattern.

** The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.

† Sequoia Analytical Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.

†† Sequoia Analytical Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 µg/L in the sample collected from this well.

MTBE = methyl tert butyl ether.

ND = Non-detectable.

-- Indicates analyses was not performed.

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

Note: The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection limit times the dilution factor indicated on the laboratory analytical sheets.

Prior to August 1, 1995, the total purgeable petroleum hydrocarbon (TPH as gasoline) quantification range used by Sequoia Analytical Laboratory was C4 - C12. Since August 1, 1995, the quantification range used by Sequoia Analytical Laboratory is C6 - C12.

Laboratory analyses data prior to November 16, 1993, were provided by GeoStrategies, Inc.

Table 3

Summary of Laboratory Analyses
Water

Well #	Date	Iron (mg/L)	Nitrate as NO3 (mg/L)	Phosphate as PO4 (mg/L)	Redox Potential (mV)
U-3	6/30/97	1.4	21	0.86	190
U-4	6/30/97	0.13	35	0.52	200
U-5	6/30/97	16	ND	ND	160
U-6	6/30/97	88	0.80	ND	190

mg/L = milligrams per liter.

mV = milli-volts.

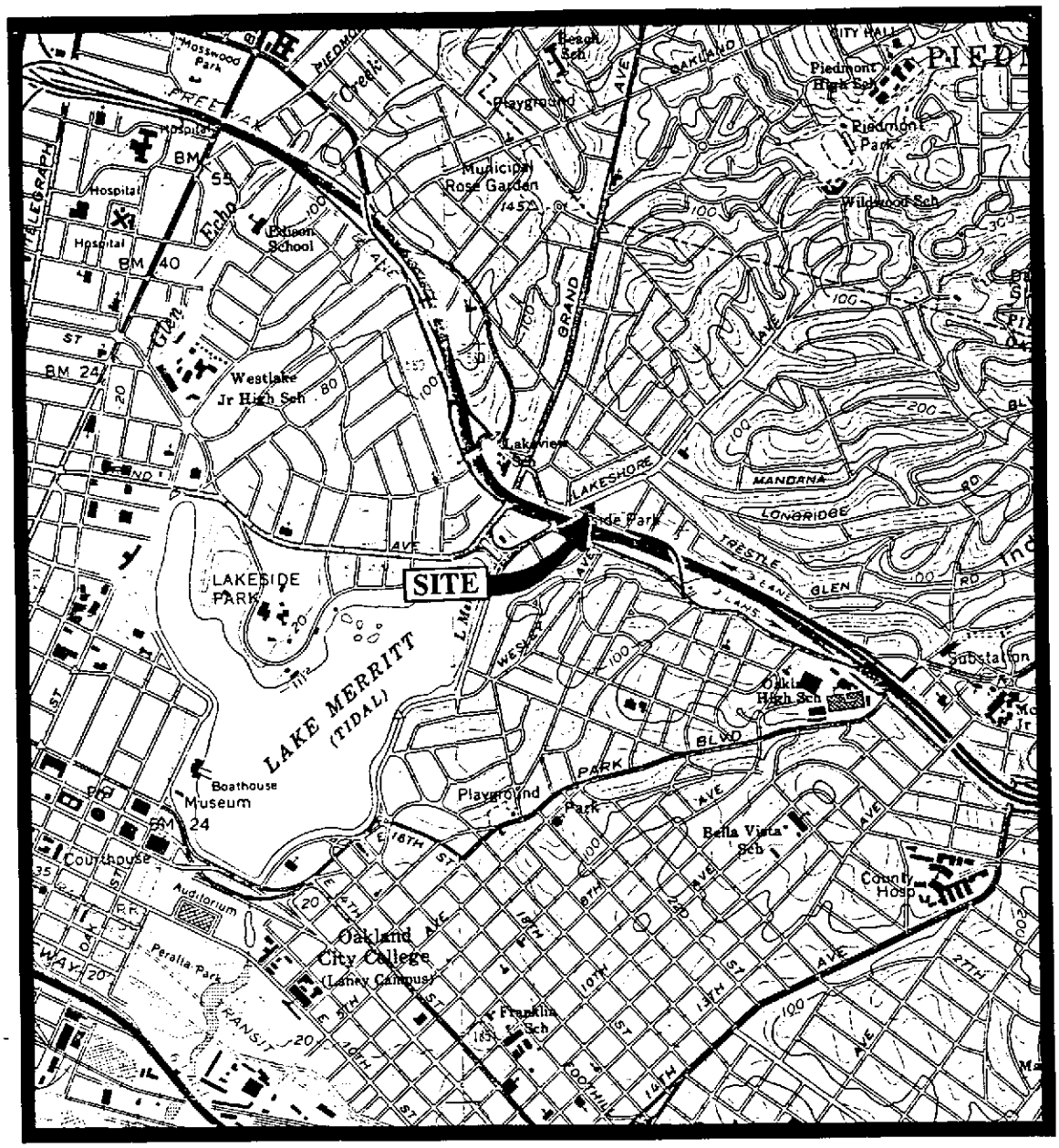
Table 4

Summary of Laboratory Analyses
Water

Well #	Date	Dissolved Oxygen (mg/L)
U-3	6/30/97	4.1
U-4	6/30/97	5.4
U-5	6/30/97	3.4
U-6	6/30/97	0.30

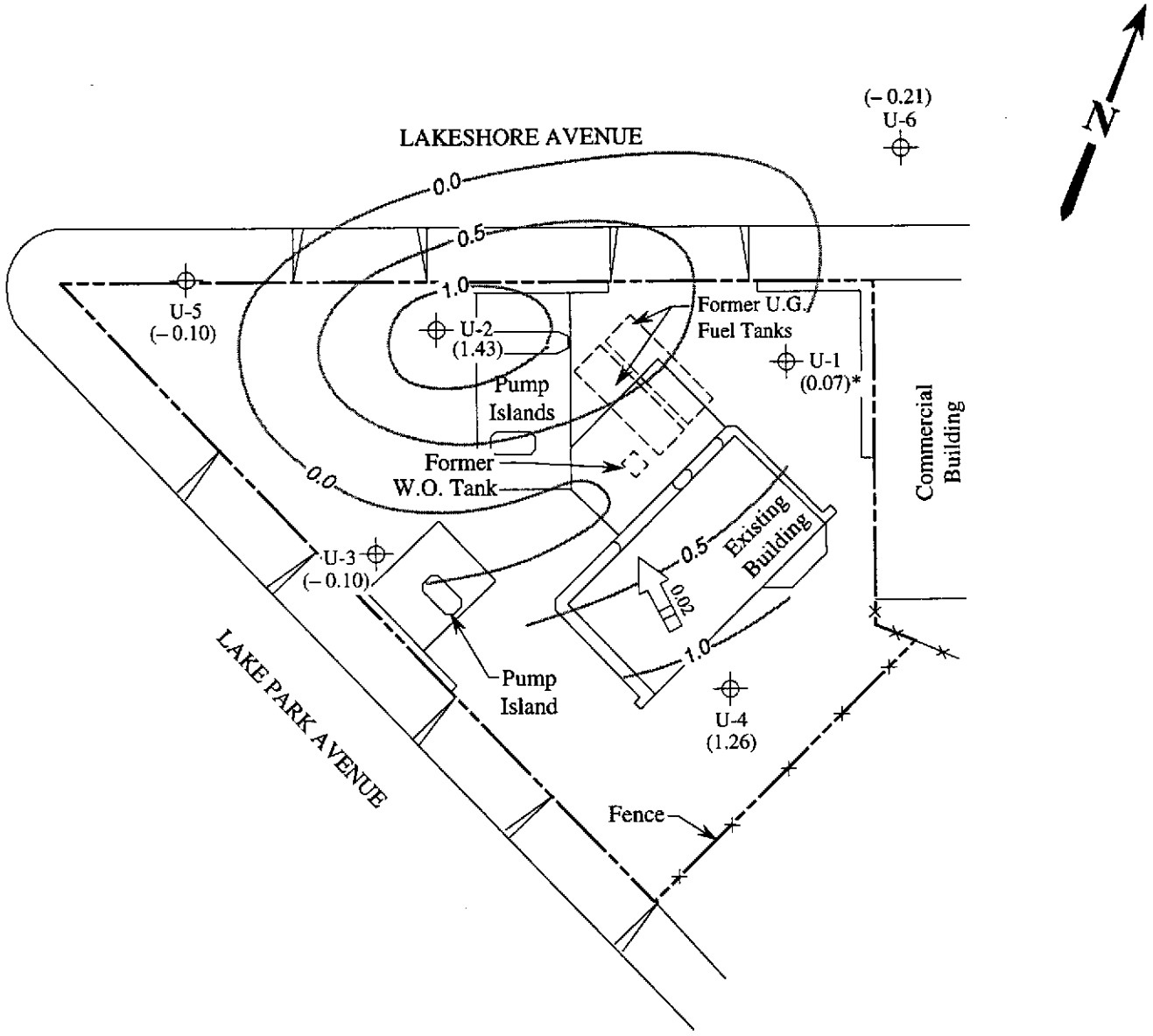
mg/L = milligrams per liter.

Note: Dissolved oxygen measurments taken at Sequoia Analytical Laboratory.



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

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #5325** **3220 LAKESHORE AVENUE** **OAKLAND, CALIFORNIA**	**LOCATION MAP**



LEGEND

- Monitoring well
- ( ) Ground water elevation relative to Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation
- * Ground water elevation corrected due to the presence of free product.

0 40 80

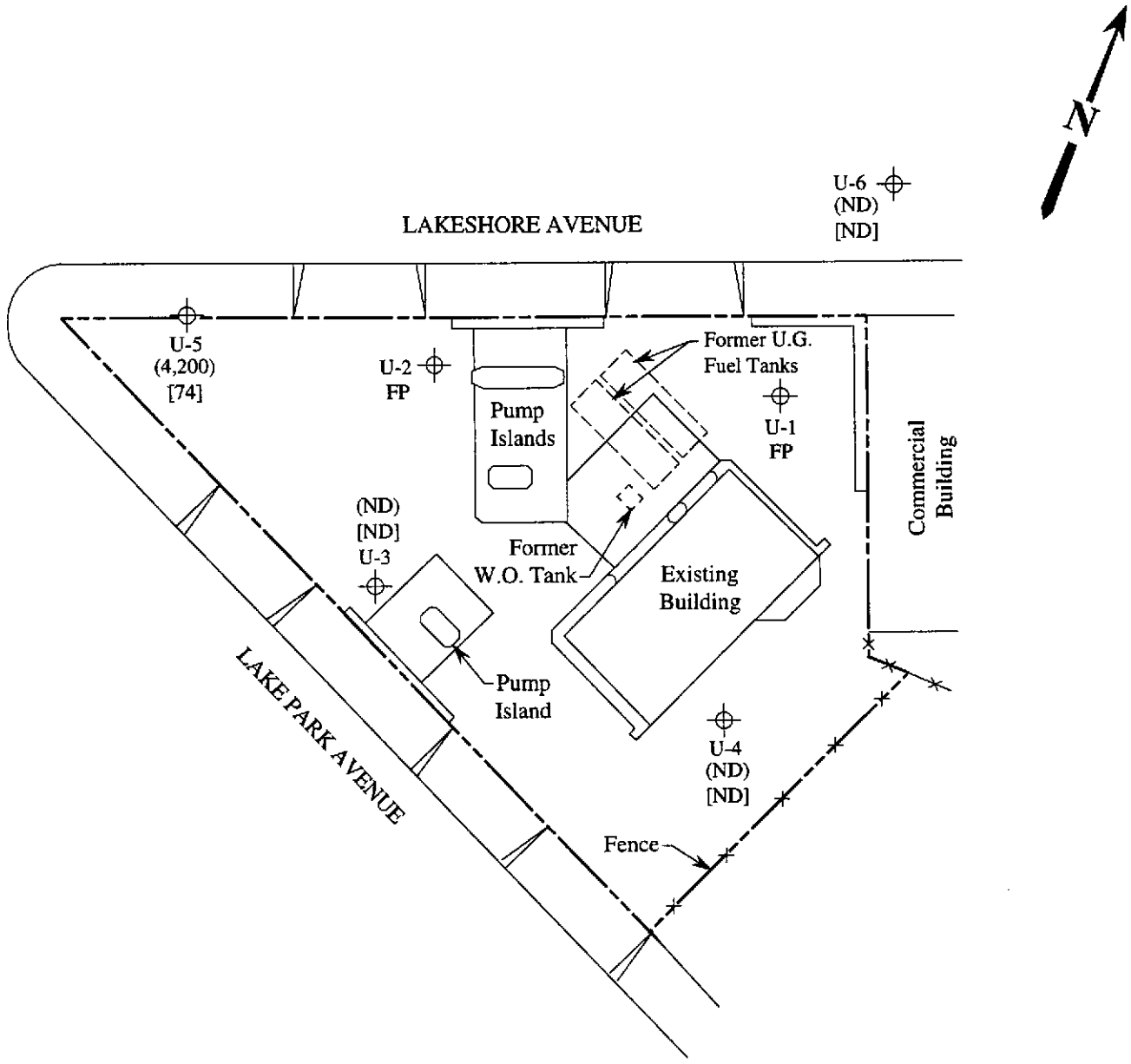
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE JUNE 30, 1997 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

- ⊕ Monitoring well
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- ND Non-detectable, FP Free product

0 40 80

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON JUNE 30, 1997

MPDS SERVICES, INCORPORATED

UNOCAL SERVICE STATION #5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

FIGURE
2

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:	Tosco #5325, 3220 Lakeshore Ave., Oakland	Sampled: Jun 30, 1997
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received: Jun 30, 1997
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Jul 15, 1997
Attention: Jarrel Crider	First Sample #:	707-0001	

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
707-0001	U-3	ND	ND	ND	ND	ND
707-0002	U-4	ND	ND	ND	ND	ND
707-0003	U-5	4,200	74	51	180	980
707-0004	U-6	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	Client Project ID:	Tosco #5325, 3220 Lakeshore Ave., Oakland	Sampled: Jun 30, 1997
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received: Jun 30, 1997
Concord, CA 94520	Analysis for:	MTBE (Modified EPA 8020)	
Attention: Jarrel Crider	First Sample #:	707-0001	Analyzed: July 1&2, 1997
			Reported: Jul 15, 1997

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
707-0001	U-3	5.0	N.D.
707-0002	U-4	5.0	N.D.
707-0003	U-5	50	270
707-0004	U-6	25	990

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

SEQUOIA ANALYTICAL, #1271

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:	Tosco #5325, 3220 Lakeshore Ave., Oakland	Sampled:	Jun 30, 1997
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received:	Jun 30, 1997
Concord, CA 94520	Analysis for:	Iron	Digested:	Jul 9, 1997
Attention: Jarrel Crider	First Sample #:	707-0001	Analyzed:	Jul 14, 1997
			Reported:	Jul 15, 1997

LABORATORY ANALYSIS FOR: Iron

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
707-0001	U-3	0.010	1.4
707-0002	U-4	0.010	0.13
707-0003	U-5	0.010	16
707-0004	U-6	0.010	88

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
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:	Tosco #5325, 3220 Lakeshore Ave., Oakland	Sampled:	Jun 30, 1997
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received:	Jun 30, 1997
Concord, CA 94520	Analysis for:	Nitrate as NO3		
Attention: Jarrel Crider	First Sample #:	707-0001	Analyzed:	Jul 2, 1997
			Reported:	Jul 15, 1997

LABORATORY ANALYSIS FOR: Nitrate as NO3

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
707-0001	U-3	0.10	21
707-0002	U-4	0.10	35
707-0003	U-5	0.10	N.D.
707-0004	U-6	0.10	0.80

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
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:	Tosco #5325, 3220 Lakeshore Ave., Oakland	Sampled:	Jun 30, 1997
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received:	Jun 30, 1997
Concord, CA 94520	Analysis for:	Phosphate as PO4		
Attention: Jarrel Crider	First Sample #:	707-0001	Analyzed:	Jul 2, 1997
			Reported:	Jul 15, 1997

LABORATORY ANALYSIS FOR: Phosphate as PO4

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
707-0001	U-3	0.50	0.86
707-0002	U-4	0.50	0.52
707-0003	U-5	0.50	N.D.
707-0004	U-6	0.50	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
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:	Tosco #5325, 3220 Lakeshore Ave., Oakland	Sampled:	Jun 30, 1997
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received:	Jun 30, 1997
Concord, CA 94520	Analysis for:	Dissolved Oxygen		
Attention: Jarrel Crider	First Sample #:	707-0001	Analyzed:	Jun 30, 1997
			Reported:	Jul 15, 1997

LABORATORY ANALYSIS FOR: Dissolved Oxygen

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
707-0001	U-3	0.10	4.1
707-0002	U-4	0.10	5.4
707-0003	U-5	0.10	3.4
707-0004	U-6	0.10	0.30

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

7070001.MPD <7>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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MPDS Services	Client Project ID:	Tosco #5325, 3220 Lakeshore Ave., Oakland	Sampled:	Jun 30, 1997
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received:	Jun 30, 1997
Concord, CA 94520	Analysis for:	Redox Potential		
Attention: Jarrel Crider	First Sample #:	707-0001	Analyzed:	Jul 7, 1997
			Reported:	Jul 15, 1997

LABORATORY ANALYSIS FOR: Redox Potential

Sample Number	Sample Description	Detection Limit mV	Sample Result mV
707-0001	U-3	10	190
707-0002	U-4	10	200
707-0003	U-5	10	160
707-0004	U-6	10	190

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

7070001.MPD <8>

Sequoia Analytical

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Tosco #5325, 3220 Lakeshore Ave., Oakland
Matrix: Liquid
QC Sample Group: 707-0003
Reported: Jul 15, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD Batch#:	7070036	7070036	7070036	7070036
Date Prepared:	7/2/97	7/2/97	7/2/97	7/2/97
Date Analyzed:	7/2/97	7/2/97	7/2/97	7/2/97
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	90	90	90	93
Matrix Spike Duplicate % Recovery:	85	90	85	88
Relative % Difference:	5.7	0.0	5.7	5.5
LCS Batch#:	4LCS070297	4LCS070297	4LCS070297	4LCS070297
Date Prepared:	7/2/97	7/2/97	7/2/97	7/2/97
Date Analyzed:	7/2/97	7/2/97	7/2/97	7/2/97
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	85	90	90	93
% Recovery Control Limits:	60-140	60-140	60-140	60-140

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.

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Tosco #5325, 3220 Lakeshore Ave., Oakland
Matrix: Liquid
QC Sample Group: 707001,002 &004
Reported: Jul 15, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD Batch#:	7061506	7061506	7061506	7061506
Date Prepared:	7/1/97	7/1/97	7/1/97	7/1/97
Date Analyzed:	7/1/97	7/1/97	7/1/97	7/1/97
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	100	95	100
Matrix Spike Duplicate % Recovery:	90	90	90	93
Relative % Difference:	5.4	10.5	5.4	6.9
LCS Batch#:	5LCS062697	5LCS062697	5LCS062697	5LCS062697
Date Prepared:	7/1/97	7/1/97	7/1/97	7/1/97
Date Analyzed:	7/1/97	7/1/97	7/1/97	7/1/97
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	90	95	95	98
% Recovery Control Limits:	60-140	60-140	60-140	60-140

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: Jarrel Crider

Client Project ID: Tosco #5325, 3220 Lakeshore Ave., Oakland
Matrix: Liquid
QC Sample Group: 7070001-004
Reported: Jul 15, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Iron	Nitrate as NO3	Phosphate as PO4
Method:	EPA 200.7	EPA 300.0	EPA 300.0
Analyst:	J. Kelly	K. Anderson	K. Anderson
MS/MSD Batch#:	7070001	7070001	7070001
Date Prepared:	7/9/97	7/2/97	7/2/97
Date Analyzed:	7/14/97	7/2/97	7/2/97
Instrument I.D.#:	MV-4	INIC-1	INIC-1
Conc. Spiked:	1.0 mg/L	10 mg/L	20 mg/L
Matrix Spike % Recovery:	100	110	86
Matrix Spike Duplicate % Recovery:	160	110	86
Relative % Difference:	22	0.0	0.0
LCS Batch#:	LCS070997A	LCS070297-B	LCS070297-B
Date Prepared:	7/9/97	7/2/97	7/2/97
Date Analyzed:	7/14/97	7/2/97	7/2/97
Instrument I.D.#:	MV-4	INIC-1	INIC-1
LCS % Recovery:	110	100	90
% Recovery Control Limits:	80-120	80-120	80-120

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.

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Tosco #5325, 3220 Lakeshore Ave., Oakland
Matrix: Liquid
QC Sample Group: 7070001-004
Reported: Jul 15, 1997

QUALITY CONTROL DATA REPORT

ANALYTE Dissolved Oxygen

Method: EPA 360.1
Analyst: B. Nguyen

Date Analyzed: 6/30/97

Instrument I.D.#: Manual

Sample #: 7070004

Sample Concentration: 0.30 mg/L

Sample Duplicate Concentration: 0.30 mg/L

RPD: 0.0

RPD Control Limits: 0-30

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

Sequoia Analytical

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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Tosco #5325, 3220 Lakeshore Ave., Oakland
Matrix: Liquid
QC Sample Group: 7070001-004

Reported: Jul 15, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Redox
Method:	ASTM DI 49876
Analyst:	J. Saaoo

Date Analyzed:	7/2/97
Instrument I.D.#:	Manual
Sample #:	9707015-1
Sample Concentration:	190
Sample Duplicate Concentration:	190
RPD:	0.0
RPD Control Limits:	0-30

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp
Project Manager

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: HAIG KEVORK
WITNESSING AGENCY:

TOSCO S/S # 5325 CITY: OAKLAND
ADDRESS: 3220 LAKESHORE AVE.

ANALYSES REQUESTED

TURN AROUND TIME: REGULAR

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTEX	MTBE 5 PPB	Dissolved oxygen	iron	phosphate	nitrate	Redox Potential		REMARKS
U-3	6/30/94		✓	✓		2 VOA's + 3	WELL	✓	✓	✓	✓	✓	✓	✓			7070001 AE
U-4			✓	✓				✓	✓	✓	✓	✓	✓	✓			7070002
U-5			✓	✓				✓	✓	✓	✓	✓	✓	✓			7070003
U-6	↓		✓	✓		↓	↓	✓	✓	✓	✓	✓	✓	✓			7070004

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
(SIGNATURE)		(SIGNATURE)	6/30/94 1810
(SIGNATURE)		(SIGNATURE)	
(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: TITLE: DATE: 6/30/94

MPDS Services Inc.
2401 Stanwell Drive
Concord, California 94520

Tel: (510) 602-5120
Fax: (510) 689-1918

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: 5325 - Oakland

DATE & TIME SAMPLED 6/30/94 4:05 A.M. (P.M.)

FIELD TECHNICIAN HAIG KEVORK

PURGE METHOD _____

DATE(S) PURGED 6/30/94

WELL NUMBER U-3

WATER LEVEL-**INITIAL** 11.08

SAMPLING METHOD BAIL

WATER LEVEL-**FINAL** 11.90

CONTAINERS 2 VOA's + 3

WELL DEPTH 19.80

PRESERVATIVES YES

WELL CASING VOLUME 3.23

†CASING DIAMETER 3"

TIME	GALLONS PURGED	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µmhos/cmx100) or µS/cm	pH
2:10	0	71.8	1.11	7.30
↓	3.5	71.3	1.09	7.28
↓	6.5	70.9	1.08	7.25
2:20	9.5	70.7	1.08 MS	7.22

† Conversion Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.60
12"	5.87

S = Siemens = mhos

Stabilization Criteria:
Temperature = ± 1 °F
Conductivity = ± 10% of total
pH = ± 0.2

/P&S

MPDS Services Inc.
2401 Stanwell Drive
Concord, California 94520

Tel: (510) 602-5120
Fax: (510) 689-1918

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: 5325 - Oakland

DATE & TIME SAMPLED 6/30/94 4:20 A.M. (P.M.)

FIELD TECHNICIAN HAIG KEVORK

PURGE METHOD PUMP

DATE(S) PURGED 6/30/94

WELL NUMBER U-4

WATER LEVEL-**INITIAL** 9.89

SAMPLING METHOD BAIL

WATER LEVEL-**FINAL** 14.30

CONTAINERS 2 VOAS + 3

WELL DEPTH 20.20

PRESERVATIVES YES

WELL CASING VOLUME 6.70

†CASING DIAMETER 4"

TIME	GALLONS PURGED	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µmhos/cmx100) or µS/cm	pH
2:40	0	72.3	0.80	7.18
↓	6.50	71.5	0.82	7.15
2:50	13 *	71.1	0.81 ms	7.13

† Conversion Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.60
12"	5.87

S = Siemens = mhos

* very slow recovery

Stabilization Criteria:
Temperature = ± 1 °F
Conductivity = ± 10% of total
pH = ± 0.2

/P&S

MPDS Services Inc.
2401 Stanwell Drive
Concord, California 94520

Tel: (510) 602-5120
Fax: (510) 689-1918

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: 5325- Oakland

DATE & TIME SAMPLED 6/30/94 4:55 A.M. (P.M.)

FIELD TECHNICIAN HAIG KEVORK

PURGE METHOD PUMP

DATE(S) PURGED 6/30/94

WELL NUMBER U-5

WATER LEVEL-**INITIAL** 7.08

SAMPLING METHOD BAIL

WATER LEVEL-**FINAL** 8.41

CONTAINERS 2 VOA's +3

WELL DEPTH 20.08

PRESERVATIVES YES

WELL CASING VOLUME 8.45

†CASING DIAMETER 4"

TIME	GALLONS PURGED	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µmhos/cmx100) or µS/cm	pH
3:40	0	69.4	2.81	6.86
↓	9	69.0	2.83	6.91
↓	14	68.8	2.84	6.90
3:55	20 *	68.5	2.85 ms	6.93

† Conversion Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.60
12"	5.87

S = Siemens = mhos

Very slow recovery

Stabilization Criteria:
Temperature = ± 1 °F
Conductivity = ± 10% of total
pH = ± 0.2

/P&S

MPDS Services Inc.
2401 Stanwell Drive
Concord, California 94520

Tel: (510) 602-5120
Fax: (510) 689-1918

PURGING/SAMPLING DATA SHEET

SAMPLING LOCATION: 5325 - Oakland

DATE & TIME SAMPLED 6/30/94 4:30 A.M. (P.M.)

FIELD TECHNICIAN HAIG KEVORK

PURGE METHOD BAIL

DATE(S) PURGED 6/30/94

WELL NUMBER U-6

WATER LEVEL-**INITIAL** 4.35

SAMPLING METHOD BAIL

WATER LEVEL-**FINAL** 8.64

CONTAINERS 2 VOA's +3

WELL DEPTH 23.81

PRESERVATIVES YES

WELL CASING VOLUME 2.80

†CASING DIAMETER 2"

TIME	GALLONS PURGED	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µmhos/cmx100) or µS/cm	pH
3:10	0	69.4	1.11	6.91
↓	2.5	69.2	1.10	6.86
↓	6	69.0	1.09	6.89
3:20	8	68.9	1.10 ms	6.88

† Conversion Factors:

Well Diameter	Factor
2"	0.17
3"	0.37
4"	0.65
4.5"	0.82
6"	1.46
8"	2.60
12"	5.87

S = Siemens = mhos

Stabilization Criteria:
Temperature = ± 1 °F
Conductivity = ± 10% of total
pH = ± 0.2

/P&S