GETTLER-RYAN INC.

TRANSMITTAL

September 8, 1999
G-R #:180106

TO: Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

CC: Mr. Doug Lee
Gettler-Ryan Inc.
Dublin, California 94568

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Tosco (Unocal) SS #7004
15599 Hesperian Blvd.
San Leandro, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 27, 1999	Groundwater Monitoring and Sampling Report Semi-Annual 1999 - Event of July 7, 1999

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by ***September 21, 1999***, this report will be distributed to the following:

Enclosure

cc: **Ms. Susan Hugo, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, CA 94502**
Mr. Michael Bakaldin, City of San Leandro Fire Department, 835 East 14th Street, San Leandro, CA 94577

agency/7004dbd.qmt

GETTLER-RYAN INC.

August 27, 1999
G-R Job #180106

Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Semi-Annual 1999 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #7004
15599 Hesperian Boulevard
San Leandro, California

Dear Mr. De Witt:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On July 7, 1999, field personnel monitored and sampled seven wells (MW-1 through MW-6 and RW-1) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. Dissolved oxygen concentrations are summarized in Table 2. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Table 1, and a Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

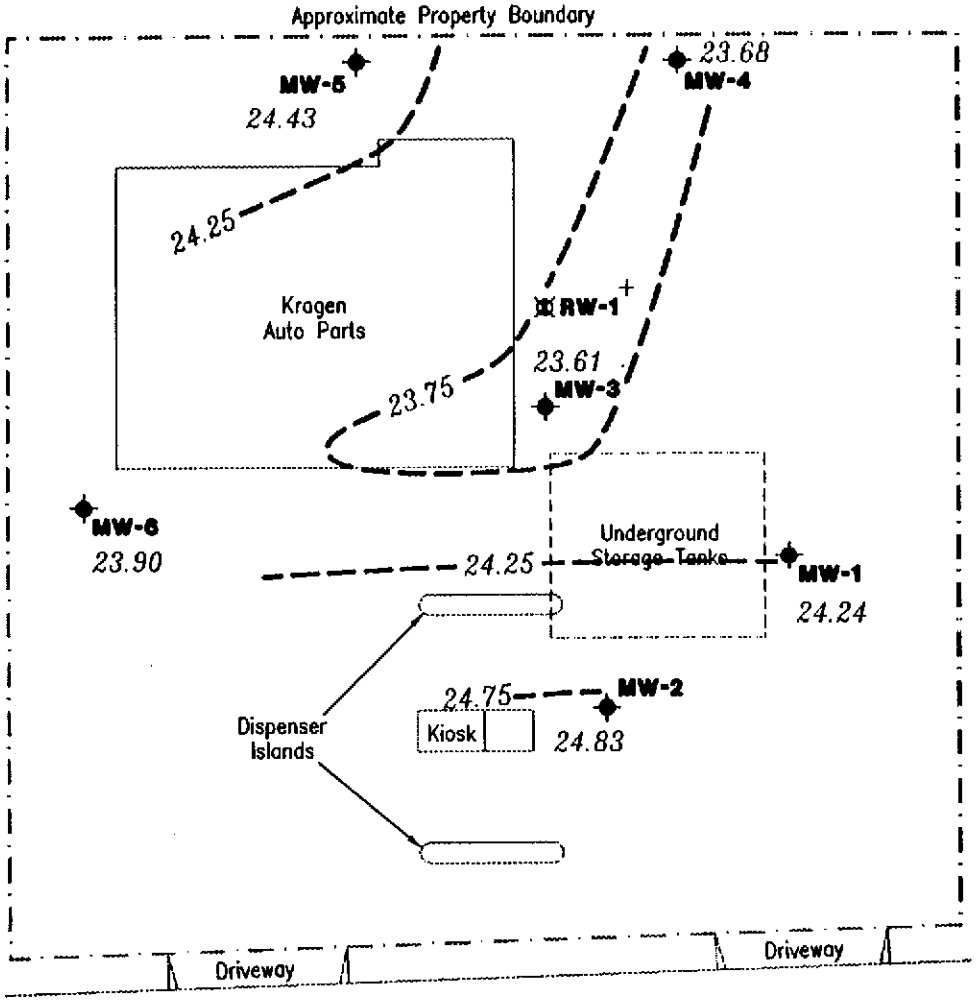
Deanna L. Harding
Project Coordinator

Douglas J. Lee
Senior Geologist, R.G. No. 6882

REGISTERED GEOLOGIST
DOUGLAS J. LEE
No. 6882
STATE OF CALIFORNIA

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Dissolved Oxygen Concentrations
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

7004.qml



EXPLANATION

- Groundwater monitoring well
- Aquifer testing well
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 — Groundwater elevation contour, dashed where inferred.
- \+ — TOC not avaliable

Approximate groundwater flow direction at a gradient of 0.01 to 0.02 Ft./Ft.

N

0 40

Scale in Feet

Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

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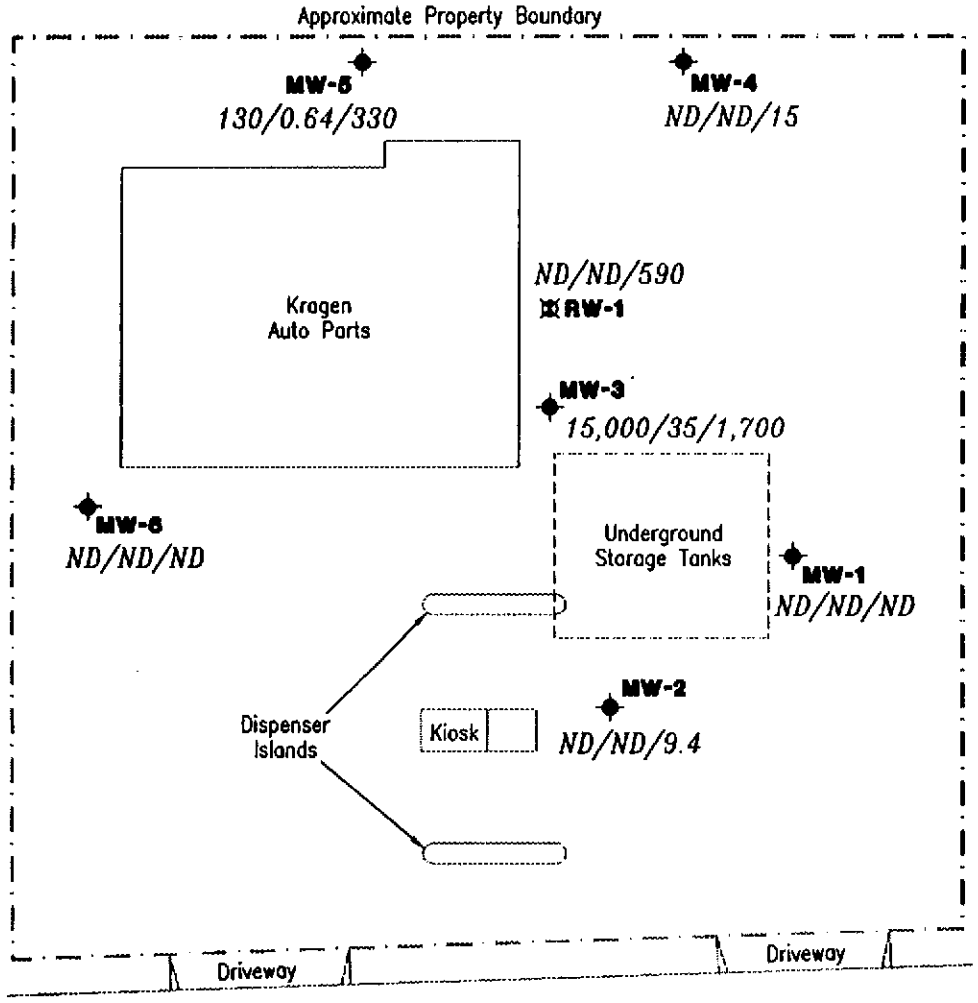
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 7004
15599 Hesperian Boulevard
San Leandro, California

FIGURE 1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180106		July 7, 1999	



EXPLANATION

✦	Groundwater monitoring well
⌘	Aquifer testing well
A/B/C	TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb
ND	Not Detected

N

0 40

Scale in Feet

Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

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Dublin, CA 94568

CONCENTRATION MAP
Tosco (Unocal) Service Station No. 7004
15599 Hesperian Boulevard
San Leandro, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180106		July 7, 1999	

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7004

15599 Hesperian Boulevard

San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	05/04/91	--	--	ND	ND	ND	ND	ND	--
	07/23/91	--	--	ND	ND	ND	ND	ND	--
	10/14/91	--	--	ND	ND	ND	ND	ND	--
	01/14/92	--	--	ND	ND	ND	ND	ND	--
	04/14/92	--	--	76[1]	ND	ND	ND	ND	--
	07/09/92	--	--	70[1]	ND	ND	ND	ND	130
	10/28/92	--	--	SAMPLED SEMI-ANNUALLY		--	--	--	--
	01/21/93	--	--	ND	ND	ND	ND	ND	42
36.89	04/20/93	14.89	22.00	--	--	--	--	--	56
	07/22/93	14.34	22.55	ND	ND	ND	ND	ND	77
36.39	10/06/93	14.87	21.52	--	--	--	--	--	--
	01/11/94	15.14	21.25	ND	ND	ND	ND	ND	--
	04/06/94	14.19	22.20	--	--	--	--	--	--
	07/08/94	14.66	21.73	ND	ND	ND	ND	ND	--
	10/06/94	16.71	19.68	--	--	--	--	--	--
	01/05/95	14.68	21.71	ND	ND	ND	ND	ND	--
	04/05/95	11.76	24.63	--	--	--	--	--	--
	07/14/95	12.93	23.46	ND	0.65	2.2	ND	2.3	--
	10/12/95	14.29	22.10	--	--	--	--	--	--
	01/08/96	14.18	22.21	ND	ND	ND	ND	ND	--
	07/08/96	12.74	23.65	ND	ND	ND	ND	ND	ND
	01/03/97	12.89	23.50	87[1]	ND	ND	ND	ND	ND
	07/02/97	13.66	22.73	ND	ND	ND	ND	ND	ND
	01/15/98	13.08	23.31	ND	ND	ND	ND	ND	ND
	07/08/98	11.25	25.14	ND	ND	ND	ND	ND	ND
	01/11/99	13.68	22.71	51[9]	ND	ND	ND	ND	4.8
	07/07/99	**12.15**	**24.24**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-2	05/04/91	--	--	ND	ND	ND	ND	ND	--
	07/23/91	--	--	ND	ND	ND	ND	ND	--
	10/14/91	--	--	ND	ND	ND	ND	ND	--
	01/14/92	--	--	ND	ND	ND	ND	ND	--
	04/14/92	--	--	45[1]	ND	ND	ND	ND	--
	07/09/92	--	--	ND	ND	ND	ND	ND	49

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7004

15599 Hesperian Boulevard

San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
MW-2	10/28/92	--	--	SAMPLED SEMI-ANNUALLY		--	--	--	--
(cont)	01/21/93	--	--	ND	ND	ND	ND	ND	17
37.35	04/20/93	15.20	22.15	--	--	--	--	--	80
	07/22/93	14.75	22.60	62[1]	ND	ND	ND	ND	42
37.07	10/06/93	15.49	21.58	--	--	--	--	--	--
	01/11/94	15.77	21.30	120[1]	ND	ND	ND	ND	--
	04/06/94	14.83	22.24	--	--	--	--	--	--
	07/08/94	15.28	21.79	140[1]	ND	ND	ND	ND	--
	10/06/94	16.32	20.75	--	--	--	--	--	--
	01/05/95	15.30	21.77	310[1]	ND	ND	ND	ND	--
	04/05/95	12.12	24.95	--	--	--	--	--	--
	07/14/95	13.55	23.52	86[1]	ND	ND	ND	ND	--
	10/12/95	14.88	22.19	--	--	--	--	--	--
	01/08/96	14.81	22.26	91[1]	ND	ND	ND	ND	--
	07/08/96	13.37	23.70	100[1]	ND	ND	ND	ND	ND
	01/03/97	13.14	23.93	160[1]	ND	ND	ND	ND	ND
	07/02/97	14.26	22.81	91[1]	ND	ND	ND	ND	ND
	01/15/98	13.31	23.76	ND	ND	ND	ND	ND	ND
	07/08/98	11.57	25.50	ND	ND	ND	ND	ND	ND
	01/11/99	14.26	22.81	ND	ND	ND	ND	ND	9.8
	07/07/99	**12.24**	**24.83**	**ND**	**ND**	**ND**	**ND**	**ND**	**9.4**
MW-3	05/04/91	--	--	34,000	6,100	32	1,200	6,100	--
	07/23/91	--	--	17,000	5,500	26	1,800	2,800	--
	10/14/91	--	--	25,000	6,300	78	2,000	1,400	--
	01/14/92	--	--	13,000	6,600	19	2,600	1,800	--
	04/14/92	--	--	16,000	3,400	19	1,400	1,300	--
	07/09/92	--	--	13,000	3,200	12	1,900	1,100	--
	10/28/92	--	--	15,000	4,400	15	2,400	800	--
	01/21/93	--	--	12,000	2,800	11	1,600	590	--
37.22	04/20/93	15.13	22.09	18,000	3,700	11	2,300	1,300	410
	07/22/93	13.52	23.70	16,000	4,500	17	3,600	1,900	440
36.79	10/06/93	15.41	21.38	24,000	4,100	ND	3,600	2,000	ND
	01/11/94	15.66	21.13	19,000	3,300	31	3,300	890	--
	04/06/94	14.72	22.07	24,000	3,100	ND	3,300	820	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7004

15599 Hesperian Boulevard

San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
MW-3	07/08/94	15.20	21.59	18,000	2,200	25	2,500	860	--
(cont)	10/06/94	16.23	20.56	20,000	2,100	26	3,000	900	--
	01/05/95	15.12	21.67	20,000	2,100	ND	3,200	3,800	--
	04/05/95	12.03	24.76	18,000	2,100	ND	3,700	690	--
	07/14/95	13.46	23.33	21,000	1,600	ND	3,900	1,500	--
	10/12/95	14.81	21.98	17,000	1,000	ND	3,600	1,000	--[3]
	01/08/96	14.70	22.09	14,000	760	ND	3,100	380	--[4]
	07/08/96	13.29	23.50	16,000	470	45	4,400	1,000	340
	01/03/97	13.09	23.70	14,000	160	ND	2,100	120	620
	07/02/97	13.96	22.83	23,000	110	ND	3,600	1,600	1,200
	01/15/98	13.26	23.53	12,000	33	ND[5]	2,800	120	1,100
	07/08/98	11.64	25.15	20,000	76	ND[5]	4,100	1,400	750
	01/11/99	14.17	22.62	23,000[10]	ND[5]	ND[5]	4,100	460	920
	07/07/99	**13.18**	**23.61**	**15,000[11]**	**35**	**ND[5]**	**3,400**	**470**	**1,700**
MW-4	07/23/91	--	--	ND	ND	ND	ND	ND	--
	10/14/91	--	--	ND	ND	ND	ND	ND	--
	01/14/92	--	--	ND	ND	ND	ND	ND	--
	04/14/92	--	--	ND	ND	ND	ND	ND	--
	07/09/92	--	--	ND	ND	ND	ND	ND	--
	10/28/92	--	--	SAMPLED SEMI-ANNUALLY		--	--	--	--
	01/21/93	--	--	ND	ND	ND	ND	ND	--
35.81	04/20/93	13.84	21.97	--	--	--	--	--	65
	07/22/93	13.52	22.29	ND	ND	ND	ND	ND	54
35.44	10/06/93	14.17	21.27	--	--	--	--	--	--
	01/11/94	14.42	21.02	ND	ND	ND	ND	ND	--
	04/06/94	13.44	22.00	--	--	--	--	--	--
	07/08/94	13.96	21.48	ND	ND	ND	ND	ND	--
	10/06/94	15.00	20.44	--	--	--	--	--	--
	01/05/95	13.83	21.61	ND	ND	ND	ND	ND	--
	04/05/95	11.05	24.39	--	--	--	--	--	--
	07/14/95	12.23	23.21	ND	ND	ND	ND	ND	--
	10/12/95	13.59	21.85	--	--	--	--	--	--
	01/08/96	13.43	22.01	ND	ND	ND	ND	ND	--[4]
	07/08/96	12.04	23.40	ND	ND	ND	ND	ND	ND

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7004

15599 Hesperian Boulevard

San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
MW-4	01/03/97	12.38	23.06	80[1]	ND	ND	ND	ND	ND
(cont)	07/02/97	13.00	22.44	ND	ND	ND	ND	ND	25
	01/15/98	12.50	22.94	ND	ND	ND	ND	ND	ND
	07/08/98	10.53	24.91	ND	ND	ND	ND	ND	25
	01/11/99	12.95	22.49	ND	ND	ND	ND	ND	23
	07/07/99	**11.76**	**23.68**	**ND**	**ND**	**ND**	**ND**	**ND**	**15**
MW-5	07/23/91	--	--	260	1.2	0.39	10	0.71	--
	10/14/91	--	--	140	0.72	ND	1.3	0.89	--
	01/14/92	--	--	60[1]	ND	ND	ND	ND	--
	04/14/92	--	--	86[1]	ND	ND	ND	ND	--
	07/09/92	--	--	ND	ND	ND	ND	ND	71
	10/28/92	--	--	ND	ND	ND	ND	ND	45
	01/21/93	--	--	100[1]	ND	ND	ND	ND	160
37.01	04/20/93	14.87	22.14	99[1]	ND	ND	ND	ND	120
	07/22/93	14.82	22.19	59[2]	ND	ND	2.6	ND	42
36.81	10/06/93	15.61	21.20	150	1.1	ND	3.1	0.85	57
	01/11/94	15.84	20.97	160	ND	0.79	0.54	ND	--
	04/06/94	14.90	21.91	260	1.4	ND	0.88	ND	--
	07/08/94	15.38	21.43	200	ND	ND	ND	ND	--
	10/06/94	16.42	20.39	350	1.3	ND	ND	ND	--
	01/05/95	15.20	21.61	85	ND	ND	ND	ND	--
	04/05/95	11.72	25.09	ND	ND	ND	ND	ND	--
	07/14/95	13.69	23.12	180	1.3	ND	7.9	ND	--
	10/12/95	15.02	21.79	310	ND	ND	31	1.2	--[3]
	01/08/96	14.85	21.96	ND	0.55	ND	ND	0.58	--[4]
	07/08/96	13.52	23.29	140	2.1	1.4	5.6	0.51	110
	07/12/96	14.50	22.31	--	--	--	--	--	--
	01/03/97	12.85	23.96	12,000	150	ND	2,100	120	660
	07/02/97	13.79	23.02	ND	ND	ND	ND	ND	72
	01/15/98	13.03	23.78	69[6]	ND	ND	ND	ND	--[7]
	07/08/98	12.05	24.76	ND	0.74	ND	ND	ND	95
	01/11/99	14.41	22.40	ND	1.0	ND	ND	ND	170
	07/07/99	**12.38**	**24.43**	**130**	**0.64**	**ND**	**ND**	**ND**	**330**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7004
15599 Hesperian Boulevard
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
MW-6	07/23/91	--	--	ND	ND	ND	ND	ND	--
	10/14/91	--	--	ND	ND	ND	ND	ND	--
	01/14/92	--	--	ND	ND	ND	ND	ND	--
	04/14/92	--	--	ND	ND	ND	ND	ND	--
	07/09/92	--	--	ND	ND	ND	ND	ND	--
	10/28/92	--	--	SAMPLED SEMI-ANNUALLY		--	--	--	--
	01/21/93	--	--	ND	ND	ND	ND	ND	--
37.55	04/20/93	15.27	22.28	--	--	--	--	--	ND
	07/22/93	15.20	22.35	ND	ND	ND	ND	ND	ND
37.13	10/06/93	15.75	21.38	--	--	--	--	--	--
	01/11/94	16.02	21.11	ND	ND	ND	ND	ND	--
	04/06/94	15.07	22.06	--	--	--	--	--	--
	07/08/94	15.55	21.58	ND	ND	ND	ND	ND	--
	10/06/94	16.58	20.55	--	--	--	--	--	--
	01/05/95	15.42	21.71	ND	ND	ND	ND	ND	--
	04/05/95	12.14	24.99	--	--	--	--	--	--
	07/14/95	13.87	23.26	ND	ND	ND	ND	ND	--
	10/12/95	15.17	21.96	--	--	--	--	--	--
	01/08/96	15.05	22.08	ND	ND	ND	ND	ND	--
	07/08/96	13.71	23.42	ND	ND	ND	ND	ND	ND
	01/03/97	13.12	24.01	97[1]	ND	ND	ND	ND	ND
	07/02/97	14.57	22.56	ND	ND	ND	ND	ND	ND
	01/15/98	13.30	23.83	ND	ND	ND	ND	ND	ND
	07/08/98	12.33	24.80	ND	ND	ND	ND	ND	ND
	01/11/99	14.60	22.53	ND	ND	ND	ND	ND	ND
	07/07/99	**13.23**	**23.90**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
RW-1	07/08/98	11.72	--	80[8]	1.7	ND	ND	ND	1,300
	01/11/99	14.05	--	ND[5]	3.0	ND[5]	ND[5]	ND[5]	1,200
	07/07/99	**13.05**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**590**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7004

15599 Hesperian Boulevard

San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
Trip Blank									
TB-LB	01/15/98	--	--	ND	ND	ND	ND	ND	ND
	07/08/98	--	--	ND	ND	ND	ND	ND	ND
	01/11/99	--	--	ND	ND	ND	ND	ND	ND
	07/07/99	**--**	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7004
15599 Hesperian Boulevard
San Leandro, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 15, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing elevation
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
msl = Relative to mean sea level

TPH(G) = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes

MTBE = Methyl tertiary butyl ether
ppb = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed/Not Available

* TOC elevations are relative to mean sea level (msl), based on the City of San Leandro Benchmark (Elevation = 36.04 feet msl). Prior to October 6, 1993, the DTW measurements were taken from the top of well covers.

1 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
2 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
3 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
4 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
5 Detection limit raised. Refer to analytical results.
6 Laboratory report indicates unidentified hydrocarbons C6-C8.
7 Laboratory narrative: MTBE was not reported due to the presence of a chlorinated hydrocarbon pattern.
8 Laboratory report indicates discrete peaks and unidentified hydrocarbons $<$C7.
9 Laboratory report indicates discrete peaks.
10 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
11 Laboratory report indicates gasoline and unidentified hydrocarbons $<$C6.

Table 2

Dissolved Oxygen Concentrations

Tosco (Unocal) Service Station #7004

15599 Hesperian Boulevard

San Leandro, California

Well ID	Date	Before Purging *(mg/L)*	After Purging *(mg/L)*
MW-5	07/02/97	3.82	3.97
	01/03/97	4.35	4.27
	07/12/96	3.44	3.67
	01/15/98	4.19	4.38
	07/08/98	4.67	4.60

EXPLANATIONS:

Dissolved oxygen concentrations prior to January 15, 1998, were compiled from reports prepared by MPDS Services, Inc.

mg/L = milligrams per liter

Note: Measurements were taken using a LaMotte DO4000 dissolved oxygen meter.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7004 Job#: 180106

Address: 15599 Hesperian Blvd. Date: 7-7-99

City: San Leandro Sampler: Joe

Well ID mw-1 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 24.40 ft.

Depth to Water 12.15 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

12.25 X VF 0.17 = 2.08 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- (Suction)
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 9:50 Weather Conditions: clear

Sampling Time: 10:13 A.M. Water Color: clear Odor: none

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:58	2	7.66	7.31	70.7			
10:10	4	7.37	6.86	73.1			
10:02	6	7.45	6.85	72.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
mw-1	3 voA	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

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WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7004 Job#: 180106

Address: 15599 Hesperian Blvd. Date: 7-7-99

City: San Leandro Sampler: Joe

Well ID mw-2 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 24.50 ft.

Depth to Water 12.24 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

12.26 X VF 0.17 = 2.08 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- (Suction)
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 9:22 Weather Conditions: clear

Sampling Time: 9:43 A.m Water Color: clear Odor: none

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L.)	ORP (mV)	Alkalinity (ppm)
9:30	2	8.00	7.12	70.7			
9:32	4	7.50	7.15	71.3			
9:34	6.5	7.40	7.16	71.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
mw-2	3x0A	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7004 Job#: 180106

Address: 15599 Hesperian Blvd. Date: 7-7-99

City: San Leandro Sampler: Joe

Well ID mw-3 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 25.00 ft.

Depth to Water 13.18 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.82 X VF 0.17 = 2.01 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- (Suction)
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 10:25 Weather Conditions: clear

Sampling Time: 10:47 A.M Water Color: clear Odor: Moderate yes

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:35	2	7.27	3.18	70.9			
10:37	4	7.22	3.20	71.2			
10:39	6	7.25	3.25	72.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
mw-3	3 VOA	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7004 Job#: 180106

Address: 15599 Hesperian Blvd. Date: 7-7-99

City: San Leandro Sampler: Joe

Well ID mw-4 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 25.60 ft.

Depth to Water 11.76 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

13.84 X VF 0.17 = 2.35 X 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

Purge Equipment:	Sampling Equipment:
Disposable Bailer	Disposable Bailer
Bailer	Bailer
Stack	Pressure Bailer
Suction	Grab Sample
Grundfos	Other:
Other:	

Starting Time: 8:45 Weather Conditions: clear

Sampling Time: 9:08 Am Water Color: clear Odor: none

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:55	2.5	7.56	6.12	71.9			
8:57	5	7.59	6.18	72.2			
8:59	7.5	7.51	6.25	72.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
mw-4	3 voA	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7004 Job#: 180106

Address: 15599 Hesperian Blvd. Date: 7-7-99

City: San Leandro Sampler: Joe

Well ID mw-5 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 26.00 ft.

Depth to Water 12.38 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

13.62 X VF 0.17 = 2.32 X 3 (case volume) = Estimated Purge Volume: 7 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- (Suction)
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 8:15 Weather Conditions: clear

Sampling Time: 8:30 AM Water Color: clear Odor: none

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:22	2.5	7.31	5.17	71.6			
8:24	5	7.38	5.22	72.2			
8:26	7	7.41	5.35	72.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
mw-5	3x0A	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7004 Job#: 180106

Address: 15599 Hesperian Blvd. Date: 7-7-99

City: San Leandro Sampler: Joe

Well ID mw-6 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): ~5~ (Gallons)

Total Depth 25.60 ft.

Depth to Water 13.23 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

12.37 X VF 0.17 = 2.10 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; (Suction); Grundfos; Other: _____

Sampling Equipment: (Disposable Bailer); Bailer; Pressure Bailer; Grab Sample; Other: _____

Starting Time: 7:38 Weather Conditions: clear

Sampling Time: 8:02 A.m Water Color: clear Odor: none

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
7:50	2	7.78	7.65	71.9			
7:52	4	7.58	7.60	71.4			
7:54	6.5	7.53	7.57	71.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
mw-6	3 voA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

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WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7004 Job#: 180106

Address: 15599 Hesperian Blvd. Date: 7-7-99

City: San Leandro Sampler: Joe

Well ID RW-1 Well Condition: O.K.

Well Diameter 6 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 26.50 ft.

Depth to Water 13.05 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

13.45 X VF 1.50 = 20.17 X 3 (case volume) = Estimated Purge Volume: 61 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- (Suction)
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 11:00 Weather Conditions: clear

Sampling Time: 11:35 A.M Water Color: clear Odor: none

Purging Flow Rate: 3 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:12	20	7.07	4.36	69.8			
11:17	40	7.15	4.25	70.1			
11:24	61	7.18	4.21	70.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
RW-1	3 VOA	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

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Chain-of-Custody-Record

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number: UNOCAL SS# 7004
Facility Address: 15599 Hesperian Blvd, San Leandro, CA
Consultant Project Number: 180-106
Consultant Name: Gettler-Ryan Inc. (G-R Inc.)
Address: 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name): Deanna L. Harding
(Phone) 925-551-7555 (Fax Number) 925-551-7888

Contact (Name): Mr. David DeWitt
(Phone) (925) 277-2384
Laboratory Name: Sequoia Analytical
Laboratory Release Number:
Samples Collected by (Name): Joe A. Jemian
Collection Date: 7-7-99
Signature:

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8015) (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						DO NOT BILL TB-LB ANALYSIS Remarks
TB-LB		2 x 40	W	G	—	HCL	Y	✓													9070471
MW-1		3 x 40	"	"	10:13 AM	"	"	✓													9070472
MW-2		"	"	"	9:43 AM	"	"	✓													9070473
MW-3		"	"	"	10:47 AM	"	"	✓													9070474
MW-4		"	"	"	9:01 AM	"	"	✓													9070475
MW-5		"	"	"	8:30 AM	"	"	✓													9070476
MW-6		"	"	"	8:02 AM	"	"	✓													9070477
RW-1		"	"	"	11:55 AM	"	"	✓													9070478

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Joe Jemian	G-R Inc.	7-7-99			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	CBC	7-8 1450			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
					7/8/99 16:50

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7004, San Leandro	Sampled:	Jul 7, 1999
6747 Sierra Court, Suite J	Sample Matrix:	Water	Received:	Jul 7, 1999
Dublin, CA 94568	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Jul 20, 1999
Attention: Deanna Harding	First Sample #:	907-0471		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 907-0471 TB-LB	Sample I.D. 907-0472 MW-1	Sample I.D. 907-0473 MW-2	Sample I.D. 907-0474 MW-3	Sample I.D. 907-0475 MW-4	Sample I.D. 907-0476 MW-5
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	15,000	N.D.	130
Benzene	0.50	N.D.	N.D.	N.D.	35	N.D.	0.64
Toluene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	3,400	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.	N.D.	470	N.D.	N.D.
MTBE	2.5	N.D.	N.D.	9.4	1,700	15	330
Chromatogram Pattern:		--	--	--	Gasoline & Unidentified Hydrocarbons <C6	--	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	40	1.0	1.0
Date Analyzed:	7/15/99	7/15/99	7/16/99	7/15/99	7/15/99	7/15/99
Instrument Identification:	HP-5	HP-5	HP-2	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	87	88	109	75	85	85

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

Julianne Fegley
Project Manager

9070471.GET <1>

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7004, San Leandro	Sampled: Jul 7, 1999
6747 Sierra Court, Suite J	Sample Matrix:	Water	Received: Jul 7, 1999
Dublin, CA 94568	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Jul 20, 1999
Attention: Deanna Harding	First Sample #:	907-0477	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 907-0477 MW-6	Sample I.D. 907-0478 RW-1
Purgeable Hydrocarbons	50	N.D.	N.D.
Benzene	0.50	N.D.	N.D.
Toluene	0.50	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.
MTBE	2.5	N.D.	590
Chromatogram Pattern:		--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	7/15/99	7/15/99
Instrument Identification:	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	87	87

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

Julianne Fegley
Project Manager

9070471.GET <2>

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#7004, San Leandro
Matrix: Liquid
QC Sample Group: 9070471-478

Reported: Jul 20, 1999

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#:	9070477	9070477	9070477	9070477
Date Prepared:	7/15/99	7/15/99	7/15/99	7/15/99
Date Analyzed:	7/15/99	7/15/99	7/15/99	7/15/99
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	95	100
Matrix Spike Duplicate % Recovery:	100	100	100	103
Relative % Difference:	5.1	5.1	5.1	3.3
LCS Batch#:	5LCS071599	5LCS071599	5LCS071599	5LCS071599
Date Prepared:	7/15/99	7/15/99	7/15/99	7/15/99
Date Analyzed:	7/15/99	7/15/99	7/15/99	7/15/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	100	100	100	105
% Recovery Control Limits:	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
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

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#7004, San Leandro
Matrix: Liquid
QC Sample Group: 9070471-478

Reported: Jul 20, 1999

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#:	9070548	9070548	9070548	9070548
Date Prepared:	7/16/99	7/16/99	7/16/99	7/16/99
Date Analyzed:	7/16/99	7/16/99	7/16/99	7/16/99
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:	100	90	95	102
Matrix Spike Duplicate % Recovery:	105	95	95	108
Relative % Difference:	4.9	5.4	0.0	6.3
LCS Batch#:	2LCS071699	2LCS071699	2LCS071699	2LCS071699
Date Prepared:	7/16/99	7/16/99	7/16/99	7/16/99
Date Analyzed:	7/16/99	7/16/99	7/16/99	7/16/99
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	105	95	100	108
% Recovery Control Limits:	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
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.