

STID #1746

ENVIRONMENTAL PROTECTION

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GETTLER-RYAN

TRANSMITTAL

TO: Ms. Amy Leech
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

DATE: November 23, 1998
G-R #: 180109

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

RE: Tosco (Unocal) SS #5760
376 Lewelling Boulevard
San Lorenzo, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	October 30, 1998	Groundwater Monitoring and Sampling Report Semi-Annual 1998 - Event of September 4, 1998

COMMENTS:

At the request of Tosco Marketing Company, we are providing you a copy of the above referenced report. The site is monitored and sampled on a semi-annual basis. If you have questions please contact the Tosco Project Manager, Ms. Tina R. Berry at (925) 277-2321.

Enclosure

cc: Mr. Tim Ripp, Pacific Environmental Group Inc., 2025 Gateway Pl., Suite 440, San Jose, CA 95110

agency/5760trb.qmt



PACIFIC
ENVIRONMENTAL
GROUP, INC.

AN  COMPANY

ENVIRONMENTAL
PROTECTION

98 JUL 10 PM 3:57

July 7, 1998
Project 311-058.1A

STIP 0746
B2

Mr. Richard Hiatt
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Re: 76 Service Station 5760
Quarterly Summary Report
Second Quarter 1998

Dear Mr. Hiatt:

As directed by Ms. Tina Berry of Tosco Marketing Company, Pacific Environmental Group, Inc. is forwarding the quarterly summary report for the following location:

<u>Service Station</u>	<u>Location</u>
5760	376 Lewelling Boulevard, San Lorenzo

If you have questions or comments, please do not hesitate to contact our office at (408) 441-7500.

Sincerely,

Pacific Environmental Group, Inc.

Timothy L. Ripp
Project Geologist

Enclosure

cc: Ms. Tina Berry, Tosco Marketing Company
• Ms. Amy Leech, Alameda County Environmental Health Care Services

Quarterly Summary Report Second Quarter 1998

76 Service Station 5760
376 Lewelling Boulevard
San Lorenzo, California

City/County ID #: None
County: Alameda

BACKGROUND

The underground storage tanks were removed and replaced in November 1987. Currently, there are nine monitoring wells on site. Groundwater monitoring and sampling began in February 1988, and have been performed semiannually since February 1996.

A remedial action plan was submitted during the third quarter 1994. Groundwater extraction and soil vapor extraction systems were installed in August and September 1995. In response to a diminishing mass removal rate, the remedial system was shut down in February 1997.

RECENT QUARTER ACTIVITIES

In late May and early June 1998, the product dispensers and underground product piping were replaced. Spill containment boxes were installed beneath the new product dispensers. Spill containment sumps were also installed on the tops of the existing underground fuel storage tanks. Soil samples were collected beneath the removed piping on May 27, 1998.

NEXT QUARTER ACTIVITIES

Semiannual groundwater monitoring and sampling will be performed in September 1998.

CHARACTERIZATION/REMEDIAL STATUS

Soil contamination delineated? Yes.

Dissolved groundwater delineated? Yes.

Free product delineated? Yes.

Amount of groundwater contaminant recovered to date? Approximately 115 pounds.

Soil remediation in progress? No.

Start? October 1995.

Completion date? February 1997.

Dissolved/free product remediation in progress? No.

Start? October 1995.

Completion? February 1997.

CONSULTANT: Pacific Environmental Group, Inc.



GETTLER-RYAN INC.

October 30, 1998
G-R Job #180109

Ms. Tina R. Berry
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Semi-Annual 1998 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #5760
376 Lewelling Boulevard
San Lorenzo, California

Dear Ms. Berry:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On September 4, 1998, field personnel monitored nine wells (MW-1 through MW-9) and sampled four wells (MW-1, MW-3, MW-6, and MW-9) 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. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

Deanna L. Harding

Deanna L. Harding
Project Coordinator

Stephen J. Carter
Stephen J. Carter
Senior Geologist, R.G. No. 5577



- 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


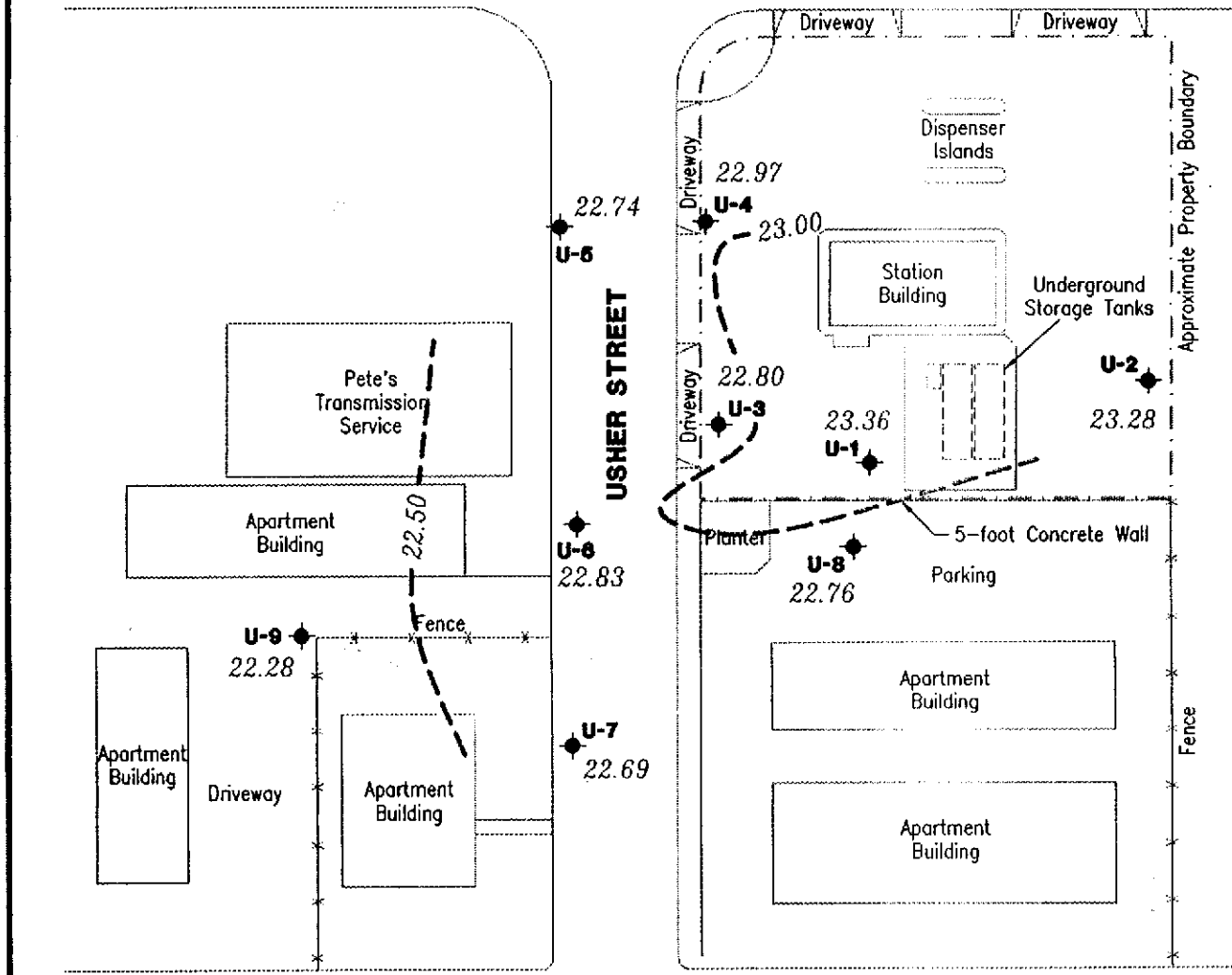
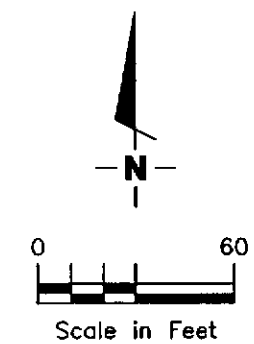
5760.qml

LEWELLING BOULEVARD

EXPLANATION

- ◆ Groundwater monitoring well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 --- Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.008 Ft./Ft.

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



Gottler - Ryan Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 5760
376 Lewelling Boulevard
San Lorenzo, California

FIGURE

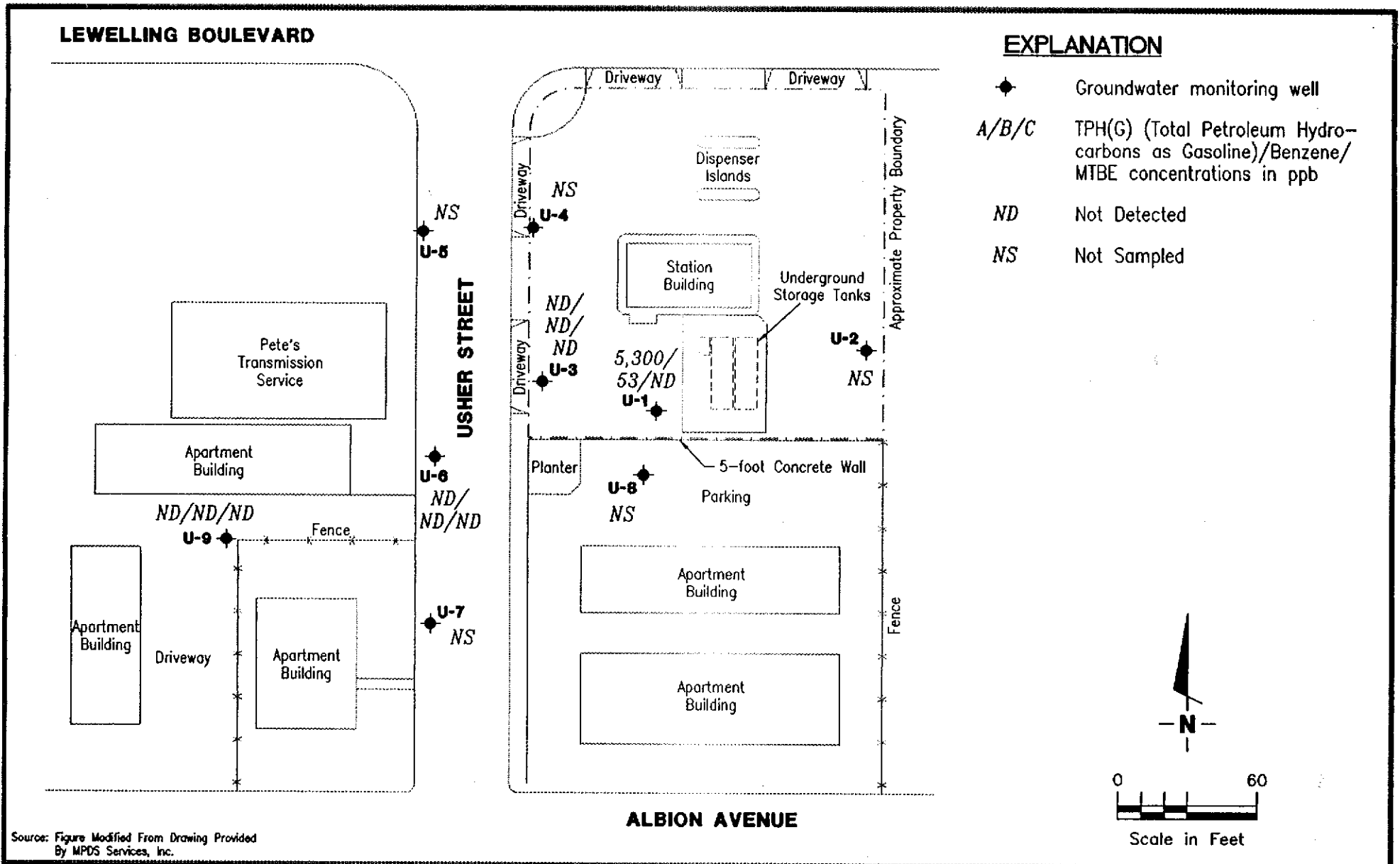
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JOB NUMBER
180109

REVIEWED BY

DATE
September 4, 1998

REVISED DATE



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

CONCENTRATION MAP
Tosco (Unocal) Service Station No. 5760
376 Lewelling Boulevard
San Lorenzo, California

FIGURE

2

JOB NUMBER
180109

REVIEWED BY

DATE
September 4, 1998

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	←-----ppb-----→						
					TPH(G)	B	T	E	X	MTBE	
U-1	02/09/88	--	--	--	93,000	3,600	11,000	-- ¹	20,000	--	
	03/20/90	--	--	--	36,000	2,100	5,500	1,900	9,300	--	
	06/05/90	--	--	--	46,000	2,300	5,500	2,500	11,000	--	
	08/24/90	--	--	--	27,000	1,200	1,800	1,400	5,500	--	
	12/05/90	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	03/04/91	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	06/03/91	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	09/19/91	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	12/04/91	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	03/05/92	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	04/07/92	--	--	--	NOT SAMPLED - PRODUCT SKIMMER INSTALLED IN WELL						
	08/06/92	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	11/20/92	--	--	--	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	02/12/93	--	--	--	70,000	2,200	8,400	3,100	18,000	--	
40.51	06/04/93	16.72	23.79	0.00	35,000	1,300	5,700	900	9,200	--	
	09/09/93	17.77	22.74	0.00	67,000	2,900	18,000	6,200	32,000	--	
40.20	12/02/93	18.36	21.84	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	03/09/94	17.20	23.00	0.00	45,000	930	4,100	2,000	11,000	--	
	06/09/94	17.42	22.78	0.00	59,000	5,200	1,300	5,200	15,000	--	
	09/07/94	18.17	22.03	0.00	41,000	1,600	6,200	3,100	16,000	--	
	12/05/94	16.67	23.53	0.00	1,300	55	20	16	330	--	
	03/09/95	15.82	24.38	0.00	49,000	860	3,200	1,900	10,000	1,500	
	06/13/95	14.70	25.50	0.00	53,000	1,400	5,000	2,500	14,000	2,800	
40.01**	09/12/95	16.77	23.24	0.00	43,000	910	2,700	1,700	9,600	1,400	
40.20	12/14/95	INACCESSILBE - WELL CONNECTED TO REMEDIATION SYSTEM WHICH WAS NOT RUNNING							--	--	--
	03/20/96	INACCESSILBE - WELL CONNECTED TO REMEDIATION SYSTEM WHICH WAS NOT RUNNING							--	--	--
	03/22/96	--	--	--	13,000	200	590	640	4,000	790	
	09/24/96	INACCESSILBE - WELL CONNECTED TO REMEDIATION SYSTEM WHICH WAS NOT RUNNING							--	--	--
	03/27/97	15.29	24.91	0.00	1,300	8.0	ND	ND	400	ND	
	09/23/97	17.20	23.00	0.00	2,000	15	ND	ND	530	ND	
	03/10/98	12.68	27.52	0.00	2,200 ⁶	19	4.8	ND ⁷	980	38	
	09/04/98	16.84	23.36	0.00	5,300 ⁸	53	ND ⁷	410	620	ND ⁷	

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G)	←-----ppb----->				
						B	T	E	X	MTBE
U-2	08/23/90	--	--	--	ND	ND	ND	ND	ND	--
	12/05/90	--	--	--	ND	ND	ND	ND	ND	--
	03/04/91	--	--	--	ND	ND	0.9	ND	2.6	--
	06/03/91	--	--	--	ND	ND	ND	ND	ND	--
	09/19/91	--	--	--	ND	ND	ND	ND	ND	--
	12/04/91	--	--	--	ND	ND	ND	ND	ND	--
	03/05/92	--	--	--	ND	ND	0.36	ND	ND	--
	04/07/92	--	--	--	ND	ND	ND	ND	ND	--
	08/06/92	--	--	--	ND	ND	ND	ND	ND	--
	11/20/92	--	--	--	ND	ND	ND	ND	ND	--
02/12/93	--	--	--	ND	ND	ND	ND	ND	--	
41.62	06/04/93	17.59	24.03	0.00	ND	ND	ND	ND	ND	--
	09/09/93	18.68	22.94	0.00	ND	ND	ND	ND	ND	--
41.26	12/02/93	19.23	22.03	0.00	ND	ND	ND	ND	ND	--
	03/09/94	18.05	23.21	0.00	62	1.1	5.4	1.1	9.7	--
	04/13/94	18.18	23.08	0.00	ND	ND	ND	ND	ND	--
	06/09/94	18.26	23.00	0.00	ND	ND	ND	ND	ND	--
	09/07/94	19.28	21.98	0.00	ND	ND	0.63	ND	0.61	--
	12/05/94	18.82	22.44	0.00	ND	ND	ND	ND	ND	--
	03/09/95	16.96	24.30	0.00	ND	ND	ND	ND	ND	ND
	06/13/95	16.71	24.55	0.00	ND	ND	ND	ND	ND	ND
	09/12/95	17.80	23.46	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	18.18	23.08	0.00	ND	ND	ND	ND	ND	ND
03/20/96	15.02	26.24	0.00	--	--	--	--	--	--	
09/24/96	17.90	23.36	0.00	--	--	--	--	--	--	
03/27/97	16.45	24.81	0.00	ND	ND	ND	ND	ND	ND	
09/23/97	18.40	22.86	0.00	--	--	--	--	--	--	
03/10/98	13.79	27.47	0.00	ND	ND	ND	ND	ND	ND	
09/04/98	17.98	23.28	0.00	--	--	--	--	--	--	
U-3	08/23/90	--	--	--	110,000	4,400	13,000	2,800	17,000	--
	12/05/90	--	--	--	69,000	1,900	3,500	1,600	9,800	--
	01/18/91	--	--	--	51,000	1,700	3,100	1,500	7,500	--
	03/04/91	--	--	--	84,000	1,400	10,000	2,900	17,000	--
	06/03/91	--	--	--	130,000	5,800	19,000	4,600	24,000	--

Table 1
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 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G)	←-----ppb----->				MTBE	
						B	T	E	X		
U-3 (cont)	09/19/91	--	--	--	61,000	3,300	9,700	2,800	15,000	--	
	12/04/91	--	--	--	75,000	2,500	6,100	1,900	11,000	--	
	03/05/92	--	--	--	160,000	5,300	15,000	5,400	26,000	--	
	04/07/92	--	--	--	97,000	6,100	16,000	5,400	28,000	--	
	08/06/92	--	--	--	140,000	5,100	13,000	5,000	23,000	--	
	11/20/92	--	--	--	50,000	3,200	4,700	1,900	10,000	--	
	02/12/93	--	--	--	80,000	3,700	9,400	3,700	18,000	--	
39.64	06/04/93	15.48	24.16	0.00	92,000	2,900	8,700	4,300	20,000	--	
	09/09/93	17.04	22.60	0.00	110,000	2,800	10,000	6,500	31,000	--	
39.26	12/02/93	17.55	21.71	0.00	110,000	3,200	7,700	5,600	26,000	--	
	03/09/94	16.35	22.91	0.00	120,000	4,500	8,300	5,600	28,000	--	
39.26**	06/09/94	16.60	22.66	0.00	120,000 ⁴	3,300	6,100	5,200	26,000	--	
	09/07/94	17.61	21.65	0.00	100,000	2,400	4,900	4,200	21,000	--	
	12/05/94	17.08	22.18	0.00	140,000	3,100	5,100	4,900	21,000	--	
	03/09/95	15.20	24.06	0.00	100,000	2,300	3,300	4,800	21,000	54,000	
	06/13/95	15.11	24.15	0.00	64,000	1,700	1,500	3,800	18,000	900	
	09/12/95	16.11	23.15	0.00	69,000	1,700	820	4,000	19,000	29,000	
	12/14/95	INACCESSIBLE - WELL CONNECTED TO REMEDIATION SYSTEM WHICH WAS NOT RUNNING							--	--	--
	03/20/96	INACCESSIBLE - WELL CONNECTED TO REMEDIATION SYSTEM WHICH WAS NOT RUNNING							--	--	--
	03/22/96	--	--	--	15,000	150	490	480	3,100	400	
	09/24/96	INACCESSIBLE - WELL CONNECTED TO REMEDIATION SYSTEM WHICH WAS NOT RUNNING							--	--	--
03/27/97	14.77	24.49	0.00	110	ND	ND	ND	0.62	9.6		
09/23/97	16.74	22.52	0.00	ND	ND	ND	ND	ND	ND		
03/10/98	12.18	27.08	0.00	ND	ND	ND	ND	3.1	ND		
09/04/98	16.46	22.80	0.00	ND	ND	ND	1.2	2.3	ND		
U-4	08/23/90	--	--	--	ND	ND	1.0	ND	1.8	--	
	12/05/90	--	--	--	ND	ND	ND	ND	ND	--	
	01/18/91	--	--	--	ND	ND	ND	ND	ND	--	
	03/04/91	--	--	--	ND	ND	ND	ND	ND	--	
	06/03/91	--	--	--	ND	ND	ND	ND	ND	--	
	09/19/91	--	--	--	ND	ND	ND	ND	ND	--	
	12/04/91	--	--	--	ND	ND	ND	ND	ND	--	
	03/05/92	--	--	--	ND	ND	ND	ND	ND	--	
	04/07/92	--	--	--	ND	ND	ND	ND	ND	--	

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	←-----ppb----->					MTBE
					TPH(G)	B	T	E	X	
U-4 (cont)	08/06/92	--	--	--	ND	ND	ND	ND	ND	--
	11/20/92	--	--	--	ND	ND	2.5	ND	ND	--
	02/12/93	--	--	--	ND	ND	ND	ND	ND	--
40.53	06/04/93	16.73	23.80	0.00	ND	ND	ND	ND	ND	--
	09/09/93	16.89	23.64	0.00	ND	ND	ND	ND	ND	--
40.25	12/02/93	18.46	21.79	0.00	ND	ND	ND	ND	2.6	--
	03/09/94	17.30	22.95	0.00	ND	1.4	4.7	1.1	8.1	--
40.28	04/13/94	17.44	22.81	0.00	ND	ND	ND	ND	ND	--
	06/09/94	17.53	22.72	0.00	ND	ND	ND	ND	ND	--
	09/07/94	18.52	21.76	0.00	ND	ND	1.1	ND	1.0	--
40.25	12/05/94	18.08	22.20	0.00	ND	ND	ND	ND	ND	--
	03/09/95	16.16	24.12	0.00	ND	ND	ND	ND	ND	ND
	06/13/95	15.95	24.30	0.00	ND	ND	ND	ND	ND	2.7
	09/12/95	17.10	23.15	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	17.43	22.82	0.00	ND	ND	ND	ND	ND	1.3
	03/20/96	14.93	25.32	0.00	--	--	--	--	--	--
	09/24/96	17.19	23.06	0.00	--	--	--	--	--	--
40.25	03/27/97	15.66	24.59	0.00	ND	ND	ND	ND	ND	ND
	09/23/97	17.69	22.56	0.00	--	--	--	--	--	--
	03/10/98	12.99	27.26	0.00	ND	ND	ND	ND	ND	ND
	09/04/98	17.28	22.97	0.00	--	--	--	--	--	--
U-5	04/07/92	--	--	--	ND	ND	ND	ND	ND	--
	08/06/92	--	--	--	ND	ND	ND	ND	ND	--
	11/20/92	--	--	--	ND	ND	ND	ND	ND	--
	02/12/93	--	--	--	ND	ND	ND	ND	ND	--
39.61	06/04/93	16.05	23.56	0.00	ND	ND	ND	ND	ND	--
	09/09/93	16.90	22.71	0.00	ND	ND	ND	ND	ND	--
39.31	12/02/93	17.66	21.65	0.00	ND	ND	ND	ND	ND	--
	03/09/94	16.45	22.86	0.00	71	1.7	6.3	1.5	10	--
	04/13/94	16.64	22.67	0.00	ND	ND	ND	ND	ND	--
	06/09/94	16.70	22.61	0.00	ND	ND	ND	ND	ND	--
	09/07/94	17.73	21.58	0.00	ND	ND	0.73	ND	0.84	--
	12/05/94	17.23	22.08	0.00	ND	ND	ND	ND	ND	--
	03/09/95	15.35	23.96	0.00	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	←-----ppb----->					
					TPH(G)	B	T	E	X	MTBE
U-5 (cont)	06/13/95	15.16	24.15	0.00	ND	ND	ND	ND	ND	0.87
	09/12/95	16.30	23.01	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	16.56	22.75	0.00	ND	ND	ND	ND	ND	ND
	03/20/96	14.07	25.24	0.00	--	--	--	--	--	--
	09/24/96	16.55	22.76	0.00	--	--	--	--	--	--
	03/27/97	14.85	24.46	0.00	ND	ND	ND	ND	ND	ND
	09/23/97	16.90	22.41	0.00	--	--	--	--	--	--
	03/10/98	12.21	27.10	0.00	ND	ND	ND	ND	ND	ND
	09/04/98	16.57	22.74	0.00	--	--	--	--	--	--
U-6	04/07/92	--	--	--	6,600	90	ND	820	1,200	--
	08/06/92	--	--	--	9,200	160	ND	360	150	--
	11/20/92	INACCESSIBLE	--	--	--	--	--	--	--	--
	02/12/93	--	--	--	2,600	27	ND	120	51	--
37.94	06/04/93	14.45	23.49	0.00	13,000	100	38	450	320	--
	09/09/93	15.56	22.38	0.00	6,300 ³	29	ND	120	34	--
37.68	12/02/93	16.08	21.60	0.00	2,100	12	1.6	21	1.1	--
	03/09/94	14.90	22.78	0.00	2,200	11	8.2	24	16	--
	06/09/94	15.18	22.50	0.00	2,600 ⁴	16	ND	29	ND	--
	09/07/94	16.20	21.48	0.00	16,004	ND	ND	ND	ND	--
	12/05/94	15.60	22.08	0.00	450 ⁵	ND	ND	ND	ND	--
	03/09/95	13.74	23.94	0.00	2,500	29	ND	70	120	320
	06/13/95	13.73	23.95	0.00	1,300	ND	ND	20	46	5,400
	09/12/95	14.85	22.83	0.00	ND	ND	ND	ND	ND	6,600
	12/14/95	14.89	22.79	0.00	760	ND	ND	7.0	8.4	1,100
	03/20/96	12.41	25.27	0.00	52	1.1	0.98	ND	0.75	1,200
	09/24/96	15.06	22.62	0.00	ND	ND	ND	ND	ND	750
	03/27/97	13.48	24.20	0.00	ND	ND	ND	ND	ND	150
	09/23/97	15.36	22.32	0.00	66	0.81	ND	ND	ND	150
	03/10/98	10.90	26.78	0.00	ND	ND	ND	ND	ND	18
	09/04/98	14.85	22.83	0.00	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	←-----ppb----->						MTBE
					TPH(G)	B	T	E	X		
U-7	04/07/92	--	--	--	ND	ND	ND	ND	ND	ND	--
	08/06/92	--	--	--	ND	ND	ND	ND	ND	ND	--
	11/20/92	--	--	--	ND	ND	ND	ND	ND	ND	--
	02/12/93	--	--	--	ND	ND	ND	ND	ND	ND	--
37.49	06/04/93	14.17	23.32	0.00	ND	ND	ND	ND	ND	ND	--
	09/09/93	15.23	22.26	0.00	ND	ND	ND	ND	ND	ND	--
37.11	12/02/93	15.61	21.50	0.00	ND	ND	ND	ND	ND	ND	--
	03/09/94	14.45	22.66	0.00	ND	1.4	4.4	0.96	7.5	--	--
	04/13/94	14.63	22.48	0.00	ND	ND	ND	ND	ND	ND	--
	06/09/94	14.70	22.41	0.00	ND	ND	ND	ND	ND	ND	--
	09/07/94	15.72	21.39	0.00	ND	ND	ND	ND	ND	ND	--
	12/05/94	15.10	22.01	0.00	ND	ND	ND	ND	ND	ND	--
	03/09/95	13.36	23.75	0.00	ND	ND	ND	ND	ND	ND	ND
	06/13/95	13.33	23.78	0.00	ND	ND	ND	ND	ND	ND	3.5
	09/12/95	14.40	22.71	0.00	ND	ND	ND	ND	ND	ND	ND
	12/14/95	14.39	22.72	0.00	ND	ND	ND	ND	ND	ND	1.4
	03/20/96	11.96	25.15	0.00	--	--	--	--	--	--	--
	09/24/96	14.59	22.52	0.00	--	--	--	--	--	--	--
	03/27/97	13.08	24.03	0.00	ND	ND	ND	ND	ND	ND	ND
	09/23/97	14.90	22.21	0.00	--	--	--	--	--	--	--
	03/10/98	10.46	26.65	0.00	ND	ND	ND	ND	ND	ND	ND
	09/04/98	14.42	22.69	0.00	--	--	--	--	--	--	--
U-8	04/07/92	--	--	--	ND	ND	ND	ND	ND	ND	--
	08/06/92	--	--	--	ND	ND	ND	ND	ND	ND	--
	02/12/93	--	--	--	ND	ND	ND	ND	ND	ND	--
38.94	06/04/93	15.26	23.68	0.00	ND	ND	ND	ND	ND	ND	--
	09/09/93	16.38	22.56	0.00	ND	ND	ND	ND	ND	ND	--
38.57	12/02/93	16.80	21.77	0.00	ND	ND	ND	ND	ND	ND	--
	03/09/94	15.62	22.95	0.00	ND	1.2	3.7	0.79	6.1	--	--
	04/13/94	15.80	22.77	0.00	ND	ND	0.78	ND	0.98	--	--
	06/09/94	15.86	22.71	0.00	ND	ND	ND	ND	ND	ND	--
	09/07/94	16.87	21.70	0.00	ND	ND	ND	ND	ND	ND	--
	12/05/94	16.32	22.25	0.00	ND	ND	ND	ND	ND	ND	--
	03/09/95	14.56	24.01	0.00	ND	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	←-----ppb----->					
					TPH(G)	B	T	E	X	MTBE
U-8	06/13/95	14.40	24.17	0.00	ND	ND	ND	ND	ND	ND
(cont)	09/12/95	15.50	23.07	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	15.67	22.90	0.00	ND	ND	ND	ND	ND	ND
	03/20/96	13.25	25.32	0.00	--	--	--	--	--	--
	09/24/96	15.75	22.82	0.00	--	--	--	--	--	--
	03/27/97	14.18	24.39	0.00	ND	ND	ND	ND	ND	ND
	09/23/97	16.05	22.52	0.00	--	--	--	--	--	--
	03/10/98	11.63	26.94	0.00	ND	ND	ND	ND	ND	ND
	09/04/98	15.81	22.76	0.00	--	--	--	--	--	--
U-9										
37.88	06/04/93	14.67	23.21	0.00	2,100 ²	ND	ND	ND	ND	--
	09/09/93	15.79	22.09	0.00	1,200 ²	ND	ND	ND	ND	--
37.31	12/02/93	15.93	21.38	0.00	ND	ND	ND	ND	ND	--
	03/09/94	14.74	22.57	0.00	5,700 ⁴	ND	ND	ND	ND	--
	04/13/94	14.96	22.35	0.00	ND	ND	ND	ND	ND	--
	06/09/94	15.05	22.26	0.00	2,900 ⁵	ND	ND	ND	ND	--
	09/07/94	16.06	21.25	0.00	2,700 ⁵	ND	ND	ND	ND	--
	12/05/94	15.43	21.88	0.00	3,700 ⁵	ND	ND	ND	ND	--
	03/09/95	13.50	23.81	0.00	2,500 ⁵	ND	ND	ND	ND	5,800
	06/13/95	13.63	23.68	0.00	ND	ND	ND	ND	ND	1,200
	09/12/95	14.73	22.58	0.00	ND	ND	ND	ND	ND	1,600
	12/14/95	14.67	22.64	0.00	ND	ND	ND	ND	ND	4,400
	03/20/96	12.27	25.04	0.00	ND	ND	ND	ND	ND	480
	09/24/96	14.92	22.39	0.00	ND	ND	ND	ND	ND	ND
	03/27/97	13.36	23.95	0.00	ND	ND	ND	ND	ND	42
	09/23/97	15.28	22.03	0.00	ND	ND	ND	ND	ND	ND
	03/10/98	10.86	26.45	0.00	ND	ND	ND	ND	3.1	ND
	09/04/98	15.03	22.28	0.00	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G) <-----ppb----->	B	T	E	X	MTBE
Trip Blank										
TB-LB	03/10/98	--	--	--	ND	ND	ND	ND	ND	ND
	09/04/98	--	--	--	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5760
376 Lewelling Boulevard
San Lorenzo, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to March 10, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing
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

* TOC elevations have been surveyed relative to mean sea level (msl). Prior to December 2, 1993, the DTW measurements were taken from the top of well covers.

** The P.V.C. well casing was shortened in September 1995.

¹ Ethylbenzene and xylenes were combined prior to March 1990.

² The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of standard gasoline

³ The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline

⁴ Laboratory report indicates the hydrocarbons detected appeared to be gasoline and non-gasoline mixture

⁵ Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.

⁶ Laboratory report indicates gasoline and unidentified hydrocarbons > C8.

⁷ Detection limit raised. Refer to analytical results.

⁸ Laboratory report indicates weathered gas C6-C12.

Table 2
Dissolved Oxygen Concentrations
 Tosco (Unocal) Service Station #5760
 376 Lewelling Boulevard
 San Lorenzo, California

Well ID	Date	Before Purging (mg/L)	After Purging (mg/L)
U-1	03/27/97	2.41	2.35
U-2	03/27/97	4.36	4.49
U-3	03/27/97	3.18	3.32
U-4	03/27/97	3.32	3.26
U-5	03/27/97	3.74	3.77
U-6	03/20/96	3.85	3.89
	09/20/96	3.73	3.81
	03/27/97	4.43	4.36
	09/23/97	--	4.14
	03/10/98	--	3.95
U-7	03/27/97	3.29	3.38
U-8	03/27/97	3.04	3.11
U-9	03/20/96	4.02	4.00
	09/20/96	3.85	3.98
	03/27/97	3.65	3.57
	09/23/97	--	3.80
	03/10/98	--	3.62

EXPLANATIONS:

Dissolved oxygen concentrations prior to March 10, 1998, were compiled from reports prepared by MPDS Services, Inc.

mg/L = milligrams per liter

-- = Not Measured

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, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured 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: # 5760 Job#: 180109
 Address: 376 Lewelling Blvd Date: 9-4-93
 City: San Lorenzo Sampler: Joe

Well ID: U-1 Well Condition: O.K.
 Well Diameter: 3 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): (Gallons)
 Total Depth: 23.17 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66
 Depth to Water: 16.84 ft. Factor (VF) 6" = 1.50 12" = 5.90

6.33 x VF 0.38 = 2.41 x 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 10:05 Weather Conditions: Clear
 Sampling Time: 10:25 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 $\mu\text{mhos/cm} \times 10^3$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:12</u>	<u>2.5</u>	<u>7.15</u>	<u>4.96</u>	<u>70.2</u>			
<u>10:15</u>	<u>5</u>	<u>7.25</u>	<u>5.12</u>	<u>70.8</u>			
<u>10:18</u>	<u>7.5</u>	<u>7.35</u>	<u>5.17</u>	<u>71.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>3 vca</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility: # 5760 Job#: 180109
 Address: 376 Lewelling Blvd Date: 9-4-98
 City: San Lorenzo Sampler: Joe

Well ID: U-2 Well Condition: OK
 Well Diameter: 3 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (Gallons):
 Total Depth: 29.89 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66
 Depth to Water: 17.98 ft. Factor (VF) 6" = 1.50 12" = 5.80

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: _____ Weather Conditions: Clear
 Sampling Time: _____ Water Color: clear Odor: None
 Purging Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 1.02^T$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-2</u>	<u>3 vials</u>	<u>r</u>	<u>HEC</u>	<u>SEQUOIA</u>	<u>TPH(G)/BTEX/mtbe</u>

COMMENTS: Monitored only.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility: # 5760 Job#: 180109
 Address: 376 Lewelling Blvd Date: 9-4-98
 City: San Lorenzo Sampler: Joe

Well ID: U-3 Well Condition: o.k.
 Well Diameter: 3 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (Gallons):
 Total Depth: 24.81 ft. Volume Factor (VF):
 Depth to Water: 16.46 ft.
 2" = 0.17 3" = 0.38 4" = 0.66
 6" = 1.50 12" = 5.80

8.35 x VF 0.38 = 3.17 x 3 (case volume) = Estimated Purge Volume: 10 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
~~Suction~~
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 4:33 Weather Conditions: clear
 Sampling Time: 9:53 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 $\mu\text{mhos/cm} \times 1.02$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:40</u>	<u>3</u>	<u>7.67</u>	<u>8.12</u>	<u>71.2</u>	_____	_____	_____
<u>9:43</u>	<u>6</u>	<u>7.52</u>	<u>7.93</u>	<u>72.0</u>	_____	_____	_____
<u>9:45</u>	<u>10</u>	<u>7.55</u>	<u>7.90</u>	<u>71.8</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-3</u>	<u>3 vca</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 5760
Address: 376 Lewelling Blvd
City: San Lorenzo

Job#: 180109
Date: 9-4-93
Sampler: Joe

Well ID U-4

Well Condition: OK

Well Diameter 3 in.

Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): _____ (Gallons)

Total Depth 27.86 ft.

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

Depth to Water 17.28 ft.

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: _____
Sampling Time: _____
Purging Flow Rate: _____ gpm.
Did well de-water? _____

Weather Conditions: clear
Water Color: clear Odor: none
Sediment Description: none
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^3$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-4</u>	<u>3 + 6A</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(O)/BTEX/MTBE</u>

COMMENTS: Monitored only

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5760
Address: 376 Lewelling Blvd
City: San Lorenzo

Job#: 180109
Date: 9-4-98
Sampler: Joe

Well ID: U-5
Well Diameter: 2 in.
Total Depth: 28.47 ft.
Depth to Water: 16.57 ft.

Well Condition: OK
Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): _____ (Gallons)
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: _____
Sampling Time: _____
Purging Flow Rate: _____ gpm.
Did well de-water? _____

Weather Conditions: Clear
Water Color: clear Odor: none
Sediment Description: none
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^3$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-5</u>	<u>3 vials</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>

COMMENTS: Monitored only.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5760 Job#: 180109
Address: 376 Lewelling Blvd Date: 9-4-98
City: San Lorenzo Sampler: Joe

Well ID U-6 Well Condition: O.K.
Well Diameter 2 in. Hydrocarbon Amount Bailed
Total Depth 28.27 ft. Thickness: _____ (feet) (product/water): _____ (Gallons)
Depth to Water 14.85 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66
Factor (VF) 6" = 1.50 12" = 5.80

13.42 x VF 0.17 = 2.28 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: 9:00 Weather Conditions: Clear
Sampling Time: 9:20 A.M. Water Color: clear Odor: none
Purging Flow Rate: _____ gpm. Sediment Description: none
Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}^{1/100}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:08</u>	<u>2.5</u>	<u>7.17</u>	<u>4.85</u>	<u>65.8</u>	_____	_____	_____
<u>9:11</u>	<u>5</u>	<u>7.26</u>	<u>5.19</u>	<u>66.2</u>	_____	_____	_____
<u>9:13</u>	<u>7</u>	<u>7.24</u>	<u>5.17</u>	<u>66.1</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-6</u>	<u>3 vca</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: Removed and Discarded ORC.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5760 Job#: 180109
Address: 376 Lewelling Blvd Date: 9-4-93
City: San Lorenzo Sampler: Joe

Well ID U-7 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (Gallons)
Total Depth 34.88 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66
Depth to Water 14.42 ft. Factor (VF) 6" = 1.50 12" = 5.90

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: _____ Weather Conditions: Clear
Sampling Time: _____ Water Color: Clear Odor: None
Purging Flow Rate: _____ gpm. Sediment Description: None
Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-7</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(HG)/bTEX/mTBE</u>

COMMENTS: Monitored only

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility: # 5760 Job#: 180109
 Address: 376 Lewelling Blvd Date: 9-4-93
 City: San Lorenzo Sampler: Joe

Well ID: U-9 Well Condition: OK
 Well Diameter: 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)
 Total Depth: 28.20 ft.
 Depth to Water: 15.03 ft.

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

13.17 x VF 0.17 = 2.24 x 3 (case volume) = Estimated Purge Volume: 7 (gal.)

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

Starting Time: 8:23 Weather Conditions: clear
 Sampling Time: 8:45 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 $\mu\text{mhos/cm} \times 10^3$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:30</u>	<u>2.5</u>	<u>7.22</u>	<u>7.83</u>	<u>66.1</u>			
<u>8:33</u>	<u>5</u>	<u>7.30</u>	<u>8.41</u>	<u>66.3</u>			
<u>8:35</u>	<u>7</u>	<u>7.37</u>	<u>8.48</u>	<u>66.2</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-9</u>	<u>3 vca</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>

COMMENTS: Removed and Discarded ORC.



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RECEIVED

Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 5760/180109.85 Sample Descript: TB-LB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809348-01	Sampled: 09/04/98 Received: 09/04/98 Analyzed: 09/10/98 Reported: 09/20/98
Attention: Deanna Harding		

Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	83

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

SEQUOIA ANALYTICAL - ELAP #1271


Tod Granicher
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 5760/180109.85 Sample Descript: U-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809348-02	Sampled: 09/04/98 Received: 09/04/98 Analyzed: 09/10/98 Reported: 09/20/98
Attention: Deanna Harding		


Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	5300
Methyl t-Butyl Ether	250	N.D.
Benzene	50	53
Toluene	50	N.D.
Ethyl Benzene	50	410
Xylenes (Total)	50	620
Chromatogram Pattern: Weathered Gas		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	75

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 5760/180109.85 Sample Descript: U-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809348-03	Sampled: 09/04/98 Received: 09/04/98 Analyzed: 09/10/98 Reported: 09/20/98
Attention: Deanna Harding		


Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	1.2
Xylenes (Total)	0.50	2.3
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	75

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

SEQUOIA ANALYTICAL - ELAP #1271


Tod Granicher
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 5760/180109.85 Sample Descript: U-6 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809348-04	Sampled: 09/04/98 Received: 09/04/98 Analyzed: 09/10/98 Reported: 09/20/98
Attention: Deanna Harding		


Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	79

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 5760/180109.85 Sample Descript: U-9 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809348-05	Sampled: 09/04/98 Received: 09/04/98 Analyzed: 09/10/98 Reported: 09/20/98
Attention: Deanna Harding		


Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	76

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

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal 5760/180109.85
Matrix: Liquid

Work Order #: 9809348 01-05

Reported: Sep 21, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC091098802002A	GC091098802002A	GC091098802002A	GC091098802002A	GC091098802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	8090686	8090686	8090686	8090686	8090686
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/10/98	9/10/98	9/10/98	9/10/98	9/10/98
Analyzed Date:	9/10/98	9/10/98	9/10/98	9/10/98	9/10/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	290 µg/L
Result:	19	20	20	64	320
MS % Recovery:	95	100	100	107	110
Dup. Result:	19	20	22	64	320
MSD % Recov.:	95	100	110	107	110
RPD:	0.0	0.0	9.5	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-50

LCS #:	LCS091098	LCS091098	LCS091098	LCS091098	LCS091098
Prepared Date:	9/10/98	9/10/98	9/10/98	9/10/98	9/10/98
Analyzed Date:	9/10/98	9/10/98	9/10/98	9/10/98	9/10/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	290 µg/L
LCS Result:	20	20	20	64	300
LCS % Recov.:	100	100	100	107	103

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140
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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
ELAP #1271

Tod Granicher
Tod Granicher
Project Manager

** MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9809348.GET <1>



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Attention: Deanna Harding

Client Proj. ID: Unocal 5760/180109.85

Lab Proj. ID: 9809348

Received: 09/04/98

Reported: 09/20/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 8 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL



Tod Granicher
Project Manager