

GETTLER-RYAN INC.

PROTECTION

98 JIIL -1 PH 3: 23

TRANSMITTAL

5770 1746 BD

TO:

Ms. Amy Leech

Alameda County Health Care Services

1131 Harbor Bay Parkway Alameda, California 94501

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 DATE: June 26, 1998

G-R #: 180109

RE: Tosco (Unocal) SS #5760

376 Lewelling Boulevard San Lorenzo, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	June 15, 1998	Groundwater Monitoring and Sampling Report Semi-Annual 1998 - Event of March 10, 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

CHRONED ACCORDING TO



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ENVIRUNTENTAL PROTECTION

98 APR 22 PH 2: 03

April 20, 1998 Project 311-058.1A

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

Re: Unocal Station 5760

Quarterly Summary Report
First Quarter 1998

Dear Mr. Hiett:

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

Service Station

Location

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.

Joséph Muzzio

Project Geologist

Enclosure

cc: Ms. Tina Berry, Tosco Marketing Company

Ms. Amy Leech, Alameda County Environmental Health Care Services

Quarterly Summary Report First Quarter 1998

Unocal 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 of wells began in February 1988. 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 February 1996, modifications to the present sampling and monitoring activities were presented in a letter to Unocal and Alameda County, recommending a reduction to semiannual groundwater sampling for some of the monitoring wells. Because the mass removal versus time trend for the remediation system indicated a diminishing incremental benefit from continued operation, the remediation system was shut down February 1997.

RECENT QUARTER ACTIVITIES

Semiannual groundwater monitoring was performed in March.

NEXT QUARTER ACTIVITIES

No activities are planned.

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.

June 15, 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 March 10, 1998, field personnel monitored and sampled nine wells (MW-1 through 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. 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 Dissolved Oxygen Concentrations are summarized in Table 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

No. 5577

E OF CALIFO

Project Coordinator

Stephen J. Carrer

Senior Geologist, R.G. No. 5577

Semor Geologist, R.G. No. 55//

Figure 1: Potentiometric Map Concentration Map

Table 1: Groundwater Monitoring Data and Analytical Results

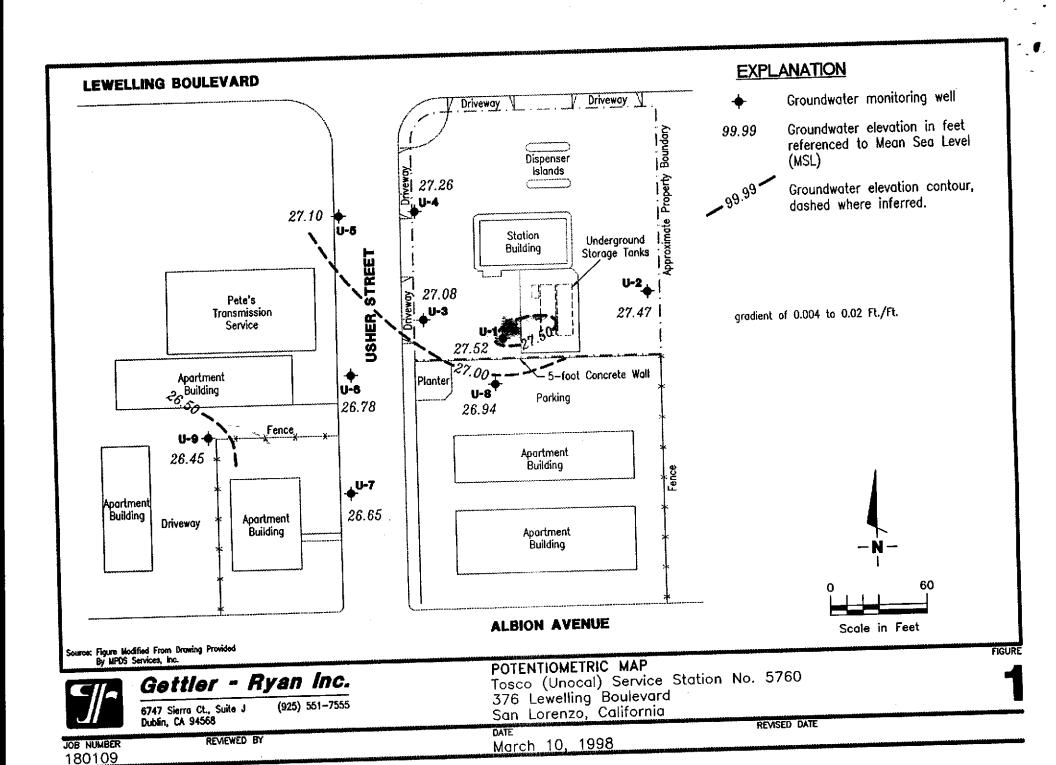
Table 2: Dissolved Oxygen Concentrations

Attachments: Standard Operating Procedure - Groundwater Sampling

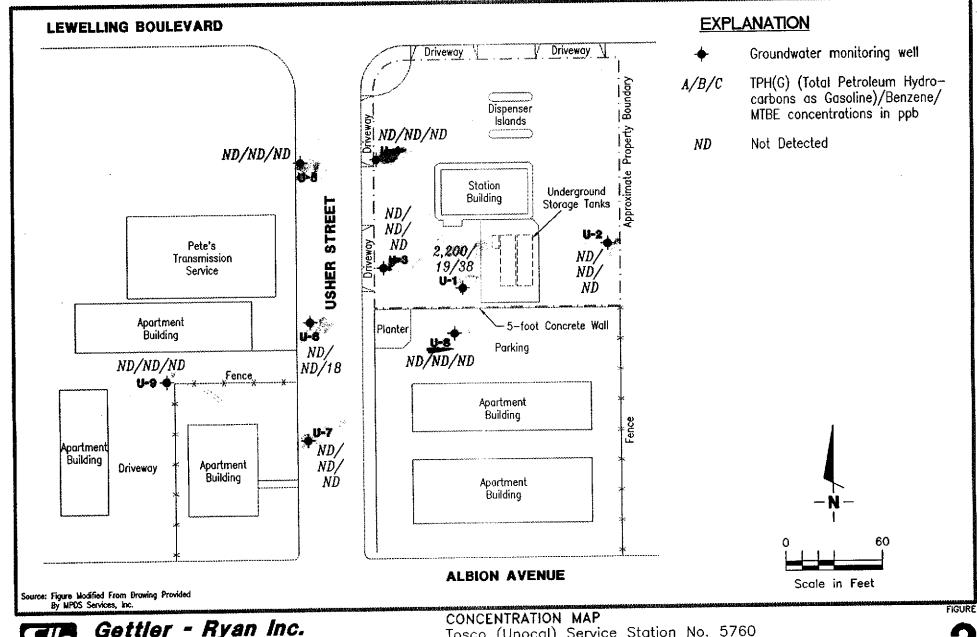
Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

5760.qml



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Gettier - Ryan Inc.

6747 Sierra Ct., Suite J Dublin, CA 94568

(925) 551-7555

Tosco (Unocal) Service Station No. 5760 376 Lewelling Boulevard

San Lorenzo, California

DATE

March 10, 1998

JOB NUMBER 180109

REVIEWED BY

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(msl)	<			b		
U-1	02/09/88			93,000	3,600	11,000	l	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				DUE TO THE PR				
	03/04/91				DUE TO THE PR				
	06/03/91				DUE TO THE PR				
	09/19/91			NOT SAMPLED	DUE TO THE PR	ESENCE OF FR	EE PRODUCT		-
	12/04/91			NOT SAMPLED	DUE TO THE PR	ESENCE OF FR	EE PRODUCT		
	03/05/92			NOT SAMPLED	DUE TO THE PR	ESENCE OF FR	EE PRODUCT		
	04/07/92			NOT SAMPLED	- PRODUCT SKI	MMER INSTALI	LED IN WELL	••	
	08/06/92			NOT SAMPLED	DUE TO THE PR	ESENCE OF FR	EE PRODUCT	* **	
	11/20/92			NOT SAMPLED	DUE TO THE PR	ESENCE OF FR	EE PRODUCT		
	02/12/93			70,000	2,200	8,400	3,100	18,000	
	06/04/93			35,000	1,300	5,700	900	9,200	
	09/09/93			67,000	2,900	18,000	6,200	32,000	
	12/02/93			NOT SAMPLED	DUE TO THE PR	ESENCE OF FR	EE PRODUCT		
	03/09/94			45,000	930	4,100	2,000	11,000	
	06/09/94			59,000	5,200	1,300	5,200	15,000	
	09/07/94			41,000	1,600	6,200	3,100	16,000	
	12/05/94			1,300	55	20	16	330	
	03/09/95			49,000	860	3,200	1,900	10,000	1,500
	06/13/95			53,000	1,400	5,000	2,500	14,000	2,800
	09/12/95			43,000	910	2,700	1,700	9,600	1,400
	12/14/95			NOT SAMPLED -	WELL CONNECTED	D TO REMEDIAT	ION SYSTEM WH	ICH WAS NOT R	UNNING
0.20	03/20/96								
-	03/22/96			13,000	200	590	640	4,000	790
	09/24/96			•	WELL CONNECTED	D TO REMEDIAT	ION SYSTEM WH	ICH WAS NOT F	UNNING
	03/27/97	15.29	24.91	1,300	8.0	ND	ND	400	ND
	09/23/97	17.20	23.00	2,000	15	ND	ND	530	ND
	* 03/10/98	12.68	27.52	2,200 ⁶	19 🔻	4.8	ND^7	986	38

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	TPH(G)	В	Т	E	X	МТВЕ
TOC*		(ft.)	(msl)	<		<i>ا</i> مِمِ)		>
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	
	06/04/93			ND	ND	ND	ND	ND	
	09/09/93			ND	ND	ND	ND	ND	
	12/02/93			ND	ND	ND	ND	ND	
	03/09/94			62	1.1	5.4	1.1	9.7	
	04/13/94			ND	ND	ND	ND	ND	
	06/09/94			ND	ND	ND	ND	ND	
	09/07/94			ND	ND	0.63	ND	0.61	
	12/05/94			ND	ND	ND	ND	ND	_
	03/09/95	4		ND	ND	ND	ND	ND	ND
	06/13/95			ND	ND	ND	ND	ND	ND
	09/12/95			ND	ND	ND	ND	ND	ND
	12/14/95			ND	ND	ND	ND	ND	ND
41.26	03/20/96	15.02	26.24						
	09/24/96	17.90	23.36						
	03/27/97	16.45	24.81	ND	ND	ND	. ND	ND	ND
	09/23/97	18.40	22.86		~~				
	03/10/98	13.79	27.47	ND	ND	ND	ND	ND	ND
¥1 0	00/04/00			110.000	4.400	12.000	2 800	17 000	
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	
	09/19/91			61,000	3,300	9,700	2,800	15,000	

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	TPH(G)	В	T .	E	X	MTBE
TOC*		(ft.)	(msl)	<		ррь			
U-3	12/04/91			75,000	2,500	6,100	1,900	11,000	
(cont)	03/05/92			160,000	5,300	15,000	5,400	26,000	
(com)	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	
	06/04/93			92,000	2,900	8,700	4,300	20,000	
	09/09/93			110,000	2,800	10,000	6,500	31,000	
	12/02/93			110,000	3,200	7,700	5,600	26,000	
	03/09/94			120,000	4,500	8,300	5,600	28,000	
	06/09/94			120,000 ⁴	3,300	6,100	5,200	26,000	
	09/07/94			100,000	2,400	4,900	4,200	21,000	
	12/05/94			140,000	3,100	5,100	4,900	21,000	
	03/09/95			100,000	2,300	3,300	4,800	21,000	54,000
	06/13/95			64,000	1,700	1,500	3,800	18,000	900
	09/12/95			69,000	1,700	820	4,000	19,000	29,000
	12/14/95	n#		NOT SAMPLED - W	•				
39.26	03/20/96								
051.20	03/22/96			15,000	150	490	480	3,100	400
	09/24/96			NOT SAMPLED - W	VELL CONNECTE	ED TO REMEDIATION	ON SYSTEM W	HICH WAS NOT R	UNNING
	03/27/97	14.77	24.49	110	ND	ND	ND	0.62	9.6
	09/23/97	16.74	22.52	ND	ND	ND	ND	ND	ND
	03/10/98	12.18	27.08	ND	ND	ND	ND	-3.1 ··	ND
U-4	08/23/90			ND	ND	1.0	ND	1.8	
U-4	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	ND	
	03/05/92			ND ND	ND	ND	ND	ND	**
	04/07/92			ND	ND	ND	ND	ND	
	08/06/92			ND ND	ND	ND	ND	ND	**
	11/20/92			ND ND	ND	2.5	ND	ND	••
	11/40/74			HD	1112	#4.5 ·	1112	. 140	

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	TPH(G)	В	T	E	X	МТВЕ
TOC*		(ft.)	(msl)	<		рр	b		>
U-4	02/12/93			ND	ND	ND	ND	ND	
(cont)	06/04/93			ND	ND	ND	ND	ND	
	09/09/93			ND	ND	ND	ND	ND	
	12/02/93			ND	ND	ND	ND	2.6	
	03/09/94			ND	1.4	4.7	1.1	8.1	· **
	04/13/94			ND	ND	ND	ND	ND	
	06/09/94			ND	ND	ND	ND	ND	
	09/07/94			ND	ND	1.1	ND	1.0	
	12/05/94			ND	ND	ND	ND	ND	
	03/09/95			ND	ND	ND	ND	ND	ND
	06/13/95			ND	ND	ND	ND	ND	2.7
	09/12/95			ND	ND	ND	ND	ND	ND
	12/14/95			ND	ND	ND	ND	ND	1.3
40.25	03/20/96	14.93	25.32						
	09/24/96	17.19	23.06			**			
	03/27/97	15.66	24.59	ND	ND	ND	ND	ND	ND
	09/23/97	17.69	22.56						
	03/10/98	12.99	27.26	ND	ND	ND	ND	ND	ND
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	
	06/04/93			ND	ND	ND	ND	ND	
	09/09/93			ND	ND	ND	ND	ND	
	12/02/93			ND	ND	ND	ND	ND	
	03/09/94			71	1.7	6.3	1.5	10	
	04/13/94			ND	ND	ND	ND	ND	
	06/09/94			ND	ND	NĐ	ND	ND	
	09/07/94			ND	ND	0.73	ND	0.84	
	12/05/94			ND	ND	ND	ND	ND	
	03/09/95			ND	ND	ND	ND	ND	ND
	06/13/95			ND	ND	ND	ND	ND	0.87

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	TPH(G)	В	Т	E	x	MTBE
тос*		(ft.)	(msl)	<		ppl	b		>
U-5	09/12/95			ND	ND	ND	ND	ND	ND
(cont)	12/14/95			ND	ND	ND	ND	ND	ND
39.31	03/20/96	14.07	25.24						
	09/24/96	16.55	22.76						
	03/27/97	14.85	24.46	ND	ND	ND	ND	ND	ND
	09/23/97	16.90	22.41						
	03/10/98	12.21	27.10	ND	ND	ND	ND	ND	ND
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	
	06/04/93			13,000	100	38	450	320	
	09/09/93			$6,300^3$	29	ND	120	34	
	12/02/93			2,100	12	1.6	21	1.1	
	03/09/94	``		2,200	11	8.2	24	16	**
	06/09/94			2,600 ⁴	16	ND	29	ND	
	09/07/94			16,004	ND	ND	ND	ND	
	12/05/94			450 ⁵	ND	ND	ND	ND	
•	03/09/95			2,500	29	ND	70	120	320
	06/13/95			1,300	ND	ND	20	46	5,400
	09/12/95			ND	ND	ND	ND	ND	6,600
	12/14/95			760	ND	ND	7.0	8.4	1,100
37.68	03/20/96	12.41	25.27	52	1.1	0.98	ND	0.75	1,200
	09/24/96	15.06	22.62	ND	ND	ND	ND	ND	750
•	03/27/97	13.48	24.20	ND	ND	ND	ND	ND	150
	09/23/97	15.36	22.32	66	0.81	ND	ND	ND	150
	03/10/98	10.90	26.78	ND	ND	ND	ND	ND	18
U-7	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	

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(msl)	<		рр	0		·····>
U-7	06/04/93			ND	ND	ND	ND	ND	
(cont)	09/09/93			ND	ND	ND	ND	ND	
, ,	12/02/93			ND	ND	ND	ND	ND	'
	03/09/94			ND	1.4	4.4	0.96	7.5	
	04/13/94			ND	ND	ND	ND	ND	
	06/09/94			ND	ND	ND	ND	ND	
	09/07/94			ND	ND	ND	ND	ND	
	12/05/94			ND	ND	ND	ND	ND	
	03/09/95			ND	ND	ND	ND	ND	ND
	06/13/95			ND	ND	ND	ND	ND	3.5
•	09/12/95			ND	ND	ND	ND	ND	ND
	12/14/95			ND	ND	ND	ND	ND	1.4
37.11	03/20/96	11.96	25.15						
	09/24/96	14.59	22.52						
	03/27/97	13.08	24.03	ND	ND	ND	ND	ND	ND
	09/23/97	14.90	22.21						
	03/10/98	10.46	26.65	ND	ND	ND	ND	ND	ND
U-8	04/07/92			ND	ND	ND	ND	ND	
	08/06/92			ND	ND	ND	ND	ND	
	02/12/93			ND	ND	ND	ND	ND	
	06/04/93			ND	ND	ND	ND	ND	
	09/09/93			ND	ND	ND	ND	ND	
	12/02/93			ND	ND	ND	ND	ND	
	03/09/94			ND	1.2	3.7	0.79	6.1	
	04/13/94			ND	ND	0.78	ND	0.98	
	06/09/94			ND	ND	ND	ND	ND	
	09/07/94			ND	ND	ND	ND	ND	
	12/05/94			ND	ND	ND	ND	ND	
	03/09/95			ND	ND	ND	ND	ND	ND
	06/13/95			ND	ND	ND	ND	ND	ND
	09/12/95			ND	ND	ND	ND	ND	ND
	12/14/95			ND	ND	ND	ND	ND	ND
38.57	03/20/96	13,25	25.32					•-	
	09/24/96	15.75	22.82						••

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(msl)	<		pp	b		
U-8	03/27/97	14.18	24.39	ND	ND	ND	ND	ND	ND
(cont)	09/23/97	16.05	22.52						
	03/10/98	11.63	26.94	ND	ND	ND	ND	ND	ND
U-9	06/04/93			$2,100^{2}$	ND	ND	ND	ND	
	09/09/93			1,200 ²	ND	ND	ND	ND	
	12/02/93			ND	ND	ND	ND	ND	
	03/09/94			5,700 ⁴	ND	ND	ND	ND	
	04/13/94			ND	ND	ND	ND	ND	
	06/09/94			2,900 ⁵	ND	ND	ND	ND	
	09/07/94			2,700 ⁵	ND	ND	ND	ND	
	12/05/94			3,700 ⁵	ND	ND	ND	ND	
	03/09/95			2,500 ⁵	ND	ND	ND	ND	5,800
	06/13/95			ND	ND	ND	ND	ND	1,200
	09/12/95			ND	ND	ND	ND	ND	1,600
	12/14/95			ND	ND	ND	ND	ND	4,400
37.31	03/20/96	12.27	25.04	ND	ND	ND	ND	ND	480
	09/24/96	14.92	22.39	ND	ND	ND	ND	ND	ND
	03/27/97	13.36	23.95	ND	ND	ND	ND	ND	42
	09/23/97	15.28	22.03	ND	ND	ND	ND	ND	ND
	03/10/98	10.86	26.45	ND	ND	ND	ND	3.1	* ND
Trip Blank TB-LB	03/10/98			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 provided by MPDS Services, Inc.

TOC = Top of Casing

B = Benzene

ppb = Parts per billion

DTW = Depth to Water

T = Toluene

ND = Not Detected

(ft.) = Feet

E = Ethylbenzene

-- = Not Measured/Not Analyzed

GWE = Groundwater Elevation

X = Xylenes

msl = Relative to mean sea level

MTBE = Methyl tertiary butyl ether

TPH(G) = Total Petroleum Hydrocarbons as Gasoline

- * TOC elevations have been surveyed relative to mean seal level (msl).
- Ethylbenzene and xylenes were combined prior to March 1990.
- The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of standard gasoline
- 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 that the hydrocarbons detected appeared to be gasoline and non-gasoline mixture
- Laboratory report indicates that the hydrocarbons detected did not appear to be gasoline.
- Laboratory report indicates gasoline and unidentified hydrocarbons > C8.
- Detection limit raised. Refer to analytical results.

Depth to water and groundwater elevation history will be updated in future reports.