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STTD 1746



# GETTLER-RYAN INC.

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## TRANSMITTAL

May 4, 1999  
G-R #:180109

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

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

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	April 28, 1999	Groundwater Monitoring and Sampling Report Semi-Annual 1999 - Event of March 4, 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 **May 14, 1999**, this report will be distributed to the following:

Enclosure

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

agency/5760dbd.qmt

ENVIRONMENTAL PROTECTION  
MAY 19 AM 11:44



PACIFIC ENVIRONMENTAL GROUP, INC.

AN COMPANY

STN 1746

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*(ck) K... to  
9/13/99  
AG*

April 20, 1999  
Project 311-058.1A

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  
First Quarter 1999

Dear Mr. Hiatt:

As directed by Mr. David DeWitt 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.**

Timothy L. Ripp  
Project Geologist

Enclosure

cc: Mr. David DeWitt, Tosco Marketing Company  
Ms. Amy Leech, Alameda County Environmental Health Care Services\*

## Quarterly Summary Report First Quarter 1999

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.

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.

The underground product piping was replaced in June 1998.

### RECENT QUARTER ACTIVITIES

Semi-annual groundwater monitoring and sampling activities were performed in March 1999.

### NEXT QUARTER ACTIVITIES

The report documenting the March 1999 semi-annual groundwater monitoring and sampling activities will be submitted in May 1999.

### 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: PEG/TT**



# GETTLER-RYAN INC.

April 28, 1999  
G-R Job #180109

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 #5760  
376 Lewelling Boulevard  
San Lorenzo, California

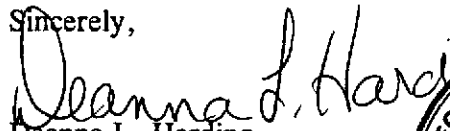
Dear Mr. De Witt:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On March 4, 1999, field personnel monitored and sampled nine wells (MW-1 through MW-9).

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  
Project Coordinator

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

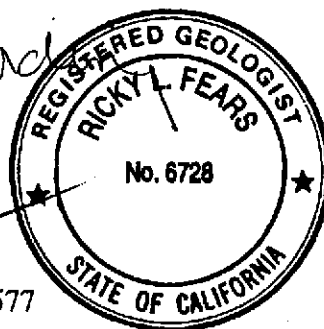


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Dissolved Oxygen Concentrations  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical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

Groundwater flow direction varies at a gradient of 0.01 to 0.07 Ft./Ft.



Scale in Feet

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



**Gertler - 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

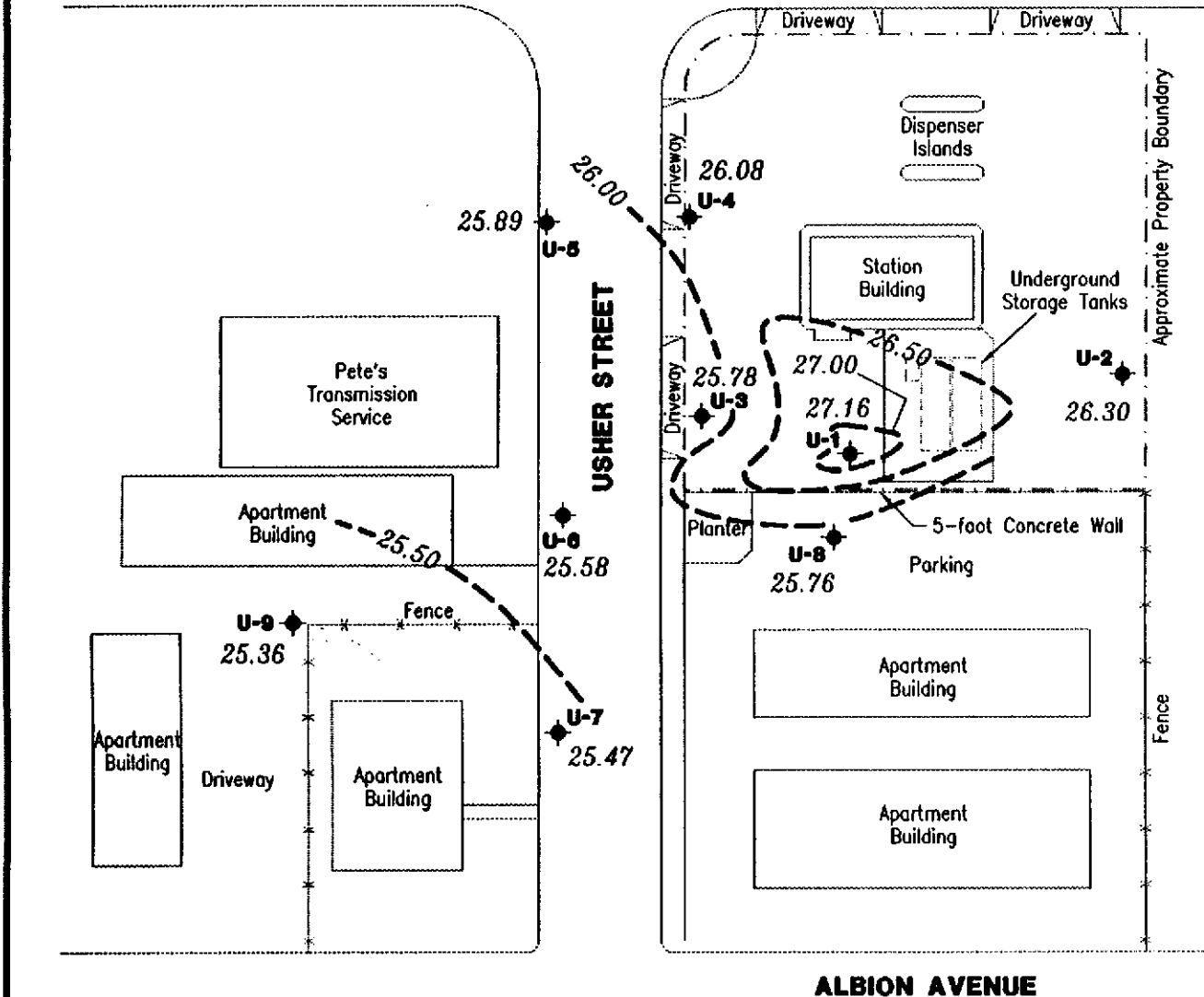
**1**

JOB NUMBER  
180109

REVIEWED BY

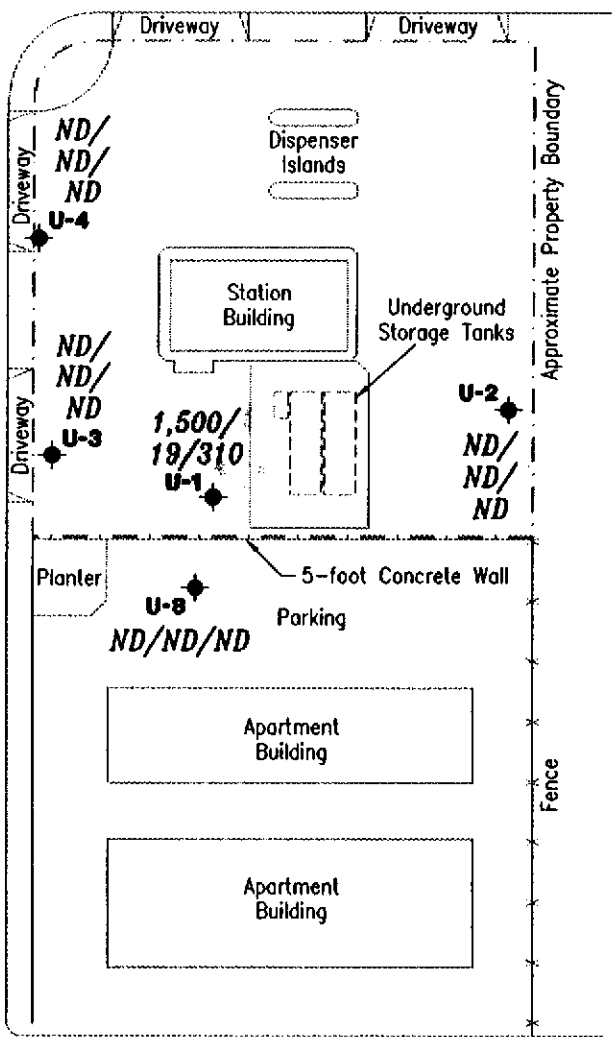
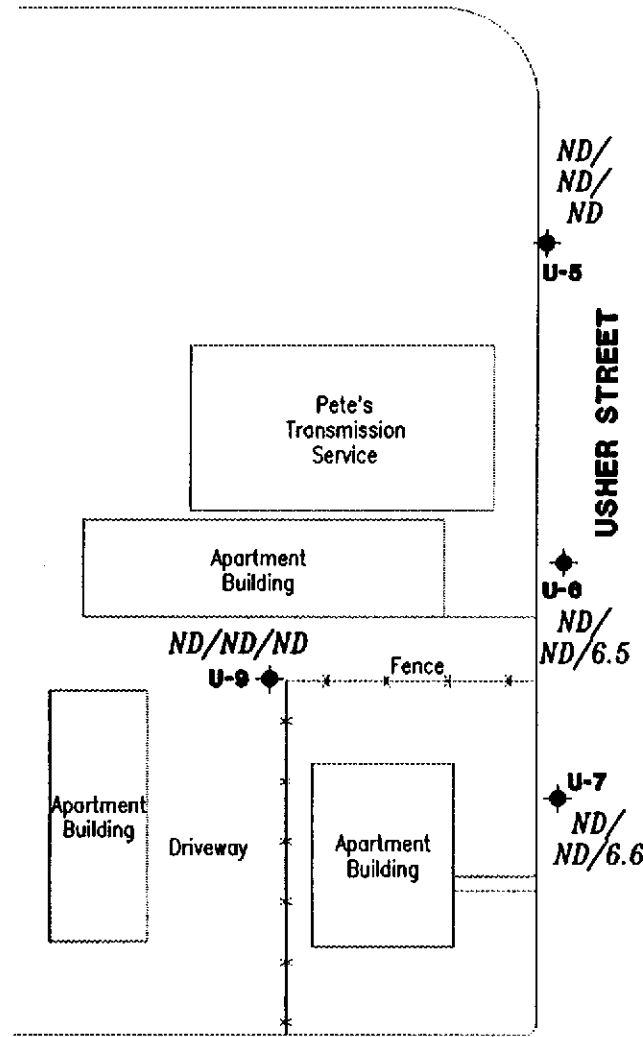
DATE  
March 4, 1999

REVISED DATE



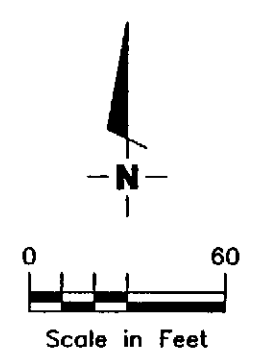
**ALBION AVENUE**

**LEWELLING BOULEVARD**



**EXPLANATION**

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



**ALBION AVENUE**

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

**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 March 4, 1999	REVISED DATE
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**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 (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1	02/09/88	--	--	--	93,000	3,600	11,000	-- <sup>1</sup>	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
40.01**	06/13/95	14.70	25.50	0.00	53,000	1,400	5,000	2,500	14,000	2,800
	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 <sup>6</sup>	19	4.8	ND <sup>7</sup>	980	38
	09/04/98	16.84	23.36	0.00	5,300 <sup>8</sup>	53	ND <sup>7</sup>	410	620	ND <sup>7</sup>
	03/04/99	13.04	27.16	0.00	1,500	19	ND <sup>7</sup>	56	110	310

**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 (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
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	--	--	--	--	--	--	
	03/04/99	14.96	26.30	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 (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
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	--	
	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	--	
	06/09/94	16.60	22.66	0.00	120,000 <sup>4</sup>	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	
39.26**	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	
	03/04/99	13.48	25.78	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 (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
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	--
	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	--
	04/13/94	17.44	22.81	0.00	ND	ND	ND	ND	ND	--
40.28	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	--
	12/05/94	18.08	22.20	0.00	ND	ND	ND	ND	ND	--
40.25	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	--	--	--	--	--	--
	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	--	--	--	--	--	--
03/04/99	14.17	26.08	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 (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
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	
	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	--	--	--	--	--	--	
	03/04/99	13.42	25.89	0.00	ND	ND	0.67	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	--	
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 <sup>3</sup>	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 <sup>4</sup>	16	ND	29	ND	--	
	09/07/94	16.20	21.48	0.00	16,004	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 (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-6	12/05/94	15.60	22.08	0.00	450 <sup>5</sup>	ND	ND	ND	ND	--
(cont)	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
	03/04/99	12.10	25.58	0.00	ND	ND	ND	ND	ND	6.5
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	--
37.49	06/04/93	14.17	23.32	0.00	ND	ND	ND	ND	ND	--
	09/09/93	15.23	22.26	0.00	ND	ND	ND	ND	ND	--
37.11	12/02/93	15.61	21.50	0.00	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	--
	06/09/94	14.70	22.41	0.00	ND	ND	ND	ND	ND	--
	09/07/94	15.72	21.39	0.00	ND	ND	ND	ND	ND	--
	12/05/94	15.10	22.01	0.00	ND	ND	ND	ND	ND	--
	03/09/95	13.36	23.75	0.00	ND	ND	ND	ND	ND	ND
	06/13/95	13.33	23.78	0.00	ND	ND	ND	ND	ND	3.5
	09/12/95	14.40	22.71	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	14.39	22.72	0.00	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
	09/23/97	14.90	22.21	0.00	--	--	--	--	--	--
	03/10/98	10.46	26.65	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 (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-7	09/04/98	14.42	22.69	0.00	--	--	--	--	--	--
(cont)	03/04/99	11.64	25.47	0.00	ND	ND	ND	ND	ND	6.6
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	--
38.94	06/04/93	15.26	23.68	0.00	ND	ND	ND	ND	ND	--
	09/09/93	16.38	22.56	0.00	ND	ND	ND	ND	ND	--
38.57	12/02/93	16.80	21.77	0.00	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	--
	09/07/94	16.87	21.70	0.00	ND	ND	ND	ND	ND	--
	12/05/94	16.32	22.25	0.00	ND	ND	ND	ND	ND	--
	03/09/95	14.56	24.01	0.00	ND	ND	ND	ND	ND	ND
	06/13/95	14.40	24.17	0.00	ND	ND	ND	ND	ND	ND
	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	--	--	--	--	--	--
	03/04/99	12.81	25.76	0.00	ND	ND	ND	ND	ND	ND
U-9										
37.88	06/04/93	14.67	23.21	0.00	2,100 <sup>2</sup>	ND	ND	ND	ND	--
	09/09/93	15.79	22.09	0.00	1,200 <sup>2</sup>	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 <sup>4</sup>	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 <sup>5</sup>	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		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
				Thickness (ft.)	TPH(G) (ppb)					
U-9	09/07/94	16.06	21.25	0.00	2,700 <sup>5</sup>	ND	ND	ND	ND	--
(cont)	12/05/94	15.43	21.88	0.00	3,700 <sup>5</sup>	ND	ND	ND	ND	--
	03/09/95	13.50	23.81	0.00	2,500 <sup>5</sup>	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
	03/04/99	11.95	25.36	0.00	ND	ND	ND	ND	ND	ND
<b>Trip Blank</b>										
TB-LB	03/10/98	--	--	--	ND	ND	ND	ND	ND	ND
	09/04/98	--	--	--	ND	ND	ND	ND	ND	ND
	03/04/99	--	--	--	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	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 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.

<sup>1</sup> Ethylbenzene and xylenes were combined prior to March 1990.

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

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

<sup>4</sup> Laboratory report indicates the hydrocarbons detected appeared to be gasoline and non-gasoline mixture

<sup>5</sup> Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.

<sup>6</sup> Laboratory report indicates gasoline and unidentified hydrocarbons > C8.

<sup>7</sup> Detection limit raised. Refer to analytical results.

<sup>8</sup> 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: 3-4-99  
 City: San Lorenzo Sampler: Joe

Well ID U-1 Well Condition: O.K.  
 Well Diameter 3 in. Hydrocarbon Amount Bailed  
 Thickness: 6 (feet) (product/water): 0 (Gallons)  
 Total Depth 29.05 ft.  
 Depth to Water 13.04 ft.

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

16.01 x VF 0.38 = 6.08 x 3 (case volume) = Estimated Purge Volume: 18 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
 Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 12:15 Weather Conditions: clear  
 Sampling Time: 12:42 p.m. Water Color: clear Odor: none  
 Purging Flow Rate: 2 gpm. Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^0$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:25</u>	<u>6</u>	<u>7.07</u>	<u>3.81</u>	<u>70.3</u>			
<u>12:27</u>	<u>12</u>	<u>6.98</u>	<u>3.80</u>	<u>71.1</u>			
<u>12:30</u>	<u>18</u>	<u>7.14</u>	<u>3.86</u>	<u>71.4</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btax/mtbe</u>

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 5760 Job#: 180109  
 Address: 376 Lewelling Blvd. Date: 3-4-99  
 City: San Lorenzo Sampler: Joe

Well ID U-2 Well Condition: Old Well cover broken  
 Well Diameter 3 in. Hydrocarbon Amount Bailed  
 Thickness: 6 (feet) (product/water): 0 (Gallons)  
 Total Depth 29.88 ft.  
 Depth to Water 14.96 ft.

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

14.92 X VF 0.38 = 5.67 X 3 (case volume) = Estimated Purge Volume: 17 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
~~Suction~~  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 7:15 Weather Conditions: clear  
 Sampling Time: 7:40 AM Water Color: clear Odor: none  
 Purging Flow Rate: 65 gpm. Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{hos/cm} \times 10^2$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>7:25</u>	<u>6</u>	<u>7.48</u>	<u>6.12</u>	<u>70.4</u>			
<u>7:28</u>	<u>11</u>	<u>7.52</u>	<u>6.19</u>	<u>71.4</u>			
<u>7:31</u>	<u>17</u>	<u>7.54</u>	<u>6.27</u>	<u>71.8</u>			

**LABORATORY INFORMATION**

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

COMMENTS: Well cover is broken into five pieces. Vault type is the kind that has two screws and is opened with a 15/16 socket. Apparently, there has been a recent pavement activity going on around site.

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 5760 Job#: 180109  
 Address: 376 Lewelling Blvd. Date: 3-4-99  
 City: San Lorenzo Sampler: Joe

Well ID U-3 Well Condition: O.K.  
 Well Diameter 3 in. Hydrocarbon Amount Bailed  
 Thickness: 8 (feet) (product/water): 0 (Gallons)  
 Total Depth 24.80 ft.  
 Depth to Water 13.48 ft.

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

11.32 X VF 0.38 = 4.30 X 3 (case volume) = Estimated Purge Volume: 13 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 11:38 Weather Conditions: clear  
 Sampling Time: 12:00 P.M. Water Color: clear Odor: none  
 Purging Flow Rate: 1.5 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 $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:45</u>	<u>4</u>	<u>7.44</u>	<u>6.55</u>	<u>69.7</u>			
<u>11:48</u>	<u>8</u>	<u>7.54</u>	<u>6.62</u>	<u>69.9</u>			
<u>11:50</u>	<u>13</u>	<u>7.47</u>	<u>6.70</u>	<u>70.2</u>			
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

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

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
 Facility # 5760 Job#: 180109  
 Address: 376 Lewelling Blvd. Date: 3-4-99  
 City: San Lorenzo Sampler: Joe

Well ID U-4 Well Condition: O.K.  
 Well Diameter 3 in. Hydrocarbon Amount Bailed  
 Thickness: 0 (feet) (product/water): 0 (Gallons)  
 Total Depth 27.85 ft  
 Depth to Water 14.17 ft

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

13.68 x VF 0.38 = 5.20 x 3 (case volume) = Estimated Purge Volume: 16 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
~~Suction~~  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 7:50 Weather Conditions: clear  
 Sampling Time: 8:14 AM Water Color: clear Odor: none  
 Purging Flow Rate: 1.5 gpm. Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^0$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:00</u>	<u>5</u>	<u>7.91</u>	<u>7.69</u>	<u>71.1</u>			
<u>8:03</u>	<u>11</u>	<u>7.53</u>	<u>7.80</u>	<u>71.0</u>			
<u>8:05</u>	<u>16</u>	<u>7.50</u>	<u>7.84</u>	<u>70.7</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-4</u>	<u>3vot</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
 Facility # 5760 Job#: 180109  
 Address: 376 Lewelling Blvd. Date: 3-4-99  
 City: San Lorenzo Sampler: Joe

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

Well Diameter 2 in.  
 Total Depth 28.45 ft.  
 Depth to Water 13.42 ft.

Hydrocarbon Thickness: <u>4</u> (feet)	Amount Bailed (Gallons)		
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

15.03 x VF 0.17 = 2.56 x 3 (case volume) = Estimated Purge Volume: 8 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
 Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment:  Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 8:25 Weather Conditions: clear  
 Sampling Time: 8:50 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 $\mu\text{mhos/cm} \times 100$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:35</u>	<u>3</u>	<u>7.37</u>	<u>5.59</u>	<u>71.9</u>			
<u>8:37</u>	<u>5</u>	<u>7.41</u>	<u>5.64</u>	<u>72.3</u>			
<u>8:40</u>	<u>8</u>	<u>7.42</u>	<u>5.65</u>	<u>72.1</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-5</u>	<u>3 vial</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: 3-4-99  
 City: San Lorenzo Sampler: Joe

Well ID U-6

Well Condition: O.K

Well Diameter 2 in.

Hydrocarbon

Amount Bailed

Total Depth 28.25 ft.

Thickness: 4 (feet) (product/water): 0 (Gallons)

Depth to Water 12.10 ft.

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

16.15 X VF 0.17 = 2.75 X 3 (case volume) = Estimated Purge Volume: 8.5 (gal.)

Purge Equipment:

Disposable Bailer  
 Bailer  
 Stack  
~~Suction~~  
 Grundfos  
 Other: \_\_\_\_\_

Sampling

Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 9:35

Weather Conditions: clear

Sampling Time: 10:00 AM

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 $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:45</u>	<u>3</u>	<u>7.38</u>	<u>5.77</u>	<u>70.7</u>			
<u>9:47</u>	<u>5</u>	<u>7.40</u>	<u>5.81</u>	<u>71.5</u>			
<u>9:49</u>	<u>8.5</u>	<u>7.38</u>	<u>5.86</u>	<u>71.4</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-6</u>	<u>3V2A</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 5760 Job#: 180109  
 Address: 376 Lewelling Blvd. Date: 3-4-99  
 City: San Lorenzo Sampler: Joe

Well ID U-7

Well Condition: O.K

Well Diameter 2 in.

Hydrocarbon Amount Bailed  
 Thickness: 8 (feet) (product/water): 8 (Gallons)

Total Depth 34.88 ft.

Depth to Water 11.64 ft.

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

23.24 x VF 0.17 = 3.95 x 3 (case volume) = Estimated Purge Volume: 12 (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: 9:25 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 $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:10</u>	<u>4</u>	<u>7.58</u>	<u>8.19</u>	<u>72.0</u>			
<u>9:13</u>	<u>8</u>	<u>7.60</u>	<u>8.12</u>	<u>72.2</u>			
<u>9:16</u>	<u>12</u>	<u>7.43</u>	<u>8.14</u>	<u>72.5</u>			

### 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(GI)/btex/mtbe</u>

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # 5760 Job#: 180109  
Address: 376 Lewelling Blvd. Date: 3-4-99  
City: San Lorenzo Sampler: Joe

Well ID U-8 Well Condition: O.K  
Well Diameter 2 in. Hydrocarbon Amount Bailed  
Thickness: 6 (feet) (product/water): 0 (Gallons)  
Total Depth 29.85 ft.  
Depth to Water 12.81 ft.

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

17.04 x VF 0.17 = 2.90 x 3 (case volume) = Estimated Purge Volume: 9 (gal.)

Purge Equipment: Disposable Bailer  
Bailer  
Stack  
Suction  
Grundfos  
Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
Bailer  
Pressure Bailer  
Grab Sample  
Other: \_\_\_\_\_

Starting Time: 10:20 Weather Conditions: clear  
Sampling Time: 10:40 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>10:28</u>	<u>3</u>	<u>7.17</u>	<u>4.75</u>	<u>71.7</u>			
<u>10:31</u>	<u>6</u>	<u>7.27</u>	<u>4.85</u>	<u>72.5</u>			
<u>10:34</u>	<u>9</u>	<u>7.30</u>	<u>4.90</u>	<u>72.8</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-8</u>	<u>3VWA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btax/mtbe</u>

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 5760 Job#: 180109  
 Address: 376 Lewelling Blvd. Date: 3-4-99  
 City: San Lorenzo Sampler: Joe

Well ID U-9 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 4 (feet) Amount Bailed (product/water): 0 (Gallons)  
 Total Depth 28.20 ft.  
 Depth to Water 11.95 ft.

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

$16.25 \times VF_{0.17} = 2.76 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 8.5 \text{ (gal.)}$

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: 11:22 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 $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:07</u>	<u>3</u>	<u>7.30</u>	<u>6.80</u>	<u>71.0</u>	_____	_____	_____
<u>11:10</u>	<u>5</u>	<u>7.46</u>	<u>6.66</u>	<u>72.0</u>	_____	_____	_____
<u>11:12</u>	<u>8.5</u>	<u>7.47</u>	<u>6.69</u>	<u>72.1</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

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

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Texas Marketing Company  
2000 Crow Canyon Pl., Box 408  
San Ramon, California 94583

Facility Number UNOCAL SS#5760  
 Facility Address 376 Lewelling Blvd. San Lorenzo CA  
180109.85  
 Consultant Project Number \_\_\_\_\_  
 Consultant Name Gettler-Ryan Inc. (G-R Inc.)  
 Address 6747 Sierra Court, Suite J, Dublin, CA 94568  
 Project Contact (Name) Deanna L. Harding  
 (Phone) 510-551-7555 (Fax Number) 510-551-7888

Contact (Name) MR. DAVID DEWITT  
 (Phone) (925) 277-2384  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number 9903243  
 Samples Collected by (Name) JOE ASEMIAN  
 Collection Date 3-4-99  
 Signature Joe Asemian

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)	Analytes To Be Performed											DO NOT BILL TB-LB ANALYSIS
								TPH Gas + BTX w/MTBE (8015)	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)	Remarks			
TB-LB		1 NoA	W	-	-	HCL	Y	✓										9030983	
U-1		3 NoA		G	12:42 P.M.			✓										9030984	
U-2		"			7:40 A.M.			✓										9030985	
U-3		"			12:00 P.M.			✓										9030986	
U-4		"			8:14 A.M.		✓	✓										9030987	
U-5		"			8:50 A.M.			✓										9030988	
U-6		"			10:00 A.M.			✓										9030989	
U-7		"			9:25 A.M.			✓										9030990	
U-8		"			10:40 A.M.			✓										9030991	
U-9		"			11:22 A.M.			✓										9030992	

Relinquished By (Signature) <u>Joe Asemian</u>	Organization G-R Inc.	Date/Time 3-4-99	Received By (Signature) <u>[Signature]</u>	Organization GRC	Date/Time 3-8-1999	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) <u>[Signature]</u>	Organization GRC	Date/Time 3-8-1999	Received By (Signature) <u>[Signature]</u>	Organization GRC	Date/Time 3-8-1999	
Relinquished By (Signature) <u>[Signature]</u>	Organization GRC	Date/Time 3/5	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization GRC	Date/Time 3/4/99	

Deanna L. Harding 3/8/99 19:00      1400



# Sequoia Analytical

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Gettler-Ryan - Dublin 6747 Sierra Court, Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Project ID: Unocal SS#5760, San Lorenzo Sample Matrix: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 903-0983	Sampled: Mar 4, 1999 Received: Mar 4, 1999 Reported: Mar 22, 1999
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## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 903-0983 TB-LB	Sample I.D. 903-0984 U-1	Sample I.D. 903-0985 U-2	Sample I.D. 903-0986 U-3	Sample I.D. 903-0987 U-4	Sample I.D. 903-0988 U-5
Purgeable Hydrocarbons	50	N.D.	1,500	N.D.	N.D.	N.D.	N.D.
Benzene	0.50	N.D.	19	N.D.	N.D.	N.D.	N.D.
Toluene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	0.67
Ethyl Benzene	0.50	N.D.	56	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	N.D.	110	N.D.	N.D.	N.D.	N.D.
MTBE	2.5	N.D.	310	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	Gasoline	--	--	--	--

### Quality Control Data

Report Limit Multiplication Factor:	1.0	10	1.0	1.0	1.0	1.0
Date Analyzed:	3/16/99	3/15/99	3/15/99	3/15/99	3/15/99	3/15/99
Instrument Identification:	HP-9	HP-5	HP-5	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	94	85	96	93	93	97

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*  
Julianne Fegley  
Project Manager



# Sequoia Analytical

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FAX (707) 792-0342

Gettler-Ryan - Dublin 6747 Sierra Court, Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Project ID: Unocal SS#5760, San Lorenzo Sample Matrix: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 903-0989	Sampled: Mar 4, 1999 Received: Mar 4, 1999 Reported: Mar 22, 1999
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## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 903-0989 U-6	Sample I.D. 903-0990 U-7	Sample I.D. 903-0991 U-8	Sample I.D. 903-0992 U-9
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.
Benzene	0.50	N.D.	N.D.	N.D.	N.D.
Toluene	0.50	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.	N.D.	N.D.
MTBE	2.5	6.5	6.6	N.D.	N.D.

Chromatogram Pattern:                    ..                    ..                    ..                    ..

### Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	3/15/99	3/15/99	3/15/99	3/15/99
Instrument Identification:	HP-9	HP-9	HP-9	HP-9
Surrogate Recovery, %: (QC Limits = 70-130%)	95	95	94	96

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*  
Julianne Fegley  
Project Manager



# Sequoia Analytical

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

Client Project ID: Unocal SS#5760, San Lorenzo  
Matrix: Liquid

QC Sample Group: 9030983-992

Reported: Mar 22, 1999

## QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater

MS/MSD Batch#:	9031235	9031235	9031235	9031235
Date Prepared:	3/15/99	3/15/99	3/15/99	3/15/99
Date Analyzed:	3/15/99	3/15/99	3/15/99	3/15/99
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	105	115	115	112
Matrix Spike Duplicate % Recovery:	100	110	110	112
Relative % Difference:	4.9	4.4	4.4	0.0

LCS Batch#:	9LCS031599	9LCS031599	9LCS031599	9LCS031599
Date Prepared:	3/15/99	3/15/99	3/15/99	3/15/99
Date Analyzed:	3/15/99	3/15/99	3/15/99	3/15/99
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
LCS % Recovery:	100	110	110	108

% Recovery Control Limits:	70-130	70-130	70-130	70-130
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**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley  
Project Manager



# Sequoia Analytical

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

Client Project ID: Unocal SS#5760, San Lorenzo  
Matrix: Liquid

QC Sample Group: 9030983-992

Reported: Mar 22, 1999

## QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	9030981	9030981	9030981	9030981
Date Prepared:	3/16/99	3/16/99	3/16/99	3/16/99
Date Analyzed:	3/16/99	3/16/99	3/16/99	3/16/99
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	100	110	110	110
Matrix Spike Duplicate % Recovery:	100	110	110	112
Relative % Difference:	0.0	0.0	0.0	1.5

LCS Batch#:	9LCS031699	9LCS031699	9LCS031699	9LCS031699
Date Prepared:	3/16/99	3/16/99	3/16/99	3/16/99
Date Analyzed:	3/16/99	3/16/99	3/16/99	3/16/99
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
LCS % Recovery:	105	115	115	112

% Recovery Control Limits:	70-130	70-130	70-130	70-130
----------------------------	--------	--------	--------	--------

**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Johanne Fegley  
Project Manager



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

Client Project ID: Unocal SS#5760, San Lorenzo  
Matrix: Liquid

QC Sample Group: 9030983-992

Reported: Mar 22, 1999

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater

MS/MSD				
Batch#:	9030707	9030707	9030707	9030707
Date Prepared:	3/15/99	3/15/99	3/15/99	3/15/99
Date Analyzed:	3/15/99	3/15/99	3/15/99	3/15/99
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	105	105	107
Matrix Spike Duplicate % Recovery:	95	100	100	103
Relative % Difference:	0.0	4.9	4.9	3.2

LCS Batch#:	5LCS031599	5LCS031599	5LCS031599	5LCS031599
Date Prepared:	3/15/99	3/15/99	3/15/99	3/15/99
Date Analyzed:	3/15/99	3/15/99	3/15/99	3/15/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	95	100	100	103

% Recovery Control Limits:	70-130	70-130	70-130	70-130
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**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

*Julianne Fegley*  
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Project Manager