



**GETTLER-RYAN Inc.**

**TRANSMITTAL**

ENVIRONMENTAL  
PROTECTION

98 DEC 10 PM 3:56

**TO:** Mr. Scott Seery  
Alameda County Health Care Services  
1131 Harbor Bay Parkway  
Alameda, California 94502

**DATE:** December 9, 1998  
**G-R #:** 180108

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

**RE: Tosco (Unocal) SS #5367**  
~~2500 Boncroft Avenue~~  
**San Leandro, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 6, 1998	Groundwater Monitoring and Sampling Report Semi-Annual 1998 - Event of September 9, 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. Michael Bakaldin, City of San Leandro Fire Department, 835 East 14th Street, San Leandro, CA 94577  
Mr. Tim Ripp, PEG Inc., 2025 Gateway Place, Suite 440, San Jose, CA

agency/5367trb.qmt



# GETTLER-RYAN INC.

November 6, 1998  
G-R Job #180108

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 #5367  
500 Bancroft Avenue  
San Leandro, California

Dear Ms. Berry:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On September 9, 1998, field personnel monitored and sampled ten wells (MW-1 through MW-10) at the above referenced site.

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

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

Sincerely,

Deanna L. Harding  
Project Coordinator

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

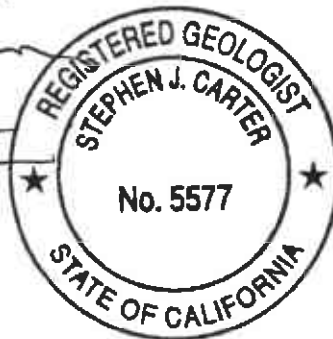


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Dissolved Oxygen Concentrations  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical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

5367.qml



PACIFIC ENVIRONMENTAL GROUP, INC.

5510.758  
885

AN  COMPANY

October 12, 1998  
Project 311-127.1A

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

Re: 76 Service Station 5367  
Quarterly Summary Report  
Third 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:

<u>Service Station</u>	<u>Location</u>
5367	500 Bancroft Avenue, San Leandro

Should 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  


## Quarterly Summary Report Third Quarter 1998

76 Service Station 5367  
500 Bancroft Avenue  
San Leandro, California

City/County ID #: None  
County: Alameda

### **BACKGROUND**

The underground fuel storage tanks, product dispensers and associated underground piping were replaced in 1987. There are currently five on-site groundwater monitoring wells and five off-site groundwater monitoring wells in use at the site. Soil vapor extraction and groundwater extraction systems were operated at the site from to March 1996 to March 1997, removing an estimated 108 pounds of gasoline hydrocarbons.

### **RECENT QUARTER ACTIVITIES**

Semiannual groundwater monitoring and sampling activities were performed in September 1998.

### **NEXT QUARTER ACTIVITIES**

No activities are planned.

### **CHARACTERIZATION/REMEDIAL STATUS**

Soil contamination delineated? Yes.

Dissolved groundwater delineated? Yes.

Free product delineated? Not applicable.

Total amount of groundwater contaminant recovered? Approximately 108 pounds.

Soil remediation in progress? No.

Start? March 1996.

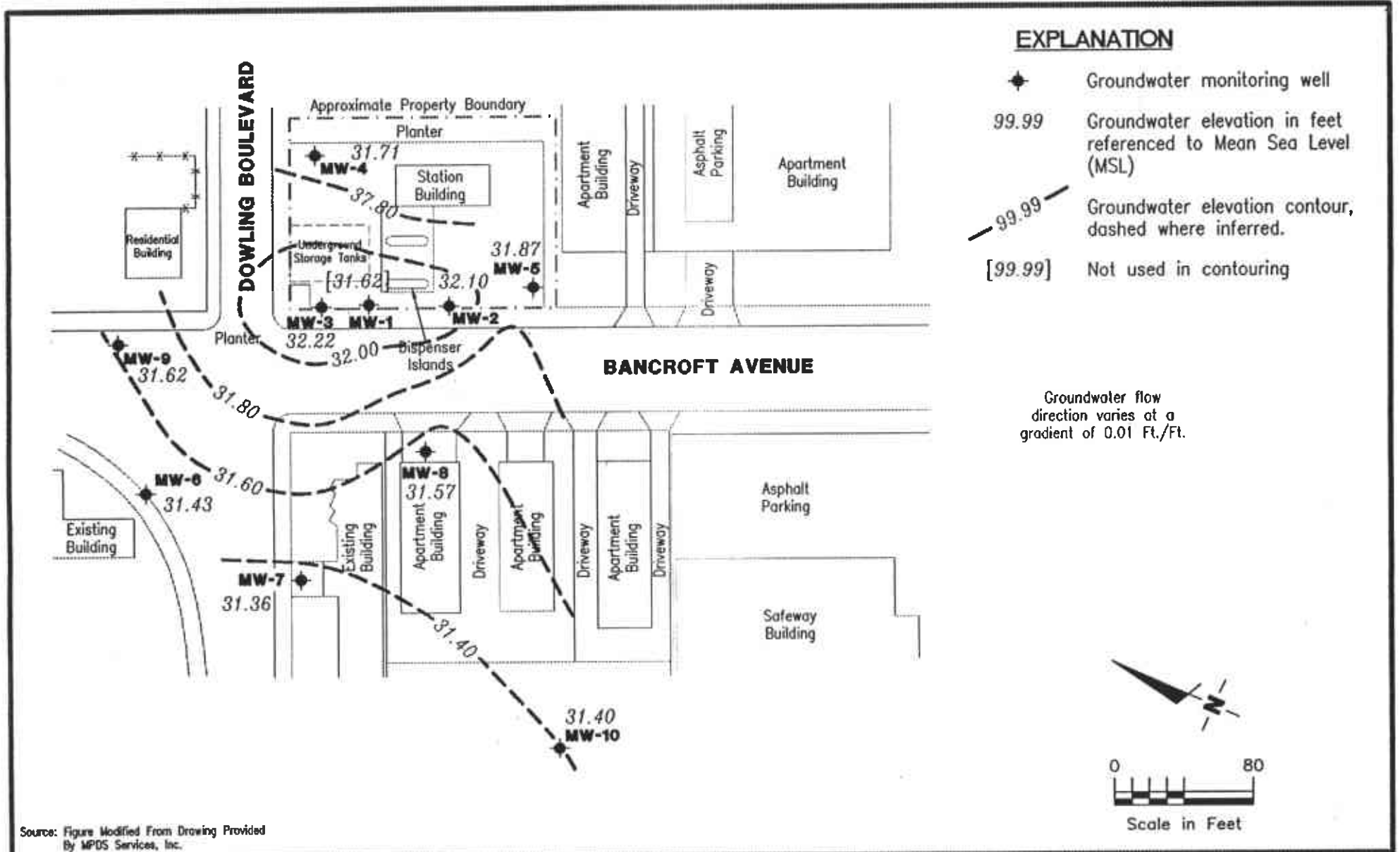
Completion date? March 1997.

Dissolved/free product remediation in progress? No.

Start? March 1996.

Completion? March 1997.

**CONSULTANT:** Pacific Environmental Group, Inc.



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

**POTENTIOMETRIC MAP**  
 Tosco (Unocal) Service Station No. 5367  
 500 Bancroft Avenue  
 San Leandro, California

FIGURE

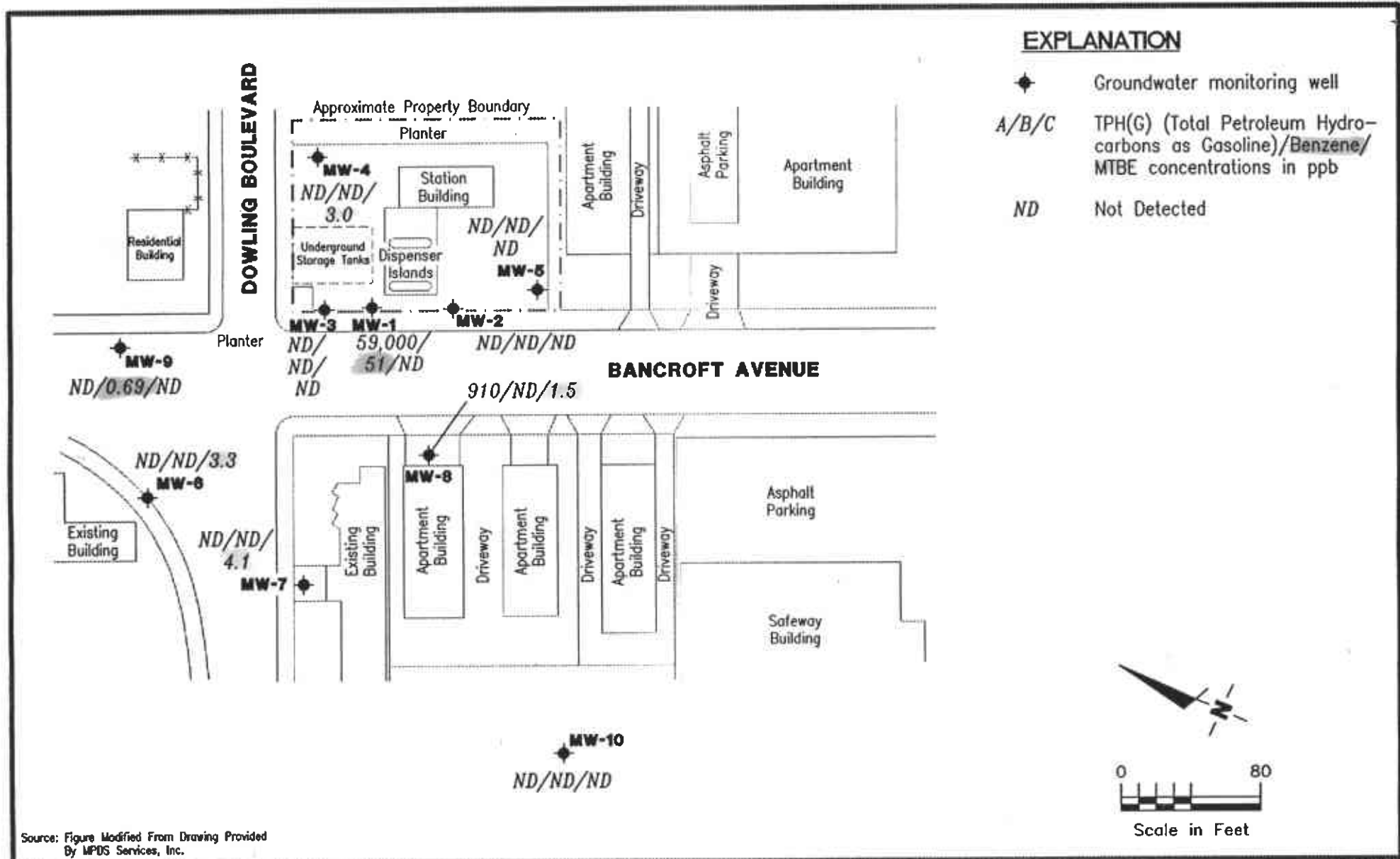
1

JOB NUMBER  
180108

REVIEWED BY

DATE  
September 9, 1998

REVISED DATE



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

**Gettler - Ryan Inc.**  
 6747 Sierra Cl., Suite J (925) 551-7555  
 Dublin, CA 94568

**CONCENTRATION MAP**  
 Tosco (Unocal) Service Station No. 5367  
 500 Bancroft Avenue  
 San Leandro, California

FIGURE  
**2**

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G)					MTBE
					B	T	E	X		
					←-----ppb-----→					
MW-1										
57.83	09/23/87	33.40	24.43**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	09/24/87	33.24	24.59**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	10/06/87	33.39	24.44**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	11/05/87	34.14	23.69**	0.31	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	11/13/87	34.15	23.68**	0.38	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	11/19/87	33.89	23.94**	0.06	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	04/27/88	32.40	25.43**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	09/07/88	DRY	--	--	--	--	--	--	--	--
	10/03/88	DRY	--	--	--	--	--	--	--	--
	01/27/89	DRY	--	--	--	--	--	--	--	--
	02/16/90	DRY	--	--	--	--	--	--	--	--
	07/19/90	DRY	--	--	--	--	--	--	--	--
	08/24/90	DRY	--	--	--	--	--	--	--	--
	11/30/90	DRY	--	--	--	--	--	--	--	--
	02/06/91	DRY	--	--	--	--	--	--	--	--
	05/06/91	33.00	24.83	0.00	--	--	--	--	--	--
	09/27/91	DRY	--	--	--	--	--	--	--	--
	03/31/92	31.00	26.83	0.00	330,000	8,200	33,000	6,800	36,000	--
	06/18/92	32.76	25.07	0.00	680,000	9,000	40,000	7,600	44,000	--
	10/16/92	DRY	--	--	--	--	--	--	--	--
	11/18/92	DRY	--	--	--	--	--	--	--	--
	03/03/93	26.03	31.80	0.00	330,000	3,800	21,000	4,200	24,000	--
	06/25/93	28.36	29.47	0.00	160,000	4,300	36,000	5,800	34,000	--
	09/03/93	30.80	27.03	0.00	160,000	3,900	41,000	6,800	38,000	--
	12/13/93	32.73	25.10	0.00	140,000	3,600	37,000	7,100	40,000	--
	03/18/94	30.10	27.73	0.00	99,000	3,800	37,000	6,800	36,000	--
	06/23/94	31.32	26.51	0.00	150,000	2,500	33,000	6,400	37,000	--
	09/21/94	33.21	24.62	0.00	110,000	2,500	23,000	4,500	25,000	--
	12/19/94	30.97	26.86	0.00	200,000	2,400	28,000	6,600	37,000	--
	03/27/95	22.77	35.06	0.00	88,000	1,500	20,000	4,200	25,000	--
	06/26/95	25.69	32.14	0.00	130,000	1,000	23,000	5,600	33,000	--
	07/28/95	26.97	30.86	0.00	--	--	--	--	--	--
	09/28/95	29.55	28.28	0.00	100,000	810	21,000	6,500	37,000	--
	10/24/95	29.99	27.84	0.00	--	--	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	-----ppb-----					
					TPH(G) <	B	T	E	X	MTBE >
MW-1 (cont)	12/29/95	30.40	27.43	0.00	110,000	990	22,000	8,300	47,000	--
	03/27/96	22.29	35.54	0.00	120,000	920	17,000	7,100	41,000	180
	09/21/96	29.44	28.39	0.00	110,000	270	3,500	5,900	16,000	260
	03/31/97	24.18	33.65	0.00	82,000	240	8,700	3,800	23,000	ND
	09/27/97	31.86	25.97	0.00	81,000	ND	1,000	5,900	31,000	ND
	03/20/98	16.88	40.95	0.00	52,000	ND <sup>5</sup>	350	2,900	14,000	ND <sup>5</sup>
	09/09/98	26.21	31.62	0.00	59,000	51	64	6,000	4,800	ND <sup>5</sup>
MW-2 58.13	10/03/88	36.04	22.09	0.00	1,760	47.8	7.4	20.9	81.6	--
	01/27/89	34.77	23.36	0.00	510	58	8.7	22.6	20.3	--
	02/16/90	34.50	23.63	0.00	840	50	0.5	28	44	--
	05/90	--	--	--	1,000	39	ND	32	52	--
	07/19/90	35.72	22.41	0.00	--	--	--	--	--	--
	08/24/90	36.30	21.83	0.00	330	17	ND	19	20	--
	11/30/90	37.40	20.73	0.00	400	41	ND	39	37	--
	02/07/91	37.27	20.86	0.00	510	40	ND	29	44	--
	05/06/91	33.31	24.82	0.00	2,300	150	10	52	110	--
	09/27/91	36.86	21.27	0.00	110	2.6	ND	5.6	5.1	--
	12/27/91	37.66	20.47	0.00	170	3.9	ND	7.3	60	--
	03/31/92	37.66	20.47	0.00	--	--	--	--	--	--
	06/18/92	31.27	26.86	0.00	1,200	35	1.6	56	26	--
	09/30/92	--	--	--	820	21	ND	42	25	--
	10/16/92	35.87	22.26	0.00	--	--	--	--	--	--
	11/18/92	36.24	21.89	0.00	65	1.2	ND	2.8	1.4	--
	03/03/93	26.30	31.83	0.00	4,200	62	2.9	97	120	--
	06/25/93	28.40	29.73	0.00	4,000	110	ND	320	280	--
	09/03/93	31.10	27.03	0.00	1,400	31	4.3	99	53	--
	12/13/93	33.03	25.10	0.00	260	7.7	0.83	17	23	--
03/18/94	30.34	27.79	0.00	250	6.4	0.64	28	24	--	
06/23/94	31.63	26.50	0.00	420	3.9	0.66	23	11	--	
09/21/94	33.52	24.61	0.00	ND	ND	ND	ND	ND	--	
12/19/94	31.26	26.87	0.00	190	1.9	ND	15	6.8	--	
03/27/95 <sup>2</sup>	23.02	35.11	0.00	ND	ND	0.55	1.2	2.5	--	



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	ppb						
					TPH(G) <----->	B	T	E	X	MTBE	
MW-2	06/26/95	25.98	32.15	0.00	ND	ND	0.93	0.88	3.4	--	
(cont)	07/28/95	27.26	30.87	0.00	--	--	--	--	--	--	
	09/28/95	29.77	28.36	0.00	730	2.9	ND	41	29	--	
	10/24/95	30.56	27.57	0.00	--	--	--	--	--	--	
	12/29/95	30.25	27.88	0.00	860	4.3	1.0	27	50	--	
	03/27/96	22.30	35.83	0.00	NOT SAMPLED (CONNECTED TO REMEDIATION SYSTEM)					--	--
	09/21/96	29.47	28.66	0.00	NOT SAMPLED (CONNECTED TO REMEDIATION SYSTEM)					--	--
	03/31/97	24.20	33.93	0.00	ND	ND	ND	ND	ND	ND	
	09/27/97	31.07	27.06	0.00	ND	ND	ND	ND	ND	ND	
	03/20/98	16.73	41.40	0.00	ND	ND	ND	ND	ND	ND	
	09/09/98	26.03	32.10	0.00	ND	ND	0.54	ND	0.57	ND	
<b>MW-3</b>											
57.92	10/03/88	35.86	22.06	0.00	61,000	1,060	3,380	1,520	8,720	--	
	01/27/89	34.60	23.32	0.00	39,000	1,570	2,830	1,250	7,070	--	
	02/16/90	35.23	22.69	0.00	22,000	710	4,100	6,900	33,000	--	
	05/90	--	--	--	19,000	330	170	310	1,500	--	
	07/19/90	35.50	22.42	0.00	--	--	--	--	--	--	
	08/24/90	36.08	21.84	0.00	19,000	480	160	510	1,500	--	
	11/30/90	37.17	20.75	0.00	13,000	390	81	410	1,000	--	
	02/06/91	37.07	20.85	0.00	13,000	310	150	380	1,200	--	
	05/06/91	33.11	24.81	0.00	39,000	1,000	570	930	3,900	--	
	09/27/91	36.64	21.28	0.00	4,000	160	84	180	560	--	
	12/27/91	37.46	20.46	0.00	31,000	240	280	400	1,600	--	
	03/31/92	31.10	26.82	0.00	100,000	1,900	1,900	2,300	9,400	--	
	06/18/92	32.83	25.09	0.00	180,000	2,200	1,700	2,300	1,100	--	
	09/30/92	--	--	--	36,000	730	200	1,000	4,400	--	
	10/16/92	35.66	22.26	0.00	--	--	--	--	--	--	
	11/18/92	36.04	21.88	0.00	24,000 <sup>1</sup>	430	160	640	2,800	--	
	03/03/93	26.11	31.81	0.00	96,000 <sup>1</sup>	1,400	1,900	1,400	8,400	--	
	06/25/93	28.43	29.49	0.00	27,000	1,200	980	1,700	6,900	--	
	09/03/93	30.88	27.04	0.00	82,000	2,400	3,400	4,200	21,000	--	
	12/13/93	32.82	25.10	0.00	49,000	1,300	360	2,300	9,200	--	
	03/18/94	30.17	27.75	0.00	22,000	1,200	430	2,200	9,700	--	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5367  
500 Bancroft Avenue  
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	-----ppb-----					
					TPH(G) <	B	T	E	X	MTBE >
MW-3	06/23/94	31.42	26.50	0.00	37,000	1,300	670	3,100	14,000	--
(cont)	09/21/94	33.30	24.62	0.00	24,000	890	110	2,200	8,800	--
	12/19/94	31.07	26.85	0.00	100,000	1,200	2,900	4,200	23,000	--
	03/27/95 <sup>2</sup>	22.78	35.14	0.00	33,000	410	66	1,600	6,500	--
	06/26/95	25.78	32.14	0.00	14,000	300	ND	1,300	3,900	--
	07/28/95	27.06	30.86	0.00	--	--	--	--	--	--
	09/28/95	29.57	28.35	0.00	17,000	730	30	4,000	8,800	-- <sup>3</sup>
	10/24/95	30.34	27.58	0.00	--	--	--	--	--	--
	12/29/95	29.91	28.01	0.00	55,000	700	ND	4,900	16,000	-- <sup>4</sup>
	03/27/96	21.99	35.93	0.00	NOT SAMPLED (CONNECTED TO REMEDIATION SYSTEM)				--	--
	09/21/96	29.15	28.77	0.00	34,000	140	ND	2,200	6,600	1,800
	03/31/97	23.86	34.06	0.00	17,000	58	110	530	1,500	ND
	09/27/97	30.76	27.16	0.00	11,000	19	ND	850	420	140
	03/20/98	16.39	41.53	0.00	ND	ND	ND	ND	ND	74
	09/09/98	25.70	32.22	0.00	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>
<b>MW-4</b>										
58.29	10/03/88	36.12	22.17	0.00	ND	ND	ND	ND	ND	--
	01/27/89	34.87	23.42	0.00	ND	ND	ND	ND	ND	--
	02/16/90	35.60	22.69	0.00	ND	ND	ND	ND	ND	--
	05/90	--	--	--	ND	ND	ND	0.68	1.4	--
	07/19/90	35.78	22.51	0.00	--	--	--	--	--	--
	08/24/90	36.35	21.94	0.00	ND	ND	ND	ND	ND	--
	11/30/90	37.46	20.83	0.00	ND	ND	ND	ND	1.2	--
	02/06/91	37.40	20.89	0.00	ND	ND	ND	ND	ND	--
	05/06/91	33.39	24.90	0.00	--	--	--	--	--	--
	09/27/91	36.90	21.39	0.00	ND	ND	ND	ND	ND	--
	12/27/91	37.76	20.53	0.00	ND	ND	ND	ND	ND	--
	03/31/92	31.41	26.88	0.00	ND	ND	ND	ND	ND	--
	06/18/92	33.09	25.20	0.00	ND	ND	ND	ND	ND	--
	10/16/92	35.92	22.37	0.00	ND	ND	ND	ND	ND	--
	11/18/92	36.33	21.96	0.00	--	--	--	--	--	--
	03/03/93	26.43	31.86	0.00	68	0.9	0.6	ND	1.9	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G) <-----ppb----->						MTBE
					B	T	E	X			
MW-4	06/25/93	28.60	29.69	0.00	--	--	--	--	--	--	
(cont)	09/03/93	31.05	27.24	0.00	86	14	13	1.4	7.1	--	
	12/13/93	33.09	25.20	0.00	SAMPLED SEMI-ANNUALLY						--
	03/18/94	30.42	27.87	0.00	ND	ND	ND	ND	ND	--	
	06/23/94	31.95	26.34	0.00	--	--	--	--	--	--	
	09/21/94	33.86	24.43	0.00	ND	ND	0.78	ND	0.81	--	
	12/19/94	31.72	26.57	0.00	--	--	--	--	--	--	
	03/27/95	23.44	34.85	0.00	ND	ND	0.79	0.5	3.1	--	
	06/26/95	26.26	32.03	0.00	--	--	--	--	--	--	
	07/28/95	27.53	30.76	0.00	--	--	--	--	--	--	
	09/28/95	30.05	28.24	0.00	ND	ND	ND	ND	ND	-- <sup>3</sup>	
	10/24/95	30.79	27.50	0.00	--	--	--	--	--	--	
	12/29/95	30.96	27.33	0.00	--	--	--	--	--	--	
	03/27/96	22.71	35.58	0.00	ND	ND	0.70	ND	0.79	ND	
	09/21/96	29.88	28.41	0.00	ND	ND	ND	ND	ND	ND	
	03/31/97	24.72	33.57	0.00	ND	ND	ND	ND	ND	ND	
	09/27/97	31.68	26.61	0.00	ND	ND	ND	ND	ND	ND	
	03/20/98	17.27	41.02	0.00	ND	ND	ND	ND	ND	ND	
	09/09/98	26.58	31.71	0.00	ND	ND	ND	ND	0.65	3.0	
MW-5											
58.50	02/16/90	35.89	22.61	0.00	67	0.51	1.6	2.9	7.5	--	
	05/90	--	--	--	ND	ND	ND	ND	ND	--	
	07/19/90	36.10	22.40	0.00	--	--	--	--	--	--	
	08/24/90	36.67	21.83	0.00	ND	ND	ND	ND	ND	--	
	11/30/90	37.74	20.76	0.00	ND	ND	0.7	ND	ND	--	
	02/06/91	37.62	20.88	0.00	ND	ND	ND	ND	ND	--	
	05/06/91	33.67	24.83	0.00	--	--	--	--	--	--	
	09/27/91	37.23	21.27	0.00	ND	ND	ND	ND	ND	--	
	12/27/91	38.02	20.48	0.00	ND	ND	ND	ND	ND	--	
	03/31/92	31.62	26.88	0.00	ND	ND	ND	ND	1.1	--	
	06/18/92	33.46	25.04	0.00	--	--	--	--	--	--	
	10/16/92	36.23	22.27	0.00	ND	ND	ND	ND	ND	--	
	11/18/92	36.62	21.88	0.00	--	--	--	--	--	--	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G) <-----ppb----->					
					B	T	E	X	MTBE	
MW-5 (cont)	03/03/93	26.62	31.88	0.00	ND	ND	ND	ND	ND	--
	06/25/93	INACCESSIBLE	--	--	--	--	--	--	--	--
	09/03/93	31.45	27.05	0.00	ND	ND	1.5	ND	7.9	--
	12/13/93	33.39	25.11	0.00	SAMPLED SEMI-ANNUALLY		--	--	--	--
	03/18/94	30.67	27.83	0.00	ND	ND	ND	ND	ND	--
	06/23/94	32.00	26.50	0.00	--	--	--	--	--	--
	09/21/94	33.90	24.60	0.00	ND	ND	0.98	ND	1.6	--
	12/19/94	31.63	26.87	0.00	--	--	--	--	--	--
	03/27/95	23.44	35.06	0.00	ND	ND	0.66	ND	2.9	--
	06/26/95	26.35	32.15	0.00	--	--	--	--	--	--
	07/28/95	27.63	30.87	0.00	--	--	--	--	--	--
	09/28/95	30.15	28.35	0.00	ND	ND	ND	ND	ND	--
	10/24/95	30.98	27.52	0.00	--	--	--	--	--	--
	12/29/95	30.87	27.63	0.00	--	--	--	--	--	--
	03/27/96	22.75	35.75	0.00	ND	ND	1.7	ND	2.4	ND
	09/21/96	29.95	28.55	0.00	ND	ND	ND	ND	ND	ND
	03/31/97	24.80	33.70	0.00	ND	ND	ND	ND	ND	ND
	09/27/97	31.65	26.85	0.00	ND	ND	ND	ND	ND	ND
	03/20/98	17.31	41.19	0.00	ND	ND	ND	ND	ND	ND
	09/09/98	26.63	31.87	0.00	ND	ND	ND	ND	ND	ND
MW-6 56.96	02/16/90	34.50	22.46	0.00	ND	ND	ND	ND	ND	--
	05/90	--	--	--	ND	ND	ND	ND	ND	--
	07/19/90	34.74	22.22	0.00	ND	ND	ND	ND	ND	--
	08/24/90	35.32	21.64	0.00	ND	ND	ND	ND	ND	--
	11/30/90	36.38	20.58	0.00	ND	ND	ND	ND	ND	--
	02/06/91	36.27	20.69	0.00	ND	ND	ND	ND	ND	--
	05/06/91	32.41	24.55	0.00	--	--	--	--	--	--
	09/27/91	35.87	21.09	0.00	ND	ND	ND	ND	ND	--
	12/27/91	36.67	20.29	0.00	ND	ND	ND	ND	ND	--
	03/31/92	30.32	26.64	0.00	ND	ND	1.3	ND	2	--
	06/18/92	32.18	24.78	0.00	ND	ND	ND	ND	ND	--
	10/16/92	34.92	22.04	0.00	ND	ND	ND	ND	ND	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G) <-----ppb----->						MTBE
					B	T	E	X			
MW-6	11/18/92	35.28	21.68	0.00	--	--	--	--	--	--	
(cont)	03/03/93	25.43	31.53	0.00	ND <sup>1</sup>	ND	ND	ND	ND	--	
	06/25/93	27.86	29.10	0.00	--	--	--	--	--	--	
	09/03/93	30.25	26.71	0.00	ND	ND	ND	ND	ND	--	
	12/13/93	32.14	24.82	0.00	SAMPLED SEMI-ANNUALLY						--
	03/18/94	29.46	27.50	0.00	ND	ND	0.93	ND	1.4	--	
	06/23/94	30.76	26.20	0.00	--	--	--	--	--	--	
	09/21/94	32.62	24.34	0.00	ND	ND	ND	ND	ND	--	
	12/19/94	30.32	26.64	0.00	--	--	--	--	--	--	
	03/27/95	22.10	34.86	0.00	56	ND	0.65	ND	3.3	--	
	06/26/95	25.20	31.76	0.00	--	--	--	--	--	--	
	07/28/95	26.48	30.48	0.00	--	--	--	--	--	--	
	09/28/95	28.92	28.04	0.00	ND	ND	ND	ND	ND	--	
	10/24/95	29.73	27.23	0.00	--	--	--	--	--	--	
	12/29/95	29.62	27.34	0.00	--	--	--	--	--	--	
	03/27/96	21.59	35.37	0.00	50	ND	0.92	ND	0.96	ND	
	09/21/96	28.72	28.24	0.00	ND	ND	ND	ND	ND	ND	
	03/31/97	23.72	33.24	0.00	73	0.67	0.82	ND	ND	ND	
	09/27/97	30.52	26.44	0.00	ND	ND	ND	ND	ND	ND	
	03/20/98	16.35	40.61	0.00	ND	ND	ND	ND	ND	ND	
	09/09/98	25.53	31.43	0.00	ND	ND	0.64	ND	0.65	3.3	
MW-7											
57.25	02/16/90	35.75	21.50	0.00	ND	ND	ND	ND	ND	--	
	05/90	--	--	--	24	ND	ND	0.74	1.7	--	
	07/19/90	35.03	22.22	0.00	--	--	--	--	--	--	
	08/24/90	35.64	21.61	0.00	ND	ND	ND	ND	ND	--	
	11/30/90	36.68	20.57	0.00	ND	ND	ND	0.6	1.5	--	
	02/06/91	36.55	20.70	0.00	ND	ND	ND	ND	ND	--	
	05/06/91	32.69	24.56	0.00	ND	ND	ND	ND	ND	--	
	09/27/91	36.18	21.07	0.00	ND	ND	ND	ND	ND	--	
	12/27/91	36.96	20.29	0.00	ND	ND	ND	ND	ND	--	
	03/31/92	30.56	26.69	0.00	ND	ND	ND	ND	0.9	--	
	06/18/92	32.52	24.73	0.00	--	--	--	--	--	--	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G)						MTBE
					-----ppb----->						
MW-7	10/16/92	35.24	22.01	0.00	ND	ND	ND	ND	ND	ND	--
(cont)	11/18/92	35.59	21.66	0.00	--	--	--	--	--	--	--
	03/03/93	25.66	31.59	0.00	ND	ND	ND	ND	ND	ND	--
	06/25/93	28.25	29.00	0.00	--	--	--	--	--	--	--
	09/03/93	30.60	26.65	0.00	ND	ND	ND	ND	ND	ND	--
	12/13/93	32.45	24.80	0.00	SAMPLED SEMI-ANNUALLY			--	--	--	--
	03/18/94	29.76	27.49	0.00	ND	ND	ND	ND	ND	ND	--
	06/23/94	31.10	26.15	0.00	--	--	--	--	--	--	--
	09/21/94	32.96	24.29	0.00	ND	0.5	ND	ND	0.89	--	--
	12/19/94	30.60	26.65	0.00	--	--	--	--	--	--	--
	03/27/95	22.43	34.82	0.00	ND	ND	0.54	ND	1.9	--	--
	06/26/95	25.55	31.70	0.00	--	--	--	--	--	--	--
	07/28/95	26.84	30.41	0.00	--	--	--	--	--	--	--
	09/28/95	29.29	27.96	0.00	ND	ND	ND	ND	ND	ND	-- <sup>3</sup>
	10/24/95	30.05	27.20	0.00	--	--	--	--	--	--	--
	12/29/95	29.91	27.34	0.00	--	--	--	--	--	--	--
	03/27/96	21.94	35.31	0.00	ND	ND	1.1	ND	1.7	ND	ND
	09/21/96	29.07	28.18	0.00	ND	ND	ND	ND	ND	ND	ND
	03/31/97	24.02	33.23	0.00	ND	ND	ND	ND	ND	ND	ND
	09/27/97	30.84	26.41	0.00	ND	ND	ND	ND	ND	ND	ND
	03/20/98	16.68	40.57	0.00	ND	ND	ND	ND	ND	ND	ND
	09/09/98	25.89	31.36	0.00	ND	ND	ND	ND	ND	ND	4.1
MW-8											
57.71	02/16/90	35.10	22.61	0.00	1,900	11	ND	52	55	--	--
	05/90	--	--	--	770	6.5	ND	20	32	--	--
	07/19/90	35.41	22.30	0.00	--	--	--	--	--	--	--
	08/24/90	36.00	21.71	0.00	990	13	ND	48	66	--	--
	11/30/90	37.08	20.63	0.00	570	13	ND	45	36	--	--
	02/06/91	36.92	20.79	0.00	630	9.6	ND	35	36	--	--
	05/06/91	33.03	24.68	0.00	14,000	80	ND	250	550	--	--
	09/27/91	36.55	21.16	0.00	720	13	4.3	26	26	--	--
	12/27/91	37.34	20.37	0.00	1,600	15	2.9	40	49	--	--
	03/31/92	31.93 <sup>6</sup>	25.78	0.00	15,000	120	1.0	430	530	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	-----> ppb <-----					
					TPH(G)	B	T	E	X	MTBE
MW-8	06/18/92	INACCESSIBLE	--		--	--	--	--	--	--
(cont)	10/16/92	35.58	22.13	0.00	300	0.96	ND	4.0	3.5	--
	11/18/92	35.94	21.77	0.00	1,100	6.1	ND	13	5.6	--
	03/03/93	26.00	31.71	0.00	13,000	33	ND	160	290	--
	06/25/93	28.27	29.44	0.00	8,100	160	ND	580	740	--
	09/03/93	30.90	26.81	0.00	9,800	180	ND	580	700	--
	12/13/93	32.75	24.96	0.00	6,900	180	ND	240	550	--
	03/18/94	30.12	27.59	0.00	6,100	85	ND	260	260	--
	06/23/94	31.40	26.31	0.00	12,000	210	ND	610	860	--
	09/21/94	33.30	24.41	0.00	6,900	190	ND	460	510	--
	12/19/94	30.95	26.76	0.00	6,200	91	ND	230	210	--
	03/27/95 <sup>2</sup>	22.78	34.93	0.00	9,200	240	ND	200	1,400	--
	06/26/95	24.83	32.88	0.00	11,000	320	ND	680	2,000	--
	07/28/95	27.10	30.61	0.00	--	--	--	--	--	--
	09/28/95	29.58	28.13	0.00	10,000	250	ND	760	910	-- <sup>3</sup>
	10/24/95	30.40	27.31	0.00	--	--	--	--	--	--
	12/29/95	30.25	27.46	0.00	7,500	260	ND	580	870	-- <sup>4</sup>
	03/27/96	22.20	35.51	0.00	970	29	0.77	82	85	ND
	09/21/96	29.34	28.37	0.00	3,800	27	ND	46	45	ND
	03/31/97	24.35	33.36	0.00	ND	ND	ND	ND	ND	ND
	09/27/97	31.15	26.56	0.00	78	0.90	ND	12	ND	ND
	03/20/98	16.84	40.87	0.00	ND	ND	ND	ND	ND	ND
	<b>09/09/98</b>	<b>26.14</b>	<b>31.57</b>	<b>0.00</b>	<b>910</b>	<b>ND</b>	<b>49</b>	<b>12</b>	<b>2.2</b>	<b>1.5</b>
MW-9										
56.47	12/19/94	29.71	26.76	0.00	ND	ND	1.6	1.5	8.4	--
	03/27/95	21.48	34.99	0.00	ND	ND	0.61	ND	2.8	--
	06/26/95	24.50	31.97	0.00	ND	ND	ND	ND	3.9	--
	07/28/95	25.77	30.70	0.00	--	--	--	--	--	--
	09/28/95	28.23	28.24	0.00	ND	ND	ND	ND	ND	--
	10/24/95	29.21	27.26	0.00	--	--	--	--	--	--
	12/29/95	29.02	27.45	0.00	ND	ND	0.58	ND	0.52	--
	03/27/96	20.91	35.56	0.00	ND	ND	0.68	ND	0.51	ND

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(G) <i>ppb</i>					
					B	T	E	X	MTBE	
MW-9 (cont)	09/21/96	28.05	28.42	0.00	ND	ND	ND	ND	ND	ND
	03/31/97	23.48	32.99	0.00	ND	ND	ND	ND	ND	ND
	09/27/97	30.38	26.09	0.00	ND	ND	ND	ND	ND	ND
	03/20/98	15.60	40.87	0.00	ND	ND	ND	ND	ND	ND
	09/09/98	24.85	31.62	0.00	ND	0.69	ND	ND	0.61	ND
MW-10 58.94	07/28/95	25.53	33.41	0.00	ND	ND	ND	ND	ND	--
	09/28/95	--	--	--	--	--	--	--	--	--
	10/24/95	31.76	27.18	0.00	ND	ND	ND	ND	ND	--
	12/29/95	31.55	27.39	0.00	ND	ND	0.65	ND	1.1	--
	03/27/96	23.62	35.32	0.00	ND	ND	0.68	ND	0.69	ND
	09/21/96	30.77	28.17	0.00	ND	ND	ND	ND	ND	ND
	03/31/97	26.05	32.89	0.00	ND	ND	ND	ND	ND	ND
	09/27/97	32.80	26.14	0.00	ND	ND	ND	ND	ND	ND
	03/20/98	18.13	40.81	0.00	ND	ND	ND	ND	ND	ND
	09/09/98	27.54	31.40	0.00	ND	ND	0.55	ND	ND	ND
Trip Blank TB-LB	03/20/98	--	--	--	ND	ND	ND	ND	ND	ND
	09/09/98	--	--	--	ND	ND	ND	ND	ND	ND



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5367  
500 Bancroft Avenue  
San Leandro, California

---

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to March 20, 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

ppm = Parts per million

ND = Not Detected

-- = Not Measured/Not Analyzed

\* TOC elevations have been surveyed relative to mean sea level (msl).

\*\* Groundwater elevation was not corrected due to the presence of free product.

<sup>1</sup> Chromatogram contains early eluting peak.

<sup>2</sup> On March 27, 1995, total dissolved solid concentrations were as follows: MW-2 at 410 ppm; MW-3 at 450 ppm; MW-8 at 490 ppm.

<sup>3</sup> Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.

<sup>4</sup> Laboratory has identified the presence of MTBE at a level above or equal to the taste odor threshold of 40 ppb in the groundwater sample from this well.

<sup>5</sup> Detection limit raised. Refer to analytical results.

<sup>6</sup> Data suspect; not used in water-elevation determination.

**Table 2**  
**Dissolved Oxygen Concentrations**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID	Date	Before Purging (mg/L)	After Purging (mg/L)
MW-1	03/27/95 <sup>1</sup>	--	1.5
	06/26/95	--	1.60
	09/28/95	--	1.22
	12/29/95	--	1.74
	03/27/96	1.48	1.02
	09/21/96	--	1.01
	03/31/97	1.47	1.49
MW-2	03/27/95 <sup>1</sup>	--	1.7
	06/26/95	--	4.55
	09/28/95	--	3.00
	12/29/95	--	8.71
	03/27/96	--	--
	09/21/96	--	--
	03/31/97	2.18	2.12
MW-3	03/27/95 <sup>1</sup>	--	0.90
	06/26/95	--	1.55
	09/28/95	--	1.63
	12/29/95	--	6.97
	03/27/96	--	--
	09/21/96	--	--
	03/31/97	1.95	2.06
MW-4	03/27/95 <sup>1</sup>	--	4.90
	06/26/95	--	--
	09/28/95	--	6.29
	12/29/95	--	--
	03/27/96	4.32	3.91
	09/21/96	--	2.82
	03/31/97	2.66	2.63
MW-5	03/27/95 <sup>1</sup>	--	5.20
	06/26/95	--	--
	09/28/95	--	1.96
	12/29/95	--	--
	03/27/96	4.03	4.71
	09/21/96	--	4.12
	03/31/97	2.98	3.11

**Table 2**  
**Dissolved Oxygen Concentrations**  
 Tosco (Unocal) Service Station #5367  
 500 Bancroft Avenue  
 San Leandro, California

Well ID	Date	Before Purging (mg/L)	After Purging (mg/L)
MW-6	03/27/95 <sup>1</sup>	--	7.4
	06/26/95	--	--
	09/28/95	--	4.19
	12/29/95	--	--
	03/27/96	5.94	4.96
	09/21/96	--	3.74
	03/31/97	3.21	3.11
MW-7	03/27/95 <sup>1</sup>	--	8.4
	06/26/95	--	--
	09/28/95	--	2.04
	12/29/95	--	--
	03/27/96	6.63	5.23
	09/21/96	--	1.19
	03/31/97	2.29	2.16
MW-8	03/27/95 <sup>1</sup>	--	2.2
	06/26/95	--	3.86
	09/28/95	--	1.85
	12/29/95	--	2.03
	03/27/96	11.73	9.76
	09/21/96	--	2.16
	03/31/97	2.81	2.91
	09/27/97	3.11	--
03/20/98	--	2.65	
MW-9	03/27/95 <sup>1</sup>	--	7.8
	06/26/95	--	4.61
	09/28/95	--	5.76
	12/29/95	--	5.32
	03/27/96	5.62	5.23
	09/21/96	--	4.13
	03/31/97	3.36	3.27
MW-10	12/29/95	--	5.11
	03/27/96	4.38	4.57
	09/21/96	--	5.38
	03/31/97	4.48	4.83

**Table 2**  
**Dissolved Oxygen Concentrations**  
Tosco (Unocal) Service Station #5367  
500 Bancroft Avenue  
San Leandro, California

---

**EXPLANATIONS:**

Dissolved oxygen concentrations prior to March 20, 1998, were compiled from reports prepared by MPDS Services, Inc.

mg/L = milligrams per liter

-- = Not Measured

<sup>1</sup> The measurements were taken at Sequoia Analytical Laboratory.

Note: Field 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/ TOSCO  
 Facility 5367  
 Address: 500 Bancroft Ave.  
 City: San Leandro

Job#: 180108  
 Date: 9/9/98  
 Sampler: Varthen

Well ID MW-3

Well Condition: OK

Well Diameter 4 in.

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

Total Depth 48.20 ft.

Depth to Water 25.70 ft.

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

22.50 X VF 0.66 = 14.85 X 3 (case volume) = Estimated Purge Volume: 44.55 (gal.)

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

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

Starting Time: 3:30  
 Sampling Time: 3:57  
 Purging Flow Rate: 2 gpm.  
 Did well de-water? no

Weather Conditions: Wdy  
 Water Color: clear Odor: no  
 Sediment Description: \_\_\_\_\_  
 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>3:37</u>	<u>15</u>	<u>7.31</u>	<u>3.47</u>	<u>68.7</u>	_____	_____	_____
<u>3:44</u>	<u>30</u>	<u>7.15</u>	<u>3.41</u>	<u>68.9</u>	_____	_____	_____
<u>3:42</u>	<u>45</u>	<u>7.06</u>	<u>3.38</u>	<u>69.0</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</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/ TOSCO  
 Facility 5367  
 Address: 500 Bancroft Ave.  
 City: San Leandro

Job#: 180108  
 Date: 9/9/98  
 Sampler: Varthes

Well ID MW-4

Well Condition: OK

Well Diameter 4 in.  
 Total Depth 48.52 ft.  
 Depth to Water 26.58 ft.

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

21.94 X VF 0.66 = 14.48 X 3 (case volume) = Estimated Purge Volume: 43.44 (gal.)

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

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

Starting Time: 11:44  
 Sampling Time: 12:20  
 Purging Flow Rate: 2 gpm.  
 Did well de-water? no

Weather Conditions: cloudy  
 Water Color: clear Odor: no  
 Sediment Description: \_\_\_\_\_  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}/100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:51</u>	<u>14.5</u>	<u>7.49</u>	<u>2.58</u>	<u>68.9</u>			
<u>11:58</u>	<u>29</u>	<u>7.30</u>	<u>2.69</u>	<u>68.6</u>			
<u>12:05</u>	<u>43.5</u>	<u>7.24</u>	<u>2.64</u>	<u>68.6</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-</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 TOSCO 5367 Job#: 180108  
 Address: 500 Bancroft Ave. Date: 9/9/98  
 City: San Leandro Sampler: Varthen

Well ID HW-5 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: ∅ (feet) Amount Bailed (Gallons)  
 Total Depth 44.38 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 26.63 ft. Factor (VF) 6" = 1.50 12" = 5.80

17.75 X VF 0.17 = 3.02 X 3 (case volume) = Estimated Purge Volume: 9.05 (gal.)

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

Starting Time: 12:30 Weather Conditions: cloudy  
 Sampling Time: 12:46 Water Color: clear Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 1000$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:33</u>	<u>3</u>	<u>7.78</u>	<u>3.21</u>	<u>69.8</u>			
<u>12:36</u>	<u>6</u>	<u>7.55</u>	<u>3.12</u>	<u>69.3</u>			
<u>12:39</u>	<u>9.5</u>	<u>7.46</u>	<u>3.10</u>	<u>69.1</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>HW-5</u>	<u>3 VOA</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 TOSCO 5367  
 Address: 500 Bancroft Ave.  
 City: San Leandro

Job#: 180108  
 Date: 9/9/98  
 Sampler: Varthes

Well ID MW-6

Well Condition: OK

Well Diameter 2 in.

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

Total Depth 44.62 ft.

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

Depth to Water 25.53 ft.

19.09 X VF 0.17 = 3.25 X 3 (case volume) = Estimated Purge Volume: 9.74 (gal.)

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

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

Starting Time: 1:01  
 Sampling Time: 1:17  
 Purging Flow Rate: 1 gpm.  
 Did well de-water? no

Weather Conditions: cloudy  
 Water Color: clear Odor: no  
 Sediment Description: \_\_\_\_\_  
 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>1:04</u>	<u>3</u>	<u>7.48</u>	<u>2.67</u>	<u>70.4</u>			
<u>1:07</u>	<u>6.5</u>	<u>7.29</u>	<u>2.80</u>	<u>69.7</u>			
<u>1:10</u>	<u>10</u>	<u>7.26</u>	<u>2.84</u>	<u>69.5</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</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: TOSCO 5367 Job#: 180108  
 Address: 500 Bancroft Ave. Date: 9/9/98  
 City: San Leandro Sampler: Vaethen

Well ID: MW-7 Well Condition: OK  
 Well Diameter: 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)  
 Total Depth: 43.96 ft.  
 Depth to Water: 25.89 ft.

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

18.07 X VF 0.17 = 3.07 X 3 (case volume) = Estimated Purge Volume: 9.22 (gal.)

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

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

Starting Time: 1:22 Weather Conditions: cloudy  
 Sampling Time: 1:50 Water Color: clear Odor: no  
 Purging Flow Rate: \_\_\_\_\_ l gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? no 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>1:35</u>	<u>3</u>	<u>7.64</u>	<u>2.09</u>	<u>70.9</u>			
<u>1:38</u>	<u>6</u>	<u>7.47</u>	<u>2.20</u>	<u>70.1</u>			
<u>1:41</u>	<u>9.5</u>	<u>7.42</u>	<u>2.27</u>	<u>69.9</u>			
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-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 TOSCO 5367 Job#: 180108  
 Address: 500 Bancroft Ave. Date: 9/9/98  
 City: San Leandro Sampler: Varthen

Well ID MW-8 Well Condition: OK - 1 well plug 1 padlock  
 Well Diameter 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)  
 Total Depth 43.88 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 26.14 ft. Factor (VF) 6" = 1.50 12" = 5.80

17.74 X VF 0.17 = 3.02 X 3 (case volume) = Estimated Purge Volume: 9.04 (gal.)

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

Starting Time: 2:53 Weather Conditions: dky  
 Sampling Time: 3:10 Water Color: clear Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}/100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>2:56</u>	<u>3</u>	<u>7.52</u>	<u>3.83</u>	<u>72.1</u>			
<u>2:59</u>	<u>6</u>	<u>7.37</u>	<u>3.78</u>	<u>70.9</u>			
<u>3:02</u>	<u>9.5</u>	<u>7.31</u>	<u>3.75</u>	<u>70.8</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>

COMMENTS: Removed ORC.

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility: TOSCO 5367 Job#: 180108  
 Address: 500 Bancroft Ave. Date: 9/9/98  
 City: San Leandro Sampler: vaethes

Well ID: MW-9 Well Condition: OK  
 Well Diameter: 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)  
 Total Depth: 44.63 ft.  
 Depth to Water: 24.85 ft.

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

19.78 x VF 0.17 = 3.36 x 3 (case volume) = Estimated Purge Volume: 10.08 (gal.)

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

Starting Time: 2:07 Weather Conditions: cldy  
 Sampling Time: 2:25 Water Color: clear Odor: ni  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? no 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>2:10</u>	<u>3.5</u>	<u>7.63</u>	<u>2.39</u>	<u>71.5</u>	_____	_____	_____
<u>2:13</u>	<u>7</u>	<u>7.48</u>	<u>2.58</u>	<u>70.6</u>	_____	_____	_____
<u>2:17</u>	<u>10.5</u>	<u>7.40</u>	<u>2.53</u>	<u>70.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

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

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ TOSCO  
 Facility 5367  
 Address: 500 Bancroft Ave.  
 City: San Leandro

Job#: 180108  
 Date: 9/9/98  
 Sampler: Varthen

Well ID HW-10

Well Condition: OK

Well Diameter 2 in.

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

Total Depth 42.65 ft.

Depth to Water 27.54 ft.

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

15.11 X VF 0.17 = 2.57 X 3 (case volume) = Estimated Purge Volume: 7.71 (gal.)

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

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

Starting Time: 10:20  
 Sampling Time: 10:35  
 Purging Flow Rate: 1 gpm.  
 Did well de-water? no

Weather Conditions: cloudy  
 Water Color: clear Odor: no  
 Sediment Description: \_\_\_\_\_  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm/100	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:22</u>	<u>2.5</u>	<u>7.75</u>	<u>3.52</u>	<u>67.3</u>	_____	_____	_____
<u>10:25</u>	<u>5</u>	<u>7.58</u>	<u>3.45</u>	<u>68.5</u>	_____	_____	_____
<u>10:28</u>	<u>8</u>	<u>7.50</u>	<u>3.39</u>	<u>68.8</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>HW-10</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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



TOSCO

Tosco Marketing Company  
3020 Lone Canyon Pl., Ste. 400  
San Antonio, California 78243

Facility Number UNOCAL SS#5367  
 Facility Address 500 Bancroft Ave. SAN LEANDRO, CA  
180108.85  
 Consultant Project Number \_\_\_\_\_  
 Consultant Name Gettler-Ryan Inc. (G-R Inc.)  
 Address 6747 Sierra Court, Suite I, Dublin, CA 94568  
 Project Contact (Name) Deanna L. Harding  
 (Phone) 510-551-7555 (Fax Number) 510-551-7888

Contact (Name) TINA BERRY  
 (Phone) 510-277-2321

Laboratory Name Sequoia Analytical

Laboratory Release Number \_\_\_\_\_

Samples Collected by (Name) Vestles Tadjine

Collection Date 9/19/98

Signature With DeLoper

Analysis To Be Performed

DO NOT BILL  
TB-LB ANALYSIS

Sample Number	Lab Sample Number	Number of Containers	Matrix		Type	Time	Sample Preservation	Lead (Year or No)	Analysis To Be Performed											Remarks			
			Soil	Air					Grab Composite	D	TPH Gas - BTEX w/MTBE (8010)	TPH Diesel (8015)	Oil and Greases (8520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (1049 or AA)					
TB-LB		1	W		A		HCl	Y	X														
MW-1		3	W		A	4:25 PM			X														
MW-2		3	W		A	11:27 AM			X														
MW-3		3	W		A	3:57 PM			X														
MW-4		3	W		A	12:00 PM			X														
MW-5		3	W		A	12:16 PM			X														
MW-6		3	W		A	1:17 PM			X														
MW-7		3	W		A	1:50 PM			X														
MW-8		3	W		A	3:10 PM			X														
MW-9		3	W		A	2:23 PM			X														
MW-10		3	W		A	10:31 PM			X														

PTGBMW  
**PET**  
 1 VOA → GCMS

Relinquished By (Signature)  
With DeLoper

Organization  
G-R Inc.

Date/Time  
9/19/98 7:45 PM

Received By (Signature)  
[Signature]  
 Received For Laboratory By (Signature)  
[Signature]

Organization  
Date/Time  
1998

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



**Sequoia  
Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite B  
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834  
Petaluma, CA 94954

(650) 364-9600  
(925) 988-9600  
(916) 921-9600  
(707) 792-1865

FAX (650) 364-9233  
FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342

**RECEIVED**

**GETTLER**  
OCT 23 1998


Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Proj. ID: Unocal SS#5367/500 Bancroft Sample Descript: TB-LB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-01	GENERAL C Sampled: 09/09/98 Received: 09/09/98 Analyzed: 09/18/98 Reported: 10/21/98
--	---	--

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	103

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Tod Granicher  
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-02	Sampled: 09/09/98 Received: 09/09/98 Analyzed: 09/18/98 Reported: 10/21/98
--	---	---

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	59000
Methyl t-Butyl Ether	50	N.D.
Benzene	10	51
Toluene	10	64
Ethyl Benzene	10	6000
Xylenes (Total)	10	4800
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	96

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Tod Granicher  
Project Manager






Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-03	Sampled: 09/09/98 Received: 09/09/98 Analyzed: 09/18/98 Reported: 10/21/98
--	---	---

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/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.
<b>Toluene</b>	<b>0.50</b>	<b>0.54</b>
Ethyl Benzene	0.50	N.D.
<b>Xylenes (Total)</b>	<b>0.50</b>	<b>0.57</b>
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	107

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
\_\_\_\_\_  
Tod Granicher  
Project Manager



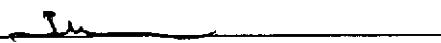
Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-04	Sampled: 09/09/98 Received: 09/09/98  Analyzed: 09/18/98 Reported: 10/21/98
Attention: Deanna Harding		

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	107

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Tod Granicher  
Project Manager



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

Client Proj. ID: Unocal SS#5367/500 Bancrof  
Sample Descript: MW-4  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9809511-05

Sampled: 09/09/98  
Received: 09/09/98  
Analyzed: 09/18/98  
Reported: 10/21/98

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	3.0
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	0.65
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	103

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Tod Granicher  
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-06	Sampled: 09/09/98 Received: 09/09/98 Analyzed: 09/18/98 Reported: 10/21/98
--	---	---

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	104

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
\_\_\_\_\_  
Tod Granicher  
Project Manager



Gettler Ryan/Geostrategies  
6747 Sierra Court Suite J  
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Unocal SS#5367/500 Bancrof  
Sample Descript: MW-6  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9809511-07

Sampled: 09/09/98  
Received: 09/09/98

Analyzed: 09/18/98  
Reported: 10/21/98

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	3.3
Benzene	0.50	N.D.
Toluene	0.50	0.64
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	0.65
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	105

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Tod Granicher  
Project Manager




Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-7 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-08	Sampled: 09/09/98 Received: 09/09/98  Analyzed: 09/18/98 Reported: 10/21/98
Attention: Deanna Harding		

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	4.1
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	96

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
\_\_\_\_\_  
Tod Granicher  
Project Manager




Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-8 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-09	Sampled: 09/09/98 Received: 09/09/98 Analyzed: 09/18/98 Reported: 10/21/98
Attention: Deanna Harding		

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	910
Methyl t-Butyl Ether	2.5	1.5
Benzene	0.50	N.D.
Toluene	0.50	49
Ethyl Benzene	0.50	12
Xylenes (Total)	0.50	2.2
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	96

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
\_\_\_\_\_  
Tod Granicher  
Project Manager



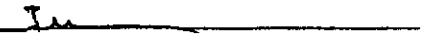
Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-9 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-10	Sampled: 09/09/98 Received: 09/09/98  Analyzed: 09/18/98 Reported: 10/21/98
Attention: Deanna Harding		

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
<b>Benzene</b>	<b>0.50</b>	<b>0.69</b>
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
<b>Xylenes (Total)</b>	<b>0.50</b>	<b>0.61</b>
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	102

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Tod Granicher  
Project Manager






Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal SS#5367/500 Bancrof Sample Descript: MW-10 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9809511-11	Sampled: 09/09/98 Received: 09/09/98  Analyzed: 09/18/98 Reported: 10/21/98
Attention: Deanna Harding		

**Purgeable Total Petroleum Hydrocarbons as Gasoline/BTEX/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.
<b>Toluene</b>	<b>0.50</b>	<b>0.55</b>
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	102

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
\_\_\_\_\_  
Tod Granicher  
Project Manager



**Sequoia  
Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8  
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834  
Petaluma, CA 94954

(650) 364-9600  
(925) 988-9600  
(916) 921-9600  
(707) 792-1865

FAX (650) 364-9233  
FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342

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

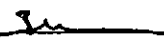
Client Proj. ID: Unocal SS#5367/500 Bancrof  
Lab Proj. ID: 9809511

Received: 09/09/98  
Reported: 10/21/98

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 14 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



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8  
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834  
Petaluma, CA 94954

(650) 364-9600 FAX (650) 364-9233  
(925) 988-9600 FAX (925) 988-9673  
(916) 921-9600 FAX (916) 921-0100  
(707) 792-1865 FAX (707) 792-0342

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

Client Project ID: Unocal SS#5367/500 Bancroft  
Matrix: Liquid

Work Order #: 9809511 01-11

Reported: Oct 22, 1998

## QUALITY CONTROL DATA REPORT

<b>Analyte:</b>	Gasoline
<b>QC Batch#:</b>	8090306
<b>Analy. Method:</b>	EPA 8015M
<b>Prep. Method:</b>	EPA 5030

**Analyst:** N.A.  
**MS/MSD #:** BLK091898  
**Sample Conc.:** N.D.  
**Prepared Date:** 9/18/98  
**Analyzed Date:** 9/18/98  
**Instrument I.D.#:** N.A.  
**Conc. Spiked:** 1000 µg/L

**Result:** 920  
**MS % Recovery:** 92

**Dup. Result:** 894  
**MSD % Recov.:** 89.4

**RPD:** 2.87  
**RPD Limit:** 0-12

**LCS #:** LCS091898  
**Prepared Date:** 9/18/98  
**Analyzed Date:** 9/18/98  
**Instrument I.D.#:** N.A.  
**Conc. Spiked:** 1000 µg/L  
**LCS Result:** 928  
**LCS % Recov.:** 92.8

<b>MS/MSD</b>	53-146
<b>LCS</b>	79-127
<b>Control Limits</b>	

**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 #2245

Todd Granicher  
Project Manager

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

9809511.GET <1>