



**GETTLER-RYAN INC.**

508

**TRANSMITTAL**

March 20, 2001  
G-R #: 180106

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

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

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

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

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	March 1, 2001	Groundwater Monitoring and Sampling Report First Semi-Annual - Event of January 19, 2001

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 **April 2, 2001**, this report will be distributed to the following:

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

Enclosure

trans/7004-DBD



# GETTLER - RYAN INC.

March 1, 2001  
G-R Job #180106

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

RE: **First Semi-Annual Event of January 19, 2001**  
Groundwater Monitoring & Sampling Report  
Tosco (Unocal) Service Station #7004  
15599 Hesperian Boulevard  
San Leandro, California


Dear Mr. De Witt:

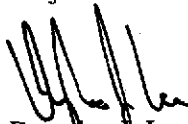
This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

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 Tables 1 and 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

  
Deanna L. Harding  
Project Coordinator

  
Douglas J. Lee

Senior Geologist, R.G. No. 6882

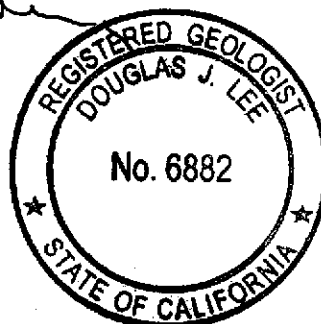
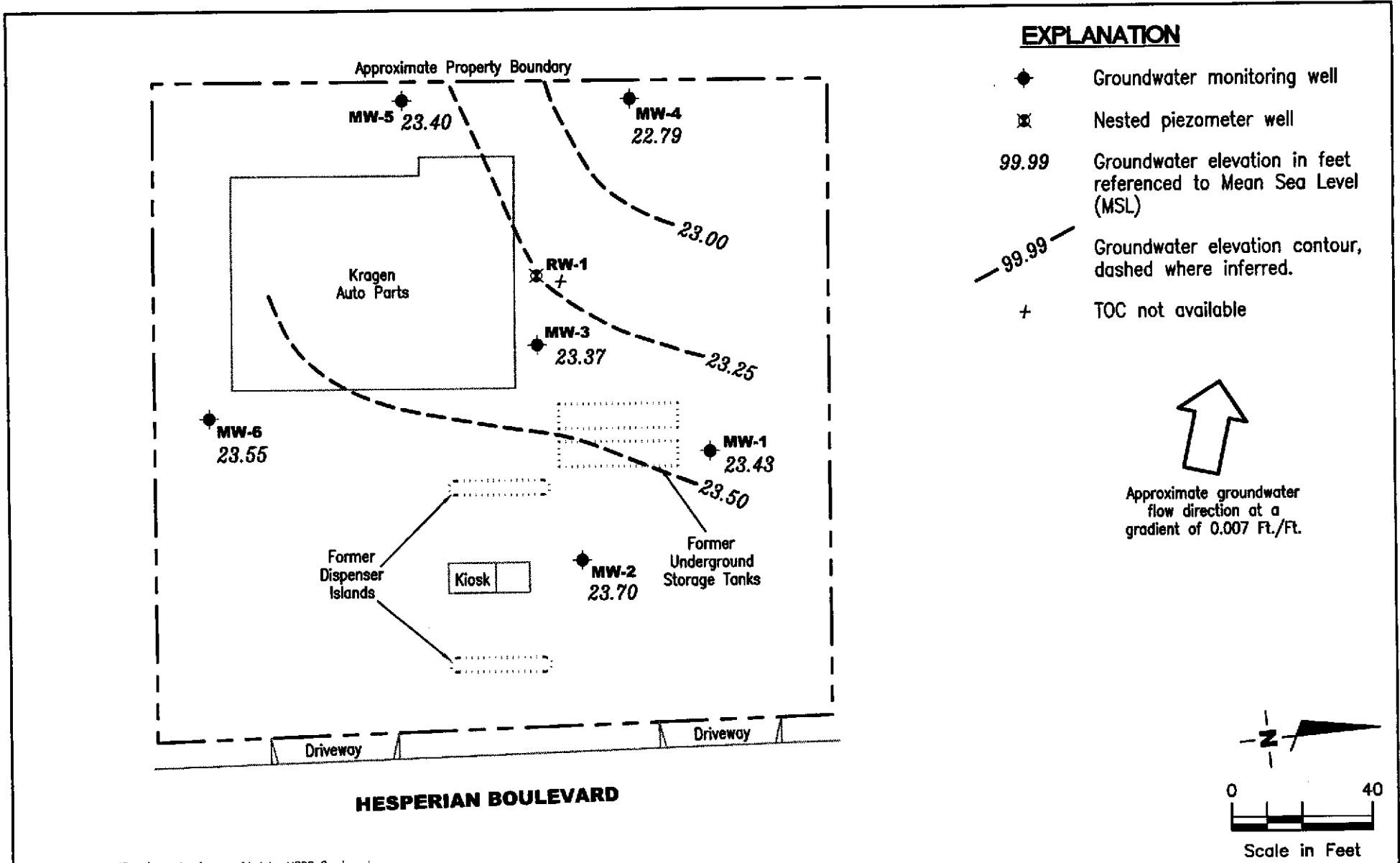


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Dissolved Oxygen Concentrations  
Table 3: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports

7004.qml



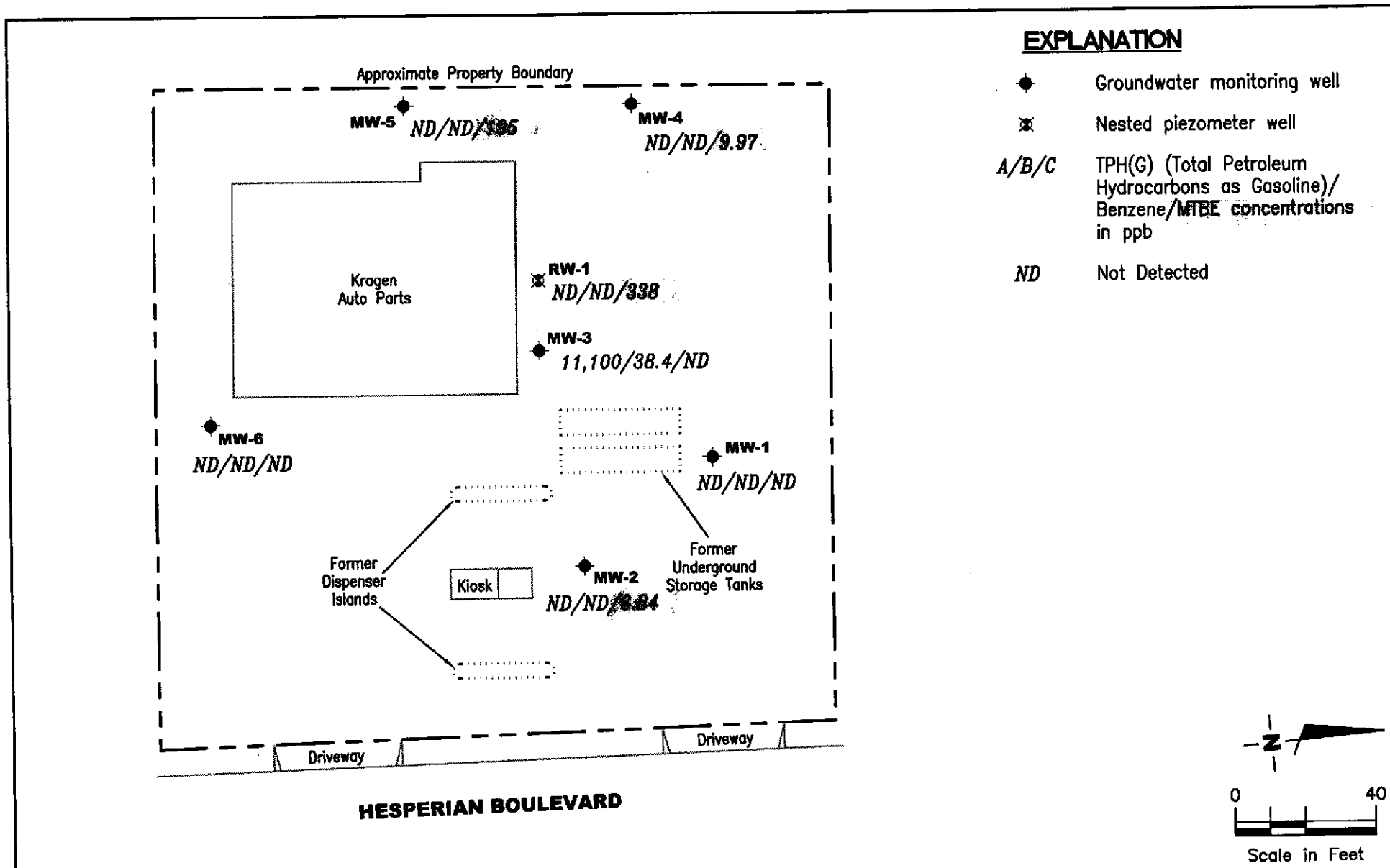
Source: Figure modified from drawing provided by MPDS Services Inc..

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

**POTENTIOMETRIC MAP**  
 Former Tosco (76) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

FIGURE  
**1**

PROJECT NUMBER 140106	REVIEWED BY	DATE January 19, 2001	REVISED DATE
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Source: Figure modified from drawing provided by MPDS Services Inc..

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

**CONCENTRATION MAP**  
 Former Tosco (76) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

FIGURE

2

PROJECT NUMBER  
140106

REVIEWED BY

DATE  
January 19, 2001

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs.)	GWE (mst)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-1	05/04/91	--	10.0-25.0	--	ND	ND	ND	ND	ND	--	
	07/23/91	--		--	ND	ND	ND	ND	ND	--	
	10/14/91	--		--	ND	ND	ND	ND	ND	--	
	01/14/92	--		--	ND	ND	ND	ND	ND	--	
	04/14/92	--		--	76 <sup>1</sup>	ND	ND	ND	ND	--	
	07/09/92	--		--	70 <sup>1</sup>	ND	ND	ND	ND	130	
	10/28/92	--		SAMPLED SEMI-ANNUALLY			--	--	--	--	
	01/21/93	--		--	ND	ND	ND	ND	ND	42	
	36.89	04/20/93		14.89	22.00	--	--	--	--	--	56
		07/22/93		14.34	22.55	ND	ND	ND	ND	ND	77
36.39	10/06/93	14.87	21.52	--	--	--	--	--	--		
	01/11/94	15.14	21.25	ND	ND	ND	ND	ND	--		
	04/06/94	14.19	22.20	--	--	--	--	--	--		
	07/08/94	14.66	21.73	ND	ND	ND	ND	ND	--		
	10/06/94	16.71	19.68	--	--	--	--	--	--		
	01/05/95	14.68	21.71	ND	ND	ND	ND	ND	--		
	04/05/95	11.76	24.63	--	--	--	--	--	--		
	07/14/95	12.93	23.46	ND	0.65	2.2	ND	2.3	--		
	10/12/95	14.29	22.10	--	--	--	--	--	--		
	01/08/96	14.18	22.21	ND	ND	ND	ND	ND	--		
	07/08/96	12.74	23.65	ND	ND	ND	ND	ND	ND		
	01/03/97	12.89	23.50	87 <sup>1</sup>	ND	ND	ND	ND	ND		
	07/02/97	13.66	22.73	ND	ND	ND	ND	ND	ND		
	01/15/98	13.08	23.31	ND	ND	ND	ND	ND	ND		
	07/08/98	11.25	25.14	ND	ND	ND	ND	ND	ND		
	01/11/99	13.68	22.71	51 <sup>9</sup>	ND	ND	ND	ND	4.8		
	07/07/99	12.15	24.24	ND	ND	ND	ND	ND	ND		
	01/04/00	13.95	22.44	ND	ND	ND	ND	ND	ND		
	07/15/00	13.46	22.93	ND	ND	0.86	ND	ND	ND		
	01/19/01	12.96	23.43	ND	ND	ND	ND	ND	ND		

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2	05/04/91	--	10.0-25.0	--	ND	ND	ND	ND	ND	--
	07/23/91	--		--	ND	ND	ND	ND	ND	--
	10/14/91	--		--	ND	ND	ND	ND	ND	--
	01/14/92	--		--	ND	ND	ND	ND	ND	--
	04/14/92	--		--	45 <sup>1</sup>	ND	ND	ND	ND	--
	07/09/92	--		--	ND	ND	ND	ND	ND	49
	10/28/92	--		--	SAMPLED SEMI-ANNUALLY		--	--	--	--
	01/21/93	--		--	ND	ND	ND	ND	ND	17
37.35	04/20/93	15.20		22.15	--	--	--	--	--	80
	07/22/93	14.75		22.60	62 <sup>1</sup>	ND	ND	ND	ND	42
37.07	10/06/93	15.49		21.58	--	--	--	--	--	--
	01/11/94	15.77		21.30	120 <sup>1</sup>	ND	ND	ND	ND	--
	04/06/94	14.83		22.24	--	--	--	--	--	--
	07/08/94	15.28		21.79	140 <sup>1</sup>	ND	ND	ND	ND	--
	10/06/94	16.32		20.75	--	--	--	--	--	--
	01/05/95	15.30		21.77	310 <sup>1</sup>	ND	ND	ND	ND	--
	04/05/95	12.12		24.95	--	--	--	--	--	--
	07/14/95	13.55		23.52	86 <sup>1</sup>	ND	ND	ND	ND	--
	10/12/95	14.88		22.19	--	--	--	--	--	--
	01/08/96	14.81		22.26	91 <sup>1</sup>	ND	ND	ND	ND	--
	07/08/96	13.37		23.70	100 <sup>1</sup>	ND	ND	ND	ND	ND
	01/03/97	13.14		23.93	160 <sup>1</sup>	ND	ND	ND	ND	ND
	07/02/97	14.26		22.81	91 <sup>1</sup>	ND	ND	ND	ND	ND
	01/15/98	13.31		23.76	ND	ND	ND	ND	ND	ND
	07/08/98	11.57		25.50	ND	ND	ND	ND	ND	ND
	01/11/99	14.26		22.81	ND	ND	ND	ND	ND	9.8
	07/07/99	12.24		24.83	ND	ND	ND	ND	ND	9.4
	01/04/00	14.14		22.93	ND	ND	0.518	ND	ND	9.07
	07/15/00	13.75		23.32	ND	ND	0.51	ND	ND	6.0
	01/19/01	13.37		23.70	ND	ND	ND	ND	ND	6.84

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	05/04/91	--	10.0-25.0	--	34,000	6,100	32	1,200	6,100	--
	07/23/91	--		--	17,000	5,500	26	1,800	2,800	--
	10/14/91	--		--	25,000	6,300	78	2,000	1,400	--
	01/14/92	--		--	13,000	6,600	19	2,600	1,800	--
	04/14/92	--		--	16,000	3,400	19	1,400	1,300	--
	07/09/92	--		--	13,000	3,200	12	1,900	1,100	--
	10/28/92	--		--	15,000	4,400	15	2,400	800	--
	01/21/93	--		--	12,000	2,800	11	1,600	590	--
37.22	04/20/93	15.13		22.09	18,000	3,700	11	2,300	1,300	410
	07/22/93	13.52		23.70	16,000	4,500	17	3,600	1,900	440
36.79	10/06/93	15.41		21.38	24,000	4,100	ND	3,600	2,000	ND
	01/11/94	15.66		21.13	19,000	3,300	31	3,300	890	--
	04/06/94	14.72		22.07	24,000	3,100	ND	3,300	820	--
	07/08/94	15.20		21.59	18,000	2,200	25	2,500	860	--
	10/06/94	16.23		20.56	20,000	2,100	26	3,000	900	--
	01/05/95	15.12		21.67	20,000	2,100	ND	3,200	3,800	--
	04/05/95	12.03		24.76	18,000	2,100	ND	3,700	690	--
	07/14/95	13.46		23.33	21,000	1,600	ND	3,900	1,500	--
	10/12/95	14.81		21.98	17,000	1,000	ND	3,600	1,000	-- <sup>3</sup>
	01/08/96	14.70		22.09	14,000	760	ND	3,100	380	-- <sup>4</sup>
	07/08/96	13.29		23.50	16,000	470	45	4,400	1,000	340
	01/03/97	13.09		23.70	14,000	160	ND	2,100	120	620
	07/02/97	13.96		22.83	23,000	110	ND	3,600	1,600	1,200
	01/15/98	13.26		23.53	12,000	33	ND <sup>5</sup>	2,800	120	1,100
	07/08/98	11.64		25.15	20,000	76	ND <sup>5</sup>	4,100	1,400	750
	01/11/99	14.17		22.62	23,000 <sup>10</sup>	ND <sup>5</sup>	ND <sup>5</sup>	4,100	460	920
	07/07/99	13.18		23.61	15,000 <sup>11</sup>	35	ND <sup>5</sup>	3,400	470	1,700
	01/04/00	14.27		22.52	15,500	ND <sup>5</sup>	ND <sup>5</sup>	3,330	191	827
	07/15/00	13.91		22.88	15,000 <sup>12</sup>	ND <sup>5</sup>	ND <sup>5</sup>	3,400	420	3,300
	08/25/00	14.24		22.55	--	--	--	--	--	1,920 <sup>13</sup>
	01/19/01	13.42		23.37	11,100 <sup>14</sup>	38.4	ND <sup>5</sup>	1,760	38.8	ND <sup>5</sup>

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**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4	07/23/91	--	10.0-26.0	--	ND	ND	ND	ND	ND	--
	10/14/91	--		--	ND	ND	ND	ND	ND	--
	01/14/92	--		--	ND	ND	ND	ND	ND	--
	04/14/92	--		--	ND	ND	ND	ND	ND	--
	07/09/92	--		--	ND	ND	ND	ND	ND	--
	10/28/92	--		--	SAMPLED SEMI-ANNUALLY			--	--	--
	01/21/93	--		--	ND	ND	ND	ND	ND	--
35.81	04/20/93	13.84		21.97	--	--	--	--	--	65
	07/22/93	13.52		22.29	ND	ND	ND	ND	ND	54
35.44	10/06/93	14.17		21.27	--	--	--	--	--	--
	01/11/94	14.42		21.02	ND	ND	ND	ND	ND	--
	04/06/94	13.44		22.00	--	--	--	--	--	--
	07/08/94	13.96		21.48	ND	ND	ND	ND	ND	--
	10/06/94	15.00		20.44	--	--	--	--	--	--
	01/05/95	13.83		21.61	ND	ND	ND	ND	ND	--
	04/05/95	11.05		24.39	--	--	--	--	--	--
	07/14/95	12.23		23.21	ND	ND	ND	ND	ND	--
	10/12/95	13.59		21.85	--	--	--	--	--	--
	01/08/96	13.43		22.01	ND	ND	ND	ND	ND	-- <sup>4</sup>
	07/08/96	12.04		23.40	ND	ND	ND	ND	ND	ND
	01/03/97	12.38		23.06	80 <sup>1</sup>	ND	ND	ND	ND	ND
	07/02/97	13.00		22.44	ND	ND	ND	ND	ND	25
	01/15/98	12.50		22.94	ND	ND	ND	ND	ND	ND
	07/08/98	10.53		24.91	ND	ND	ND	ND	ND	25
	01/11/99	12.95		22.49	ND	ND	ND	ND	ND	23
	07/07/99	11.76		23.68	ND	ND	ND	ND	ND	15
	01/04/00	13.17		22.27	ND	ND	ND	ND	ND	13.2
	07/15/00	13.04		22.40	ND	ND	ND	ND	ND	11
	01/19/01	12.65		22.79	ND	ND	ND	ND	ND	9.97



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	07/23/91	--	10.0-26.0	--	260	1.2	0.39	10	0.71	--
	10/14/91	--		--	140	0.72	ND	1.3	0.89	--
	01/14/92	--		--	60 <sup>1</sup>	ND	ND	ND	ND	--
	04/14/92	--		--	86 <sup>1</sup>	ND	ND	ND	ND	--
	07/09/92	--		--	ND	ND	ND	ND	ND	71
	10/28/92	--		--	ND	ND	ND	ND	ND	45
	01/21/93	--		--	100 <sup>1</sup>	ND	ND	ND	ND	160
37.01	04/20/93	14.87		22.14	99 <sup>1</sup>	ND	ND	ND	ND	120
	07/22/93	14.82		22.19	59 <sup>2</sup>	ND	ND	2.6	ND	42
36.81	10/06/93	15.61		21.20	150	1.1	ND	3.1	0.85	57
	01/11/94	15.84		20.97	160	ND	0.79	0.54	ND	--
	04/06/94	14.90		21.91	260	1.4	ND	0.88	ND	--
	07/08/94	15.38		21.43	200	ND	ND	ND	ND	--
	10/06/94	16.42		20.39	350	1.3	ND	ND	ND	--
	01/05/95	15.20		21.61	85	ND	ND	ND	ND	--
	04/05/95	11.72		25.09	ND	ND	ND	ND	ND	--
	07/14/95	13.69		23.12	180	1.3	ND	7.9	ND	--
	10/12/95	15.02		21.79	310	ND	ND	31	1.2	-- <sup>3</sup>
	01/08/96	14.85		21.96	ND	0.55	ND	ND	0.58	-- <sup>4</sup>
	07/08/96	13.52		23.29	140	2.1	1.4	5.6	0.51	110
	07/12/96	14.50		22.31	--	--	--	--	--	--
	01/03/97	12.85		23.96	12,000	150	ND	2,100	120	660
	07/02/97	13.79		23.02	ND	ND	ND	ND	ND	72
	01/15/98	13.03		23.78	69 <sup>6</sup>	ND	ND	ND	ND	-- <sup>7</sup>
	07/08/98	12.05		24.76	ND	0.74	ND	ND	ND	95
	01/11/99	14.41		22.40	ND	1.0	ND	ND	ND	170
	07/07/99	12.38		24.43	130	0.64	ND	ND	ND	330
	01/04/00	14.33		22.48	ND	ND	ND	ND	ND	183
	07/15/00	13.88		22.93	ND	0.68	ND	ND	ND	350
01/19/01	13.41		23.40	ND	ND	ND	ND	ND	195	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-6	07/23/91	--	10.0-26.0	--	ND	ND	ND	ND	ND	--	
	10/14/91	--		--	ND	ND	ND	ND	ND	--	
	01/14/92	--		--	ND	ND	ND	ND	ND	--	
	04/14/92	--		--	ND	ND	ND	ND	ND	--	
	07/09/92	--		--	ND	ND	ND	ND	ND	--	
	10/28/92	--		--	--	SAMPLED SEMI-ANNUALLY		--	--	--	--
	01/21/93	--		--	--	ND	ND	ND	ND	ND	--
37.55	04/20/93	15.27		22.28	--	--	--	--	--	ND	
	07/22/93	15.20		22.35	ND	ND	ND	ND	ND	ND	
37.13	10/06/93	15.75		21.38	--	--	--	--	--	--	
	01/11/94	16.02		21.11	ND	ND	ND	ND	ND	--	
	04/06/94	15.07		22.06	--	--	--	--	--	--	
	07/08/94	15.55		21.58	ND	ND	ND	ND	ND	--	
	10/06/94	16.58		20.55	--	--	--	--	--	--	
	01/05/95	15.42		21.71	ND	ND	ND	ND	ND	--	
	04/05/95	12.14		24.99	--	--	--	--	--	--	
	07/14/95	13.87		23.26	ND	ND	ND	ND	ND	--	
	10/12/95	15.17		21.96	--	--	--	--	--	--	
	01/08/96	15.05		22.08	ND	ND	ND	ND	ND	--	
	07/08/96	13.71		23.42	ND	ND	ND	ND	ND	ND	
	01/03/97	13.12		24.01	97 <sup>1</sup>	ND	ND	ND	ND	ND	
	07/02/97	14.57		22.56	ND	ND	ND	ND	ND	ND	
	01/15/98	13.30		23.83	ND	ND	ND	ND	ND	ND	
	07/08/98	12.33		24.80	ND	ND	ND	ND	ND	ND	
	01/11/99	14.60		22.53	ND	ND	ND	ND	ND	ND	
	07/07/99	13.23		23.90	ND	ND	ND	ND	ND	ND	
	01/04/00	14.41		22.72	ND	ND	ND	ND	ND	ND	
	07/15/00	14.05		23.08	ND	ND	ND	ND	ND	ND	
	01/19/01	13.58		23.55	ND	ND	ND	ND	ND	ND	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
RW-1	07/08/98	11.72	12.5-27.5	--	80 <sup>8</sup>	1.7	ND	ND	ND	1,300
	01/11/99	14.05		--	ND <sup>5</sup>	3.0	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>	1,200
	07/07/99	13.05		--	ND	ND	ND	ND	ND	590
	01/04/00	14.26		--	ND	ND	ND	ND	ND	270
	07/15/00	13.77		--	ND	0.55	ND	ND	ND	460
	01/19/01	13.29		--	ND	ND	ND	ND	ND	338
<b>Trip Blank</b>										
TB-LB	01/15/98	--	--	--	ND	ND	ND	ND	ND	ND
	07/08/98	--	--	--	ND	ND	ND	ND	ND	ND
	01/11/99	--	--	--	ND	ND	ND	ND	ND	ND
	07/07/99	--	--	--	ND	ND	ND	ND	ND	ND
	01/04/00	--	--	--	ND	ND	ND	ND	ND	ND
	07/15/00	--	--	--	ND	ND	ND	ND	ND	ND
	01/19/01	--	--	--	ND	ND	ND	ND	ND	ND

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

**EXPLANATIONS:**

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

TOC = Top of Casing	B = Benzene	(ppb) = Parts per billion
DTW = Depth to Water	T = Toluene	ND = Not Detected
(ft.) = Feet	E = Ethylbenzene	-- = Not Measured/Not Analyzed/Not Available
S.I. = Screen Interval	X = Xylenes	
(ft. bgs.) = Feet Below Ground Surface	MTBE = Methyl tertiary butyl ether	
GWE = Groundwater Elevation		
msl = Mean sea level		
TPH-G = Total Petroleum Hydrocarbons as Gasoline		

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

- 1 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- 2 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 3 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 4 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
- 5 Detection limit raised. Refer to analytical reports.
- 6 Laboratory report indicates unidentified hydrocarbons C6-C8.
- 7 Laboratory narrative: MTBE was not reported due to the presence of a chlorinated hydrocarbon pattern.
- 8 Laboratory report indicates discrete peaks and unidentified hydrocarbons <C7.
- 9 Laboratory report indicates discrete peaks.
- 10 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- 11 Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
- 12 Laboratory report indicates gasoline C6-C12.
- 13 MTBE by EPA Method 8260.
- 14 Laboratory report indicates weathered gasoline C6-C12.

**Table 2**

**Dissolved Oxygen Concentrations**  
Tosco (Unocal) Service Station #7004  
15599 Hesperian Boulevard  
San Leandro, California

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

**EXPLANATIONS:**

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

mg/L = milligrams per liter

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
 Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

<b>WELL ID</b>	<b>DATE</b>	<b>TBA</b> <i>(ppb)</i>	<b>MTBE</b> <i>(ppb)</i>	<b>DIPE</b> <i>(ppb)</i>	<b>ETBE</b> <i>(ppb)</i>	<b>TAME</b> <i>(ppb)</i>	<b>1,2-DCA</b> <i>(ppb)</i>	<b>EDB</b> <i>(ppb)</i>
MW-3	08/25/00	ND <sup>1</sup>	1,920	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>

**EXPLANATIONS:**

TBA = Tertiary butyl alcohol  
 MTBE = Methyl tertiary butyl ether  
 DIPE = Di-isopropyl ether  
 ETBE = Ethyl tertiary butyl ether  
 TAME = Tertiary amyl methyl ether  
 1,2-DCA = 1,2-Dichloroethane  
 EDB = 1,2-Dibromoethane  
 (ppb) = Parts per billion  
 ND = Not Detected

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

<sup>1</sup> Dectection limit raised. Refer to analytical reports.

## 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 an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

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

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

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

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

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 7004  
Address: 15599 Hesperian Blvd.  
City: San Leandro

Job#: 180106  
Date: 1-19-01  
Sampler: Joe

Well ID MW-1

Well Condition: o.k.

Well Diameter 2 in

Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal)

Total Depth 24.40 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

Depth to Water 12.96 ft

11.44 x VF 0.17 = 1.94 x 3 (case volume) = Estimated Purge Volume: 6 (gal)

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

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

Starting Time: 7:56

Weather Conditions: clear/cold

Sampling Time: 8:13A.M

Water Color: clear Odor: none

Purging Flow Rate: 1 gpm

Sediment Description: none

Did well de-water? \_\_\_\_\_

If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal)

Time	Volume (gal)	pH	Conductivity $\mu\text{mhos/cm} \times 10^3$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:02</u>	<u>2</u>	<u>7.30</u>	<u>1366</u>	<u>72.2</u>			
<u>8:04</u>	<u>4</u>	<u>7.39</u>	<u>1325</u>	<u>71.6</u>			
<u>8:05</u>	<u>6</u>	<u>7.41</u>	<u>1320</u>	<u>72.5</u>			
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHC, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 7004  
Address: 15599 Hesperian Blvd.  
City: San Leandro

Job#: 180106  
Date: 1-19-01  
Sampler: Joc

Well ID: MW-2  
Well Diameter: 2 in  
Total Depth: 24.50 +  
Depth to Water: 13.37 +

Well Condition: O.K.  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal)  
Volume Factor (VF):  

2" = 0.17	3" = 0.38	4" = 0.66
6" = 1.50	12" = 5.50	

11.13 x VF 0.17 = 1.89 x 3 (case volume) = Estimated Purge Volume: 6 (gal)

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

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

Starting Time: 8:27  
Sampling Time: 8:50 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear/cold  
Water Color: clear Odor: none  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal)

Time	Volume (gal)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:35</u>	<u>2</u>	<u>7.96</u>	<u>10.38</u>	<u>72.2</u>	_____	_____	_____
<u>8:37</u>	<u>4</u>	<u>7.37</u>	<u>10.25</u>	<u>72.5</u>	_____	_____	_____
<u>8:38</u>	<u>6</u>	<u>7.45</u>	<u>10.16</u>	<u>72.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3 gal</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

• Client/  
Facility # 7004 Job#: 180106  
Address: 15599 Hesperian Blvd. Date: 1-19-01  
City: San Leandro Sampler: Joe

Well ID MW-3 Well Condition: O.K.  
Well Diameter 2 in Hydrocarbon Thickness: Ø in Amount Bailed (product/water): Ø (gal)  
Total Depth 24.78 ft  
Depth to Water 13.42 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

11.36 X VF 0.17 = 1.93 X 3 (case volume) = Estimated Purge Volume: 6 (gal)

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

Starting Time: 11:04 Weather Conditions: clear/cold  
Sampling Time: 11:18 AM Water Color: clear Odor: yes  
Purging Flow Rate: 1 gpm Sediment Description: none  
Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal)

Time	Volume (gal)	pH	Conductivity $\mu\text{mhos/cm}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:12</u>	<u>2</u>	<u>6.80</u>	<u>1.55</u>	<u>72.2</u>			
<u>11:13</u>	<u>4</u>	<u>6.82</u>	<u>1.85</u>	<u>72.5</u>			
<u>11:14</u>	<u>6</u>	<u>6.85</u>	<u>1.90</u>	<u>72.3</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3VSA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 7004  
Address: 15599 Hesperian Blvd.  
City: San Leandro

Job#: 180106  
Date: 1-19-01  
Sampler: Joe

Well ID: MW-4  
Well Diameter: 2 in  
Total Depth: 25.60 ft  
Depth to Water: 12.65 ft

Well Condition: o.k.  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal)  
Volume Factor (VF) 

2" = 0.17	3" = 0.38	4" = 0.66
6" = 1.50	12" = 5.50	

12.95 X VF 0.17 = 2.20 X 3 (case volume) = Estimated Purge Volume: 7 (gal)

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

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

Starting Time: 9:15  
Sampling Time: 9:35 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear/cold  
Water Color: clear Odor: none  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm) <sup>(100)</sup>	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:22</u>	<u>2.5</u>	<u>7.67</u>	<u>8.10</u>	<u>72.9</u>	_____	_____	_____
<u>9:26</u>	<u>5</u>	<u>7.27</u>	<u>7.76</u>	<u>73.0</u>	_____	_____	_____
<u>9:28</u>	<u>7</u>	<u>7.31</u>	<u>7.84</u>	<u>72.4</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHC, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 7004  
Address: 15599 Hesperian Blvd.  
City: San Leandro

Job#: 180106  
Date: 1-19-01  
Sampler: Joc

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

Well Diameter 2 in Hydrocarbon Thickness: 0 in Amount Bailed (product/water): 0 (gal.)  
Total Depth 26.17 ft  
Depth to Water 13.41 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

12.76 x VF 0.17 = 2.17 x 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

Starting Time: 9:42 Weather Conditions: clear/cold  
Sampling Time: 10:05 AM Water Color: clear Odor: none  
Purging Flow Rate: 1 gpm Sediment Description: none  
Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:50</u>	<u>2</u>	<u>7.67</u>	<u>5.59</u>	<u>73.3</u>			
<u>9:51</u>	<u>4</u>	<u>7.62</u>	<u>5.69</u>	<u>73.5</u>			
<u>9:52</u>	<u>6.5</u>	<u>7.57</u>	<u>5.72</u>	<u>73.8</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3VGA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 7004 Job#: 180106  
 Address: 15599 Hesperian Blvd. Date: 1-19-01  
 City: San Leandro Sampler: Joe

Well ID MW-6 Well Condition: O.K.  
 Well Diameter 2 in Hydrocarbon Thickness: Ø in Amount Bailed (product/water): Ø (gal.)  
 Total Depth 25.63 ft  
 Depth to Water 13.58 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

12.05 x VF 0.17 = 2.04 x 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

Starting Time: 6:55 Weather Conditions: clear/cold  
 Sampling Time: 7:22 A.M. Water Color: clear Odor: none  
 Purging Flow Rate: \_\_\_\_\_ gpm Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>7:05</u>	<u>2</u>	<u>7.26</u>	<u>12.11</u>	<u>72.2</u>			
<u>7:06</u>	<u>4</u>	<u>7.30</u>	<u>11.67</u>	<u>73.0</u>			
<u>7:08</u>	<u>6.5</u>	<u>7.40</u>	<u>11.62</u>	<u>73.0</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBG</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 7004  
Address: 15599 Hesperian Blvd.  
City: San Leandro

Job#: 180106  
Date: 1-19-01  
Sampler: Joc

Well ID: Rw-1  
Well Diameter: 6 in.  
Total Depth: 26.45 ft  
Depth to Water: 13.29 ft

Well Condition: O.K.  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
Volume Factor (VF):  

2" = 0.17	3" = 0.38	4" = 0.66
6" = 1.50	12" = 5.50	

13.16 x VF <sup>1.50</sup> 19.74 = 19.74 x 3 (case volume) = Estimated Purge Volume: 60 (gal.)

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

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

Starting Time: 10:07  
Sampling Time: 10:35 A.M.  
Purging Flow Rate: 3 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear/cold  
Water Color: clear Odor: none  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm) X	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:15</u>	<u>20</u>	<u>7.27</u>	<u>5.12</u>	<u>69.2</u>	_____	_____	_____
<u>10:19</u>	<u>40</u>	<u>7.37</u>	<u>5.16</u>	<u>69.0</u>	_____	_____	_____
<u>10:25</u>	<u>60</u>	<u>7.44</u>	<u>5.11</u>	<u>69.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>Rw-1</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

# Chain-of-Custody-Record



**TOSCO**

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

LI01134

Facility Number UNOCAL SS# 7004  
 Facility Address 15399 Hesperian Blvd, San Leandro, CA  
 Consultant Project Number 180-106  
 Consultant Name Gettler-Ryan Inc. (G-R Inc.)  
 Address 6747 Sierra Court, Suite J, Dublin, CA 94568  
 Project Contact (Name) Deanna L. Harding  
 (Phone) 925-551-7555 (Fax Number) 925-551-7888

Contact (Name) MR. DAVID DEWITT  
 (Phone) (925) 277-2384  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) JOE AJEMIAN  
 Collection Date 1-19-01  
 Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed											Remarks			
								TPH Gas + BTEX w/MTBE (8015)	TPH Diesel (8015)	Oil and Grease (8020)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)							
TB-LB	01	VOA	W	G	-	HCL	Y	<input checked="" type="checkbox"/>														
MW-1	02	3 VOA	/	/	8:13	/	/	<input checked="" type="checkbox"/>														
MW-2	03	"	/	/	8:50	/	/	<input checked="" type="checkbox"/>														
MW-3	04	"	/	/	11:18	/	/	<input checked="" type="checkbox"/>														
MW-4	05	/	/	/	9:35	/	/	<input checked="" type="checkbox"/>														
MW-5	06	/	/	/	10:05	/	/	<input checked="" type="checkbox"/>														
MW-6	07	/	/	/	7:22	/	/	<input checked="" type="checkbox"/>														
RW-1	08	/	/	/	10:35	/	/	<input checked="" type="checkbox"/>														

DO NOT BILL  
TB-LB ANALYSIS

Shipped By (Signature) <u>[Signature]</u>	Organization G-R Inc.	Date/Time 1-19-01	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time 1/19/01	Turn Around Time (Circle Choice)  24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Delivered By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	



# Sequoia Analytical

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www.sequoialabs.com

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FEB 06 2001

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

February 02, 2001

Deanna Harding  
Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin, CA 94568  
RE: Tosco(1) / L101134

Enclosed are the results of analyses for samples received by the laboratory on 01/19/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Latonya K. Pelt*

Latonya Pelt  
Project Manager

CA ELAP Certificate Number 2360





Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: Unocal SS#7004  
Project Manager: Deanna Harding

Reported:  
02/02/01 14:16

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L101134-01	Water	01/19/01 00:00	01/19/01 17:00
MW-1	L101134-02	Water	01/19/01 08:13	01/19/01 17:00
MW-2	L101134-03	Water	01/19/01 08:50	01/19/01 17:00
MW-3	L101134-04	Water	01/19/01 11:18	01/19/01 17:00
MW-4	L101134-05	Water	01/19/01 09:35	01/19/01 17:00
MW-5	L101134-06	Water	01/19/01 10:05	01/19/01 17:00
MW-6	L101134-07	Water	01/19/01 07:22	01/19/01 17:00
RW-1	L101134-08	Water	01/19/01 10:35	01/19/01 17:00

Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: Unocal SS#7004  
Project Manager: Deanna Harding

Reported:  
02/02/01 14:16

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>TB-LB (L101134-01) Water</b> Sampled: 01/19/01 00:00 Received: 01/19/01 17:00									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010102	01/31/01	02/01/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		93.2 %	70-130		"	"	"	"	
<b>MW-1 (L101134-02) Water</b> Sampled: 01/19/01 08:13 Received: 01/19/01 17:00									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010102	01/31/01	02/01/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	70-130		"	"	"	"	
<b>MW-2 (L101134-03) Water</b> Sampled: 01/19/01 08:50 Received: 01/19/01 17:00									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010101	01/31/01	02/01/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	6.84	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99.3 %	70-130		"	"	"	"	

Gettler-Ryan/Geostrategies(1)  
 6747 Sierra Court, Suite J  
 Dublin CA, 94568

Project: Tosco(1)  
 Project Number: Unocal SS#7004  
 Project Manager: Deanna Harding

Reported:  
 02/02/01 14:16

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT  
 Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (L101134-04) Water</b> Sampled: 01/19/01 11:18 Received: 01/19/01 17:00									
Purgeable Hydrocarbons as Gasoline	11100	2000	ug/l	40	1010102	01/31/01	02/01/01	DHS LUFT	P-02
Benzene	38.4	20.0	"	"	"	"	"	"	
Toluene	ND	20.0	"	"	"	"	"	"	
Ethylbenzene	1760	20.0	"	"	"	"	"	"	
Xylenes (total)	38.8	20.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		101 %		70-130	"	"	"	"	
<b>MW-4 (L101134-05) Water</b> Sampled: 01/19/01 09:35 Received: 01/19/01 17:00									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010101	01/31/01	02/01/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	9.97	5.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %		70-130	"	"	"	"	
<b>MW-5 (L101134-06) Water</b> Sampled: 01/19/01 10:05 Received: 01/19/01 17:00									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010101	01/31/01	02/01/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	195	5.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %		70-130	"	"	"	"	

Gettler-Ryan/Geostrategies(1)  
 6747 Sierra Court, Suite J  
 Dublin CA, 94568

Project: Tosco(1)  
 Project Number: Unocal SS#7004  
 Project Manager: Deanna Harding

Reported:  
 02/02/01 14:16

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (L101134-07) Water Sampled: 01/19/01 07:22 Received: 01/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010101	01/31/01	02/01/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		88.6 %	70-130		"	"	"	"	
<b>RW-1 (L101134-08) Water Sampled: 01/19/01 10:35 Received: 01/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1010101	01/31/01	02/01/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	338	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %	70-130		"	"	"	"	

Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: Unocal SS#7004  
Project Manager: Deanna Harding

Reported:  
02/02/01 14:16

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1010101 - EPA 5030B (P/T)**

**Blank (1010101-BLK1)**

Prepared & Analyzed: 01/31/01

Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	5.00	"							
Surrogate: a,a,a-Trifluorotoluene	9.68		"	10.0		96.8	70-130			

**LCS (1010101-BS1)**

Prepared & Analyzed: 01/31/01

Benzene	8.88	0.500	ug/l	10.0		88.8	70-130			
Toluene	8.61	0.500	"	10.0		86.1	70-130			
Ethylbenzene	8.81	0.500	"	10.0		88.1	70-130			
Xylenes (total)	26.1	0.500	"	30.0		87.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.0		"	10.0		100	70-130			

**LCS (1010101-BS2)**

Prepared & Analyzed: 01/31/01

Purgeable Hydrocarbons as Gasoline	248	50.0	ug/l	250		99.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.46		"	10.0		84.6	70-130			

**Matrix Spike (1010101-MS1)**

Source: L101162-01

Prepared: 01/31/01 Analyzed: 02/01/01

Purgeable Hydrocarbons as Gasoline	254	50.0	ug/l	250	ND	102	60-140			
Surrogate: a,a,a-Trifluorotoluene	10.3		"	10.0		103	70-130			

**Matrix Spike Dup (1010101-MSD1)**

Source: L101162-01

Prepared: 01/31/01 Analyzed: 02/01/01

Purgeable Hydrocarbons as Gasoline	252	50.0	ug/l	250	ND	101	60-140	0.791	25	
Surrogate: a,a,a-Trifluorotoluene	10.4		"	10.0		104	70-130			

Gettler-Ryan/Geostrategies(1)  
 6747 Sierra Court, Suite J  
 Dublin CA, 94568

Project: Tosco(1)  
 Project Number: Unocal SS#7004  
 Project Manager: Deanna Harding

Reported:  
 02/02/01 14:16

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1010102 - EPA 5030B (P/T)**

**Blank (1010102-BLK1)**

Prepared & Analyzed: 01/31/01

Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	5.00	"							
Surrogate: a,a,a-Trifluorotoluene	10.5		"	10.0		105	70-130			

**LCS (1010102-BS1)**

Prepared & Analyzed: 01/31/01

Benzene	9.88	0.500	ug/l	10.0		98.8	70-130			
Toluene	9.47	0.500	"	10.0		94.7	70-130			
Ethylbenzene	9.38	0.500	"	10.0		93.8	70-130			
Xylenes (total)	27.9	0.500	"	30.0		93.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.5		"	10.0		105	70-130			

**LCS (1010102-BS2)**

Prepared & Analyzed: 01/31/01

Purgeable Hydrocarbons as Gasoline	227	50.0	ug/l	250		90.8	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.7		"	10.0		107	70-130			

**Matrix Spike (1010102-MS1)**

Source: L101158-01

Prepared: 01/31/01 Analyzed: 02/01/01

Purgeable Hydrocarbons as Gasoline	241	50.0	ug/l	250	ND	96.4	60-140			
Surrogate: a,a,a-Trifluorotoluene	10.5		"	10.0		105	70-130			

**Matrix Spike Dup (1010102-MSD1)**

Source: L101158-01

Prepared: 01/31/01 Analyzed: 02/01/01

Purgeable Hydrocarbons as Gasoline	215	50.0	ug/l	250	ND	86.0	60-140	11.4	25	
Surrogate: a,a,a-Trifluorotoluene	9.85		"	10.0		98.5	70-130			

Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: Unocal SS#7004  
Project Manager: Deanna Harding

Reported:  
02/02/01 14:16

#### Notes and Definitions

P-02      Chromatogram Pattern: Weathered Gasoline C6-C12  
DET      Analyte DETECTED  
ND      Analyte NOT DETECTED at or above the reporting limit  
NR      Not Reported  
dry      Sample results reported on a dry weight basis  
RPD      Relative Percent Difference

APR 05 2001