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SEP 18 2001



# GETTLER-RYAN INC.

## TRANSMITTAL

August 31, 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: **Former Tosco (Unocal)  
Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 31, 2001	Groundwater Monitoring and Sampling Report Second Semi-Annual - Event of July 31, 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 *September 14, 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.

August 31, 2001  
G-R Job #180106

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

SEP 18 2001

**RE: Second Semi-Annual Event of July 31, 2001**  
Groundwater Monitoring & Sampling Report  
Former 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.

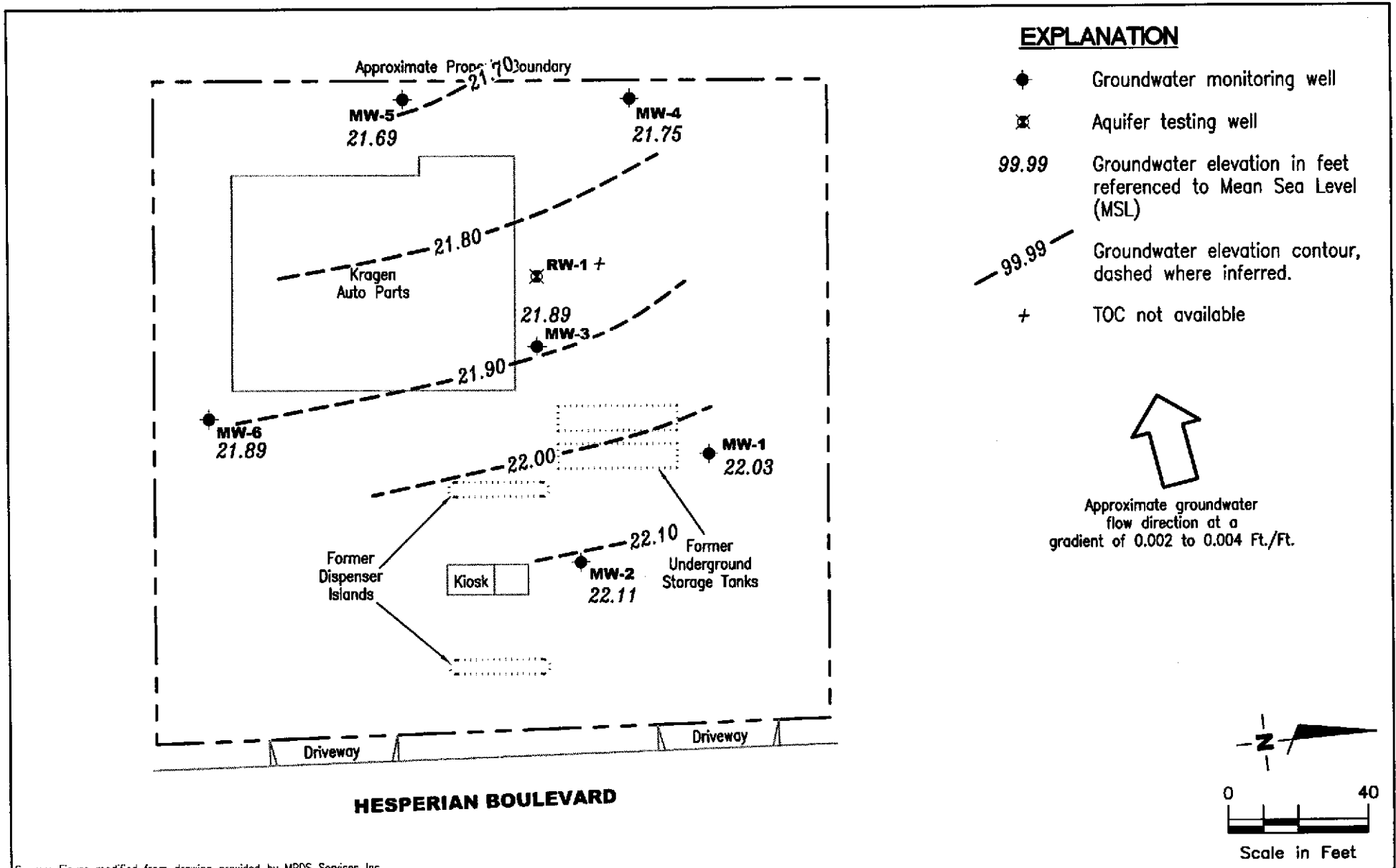
Sincerely,

*Deanna L. Harding*  
Deanna L. Harding  
Project Coordinator

*Hagop Kevork*  
Hagop Kevork  
P.E. No. C55734



- 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



**EXPLANATION**

- ◆ Groundwater monitoring well
- ⊗ Aquifer testing well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 - Groundwater elevation contour, dashed where inferred.
- + TOC not available

↑  
 Approximate groundwater flow direction at a gradient of 0.002 to 0.004 Ft./Ft.

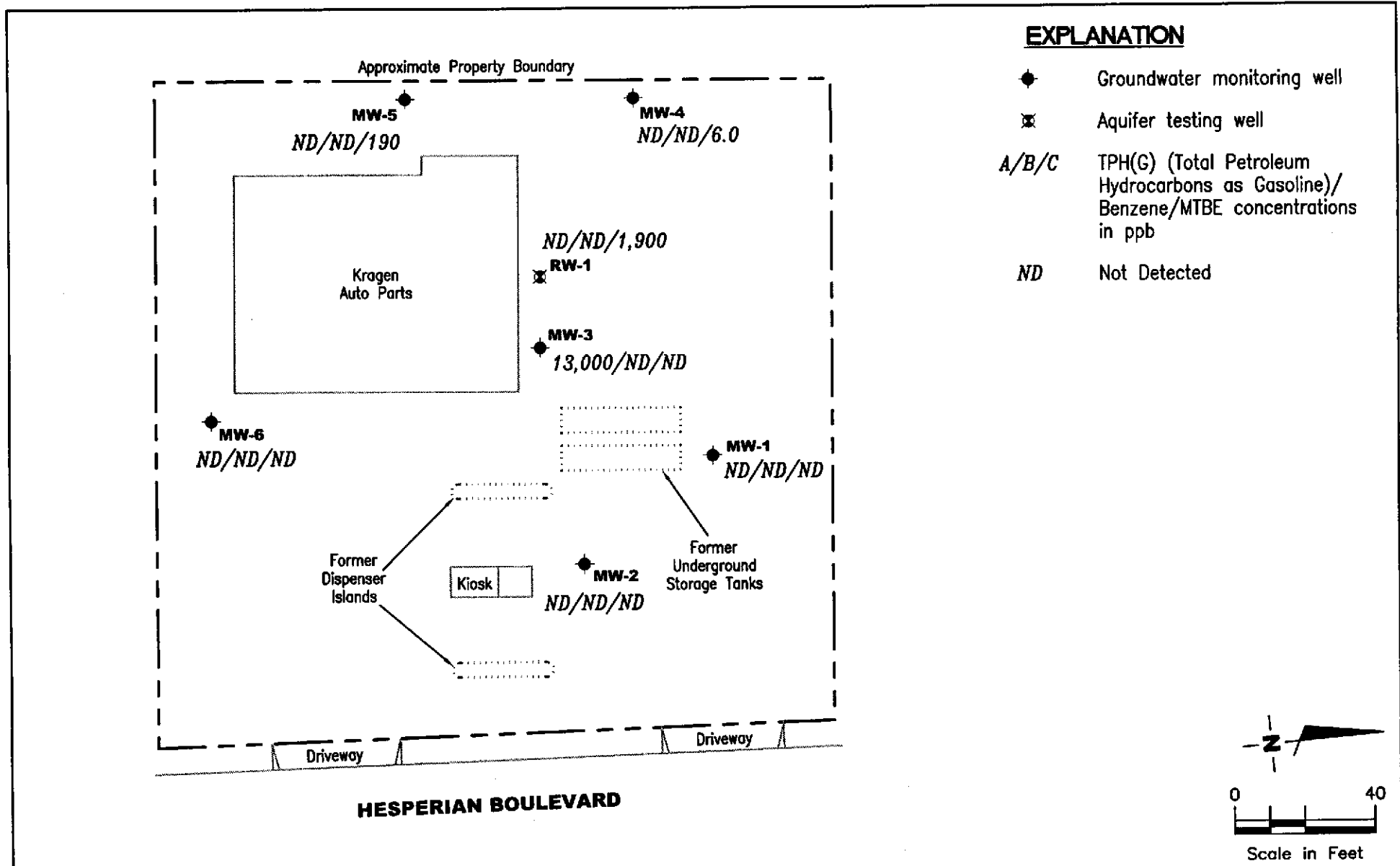
Source: Figure modified from drawing provided by MPDS Services Inc..

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

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

FIGURE  
**1**

PROJECT NUMBER 180106	REVIEWED BY	DATE July 31, 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 (Unocal) Service Station #7004  
15599 Hesperian Boulevard  
San Leandro, California

FIGURE

2

PROJECT NUMBER  
180106

REVIEWED BY

DATE  
July 31, 2001

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former 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-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
	07/31/01	14.36		22.03	ND	ND	ND	ND	ND	ND

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former 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 (pph)	B (pph)	T (pph)	E (pph)	X (pph)	MTBE (pph)
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
07/31/01	14.96		22.11	ND	ND	ND	ND	ND	ND	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former 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>
	07/31/01	14.90		21.89	13,000 <sup>14</sup>	ND <sup>5</sup>	ND <sup>5</sup>	1,600	63	ND <sup>5</sup>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former 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
	07/31/01	13.69		21.75	ND	ND	ND	ND	ND	6.0



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former 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	
	07/31/01	15.12		21.69	ND	ND	ND	ND	ND	190	

**Table 1**  
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Former 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-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
07/31/01	15.24		21.89	ND	ND	ND	ND	ND	ND	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former 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
	07/31/01	14.72		--	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>	ND <sup>5</sup>	1,900
<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
	07/31/01	--		--	ND	ND	ND	ND	ND	ND

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former 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	TPH-G = Total Petroleum Hydrocarbons as Gasoline	(ppb) = Parts per billion
DTW = Depth to Water	B = Benzene	ND = Not Detected
(ft.) = Feet	T = Toluene	-- = Not Measured/Not Analyzed/Not Available
S.I. = Screen Interval	E = Ethylbenzene	
(ft. bgs) = Feet Below Ground Surface	X = Xylenes	
GWE = Groundwater Elevation	MTBE = Methyl tertiary butyl ether	
(msl) = Mean sea level		

\* 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.

- ◆ ORC installed.
- ◆◆ ORC removed from well.

- 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**  
Former Tosco (Unocal) Service Station #7004  
15599 Hesperian Boulevard  
San Leandro, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
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**  
 Former Tosco (Unocal) Service Station #7004  
 15599 Hesperian Boulevard  
 San Leandro, California

WELL ID	DATE	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
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> Detection 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 # Tosco #7004  
 Address: 15599 Hesperian Blvd  
 City: SAN LEANDRO

Job#: 180106  
 Date: 7-31-01  
 Sampler: FB

Well ID: MW-1  
 Well Diameter: 2 in.  
 Total Depth: 23.89 ft.  
 Depth to Water: 14.36 ft.

Well Conditions: OK  
 Hydrocarbon Thickness: ∅ in.  
 Amount Bailed (product/water): ∅ (gal.)  
 Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
6" = 1.50 12" = 5.80

9.53 x VF 1.17 = 1.62 x 3 (case volume) = Estimated Purge Volume: 5 (gal.)

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

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

Starting Time: 8:54  
 Sampling Time: 9:15  
 Purging Flow Rate: \_\_\_\_\_ 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 $\mu\text{mhos/cm}$	Temperature $^{\circ}\text{C}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
859	2	5.75	1091	74.2			
904	4	5.70	1057	73.9			
907	5	5.67	1042	74.0			

### LABORATORY INFORMATION

SAMPLE ID	(#)-CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES	
					TPHG/BTEX	MTOE
MW-1	3 x VDA VIAL	Y	HCL	Seg		

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



## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # Tosco #7004  
Address: 15599 HESPERIAN BLVD  
City: SAN LEANDRO

Job#: 180106  
Date: 7-31-01  
Sampler: FB

Well ID: MW-3  
Well Diameter: 2 in.  
Total Depth: 24.38 ft.  
Depth to Water: 14.90 ft.

Well Condition: OK  
Hydrocarbon Thickness: ∅ in.  
Amount Bailed (product/water): ∅ (gal.)  
Volume Factor (VF):  
2" = 0.17      3" = 0.38      4" = 0.66  
6" = 1.50      12" = 5.80

9.48 x VF 1.17 = 11.01 x 3 (case volume) = Estimated Purge Volume: 5 (gal.)

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

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

Starting Time: 1300  
Sampling Time: 1330  
Purging Flow Rate: — gpm.  
Did well de-water? NO

Weather Conditions: CLOUDY  
Water Color: clear      Odor: YES  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1304</u>	<u>2</u>	<u>5.65</u>	<u>1130</u>	<u>71.6</u>			
<u>1308</u>	<u>4</u>	<u>5.62</u>	<u>1100</u>	<u>71.5</u>			
<u>1311</u>	<u>5</u>	<u>5.56</u>	<u>1084</u>	<u>71.6</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 X VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>Seq</u>	<u>TPHG/BTEX/MTDE</u>

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # Tosco #7004  
 Address: 15599 HESPERIAN BLVD  
 City: SAN LEANDRO

Job#: 180106  
 Date: 7-31-01  
 Sampler: FB

Well ID: MW-5  
 Well Diameter: 2 in.  
 Total Depth: 25.81 ft.  
 Depth to Water: 15.12 ft.

Well Condition: OK  
 Hydrocarbon Thickness: Ø in.  
 Amount Bailed (product/water): Ø (gal.)  
 Volume Factor (VF):  
 2" = 0.17      3" = 0.38      4" = 0.66  
 6" = 1.50      12" = 5.80

10.69 x VF 1.7 = 1.81 x 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

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

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

Starting Time: 11:30  
 Sampling Time: 11:52  
 Purging Flow Rate: \_\_\_\_\_ 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	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1135</u>	<u>2</u>	<u>5.69</u>	<u>965</u>	<u>77.0</u>			
<u>1140</u>	<u>4</u>	<u>5.64</u>	<u>937</u>	<u>75.4</u>			
<u>1144</u>	<u>5.5</u>	<u>5.60</u>	<u>929</u>	<u>75.8</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE:	LABORATORY	ANALYSES	
<u>MW-5</u>	<u>3 X VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>Seq</u>	<u>TPH6/BTEX</u>	<u>MTDE</u>

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

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

Job#: 180106  
 Date: 7-31-01  
 Sampler: FB

Well ID: RW-1  
 Well Diameter: 6 in.  
 Total Depth: 26.41 ft.  
 Depth to Water: 14.72 ft.

Well Condition: OR  
 Hydrocarbon Thickness: ∅ in.  
 Amount Bailed (product/water): ∅ (gal.)  
 Volume Factor (VF):  
 2" = 0.17      3" = 0.38      4" = 0.66  
 6" = 1.50      12" = 5.80

11.69 x VF 1.50 = 17.5 x 3 (case volume) = Estimated Purge Volume: 53 (gal.)

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

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

Starting Time: 12:08  
 Sampling Time: 12:43  
 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 (µmhos/cm)	Temperature (°C)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1217	17.5	5.66	1619	72.0			
1226	35.0	5.64	1092	71.2			
1235	53.0	5.60	1044	70.4			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
RW-1	3 x VDA VIAL	Y	HCL	SGG	TPHG/BTEX/MTOE

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



**Sequoia  
Analytical**

RECEIVED

1551 Industrial Road  
San Carlos, CA 94070  
(650) 232-9600  
FAX (650) 232-9612  
www.sequoialabs.com

15 August, 2001

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

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

RE: Tosco(1)  
Sequoia Report: L107262

Enclosed are the results of analyses for samples received by the laboratory on 07/31/01 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate #2360



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

Project: Tosco(1)  
Project Number: Unocal SS# 7004, San Leandro, CA  
Project Manager: Deanna Harding

**Reported:**  
08/15/01 15:14

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>TB-LB (L107262-01) Water</b> Sampled: 07/31/01 00:00 Received: 07/31/01 14:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1080040	08/09/01	08/09/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.0 %	70-130		"	"	"	"	
<b>MW-1 (L107262-02) Water</b> Sampled: 07/31/01 09:15 Received: 07/31/01 14:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1080040	08/09/01	08/09/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		90.8 %	70-130		"	"	"	"	
<b>MW-2 (L107262-03) Water</b> Sampled: 07/31/01 10:30 Received: 07/31/01 14:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1080040	08/09/01	08/09/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		97.9 %	70-130		"	"	"	"	



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

Project: Tosco(1)  
Project Number: Unocal SS# 7004, San Leandro, CA  
Project Manager: Deanna Harding

Reported:  
08/15/01 15:14

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (L107262-07) Water</b> Sampled: 07/31/01 09:55 Received: 07/31/01 14:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1080045	08/10/01	08/10/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		76.3 %	70-130		"	"	"	"	
<b>RW-1 (L107262-08) Water</b> Sampled: 07/31/01 12:43 Received: 07/31/01 14:00									
Purgeable Hydrocarbons as Gasoline	ND	100	ug/l	2	1080045	08/13/01	08/13/01	DHS LUFT	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	1900	100	"	20	"	"	08/14/01	"	M-04
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.1 %	70-130		"	"	08/13/01	"	

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

 Project: Tosco(1)  
 Project Number: Unocal SS# 7004, San Leandro, CA  
 Project Manager: Deanna Harding

 Reported:  
 08/15/01 15:14

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1080045 - EPA 5030B (P/T)</b>										
<b>Blank (1080045-BLK1)</b> <span style="float:right">Prepared &amp; Analyzed: 08/10/01</span>										
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.95		"	10.0		89.5	70-130			
<b>Blank (1080045-BLK2)</b> <span style="float:right">Prepared &amp; Analyzed: 08/13/01</span>										
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.3		"	10.0		103	70-130			
<b>LCS (1080045-BS1)</b> <span style="float:right">Prepared &amp; Analyzed: 08/10/01</span>										
Benzene	7.40	0.50	ug/l	10.0		74.0	70-130			
Toluene	7.35	0.50	"	10.0		73.5	70-130			
Ethylbenzene	7.34	0.50	"	10.0		73.4	70-130			
Xylenes (total)	22.3	0.50	"	30.0		74.3	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.90		"	10.0		89.0	70-130			
<b>LCS (1080045-BS2)</b> <span style="float:right">Prepared &amp; Analyzed: 08/10/01</span>										
Purgeable Hydrocarbons as Gasoline	250	50	ug/l	250		100	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.58		"	10.0		85.8	70-130			



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

Project: Tosco(1)  
Project Number: Unocal SS# 7004, San Leandro, CA  
Project Manager: Deanna Harding

**Reported:**  
08/15/01 15:14

### Notes and Definitions

M-04 MTBE was reported from second analysis.  
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