



# GETTLER-RYAN INC.

DEC 03 2001

## TRANSMITTAL

November 14, 2001

G-R #180065

#521

RO 219

TO: Mr. David B. De Witt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California

CC: Mr. Douglas Lee  
Gettler-Ryan Inc.  
6747 Sierra Court, Suite J  
Dublin, California 94568

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

RE: **Tosco (Unocal) Service Station  
#5043  
449 Hegenberger Road  
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 6, 2001	Groundwater Monitoring and Sampling Report Fourth Quarter - Event of October 1, 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 **November 28, 2001**, this report will be distributed to the following:

cc: **Mr. Barney M. Chan, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, California 94502**  
Beretta Investment Group, 39560 Stevenson Place, Suite 118, Fremont, CA 94539

Enclosure

trans/5043.dbd



# GETTLER-RYAN INC.

November 6, 2001  
G-R Job #180065

Mr. David B. De Witt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94583

**RE: Fourth Quarter Event of October 1, 2001**  
Groundwater Monitoring & Sampling Report  
Tosco (Unocal) Service Station #5043  
449 Hegenberger Road  
Oakland, 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. Static water level data and groundwater elevations are summarized in Table 1. Product Thickness/Removal Data is summarized in Table 3. 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 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

For  
Deanna L. Harding  
Project Coordinator

Douglas J. Lee  
Senior Geologist, R.G. No. 6882

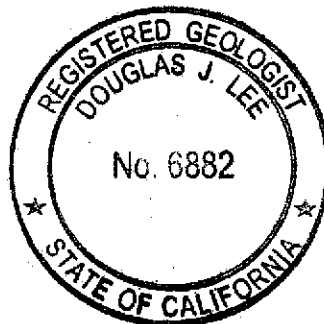
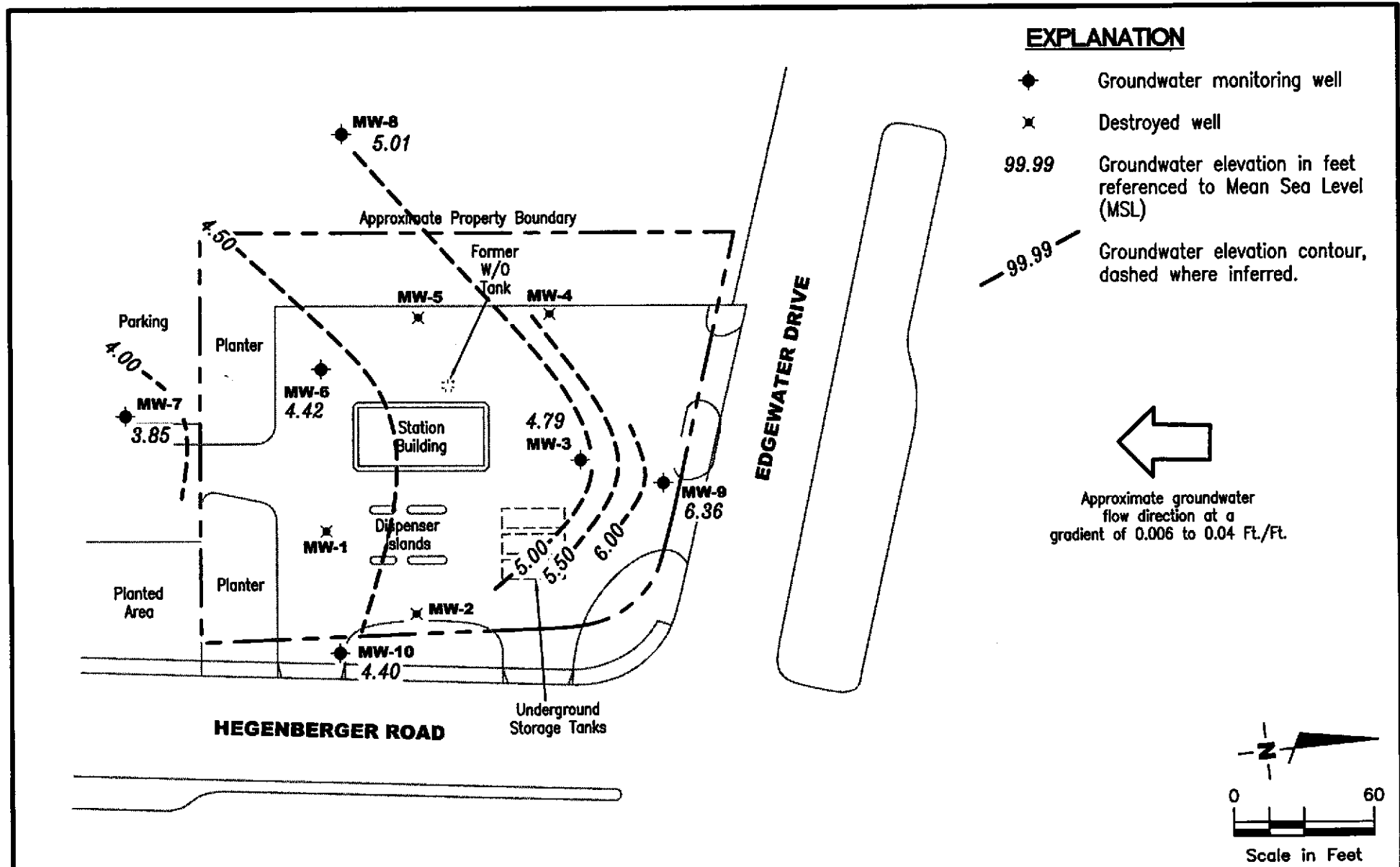


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Table 3: Product Thickness/Removal Data  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field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

5043.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**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

FIGURE

1

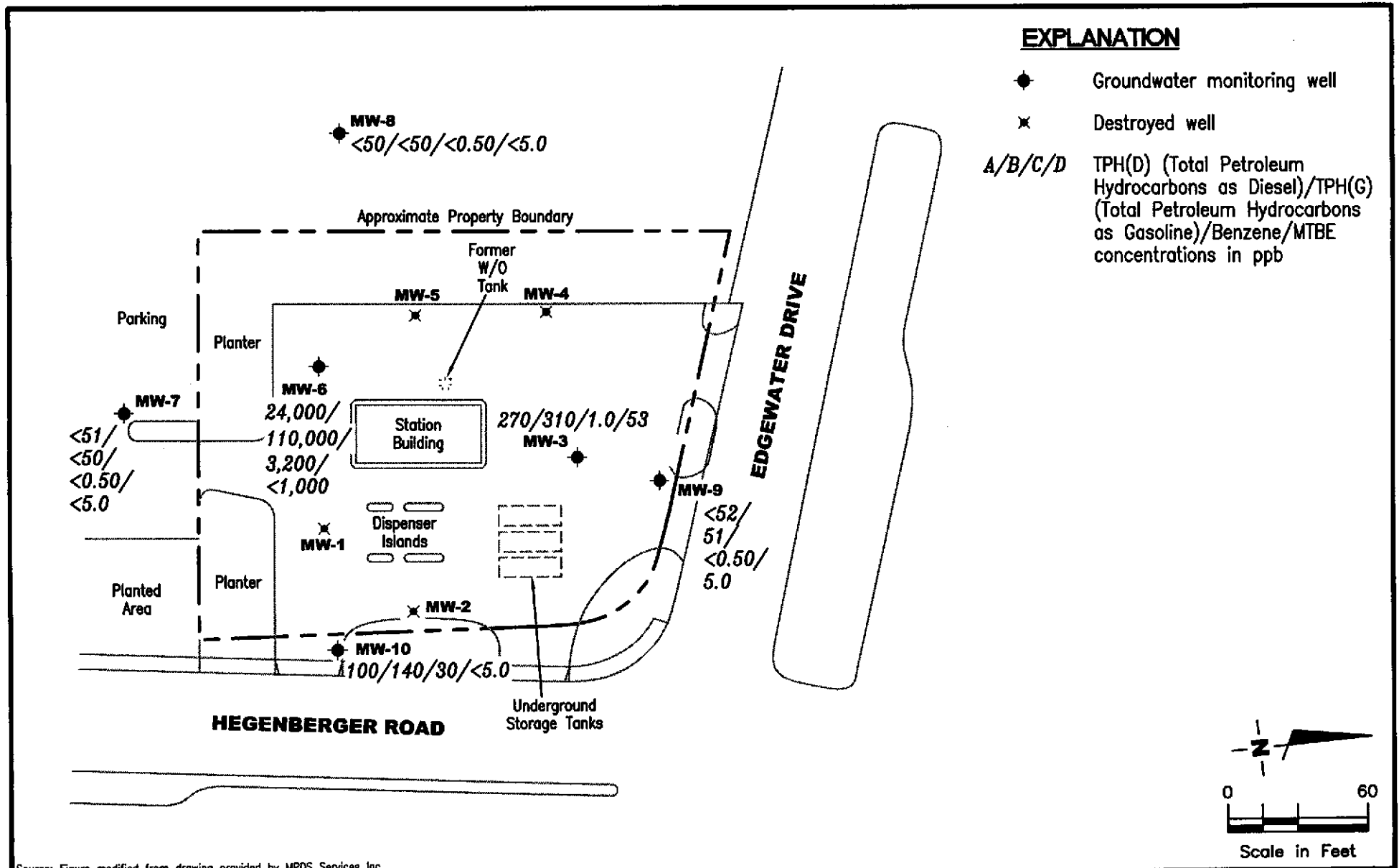
PROJECT NUMBER  
 180065

REVIEWED BY

DATE  
 October 1, 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**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

FIGURE  
**2**

PROJECT NUMBER  
 180065

REVIEWED BY

DATE  
 October 1, 2001

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.lbs)	GWE (msl)	Product		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
					Thickness (ft.)	TPH-D (ppb)						
MW-1	02/18/92	--	--	--	--	13,000	150,000	17,000	26,000	5,200	26,000	--
	05/20/92	--	--	--	--	--	--	--	--	--	--	--
	08/31/92	--	--	--	--	8,900 <sup>1</sup>	64,000	13,000	12,000	2,500	22,000	--
	11/30/92	--	--	--	--	--	--	--	--	--	--	--
	02/04/93	--	--	--	--	--	--	--	--	--	--	--
8.96*	05/04/93	2.13		5.73**	0.10	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	08/04/93	2.92		4.88**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
7.38	11/03/93	3.04		4.74	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/07/94	2.55		4.85**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	05/19/94	2.23		5.16**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	06/25/94	2.49		4.90**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	07/27/94	3.10		4.28	0.00	--	--	--	--	--	--	--
	08/15/94	2.85		4.61**	0.11	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	11/14/94	2.97		4.50**	0.12	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/21/95	1.53		5.87**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	DESTROYED											
MW-2	02/18/92	--	--	--	--	4,300	29,000	1,000	5,300	260	7,900	--
	05/20/92	--	--	--	--	4,300 <sup>1</sup>	24,000	2,200	7,600	630	11,000	--
	08/31/92	--	--	--	--	1,600 <sup>1</sup>	9,000	1,800	640	140	2,000	--
	11/30/92	--	--	--	--	5,700 <sup>1</sup>	29,000	2,000	3,400	1,200	6,900	--
	02/04/93	--	--	--	--	6,100 <sup>1</sup>	18,000	1,600	3,000	ND	6,900	--
8.96*	05/04/93	2.48		6.48	0.00	7,100 <sup>1</sup>	63,000	3,200	17,000	470	17,000	--
	08/04/93	3.20		5.76	0.00	1,800 <sup>2</sup>	45,000	2,100	6,600	1,400	12,000	--
8.58	11/03/93	3.37		5.21	0.00	2,600 <sup>2</sup>	72,000	3,700	16,000	3,700	20,000	--
	02/07/94	2.40		6.18	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	05/19/94	2.13		6.45	0.00	3,000 <sup>2</sup>	42,000	2,500	1,300	2,300	13,000	--
	06/25/94	2.65		5.93	0.00	--	--	--	--	--	--	--
	07/27/94	3.44		5.14	0.00	--	--	--	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	Product		TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
					Thickness (ft.)									
MW-2 (cont)	08/15/94	3.25	--	5.33	0.00		2,800 <sup>2</sup>	35,000	2,400	850	1,700	15,000	--	
	11/14/94	2.13		6.45	0.00		10,000 <sup>1</sup>	43,000	2,200	6,500	1,800	14,000	--	
	02/21/95	1.65		6.93	0.00		2,000 <sup>2</sup>	44,000	2,200	3,200	1,300	1,500	--	
DESTROYED														
MW-3	02/18/92	--	2.5-14.0	--	--		ND	230	4.8	22	1.8	33	--	
	05/20/92	INACCESSIBLE		--	--		--	--	--	--	--	--	--	
	08/31/92	--		--	--		92 <sup>2</sup>	210 <sup>4</sup>	1	ND	ND	ND	--	
	11/30/92	--		--	--		94	790 <sup>4</sup>	ND	ND	ND	ND	--	
	02/04/93	--		--	--		550 <sup>2</sup>	3,300	320	ND	96	6.1	--	
	7.84*	05/04/93	4.32		3.52	0.00		250 <sup>2</sup>	1,800 <sup>3</sup>	95	ND	ND	ND	--
		08/04/93	4.94		2.90	0.00		100	210 <sup>4</sup>	ND	ND	ND	ND	--
	7.42	11/03/93	4.53		2.89	0.00		160	640 <sup>4</sup>	ND	ND	ND	ND	--
		02/07/94	2.40		5.02	0.00		620 <sup>2</sup>	2,700	110	ND	17	ND	--
		05/19/94	3.60		3.82	0.00		480 <sup>2</sup>	1,800	83	ND	6.2	9.1	--
	06/25/94	4.58		2.84	0.00		--	--	--	--	--	--	--	
	07/27/94	4.58		2.84	0.00		--	--	--	--	--	--	--	
	08/15/94	4.65		2.77	0.00		110 <sup>2</sup>	130	1.1	0.54	ND	0.97	--	
	11/14/94	3.18		4.24	0.00		150 <sup>2</sup>	1,600 <sup>4</sup>	ND	ND	ND	ND	--	
	02/21/95	1.81		5.61	0.00		850 <sup>2</sup>	3,800	350	ND	130	22	--	
	05/18/95	4.56		2.86	0.00		150 <sup>1</sup>	1,300 <sup>3</sup>	42	ND	ND	ND	--	
	08/17/95	INACCESSIBLE		--	--		--	--	--	--	--	--	--	
	07/26/96	INACCESSIBLE		--	--		--	--	--	--	--	--	--	
	10/28/96 <sup>6</sup>	INACCESSIBLE		--	--		--	--	--	--	--	--	--	
	01/29/97	INACCESSIBLE		--	--		--	--	--	--	--	--	--	
	04/15/97	INACCESSIBLE		--	--		--	--	--	--	--	--	--	
	05/27/97	3.45		4.59	0.00		--	670	6.5	ND	ND	ND	250	
	06/01/97	3.50		4.54	0.00		610 <sup>2</sup>	--	--	--	--	--	--	
8.04	07/15/97	3.71		4.33	0.00		240 <sup>2</sup>	240	ND	ND	ND	ND	490	
	10/09/97	3.70		4.34	0.00		500 <sup>2</sup>	270	1.1	ND	2.4	1.4	910	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5043  
449 Hegenberger Road  
Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft.bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	01/14/98	2.16	2.5-14.0	5.88	0.00	340 <sup>7</sup>	310	ND	ND	0.62	0.65	140
(cont)	04/01/98	2.20		5.84	0.00	320 <sup>7</sup>	370	5.7	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	93
	07/15/98	3.38		4.66	0.00	510 <sup>10</sup>	460 <sup>11</sup>	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	230
	10/16/98	2.30		5.74	0.00	67 <sup>13</sup>	330 <sup>14</sup>	4.7	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	60
	01/25/99	2.42		5.62	0.00	120 <sup>7</sup>	420 <sup>14</sup>	1.5	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	180
	04/15/99	2.16		5.88	0.00	170 <sup>17</sup>	290	0.54	ND	ND	ND	160
	07/14/99	2.35		5.69	0.00	420 <sup>19</sup>	290	3.2	ND	ND	ND	160
	10/21/99	2.49		5.55	0.00	350 <sup>7</sup>	360 <sup>23</sup>	0.77	ND	ND	ND	82
	01/20/00	2.38		5.66	0.00	2,060 <sup>1</sup>	ND	0.81	ND	ND	ND	54
	04/13/00	2.76		5.28	0.00	200 <sup>21</sup>	250 <sup>23</sup>	0.69	ND	ND	ND	91/150 <sup>26</sup>
	07/14/00	3.26		4.78	0.00	423 <sup>7</sup>	345 <sup>27</sup>	ND	ND	ND	ND	94.7
	10/26/00	3.12		4.92	0.00	330 <sup>29</sup>	480 <sup>23</sup>	6.0	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	120
	01/03/01	3.65		4.39	0.00	287 <sup>7</sup>	364 <sup>27</sup>	1.59	ND	ND	ND	118
	04/04/01	3.98		4.06	0.00	360 <sup>7</sup>	417 <sup>27</sup>	1.24	ND	ND	0.802	237
	07/17/01	3.12		4.92	0.00	270 <sup>28</sup>	480 <sup>27</sup>	ND	ND	ND	ND	150
	10/01/01	3.25		4.79	0.00	270 <sup>7</sup>	310 <sup>27</sup>	1.0	<0.50	<0.50	<0.50	53
MW-4	08/31/92	--	--	--	--	90 <sup>2</sup>	240 <sup>4</sup>	ND	ND	ND	0.54	--
	11/30/92	--	--	--	--	61	420 <sup>4</sup>	ND	ND	ND	ND	--
	02/04/93	--	--	--	--	ND	ND	ND	ND	ND	ND	--
9.00*	05/04/93	4.09		4.91	0.00	ND	110 <sup>3</sup>	0.95	ND	ND	ND	--
	08/04/93	5.01		3.99	0.00	81	250 <sup>4</sup>	ND	3.5	ND	4.1	--
8.41	11/03/93	4.23		4.18	0.00	68	130 <sup>4</sup>	ND	ND	ND	ND	--
	02/07/94	3.35		5.06	0.00	ND	56 <sup>4</sup>	ND	ND	ND	ND	--
	05/19/94	3.92		4.49	0.00	90 <sup>2</sup>	140 <sup>4</sup>	ND	ND	ND	ND	--
	06/25/94	4.35		4.06	0.00	--	--	--	--	--	--	--
	07/27/94	4.28		4.13	0.00	--	--	--	--	--	--	--
	08/15/94	4.27		4.14	0.00	72 <sup>2</sup>	59 <sup>4</sup>	ND	0.6	ND	ND	--
	11/14/94	4.05		4.36	0.00	ND	130 <sup>4</sup>	ND	ND	ND	ND	--

DESTROYED

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5043  
449 Hegenberger Road  
Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	Product									
					Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)		
MW-5	08/31/92	--	--	--	--	690 <sup>1</sup>	78	0.89	ND	ND	13	--		
	11/30/92 <sup>5</sup>	--	--	--	--	470 <sup>2</sup>	930	70	290	0.79	14	--		
	02/04/93 <sup>5</sup>	--	--	--	--	5,500 <sup>2</sup>	5,700	38	ND	620	170	--		
	05/04/93 <sup>5</sup>	4.37	4.90	0.00	4,600 <sup>1</sup>	7,400	41	ND	1,000	35	--	--		
	08/04/93 <sup>5</sup>	5.81	3.46	0.00	970 <sup>2</sup>	1,500	130	1	460	11	--	--		
8.95	11/03/93	5.68	3.27	0.00	2,100 <sup>2</sup>	13,000	350	ND	3,500	530	--	--		
	02/07/94	5.11	3.84	0.00	830 <sup>2</sup>	2,000	87	ND	370	110	--	--		
	05/19/94	5.09	3.86	0.00	600 <sup>2</sup>	260	44	ND	32	4.1	--	--		
	06/25/94	4.55	4.40	0.00	--	--	--	--	--	--	--	--		
	07/27/94	5.72	3.23	0.00	--	--	--	--	--	--	--	--		
	08/15/94	5.68	3.27	0.00	860 <sup>2</sup>	1,600	110	ND	340	72	--	--		
	11/14/94	5.63	3.32	0.00	290 <sup>1</sup>	250	40	ND	ND	5	--	--		
	DESTROYED													
MW-6	08/31/92	--	2.5-13.5	--	--	750 <sup>2</sup>	ND	ND	ND	ND	ND	--		
	11/30/92	--	--	--	--	1,400 <sup>1</sup>	9,200	550	ND	740	1,600	--		
	02/04/93	--	--	--	--	890 <sup>2</sup>	3,600	340	ND	290	550	--		
9.12*	05/04/93	3.72	5.40	0.00	1,800 <sup>1</sup>	4,900	360	18	450	430	--	--		
	08/04/93	5.15	3.97	0.00	1,100 <sup>2</sup>	3,400	390	ND	440	190	--	--		
8.87	11/03/93	5.25	3.62	0.00	390 <sup>2</sup>	1,400	320	ND	200	7.7	--	--		
	02/07/94	4.55	4.32	0.00	970 <sup>2</sup>	4,900	650	ND	250	35	--	--		
	05/19/94	4.62	4.25	0.00	1,400 <sup>2</sup>	3,600	300	1.7	210	41	--	--		
	08/15/94	5.08	3.79	0.00	790 <sup>2</sup>	1,300	130	6.7	54	57	--	--		
	11/14/94	5.30	3.57	0.00	800 <sup>2</sup>	730	50	ND	ND	39	--	--		
	02/21/95	5.37	3.50	0.00	730 <sup>2</sup>	2,000	250	4.6	25	30	--	--		
	05/18/95	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	
	08/17/95	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	
	07/26/96	6.40	5.03**	3.33	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT								--	--
	10/28/96	4.10	4.93**	0.21	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT								--	--
11/13/96	4.02	5.04**	0.25	--	--	--	--	--	--	--	--	--		



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6	11/25/96	4.01	2.5-13.5	5.44**	0.75	--	--	--	--	--	--	--
(cont)	12/04/96	3.65		5.61**	0.50	--	--	--	--	--	--	--
	12/19/96	4.80		5.76**	2.20	--	--	--	--	--	--	--
	01/08/97	4.84		5.38**	1.75	--	--	--	--	--	--	--
	01/14/97	4.51		5.25**	1.15	--	--	--	--	--	--	--
	01/27/97	4.00		6.22**	1.75	--	--	--	--	--	--	--
	01/29/97	3.24		5.87**	0.31	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/11/97	4.65		5.14**	1.20	--	--	--	--	--	--	--
	02/24/97	4.81		4.91**	1.10	--	--	--	--	--	--	--
	03/10/97	4.60		5.00**	0.95	--	--	--	--	--	--	--
	03/17/97	4.50		5.06**	0.89	--	--	--	--	--	--	--
	03/31/97	4.65		4.99**	1.00	--	--	--	--	--	--	--
	04/15/97	4.90		4.76**	1.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	04/28/97	4.78		4.11**	0.03	--	--	--	--	--	--	--
	05/15/97	4.60		4.46**	0.25	--	--	--	--	--	--	--
	05/27/97	4.50		4.56**	0.25	--	--	--	--	--	--	--
	06/09/97	4.60		4.42**	0.20	--	--	--	--	--	--	--
	06/24/97	4.50		4.56**	0.25	--	--	--	--	--	--	--
	07/09/97	4.80		4.53**	0.60	--	--	--	--	--	--	--
	07/15/97	4.63		4.56**	0.42	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	07/21/97	4.75		4.31**	0.25	--	--	--	--	--	--	--
	08/06/97	4.50		4.45**	0.10	--	--	--	--	--	--	--
	08/20/97	4.55		4.40**	0.10	--	--	--	--	--	--	--
	09/02/97	4.75		4.16**	0.05	--	--	--	--	--	--	--
	10/09/97	4.84		4.06**	0.04	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	01/14/98	3.90		5.69**	0.94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/12/98	3.35		6.01**	0.64	--	--	--	--	--	--	--
	03/03/98	4.51		4.38**	0.02	--	--	--	--	--	--	--
	04/01/98	3.67		6.43**	1.60	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	05/26/98	4.11		5.15**	0.50	--	--	--	--	--	--	--
	06/15/98	5.03		4.07**	0.30	--	--	--	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft.bgs)	GWE (msl)	Product							X (ppb)	MTBE (ppb)	
					Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)				
MW-6	07/15/98	4.56	2.5-13.5	4.35**	0.05	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT							--	--
(cont)	08/21/98	4.77		4.12**	0.02	--	--	--	--	--	--	--	--	
	09/30/98	5.08		3.81**	0.03	--	--	--	--	--	--	--	--	
	10/16/98	4.31		6.41**	2.40	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT							--	--
	11/06/98	3.98		5.02**	0.17	--	--	--	--	--	--	--	--	
	11/25/98	3.92		5.03**	0.10	--	--	--	--	--	--	--	--	
	12/28/98	3.90		5.12**	0.20	--	--	--	--	--	--	--	--	
	01/25/99	4.18		5.15**	0.60	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT							--	--
	02/22/99	4.07		4.97**	0.22	--	--	--	--	--	--	--	--	
	03/22/99	4.32		4.67**	0.15	--	--	--	--	--	--	--	--	
	04/15/99	4.23		5.37**	0.95	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT							--	--
	05/28/99	4.38		4.79**	0.39	--	--	--	--	--	--	--	--	
	06/29/99	4.12		4.77**	0.02	--	--	--	--	--	--	--	--	
	07/14/99	4.20		4.69**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT							--	--
	08/23/99	4.51		4.54**	0.24	--	--	--	--	--	--	--	--	
	09/30/99	4.17		4.83**	0.17	--	--	--	--	--	--	--	--	
	10/21/99	4.27		4.69**	0.12	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT							--	--
	11/29/99	4.18		4.69	<0.01	--	--	--	--	--	--	--	--	
	12/20/99	4.26		4.62**	0.01	--	--	--	--	--	--	--	--	
	01/20/00	4.31		4.56	<0.01	67,600 <sup>1</sup>	130,000 <sup>23</sup>	2,900	8,600	2,000	16,000	ND <sup>9</sup>		
	02/26/00	3.98		4.89	0.00	--	--	--	--	--	--	--	--	
	03/31/00	4.14		4.73	0.00	--	--	--	--	--	--	--	--	
	04/13/00	4.04		4.83	0.00	8,700 <sup>7</sup>	140,000 <sup>23</sup>	5,000	14,000	3,600	27,000	7,700		
	05/26/00	4.41		4.46	0.00	--	--	--	--	--	--	--	--	
	06/17/00	4.35		4.52	0.00	--	--	--	--	--	--	--	--	
	07/14/00	4.47		4.40	<0.01	133,000 <sup>7</sup>	259,000 <sup>23</sup>	7,670	13,700	6,860	40,700	<sup>9</sup> ND/ND <sup>9,26</sup>		
	08/24/00	3.71		5.16	0.00	--	--	--	--	--	--	--	--	
	09/27/00	4.33		4.54	0.00	--	--	--	--	--	--	--	--	
	10/26/00	4.32		4.55	0.00	61,000 <sup>28</sup>	110,000 <sup>23</sup>	7,000	6,200	3,700	12,000	670/43 <sup>30</sup>		
	01/03/01	4.52		4.35	0.00	929 <sup>7</sup>	84,700 <sup>23</sup>	3,950	4,130	3,650	11,800	<sup>9</sup> ND/ND <sup>9,26</sup>		

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	Product							
					Thickness (ft.)	TPH-D (pph)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6 (cont)	04/04/01	4.29	2.5-13.5	4.58	0.00	18,000 <sup>28</sup>	69,800 <sup>23</sup>	2,060	2,840	3,650	10,900	<sup>9</sup> ND/47.8 <sup>26</sup>
	07/17/01	4.37		4.50	0.00	20,000 <sup>31</sup>	100,000 <sup>23</sup>	3,200	3,300	3,400	12,000	ND <sup>9</sup>
	10/01/01	4.45		4.42	0.00	24,000 <sup>7</sup>	110,000 <sup>23</sup>	3,200	2,400	4,500	13,000	<1,000
MW-7 8.83	05/27/97	4.50	3.0-13.0	4.33	0.00	--	68	ND	ND	ND	ND	ND
	06/01/97	4.54		4.29	0.00	69 <sup>2</sup>	--	--	--	--	--	--
	07/15/97	4.70		4.13	0.00	ND	ND	ND	ND	ND	ND	ND
	10/09/97	4.30		4.53	0.00	190 <sup>1</sup>	ND	ND	ND	ND	ND	ND
	01/14/98	2.88		5.95	0.00	65 <sup>7</sup>	ND	ND	ND	ND	ND	36
	04/01/98	3.13		5.70	0.00	ND	ND	ND	ND	ND	ND	ND
	07/15/98	4.45		4.38	0.00	74 <sup>12</sup>	ND	ND	ND	ND	ND	ND
	10/16/98	3.45		5.38	0.00	ND	ND	ND	ND	ND	ND	ND
	01/25/99	3.22		5.61	0.00	ND	ND	ND	ND	ND	ND	ND
	04/15/99	3.11		5.72	0.00	ND	ND	ND	ND	ND	ND	ND
	07/14/99	3.34		5.49	0.00	69 <sup>20</sup>	ND	ND	ND	ND	ND	ND
	10/21/99	3.43		5.40	0.00	ND	ND	ND	ND	ND	ND	ND
	01/20/00	3.29		5.54	0.00	ND	ND	ND	ND	ND	ND	4.2
	04/13/00	3.39		5.44	0.00	ND <sup>9</sup>	ND	ND	ND	ND	ND	ND
	07/14/00	4.42		4.41	0.00	68.0 <sup>7</sup>	ND	ND	ND	ND	ND	7.83
	07/17/01	5.06		3.77	0.00	ND	ND	ND	ND	ND	ND	ND
10/01/01	4.98	3.85	0.00	<51	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	
MW-8 8.52	05/27/97	3.42	3.0-15.0	5.10	0.00	--	310	0.88	0.67	15	70	ND
	06/01/97	3.46		5.06	0.00	320 <sup>2</sup>	--	--	--	--	--	--
	07/15/97	3.49		5.03	0.00	ND	ND	ND	ND	2.7	3.8	ND
	10/09/97	3.73		4.79	0.00	390 <sup>1</sup>	590	1.4	ND	32	4.1	ND
	01/14/98	1.92		6.60	0.00	230 <sup>7</sup>	ND	ND	ND	ND	ND	ND
	04/01/98	2.38		6.14	0.00	510 <sup>7</sup>	ND	ND	ND	ND	ND	4.7
	07/15/98	3.53		4.99	0.00	140 <sup>12</sup>	ND	ND	ND	0.56	1.1	ND

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WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	Product							
					Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-8	10/16/98	3.04	3.0-15.1	5.48	0.00	170 <sup>15</sup>	ND	ND	ND	ND	ND	ND
(cont)	01/25/99	2.92		5.60	0.00	ND <sup>9</sup>	ND	ND	ND	ND	ND	ND
	04/15/99	2.40		6.12	0.00	91 <sup>12</sup>	ND	ND	ND	ND	ND	ND
	07/14/99	3.03		5.49	0.00	120 <sup>21</sup>	ND	ND	ND	ND	ND	ND
	10/21/99	3.11		5.41	0.00	110 <sup>24</sup>	ND	ND	ND	ND	ND	ND
	01/20/00	3.06		5.46	0.00	583 <sup>1</sup>	ND	ND	ND	ND	ND	ND
	04/13/00	2.84		5.68	0.00	80 <sup>24</sup>	ND	ND	ND	ND	ND	ND
	07/14/00	3.39		5.13	0.00	113 <sup>7</sup>	ND	ND	ND	ND	ND	ND
	07/17/01	3.46		5.06	0.00	ND	ND	ND	ND	ND	ND	ND
	10/01/01	3.51		5.01	0.00	<50	<50	<0.50	<0.50	<0.50	<0.50	<5.0
MW-9	02/21/95	1.98	3.0-13.0	6.31	0.00	71 <sup>2</sup>	70 <sup>4</sup>	ND	ND	ND	ND	--
8.29	05/18/95	3.47		4.82	0.00	ND	52	ND	1.1	ND	1.9	--
	08/17/95	1.49		6.80	0.00	ND	ND	ND	ND	ND	ND	--
	07/26/96	0.28		8.01	0.00	98	ND	ND	ND	ND	ND	ND
	10/28/96	1.15		7.14	0.00	99 <sup>1</sup>	ND	ND	ND	ND	ND	7.6
	01/29/97	1.05		7.24	0.00	54	ND	ND	ND	ND	ND	5.4
	04/15/97	1.88		6.41	0.00	94 <sup>1</sup>	ND	ND	ND	ND	ND	5.4
	05/27/97	1.05		7.24	0.00	--	--	--	--	--	--	--
	07/15/97	1.90		6.39	0.00	ND	ND	ND	ND	ND	ND	ND
	10/09/97	1.76		6.53	0.00	160 <sup>1</sup>	ND	ND	ND	ND	ND	ND
	01/14/98	1.26		7.03	0.00	110 <sup>7</sup>	ND	ND	ND	ND	ND	3.0
	04/01/98	0.85		7.44	0.00	110 <sup>7</sup>	ND	ND	ND	ND	ND	ND
	07/15/98	1.52		6.77	0.00	200 <sup>12</sup>	ND	ND	ND	ND	ND	ND
	10/16/98	0.81		7.48	0.00	ND	ND	ND	ND	ND	ND	ND
	01/25/99	0.92		7.37	0.00	ND	ND	ND	ND	ND	ND	ND
	04/15/99	0.90		7.39	0.00	ND	75 <sup>18</sup>	21	ND	ND	1.1	680
	07/14/99	1.04		7.25	0.00	140 <sup>21</sup>	ND	1.9	ND	ND	ND	260
	10/21/99	1.23		7.06	0.00	210 <sup>24</sup>	ND	ND	ND	ND	ND	170
	01/20/00	1.18		7.11	0.00	519 <sup>1</sup>	ND	1.1	ND	ND	ND	35

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5043  
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Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft.lgs)	GWE (msl)	Product							
					Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-9	04/13/00	1.08	3.0-13.0	7.21	0.00	81 <sup>25</sup>	160 <sup>23</sup>	0.64	ND	ND	ND	53
(cont)	07/14/00	1.43		6.86	0.00	107 <sup>7</sup>	ND	ND	ND	ND	ND	20.2
	10/26/00	1.38		6.91	0.00	240 <sup>7</sup>	240 <sup>23</sup>	2.9	ND	ND	ND	56
	01/03/01	1.66		6.63	0.00	164 <sup>7</sup>	166 <sup>27</sup>	0.763	0.776	ND	1.28	50.2
	04/04/01	1.27		7.02	0.00	240 <sup>7</sup>	296 <sup>27</sup>	0.738	ND	ND	0.907	135
	07/17/01	1.38		6.91	0.00	ND	ND	ND	ND	ND	ND	13
	10/01/01	1.93		6.36	0.00	<52	51 <sup>18</sup>	<0.50	<0.50	<0.50	<0.50	5.0
<b>MW-10</b>	02/21/95	4.69	3.0-13.0	3.93	0.00	270 <sup>2</sup>	1,500	250	26	9.1	160	--
8.62	05/18/95	4.92		3.70	0.00	75 <sup>1</sup>	810	520	ND	18	23	--
	08/17/95	4.05		4.57	0.00	ND	67	25	ND	2.4	ND	--
	07/26/96	4.08		4.54	0.00	ND	ND	3.7	ND	ND	ND	ND
	10/28/96	4.09		4.53	0.00	ND	ND	1.1	ND	ND	ND	ND
	01/29/97	2.94		5.68	0.00	ND	210	41	0.67	7.2	4.8	11
	04/15/97	4.07		4.55	0.00	ND	110	12	ND	0.77	ND	9.7
	05/27/97	4.40		4.22	0.00	--	--	--	--	--	--	--
	07/15/97	4.19		4.43	0.00	ND	ND	2.1	ND	0.67	0.73	ND
	10/09/97	4.75		3.87	0.00	ND	190	38	0.92	6.6	7.6	ND
	01/14/98	2.66		5.96	0.00	-- <sup>8</sup>	59	9.5	0.85	1.2	1.7	4.5
	04/01/98	3.45		5.17	0.00	62 <sup>7</sup>	230	66	1.7	12	17	6.4
	07/15/98	4.21		4.41	0.00	78 <sup>12</sup>	290	98	45	21	38	21
	10/16/98	4.11		4.51	0.00	ND	160 <sup>16</sup>	44	0.96	2.5	10	17
	01/25/99	3.26		5.36	0.00	ND	140	27	ND	2.8	6.8	23
	04/15/99	3.63		4.99	0.00	ND	120	18	ND	1.8	5.1	14
	07/14/99	3.89		4.73	0.00	180 <sup>22</sup>	280	55	3.2	11	31	6.1
	10/21/99	4.09		4.53	0.00	96 <sup>7</sup>	140 <sup>23</sup>	22	0.59	1.7	7.7	5.3
	01/20/00	3.92		4.70	0.00	252 <sup>1</sup>	ND	0.73	0.86	ND	ND	5.2
	04/13/00	3.85		4.77	0.00	69 <sup>24</sup>	67 <sup>23</sup>	54	ND	2.6	ND	3.8
	07/14/00	4.18		4.44	0.00	149 <sup>7</sup>	ND	0.547	ND	ND	ND	ND
	10/26/00	3.96		4.66	0.00	83 <sup>24</sup>	ND	3.3	ND	0.83	1.5	ND

**Table 1**  
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 449 Hegenberger Road  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	Product							
					Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-10	01/03/01	4.14	3.0-13.0	4.48	0.00	126 <sup>7</sup>	52.7 <sup>23</sup>	5.15	ND	0.823	1.57	ND
(cont)	04/04/01	3.88		4.74	0.00	75 <sup>24</sup>	129 <sup>23</sup>	28.1	1.67	4.97	10.1	ND
	07/17/01	4.08		4.54	0.00	ND	ND	4.1	ND	1.0	1.8	ND
	10/01/01	4.22		4.40	0.00	100 <sup>7</sup>	140 <sup>23</sup>	30	0.51	4.0	12	<5.0
<b>Trip Blank</b>												
TB-LB	01/14/98	--	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/01/98	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/15/98	--		--	--	--	ND	ND	ND	ND	ND	ND
	10/16/98	--		--	--	--	ND	ND	ND	ND	ND	ND
	01/25/99	--		--	--	--	ND	ND	ND	ND	ND	ND
	04/15/99	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/14/99	--		--	--	--	ND	ND	ND	ND	ND	ND
	10/21/99	--		--	--	--	ND	ND	ND	ND	ND	ND
	01/20/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	04/13/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/14/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	10/26/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	01/03/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	04/04/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/17/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	10/01/01	--		--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

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

- \* TOC elevations are relative to msl, per the City of Oakland Benchmark #3880, (Elevation = 20.37 feet, msl).
- \*\* GWE corrected for the presence of free product; correction factor: [(TOC - DTW) + (Product Thickness x 0.77)].
- ♦ Elevations were based on the top of the well covers and were surveyed relative to msl, per the City of Oakland Benchmark #3880, (Elevation = 20.37 feet).

- <sup>1</sup> Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- <sup>2</sup> Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- <sup>3</sup> Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- <sup>4</sup> Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- <sup>5</sup> Total Oil and Grease (TOG) was ND.
- <sup>6</sup> The well was obstructed with debris at 0.55 feet. A water sample was collected but was not analyzed as it was considered not representative of groundwater in this well.
- <sup>7</sup> Laboratory report indicates unidentified hydrocarbons C9-C24.
- <sup>8</sup> Sample bottle broken at laboratory.
- <sup>9</sup> Detection limit raised. Refer to analytical reports.
- <sup>10</sup> Laboratory report indicates unidentified hydrocarbons >C14 and <C12.
- <sup>11</sup> Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- <sup>12</sup> Laboratory report indicates unidentified hydrocarbons >C14.
- <sup>13</sup> Laboratory report indicates non diesel mix >C14.
- <sup>14</sup> Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- <sup>15</sup> Laboratory report indicates non diesel mix C9-C27.
- <sup>16</sup> Laboratory report indicates unidentified hydrocarbons <C7.
- <sup>17</sup> Laboratory report indicates unidentified hydrocarbons >C10.
- <sup>18</sup> Laboratory report indicates unidentified hydrocarbons C6-C12.
- <sup>19</sup> Laboratory report indicates unidentified hydrocarbons >C9.
- <sup>20</sup> Laboratory report indicates discrete peaks and unidentified hydrocarbons >C20.

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
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**EXPLANATIONS:** (cont)

- 21 Laboratory report indicates discrete peaks and unidentified hydrocarbons >C16.
- 22 Laboratory report indicates unidentified hydrocarbons <C14 and >C16.
- 23 Laboratory report indicates gasoline C6-C12.
- 24 Laboratory report indicates unidentified hydrocarbons >C16.
- 25 Laboratory report indicates discrete peaks.
- 26 MTBE by EPA Method 8260.
- 27 Laboratory report indicates weathered gasoline C6-C12.
- 28 Laboratory report indicates unidentified hydrocarbons <C16.
- 29 Laboratory report indicates unidentified hydrocarbons C9-C40.
- 30 MTBE by EPA Method 8260 was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.
- 31 Laboratory report indicates diesel C9-C24.



**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-3	04/13/00	ND	ND	150	ND	ND	ND	ND	ND
MW-6	07/14/00	--	--	ND <sup>1</sup>	--	--	--	--	--
	10/26/00	--	--	43 <sup>2</sup>	--	--	--	--	--
	01/03/01	--	--	ND <sup>1</sup>	--	--	--	--	--
	04/04/01	ND <sup>1</sup>	ND <sup>1</sup>	47.8	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 = Ethylene dibromide/1,2-Dibromoethane  
 (ppb) = Parts per billion  
 ND = Not Detected  
 -- = Not Analyzed

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

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

<sup>2</sup> Laboratory report indicates sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.

**Table 3**  
**Product Thickness/Removal Data**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID	DATE	DTW (ft.)	Product Thickness (ft.)	Amount Bailed (Product + Water) (gallons)
MW-6	07/26/96	6.40	3.33	2.10
	10/28/96	4.10	0.21	0.14
	11/13/96	4.02	0.25	0.09
	11/25/96	4.01	0.75	0.47
	12/04/96	3.65	0.50	0.43
	12/19/96	4.80	2.20	1.02
	01/08/97	4.84	1.75	0.59
	01/14/97	4.51	1.15	0.66
	01/27/97	4.00	1.75	0.78
	01/29/97	3.24	0.31	0.25
	02/11/97	4.65	1.20	0.62
	02/24/97	4.81	1.10	0.50
	03/10/97	4.60	0.95	0.47
	03/17/97	4.50	0.89	0.35
	03/31/97	4.65	1.00	0.50
	04/15/97	4.90	1.03	0.51
	04/28/97	4.78	0.03	0.20
	05/15/97	4.60	0.25	0.20
	05/27/97	4.50	0.25	0.00
	06/09/97	4.60	0.20	0.23
	06/24/97	4.50	0.25	0.25
	07/09/97	4.80	0.60	0.25
	07/15/97	4.63	0.42	0.20
	07/21/97	4.75	0.25	0.27
	08/06/97	4.50	0.10	0.16
	08/20/97	4.55	0.10	0.20
	09/02/97	4.75	0.05	0.12
	10/09/97	4.84	0.04	0.12
	01/14/98 <sup>1</sup>	3.90	0.94	1.50
	02/12/98 <sup>1</sup>	3.35	0.64	0.32
	03/03/98 <sup>1</sup>	4.51	0.02	2.00
	04/01/98 <sup>1</sup>	3.67	1.60	0.50
	05/26/98 <sup>1</sup>	4.11	0.50	0.08
	06/15/98 <sup>1</sup>	5.03	0.30	0.060
	07/15/98 <sup>1</sup>	4.56	0.05	0.10
	08/21/98 <sup>1</sup>	4.77	0.02	0.040
	09/30/98 <sup>1</sup>	5.08	0.03	0.027
	10/16/98 <sup>1</sup>	4.32	2.40	0.98
	11/06/98 <sup>1</sup>	3.98	0.17	0.16
	11/25/98 <sup>1</sup>	3.92	0.10	0.12
12/28/98 <sup>1</sup>	3.90	0.20	0.14	
01/25/99 <sup>1</sup>	4.18	0.60	0.27	
02/22/99 <sup>1</sup>	4.07	0.22	0.078 product/3.0 water	
03/22/99 <sup>1</sup>	4.32	0.15	0.039 product/5.0 water	

**Table 3**  
**Product Thickness/Removal Data**  
 Tosco (Unocal) Service Station #5043  
 449 Hegenberger Road  
 Oakland, California

WELL ID	DATE	DTW (ft.)	Product Thickness (ft.)	Amount Bailed (Product + Water) (gallons)
MW-6	04/15/99 <sup>1</sup>	4.23	0.95	1.0 product
(cont)	05/28/99 <sup>1</sup>	4.38	0.39	0.141 product/1.0 water
	06/29/99 <sup>1</sup>	4.12	0.02	0.054 product/8.0 water
	07/14/99 <sup>1</sup>	4.20	0.03	0.039 product/2.0 water
	08/23/99 <sup>1</sup>	4.51	0.24	0.094 product/1.0 water
	09/30/99 <sup>1</sup>	4.17	0.17	0.141 product/1.0 water
	10/21/99 <sup>1</sup>	4.27	0.12	0.070 product/1.0 water
	11/29/99 <sup>2</sup>	4.18	<0.01	0.0078 product/1.0 water
	12/20/99 <sup>2</sup>	4.26	0.01	0.0156 product/1.0 water
	01/20/00 <sup>2</sup>	4.31	<0.01	0.00
	02/26/00	3.98	0.00	0.00
	03/31/00	4.14	0.00	0.00
	04/13/00	4.04	0.00	0.00
	05/26/00	4.41	0.00	0.00
	06/17/00	4.35	0.00	0.00
	07/14/00	4.47	<0.01	<1 ounce
	08/24/00	3.71	0.00	0.00
	09/27/00	4.33	0.00	0.00
	10/26/00	4.32	0.00	0.00
	01/03/01	4.52	0.00	0.00
	04/04/01	4.29	0.00	0.00
	07/17/01	4.37	0.00	0.00
	10/01/01	4.45	0.00	0.00

**EXPLANATIONS:**

Product Thickness/Removal Data prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

DTW = Depth to Water

(ft.) = Feet

<sup>1</sup> Skimmer present in well.

<sup>2</sup> No skimmer found in well.

## 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 # 5043  
Address: 449 Heegenberger Rd.  
City: Oakland

Job#: 180065  
Date: 10-1-01  
Sampler: Joe

Well ID MW-3  
Well Diameter 2 in  
Total Depth 13.92 ft  
Depth to Water 3.25 ft

Well Condition: OK  
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" = 5.80

10.67 x VF 0.17 = 1.81 x 3 (case volume) = Estimated Purge Volume: 5.43 (gal.)

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

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

Starting Time: 10:10  
Sampling Time: 10:20 AM (10:20)  
Purging Flow Rate: 0.5 gpm.  
Did well de-water? \_\_\_\_\_

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

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm $\times 10^2$	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:06</u>	<u>1.5</u>	<u>7.46</u>	<u>2.21</u>	<u>66.7</u>	_____	_____	_____
<u>10:09</u>	<u>3.5</u>	<u>7.41</u>	<u>2.20</u>	<u>66.4</u>	_____	_____	_____
<u>10:12</u>	<u>5.5</u>	<u>7.42</u>	<u>2.26</u>	<u>66.5</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3YOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1AMB</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>TPHD</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 5043  
Address: 449 Heegenberger Rd.  
City: Oakland

Job#: 180065  
Date: 10-1-01  
Sampler: Joe

Well ID mw-6  
Well Diameter 2 in.  
Total Depth 12.71 ft.  
Depth to Water 4.45 ft.

Well Condition: OK  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
5" = 1.50 12" = 5.80

8.26 X VF 0.17 = 1.40 X 3 (case volume) = Estimated Purge Volume: 4.5 (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: 10:55 AM (1055)  
Purging Flow Rate: 2.0 gpm.  
Did well de-water? \_\_\_\_\_

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

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:38</u>	<u>1.5</u>	<u>6.69</u>	<u>0.42</u>	<u>66.3</u>	_____	_____	_____
<u>10:41</u>	<u>3</u>	<u>6.71</u>	<u>0.45</u>	<u>66.2</u>	_____	_____	_____
<u>10:44</u>	<u>4.5</u>	<u>6.75</u>	<u>0.43</u>	<u>66.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3YOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 Amb</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>TPHD</u>

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # 5043  
Address: 449 Hegenberger Rd.  
City: Oakland

Job#: 180065  
Date: 10-1-01  
Sampler: Joe

Well ID mw-7  
Well Diameter 2 in  
Total Depth 13.15 ft  
Depth to Water 4.98 ft

Well Condition: OK  
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" = 5.80

8.17 X VF 0.17 = 1.39 X 3 (case volume) = Estimated Purge Volume: 4.5 gal.

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

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

Starting Time: 7:26  
Sampling Time: 7:52 AM (0752)  
Purging Flow Rate: 0.5 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear/hot  
Water Color: clear Odor: None  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>7:36</u>	<u>1.5</u>	<u>7.61</u>	<u>10.28</u>	<u>66.8</u>	_____	_____	_____
<u>7:39</u>	<u>3</u>	<u>7.62</u>	<u>10.33</u>	<u>66.7</u>	_____	_____	_____
<u>7:42</u>	<u>4.5</u>	<u>7.66</u>	<u>10.36</u>	<u>66.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3YOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 Amb</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>TPHD</u>

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # 5043  
Address: 449 Hegenberger Rd.  
City: Oakland

Job#: 180065  
Date: 10-1-01  
Sampler: Joe

Well ID mw-8  
Well Diameter 2 in.  
Total Depth 14.80 ft.  
Depth to Water 3.51 ft.

Well Condition: OK

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.29 X VF 0.17 = 1.92 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: 8:08  
Sampling Time: 8:30 A.M. (0830)  
Purging Flow Rate: 0.5 gpm  
Did well de-water? \_\_\_\_\_

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:14</u>	<u>2</u>	<u>7.59</u>	<u>10.56</u>	<u>66.2</u>	_____	_____	_____
<u>8:16</u>	<u>4</u>	<u>7.51</u>	<u>10.58</u>	<u>66.5</u>	_____	_____	_____
<u>8:19</u>	<u>6</u>	<u>7.57</u>	<u>10.62</u>	<u>66.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 Amb</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>TPHD</u>

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



## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # 5043  
Address: 449 Heegenberger Rd.  
City: Oakland

Job#: 180065  
Date: 10-1-01  
Sampler: Joe

Well ID mw-9  
Well Diameter 2 in.  
Total Depth 12.50 ft.  
Depth to Water 1.93 ft.

Well Condition: OK  
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" = 5.80

10.57 x VF 0.17 = 1.79 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: 8:42  
Sampling Time: 9:06 A.M. (0906)  
Purging Flow Rate: 2.5 gpm  
Did well de-water? \_\_\_\_\_

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:50</u>	<u>1.5</u>	<u>7.57</u>	<u>5.55</u>	<u>66.2</u>	_____	_____	_____
<u>8:53</u>	<u>3</u>	<u>7.42</u>	<u>5.59</u>	<u>66.4</u>	_____	_____	_____
<u>8:59</u>	<u>5.5</u>	<u>7.36</u>	<u>5.61</u>	<u>66.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 Amb</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>TPHD</u>

COMMENTS: New vault, and an extension of approx. 6"-7" casing.

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 5043  
Address: 449 Heegenberger Rd.  
City: Oakland

Job#: 180065  
Date: 10-1-01  
Sampler: Joe

Well ID mw-10  
Well Diameter 2 in.  
Total Depth 12.81 ft.  
Depth to Water 4.22 ft.

Well Condition: OK

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

8.59 X VF 0.17 = 1.46 X 3 (case volume) = Estimated Purge Volume: 4.5 (gal.)

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

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

Starting Time: 9:20 Weather Conditions: clear/hot  
Sampling Time: 9:45 AM (0945) Water Color: clear Odor: yes  
Purging Flow Rate: 2.5 gpm Sediment Description: \_\_\_\_\_  
Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:30	1.5	7.31	5.92	66.3			
9:34	3	7.36	5.94	66.5			
9:37	4.5	7.38	5.91	66.5			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-10	3 Vol	Y	HCL	Seq.	TPHG, BTEX, MTBE
	1 Amb	"	-	"	TPHD

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



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

Facility Number TOSCO #5043  
 Facility Address 449 Hegenberger Rd., Oakland, CA  
 Consultant Project Number 180065.85  
 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) \_\_\_\_\_

Contact (Name) Mr. David De Witt  
 (Phone) 925-277-2384  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) Joe Asemian  
 Collection Date JOE ASEMIAN 10-1-01  
 Signature \_\_\_\_\_

DO NOT BILL  
TB-LB ANALYSIS

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water	A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										Remarks					
									TPH Gas + BTEX w/MTE (8016)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)								
TB-LB	01	1 unit	W		G	-	HCL	Y	✓															
MW-3	02	300A 1 unit	W			1020	/	/	✓	✓														
MW-6	03	"	W			1055	/	/	✓	✓														
MW-7	04	"	W			0752	/	/	✓	✓														
MW-8	05	"	W			0830	/	/	✓	✓														
MW-9	06	"	W			0906	/	/	✓	✓														
MW-10	07	"	W			0945	/	/	✓	✓														

Relinquished By (Signature) _____	Organization G-R Inc.	Date/Time 10-1-01	Received By (Signature) _____	Organization	Date/Time 10/1/01
Relinquished By (Signature) _____	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice),

24 Hrs.  
 48 Hrs.  
 5 Days  
 10 Days  
As Contracted



**Sequoia  
Analytical**

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San Carlos, CA 94070  
(650) 232-9600  
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15 October, 2001

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

RECEIVED  
GENERAL CONTRACTOR

RE: Tosco(1)  
Sequoia Report: L110008

Enclosed are the results of analyses for samples received by the laboratory on 10/01/01 15:00. 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: Tosco #5043, Oakland, CA  
Project Manager: Deanna Harding

**Reported:**  
10/15/01 12:40

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L110008-01	Water	10/01/01 00:00	10/01/01 15:00
MW-3	L110008-02	Water	10/01/01 10:20	10/01/01 15:00
MW-6	L110008-03	Water	10/01/01 10:55	10/01/01 15:00
MW-7	L110008-04	Water	10/01/01 07:52	10/01/01 15:00
MW-8	L110008-05	Water	10/01/01 08:30	10/01/01 15:00
MW-9	L110008-06	Water	10/01/01 09:06	10/01/01 15:00
MW-10	L110008-07	Water	10/01/01 09:45	10/01/01 15:00

Sequoia Analytical - San Carlos

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Latonya K. Pelt*

Latonya Pelt, Project Manager



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

Project: Tosco(1)  
Project Number: Tosco #5043, Oakland, CA  
Project Manager: Deanna Harding

Reported:  
10/15/01 12:40

**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 (L110008-01) Water</b> Sampled: 10/01/01 00:00 Received: 10/01/01 15:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100053	10/11/01	10/11/01	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>		83.8 %	70-130	"	"	"	"	"	
<b>MW-3 (L110008-02) Water</b> Sampled: 10/01/01 10:20 Received: 10/01/01 15:00									
Purgeable Hydrocarbons as Gasoline	310	50	ug/l	1	1100053	10/11/01	10/11/01	DHS LUFT	P-02
Benzene	1.0	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	53	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99.9 %	70-130	"	"	"	"	"	
<b>MW-6 (L110008-03) Water</b> Sampled: 10/01/01 10:55 Received: 10/01/01 15:00									
Purgeable Hydrocarbons as Gasoline	110000	10000	ug/l	200	1100053	10/11/01	10/11/01	DHS LUFT	P-01
Benzene	3200	100	"	"	"	"	"	"	
Toluene	2400	100	"	"	"	"	"	"	
Ethylbenzene	4500	100	"	"	"	"	"	"	
Xylenes (total)	13000	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %	70-130	"	"	"	"	"	

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

 Project: Tosco(1)  
 Project Number: Tosco #5043, Oakland, CA  
 Project Manager: Deanna Harding

 Reported:  
 10/15/01 12:40

**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-7 (L110008-04) Water</b> Sampled: 10/01/01 07:52 Received: 10/01/01 15:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100052	10/11/01	10/11/01	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>		83.0 %	70-130	"	"	"	"	"	
<b>MW-8 (L110008-05) Water</b> Sampled: 10/01/01 08:30 Received: 10/01/01 15:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100052	10/11/01	10/11/01	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>		82.3 %	70-130	"	"	"	"	"	
<b>MW-9 (L110008-06) Water</b> Sampled: 10/01/01 09:06 Received: 10/01/01 15:00									
Purgeable Hydrocarbons as Gasoline	51	50	ug/l	1	1100052	10/11/01	10/11/01	DHS LUFT	P-03
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	5.0	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		111 %	70-130	"	"	"	"	"	

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

 Project: Tosco(1)  
 Project Number: Tosco #5043, Oakland, CA  
 Project Manager: Deanna Harding

**Reported:**  
 10/15/01 12:40

**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-10 (L110008-07) Water    Sampled: 10/01/01 09:45    Received: 10/01/01 15:00</b>									
Purgeable Hydrocarbons as Gasoline	140	50	ug/l	1	1100053	10/11/01	10/11/01	DHS LUFT	P-01
Benzene	30	0.50	"	"	"	"	"	"	
Toluene	0.51	0.50	"	"	"	"	"	"	
Ethylbenzene	4.0	0.50	"	"	"	"	"	"	
Xylenes (total)	12	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		107 %		70-130	"	"	"	"	



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

 Project: Tosco(1)  
 Project Number: Tosco #5043, Oakland, CA  
 Project Manager: Deanna Harding

**Reported:**  
 10/15/01 12:40

### Diesel Hydrocarbons (C9-C24) by 8015B

#### Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (L110008-02) Water</b> Sampled: 10/01/01 10:20 Received: 10/01/01 15:00									
Diesel Range Organics (C9-C24)	270	51	ug/l	1	1J11026	10/11/01	10/12/01	DHS LUFT	D-15
Surrogate: <i>n</i> -Pentacosane		113 %	50-150		"	"	"	"	
<b>MW-6 (L110008-03) Water</b> Sampled: 10/01/01 10:55 Received: 10/01/01 15:00									
Diesel Range Organics (C9-C24)	24000	1100	ug/l	20	1J11026	10/11/01	10/15/01	DHS LUFT	D-15
Surrogate: <i>n</i> -Pentacosane		224 %	50-150		"	"	"	"	S-06
<b>MW-7 (L110008-04) Water</b> Sampled: 10/01/01 07:52 Received: 10/01/01 15:00									
Diesel Range Organics (C9-C24)	ND	51	ug/l	1	1J11026	10/11/01	10/13/01	DHS LUFT	
Surrogate: <i>n</i> -Pentacosane		95.6 %	50-150		"	"	"	"	
<b>MW-8 (L110008-05) Water</b> Sampled: 10/01/01 08:30 Received: 10/01/01 15:00									
Diesel Range Organics (C9-C24)	ND	50	ug/l	1	1J11026	10/11/01	10/13/01	DHS LUFT	
Surrogate: <i>n</i> -Pentacosane		89.6 %	50-150		"	"	"	"	
<b>MW-9 (L110008-06) Water</b> Sampled: 10/01/01 09:06 Received: 10/01/01 15:00									
Diesel Range Organics (C9-C24)	ND	52	ug/l	1	1J11026	10/11/01	10/13/01	DHS LUFT	
Surrogate: <i>n</i> -Pentacosane		92.6 %	50-150		"	"	"	"	
<b>MW-10 (L110008-07) Water</b> Sampled: 10/01/01 09:45 Received: 10/01/01 15:00									
Diesel Range Organics (C9-C24)	100	50	ug/l	1	1J11026	10/11/01	10/13/01	DHS LUFT	D-15
Surrogate: <i>n</i> -Pentacosane		102 %	50-150		"	"	"	"	

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

 Project: Tosco(1)  
 Project Number: Tosco #5043, Oakland, CA  
 Project Manager: Deanna Harding

 Reported:  
 10/15/01 12:40

**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
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**Batch 1100052 - EPA 5030B (P/T)**
**Blank (1100052-BLK1)**

Prepared &amp; Analyzed: 10/11/01

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	"							

*Surrogate: a,a,a-Trifluorotoluene*

9.17

"

10.0

91.7

70-130

**LCS (1100052-BS1)**

Prepared &amp; Analyzed: 10/11/01

Benzene	8.05	0.50	ug/l	10.0		80.5	70-130			
Toluene	8.36	0.50	"	10.0		83.6	70-130			
Ethylbenzene	8.31	0.50	"	10.0		83.1	70-130			
Xylenes (total)	25.0	0.50	"	30.0		83.3	70-130			

*Surrogate: a,a,a-Trifluorotoluene*

9.76

"

10.0

97.6

70-130

**LCS (1100052-BS2)**

Prepared &amp; Analyzed: 10/11/01

Purgeable Hydrocarbons as Gasoline	268	50	ug/l	250		107	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	12.4		"	10.0		124	70-130			

**Matrix Spike (1100052-MS1)**

Source: L110021-04

Prepared &amp; Analyzed: 10/11/01

Purgeable Hydrocarbons as Gasoline	264	50	ug/l	250	ND	106	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	12.0		"	10.0		120	70-130			

**Matrix Spike Dup (1100052-MSD1)**

Source: L110021-04

Prepared &amp; Analyzed: 10/11/01

Purgeable Hydrocarbons as Gasoline	269	50	ug/l	250	ND	108	60-140	1.88	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.6		"	10.0		116	70-130			

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

 Project: Tosco(1)  
 Project Number: Tosco #5043, Oakland, CA  
 Project Manager: Deanna Harding

 Reported:  
 10/15/01 12:40

**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 1100053 - EPA 5030B (P/T)</b>										
<b>Blank (1100053-BLK1) Prepared &amp; Analyzed: 10/11/01</b>										
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	"							
Surrogate: a,a,a-Trifluorotoluene	8.93		"	10.0		89.3	70-130			
<b>LCS (1100053-BS1) Prepared &amp; Analyzed: 10/11/01</b>										
Benzene	9.95	0.50	ug/l	10.0		99.5	70-130			
Toluene	10.1	0.50	"	10.0		101	70-130			
Ethylbenzene	10.2	0.50	"	10.0		102	70-130			
Xylenes (total)	30.2	0.50	"	30.0		101	70-130			
Surrogate: a,a,a-Trifluorotoluene	11.0		"	10.0		110	70-130			
<b>LCS (1100053-BS2) Prepared &amp; Analyzed: 10/11/01</b>										
Purgeable Hydrocarbons as Gasoline	219	50	ug/l	250		87.6	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.1		"	10.0		101	70-130			
<b>Matrix Spike (1100053-MS1) Source: L110009-04 Prepared &amp; Analyzed: 10/11/01</b>										
Purgeable Hydrocarbons as Gasoline	262	50	ug/l	250	ND	105	60-140			
Surrogate: a,a,a-Trifluorotoluene	10.7		"	10.0		107	70-130			
<b>Matrix Spike Dup (1100053-MSD1) Source: L110009-04 Prepared &amp; Analyzed: 10/11/01</b>										
Purgeable Hydrocarbons as Gasoline	249	50	ug/l	250	ND	99.6	60-140	5.09	25	
Surrogate: a,a,a-Trifluorotoluene	10.0		"	10.0		100	70-130			

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

 Project: Tosco(1)  
 Project Number: Tosco #5043, Oakland, CA  
 Project Manager: Deanna Harding

 Reported:  
 10/15/01 12:40

**Diesel Hydrocarbons (C9-C24) by 8015B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1J11026 - EPA 3510B</b>									
<b>Blank (1J11026-BLK1)</b>					Prepared: 10/11/01 Analyzed: 10/12/01				
Diesel Range Organics (C9-C24)	ND	50	ug/l						
Surrogate: <i>n</i> -Pentacosane	48.8		"	50.0		97.6	50-150		
<b>LCS (1J11026-BS1)</b>					Prepared: 10/11/01 Analyzed: 10/12/01				
Diesel Range Organics (C9-C24)	509	50	ug/l	500		102	60-140		
Surrogate: <i>n</i> -Pentacosane	50.2		"	50.0		100	50-150		
<b>LCS Dup (1J11026-BSD1)</b>					Prepared: 10/11/01 Analyzed: 10/12/01				
Diesel Range Organics (C9-C24)	568	50	ug/l	500		114	60-140	11.0	50
Surrogate: <i>n</i> -Pentacosane	51.6		"	50.0		103	50-150		



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

Project: Tosco(1)  
Project Number: Tosco #5043, Oakland, CA  
Project Manager: Deanna Harding

**Reported:**  
10/15/01 12:40

### Notes and Definitions

D-15 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24

P-01 Chromatogram Pattern: Gasoline C6-C12

P-02 Chromatogram Pattern: Weathered Gasoline C6-C12

P-03 Chromatogram Pattern: Unidentified Hydrocarbons C6-C12

S-06 The recovery of this surrogate is outside control limits due to sample dilution which was required by high analyte concentration in the sample and/or matrix interference.

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