



# GETTLER-RYAN INC.

## TRANSMITTAL

June 13, 2002

G-R #180065

R0219

JUL 02 2002

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	May 31, 2002	Groundwater Monitoring and Sampling Report Second Quarter – Event of April 18, 2002

### 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 **June 27, 2002**, 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.

May 31, 2002  
G-R Job #180065

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

**RE: Second Quarter Event of April 18, 2002**  
Groundwater Monitoring & Sampling Report  
Tosco (Unocal) Service Station #5043  
449 Hegenberger Road  
Oakland, California

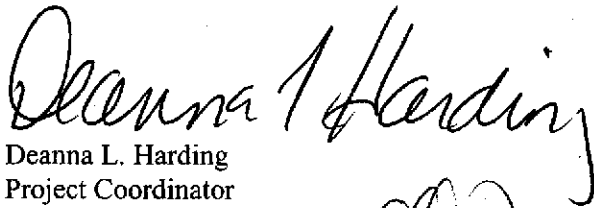
Dear Mr. De Witt:

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,

  
Deanna L. Harding  
Project Coordinator


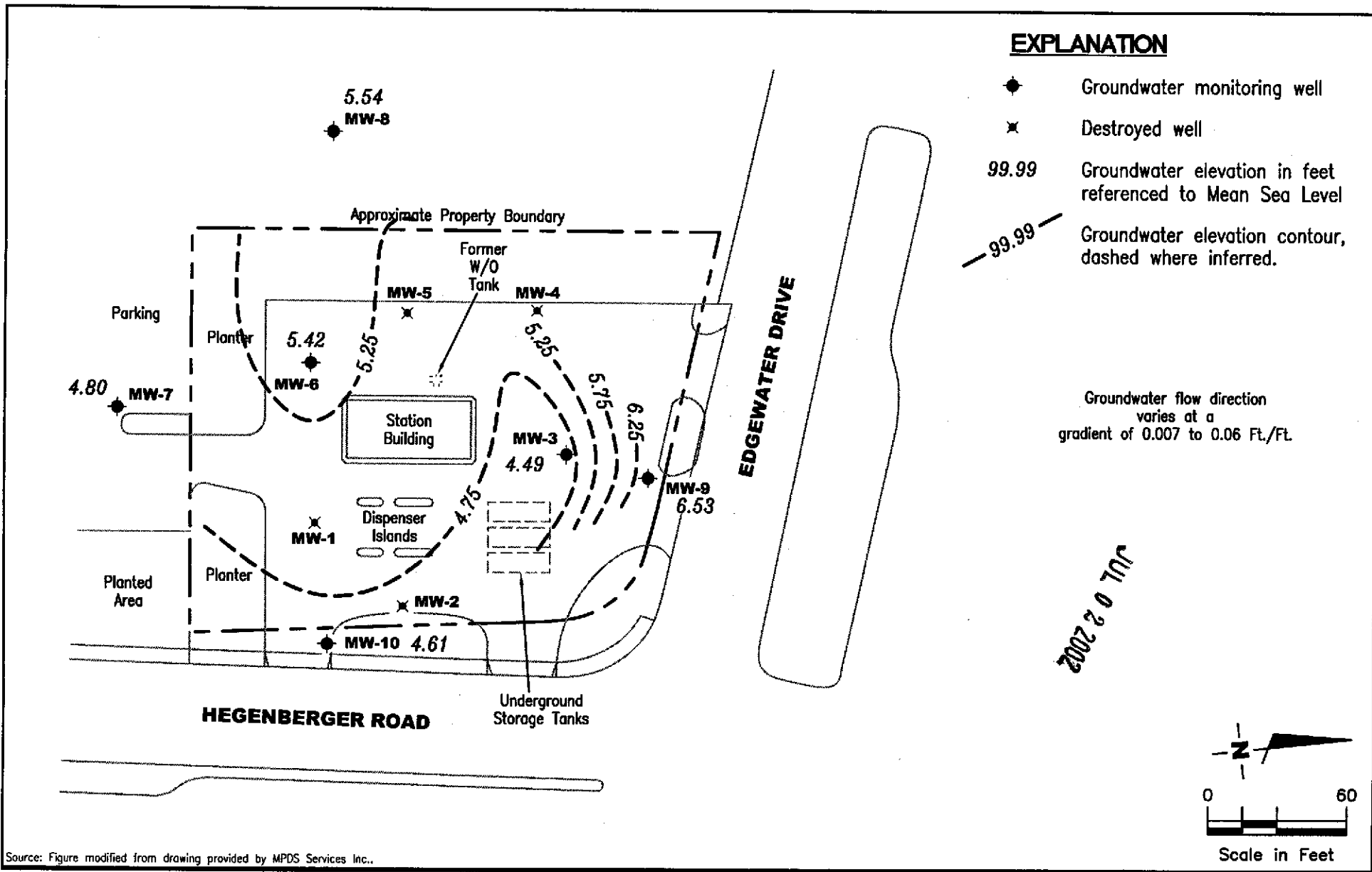
  
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P.E. No. C55734



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



**EXPLANATION**

- ◆ Groundwater monitoring well
- ✕ Destroyed well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- 99.99 - Groundwater elevation contour, dashed where inferred.

Groundwater flow direction varies at a gradient of 0.007 to 0.06 Ft./Ft.

JUL 0 2 2002

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

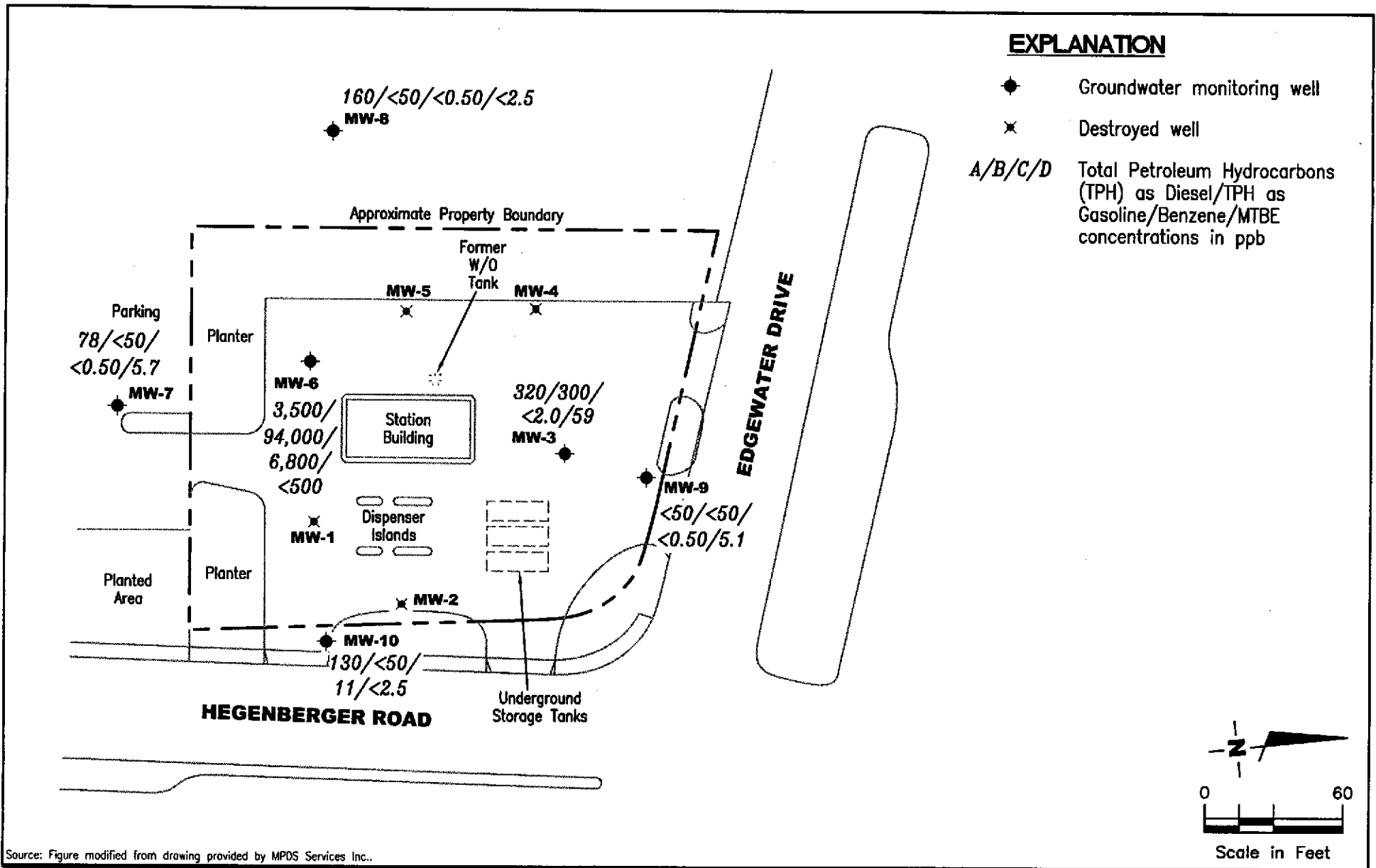
FIGURE  
**1**

PROJECT NUMBER  
**180065**

REVIEWED BY

DATE  
 April 18, 2002

REVISED DATE



**GETTLER - RYAN INC.**  
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 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  
 April 18, 2002

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.L. (ft. bgs)	GWE (msl)	Product		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
					Thickness (ft.)	TPH-D (ppb)						TPH-G (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
	01/31/02	2.27		5.77	0.00	250 <sup>34</sup>	250 <sup>32</sup>	3.5	<1.0	<1.0	<1.0	110
	04/18/02	3.55		4.49	0.00	320 <sup>35</sup>	300	<2.0	<2.0	<2.0	<2.0	59
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	--	--	--	--	--	--	--

**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-4	08/15/94	4.27	--	4.14	0.00	72 <sup>2</sup>	59 <sup>4</sup>	ND	0.6	ND	ND	--
(cont)	11/14/94	4.05		4.36	0.00	ND	130 <sup>4</sup>	ND	ND	ND	ND	--
	DESTROYED											
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	--

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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-6	05/18/95	--	2.5-13.5	INACCESSIBLE		--	--	--	--	--	--	--	--
(cont)	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	--	--	--	--	--	--	--	--
	11/25/96	4.01		5.44**	0.75	--	--	--	--	--	--	--	--
	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							

**Table 1**  
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 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	02/12/98	3.35	2.5-13.5	6.01**	0.64	--	--	--	--	--	--	--	--	
(cont)	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	--	--	--	--	--	--	--	--	
	07/15/98	4.56		4.35**	0.05	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT							--	--
	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>		



**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	08/24/00	3.71	2.5-13.5	5.16	0.00	--	--	--	--	--	--	--	--
(cont)	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>	
	04/04/01	4.29		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	
	01/31/02	4.03		4.84	0.00	11,000 <sup>34</sup>	230,000 <sup>32</sup>	2,400	1,800	5,400	16,000	<2,500	
	04/18/02	3.45		5.42	0.00	3,500 <sup>35</sup>	94,000	6,800	13,000	3,000	19,000	<500	
MW-7	05/27/97	4.50	3.0-13.0	4.33	0.00	--	68	ND	ND	ND	ND	ND	
8.83	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	<5.0	
	01/31/02	3.88		4.95	0.00	90 <sup>34</sup>	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
	04/18/02	4.03		4.80	0.00	78 <sup>35</sup>	<50	<0.50	<0.50	<0.50	<0.50	5.7	

**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-8	05/27/97	3.42	3.0-15.0	5.10	0.00	--	310	0.88	0.67	15	70	ND
8.52	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
	10/16/98	3.04		5.48	0.00	170 <sup>15</sup>	ND	ND	ND	ND	ND	ND
	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
	01/31/02	2.75		5.77	0.00	260 <sup>34</sup>	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	04/18/02	2.98		5.54	0.00	160 <sup>35</sup>	<50	<0.50	<0.50	<0.50	<0.50	<2.5
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

**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-9	01/14/98	1.26	3.0-13.0	7.03	0.00	110 <sup>7</sup>	ND	ND	ND	ND	ND	3.0
(cont)	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
	04/13/00	1.08		7.21	0.00	81 <sup>25</sup>	160 <sup>23</sup>	0.64	ND	ND	ND	53
	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 <sup>7</sup>	51 <sup>18</sup>	<0.50	<0.50	<0.50	<0.50	5.0
	01/31/02	2.08		6.21	0.00	200 <sup>34</sup>	<50	<0.50	<0.50	<0.50	<0.50	5.8
	04/18/02	1.76		6.53	0.00	<50	<50	<0.50	<0.50	<0.50	<0.50	5.1
MW-10	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

**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-10	04/01/98	3.45	3.0-13.0	5.17	0.00		62 <sup>7</sup>	230	66	1.7	12	17	6.4
(cont)	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
	01/03/01	4.14		4.48	0.00		126 <sup>7</sup>	52.7 <sup>23</sup>	5.15	ND	0.823	1.57	ND
	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
	01/31/02	3.68		4.94	0.00		170 <sup>34</sup>	110 <sup>33</sup>	16	<0.50	2.3	5.6	<2.5
	04/18/02	4.01		4.61	0.00		130 <sup>35</sup>	<50	11	<0.50	1.4	4.5	<2.5
<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

**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)
TB-LB	10/26/00	--	--	--	--	--	ND	ND	ND	ND	ND	ND
(cont)	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
	01/31/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	04/18/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5

**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).

- 1 Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- 2 Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- 3 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 4 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- 5 Total Oil and Grease (TOG) was ND.
- 6 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.
- 7 Laboratory report indicates unidentified hydrocarbons C9-C24.
- 8 Sample bottle broken at laboratory.
- 9 Detection limit raised. Refer to analytical reports.
- 10 Laboratory report indicates unidentified hydrocarbons >C14 and <C12.
- 11 Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- 12 Laboratory report indicates unidentified hydrocarbons >C14.
- 13 Laboratory report indicates non diesel mix >C14.
- 14 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- 15 Laboratory report indicates non diesel mix C9-C27.
- 16 Laboratory report indicates unidentified hydrocarbons <C7.
- 17 Laboratory report indicates unidentified hydrocarbons >C10.
- 18 Laboratory report indicates unidentified hydrocarbons C6-C12.
- 19 Laboratory report indicates unidentified hydrocarbons >C9.
- 20 Laboratory report indicates discrete peaks and unidentified hydrocarbons >C20.

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

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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.
- 32 Laboratory report indicates unidentified hydrocarbons C6-C10.
- 33 Laboratory report indicates gasoline C6-C10.
- 34 Laboratory report indicates unidentified hydrocarbons C10-C28.
- 35 Laboratory report indicates hydrocarbon pattern is present in ther requested fuel quantitation range but does not resemble the pattern of the requested fuel.

**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
	01/31/02	4.03	0.00	0.00
	04/18/02	3.45	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 Phillips 66 Company, the purge water and decontamination water generated during sampling activities is transported to Phillips 66 - San Francisco Refinery, located in Rodeo, California.

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET.**

Client/Facility# Tasco # 5043 Job#: 180065  
 Address: 449 Heganburger Rd. Date: 4/18/02  
 City: Oakland, CA Sampler: HAIG K.

Well ID MW-3 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed Ø (product/water): Ø (Gallons)  
 Total Depth 13.95 ft.  
 Depth to Water 3.55 ft.

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

10.40 x VF 0.17 = 1.7 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: 1505 Weather Conditions: SUNNY  
 Sampling Time: 1530 Water Color: CLEAR Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? NO 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>1511</u>	<u>2</u>	<u>7.12</u>	<u>1289</u>	<u>19.6</u>			
<u>1516</u>	<u>3.5</u>	<u>7.09</u>	<u>1326</u>	<u>19.9</u>			
<u>1522</u>	<u>5</u>	<u>6.97</u>	<u>1344</u>	<u>19.7</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
	<u>1 AMBER</u>	<u>Y</u>	<u>NO</u>	<u>"</u>	<u>TPH-D</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET.**

Client/Facility# Tasco # 5043 Job#: 180065  
 Address: 449 Heganburger Rd. Date: 4/18/02  
 City: Oakland, CA Sampler: HAIG R.

Well ID mw-6 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)  
 Total Depth 12.70 ft.  
 Depth to Water 3.45 ft.

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

9.25 x VF 0.17 = 1.5 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: 1542 Weather Conditions: SUNNY  
 Sampling Time: 1610 Water Color: CLEAR Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? NO 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>1547</u>	<u>1.5</u>	<u>6.83</u>	<u>2258</u>	<u>19.2</u>			
<u>1553</u>	<u>3</u>	<u>6.76</u>	<u>2304</u>	<u>19.7</u>			
<u>1559</u>	<u>4.5</u>	<u>6.78</u>	<u>2281</u>	<u>19.5</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
	<u>1 AMBER</u>	<u>Y</u>	<u>NO</u>	<u>//</u>	<u>TPH-D</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET.**

Client/Facility # Tasco # 5043 Job#: 180065  
 Address: 449 Hegenberger Rd. Date: 4/18/02  
 City: Oakland, CA Sampler: HAIG K.

Well ID MW-7 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)  
 Total Depth 13.18 ft. Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 4.03 ft. 6" = 1.50 12" = 5.80

9.15 x VF 0.17 = 1.5 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: 1220 Weather Conditions: SUNNY  
 Sampling Time: 1245 Water Color: CLEAR Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? NO 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>1226</u>	<u>1.5</u>	<u>7.19</u>	<u>834</u>	<u>20.5</u>			
<u>1232</u>	<u>3</u>	<u>7.10</u>	<u>861</u>	<u>21.3</u>			
<u>1238</u>	<u>4.5</u>	<u>7.12</u>	<u>853</u>	<u>21.0</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
	<u>1 AMBER</u>	<u>Y</u>	<u>NO</u>	<u>"</u>	<u>TPH-D</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET.**

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

Job#: 180065  
Date: 4/18/02  
Sampler: HAIG K.

Well ID mw-8  
Well Diameter 2 in.  
Total Depth 14.82 ft.  
Depth to Water 2.98 ft.

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

11.84 x VF 0.17 = 2 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: 1258  
Sampling Time: 1330  
Purging Flow Rate: \_\_\_\_\_ gpm.  
Did well de-water? NO

Weather Conditions: SUNNY  
Water Color: CLEAR Odor: \_\_\_\_\_  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ F (C)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1303</u>	<u>2</u>	<u>6.49</u>	<u>4459</u>	<u>19.2</u>			
<u>1312</u>	<u>4</u>	<u>6.41</u>	<u>4522</u>	<u>19.5</u>			
<u>1319</u>	<u>6</u>	<u>6.42</u>	<u>4508</u>	<u>19.6</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
	<u>1 AMBER</u>	<u>Y</u>	<u>NO</u>	<u>//</u>	<u>TPH-D</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET.**

Client/  
Facility # Tasco # 5043 Job#: 180065  
Address: 449 Hegenberger Rd. Date: 4/18/02  
City: Oakland, CA Sampler: HAIG K.

Well ID mw-9 Well Condition: OK  
Well Diameter 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)  
Total Depth 12.48 ft.  
Depth to Water 1.76 ft.

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

10.72 x VF 0.17 = 1.8 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: 1345 Weather Conditions: SUNNY  
Sampling Time: 1410 Water Color: CLOUDY Odor: \_\_\_\_\_  
Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
Did well de-water? NO If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ hos/cm	Temperature $^{\circ}$ F / $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1351</u>	<u>2</u>	<u>6.91</u>	<u>3485</u>	<u>19.0</u>			
<u>1356</u>	<u>3.5</u>	<u>6.85</u>	<u>3527</u>	<u>19.2</u>			
<u>1402</u>	<u>5</u>	<u>6.82</u>	<u>3533</u>	<u>19.3</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>3 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPHIG)/btex/mtbe</u>
	<u>1 AMBER</u>	<u>Y</u>	<u>NO</u>	<u>"</u>	<u>TPH-D</u>

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



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET.**

Client/  
Facility # Tasco # 5043  
Address: 449 Heganburg Rd.  
City: Oakland, CA

Job#: 180065  
Date: 4/18/02  
Sampler: HAIG R.

Well ID mw-10  
Well Diameter 2 in.  
Total Depth 12.77 ft.  
Depth to Water 4.01 ft.

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

8.76 x VF 0.17 = 1.5 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: 1422  
Sampling Time: 1455  
Purging Flow Rate: \_\_\_\_\_ gpm.  
Did well de-water? NO

Weather Conditions: SUNNY  
Water Color: CLEAR Odor: \_\_\_\_\_  
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>1427</u>	<u>1.5</u>	<u>7.68</u>	<u>2325</u>	<u>18.2</u>	_____	_____	_____
<u>1433</u>	<u>3</u>	<u>7.63</u>	<u>2368</u>	<u>18.6</u>	_____	_____	_____
<u>1439</u>	<u>4.5</u>	<u>7.61</u>	<u>2390</u>	<u>18.6</u>	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>3 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
	<u>1 AMBER</u>	<u>Y</u>	<u>NO</u>	<u>"</u>	<u>TPH-D</u>

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

05/03/02 14:51 02/02 NO:890

925 988 9673

SEQUIA ANALYTICAL

GLOBAL ID# T0600101476

Chain-of-Custody-Record



TOSCO  
 TOSCO Refining Company  
 20000 Highway 97, Ste. 200  
 San Ramon, California 94583

Facility Number TOSCO SS# 5043  
 Facility Address 449 Hegenberger Rd., Oakland, CA  
 Consultant Project Number 180065.85  
 Consultant Name Gottler-Ryan Inc. (G-R Inc.)  
 Address 6747 SIERRA COURT, SUITE J, DUBLIN, CA 94568  
 Project Contact (Name) Deanna L. Harding  
 (Phone) (925) 551-7555 / Fax Number 925-551-7899

Contact (Name) MR. Dave DeWitt  
 (Phone) 925-277-2384  
 Laboratory Name Sequoia Analytical W204328  
 Laboratory Release Number \_\_\_\_\_  
 Sample Collected by (Name) HAIG KEVORK  
 Collection Date 4/18/2002  
 Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Duplicate	Time	Sample Preservation	Iodine (Yes or No)	Analysis To Be Performed										Remarks
								TPH by FTIR (2010)	TPH by GC (2015)	Oil and Grease (2520)	Pyrolytic Hydrocarbons (2010)	Pyrolytic Aromatics (2520)	Pyrolytic Organics (2540)	Extractable Organics (2570)	Metals Cd, Cr, Pb, Zn, Ni (2540 or 2545)			
B-LB	-01A	1	W	G		HCL	YES	X	X	X	X	X	X	X	X	X		
1W-3	-02A-04	4	W	G	1530	HCL		X	X	X	X	X	X	X	X	X		
1W-6	-03	4	W	G	1610			X	X	X	X	X	X	X	X	X		
1W-7	-04	4	W	G	1245			X	X	X	X	X	X	X	X	X		
1W-8	-05	4	W	G	1330			X	X	X	X	X	X	X	X	X		
1W-9	-06	4	W	G	1410			X	X	X	X	X	X	X	X	X		
1W-10	-07	4	W	G	1455			X	X	X	X	X	X	X	X	X		

DO NOT BILL  
 TB-LB ANALYSIS

Prepared By (Signature) <u>[Signature]</u>	Organization <u>G-R Inc.</u>	Date/Time	Received By (Signature) _____	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Inspected By (Signature) _____	Organization	Date/Time	Received By (Signature) _____	Organization	Date/Time	
Inspected By (Signature) _____	Organization	Date/Time	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time <u>4/18/02 17:00</u>	



**Sequoia  
Analytical**

404 N. Wiget Lane  
Walnut Creek, CA 94598  
(925) 988-9600  
FAX (925) 988-9673  
[www.sequoialabs.com](http://www.sequoialabs.com)

3 May, 2002

Deanna L. Harding  
Gettler Ryan, Inc. - Dublin  
6747 Sierra Court Suite J  
Dublin, CA 94568

RECEIVED

MAY 3 2002

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

RE: Tosco  
Sequoia Report: W204328

Enclosed are the results of analyses for samples received by the laboratory on 18-Apr-02 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charlie Westwater  
Project Manager  
CA ELAP Certificate #1271



Gettler Ryan, Inc. - Dublin  
6747 Sierra Court Suite J  
Dublin CA, 94568

Project: Tosco  
Project Number: Tosco # 5043  
Project Manager: Deanna L. Harding

**Reported:**  
03-May-02 14:27

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W204328-01	Water	18-Apr-02 00:00	18-Apr-02 17:00
MW-3	W204328-02	Water	18-Apr-02 15:30	18-Apr-02 17:00
MW-6	W204328-03	Water	18-Apr-02 16:10	18-Apr-02 17:00
MW-7	W204328-04	Water	18-Apr-02 12:45	18-Apr-02 17:00
MW-8	W204328-05	Water	18-Apr-02 13:30	18-Apr-02 17:00
MW-9	W204328-06	Water	18-Apr-02 14:10	18-Apr-02 17:00
MW-10	W204328-07	Water	18-Apr-02 14:55	18-Apr-02 17:00

Sequoia Analytical - Walnut Creek

Charlie Westwater, Project Manager

*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.*



Gettler Ryan, Inc. - Dublin  
6747 Sierra Court Suite J  
Dublin CA, 94568

Project: Tosco  
Project Number: Tosco # 5043  
Project Manager: Deanna L. Harding

Reported:  
03-May-02 14:27

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>TB-LB (W204328-01) Water</b> Sampled: 18-Apr-02 00:00 Received: 18-Apr-02 17:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	2D29003	29-Apr-02	29-Apr-02	EPA 8015M/8021	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	2.5	"	"	"	"	"	"	Q-28
<i>Surrogate: a,a,a-Trifluorotoluene</i>		112 %	70-130		"	"	"	"	
<b>MW-3 (W204328-02) Water</b> Sampled: 18-Apr-02 15:30 Received: 18-Apr-02 17:00									
Purgeable Hydrocarbons (C6-C12)	300	200	ug/l	4	2D29003	30-Apr-02	30-Apr-02	EPA 8015M/8021	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	59	10	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %	70-130		"	"	"	"	
<b>MW-6 (W204328-03) Water</b> Sampled: 18-Apr-02 16:10 Received: 18-Apr-02 17:00									
Purgeable Hydrocarbons (C6-C12)	94000	10000	ug/l	200	2D29003	30-Apr-02	30-Apr-02	EPA 8015M/8021	
Benzene	6800	100	"	"	"	"	"	"	
Toluene	13000	100	"	"	"	"	"	"	
Ethylbenzene	3000	100	"	"	"	"	"	"	
Xylenes (total)	19000	100	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	70-130		"	"	"	"	

Gettler Ryan, Inc. - Dublin  
 6747 Sierra Court Suite J  
 Dublin CA, 94568

 Project: Tosco  
 Project Number: Tosco # 5043  
 Project Manager: Deanna L. Harding

 Reported:  
 03-May-02 14:27

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-7 (W204328-04) Water Sampled: 18-Apr-02 12:45 Received: 18-Apr-02 17:00</b>									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	2D29003	30-Apr-02	30-Apr-02	EPA 8015M/8021	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	5.7	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		100 %	70-130		"	"	"	"	
<b>MW-8 (W204328-05) Water Sampled: 18-Apr-02 13:30 Received: 18-Apr-02 17:00</b>									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	2D29003	30-Apr-02	30-Apr-02	EPA 8015M/8021	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		98 %	70-130		"	"	"	"	
<b>MW-9 (W204328-06) Water Sampled: 18-Apr-02 14:10 Received: 18-Apr-02 17:00</b>									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	2D29003	01-May-02	01-May-02	EPA 8015M/8021	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	5.1	2.5	"	"	"	"	"	"	Q-28a
<i>Surrogate: a,a,a-Trifluorotoluene</i>		108 %	70-130		"	"	"	"	



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Reported:  
03-May-02 14:27

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-10 (W204328-07) Water</b> <b>Sampled: 18-Apr-02 14:55</b> <b>Received: 18-Apr-02 17:00</b>									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	2D29003	30-Apr-02	30-Apr-02	EPA 8015M/8021	
Benzene	11	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	1.4	0.50	"	"	"	"	"	"	
Xylenes (total)	4.5	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		105 %		70-130		"	"	"	



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Project Manager: Deanna L. Harding

**Reported:**  
03-May-02 14:27

**Diesel Hydrocarbons (C10-C23) by DHS LUFT**  
**Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (W204328-02) Water</b> <b>Sampled: 18-Apr-02 15:30</b> <b>Received: 18-Apr-02 17:00</b>									
<b>Diesel Range Hydrocarbons (C10-C28)</b>	<b>320</b>	<b>50</b>	<b>ug/l</b>	<b>1</b>	<b>2E01007</b>	<b>01-May-02</b>	<b>02-May-02</b>	<b>EPA 8015M</b>	<b>HC-12</b>
<i>Surrogate: n-Octacosane</i>		<b>%</b>	<b>50-150</b>		<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>S-02</b>
<b>MW-6 (W204328-03) Water</b> <b>Sampled: 18-Apr-02 16:10</b> <b>Received: 18-Apr-02 17:00</b>									
<b>Diesel Range Hydrocarbons (C10-C28)</b>	<b>3500</b>	<b>50</b>	<b>ug/l</b>	<b>1</b>	<b>2E01007</b>	<b>01-May-02</b>	<b>02-May-02</b>	<b>EPA 8015M</b>	<b>HC-12</b>
<i>Surrogate: n-Octacosane</i>		<b>80 %</b>	<b>50-150</b>		<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>MW-7 (W204328-04) Water</b> <b>Sampled: 18-Apr-02 12:45</b> <b>Received: 18-Apr-02 17:00</b>									
<b>Diesel Range Hydrocarbons (C10-C28)</b>	<b>78</b>	<b>50</b>	<b>ug/l</b>	<b>1</b>	<b>2E01007</b>	<b>01-May-02</b>	<b>02-May-02</b>	<b>EPA 8015M</b>	<b>HC-12</b>
<i>Surrogate: n-Octacosane</i>		<b>94 %</b>	<b>50-150</b>		<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>MW-8 (W204328-05) Water</b> <b>Sampled: 18-Apr-02 13:30</b> <b>Received: 18-Apr-02 17:00</b>									
<b>Diesel Range Hydrocarbons (C10-C28)</b>	<b>160</b>	<b>50</b>	<b>ug/l</b>	<b>1</b>	<b>2E01007</b>	<b>01-May-02</b>	<b>02-May-02</b>	<b>EPA 8015M</b>	<b>HC-12</b>
<i>Surrogate: n-Octacosane</i>		<b>95 %</b>	<b>50-150</b>		<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>MW-9 (W204328-06) Water</b> <b>Sampled: 18-Apr-02 14:10</b> <b>Received: 18-Apr-02 17:00</b>									
<b>Diesel Range Hydrocarbons (C10-C28)</b>	<b>ND</b>	<b>50</b>	<b>ug/l</b>	<b>1</b>	<b>2E01007</b>	<b>01-May-02</b>	<b>02-May-02</b>	<b>EPA 8015M</b>	
<i>Surrogate: n-Octacosane</i>		<b>93 %</b>	<b>50-150</b>		<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>MW-10 (W204328-07) Water</b> <b>Sampled: 18-Apr-02 14:55</b> <b>Received: 18-Apr-02 17:00</b>									
<b>Diesel Range Hydrocarbons (C10-C28)</b>	<b>130</b>	<b>50</b>	<b>ug/l</b>	<b>1</b>	<b>2E01007</b>	<b>01-May-02</b>	<b>02-May-02</b>	<b>EPA 8015M</b>	<b>HC-12</b>
<i>Surrogate: n-Octacosane</i>		<b>91 %</b>	<b>50-150</b>		<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	





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Project: Tosco  
Project Number: Tosco # 5043  
Project Manager: Deanna L. Harding

Reported:  
03-May-02 14:27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2D29003 - EPA 5030B P/T**

**Blank (2D29003-BLK1)**

Prepared & Analyzed: 29-Apr-02

Purgeable Hydrocarbons (C6-C12)	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 (MTBE)	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	34.2		"	30.0		114	70-130			

**Blank (2D29003-BLK2)**

Prepared & Analyzed: 30-Apr-02

Purgeable Hydrocarbons (C6-C12)	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 (MTBE)	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	33.7		"	30.0		112	70-130			

**Blank (2D29003-BLK3)**

Prepared & Analyzed: 01-May-02

Purgeable Hydrocarbons (C6-C12)	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 (MTBE)	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	33.6		"	30.0		112	70-130			

**LCS (2D29003-BS1)**

Prepared & Analyzed: 29-Apr-02

Benzene	18.8	0.50	ug/l	20.0		94	70-130			
Toluene	17.6	0.50	"	20.0		88	70-130			
Ethylbenzene	17.6	0.50	"	20.0		88	70-130			
Xylenes (total)	55.4	0.50	"	60.0		92	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	31.7		"	30.0		106	70-130			



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Reported:  
03-May-02 14:27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2D29003 - EPA 5030B P/T**

**LCS (2D29003-BS2)**

Prepared & Analyzed: 30-Apr-02

Benzene	21.0	0.50	ug/l	20.0		105	70-130			
Toluene	18.8	0.50	"	20.0		94	70-130			
Ethylbenzene	19.2	0.50	"	20.0		96	70-130			
Xylenes (total)	58.3	0.50	"	60.0		97	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	33.0		"	30.0		110	70-130			

**LCS (2D29003-BS3)**

Prepared & Analyzed: 01-May-02

Benzene	20.9	0.50	ug/l	20.0		104	70-130			
Toluene	18.7	0.50	"	20.0		94	70-130			
Ethylbenzene	20.1	0.50	"	20.0		100	70-130			
Xylenes (total)	56.4	0.50	"	60.0		94	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	32.6		"	30.0		109	70-130			

**Matrix Spike (2D29003-MS1)**

Source: W204393-04

Prepared & Analyzed: 30-Apr-02

Benzene	21.9	0.50	ug/l	20.0	ND	110	70-130			
Toluene	19.7	0.50	"	20.0	ND	98	70-130			
Ethylbenzene	20.3	0.50	"	20.0	ND	102	70-130			
Xylenes (total)	61.2	0.50	"	60.0	ND	102	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	34.2		"	30.0		114	70-130			

**Matrix Spike Dup (2D29003-MSD1)**

Source: W204393-04

Prepared & Analyzed: 30-Apr-02

Benzene	22.6	0.50	ug/l	20.0	ND	113	70-130	3	20	
Toluene	20.0	0.50	"	20.0	ND	100	70-130	2	20	
Ethylbenzene	21.2	0.50	"	20.0	ND	106	70-130	4	20	
Xylenes (total)	59.5	0.50	"	60.0	ND	99	70-130	3	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	36.0		"	30.0		120	70-130			



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Reported:  
03-May-02 14:27

**Diesel Hydrocarbons (C10-C23) by DHS LUFT - Quality Control**  
**Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2E01007 - EPA 3510B</b>										
<b>Blank (2E01007-BLK1)</b> Prepared: 01-May-02 Analyzed: 02-May-02										
Diesel Range Hydrocarbons (C10-C28)	ND	50	ug/l							
Surrogate: n-Octacosane	74.0		"	100		74	50-150			
<b>LCS (2E01007-BS1)</b> Prepared: 01-May-02 Analyzed: 02-May-02										
Diesel Range Hydrocarbons (C10-C28)	368	50	ug/l	500		74	60-140			
Surrogate: n-Octacosane	74.3		"	100		74	50-150			
<b>LCS Dup (2E01007-BSD1)</b> Prepared: 01-May-02 Analyzed: 02-May-02										
Diesel Range Hydrocarbons (C10-C28)	329	50	ug/l	500		66	60-140	11	50	
Surrogate: n-Octacosane	79.3		"	100		79	50-150			



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03-May-02 14:27

### Notes and Definitions

- HC-12 Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- Q-28 The opening calibration verification standard was outside acceptance criteria by -14%. Although the Laboratory Control Sample verified the accuracy of the batch, this should be considered in evaluating the data for its intended purpose.
- Q-28a The opening calibration verification standard was outside acceptance criteria by -2%. Although the Laboratory Control Sample verified the accuracy of the batch, this should be considered in evaluating the data for its intended purpose.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- 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