



# GETTLER-RYAN INC.

20482

## TRANSMITTAL

4104

FEB 26 2002

February 7, 2002

G-R #180022

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

CC: Mr. Paul Blank  
ERI, Inc.  
73 Digital Drive, Suite 100  
Novato, California 94949

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

RE: **Tosco(Unocal) Service Station  
#7176  
7850 Amador Valley Boulevard  
Dublin, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	February 6, 2002	Groundwater Monitoring and Sampling Report First Quarter - Event of January 3, 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 **February 21, 2002**, this report will be distributed to the following:

cc: Mr. Amir K. Gholami, REHS, Alameda County Health Care Services, 1131 Harbor Bay Pkwy., Alameda, CA 94502

Enclosure

trans/7176-DBD



# GETTLER - RYAN INC.

February 6, 2002  
G-R Job #180022

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

**RE: First Quarter Event of January 3, 2002**  
Groundwater Monitoring & Sampling Report  
Tosco (Unocal) Service Station #7176  
7850 Amador Valley Boulevard  
Dublin, California

Dear Mr. De Witt:

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

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

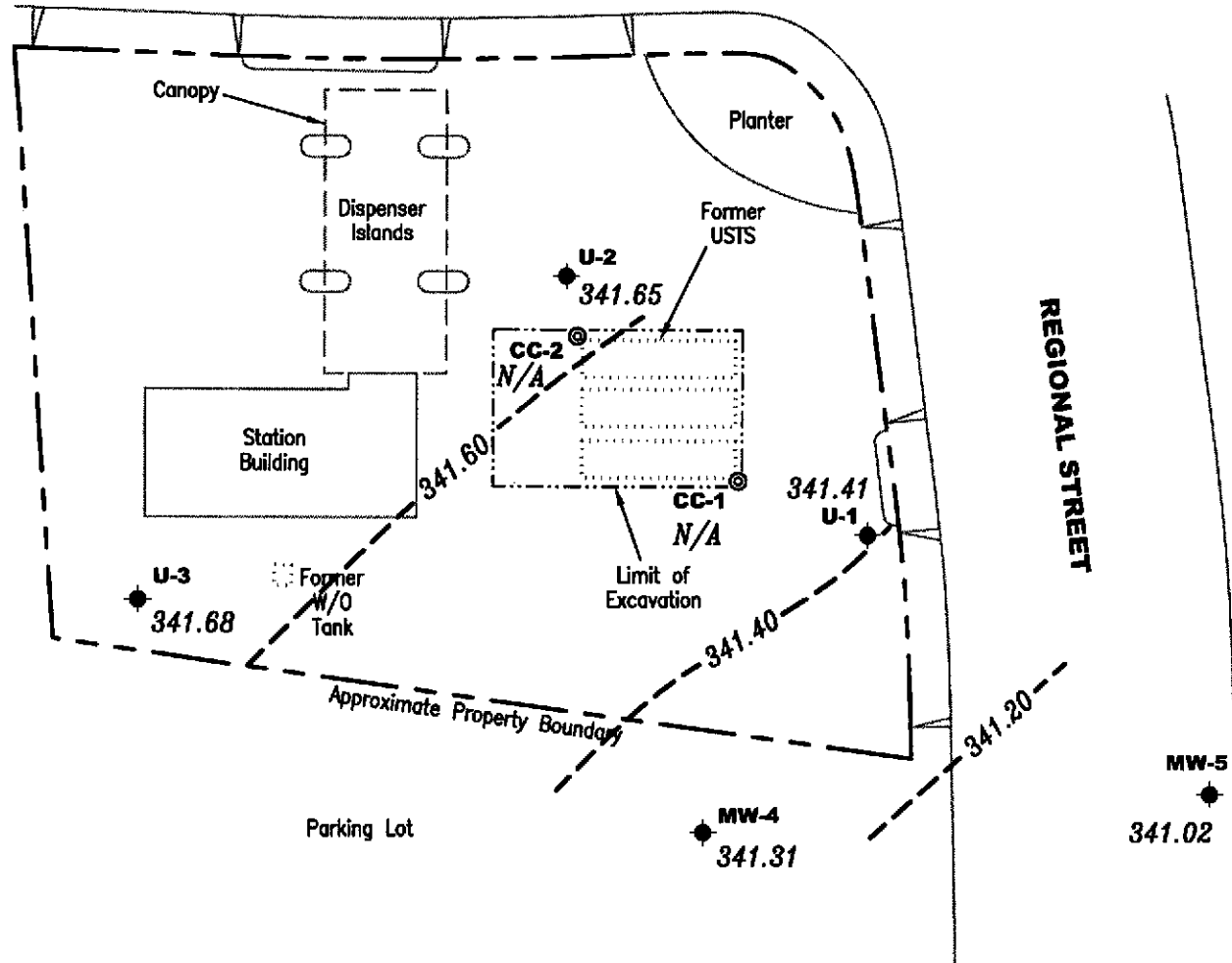
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Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Table 3: Dissolved Oxygen Concentrations  
Attachments: Standard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

7176.qml

**AMADOR VALLEY BOULEVARD**

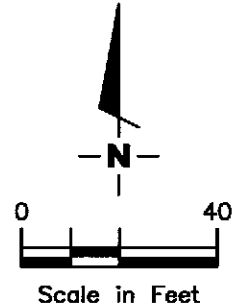


**EXPLANATION**

- ◆ Groundwater monitoring well
- ⊙ Conductor casing
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- - - 99.99 - - - Groundwater elevation contour, dashed where inferred
- N/A Not Available



Approximate groundwater flow direction at a gradient of 0.003 to 0.004 Ft./Ft.



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

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

**POTENTIOMETRIC MAP**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

FIGURE  
**1**

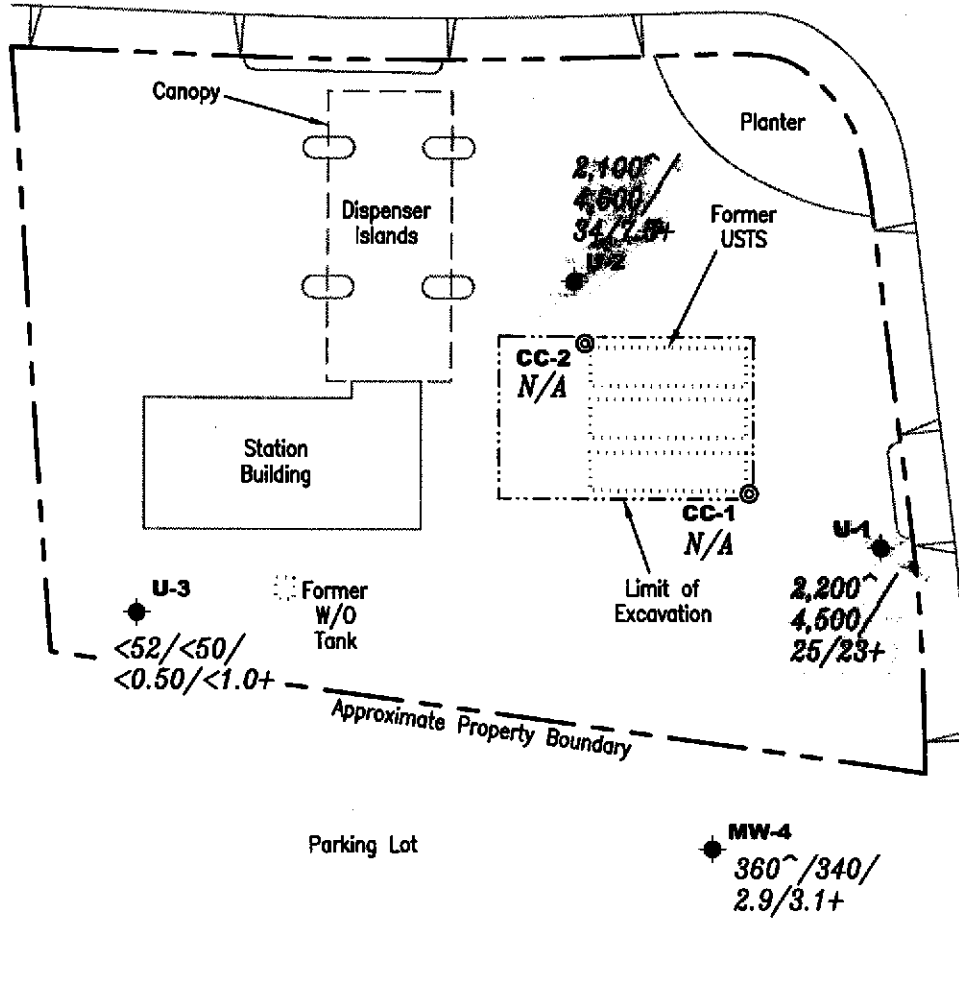
PROJECT NUMBER  
 180022

REVIEWED BY

DATE  
 January 3, 2002

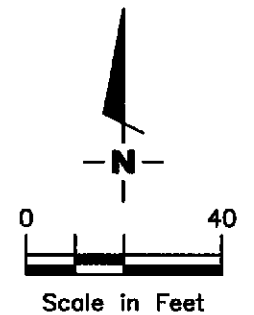
REVISED DATE

**AMADOR VALLEY BOULEVARD**



**EXPLANATION**

- ◆ Groundwater monitoring well
- ⊙ Conductor casing
- A/B/C/D Total Petroleum Hydrocarbons (TPH) as Diesel/TPH as Gasoline/Benzene/MTBE concentrations in ppb
- ^ w/silica gel cleanup
- + MTBE by EPA Method 8260
- N/A Not Available



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

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**CONCENTRATION MAP**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

FIGURE  
**2**

PROJECT NUMBER  
 180022

REVIEWED BY

DATE  
 January 3, 2002

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D◆ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1											
355.62	07/08/95	12.59	10.0-30.0	343.03	<sup>3</sup> 9,400/--	39,000	1,500	19	1,600	5,200	--
	10/12/95	15.38		340.24	<sup>5</sup> 4,200/--	33,000	1,400	ND	1,400	3,100	-- <sup>7</sup>
	01/11/96 <sup>1</sup>	16.33		339.29	<sup>5</sup> 8,200/--	8,300	690	11	680	1,500	-- <sup>8</sup>
	04/11/96 <sup>2</sup>	12.20		343.42	<sup>5</sup> 630/--	3,200	110	ND	180	290	790
	07/10/96	13.84		341.78	<sup>5</sup> 2,200/--	2,600	81	4.4	210	230	510
	10/30/96	15.85		339.77	<sup>5</sup> 560/--	2,200	67	19	140	150	360
	01/27/97	12.20		343.42	<sup>5</sup> 2,300/--	4,600	98	ND	360	290	150
	04/08/97	13.46		342.16	<sup>5</sup> 1,300/--	2,800	50	ND	220	140	ND
	07/17/97	15.30		340.32	<sup>6</sup> 460/--	2,300	30	4.5	140	94	190
	10/17/97	16.33		339.29	<sup>6</sup> 510/--	1,500	31	6.7	110	88	220
	01/19/98	14.34		341.28	<sup>10</sup> 1,900/1,300 <sup>10</sup>	3,100	46	3.4	310	200	170
355.59	NP 04/23/98	11.16		344.43	--/1,700 <sup>11</sup>	3,400	72	3.8	470	350	280
	NP 07/08/98	12.67		342.92	<sup>14</sup> 2,000/--	4,500	51	ND <sup>12</sup>	590	430	190
	10/05/98	14.57		341.02	--/2,500 <sup>10</sup>	7,500 <sup>16</sup>	53	ND <sup>12</sup>	680	350	190/180 <sup>17</sup>
	01/04/99	15.35		340.24	<sup>11</sup> 2,700/2,500 <sup>11</sup>	10,000 <sup>19</sup>	ND <sup>12</sup>	ND <sup>12</sup>	1,200	540	ND <sup>12</sup>
	04/05/99	13.64		341.95	<sup>10</sup> 920/570 <sup>10</sup>	4,900	34	ND <sup>12</sup>	350	150	150/55 <sup>17</sup>
	07/01/99	14.39		341.20	<sup>10</sup> 2,700/3,600 <sup>26</sup>	10,000	45	ND <sup>12</sup>	850	420	260/110 <sup>17</sup>
	09/30/99	15.32		340.27	<sup>10</sup> 2,360/1,680 <sup>10</sup>	7,150 <sup>27</sup>	ND <sup>12</sup>	ND <sup>12</sup>	415	84.4	<sup>12</sup> ND/195 <sup>17</sup>
	01/03/00	16.51		339.08	<sup>26</sup> 2,000/1,700 <sup>26</sup>	5,400 <sup>27</sup>	28	8.4	180	33	160/120 <sup>17</sup>
	04/04/00	12.89		342.70	<sup>26</sup> 990/1,400 <sup>26</sup>	4,800 <sup>27</sup>	30	ND <sup>12</sup>	210	93	170/160 <sup>17</sup>
	07/14/00	14.56		341.03	<sup>26</sup> 2,800/1,200 <sup>26</sup>	6,200 <sup>27</sup>	41	16	170	32	170/120 <sup>17</sup>
	10/27/00	15.96		339.63	<sup>26</sup> 1,400/1,300 <sup>26</sup>	3,830 <sup>16</sup>	16.8	ND <sup>12</sup>	68.6	7.99	55.2/38 <sup>17</sup>
	01/08/01	15.72		339.87	--/873 <sup>29</sup>	2,410 <sup>16</sup>	14.7	4.30	30.5	5.04	34.5/9.33 <sup>17</sup>
	04/03/01	14.46		341.13	<sup>26</sup> 1,500/830 <sup>26</sup>	3,330 <sup>16</sup>	15.8	5.96	74.8	7.06	<sup>12</sup> ND/13.3 <sup>17</sup>
	07/06/01	15.65		339.94	<sup>10</sup> 1,600/1,200 <sup>10,30</sup>	4,300 <sup>16</sup>	23	6.4	57	6.8	58/36 <sup>17</sup>
	10/05/01	16.45		339.14	<sup>10</sup> 2,500/2,300 <sup>10</sup>	3,800 <sup>16</sup>	19	<5.0	19	<5.0	64/36 <sup>17</sup>
	01/03/02	14.18		341.41	<sup>31</sup> 2,200/2,200 <sup>31</sup>	4,500 <sup>16</sup>	25	<10	24	<10	<100/23 <sup>17</sup>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D◆ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-2											
356.59	07/08/95	12.68	10.0-30.0	343.91	<sup>3</sup> 4,700/--	17,000	430	ND	2,200	590	--
	10/12/95	16.01		340.58	<sup>5</sup> 3,600/--	24,000	310	60	1,900	190	-- <sup>7</sup>
	01/11/96 <sup>1</sup>	17.06		339.53	<sup>5</sup> 8,600/--	10,000	210	55	1,400	240	-- <sup>8</sup>
	04/11/96 <sup>2</sup>	12.75		343.84	<sup>5</sup> 1,900/--	7,700	130	27	1,100	110	340
	07/10/96	14.42		342.17	<sup>5</sup> 2,300/--	5,600	59	15	610	42	250
	10/30/96	16.82		339.77	<sup>5</sup> 1,800/--	7,700	67	35	1,000	54	260
	01/27/97	12.91		343.68	<sup>5</sup> 660/--	1,600	14	ND	130	7.0	100
	04/08/97	14.07		342.52	<sup>5</sup> 2,000/--	4,300	35	ND	400	16	ND
	07/17/97	15.96		340.63	<sup>6</sup> 1,300/--	6,200	17	22	410	ND	130
	10/17/97	17.03		339.56	<sup>6</sup> 1,400/--	7,100	71	26	520	50	ND
	01/19/98	15.10		341.49	<sup>10</sup> 2,100/1,500 <sup>10</sup>	5,300	46	11	350	16	110
356.55	NP 04/23/98	11.74		344.81	--/1,200 <sup>11</sup>	3,200	23	11	210	38	160
	NP 07/08/98	13.27		343.28	<sup>14</sup> 1,100/--	1,600	34	8.5	100	7.4	190
	10/05/98	14.90		341.65	--/1,300 <sup>10</sup>	2,900 <sup>18</sup>	37	8.4	110	7.3	78
	01/04/99	15.94		340.61	<sup>11</sup> 670/250 <sup>20</sup>	2,200 <sup>21</sup>	35	ND <sup>12</sup>	17	ND <sup>12</sup>	86
	04/05/99	14.19		342.36	<sup>10</sup> 660/490 <sup>10</sup>	4,900	21	77	130	310	100/6.9 <sup>17</sup>
	07/01/99	14.98		341.57	<sup>24</sup> 210/440 <sup>26</sup>	1,500 <sup>25</sup>	7.6	ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>	<sup>12</sup> ND/35 <sup>17</sup>
	09/30/99	16.00		340.55	<sup>10</sup> 483/340 <sup>10</sup>	256 <sup>27</sup>	1.85	ND <sup>12</sup>	2.42	ND <sup>12</sup>	26.3/29.8 <sup>17</sup>
	01/03/00	17.20		339.35	<sup>26</sup> 2,400/1,900 <sup>26</sup>	3,400 <sup>27</sup>	23	13	ND <sup>12</sup>	44	46/14 <sup>17</sup>
	04/04/00	13.50		343.05	<sup>26</sup> 1,000/1,000 <sup>26</sup>	3,600 <sup>27</sup>	34	17	56	ND <sup>12</sup>	59/25 <sup>17</sup>
	07/14/00	15.23		341.32	<sup>26</sup> 1,000/350 <sup>26</sup>	3,100 <sup>27</sup>	16	13	15	10	100/19 <sup>17</sup>
	10/27/00	16.74		339.81	<sup>26</sup> 2,000/1,900 <sup>26</sup>	4,180 <sup>16</sup>	30.4	10.2	14.6	ND <sup>12</sup>	55.5/15 <sup>17</sup>
	01/08/01	16.68		339.87	--/624 <sup>29</sup>	3,300 <sup>16</sup>	33.5	7.32	3.49	ND <sup>12</sup>	66.7/7.49 <sup>17</sup>
	04/03/01	15.12		341.43	<sup>26</sup> 1,500/830 <sup>26</sup>	4,290 <sup>16</sup>	32.4	9.91	20.1	ND <sup>12</sup>	66.6/18.1 <sup>17</sup>
	07/06/01	16.32		340.23	<sup>10</sup> 1,400/1,100 <sup>10,30</sup>	4,700 <sup>16</sup>	35	11	12	5.3	62/19 <sup>17</sup>
	10/05/01	17.15		339.40	<sup>10</sup> 3,200/1,900 <sup>10</sup>	3,600 <sup>16</sup>	31	9.6	8.7	6.9	62/13 <sup>17</sup>
	01/03/02	14.90		341.65	<sup>31</sup> 2,300/2,100 <sup>31</sup>	4,600 <sup>16</sup>	34	11	15	5.8	62/7.5 <sup>17</sup>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D♦ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-3											
358.13	07/08/95	14.58	10.0-30.0	343.55	<sup>3</sup> 710/--	1,100 <sup>4</sup>	0.57	2.1	1.7	2.4	--
	10/12/95	17.60		340.53	<sup>6</sup> 470/--	560	ND	0.87	0.7	1.1	--
	01/11/96 <sup>1</sup>	18.65		339.48	<sup>6</sup> 260/--	230	0.62	0.91	0.97	1.9	--
	04/11/96	13.20		344.93	ND/--	68 <sup>9</sup>	ND	ND	ND	ND	ND
	07/10/96	15.98		342.15	ND/--	ND	ND	ND	ND	ND	ND
	10/30/96	18.24		339.89	ND/--	70	ND	ND	ND	ND	ND
	01/27/97	14.41		343.72	ND/--	ND	ND	ND	ND	ND	ND
	04/08/97	15.73		342.40	ND/--	ND	ND	ND	ND	ND	ND
	07/17/97	17.54		340.59	ND/--	ND	ND	ND	ND	ND	ND
	10/17/97	18.64		339.49	<sup>6</sup> 63/--	ND	ND	ND	ND	ND	ND
	01/19/98	16.67		341.46	<sup>10</sup> 68/ND	ND	ND	ND	ND	ND	ND
358.09	NP 04/23/98	13.28		344.81	--/ND	ND	ND	ND	ND	ND	ND
	NP 07/08/98	14.90		343.19	<sup>15</sup> 80/--	ND	ND	ND	ND	ND	ND
		10/05/98		341.59	--/ND	ND	ND	ND	ND	ND	ND
		01/04/99		340.39	ND/--	ND	ND	ND	ND	ND	ND
		04/05/99		342.42	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		07/01/99		341.30	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		09/30/99		340.49	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		01/03/00		339.23	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		04/04/00		342.99	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		07/14/00		341.24	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		10/27/00		339.74	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		01/08/01		339.78	--/ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		04/03/01		341.39	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		07/06/01		340.19	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
		10/05/01		339.38	<50/--	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<2.0 <sup>17</sup>
		01/03/02		341.68	<52/--	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<1.0 <sup>17</sup>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #7176  
7850 Amador Valley Boulevard  
Dublin, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D♦ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>MW-4</b>											
356.41	04/23/98	12.11	10.0-25.0	344.30	--/1,400 <sup>11</sup>	2,500	5.9	6.4	16	31	ND <sup>12</sup>
	07/08/98	13.70		342.71	<sup>11</sup> 1,400/--	1,000 <sup>13</sup>	ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>
	10/05/98	15.18		341.23	--/230 <sup>10</sup>	890 <sup>16</sup>	ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>	14	ND <sup>12</sup>
	01/04/99	16.39		340.02	<sup>10</sup> 71/71 <sup>10</sup>	230 <sup>22</sup>	0.56	1.3	1.4	1.8	10
	04/05/99	14.61		341.80	<sup>10</sup> 340/210 <sup>10</sup>	620 <sup>23</sup>	ND <sup>12</sup>	1.8	2.1	ND <sup>12</sup>	6.0/9.3 <sup>17</sup>
	07/01/99	15.43		340.98	<sup>24</sup> 260/310 <sup>26</sup>	700 <sup>19</sup>	2.1	ND <sup>12</sup>	1.9	2.4	<sup>12</sup> ND/21 <sup>17</sup>
	09/30/99	16.27		340.14	<sup>10</sup> 420/220 <sup>10</sup>	582 <sup>27</sup>	2.60	1.30	1.98	ND <sup>12</sup>	23.1/22.5 <sup>17</sup>
	01/03/00	17.50		338.91	<sup>26</sup> 250/260 <sup>26</sup>	800 <sup>27</sup>	4.2	4.6	3.3	11	31/17 <sup>17</sup>
	04/04/00	13.91		342.50	<sup>10,15</sup> 460/340 <sup>26</sup>	710 <sup>27</sup>	2.0	1.3	4.4	2.0	21/22 <sup>17</sup>
	07/14/00	15.58		340.83	<sup>26</sup> 220/76 <sup>26</sup>	490 <sup>28</sup>	0.89	1.3	0.85	1.8	21/12 <sup>17</sup>
	10/27/00	16.96		339.45	<sup>26</sup> 160/120 <sup>26</sup>	598 <sup>21</sup>	ND	1.56	4.65	ND	15.4/14 <sup>17</sup>
	01/08/01	16.64		339.77	--/202 <sup>29</sup>	522 <sup>27</sup>	4.09	1.69	2.53	1.26	17.2/14.3 <sup>17</sup>
	04/03/01	15.46		340.95	<sup>26</sup> 180/ND	575 <sup>21</sup>	ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>	14.0/11.6 <sup>17</sup>
	07/06/01	16.63		339.78	<sup>10</sup> 230/200 <sup>10,30</sup>	720 <sup>16</sup>	4.7	1.5	2.5	0.74	10/7.1 <sup>17</sup>
	10/05/01	17.38		339.03	<sup>10</sup> 180/140 <sup>10</sup>	650 <sup>27</sup>	4.3	1.2	1.1	1.8	5.9/5.4 <sup>17</sup>
	01/03/02	15.10		341.31	<sup>31</sup> 390/360 <sup>31</sup>	340 <sup>16</sup>	2.9	1.4	1.7	<1.0	<10/3.1 <sup>17</sup>
<b>MW-5</b>											
355.03	04/23/98	11.15	10.0-25.0	343.88	--/100 <sup>11</sup>	120	0.53	0.90	1.0	3.8	13
	07/08/98	12.63		342.40	<sup>10</sup> 170/--	ND	ND	ND	ND	ND	12
	10/05/98	14.00		341.03	--/100 <sup>10</sup>	ND	ND	ND	ND	ND	12
	01/04/99	15.21		339.82	ND/--	ND	ND	ND	ND	ND	ND
	04/05/99	13.76		341.27	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	07/01/99	14.48		340.55	ND/--	ND	ND	ND	ND	ND	<sup>12</sup> ND/2.3 <sup>17</sup>
	09/30/99	15.15		339.88	<sup>10</sup> 60.4/ND	50.8 <sup>27</sup>	ND	ND	ND	ND	ND/ND <sup>17</sup>
	01/03/00	16.34		338.69	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	04/04/00	12.90		342.13	<sup>15</sup> 69/ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	07/14/00	14.48		340.55	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	10/27/00	15.75		339.28	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	01/08/01	15.25		339.78	--/ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D♦ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	04/03/01	14.41	10.0-25.0	340.62	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
(cont)	07/06/01	15.52		339.51	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	10/05/01	16.28		338.75	<50/--	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<2.0 <sup>17</sup>
	01/03/02	14.01		341.02	<51/--	<50	<0.50	<0.50	<0.50	<0.50	<5.0/1.6 <sup>17</sup>
<b>Trip Blank</b>											
TB-LB	01/19/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/23/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/08/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	10/05/98	--	--	--	--	ND	ND	0.70	ND	0.71	ND
	01/04/99	--	--	--	--	ND	ND	0.74	ND	0.92	ND
	04/05/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/01/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	09/30/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	01/03/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/04/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/14/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	10/27/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	01/08/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/03/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/06/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	10/05/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	01/03/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to January 19, 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	NP = No purge
(ft.bgs) = Feet Below Ground Surface	E = Ethylbenzene	
GWE = Groundwater Elevation	X = Xylenes	
(msl) = Mean sea level	MTBE = Methyl tertiary butyl ether	

\* TOC elevations were surveyed relative to msl, per the Benchmark AM-STW1977 located at the easterly return at the most easterly corner of intersection at Amador Valley Boulevard and Starward Street, (Elevation = 344.17 feet, msl).

◆ Analytical results reported as follows: TPH-D/TPH-D with silica gel cleanup.

- 1 Polynuclear Aromatic Hydrocarbons (PNAs) compound naphthalene was detected in well U-1 at a concentration of 320 ppb and at a concentration of 310 ppb in well U-2. All other PNAs compounds were ND in both wells.
- 2 PNAs compounds were ND.
- 3 Laboratory report indicates unidentified hydrocarbons C9-C26.
- 4 Laboratory report indicates gasoline and unidentified hydrocarbons >C12.
- 5 Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- 6 Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- 7 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 8 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
- 9 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- 10 Laboratory report indicates unidentified hydrocarbons C9-C24.
- 11 Laboratory report indicates diesel and unidentified hydrocarbons <C14.
- 12 Detection limit raised. Refer to analytical reports.
- 13 Laboratory report indicates unidentified hydrocarbons >C8.
- 14 Laboratory report indicates unidentified hydrocarbons <C14.
- 15 Laboratory report indicates discrete peaks.
- 16 Laboratory report indicates weathered gasoline C6-C12.
- 17 MTBE by EPA Method 8260.
- 18 Laboratory report indicates unidentified hydrocarbons <C8.
- 19 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- 20 Laboratory report indicates diesel and unidentified hydrocarbons <C16.

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #7176  
7850 Amador Valley Boulevard  
Dublin, California

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**EXPLANATIONS:** (cont)

- 21 Laboratory report indicates unidentified hydrocarbons C6-C12.
- 22 Laboratory report indicates gasoline and unidentified hydrocarbons >C10.
- 23 Laboratory report indicates gasoline and unidentified hydrocarbons <C7.
- 24 Laboratory report indicates unidentified hydrocarbons C10-C24.
- 25 Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
- 26 Laboratory report indicates unidentified hydrocarbons <C16.
- 27 Laboratory report indicates gasoline C6-C12.
- 28 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons C6-C12.
- 29 Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- 30 Laboratory report indicates sample was generated out of hold time. The sample was originally run within hold time, but needed to be re-analyzed.
- 31 Laboratory report indicates unidentified hydrocarbons C10-C28.

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Tosco (Unocal) Service Station #7176  
7850 Amador Valley Boulevard  
Dublin, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-1	04/05/99	ND <sup>1</sup>	ND <sup>1</sup>	55	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	07/01/99	ND	ND	110	ND	ND	ND	ND	ND
	09/30/99	ND <sup>1</sup>	ND <sup>1</sup>	195	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	01/03/00	ND	ND	120	ND	ND	ND	ND	ND
	04/04/00	ND <sup>1</sup>	ND <sup>1</sup>	160	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	07/14/00	ND <sup>1</sup>	ND <sup>1</sup>	120	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	10/27/00	ND	ND	38	ND	ND	ND	ND	ND
	01/08/01	ND <sup>1</sup>	ND <sup>1</sup>	9.33	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	04/03/01	ND <sup>1</sup>	ND <sup>1</sup>	13.3	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	07/06/01	ND	ND	36	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	36	<2.0	<2.0	<2.0	<2.0	<2.0
01/03/02	<2,500	<100	23	<5.0	<5.0	<5.0	<5.0	<5.0	
U-2	04/05/99	ND <sup>1</sup>	ND <sup>1</sup>	6.9	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	07/01/99	ND	ND	35	ND	ND	ND	ND	ND
	09/30/99	ND	ND	29.8	ND	ND	ND	ND	ND
	01/03/00	ND	ND	14	ND	ND	ND	ND	ND
	04/04/00	ND <sup>1</sup>	ND <sup>1</sup>	25	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	07/14/00	ND	ND	19	ND	ND	ND	ND	ND
	10/27/00	ND	ND	15	ND	ND	ND	ND	ND
	01/08/01	ND <sup>1</sup>	ND <sup>1</sup>	7.49	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	04/03/01	ND	ND	18.1	ND	ND	ND	ND	ND
	07/06/01	ND	ND	19	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	13	<2.0	<2.0	<2.0	<2.0	<2.0
01/03/02	<2,500	<100	7.5	<5.0	<5.0	<5.0	<5.0	<5.0	
U-3	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND
	07/01/99	ND	ND	ND	ND	ND	ND	ND	ND
	09/30/99	ND	ND	ND	ND	ND	ND	ND	ND
	01/03/00	ND	ND	ND	ND	ND	ND	ND	ND

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-3 (cont)	04/04/00	ND	ND	ND	ND	ND	ND	ND	ND
	07/14/00	ND	ND	ND	ND	ND	ND	ND	ND
	10/27/00	ND	ND	ND	ND	ND	ND	ND	ND
	01/08/01	ND	ND	ND	ND	ND	ND	ND	ND
	04/03/01	ND	ND	ND	ND	ND	ND	ND	ND
	07/06/01	ND	ND	ND	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	01/03/02	<500	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4	04/05/99	ND	ND	9.3	ND	ND	ND	ND	ND
	07/01/99	ND	ND	21	ND	ND	ND	ND	ND
	09/30/99	ND	ND	22.5	ND	ND	ND	ND	ND
	01/03/00	ND	ND	17	ND	ND	ND	ND	ND
	04/04/00	ND	ND	22	ND	ND	ND	ND	ND
	07/14/00	ND	ND	12	ND	ND	ND	ND	ND
	10/27/00	ND	ND	14	ND	ND	ND	ND	ND
	01/08/01	ND	ND	14.3	ND	ND	ND	ND	ND
	04/03/01	ND	ND	11.6	ND	ND	ND	ND	ND
	07/06/01	ND	ND	7.1	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	5.4	<2.0	<2.0	<2.0	<2.0	<2.0
01/03/02	<500	<20	3.1	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-5	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND
	07/01/99	ND	ND	2.3	ND	ND	ND	ND	ND
	09/30/99	ND	ND	ND	ND	ND	ND	ND	ND
	01/03/00	ND	ND	ND	ND	ND	ND	ND	ND
	04/04/00	ND	ND	ND	ND	ND	ND	ND	ND
	07/14/00	ND	ND	ND	ND	ND	ND	ND	ND
	10/27/00	ND	ND	ND	ND	ND	ND	ND	ND
	01/08/01	ND	ND	ND	ND	ND	ND	ND	ND

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-5	04/03/01	ND	ND	ND	ND	ND	ND	ND	ND
(cont)	07/06/01	ND	ND	ND	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	01/03/02	<500	<20	1.6	<1.0	<1.0	<1.0	<1.0	<1.0

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Tosco (Unocal) Service Station #7176  
7850 Amador Valley Boulevard  
Dublin, California

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**EXPLANATIONS:**

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

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

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

**Table 3**  
**Dissolved Oxygen Concentrations**  
 Tosco (Unocal) Service Station #7176  
 7850 Amador Valley Boulevard  
 Dublin, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
U-1	01/11/96	--	3.41
	04/11/96	3.77	3.78
	07/10/96 <sup>1</sup>	1.22	--
	10/30/96 <sup>1</sup>	1.41	--
	01/27/97 <sup>1</sup>	1.34	--
	04/08/97 <sup>1</sup>	2.09	--
	07/17/97 <sup>1</sup>	2.00	--
	10/17/97 <sup>1</sup>	1.86	--
	01/19/98 <sup>1</sup>	2.91	--
	04/23/98 <sup>1</sup>	0.59	--
	07/08/98 <sup>1</sup>	1.10	--
U-2	01/11/96	--	3.99
	04/11/96	3.32	3.41
	07/10/96 <sup>1</sup>	1.01	--
	10/30/96 <sup>1</sup>	1.42	--
	01/27/97 <sup>1</sup>	1.29	--
	04/08/97 <sup>1</sup>	1.69	--
	07/17/97 <sup>1</sup>	2.08	--
	10/17/97 <sup>1</sup>	1.80	--
	01/19/98 <sup>1</sup>	2.95	--
	04/23/98 <sup>1</sup>	0.55	--
	07/08/98 <sup>1</sup>	1.36	--
U-3	01/11/96	--	5.05
	04/11/96	5.16	4.96
	07/10/96 <sup>1</sup>	3.44	--
	10/30/96 <sup>1</sup>	2.18	--
	01/27/97 <sup>1</sup>	2.61	--
	04/08/97 <sup>1</sup>	3.73	--
	07/17/97 <sup>1</sup>	2.65	--
	10/17/97 <sup>1</sup>	2.44	--
	01/19/98 <sup>1</sup>	6.51	--
	04/23/98 <sup>1</sup>	4.72	--
	07/08/98 <sup>1</sup>	4.35	--
CC-1	10/02/95	2.83	--

**EXPLANATIONS:**

Dissolved oxygen concentrations prior to January 19, 1998, were compiled from reports prepared by MPDS Services, Inc.

(mg/L) = Milligrams per liter

-- = Not Measured

CC-1 = Conductor casing in the underground storage tank backfill

<sup>1</sup> The wells were not purged on this date.



## 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 # TOSCO 776 Job#: 180022  
 Address: 7250 Amador Valley Blvd. Date: 1/3/02  
 City: Dublin, Ca. Sampler: Vetter

Well ID: U-1 Well Condition: OK  
 Well Diameter: 2 in. Hydrocarbon Thickness: 8.00 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth: 2780 ft.  
 Depth to Water: 14.18 ft.

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

13.62 x VF 0.17 = 2.31 X 3 (case volume) = Estimated Purge Volume: 7 (gal.)

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

Starting Time: 1805 Weather Conditions: clear  
 Sampling Time: 1830 Water Color: grayish Odor: 4  
 Purging Flow Rate: \_\_\_\_\_ gpm Sediment Description: Silt  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1810	2	7.37	1180	67.8			
1817	4.5	7.21	1167	68.4			
1825	7	7.16	1158	68.7			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-1	5 X VOA VIAL	Y	HEL	SEQUOIA	TPH/G/BTEX/MTOE + 2062/826
"	1 Amber	"	NOV	"	TPH-D

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client: TOSCO  
 Well ID: 7176 Job#: 180022  
 Address: 7850 Amador Valley Blvd. Date: 1/3/02  
 City: Dublin, Ca. Sampler: Vartheta

Well ID: U-2 Well Condition: OK  
 Well Diameter: 2 in.  
 Total Depth: 26.46 ft.  
 Depth to Water: 14.90 ft.  
 Hydrocarbon Thickness: 0.00 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  
11.56 X VF 0.17 = 1.96 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

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

Starting Time: 1730 Weather Conditions: clear  
 Sampling Time: 1755 Water Color: grayish Odor: 4  
 Sampling Flow Rate: \_\_\_\_\_ gpm. Sediment Description: silt  
 Is well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1736</u>	<u>2</u>	<u>7.45</u>	<u>1143</u>	<u>68.1</u>			
<u>1742</u>	<u>4</u>	<u>7.27</u>	<u>1138</u>	<u>68.6</u>			
<u>1748</u>	<u>6</u>	<u>7.20</u>	<u>1136</u>	<u>68.9</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-2</u>	<u>5 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH/G/BTEX/MTOE + Benz (8260)</u>
<u> </u>	<u>1 Amber</u>	<u> </u>	<u>NO ME</u>	<u> </u>	<u>TPH-D</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client: TOSCO  
 Well ID: 776 Job#: 180022  
 Address: 7850 Amador Valley Blvd. Date: 1/3/02  
 City: Dublin, Ca. Sampler: Varthos

Well ID: U-3 Well Condition: OK  
 Well Diameter: 2 in. Hydrocarbon Thickness: 0.00 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth: 28.41 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water: 16.41 ft. Factor (VF) 6" = 1.50 12" = 5.80

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

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

Starting Time: 1650 Weather Conditions: clear  
 Sampling Time: 1713 Water Color: brn. Odor: no  
 Pumping Flow Rate: \_\_\_\_\_ gpm. Sediment Description: silt  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1655</u>	<u>2</u>	<u>7.80</u>	<u>965</u>	<u>67.2</u>			
<u>1701</u>	<u>4</u>	<u>7.64</u>	<u>957</u>	<u>67.6</u>			
<u>1708</u>	<u>6.5</u>	<u>7.61</u>	<u>950</u>	<u>67.9</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-3</u>	<u>5 X VDA VIAL</u>	<u>Y</u>	<u>HELL</u>	<u>SEQUOIA</u>	<u>TPH/G/BTEX/MTDE + 209 (8260)</u>
<u>"</u>	<u>1 Bailer</u>	<u>-</u>	<u>NONE</u>	<u>-</u>	<u>TPH-D</u>

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Tosco 7176 Job#: 180022  
 Address: 7850 Amador Valley Blvd. Date: 1/3/02  
 City: Dublin, Ca. Sampler: Venture

Well ID MW-4 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: 0.00 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth 25.40 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 15.10 ft. Factor (VF) 6" = 1.50 12" = 5.80

10.30 X VF 0.17 = 1.75 X 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

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

Starting Time: 1615 Weather Conditions: clear  
 Sampling Time: 1635 Water Color: brn. Odor: mild  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: SiH  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1620	2	7.54	1089	67.7			
1626	4	7.38	1074	68.4			
1631	5.5	7.35	1070	68.5			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	5 X VOA VIAL	Y	HC	SEQUOIA	TPH6/BTEX/MTOE + <u>826</u>
"	1 Amber	~	NONE	~	TPH-D

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Well ID: MW-5      Job#: 180022  
 Well Name: TOSCO      Date: 1/3/02  
 Well No.: 7176      Address: 7850 Amador Valley Blvd.  
 City: Dublin, Ca.      Sampler: Ventler

Well ID: MW-5      Well Condition: OK  
 Well Diameter: 2 in.  
 Well Depth: 24.88 ft.  
 Depth to Water: 14.01 ft.

Hydrocarbon Thickness:	Amount Bailed (product/water):
<u>0.5</u> in.	<u>8</u> (gal.)
2" = 0.17	3" = 0.38
6" = 1.50	12" = 5.80
4" = 0.66	

$10.87 \times \text{VF } 0.17 = 1.84 \times 3 \text{ (case volume) = Estimated Purge Volume: } 6.0 \text{ (gal.)}$

Purge Equipment: Disposable Bailer  
 Sampling Equipment: Disposable Bailer  
 Other: \_\_\_\_\_

Starting Time: 1540      Weather Conditions: clear  
 Sampling Time: 1600      Water Color: brn.      Odor: no  
 Pumping Flow Rate: \_\_\_\_\_ gpm.  
 Did well de-water? no      Sediment Description: silt  
 If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1545</u>	<u>2</u>	<u>7.70</u>	<u>924</u>	<u>67.4</u>			
<u>1551</u>	<u>4</u>	<u>7.55</u>	<u>910</u>	<u>68.3</u>			
<u>1556</u>	<u>6</u>	<u>7.52</u>	<u>912</u>	<u>68.6</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>5 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH/G/BTEX/MTOE + 8047(8260)</u>
<u>"</u>	<u>1 Amber</u>	<u>"</u>	<u>NONE</u>	<u>"</u>	<u>TPH-D</u>

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



TOSCO

Tosco Marketing Company  
2001 East Canyon Pl., Ste. 400  
San Ramon, California 94583

CHAIN-OF-CUSTODY-RECORD

Facility Number UNOCAL SSA-7176  
 Facility Address 7850 Amador Valley Blvd., Dublin, CA  
 Consultant Project Number 180022:85  
 Consultant Name Gettler-Ryan Inc. (G-R Inc.)  
 Address 6747 SIERRA COURT, SUITE J, DUBLIN, CA 94568  
 Project Contact (Name) Jeanna L. Harding  
 (Phone) (925) 551-7555 (Fax Number) 925-551-7899

Contact (Name) MR. Dave DeWitt  
 (Phone) 925-277-2384  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) Vahkes Tashjian  
 Collection Date 1/3/02  
 Signature Vahkes Tashjian

201016  
Sample Number  
Lab Sample Number

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Gas C = Composite D = Degrade	Time	Sample Preservation	Isol (Yes or No)	Analyses To Be Performed																		
								TPH Gas - BTX WASTE (8020)	TPH Liquid (8015)	Oil and Grease (8020)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (8240 or 8270)											
1-LB	01	1	W	C		HCl	Y	X																		
1-1	02	6	u	u	1830	u	F	X	X																	
1-2	03	6	u	u	1755	u	F	X	X																	
1-3	04	6	u	u	1713	u	F	X	X																	
1-4	05	6	u	u	1635	u	F	X	X																	
1-5	06	6	u	u	1600	u	u	X	X																	

DO NOT BILL  
TB-LB ANALYSIS

8 Oxy's - MTBE,  
TBA, DIBP, ETBE  
TAMR, 1,2-DCA  
EDR, Ethanol

Run Silica-Gel  
Clean-up On Any  
Diesel hits.

8 Oxy's  
(8260)

Requested By (Signature) [Signature]  
 Requested By (Signature) [Signature]  
 Requested By (Signature) \_\_\_\_\_

Organization G-R Inc.  
 Date/Time 1/3/02  
 Organization \_\_\_\_\_  
 Date/Time \_\_\_\_\_  
 Organization \_\_\_\_\_  
 Date/Time \_\_\_\_\_

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

Organization Sequoia  
 Date/Time 1/3/02 19:30  
 Organization \_\_\_\_\_  
 Date/Time \_\_\_\_\_  
 Date/Time \_\_\_\_\_

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



**Sequoia  
Analytical**

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

22 January, 2002

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

RE: Tosco(1)  
Sequoia Report: L201016

Enclosed are the results of analyses for samples received by the laboratory on 01/03/02 19:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate #2360





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

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

**Reported:**  
01/22/02 14:30

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L201016-01	Water	01/03/02 00:00	01/03/02 19:30
U-1	L201016-02	Water	01/03/02 18:30	01/03/02 19:30
U-2	L201016-03	Water	01/03/02 17:55	01/03/02 19:30
U-3	L201016-04	Water	01/03/02 17:13	01/03/02 19:30
MW-4	L201016-05	Water	01/03/02 16:35	01/03/02 19:30
MW-5	L201016-06	Water	01/03/02 16:00	01/03/02 19:30

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 Pelt, Project Manager



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

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

Reported:  
01/22/02 14:30

**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
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**TB-LB (L201016-01) Water** Sampled: 01/03/02 00:00 Received: 01/03/02 19:30

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2010043	01/14/02	01/14/02	EPA 8021B	
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>		103 %	70-130		"	"	"	"	

**U-1 (L201016-02) Water** Sampled: 01/03/02 18:30 Received: 01/03/02 19:30

Purgeable Hydrocarbons as Gasoline	4500	1000	ug/l	20	2010044	01/14/02	01/14/02	EPA 8021B	P-02
Benzene	25	10	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	24	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.6 %	70-130		"	"	"	"	

**U-2 (L201016-03) Water** Sampled: 01/03/02 17:55 Received: 01/03/02 19:30

Purgeable Hydrocarbons as Gasoline	4600	500	ug/l	10	2010044	01/14/02	01/14/02	EPA 8021B	P-02
Benzene	34	5.0	"	"	"	"	"	"	
Toluene	11	5.0	"	"	"	"	"	"	
Ethylbenzene	15	5.0	"	"	"	"	"	"	
Xylenes (total)	5.8	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	62	50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		92.0 %	70-130		"	"	"	"	



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

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

Reported:  
01/22/02 14:30

**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>U-3 (L201016-04) Water Sampled: 01/03/02 17:13 Received: 01/03/02 19:30</b>									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2010043	01/14/02	01/14/02	EPA 8021B	
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>		103 %	70-130		"	"	"	"	
<b>MW-4 (L201016-05) Water Sampled: 01/03/02 16:35 Received: 01/03/02 19:30</b>									
Purgeable Hydrocarbons as Gasoline	340	100	ug/l	2	2010044	01/14/02	01/14/02	EPA 8021B	P-02
Benzene	2.9	1.0	"	"	"	"	"	"	
Toluene	1.4	1.0	"	"	"	"	"	"	
Ethylbenzene	1.7	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %	70-130		"	"	"	"	
<b>MW-5 (L201016-06) Water Sampled: 01/03/02 16:00 Received: 01/03/02 19:30</b>									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2010044	01/14/02	01/14/02	EPA 8021B	
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>		84.4 %	70-130		"	"	"	"	



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

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

**Reported:**  
01/22/02 14:30

**Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B**

**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (L201016-02) Water</b> Sampled: 01/03/02 18:30 Received: 01/03/02 19:30									
Ethanol	ND	2500	ug/l	5	2010020	01/07/02	01/07/02	EPA 8260B	
1,2-Dibromoethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>23</b>	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		91.9 %		70-130	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.9 %		70-130	"	"	"	"	
<b>U-2 (L201016-03) Water</b> Sampled: 01/03/02 17:55 Received: 01/03/02 19:30									
Ethanol	ND	2500	ug/l	5	2010020	01/07/02	01/07/02	EPA 8260B	
1,2-Dibromoethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>7.5</b>	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92.6 %		70-130	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.8 %		70-130	"	"	"	"	
<b>U-3 (L201016-04) Water</b> Sampled: 01/03/02 17:13 Received: 01/03/02 19:30									
Ethanol	ND	500	ug/l	1	2010018	01/07/02	01/07/02	EPA 8260B	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %		70-130	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.0 %		70-130	"	"	"	"	

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

 Project: Tosco(1)  
 Project Number: Unocal SS#7176, Dublin, CA  
 Project Manager: Deanna Harding

**Reported:**  
 01/22/02 14:30

**Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B**
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-4 (L201016-05) Water</b> <b>Sampled: 01/03/02 16:35</b> <b>Received: 01/03/02 19:30</b>									
Ethanol	ND	500	ug/l	1	2010018	01/07/02	01/07/02	EPA 8260B	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>3.1</b>	1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	70-130	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.6 %	70-130	"	"	"	"	"	
<b>MW-5 (L201016-06) Water</b> <b>Sampled: 01/03/02 16:00</b> <b>Received: 01/03/02 19:30</b>									
Ethanol	ND	500	ug/l	1	2010018	01/07/02	01/07/02	EPA 8260B	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>1.6</b>	1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.0 %	70-130	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.0 %	70-130	"	"	"	"	"	



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

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

Reported:  
01/22/02 14:30

**Diesel Hydrocarbons (C10-C28) by 8015B modified  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (L201016-02) Water</b> Sampled: 01/03/02 18:30 Received: 01/03/02 19:30									<b>HT-08</b>
Diesel Range Organics (C10-C28)	2200	210	ug/l	4	2A14011	01/14/02	01/16/02	8015Bm	D-15
Surrogate: n-Octacosane		92.9 %	50-150		"	"	"	"	
<b>U-2 (L201016-03) Water</b> Sampled: 01/03/02 17:55 Received: 01/03/02 19:30									<b>HT-08</b>
Diesel Range Organics (C10-C28)	2300	210	ug/l	4	2A14011	01/14/02	01/16/02	8015Bm	D-15
Surrogate: n-Octacosane		89.7 %	50-150		"	"	"	"	
<b>U-3 (L201016-04) Water</b> Sampled: 01/03/02 17:13 Received: 01/03/02 19:30									<b>HT-08</b>
Diesel Range Organics (C10-C28)	ND	52	ug/l	1	2A14011	01/14/02	01/15/02	8015Bm	
Surrogate: n-Octacosane		98.1 %	50-150		"	"	"	"	
<b>MW-4 (L201016-05) Water</b> Sampled: 01/03/02 16:35 Received: 01/03/02 19:30									<b>HT-08</b>
Diesel Range Organics (C10-C28)	390	52	ug/l	1	2A14011	01/14/02	01/15/02	8015Bm	D-15
Surrogate: n-Octacosane		111 %	50-150		"	"	"	"	
<b>MW-5 (L201016-06) Water</b> Sampled: 01/03/02 16:00 Received: 01/03/02 19:30									<b>HT-08</b>
Diesel Range Organics (C10-C28)	ND	51	ug/l	1	2A14011	01/14/02	01/15/02	8015Bm	
Surrogate: n-Octacosane		99.2 %	50-150		"	"	"	"	



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

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

**Reported:**  
01/22/02 14:30

**Diesel Hydrocarbons (C10-C28) with Silica Gel Cleanup by 8015B modified  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (L201016-02) Water</b> Sampled: 01/03/02 18:30 Received: 01/03/02 19:30									
<b>Diesel Range Organics (C10-C28)</b>	<b>2200</b>	210	ug/l	4	2A16001	01/16/02	01/21/02	8015Bm	D-15
<i>Surrogate: n-Octacosane</i>		98.1 %	40-140		"	"	"	"	
<b>U-2 (L201016-03) Water</b> Sampled: 01/03/02 17:55 Received: 01/03/02 19:30									
<b>Diesel Range Organics (C10-C28)</b>	<b>2100</b>	210	ug/l	4	2A16001	01/16/02	01/21/02	8015Bm	D-15
<i>Surrogate: n-Octacosane</i>		110 %	40-140		"	"	"	"	
<b>MW-4 (L201016-05) Water</b> Sampled: 01/03/02 16:35 Received: 01/03/02 19:30									
<b>Diesel Range Organics (C10-C28)</b>	<b>360</b>	52	ug/l	1	2A16001	01/16/02	01/21/02	8015Bm	D-15
<i>Surrogate: n-Octacosane</i>		121 %	40-140		"	"	"	"	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#7176, Dublin, CA Project Manager: Deanna Harding	Reported: 01/22/02 14:30
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**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 2010043 - EPA 5030B (P/T)**

**Blank (2010043-BLK1)**

Prepared & Analyzed: 01/14/02

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							

<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.21		"	10.0		82.1	70-130			
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**LCS (2010043-BS1)**

Prepared & Analyzed: 01/14/02

Benzene	11.4	0.50	ug/l	10.0		114	70-130			
Toluene	11.1	0.50	"	10.0		111	70-130			
Ethylbenzene	10.9	0.50	"	10.0		109	70-130			
Xylenes (total)	33.2	0.50	"	30.0		111	70-130			

<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.65		"	10.0		86.5	70-130			
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**LCS (2010043-BS2)**

Prepared & Analyzed: 01/14/02

Purgeable Hydrocarbons as Gasoline	270	50	ug/l	250		108	70-130			
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.16		"	10.0		91.6	70-130			
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**Matrix Spike (2010043-MS1)**

Source: L201019-04

Prepared: 01/14/02 Analyzed: 01/15/02

Purgeable Hydrocarbons as Gasoline	264	50	ug/l	250	ND	106	60-140			
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.73		"	10.0		97.3	70-130			
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**Matrix Spike Dup (2010043-MSD1)**

Source: L201019-04

Prepared: 01/14/02 Analyzed: 01/15/02

Purgeable Hydrocarbons as Gasoline	261	50	ug/l	250	ND	104	60-140	1.14	25	
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<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.23		"	10.0		92.3	70-130			
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Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

**Reported:**  
01/22/02 14:30

**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 2010044 - EPA 5030B (P/T)**

**Blank (2010044-BLK1)**

Prepared & Analyzed: 01/14/02

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	7.63		"	10.0		76.3	70-130			
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**LCS (2010044-BS1)**

Prepared & Analyzed: 01/14/02

Benzene	8.17	0.50	ug/l	10.0		81.7	70-130			
Toluene	7.32	0.50	"	10.0		73.2	70-130			
Ethylbenzene	7.11	0.50	"	10.0		71.1	70-130			
Xylenes (total)	21.0	0.50	"	30.0		70.0	70-130			

Surrogate: a,a,a-Trifluorotoluene	7.83		"	10.0		78.3	70-130			
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**LCS (2010044-BS2)**

Prepared & Analyzed: 01/14/02

Purgeable Hydrocarbons as Gasoline	275	50	ug/l	250		110	70-130			
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Surrogate: a,a,a-Trifluorotoluene	7.89		"	10.0		78.9	70-130			
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**Matrix Spike (2010044-MS1)**

Source: L201016-06

Prepared: 01/14/02 Analyzed: 01/15/02

Purgeable Hydrocarbons as Gasoline	263	50	ug/l	250	ND	105	60-140			
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Surrogate: a,a,a-Trifluorotoluene	9.81		"	10.0		98.1	70-130			
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**Matrix Spike Dup (2010044-MSD1)**

Source: L201016-06

Prepared: 01/14/02 Analyzed: 01/15/02

Purgeable Hydrocarbons as Gasoline	246	50	ug/l	250	ND	98.4	60-140	6.68	25	
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Surrogate: a,a,a-Trifluorotoluene	9.17		"	10.0		91.7	70-130			
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Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin CA, 94568

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

Reported:  
01/22/02 14:30

**Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - 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 2010018 - EPA 5030B [P/T]**

**Blank (2010018-BLK1)**

Prepared & Analyzed: 01/07/02

Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	22.7		"	25.0		90.8	70-130			
<i>Surrogate: Toluene-d8</i>	23.1		"	25.0		92.4	70-130			

**LCS (2010018-BS1)**

Prepared & Analyzed: 01/07/02

Methyl tert-butyl ether	49.0	1.0	ug/l	50.0		98.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.9		"	25.0		95.6	70-130			
<i>Surrogate: Toluene-d8</i>	23.5		"	25.0		94.0	70-130			

**Matrix Spike (2010018-MS1)**

Source: L201014-03

Prepared & Analyzed: 01/07/02

Methyl tert-butyl ether	43.0	1.0	ug/l	50.0	1.3	83.4	60-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	21.8		"	25.0		87.2	70-130			
<i>Surrogate: Toluene-d8</i>	23.7		"	25.0		94.8	70-130			

**Matrix Spike Dup (2010018-MSD1)**

Source: L201014-03

Prepared & Analyzed: 01/07/02

Methyl tert-butyl ether	45.9	1.0	ug/l	50.0	1.3	89.2	60-140	6.72	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	22.8		"	25.0		91.2	70-130			
<i>Surrogate: Toluene-d8</i>	24.0		"	25.0		96.0	70-130			

**Batch 2010020 - EPA 5030B [P/T]**

**Blank (2010020-BLK1)**

Prepared & Analyzed: 01/07/02

Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	9.78		"	10.0		97.8	70-130			

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.*



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

Project: Tosco(1)  
Project Number: Unocal SS#7176, Dublin, CA  
Project Manager: Deanna Harding

**Reported:**  
01/22/02 14:30

**Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Notes
<b>Batch 2010020 - EPA 5030B [P/T]</b>									
<b>Blank (2010020-BLK1)</b>					Prepared & Analyzed: 01/07/02				
Surrogate: Toluene-d8	10.1		ug/l	10.0		101 70-130			
<b>LCS (2010020-BS1)</b>					Prepared & Analyzed: 01/07/02				
Methyl tert-butyl ether	44.3	1.0	ug/l	50.0		88.6 70-130			
Surrogate: 1,2-Dichloroethane-d4	9.42		"	10.0		94.2 70-130			
Surrogate: Toluene-d8	9.80		"	10.0		98.0 70-130			
<b>Matrix Spike (2010020-MS1)</b>					Source: L201015-09 Prepared & Analyzed: 01/07/02				
Methyl tert-butyl ether	42.3	1.0	ug/l	50.0	ND	84.6 60-140			
Surrogate: 1,2-Dichloroethane-d4	9.50		"	10.0		95.0 70-130			
Surrogate: Toluene-d8	9.75		"	10.0		97.5 70-130			
<b>Matrix Spike Dup (2010020-MSD1)</b>					Source: L201015-09 Prepared & Analyzed: 01/07/02				
Methyl tert-butyl ether	41.0	1.0	ug/l	50.0	ND	82.0 60-140	3.12	25	
Surrogate: 1,2-Dichloroethane-d4	9.47		"	10.0		94.7 70-130			
Surrogate: Toluene-d8	9.77		"	10.0		97.7 70-130			



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Project: Tosco(1)  
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Project Manager: Deanna Harding

**Reported:**  
01/22/02 14:30

**Diesel Hydrocarbons (C10-C28) by 8015B modified - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2A14011 - EPA 3510B</b>									
<b>Blank (2A14011-BLK1)</b>					Prepared & Analyzed: 01/14/02				
Diesel Range Organics (C10-C28)	ND	50	ug/l						
<i>Surrogate: n-Octacosane</i>	47.7		"	50.0		95.4 50-150			
<b>LCS (2A14011-BS1)</b>					Prepared & Analyzed: 01/14/02				
Diesel Range Organics (C10-C28)	544	50	ug/l	500		109 60-140			
<i>Surrogate: n-Octacosane</i>	49.7		"	50.0		99.4 50-150			
<b>LCS Dup (2A14011-BSD1)</b>					Prepared & Analyzed: 01/14/02				
Diesel Range Organics (C10-C28)	534	50	ug/l	500		107 60-140	1.86	50	
<i>Surrogate: n-Octacosane</i>	44.4		"	50.0		88.8 50-150			

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 6747 Sierra Court, Suite J  
 Dublin CA, 94568

 Project: Tosco(1)  
 Project Number: Unocal SS#7176, Dublin, CA  
 Project Manager: Deanna Harding

**Reported:**  
 01/22/02 14:30

**Diesel Hydrocarbons (C10-C28) with Silica Gel Cleanup by 8015B modified - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2A16001 - EPA 3510B</b>										
<b>Blank (2A16001-BLK1)</b>										
					Prepared: 01/16/02 Analyzed: 01/20/02					
Diesel Range Organics (C10-C28)	ND	50	ug/l							
Surrogate: n-Octacosane	45.1		"	50.0		90.2	40-140			
<b>LCS (2A16001-BS1)</b>										
					Prepared: 01/16/02 Analyzed: 01/20/02					
Diesel Range Organics (C10-C28)	657	50	ug/l	500		131	40-140			
Surrogate: n-Octacosane	61.4		"	50.0		123	40-140			
<b>LCS Dup (2A16001-BSD1)</b>										
					Prepared: 01/16/02 Analyzed: 01/20/02					
Diesel Range Organics (C10-C28)	594	50	ug/l	500		119	40-140	10.1	50	
Surrogate: n-Octacosane	55.4		"	50.0		111	40-140			



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Project: Tosco(1)  
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Project Manager: Deanna Harding

**Reported:**  
01/22/02 14:30

### Notes and Definitions

- D-15 Chromatogram Pattern: Unidentified Hydrocarbons C10-C28
- HT-08 EPA 8015B recommends a 7 day holding time. However, according to the 14 day holding time referenced in the California LUFT manual, the results are valid and useful for their intended purpose.
- P-02 Chromatogram Pattern: Weathered Gasoline C6-C12
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference