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**ENVIRONMENTAL RESOLUTIONS, INC.**

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July 13, 2001  
ERI 2023QSR.L18

AUG 02 2001

Mr. Steve Morse  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

Subject: Tosco Marketing Company, Quarterly Summary Reports, Second Quarter 2001.

Mr. Morse:

At the request of Tosco Marketing Company (Tosco), Environmental Resolutions, Inc. (ERI) is submitting the attached second quarter 2001 summary reports for various Tosco facilities at which ERI is performing ongoing environmental work within the San Francisco Bay Region. Please call me at (415) 382-5994 with any questions.

Sincerely,  
Environmental Resolutions, Inc.

Glenn L. Matteucci  
Tosco Program Manager

Attachments: Second Quarter 2001 Quarterly Summary Reports

cc: Mr. Dave DeWitt, Tosco  
Mr. Ed Ralston, Tosco  
Mr. David Camille, Tosco  
Mr. Jake Madden, San Mateo County Department of Health Services  
Mr. Mamdouh Awwad, City and County of San Francisco Department of Public Health  
Bureau of Environmental Health Management  
Mr. Ted Trenholm, Alameda County Water District  
Ms. Eva Chu, Alameda County Department of Environmental Health Services  
Mr. Amir Gholami, Alameda County Department of Environmental Health Services  
Mr. Bill Mitchell, City of Berkeley Planning & Economic Development Department  
Toxics Management Division  
Mr. Geoffrey A. Fiedler, R.G., City of Berkeley Planning & Economic Development  
Department-Toxics Management Division  
Mr. Bradley Mark, San Rafael Fire Department  
Ms. Jacqueline Bertaina, Napa County Department of Environmental Management

## QUARTERLY SUMMARY REPORT

Second Quarter 2001  
(April - June)

**TOSCO 76 SERVICE STATION 7176**  
7850 Amador Valley Boulevard  
Dublin, California

City/County ID: City of Dublin/Alameda County

Lead Agency: Alameda County Health Care Services Agency

### BACKGROUND

In November 1994, Unocal Corporation (Unocal) replaced the fuel underground storage tanks (USTs) and removed the used-oil UST. Approximately 1,863 tons of hydrocarbon-impacted soil was excavated and transported to a Unocal-approved landfill. In July 1995, Unocal performed a soil and groundwater investigation that included drilling nine soil borings and constructing three on-site groundwater monitoring wells. During March 1998, Tosco Marketing Company (Tosco) performed an off-site soil and groundwater investigation that included installation of two off-site groundwater monitoring wells south and east of the site. During third quarter 2000, ERI completed and submitted to the appropriate regulatory agencies the *Request and Work Plan for Case Closure* presenting the results of a groundwater receptor survey and risk-based corrective action Tier II analysis and requesting closure of the environmental case.

### RECENT QUARTER ACTIVITIES

Performed quarterly groundwater monitoring, sampling, and reporting. Completed and submitted the *Addendum to Request and Work Plan for Case Closure*, including hydrographs and concentration versus time graphs for select wells, and required agency closure summary forms, to the appropriate regulatory agencies.

### NEXT QUARTER ACTIVITIES

Continue quarterly groundwater monitoring, sampling and reporting. Await regulatory response to the closure plan and addendum.

### CHARACTERIZATION/REMEDIAL STATUS

Soil contamination delineated?	<u>Yes</u>
Dissolved groundwater delineated?	<u>No</u>
Free Product delineated?	<u>NA</u>
Amount of gw contaminant recovered this quarter?	<u>0 gallons</u>
Amount of gw contaminant recovered to date?	<u>15,511 gallons gw removed</u>
Soil remediation in progress?	<u>1,863 tons removed</u>
Dissolved/free product remediation in progress?	<u>No</u>

CONSULTANT: Environmental Resolutions, Inc.



# GETTLER-RYAN INC.

## TRANSMITTAL

August 14, 2001

G-R #: 180022

STW 4/04 ✓

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

CC: Mr. Keith Romstad  
ERI, Inc.  
73 Digital Drive, Suite 100  
Novato, California 94949

Deanna  
9/17/01  
*(Signature)*

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	August 3, 2001	Groundwater Monitoring and Sampling Report Third Quarter - Event of July 6, 2001

### COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by **August 28, 2001**, 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.

August 3, 2001  
G-R Job #180022

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

**RE: Third Quarter Event of July 6, 2001**  
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,

- For -

Deanna L. Harding  
Project Coordinator

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

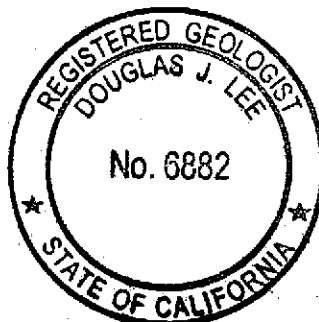
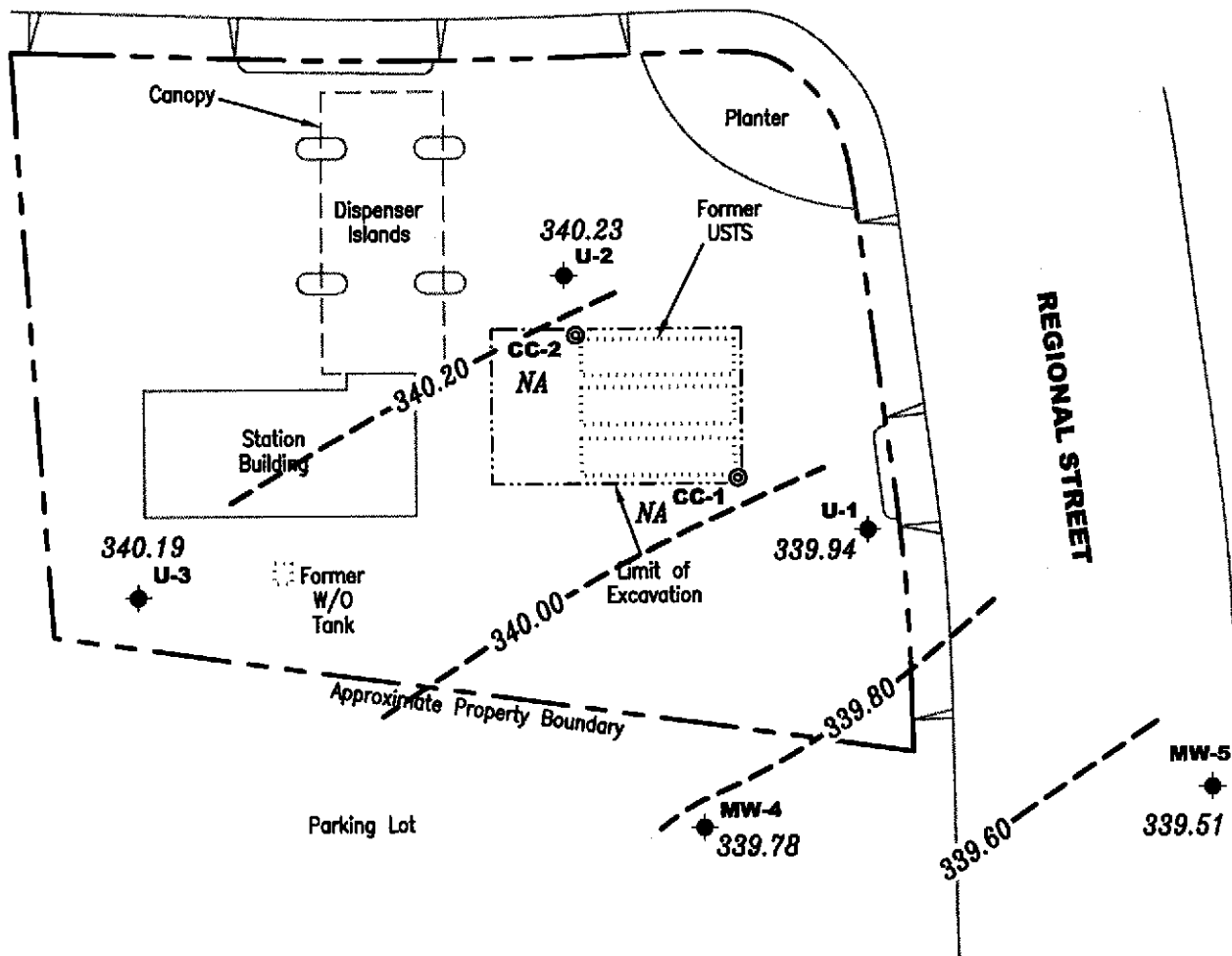


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Table 3: Dissolved Oxygen Concentrations  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field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

7176.qml

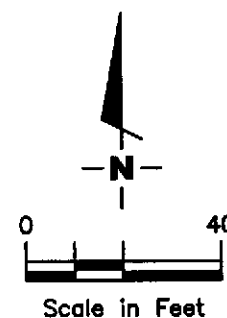
**AMADOR VALLEY BOULEVARD**



**EXPLANATION**

- ◆ Groundwater monitoring well
- ⊙ Conductor casing
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- - - 99.99 - - - Groundwater elevation contour, dashed where inferred.
- NA Not Available

Approximate groundwater flow direction at a gradient of 0.004 to 0.005 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**

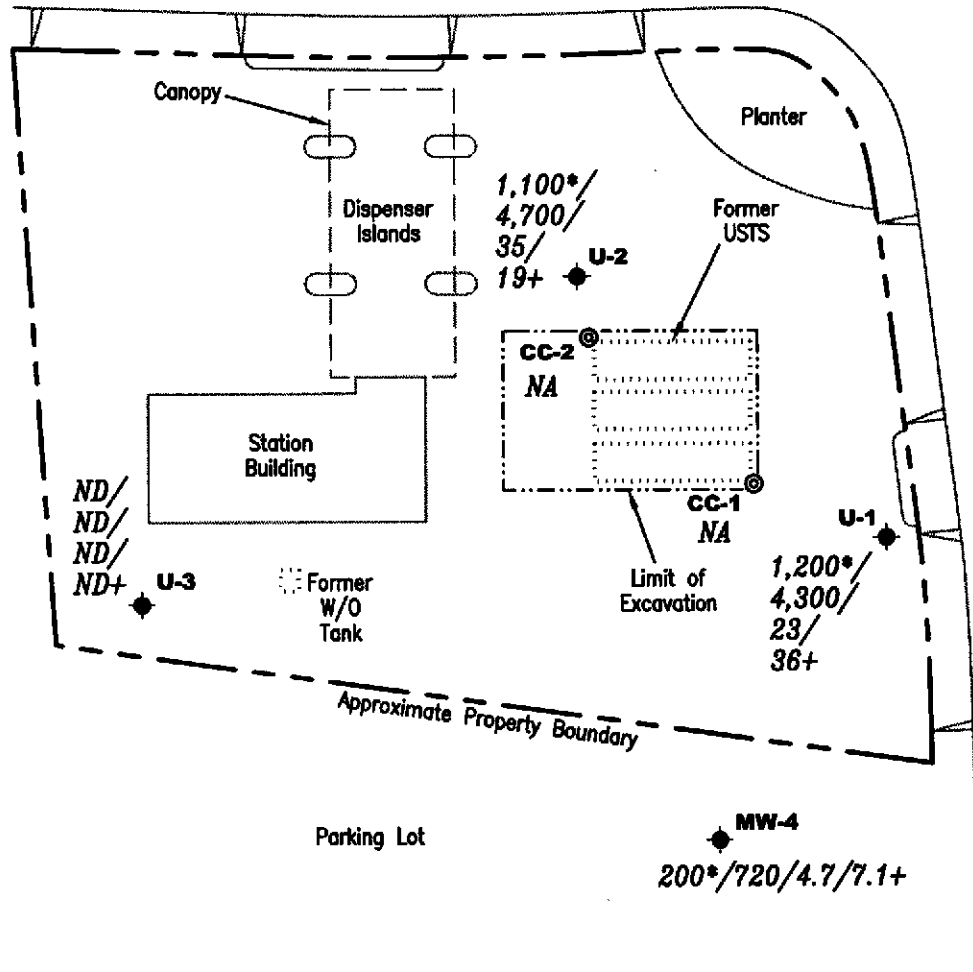
PROJECT NUMBER  
 180022

REVIEWED BY

DATE  
 July 6, 2001

REVISED DATE

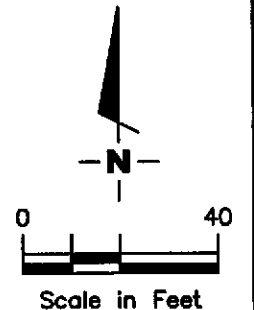
**AMADOR VALLEY BOULEVARD**



**REGIONAL STREET**

**EXPLANATION**

- ◆ Groundwater monitoring well
- ⊙ Conductor casing
- A/B/C/D TPH(D) (Total Petroleum Hydrocarbons as Diesel)/TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb
- + MTBE by EPA Method 8260
- ND Not Detected
- \* TPH(D) with silica gel
- NA Not Available



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

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

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

FIGURE  
**2**

PROJECT NUMBER  
**180022**

REVIEWED BY

DATE  
**July 6, 2001**

REVISED DATE

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

WELL ID/ TOC*	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>U-1</b>											
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>
<b>U-2</b>											
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>

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

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-D <sup>◆</sup> (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-2	04/11/96 <sup>2</sup>	12.75	10.0-30.0	343.84	<sup>5</sup> 1,900/--	7,700	130	27	1,100	110	340
(cont)	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>
	<b>07/06/01</b>	<b>16.32</b>		<b>340.23</b>	<sup>10</sup> 1,400/1,100 <sup>10,30</sup>	<b>4,700<sup>16</sup></b>	<b>35</b>	<b>11</b>	<b>12</b>	<b>5.3</b>	<b>62/19<sup>17</sup></b>
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



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

WELL ID/ TOC*	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	04/08/97	15.73	10.0-30.0	342.40	ND/--	ND	ND	ND	ND	ND	ND
(cont)	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	16.50		341.59	--/ND	ND	ND	ND	ND	ND	ND
	01/04/99	17.70		340.39	ND/--	ND	ND	ND	ND	ND	ND
	04/05/99	15.67		342.42	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	07/01/99	16.79		341.30	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	09/30/99	17.60		340.49	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	01/03/00	18.86		339.23	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	04/04/00	15.10		342.99	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	07/14/00	16.85		341.24	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	10/27/00	18.35		339.74	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	01/08/01	18.31		339.78	--/ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	04/03/01	16.70		341.39	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	<b>07/06/01</b>	<b>17.90</b>		<b>340.19</b>	<b>ND/--</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND/ND<sup>17</sup></b>
<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>

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

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs)	GWE (msl)	TPH-D <sup>◆</sup> (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4	01/08/01	16.64	10.0-25.0	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>
(cont)	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>
<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>
	04/03/01	14.41		340.62	ND/--	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	07/06/01	15.52		339.51	ND/--	ND	ND	ND	ND	ND	ND/ND <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

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

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs)	GWE (msl)	TPH-D◆ (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
TB-LB	04/04/00	--	--	--	--	ND	ND	ND	ND	ND	ND
(cont)	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

**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.

**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)	EDB (ppb)	1,2-DCA (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>
	<b>07/06/01</b>	<b>ND</b>	<b>ND</b>	<b>36</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
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
	<b>07/06/01</b>	<b>ND</b>	<b>ND</b>	<b>19</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
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
	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

**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)	EDB (ppb)	1,2-DCA (ppb)
U-3	01/08/01	ND	ND	ND	ND	ND	ND	ND	ND
(cont)	04/03/01	ND	ND	ND	ND	ND	ND	ND	ND
	07/06/01	ND	ND	ND	ND	ND	ND	ND	ND
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
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
	04/03/01	ND	ND	ND	ND	ND	ND	ND	ND
	07/06/01	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

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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  
EDB = 1,2-Dibromomethane  
1,2-DCA = 1,2-Dichloroethane  
(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 Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # TOSCO # 7176 Job#: 180022  
 Address: 7850 Amador Valley Blvd. Date: 7/4/01  
 City: Dublin, Ca. Sampler: Vartkes

Well ID: U-1 Well Condition: OK  
 Well Diameter: 2 in. Hydrocarbon Thickness: 0.00 in. Amount Bailed (product/water): Ø (gal.)  
 Total Depth: 27.80 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water: 15.65 ft. Factor (VF) 6" = 1.50 12" = 5.80  
12.15 x VF 0.17 = 2.06 x 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

Starting Time: 1350 Weather Conditions: clear  
 Sampling Time: 1405 Water Color: grayish Odor: 4  
 Purging Flow Rate: 1 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>1352</u>	<u>2</u>	<u>7.40</u>	<u>867</u>	<u>73.7</u>	_____	_____	_____
<u>1354</u>	<u>4</u>	<u>7.26</u>	<u>888</u>	<u>71.9</u>	_____	_____	_____
<u>1356</u>	<u>6.5</u>	<u>7.23</u>	<u>896</u>	<u>71.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>5 x VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH6/BTEX/MTOE + (604/3+1,2,DCAT/EDB) (8260)</u>
<u>"</u>	<u>1 Amber</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: 7/6/01  
 City: Dublin, Ca. Sampler: Vartkes

Well ID U-2 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: 0.00 in. Amount Bailed (product/water): Ø (gal.)  
 Total Depth 26.46 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 16.32 ft. Factor (VF) 6" = 1.50 12" = 5.80

10.14 x VF 0.17 = 1.72 x 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

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

Starting Time: 1415 Weather Conditions: clear  
 Sampling Time: 1430 Water Color: grayish Odor: Y  
 Purging Flow Rate: 1 gpm Sediment Description: SDH  
 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)
<u>1417</u>	<u>2</u>	<u>7.45</u>	<u>971</u>	<u>74.0</u>			
<u>1419</u>	<u>4</u>	<u>7.30</u>	<u>989</u>	<u>72.2</u>			
<u>1421</u>	<u>5.5</u>	<u>7.27</u>	<u>997</u>	<u>71.8</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-2</u>	<u>5 x VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>(TPH, BTEX, MTBE + 604's + 1,2 DCA + EDB) (8260)</u>
<u>"</u>	<u>1 Amber</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: 7/6/01  
 City: Dublin, Ca. Sampler: Vartkes

Well ID: U-3 Well Condition: OK  
 Well Diameter: 2 in. Hydrocarbon Thickness: 0.00 in. Amount Bailed (product/water): Ø (gal.)  
 Total Depth: 28.41 ft. Volume Factor (VF): 2" = 0.17, 3" = 0.38, 4" = 0.66  
 Depth to Water: 17.90 ft. 6" = 1.50, 12" = 5.80

10.51 x VF 0.17 = 1.78 x 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

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

Starting Time: 1215 Weather Conditions: clear  
 Sampling Time: 1230 Water Color: brn. Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: sil  
 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>1217</u>	<u>2</u>	<u>7.84</u>	<u>966</u>	<u>72.3</u>			
<u>1219</u>	<u>4</u>	<u>7.65</u>	<u>980</u>	<u>71.1</u>			
<u>1221</u>	<u>5.5</u>	<u>7.58</u>	<u>992</u>	<u>70.9</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-3</u>	<u>5 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>(TPH6/BTEX/MTOE + 6043+12DCATEDB (8260))</u>
<u>"</u>	<u>1 Amber</u>	<u>~</u>	<u>NONE</u>	<u>~</u>	<u>TPH-D</u>

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # Tosco # 7176  
Address: 7850 Amador Valley Blvd  
City: Dublin, Ca.

Job#: 180022  
Date: 7/6/01  
Sampler: Vartkes

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

Depth to Water: 16.63 ft.

8.77 x VF 0.17 = 1.49 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: 1320  
Sampling Time: 1335  
Purging Flow Rate: \_\_\_\_\_ gpm.  
Did well de-water? no

Weather Conditions: Clear  
Water Color: brn. Odor: 4  
Sediment Description: silt  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1322</u>	<u>1.5</u>	<u>7.55</u>	<u>1037</u>	<u>73.5</u>	_____	_____	_____
<u>1323</u>	<u>3</u>	<u>7.40</u>	<u>1058</u>	<u>72.0</u>	_____	_____	_____
<u>1325</u>	<u>4.5</u>	<u>7.36</u>	<u>1064</u>	<u>71.5</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>5 x VOA VIAL</u>	<u>Y</u>	<u>HC</u>	<u>SEQUOIA</u>	<u>TPH6/BTEX/MTOE + 60X/5+12.DAT/EDB (8260)</u>
<u>1</u>	<u>1 Amber</u>	<u>u</u>	<u>NONE</u>	<u>u</u>	<u>TPH-D</u>
_____	_____	_____	_____	_____	_____

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # Tosco # 7176  
Address: 7850 Amador Valley Blvd  
City: Dublin, Ca.

Job#: 180022  
Date: 7/6/01  
Sampler: Vartken

Well ID: MW-5  
Well Diameter: 2 in.  
Total Depth: 24.88 ft.  
Depth to Water: 15.52 ft.

Well Condition: OK  
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

9.36 x VF 0.17 = 1.59 x 3 (case volume) = Estimated Purge Volume: 5.0 (gal.)

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

Starting Time: 1249      Weather Conditions: clear  
Sampling Time: 1305      Water Color: low      Odor: no  
Purging Flow Rate: 1 gpm.      Sediment Description: soft  
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)
<u>1251</u>	<u>1.5</u>	<u>7.71</u>	<u>927</u>	<u>74.1</u>			
<u>1253</u>	<u>3</u>	<u>7.53</u>	<u>945</u>	<u>71.9</u>			
<u>1255</u>	<u>5</u>	<u>7.50</u>	<u>952</u>	<u>71.3</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>HC</u>	<u>SEQUOIA</u>	<u>TPH, BTEX, MTBE +</u> <u>6 ON + 1, 2, DCA, ENB (8260)</u>
<u>11</u>	<u>1 Amber</u>	<u>u</u>	<u>NONE</u>	<u>u</u>	<u>TPH-D</u>

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



Tosco Marketing Company  
2020 Green Canyon Pl., San Jose, CA 95128

Facility Number INOCAL SS# 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) Deanna L. Harding  
 (Phone) 510-551-7555 (Fax Number) 510-551-7888

Contact (Name) MR. DAVE DEWITT  
 (Phone) (925) 277-2384  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) Vartkes Tashjian  
 Collection Date 7/6/01  
 Signature [Signature]

DO NOT BILL  
TB-LB ANALYSIS

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Lead (Yes or No)	Analyses To Be Performed											Remarks						
								TPH GC + STEK W/M/T/B/E (8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (NDP or AA)										
10707																									
B-LB	01	1	W	G		HU	Y	X																	Run Silica Gel
U-1	02	6	~	~	1405	~	~	X	X																clean-up on eng
U-2	03	6	~	~	1430	~	~	X	X																Diesel hits
U-3	04	6	~	~	1335	~	~	X	X																
W-4	05	6	~	~	1335	~	~	X	X																
W-5	06	6	~	~	1305	~	~	X	X																

604's (8260)  
12 DCA FEDE

Relinquished By (Signature) <u>[Signature]</u>	Organization G-R Inc.	Date/Time 7/6/01	Received By (Signature) <u>[Signature]</u>	Organization Sequoia	Date/Time 7/6/01
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice)

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





**Sequoia  
Analytical**

RECEIVED

1551 Industrial Road  
San Carlos, CA 94070-4111  
(650) 232-9600  
FAX (650) 232-9612  
www.sequoialabs.com

JUL 27 2001

**GETTLER-RYAN INC.  
GENERAL CONTRACTOR**

July 26 , 2001

Deanna Harding  
Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin, CA 94568  
RE: Tosco(1) / L107077

Enclosed are the results of analyses for samples received by the laboratory on 07/06/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate Number 2360



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

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

Reported:  
07/26/01 06:59

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L107077-01	Water	07/06/01 00:00	07/06/01 16:50
U-1	L107077-02	Water	07/06/01 14:05	07/06/01 16:50
U-2	L107077-03	Water	07/06/01 14:30	07/06/01 16:50
U-3	L107077-04	Water	07/06/01 12:30	07/06/01 16:50
MW-4	L107077-05	Water	07/06/01 13:35	07/06/01 16:50
MW-5	L107077-06	Water	07/06/01 13:05	07/06/01 16:50

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

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

Reported:  
 07/26/01 06:59

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

**TB-LB (L107077-01) Water** Sampled: 07/06/01 00:00 Received: 07/06/01 16:50

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070089	07/19/01	07/19/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		97.7 %		70-130	"	"	"	"	

**U-1 (L107077-02) Water** Sampled: 07/06/01 14:05 Received: 07/06/01 16:50

Purgeable Hydrocarbons as Gasoline	4300	500	ug/l	10	1070090	07/19/01	07/19/01	DHS LUFT	P-02
Benzene	23	5.0	"	"	"	"	"	"	
Toluene	6.4	5.0	"	"	"	"	"	"	
Ethylbenzene	57	5.0	"	"	"	"	"	"	
Xylenes (total)	6.8	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	58	50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		79.2 %		70-130	"	"	"	"	

**U-2 (L107077-03) Water** Sampled: 07/06/01 14:30 Received: 07/06/01 16:50

Purgeable Hydrocarbons as Gasoline	4700	500	ug/l	10	1070090	07/19/01	07/19/01	DHS LUFT	P-02
Benzene	35	5.0	"	"	"	"	"	"	
Toluene	11	5.0	"	"	"	"	"	"	
Ethylbenzene	12	5.0	"	"	"	"	"	"	
Xylenes (total)	5.3	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	62	50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		97.3 %		70-130	"	"	"	"	

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

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

Reported:  
07/26/01 06:59

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-3 (L107077-04) Water</b> Sampled: 07/06/01 12:30 Received: 07/06/01 16:50									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070090	07/19/01	07/19/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		82.6 %	70-130		"	"	"	"	
<b>MW-4 (L107077-05) Water</b> Sampled: 07/06/01 13:35 Received: 07/06/01 16:50									
Purgeable Hydrocarbons as Gasoline	720	50	ug/l	1	1070090	07/19/01	07/19/01	DHS LUFT	P-02
Benzene	4.7	0.50	"	"	"	"	"	"	
Toluene	1.5	0.50	"	"	"	"	"	"	
Ethylbenzene	2.5	0.50	"	"	"	"	"	"	
Xylenes (total)	0.74	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	10	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		113 %	70-130		"	"	"	"	
<b>MW-5 (L107077-06) Water</b> Sampled: 07/06/01 13:05 Received: 07/06/01 16:50									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070089	07/19/01	07/19/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		78.0 %	70-130		"	"	"	"	

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

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

Reported:  
 07/26/01 06:59

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>U-1 (L107077-02) Water</b> <b>Sampled: 07/06/01 14:05</b> <b>Received: 07/06/01 16:50</b>										
Ethanol	ND	1000		ug/l	1	1070064	07/13/01	07/14/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	"	"
Methyl tert-butyl ether	36	2.0	"	"	"	"	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	"	"
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		86.8 %		76-114		"	"	"	"	"
<i>Surrogate: Toluene-d8</i>		98.6 %		88-110		"	"	"	"	"
<b>U-2 (L107077-03) Water</b> <b>Sampled: 07/06/01 14:30</b> <b>Received: 07/06/01 16:50</b>										
Ethanol	ND	1000		ug/l	1	1070064	07/13/01	07/14/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	"	"
Methyl tert-butyl ether	19	2.0	"	"	"	"	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	"	"
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		86.2 %		76-114		"	"	"	"	"
<i>Surrogate: Toluene-d8</i>		94.4 %		88-110		"	"	"	"	"
<b>U-3 (L107077-04) Water</b> <b>Sampled: 07/06/01 12:30</b> <b>Received: 07/06/01 16:50</b>										
Ethanol	ND	1000		ug/l	1	1070064	07/13/01	07/14/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	"	"
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	"	"
<i>Surrogate: 1,2-Dichloroethane-d4</i>		81.6 %		76-114		"	"	"	"	"
<i>Surrogate: Toluene-d8</i>		102 %		88-110		"	"	"	"	"

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

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

Reported:  
 07/26/01 06:59

**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 (L107077-05) Water    Sampled: 07/06/01 13:35    Received: 07/06/01 16:50</b>									
Ethanol	ND	1000	ug/l	1	1070064	07/13/01	07/14/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	7.1	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		82.0 %		76-114	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		102 %		88-110	"	"	"	"	
<b>MW-5 (L107077-06) Water    Sampled: 07/06/01 13:05    Received: 07/06/01 16:50</b>									
Ethanol	ND	1000	ug/l	1	1070064	07/13/01	07/14/01	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		81.6 %		76-114	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.4 %		88-110	"	"	"	"	

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

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

Reported:  
 07/26/01 06:59

**Diesel Hydrocarbons (C9-C24) by DHS LUFT  
 Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (L107077-02) Water</b> Sampled: 07/06/01 14:05 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	1600	50	ug/l	1	1G18016	07/18/01	07/20/01	DHS LUFT	D-15
Surrogate: n-Pentacosane		86.5 %	50-150		"	"	"	"	
<b>U-2 (L107077-03) Water</b> Sampled: 07/06/01 14:30 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	1400	50	ug/l	1	1G18016	07/18/01	07/20/01	DHS LUFT	D-15
Surrogate: n-Pentacosane		83.9 %	50-150		"	"	"	"	
<b>U-3 (L107077-04) Water</b> Sampled: 07/06/01 12:30 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	ND	50	ug/l	1	1G18016	07/18/01	07/20/01	DHS LUFT	
Surrogate: n-Pentacosane		76.7 %	50-150		"	"	"	"	
<b>MW-4 (L107077-05) Water</b> Sampled: 07/06/01 13:35 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	230	50	ug/l	1	1G18016	07/18/01	07/20/01	DHS LUFT	D-15
Surrogate: n-Pentacosane		69.8 %	50-150		"	"	"	"	
<b>MW-5 (L107077-06) Water</b> Sampled: 07/06/01 13:05 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	ND	50	ug/l	1	1G18016	07/18/01	07/20/01	DHS LUFT	S-09
Surrogate: n-Pentacosane		72.6 %	50-150		"	"	"	"	

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

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

Reported:  
 07/26/01 06:59

**Diesel Hydrocarbons (C9-C24) with Silica Gel Cleanup by DHS LUFT  
 Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (L107077-02) Water</b> Sampled: 07/06/01 14:05 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	1200	50	ug/l	1	1G24009	07/24/01	07/24/01	DHS LUFT	D-15,D-23,H-06
Surrogate: n-Pentacosane		70.0 %	40-140		"	"	"	"	H-06
<b>U-2 (L107077-03) Water</b> Sampled: 07/06/01 14:30 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	1100	50	ug/l	1	1G24009	07/24/01	07/24/01	DHS LUFT	D-15,D-23,H-06
Surrogate: n-Pentacosane		83.2 %	40-140		"	"	"	"	H-06
<b>MW-4 (L107077-05) Water</b> Sampled: 07/06/01 13:35 Received: 07/06/01 16:50									
Diesel Range Hydrocarbons	200	50	ug/l	1	1G24009	07/24/01	07/24/01	DHS LUFT	D-15,D-23,H-06
Surrogate: n-Pentacosane		83.6 %	40-140		"	"	"	"	H-06



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6747 Sierra Court, Suite J  
Dublin CA, 94568

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

Reported:  
07/26/01 06:59

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020 - 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 1070089 - EPA 5030B (P/T)**

**Blank (1070089-BLK1)**

Prepared & Analyzed: 07/19/01

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	8.93		"	10.0		89.3	70-130			

**LCS (1070089-BS1)**

Prepared & Analyzed: 07/19/01

Benzene	8.01	0.50	ug/l	10.0		80.1	70-130			
Toluene	7.70	0.50	"	10.0		77.0	70-130			
Ethylbenzene	7.79	0.50	"	10.0		77.9	70-130			
Xylenes (total)	23.2	0.50	"	30.0		77.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.46		"	10.0		84.6	70-130			

**LCS (1070089-BS2)**

Prepared & Analyzed: 07/19/01

Purgeable Hydrocarbons as Gasoline	241	50	ug/l	250		96.4	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.88		"	10.0		98.8	70-130			

**Matrix Spike (1070089-MS1)**

Source: L107083-03

Prepared: 07/19/01 Analyzed: 07/20/01

Benzene	8.40	0.50	ug/l	10.0	ND	84.0	60-140			
Toluene	8.29	0.50	"	10.0	ND	82.9	60-140			
Ethylbenzene	8.32	0.50	"	10.0	ND	83.2	60-140			
Xylenes (total)	25.4	0.50	"	30.0	ND	84.7	60-140			
Surrogate: a,a,a-Trifluorotoluene	9.23		"	10.0		92.3	70-130			

**Matrix Spike Dup (1070089-MSD1)**

Source: L107083-03

Prepared: 07/19/01 Analyzed: 07/20/01

Benzene	8.35	0.50	ug/l	10.0	ND	83.5	60-140	0.597	25	
Toluene	8.11	0.50	"	10.0	ND	81.1	60-140	2.20	25	
Ethylbenzene	8.16	0.50	"	10.0	ND	81.6	60-140	1.94	25	
Xylenes (total)	24.8	0.50	"	30.0	ND	82.7	60-140	2.39	25	
Surrogate: a,a,a-Trifluorotoluene	9.42		"	10.0		94.2	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  
Project Manager: Deanna Harding

Reported:  
07/26/01 06:59

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8020 - 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 1070090 - EPA 5030B (P/T)**

**Blank (1070090-BLK1)**

Prepared & Analyzed: 07/19/01

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	9.64		"	10.0		96.4	70-130			

**LCS (1070090-BS1)**

Prepared & Analyzed: 07/19/01

Benzene	8.18	0.50	ug/l	10.0		81.8	70-130			
Toluene	8.03	0.50	"	10.0		80.3	70-130			
Ethylbenzene	8.21	0.50	"	10.0		82.1	70-130			
Xylenes (total)	25.0	0.50	"	30.0		83.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.71		"	10.0		87.1	70-130			

**LCS (1070090-BS2)**

Prepared & Analyzed: 07/19/01

Purgeable Hydrocarbons as Gasoline	237	50	ug/l	250		94.8	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.23		"	10.0		92.3	70-130			

**Matrix Spike (1070090-MS1)**

Source: L107086-02

Prepared & Analyzed: 07/19/01

Benzene	10.1	0.50	ug/l	10.0	ND	101	60-140			
Toluene	10.1	0.50	"	10.0	ND	101	60-140			
Ethylbenzene	10.3	0.50	"	10.0	ND	103	60-140			
Xylenes (total)	31.1	0.50	"	30.0	ND	104	60-140			
Surrogate: a,a,a-Trifluorotoluene	9.90		"	10.0		99.0	70-130			

**Matrix Spike Dup (1070090-MSD1)**

Source: L107086-02

Prepared: 07/19/01 Analyzed: 07/20/01

Benzene	9.35	0.50	ug/l	10.0	ND	93.5	60-140	7.71	25	
Toluene	9.29	0.50	"	10.0	ND	92.9	60-140	8.35	25	
Ethylbenzene	9.44	0.50	"	10.0	ND	94.4	60-140	8.71	25	
Xylenes (total)	29.0	0.50	"	30.0	ND	96.7	60-140	6.99	25	
Surrogate: a,a,a-Trifluorotoluene	9.04		"	10.0		90.4	70-130			

Gettler-Ryan/Geostrategies(1)  
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 Dublin CA, 94568

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

Reported:  
 07/26/01 06:59

**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 1070064 - EPA 5030B [P/T]**

**Blank (1070064-BLK1)**

Prepared & Analyzed: 07/13/01

Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	44.7		"	50.0		89.4	76-114			
<i>Surrogate: Toluene-d8</i>	51.2		"	50.0		102	88-110			

**Blank (1070064-BLK2)**

Prepared & Analyzed: 07/16/01

Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	41.7		"	50.0		83.4	76-114			
<i>Surrogate: Toluene-d8</i>	49.0		"	50.0		98.0	88-110			

**LCS (1070064-BS1)**

Prepared & Analyzed: 07/13/01

Methyl tert-butyl ether	47.4	2.0	ug/l	50.0		94.8	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	45.9		"	50.0		91.8	76-114			
<i>Surrogate: Toluene-d8</i>	52.2		"	50.0		104	88-110			

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

Reported:  
 07/26/01 06:59

**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 1070064 - EPA 5030B (P/T)</b>										
<b>LCS (1070064-BS2)</b>										
					Prepared & Analyzed: 07/16/01					
Methyl tert-butyl ether	48.6	2.0	ug/l	50.0		97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	39.7		"	50.0		79.4	76-114			
Surrogate: Toluene-d8	49.6		"	50.0		99.2	88-110			
<b>Matrix Spike (1070064-MS1)</b>										
					Source: L107074-03 Prepared & Analyzed: 07/13/01					
Methyl tert-butyl ether	39.0	2.0	ug/l	50.0	ND	78.0	60-140			
Surrogate: 1,2-Dichloroethane-d4	42.8		"	50.0		85.6	76-114			
Surrogate: Toluene-d8	51.1		"	50.0		102	88-110			
<b>Matrix Spike Dup (1070064-MSD1)</b>										
					Source: L107074-03 Prepared & Analyzed: 07/13/01					
Methyl tert-butyl ether	46.6	2.0	ug/l	50.0	ND	93.2	60-140	17.8	25	
Surrogate: 1,2-Dichloroethane-d4	42.1		"	50.0		84.2	76-114			
Surrogate: Toluene-d8	51.2		"	50.0		102	88-110			

Gettler-Ryan/Geostrategies(1)  
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 Dublin CA, 94568

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

Reported:  
 07/26/01 06:59

**Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1G18016 - EPA 3510B**

**Blank (1G18016-BLK1)**

Prepared: 07/18/01 Analyzed: 07/20/01

Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	76.3		"	100		76.3	50-150			

**LCS (1G18016-BS1)**

Prepared: 07/18/01 Analyzed: 07/20/01

Diesel Range Hydrocarbons	769	50	ug/l	1000		76.9	60-140			
Surrogate: n-Pentacosane	84.9		"	100		84.9	50-150			

**LCS Dup (1G18016-BSD1)**

Prepared: 07/18/01 Analyzed: 07/20/01

Diesel Range Hydrocarbons	814	50	ug/l	1000		81.4	60-140	5.69	50	
Surrogate: n-Pentacosane	91.7		"	100		91.7	50-150			

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 Dublin CA, 94568

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

Reported:  
 07/26/01 06:59

**Diesel Hydrocarbons (C9-C24) with Silica Gel Cleanup by DHS LUFT - Quality Control  
 Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1G24009 - EPA 3510B</b>										
<b>Blank (1G24009-BLK1)</b> Prepared: 07/24/01 Analyzed: 07/25/01										
Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	80.2		"	100		80.2	40-140			
<b>LCS (1G24009-BS1)</b> Prepared & Analyzed: 07/24/01										
Diesel Range Hydrocarbons	664	50	ug/l	1000		66.4	40-140			
Surrogate: n-Pentacosane	76.9		"	100		76.9	40-140			
<b>LCS Dup (1G24009-BSD1)</b> Prepared & Analyzed: 07/24/01										
Diesel Range Hydrocarbons	763	50	ug/l	1000		76.3	40-140	13.9	50	
Surrogate: n-Pentacosane	89.4		"	100		89.4	40-140			

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Reported:  
07/26/01 06:59

#### Notes and Definitions

- D-15 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
- D-23 Sample has undergone silica gel cleanup
- H-06 The result reported was generated out of hold time. The sample was originally run within hold time, but needed to be re-analyzed.
- P-02 Chromatogram Pattern: Weathered Gasoline C6-C12
- S-09 The closing calibration surrogate recovery was outside acceptable limit of 15% by 3%. Review of associated QC indicates the recovery for this surrogate does not represent an out-of-control condition
- 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