

# GETTLER - RYAN INCOTECTION

00 30M 13 VW 8: 00

June 2, 2000

G-R #:180022

TO:

Mr. David B. De Witt

Tosco Marketing Company

2000 Crow Canyon Place, Suite 400

TRANSMITTAL

San Ramon, California 94583

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite

Dublin, California 94568

CC: Mr. Keith Romstad

ERI, Inc.

73 Digital Drive, Suite 100

Novato, California 94949

○ }\0 RE:

Tosco(Unocal) SS #7176

7850 Amador Valley Blvd.

Dublin, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	May 24, 2000	Groundwater Monitoring and Sampling Report Second Quarter 2000 - Event of April 4, 2000

#### COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by *June 15*, 2000, this report will be distributed to the following:

#### Enclosure

cc:

Mr. Amir K. Gholami, REHS

Alameda County Health Care Services

1131 Harbor Bay Parkway Alameda, California 94502

May 24, 2000 G-R Job #180022

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

RE: Second Quarter 2000 Groundwater Monitoring & Sampling Report

Tosco (Unocal) Service Station #7176 7850 Amador Valley Boulevard

Dublin, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On April 4, 2000, field personnel monitored and sampled five wells (U-1, U-2, U-3, MW-4, and MW-5) at the above referenced site.

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.

No. 5577

Sincerely,

Deanna L. Harding

Project Coordinator

Stephen J. Carter /
Senior Geologist, R.G. No. 5577

Figure 1: Figure 2:

Potentiometric Map Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

Table 2:

Groundwater Analytical Results - Oxygenate Compounds

Table 3:

Dissolved Oxygen Concentrations

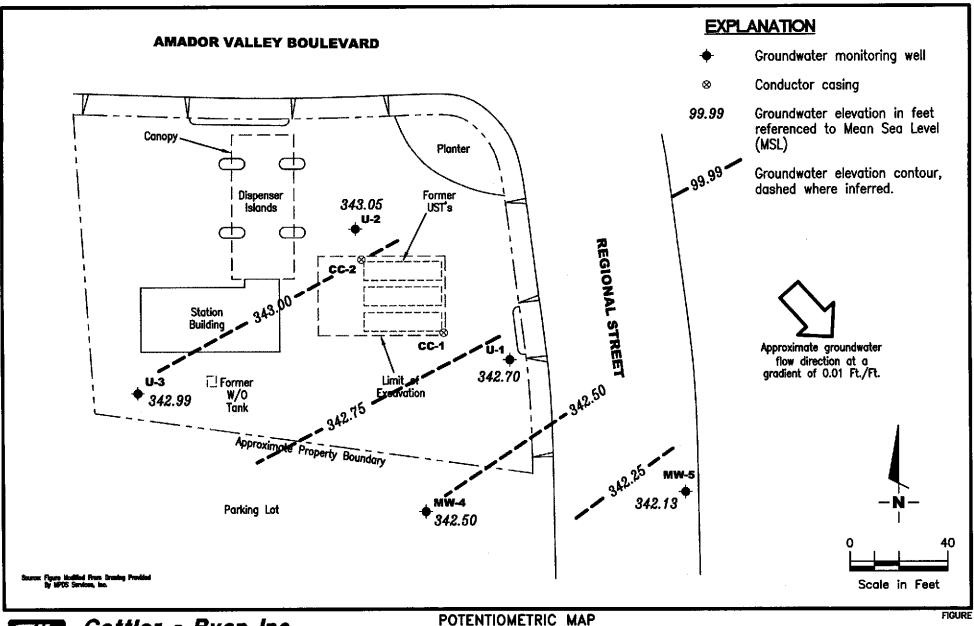
Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

7176.qml





Gettler - Ryan Inc.

6747 Sierra Ct., Suite J Dublin, CA 94568

(925) 551-7555

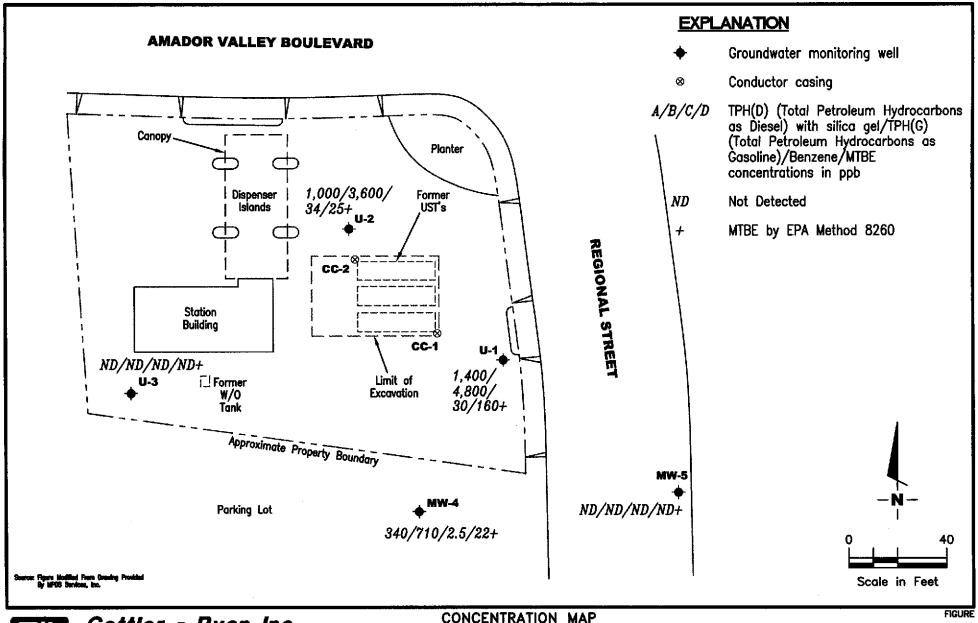
Tosco (Unocal) Service Station No. 7176 7850 Amador Valley Boulevard Dublin, California

REVISED DATE

REVIEWED BY

DATE April 4, 2000

JOB NUMBER 180022





Gettler - Ryan Inc.

6747 Sierra Ct., Suite J Dublin, CA 94568

(925) 551-7555

Tosco (Unocal) Service Station No. 7176 7850 Amador Valley Boulevard Dublin, California

REVISED DATE

180022

REVIEWED BY

DATE April 4, 2000

JOB NUMBER

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/		Date	DTW	GWE	TPH(D)∳	TPH(G)	В	T	E	X	MTBE
TOC*			(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-1											
355.62		07/08/95	12.59	343.03	9,400 <sup>3</sup>	39,000	1,500	19	1,600	5,200	
222.02		10/12/95	15.38	340.24	4,200 <sup>5</sup>	33,000	1,400	ND	1,400	3,100	<b></b> <sup>7</sup>
		01/11/96 <sup>1</sup>	16.33	339.29	8,200 <sup>5</sup>	8,300	690	11	680	1,500	8
		04/11/96 <sup>2</sup>	12.20	343.42	630 <sup>5</sup>	3,200	110	ND	180	290	<b>7</b> 90
		07/10/96	13.84	341.78	2,200 <sup>5</sup>	2,600	81	4.4	210	230	510
		10/30/96	15.85	339.77	560⁵	2,200	67	19	140	150	360
		01/27/97	12.20	343.42	$2,300^{5}$	4,600	98	ND	360	290	150
		04/08/97	13.46	342.16	1,300 <sup>5</sup>	2,800	50	ND	220	140	ND
		07/17/97	15.30	340.32	460 <sup>6</sup>	2,300	30	4.5	140	94	190
		10/17/97	16.33	339.29	510 <sup>6</sup>	1,500	31	6.7	110	88	220
		01/19/98	14.34	341.28	101,900/1,300 <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	$2,000^{14}$	4,500	51	$\mathrm{ND}^{12}$	590	430	190
		10/05/98	14.57	341.02	$/2,500^{10}$	7,500 <sup>16</sup>	53	$ND^{12}$	680	350	190/180 <sup>17</sup>
		01/04/99	1 <b>5</b> .35	340.24	112,700/2,500 <sup>11</sup>	10,000 <sup>19</sup>	$ND^{12}$	ND <sup>12</sup>	1,200	540	ND <sup>12</sup>
		04/05/99	13.64	341.95	10920/570 <sup>10</sup>	4,900	34	$ND^{12}$	350	150	150/55 <sup>17</sup>
		07/01/99	14.39	341.20	$^{10}2,700/3,600^{26}$	10,000	45	$ND^{12}$	850	420	260/110 <sup>17</sup>
		09/30/99	15.32	340.27	102,360/1,680 <sup>10</sup>	$7,150^{27}$	$ND^{12}$	${ m ND}^{12}$	415	84.4	<sup>12</sup> ND/195 <sup>17</sup>
		01/03/00	16.51	339.08	$^{26}2,000/1,700^{26}$	5,400 <sup>27</sup>	28	8.4	180	33	160/120 <sup>17</sup>
		04/04/00	12.89	342.70	$^{26}990/1,400^{26}$	4,800 <sup>27</sup>	30	ND <sup>12</sup>	210	93	170/160 <sup>17</sup>
U-2		00.0000	10.00		4,700 <sup>3</sup>	17 000	400	NIES	2 200	500	
356.59		07/08/95	12.68	343.91	4,700 3,600 <sup>5</sup>	17,000	430	ND	2,200	590	 <sup>7</sup>
		10/12/95	16.01	340.58	3,600 8,600 <sup>5</sup>	24,000	310	60 55	1,900	190	8
		01/11/96 <sup>1</sup>	17.06	339.53	·	10,000	210	55	1,400	240	
		04/11/96 <sup>2</sup>	12.75	343.84	1,9005	7,700	130	27	1,100	110	340
		07/10/96	14.42	342.17	2,3005	5,600	59	15	610	42	250
		10/30/96	16.82	339.77	1,8005	7,700	67	35	1,000	54	260
		01/27/97	12.91	343.68	660 <sup>5</sup>	1,600	14	ND	130	7.0	100
		04/08/97	14.07	342.52	2,000 <sup>5</sup>	4,300	35	ND	400	16	ND
		07/17/97	15.96	340.63	1,3006	6,200	17	22	410	ND	130
		10/17/97	17.03	339.56	1,400 <sup>6</sup>	7,100	71	26	520	50	ND
		01/19/98	15.10	341.49	102,100/1,500 <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

Table 1
Groundwater Monitoring Data and Analytical Results

	Dublin, California											
Well ID/		Date	DTW	GWE	TPH(D)∳	TPH(G)	В	T	E	X	MTBE	
TOC*			(fi.)	(msl)	(ppb)	(ррь)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	
U-2	NP	07/08/98	13.27	343.28	1,10014	1,600	34	8.5	100	7.4	190	
(cont)	INE	10/05/98	14.90	341.65	/1,300 <sup>10</sup>	2,900 <sup>18</sup>	37	8.4	110	7.3	78	
(com)		01/04/99	15.94	340.61	11670/250 <sup>20</sup>	$2,200^{21}$	35	ND <sup>12</sup>	17	$ND^{12}$	86	
		01/04/99	14.19	342.36	10660/490 <sup>10</sup>	4,900	21	77	130	310	100/6.9 <sup>17</sup>	
		04/03/99	14.19	341.57	<sup>24</sup> 210/440 <sup>26</sup>	1,500 <sup>25</sup>	7.6	$ND^{12}$	ND <sup>12</sup>	${ m ND}^{12}$	<sup>12</sup> ND/35 <sup>17</sup>	
		07/01/99 09/30/99	16.00	340.55	10483/340 <sup>10</sup>	256 <sup>27</sup>	1.85	$ND^{12}$	2.42	${ m ND}^{12}$	26.3/29.8 <sup>17</sup>	
		09/30/99	17.20	339.35	$^{26}2,400/1,900^{26}$	3,400 <sup>27</sup>	23	13	$ND^{12}$	44	46/14 <sup>17</sup>	
			17.20 13.50	339.33 3 <b>43.05</b>	<sup>26</sup> 1,000/1,000 <sup>26</sup>	3,600 <sup>27</sup>	34	17	56	$ND^{12}$	59/25 <sup>17</sup>	
		04/04/00	13.50	343.03	1,000/1,000	5,000	34	1,	20	<b>2</b> \ <del></del>		
<b>U-3</b>						4						
358.13		07/08/95	14.58	343.55	710 <sup>3</sup>	1,100 <sup>4</sup>	0.57	2.1	1.7	2.4		
		10/12/95	17.60	340.53	470 <sup>6</sup>	560	ND	0.87	0.7	1.1		
		01/11/96 <sup>1</sup>	18.65	339.48	$260^{6}$	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	63 <sup>6</sup>	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	80 <sup>15</sup>	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	NĐ	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>	
MW-4					u angli	0.500	5.0	6.4	16	31	ND <sup>12</sup>	
356.41		04/23/98	12.11	344.30	/1,400 <sup>11</sup>	2,500	5.9	6.4 ND <sup>12</sup>	16 ND <sup>12</sup>	ND <sup>12</sup>	ND <sup>12</sup>	
		07/08/98	13.70	342.71	1,40011	$1,000^{13}$	ND <sup>12</sup>	ND	ND	ND	ND	

Table 1
Groundwater Monitoring Data and Analytical Results

10/05/98 01/04/99 04/05/99 07/01/99 09/30/99 01/03/00 04/04/00	15.18 16.39 14.61 15.43 16.27 17.50 13.91	341.23 340.02 341.80 340.98 340.14 338.91 342.50	7PH(D)t (ppb) /230 <sup>10</sup> 1071/71 <sup>10</sup> 10340/210 <sup>10</sup> 24260/310 <sup>26</sup> 10420/220 <sup>10</sup> 26250/260 <sup>26</sup>	(ppb)  890 <sup>16</sup> 230 <sup>22</sup> 620 <sup>23</sup> 700 <sup>19</sup> 582 <sup>27</sup>	(ppb)  ND <sup>12</sup> 0.56 ND <sup>12</sup> 2.1	( <i>ppb</i> )  ND <sup>12</sup> 1.3 1.8 ND <sup>12</sup>	(ppb)  ND <sup>12</sup> 1.4 2.1 1.9	14 1.8 ND <sup>12</sup>	(pph)  ND <sup>12</sup> 10 6.0/9.3 <sup>17</sup>
01/04/99 04/05/99 07/01/99 09/30/99 01/03/00	16.39 14.61 15.43 16.27 17.50	340.02 341.80 340.98 340.14 338.91	1071/71 10 10340/210 10 24260/310 26 10420/220 10	230 <sup>22</sup> 620 <sup>23</sup> 700 <sup>19</sup>	0.56 ND <sup>12</sup>	1.3 1.8	1.4 2.1	1.8	10
01/04/99 04/05/99 07/01/99 09/30/99 01/03/00	16.39 14.61 15.43 16.27 17.50	340.02 341.80 340.98 340.14 338.91	1071/71 10 10340/210 10 24260/310 26 10420/220 10	230 <sup>22</sup> 620 <sup>23</sup> 700 <sup>19</sup>	0.56 ND <sup>12</sup>	1.3 1.8	1.4 2.1	1.8	10
04/05/99 07/01/99 09/30/99 01/03/00	14.61 15.43 16.27 17.50	341.80 340.98 340.14 338.91	10340/21010 24260/310 <sup>26</sup> 10420/22010	620 <sup>23</sup> 700 <sup>19</sup>	ND <sup>12</sup>	1.8	2.1	ND <sup>12</sup>	
07/01/99 09/30/99 01/03/00	15.43 16.27 17.50	340.98 340.14 338.91	<sup>24</sup> 260/310 <sup>26</sup> <sup>10</sup> 420/220 <sup>10</sup>	700 <sup>19</sup>					U.U/ J.J
09/30/99 01/03/00	16.27 17.50	340.14 338.91	$^{10}420/220^{10}$		2.1		1 4	2.4	<sup>12</sup> ND/21 <sup>17</sup>
01/03/00	17.50	338.91		202	2.60	1.30	1.98	ND <sup>12</sup>	23.1/22.5 <sup>17</sup>
			250/260	800 <sup>27</sup>	4.2	4.6	3.3	11	31/17 <sup>17</sup>
04/04/00	13.91	342.50		710 <sup>27</sup>			4.4	2.0	21/22 <sup>17</sup>
			<sup>10,15</sup> 460/340 <sup>26</sup>	/10	2.0	1.3	4.4	2.0	21/22
04/23/98	11.15	343.88	/100 <sup>11</sup>	120	0.53	0.90	1.0		13
			170 <sup>10</sup>	ND	ND	ND	ND		12
			/100 <sup>10</sup>	ND	ND	ND	ND		12
			ND	ND	ND	ND	ND	ND	ND
				ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
			ND	ND	ND	ND	ND	ND	<sup>12</sup> ND/2.3 <sup>17</sup>
			<sup>10</sup> 60.4/ND	50.8 <sup>27</sup>	ND	ND	ND	ND	ND/ND <sup>17</sup>
				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>
01/10/08				ND	ND	ND	ND	ND	ND
					ND	ND	ND	ND	ND
					ND	ND	ND	ND	ND
						0.70	ND	0.71	ND
						0.74	ND	0.92	ND
							ND	ND	ND
								ND	ND
								ND	ND
									ND
									ND
	04/23/98 07/08/98 10/05/98 01/04/99 04/05/99 07/01/99 09/30/99 01/03/00 04/04/00 01/19/98 04/23/98 07/08/98 10/05/98 01/04/99 04/05/99 07/01/99 09/30/99 01/03/00 04/04/00	04/23/98 11.15 07/08/98 12.63 10/05/98 14.00 01/04/99 15.21 04/05/99 13.76 07/01/99 14.48 09/30/99 15.15 01/03/00 16.34 04/04/00 12.90  01/19/98 04/23/98 10/05/98 01/04/99 04/05/99 07/01/99 09/30/99 01/03/00	04/23/98       11.15       343.88         07/08/98       12.63       342.40         10/05/98       14.00       341.03         01/04/99       15.21       339.82         04/05/99       13.76       341.27         07/01/99       14.48       340.55         09/30/99       15.15       339.88         01/03/00       16.34       338.69         04/04/00       12.90       342.13             01/19/98           04/23/98           07/08/98           01/04/99           04/05/99           07/01/99           09/30/99           01/03/00	04/23/98 11.15 343.88/100 <sup>11</sup> 07/08/98 12.63 342.40 170 <sup>10</sup> 10/05/98 14.00 341.03/100 <sup>10</sup> 01/04/99 15.21 339.82 ND 04/05/99 13.76 341.27 ND 07/01/99 14.48 340.55 ND 09/30/99 15.15 339.88 <sup>10</sup> 60.4/ND 01/03/00 16.34 338.69 ND 04/04/00 12.90 342.13 <sup>15</sup> 69/ND  01/19/98	04/23/98	04/23/98 11.15 343.88/100 <sup>11</sup> 120 0.53 07/08/98 12.63 342.40 170 <sup>10</sup> ND ND 10/05/98 14.00 341.03/100 <sup>10</sup> ND ND 01/04/99 15.21 339.82 ND ND ND 04/05/99 13.76 341.27 ND ND ND 07/01/99 14.48 340.55 ND ND ND 09/30/99 15.15 339.88 1060.4/ND 50.8 <sup>27</sup> ND 01/03/00 16.34 338.69 ND ND ND 04/04/00 12.90 342.13 1569/ND ND ND 07/08/98 ND ND 07/08/98 ND ND 01/05/98 ND ND 01/04/99 ND ND 01/04/99 ND ND 01/04/99 ND ND 04/05/99 ND ND 07/01/99 ND ND	04/23/98 11.15 343.88/100 <sup>11</sup> 120 0.53 0.90 07/08/98 12.63 342.40 170 <sup>10</sup> ND ND ND 10/05/98 14.00 341.03/100 <sup>10</sup> ND ND ND 01/04/99 15.21 339.82 ND ND ND ND ND 04/05/99 13.76 341.27 ND ND ND ND ND 07/01/99 14.48 340.55 ND ND ND ND ND 09/30/99 15.15 339.88 <sup>10</sup> 60.4/ND 50.8 <sup>27</sup> ND ND 01/03/00 16.34 338.69 ND ND ND ND 04/04/00 12.90 342.13 <sup>15</sup> 69/ND ND ND ND 04/04/98 ND ND ND ND 07/08/98 ND ND ND ND 01/05/98 ND ND ND ND 01/05/98 ND ND ND ND 01/05/98 ND ND ND ND 01/04/99 ND ND ND ND 01/04/99 ND ND ND ND 07/01/99 ND ND ND ND	04/23/98 11.15 343.88/100 <sup>11</sup> 120 0.53 0.90 1.0 07/08/98 12.63 342.40 170 <sup>10</sup> ND ND ND ND ND ND 10/05/98 14.00 341.03/100 <sup>10</sup> ND ND ND ND ND 01/04/99 15.21 339.82 ND ND ND ND ND ND 04/05/99 13.76 341.27 ND ND ND ND ND ND ND 07/01/99 14.48 340.55 ND ND ND ND ND ND ND 09/30/99 15.15 339.88 1060.4/ND 50.8 <sup>27</sup> ND ND ND ND 01/03/00 16.34 338.69 ND ND ND ND ND ND ND 04/04/00 12.90 342.13 1569/ND ND ND ND ND ND 04/05/98 ND ND ND ND ND ND 01/05/98 ND ND ND ND ND ND 01/05/98 ND ND ND ND ND 01/06/99 ND ND ND ND ND 01/06/99 ND ND ND ND ND 01/06/99 ND ND ND ND ND ND 01/06/99 ND ND ND ND ND ND 01/06/99 ND ND ND ND ND ND 04/05/99 ND ND ND ND ND ND ND	04/23/98

#### 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 elevation TPH(G) = Total Petroleum Hydrocarbons as Gasoline

DTW = Depth to Water B = Benzene ppb = Parts per billion T = Toluene ND = Not Detected

GWE = Groundwater Elevation E = Ethylbenzene -- = Not Measured/Not Analyzed

msl = Relative to mean sea level X = Xylenes NP = No purge

TPH(D) = Total Petroleum Hydrocarbons as Diesel MTBE = Methyl tertiary butyl ether PNA = Polynuclear Aromatic Hydrocarbons

- \* 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 PNA 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 PNA compounds were ND in both wells.
- PNA compounds were ND.
- <sup>3</sup> Laboratory report indicates unidentified hydrocarbons C9-C26.
- Laboratory report indicates gasoline and unidentified hydrocarbons >C12.
- 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.
- Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 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.
- Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- Laboratory report indicates unidentified hydrocarbons C9-C24.
- 11 Laboratory report indicates diesel and unidentified hydrocarbons <C14.
- Detection limit raised. Refer to analytical reports.
- Laboratory report indicates unidentified hydrocarbons >C8.
- Laboratory report indicates unidentified hydrocarbons <C14.
- Laboratory report indicates discrete peaks.
- Laboratory report indicates weathered gas C6-C12.
- 17 MTBE by EPA Method 8260.
- Laboratory report indicates unidentified hydrocarbons <C8.
- Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- Laboratory report indicates diesel and unidentified hydrocarbons <C16.
- Laboratory report indicates unidentified hydrocarbons C6-C12.
- Laboratory report indicates gasoline and unidentified hydrocarbons >C10.
- Laboratory report indicates gasoline and unidentified hydrocarbons <C7.
- Laboratory report indicates unidentified hydrocarbons C10-C24.
- Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
- Laboratory report indicates unidentified hydrocarbons <C16.</p>
- Laboratory report indicates gasoline C6-C12.

Table 2
Groundwater Analytical Results - Oxygenate Compounds

	Dublin, California											
Well 1D	Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	EDB	1,2-DCA			
		(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)			
U-1	04/05/99	ND¹	ND¹	55	$ND^1$	$ND^1$	$ND^1$	$ND^1$	$ND^1$			
U-1	07/01/99	ND	ND	110	ND	ND	ND	ND	ND			
	09/30/99	ND <sup>1</sup>	ND <sup>1</sup>	195	$ND^1$	$ND^1$	ND¹	$\mathbf{ND}^1$	$\mathbf{ND}^1$			
	01/03/00	ND	ND	120	ND	ND	ND	ND	ND			
	04/04/00	ND <sup>1</sup>	ND <sup>1</sup>	160	ND¹	ND¹	ND <sup>1</sup>	$\mathbf{ND}^1$	$\mathbf{ND}^1$			
		- vm1	aml	6.0	ND <sup>1</sup>	$ND^1$	$\mathbf{ND}^1$	$ND^1$	$ND^1$			
U-2	04/05/99	ND <sup>1</sup>	ND	6.9	ND	ND	ND	ND	ND			
	07/01/99	ND	ND	35	ND ND	ND	ND	ND	ND			
	09/30/99	ND	ND	29.8 14	ND ND	ND ND	ND	ND	ND			
	01/03/00	ND <b>ND</b> <sup>1</sup>	ND <b>ND</b> <sup>1</sup>	25	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	$ND^1$	$ND^1$			
	04/04/00	ND	ND	25	110	112						
¥1 7	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND			
U-3	07/01/99	ND	ND	ND	ND	ND	ND	ND	ND			
	09/30/99	ND 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			
	04/05/00	ND	ND	9.3	ND	ND	ND	ND	ND			
MW-4	04/05/99 07/01/99	ND	ND ND	21	ND	ND	ND	ND	ND			
	09/30/99	ND 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			
						* TF	210	NID	ND			
MW-5	04/05/99	ND	ND	ND	ND	ND	ND	ND ND	ND			
	07/01/99	ND	ND	2.3	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	ND ND			
	04/04/00	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

#### **EXPLANATIONS:**

ANALYTICAL METHOD:

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

EPA Method 8260 for Oxygenate Compounds

Detection limit raised. Refer to analytical reports.

Table 3
Dissolved Oxygen Concentrations

2000 Common disease as a second		Dublin, California					
Well ID	Date	Before Purging	After Purging				
<u> </u>		(mg/L)	(mg/L)				
U-1	01/11/96	<b>*</b> *	3.41				
	04/11/96	3.77	3.78				
	07/10/96 <sup>t</sup>	1.22					
	10/30/96 <sup>1</sup>	1.41					
	01/27/97 <sup>1</sup>	1.34					
	04/08/971	2.09					
	07/17/97 <sup>1</sup>	2.00					
	10/17/97 <sup>1</sup>	1.86					
	01/19/981	2.91	<del></del>				
	04/23/981	0.59					
	07/08/981	1.10					
U-2	01/11/96		3.99				
U <b>-2</b>	04/11/96	3.32	3.41				
	07/10/96 <sup>1</sup>	1.01	J.11				
	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	<del></del>				
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	<del></del>				
	01/27/971	2.61					
	04/08/971	3.73					
	07/17/97 <sup>1</sup>	2.65					
	10/17/9 <b>7</b> <sup>1</sup>	2.44					
	01/19/98 <sup>1</sup>	6.51					
	04/23/98 <sup>1</sup>	4.72	<b></b>				
	07/08/981	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.

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

-- = Not Measured

mg/L = milligrams per liter

Note: Measurements were taken using a LaMotte DO4000 dissolved oxygen meter.

<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.

		_			Ø ~ ~ `	ำำ	
-	4(53#7176	_			800		•
4ddress: 7857	O AMADOR L	MLLEY			-4-	•	
City: <u>Durui</u>	W CA		San	npler: <u>\$ 1</u>	TEVE	RALIAN	
Well ID	0-1	Weil	Condition:	0	<u>.k</u>	·	•
Well Diameter	2" in.	•	ocarbon cness:		Amount (product/v	~~	(Gallons)
Total Depth	27.90 +	Voit	ume 2° =	0.17	3" = 0.		" = 0.66
Depth to Water	12.89 +	Fact	or (VF)	0 = 1.			
	15.01 x	VF <u>0.17</u>	•		Estimated	Purge Volume:	7. 66 Igal)
Purge Equipment:	Disposable Bailer Bailer		Sampling Equipme		posable	Saile	-
	Stack			Bai	ier ssure Ba	iller	
	Suction . Grundfos			Gra	ab Sampi	ie	
	Other:	<del></del>		Oti	ner:	<del></del>	
Starting Time:	5:39		Weather Condi				
Sampling Time: Purging Flow Ra	16: 00	gpm.	Water Color: _ Sediment Desc	NoT CU	AR	Odor: Y #	
Sampling Time: Purging Flow Ra	16:00	gpm.	Water Color: _	NoT CU	AR	Odor: Y #	
Sampling Time: Purging Flow Ra Did well de-wate	te:	Cond	Water Color: _ Sediment Desc If yes; Time:	NoT CU	AR	Odor: <u>y/s</u> ume:	
Sampling Time: Purging Flow Ra Did well de-wate		Cond	Water Color: _ Sediment Desc If yes; Time:  uctivity Ten Instant 6.1 7	NoT CU	Voi:	Odor: <u>y s</u>	/gal.\
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:42  15:44	ote:	Cond  µmin	Water Color: _ Sediment Desc If yes; Time:	NoT CU	Voi:	Odor: <u>y s</u>	/gal.\
Sampling Time: Purging Flow Ra Did well de-wate		Cond  µmin	Water Color: _ Sediment Desc If yes: Time:  uctivity Ten os/cm 67 66	NoT CU	Voi:	Odor: <u>y s</u>	/gal.\
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:43  15:44		Cond  µmin	Water Color: _ Sediment Desc If yes: Time:  uctivity Ten os/cm 67 66	NoT CU	Voi:	Odor: <u>y s</u>	/gal.\
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:43  15:44		Cond    Cond     Graph	Water Color: _ Sediment Description If yes: Time:  ucrivity Ten 65 6 83 6	nperature  7.7	Voi:	Odor: <u>y s</u>	/gal.\
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:42  15:44		Cond    Cond     Graph	Water Color: _ Sediment Desc If yes: Time:  uctivity Ten os/cm 67 66	NoT Cu	Voi:	Odor: y/s	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:43  15:46  SAMPLE ID  U-1		Cond  µmin  6  7  6  LABOR	Water Color: _ Sediment Description If yes: Time:  Termos/cm 61 7 83 - 65	nperature  7, 7  MATION  LABO  SEQUOIA	D.O. (mg/L	Odor: y/s  ume:  ORP ) (mV)  ANAL	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:42  15:44  15:46  SAMPLE ID		Cond  µmin  6  7  6  1  LABOR  REFRIG.	Water Color: _ Sediment Description If yes: Time:  Termos/cm 61 7 83 - 65	nperature  7. 7  VATION  LABO	D.O. (mg/L	Odor: y/s	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:43  15:46  SAMPLE ID  U-1		Cond  µmin  6  7  6  1  LABOR  REFRIG.	Water Color: _ Sediment Description If yes: Time:  Termos/cm 61 7 83 6 83 6 ATORY INFORI	nperature  7, 7  MATION  LABO  SEQUOIA	D.O. (mg/L	Odor: y/s  ume:  ORP ) (mV)  ANAL	Alkalinity (ppm)
Sampling Time: Purging Flow Ra Did well de-wate  Time  15:43  15:46  SAMPLE ID  U-1		Cond  µmin  6  7  6  1  LABOR  REFRIG.	Water Color: _ Sediment Description If yes: Time:  Termos/cm 61 7 83 6 83 6 ATORY INFORI	nperature  7, 7  MATION  LABO  SEQUOIA	D.O. (mg/L	Odor: y/s  ume:  ORP ) (mV)  ANAL	Alkalinity (ppm)

Client/		Asia Asia		100 -		÷
Facility UNOCA	7155 # 7176	(705co)	Job#			<del> </del>
Address: 785	AMADOR V	MUEY R	o <u>A</u> ⊘ Date	= 4-4-	<u> </u>	
City: <u>NURL</u>	v , ca	<u>'</u>	Sam	pler: STEVE	RALIAN	
Weil iD	<u>v_2</u>	Well Co	ndition: _	0·K		
Well Diameter	2" in.	Hydroca Thickne		Amount I		(Gallons)
Total Depth	26.50 4	Volume		0.17 3" = 0.3		= 0.ốố
Depth to Water	13.50 t.	Factor (			12" = 5.80	
	13.00 x	VF <u>0.17</u> =2	.21 x 3 (case	e volume) = Estimated P	Purge Volume: 6	63 (gal.)
Purge Equipment:	Disposable Bailer Bailer Stack		Sampling Equipmen	Bailer	•	
	Suction Grundfos Other:	· 		Pressure Bail Grab Sample Other:	•	
Starting Time: Sampling Time: Purging Flow Rat		Wa	ter Color: diment Descr	iption:	Odor: YÆ)	
Did well de-wate	r? <u>No</u>	· If y	es; Time:	Voiu	me:	(gai.)
Time V 15:06 2 15:08	olume pH (gal.) 2.5 6.89 7 6.87	Conducti	7	perature D.O. (mgL)	* ORP (mV)	Alkalinity (ppm)
		-				
SAMPLE ID	(#) - CONTAINER		ORY INFORM		ANALYS	
U-2	6-10A"	Υ .	Hel	SEQUOIA	TPH(G)/btex/mtt	
0-2	1-AMBEN	У		11	1 TPH-0	1,20 E03
	<u>_</u>		<del></del>			
COMMENTS: _	· · · · · · · · · · · · · · · · · · ·					
				<del>_</del>		

9/97-lieigat.:m

ddress: 785	AMADOR W	HLLEY ROAD	Date:	4-4-00	
	u , ca	•		EVE BALIAN	
Well ID	<i>U</i> – 3	Well Condit	ion:	ONE FLANGE	is BROKE
Vell Diameter	2"in.	Hydrocarbo Thickness:		Amount Bailed	(Gallons)
otal Depth	28.50 +	Volume	2" = 0.17		4" = 0.66
epth to Water	15.10 to	Factor (VF)	e = 1.	. 12 - 5.50	
	13.40 xv	F 0.17 = 2.2	X 3 (case volume) =	Estimated Purge Volume:	6.83 (agl.)
Purge	Disposable Bailer		Sampling Equipment: Dis	posable Baile	-
quipment:	Bailer Stack		Bai		
	Suction Grundfos			ssure caller ib Sample	
	Other:	· 	Oti	ner:	
	12.22	146	- Candinians:	SUNNY	•
	13:22 13:40			AR Odor:	
	te:	<del></del>			
	ar? No		Time:	Volume:	/gat.\
	Volume pH	Conductivity umhos/cm	٠Ē	D.O. * ORP (mgL) (mV)	Alkalinity (ppm)
3:24 3:26	5 6.89	<u> 172</u> 806	79.3		
3.28 -	7 6.89		71.7	-	
		<u></u>			_
		•			<del>ــــــــــــــــــــــــــــــــــــ</del>
		LABORATORY	INFORMATION		
SAMPLE ID	(#) - CONTAINER				LYSES
U - 3	56 - VOA'	Y   H	SEQUOIA		Umtbe /6-024
U- 3	1-AMBER	_ 7   -		77914-	0 12
0-3	t 1		<u> </u>		
		1			

iaress: 1793	AMADOR W	alley	<u>Roan</u> Da	te: <u>4</u>	- 4-00	·	
y: <u>Dubli</u>	W CA		Sa	mpler: <u>57</u>	eve R	ALIAN	
Well ID	Mw-4	Weil	Condition:		K		
ell Diameter	2" in.	•	rocarbon kness:		Amount Bai		(Gallons)
tal Depth	25.50 t	Voi	iume 2°	= 0.17	3" = 0.38	4" =	0.óó
opth to Water	13.91 =	Fac	cor (VF)	6" = 1.5			
	11.59 xv	F <u>0.17</u>	=1.97 x 3 (c	ase volume) = E	Stimated Pure	ge Valume: <u>5.</u>	9/ (gal.)
ourge Quipment:	Disposable Bailer Bailer		Samplit Equipm	ng ent: Disc	osable Bai		
hibitiett.	Stack	,	<b></b>	Baile		-	
	Suction Grundfos			Grai	Sample		
	Other:			Oth	er:	<del></del>	
	// 5.0			** _ *	Citable to		
	14:29	_	Weather Cond Water Color:				
ampling Time: urging Flow Ra	14:50	<del></del>	Sediment Des				
id well de-wat	er? No		If yes; Time	•		3:	igal.
					D.O.	• ORP	Alkalinity
	Volume pH (gal.) 2 6.82	$\mu$ m	hos/cm	mperature	(mgL)	· (mV)	(ppm)
<u>4:31                                    </u>	<del>2</del> 6.82	<u>\</u>	133 —	70.4 19.8			
<del>7.33</del> -	6 6.83	X		59.7			
							<del></del>
	-		<u> </u>			<u></u>	
•		•	•			•	
	•		ATORY INFO			ANALYS	==
SAMPLE ID	14, 44	REFRIG.	PRESERV. TYP	E / LABOR		TPH(G)/btax/mtb	
MW-4	6-WA"	<u>У</u>	774	·	1	TPH-D	EOB
A411	1-AMBER						
Mu-4			<del>_</del>		i		
MW-4	,	•					

idress: 7850	AMADOR V	MLLEY 1			1-4-00	
ty: <u>NUAU</u> .	N CA		Sar	npler: <u>51</u>	TEVE RALIA	<u></u>
Weil ID	MW-5	Well	Condition:	0	K	
ell Diameter		•	ncarbon ness:		Amount Bailed	d (Gallons)
tal Depth	25.00 #	Volu			3" = 0.38 50 12" = 5.8	4" = 0.66 0
epth to Water	12,90 +			<u> </u>	<u> </u>	<i>(</i> ) =
•	12.10 x	VF <u>0.17</u>	-2.06×3 (cz	se volume) =	Estimated Purge Volume	:: 6 . 1 . 7 (gal.)
urge uipment:	Disposable Bailer Bailer		Samplin Equipme	ent: Dis	posable Bailer	
	Stack	•		Bai Pre	ier ssure Bailer	
	Grundfos				io Sampie ner:	
	Other:				161.	· .
tarting Time:	13:54	\	Neather Cond	itions:	SUNNY	
ampling Time:					Odor:_	
<del>-</del>	te:	1.00				
id weil de-wate	ar? <u>No</u>		f yes; Time:		Volume:	igal
Time \	/oiume pH			mperature	D.O. * ORP	
	(gal.) 2.5 6.90	μπh	os/cm <u>'17</u>	10.6	(mgL) (mV	
3.5%	4.5 - 6.90		14 -	<u> [0.]</u>		
4.00	6.5 6.90	<u> </u>	<u> </u>	<u>700</u>		<del></del> . <del></del>
<del></del> -			<del>-</del> -	<del></del>		·
<del></del> . <del>-</del>				<del></del>		
	·	LABOR	ATORY INFOR	MATION		
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYP			NALYSES
MW-5	58 - VOA"	Υ	Hul	SEQUOIA	`	teximite /6-ox
MW-5	1-AMBER	У		11	1 791	47 EDI
		1	<u></u>	1		
		1			l l	



Topos Markedag Company 2000 Gove Corpus Pi., Std. 408 San Barres, Calibrais 24143

Relinquished By (Signature)

Relinquished By (Signature)

Foolity Humber UNQCAL SS# 7176	
Foolity Address 7850 Amador Valley Blvd. Dublin, CA	
Consultant Project Number 180022.85	
Consultant Home Gettler-Ryan Inc. (G-R Inc.)	_
Address 6747 Sierra Court, Suite J. Dublin, CA 9456	
Project Contact (Nome) Deanna L. Harding	
(Phone) 510-551-7555 (Fox Humber) 510-551-7888	_

G-R Inc.

nollesinopiO

Organization

Date/Time

Date/11me

Contact (Nome) MR. DAVE DEWITT	
4000 000	and the second second second
Laboratory Name Sequoia Analytical	
Laboratory Release Humber	
Samples Collected by (Norne) STEVE BALIAN	
Collection Date 4-4-00	· · · · · ·
Signature STEVE RALIAN Fort	

24 Hre. 48 Hre.

6 Days -10-Days

As Contracted

•		į .		(P)	hone)21	0-221-/23	2 (Fax	Humber	<u>.010-</u>	-1771-	7000	$=$ $\mathbb{L}^{3}$	ignotur#								
			8									•	Analyse	• To B	• Perfo	med	·				DO NOT BILL
Sample Number	Lab Sample Number	Number of Containers	Mathics A. Air S. E. Soll A. Air W. F. Weter C. E. Chermool	Type G = Grab C = Camposite D = Discrete	Time	. Sample Preservation	(New or No)	TPH Gar + BTEX WATEE (BOJE)	TPH Dissel (8015)	Oil and Gream (5520)	Purpeable Holocarbors (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Herbis CACLPSZANI (RUP or M)	6-047's 648260 a.1,2 OCAKEDB		:			TB-LB ANALYSIS
TB-LB		1	w	6		#-{	×	X													Run Silica Gel
U- 1		6	"	"	16:00	9	У	X	X				<u>.</u>		·	X		χ,			cheun-up on any
U- 2		6	"	"	15:25		У	X	X						<u> </u>	X					Diesel hits.
U- 3		6	11		13:40		Y	X	X						<u> </u>	X					
MW- 4		6	"	1	14:50		٧.	X	X							X					
MW-5		6	11	11 11	14:15	11	Y	X	X				<u> </u>		<u> </u>	1					
		·				,			<u> </u>	<u></u>			<u> </u>		<u> </u>	<u> </u>					
		·												<u> </u>	<u> </u>					·	
								<u> </u>	<u>                                      </u>		<u> </u>			<u> </u>	ļ						
								] _				<u> </u>		ļ	J						
												ļ				٠					
																		<u> </u>			
				1.													·				
		-	<b> </b>	1.		<u> </u>	-														, , , , , , , , , , , , , , , , , , ,
Relinguished By	(Signature)	<u> </u>	Ong	denization	۱	Dote/Time ,	Rec	pelyed B	y (Slgn	alur•)	<del> </del>	1	Organizo	llon	Dal	e/Time		,	Turn Ara	ound Tin	ne (Cirole Choles)

Received By (Signature)

Reviewed For Laboratory By (Signature)

4/G/SO Organization

Dale/Ilme

Dole/Time



404 N. Wiget Lane Walnut Creek, CA 94598 (925) 988-9600 FAX (925) 988-9673 www.sequolalabs.com

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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised: 12-May-00 08:48

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W004100-01	Water	04-Apr-00 00:00	05-Apr-00 17:30
U-1	W004100-02	Water	04-Apr-00 16:00	05-Apr-00 17:30
U-2	W004100-03	Water	04-Apr-00 15:25	05-Apr-00 17:30
U-3	W004100-04	Water	04-Apr-00 13:40	05-Apr-00 17:30
MW-4	W004100-05	Water	04-Apr-00 14:50	05-Apr-00 17:30
MW-5	W004100-06	Water	04-Apr-00 14:15	05-Apr-00 17:30

Sequoia Analytical - Walnut Creek

Charlie Westwater, Project Manager

This report represents a revision of the original document. 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.





6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised:

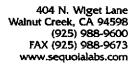
12-May-00 08:48

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

Analyte		eporting	TTuite	Dilution	Batch	Dronored	Analyzed	Method	Notes
	Result	Limit	Units			Prepared	Analyzeu	Mediod	Notes
TB-LB (W004100-01) Water	Sampled: 04-Apr-00 00:00	Receive	ed: 05-A <sub>]</sub>	pr-00 17:30	)		_		
Purgeable Hydrocarbons	ND	50	ug/l	1	0D12002	12-Apr-00	12-Apr-00	EPA	
Benzene	ND	0.50	11	#	"	n	*	8015M/8020	
Toluene	ND	0.50	W	n	Ħ	Н	. 41	n	
Ethylbenzene	ND	0.50	11	"	11	II	₩.		
Xylenes (total)	ND	0.50		H	W	н	#		
Methyl tert-butyl ether	ND	2.5	n	"	"	н		"	
Surrogate: a,a,a-Trifluorotolue	ne	94.3 %	70-	-130	"	"	. "	m	
U-1 (W004100-02) Water Sa	mpled: 04-Apr-00 16:00 F	Received:	05-Apr-0	00 17:30					P-01
Purgeable Hydrocarbons	4800	1000	ug/l	20	0D13001	13-Apr-00	13-Apr-00	EPA	
Benzene	30	10	H	"	n	11		8015M/8020	
Toluene	ND	10				н	н	11	
Ethylbenzene	210	10	11	u	H .	11	n	er	
Xylenes (total)	93	10	**	"	Ħ	11	11	ч	
Methyl tert-butyl ether	170	50	п		**	"	"	**	
Surrogate: a,a,a-Trifluorotolue	ne	109 %	70-	-130	"	n	#	#	
U-2 (W004100-03) Water Sa	mpled: 04-Apr-00 15:25   F	teceived:	05-Apr-(	00 17:30					P-01
Purgeable Hydrocarbons	3600	1000	ug/l	20	0D13001	13-Apr-00	13-Apr-00	EPA	
Benzene	34	10	**	"	u	W	11	8015M/8020	
Toluene	17	10	11	"	н	"	11	Ħ	
Ethylbenzene	56	10	11		н	•	11	11	
Xylenes (total)	ND	10	11		H	W.,	er e	P	
Methyl tert-butyl ether	59	50	19	н	H	v	11	H	
Surrogate: a,a,a-Trifluorotolue	ne	114%	70-	-130	"	"	n	rr	

Sequoia Analytical - Walnut Creek

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





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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised:

12-May-00 08:48

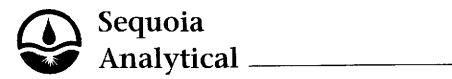
## Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (W004100-04) Water	Sampled: 04-Apr-00 13:40	Received:	05-Apr-0	0 17:30					
Purgeable Hydrocarbons	ND	50	ug/l	1	0D12003	12-Apr-00	12-Apr-00	EPA	
Benzene	ND	0.50	Ħ	**	Ħ	Ħ	**	8015M/8020	
Toluene	ND	0.50	н		n			41	
Ethylbenzene	ND	0.50	ħ	н	"	H	W.	11	
Xylenes (total)	ND	0.50	11	*	n	"	"	**	
Methyl tert-butyl ether	ND	2.5	н	**	н	••	Ħ	**	
Surrogate: a,a,a-Trifluoroto	luene	98.0 %	70-	130	. "	n	"	"	
MW-4 (W004100-05) Wate	r Sampled: 04-Apr-00 14:5	0 Receive	ed: 05-Ap	r-00 17:30					P-01
Purgeable Hydrocarbons	710	50	ug/l	1	0D12003	12-Apr-00	12-Apr-00	EPA	
Benzene	2.0	0.50	н	n	#1	11	H	8015M/8020	
Toluene	1.3	0.50	π	"	н	и	"	n	
Ethylbenzene	4.4	0.50	"	H	11	"	н	11	
Xylenes (total)	2.0	0.50		11	W	**	11	Ħ	
Methyl tert-butyl ether	21	2.5	11	11	,,	н	u	#	
Surrogate: a,a,a-Trifluorotol	luene	70.7 %	70-1	130	"	"	"	n	
MW-5 (W004100-06) Wate	r Sampled: 04-Apr-00 14:1	5 Receive	ed: 05-Api	r-00 17:30					
Purgeable Hydrocarbons	ND	50	ug/l	1	0D12001	12-Apr-00	12-Арг-00	EPA	
Benzene	ND	0.50	II	77	17	"	•	8015M/8020	
Toluene	ND	0.50	11	*	u	Ħ	"	11	
Ethylbenzene	ND	0.50	H	n		11	H	11	
Xylenes (total)	ND	0.50	**	"	"	11	n	rt	
Methyl tert-butyl ether	ND	2.5	W	**	"	11	н	**	
Surrogate: a,a,a-Trifluorotol	uene	86.7%	70-1	130	м	"	"	"	

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. 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.





6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176

Project Manager: Deanna L. Harding

Report Revised: 12-May-00 08:48

### Diesel Hydrocarbons (C9-C24) by DHS LUFT

### Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W004100-02) Water	Sampled: 04-Apr-00 16:00	Received:	05-Apr-00	17:30					
Diesel Range Hydrocarbor	ıs 990	50	ug/l	1	0D18018	18-Apr-00	18-Арг-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		61.0 %	50-1	50	n	,,	"	π	
U-2 (W004100-03) Water	Sampled: 04-Apr-00 15:25	Received:	05-Apr-0	17:30					
Diesel Range Hydrocarbon	ıs 1000	50	ug/l	1	0D18018	18-Apr-00	18-Apr-00	EPA 8015M	<b>D-</b> 11
Surrogate: n-Pentacosane		68.1 %	50-1	150	"	"	"	"	
U-3 (W004100-04) Water	Sampled: 04-Apr-00 13:40	Received:	05-Apr-00	17:30					٠
Diesel Range Hydrocarbons	ND	50	ug/l	1	0D18018	18-Apr-00	18-Apr-00	EPA 8015M	
Surrogate: n-Pentacosane	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	79.0 %	50-1	50	Ħ	n	"	"	
MW-4 (W004100-05) Wate	er Sampled: 04-Apr-00 14:	50 Receive	ed: 05-Apı	-00 17:30					
Diesel Range Hydrocarbon	ıs 460	50	ug/l	1	0D18018	18-Арг-00	18-Apr-00	EPA 8015M	D-06,D-14
Surrogate: n-Pentacosane		91.0 %	50-7	150	'n	"	,,	"	
MW-5 (W004100-06) Wate	er Sampled: 04-Apr-00 14:	15 Receive	ed: 05-Apı	:-00 17:30					
Diesel Range Hydrocarbor	ns 69	50	ug/l	1	0D18018	18-Арг-00	18-Apr-00	EPA 8015M	D-06
Surrogate: n-Pentacosane		101 %	50-,	150	"	"		"	

Sequoia Analytical - Walnut Creek

Charlie Westwater, Project Manager

This report represents a revision of the original document. 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.







6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised:

12-May-00 08:48

## Diesel Hydrocarbons (C9-C24) with Silica Gel Cleanup by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W004100-02) Water Sampled: 0	04-Apr-00 16:00	Received:	05-Apr-0	0 17:30					
Diesel Range Hydrocarbons	1400	50	ug/l	1	0D25019	18-Apr-00	24-Apr-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		50.2 %	50-	140	n	n	,,	"	
U-2 (W004100-03) Water Sampled: 0	04-Apr-00 15:25	Received:	05-Apr-0	0 17:30					
Diesel Range Hydrocarbons	1000	50	ug/l	1	0D25019	18-Apr-00	24-Apr-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		73.0 %	50-	140	"	"	"	п	
MW-4 (W004100-05) Water Sample	d: 04-Apr-00 14:5	0 Receive	d: 05-Ap	r-00 17:30	•				
Diesel Range Hydrocarbons	340	50	ug/l	1	0D25019	18-Apr-00	24-Apr-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		63.1 %	50-	140	"	"	ır	"	<del></del>
MW-5 (W004100-06) Water Sample	d: 04-Apr-00 14:1	5 Receive	d: 05-Ap	r-00 17:30	)				
Diesel Range Hydrocarbons	ND	50	ug/l	1	0D25019	18-Apr-00	24-Арг-00	EPA 8015M	
Surrogate: n-Pentacosane		105 %	50-	140	,,	"	"	rr .	

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. 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.







6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised:

12-May-00 08:48

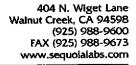
### Volatile Organic Compounds by EPA Method 8260A Sequoia Analytical - Walnut Creek

Line   Line	Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
tert-Butyl alcohol   ND   500   " " " " " " " "   "   "							*	<u></u>		
tert-Butyl alcohol   ND   500   " " " " " " " " "   "   "	Ethanol	ND	2500	ug/l	5	0D04020	06-Apr-00	06-Apr-00	EPA 8260A	
Di-isopropyl ether	tert-Butyl alcohol	ND	500		н	"	**	**	**	
Ethyl tert-butyl ether ND 10 " " " " " " " " " " " " " " " " " "	Methyl tert-butyl ether	160	10	H	II.	"	**	#1	85	
tert-Amyl methyl ether	Di-isopropyl ether	ND	10	11	**	"	H	"	**	
1,2-Dichloroethane   ND   10	Ethyl tert-butyl ether	ND	. 10	и .	**	и ,	n	•	n	
Ethylene dibromide	tert-Amyl methyl ether	ND	10	H	**	#		**	. #	
Surrogate: Dibromofluoromethane	1,2-Dichloroethane	ND	10	H	** .	**		u	71	
Surrogate: Li2-Dichloroethane=d4	Ethylene dibromide	ND	10	п	**	"	II.	••	<b>~</b>	
U-2 (W004100-03)   Water   Sampled: 04-Apr-00 15:25   Received: 05-Apr-00 17:30	Surrogate: Dibromofluoron	nethane	92.0 %	50-	150	#	"	"	"	
Ethanol ND 2500 ug/l 5 0D04020 06-Apr-00 06-Apr-00 EPA 8260A tert-Butyl alcohol ND 500 " " " " " " " " " " " " " " " " " "	Surrogate: 1,2-Dichloroeth	ane-d4	78.0 %	50-	150	,,	"	"	"	
tert-Butyl alcohol ND 500 " " " " " " " " " " " " " " " " " "	U-2 (W004100-03) Water	Sampled: 04-Apr-00 15:25	Received:	05-Apr-0	0 17:30					
Methyl tert-butyl ether 25 10 " " " " " " " " " " " " " " " " " "	Ethanol	ND	2500	ug/l	. 5	0D04020	06-Apr-00	06-Apr-00	EPA 8260A	
Di-isopropyl ether   ND   10   " " " " " " " " "   Thylographyl ether   ND   10   " " " " " " "   Thylographyl ether   ND   10   " " " " " " "   Thylographyl ether   ND   10   " " " " " " " "   Thylographyl ether   ND   10   " " " " " " " "   Thylographyl ether   ND   10   " " " " " " " "   Thylographyl ether   ND   10   " " " " " " "   Thylographyl ether   ND   10   " " " " " "   Thylographyl ether   ND   2.0   " " " " " "   Thylographyl ether   ND   2.0   " " " " " "   Thylographyl ether   ND   2.0   " " " " " "   Thylographyl ether   ND   2.0   " " " " " "   Thylographyl ether   ND   2.0   " " " " " "   Thylographyl ether   ND   2.0   " " " " " "   Thylographyl ether   ND   2.0   " " " " " "   Thylographyl ether   ND   2.0   " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " " " " " " " "   Thylographyl ether   ND   2.0   " " " " " " " " " " " " " " " " " "	•	ND	500	н	**	**	H	"	n	
Ethyl tert-butyl ether ND 10 " " " " " " " " " " " " " " " " " "	- <del>-</del>	25	10	**	"	77	It	**	H	
tert-Amyl methyl ether         ND         10         " " " " " " " " " " " " " " " " " " "		ND	10	11	H	"	n	,	11	
1,2-Dichloroethane         ND         10         "	Ethyl tert-butyl ether	ND	10	11	H	**	It	"	11	
Ethylene dibromide ND 10 " " " " " " " " " " " " " " " " " "	•	ND	10	n	*	**	H	,,	<b>11</b>	
Surrogate: Dibromofluoromethane         90.0 %         50-150         " " " " "           Surrogate: 1,2-Dichloroethane-d4         76.0 %         50-150         " " " " "           U-3 (W004100-04) Water         Sampled: 04-Apr-00 13:40 Received: 05-Apr-00 17:30           Ethanol         ND         500         ug/l         1 0D04020 06-Apr-00 06-Apr-00 EPA 8260A           tert-Butyl alcohol         ND         100         " " " " " " " "           Methyl tert-butyl ether         ND         2.0 " " " " " " " " "           Di-isopropyl ether         ND         2.0 " " " " " " " " "           Ethyl tert-butyl ether         ND         2.0 " " " " " " " " " "           Ethyl methyl ether         ND         2.0 " " " " " " " " " " "           1,2-Dichloroethane         ND         2.0 " " " " " " " " " "           Ethylene dibromide         ND         2.0 " " " " " " " " " " "	=	ND	10	**		77	ır	**	# .	
Surrogate: 1,2-Dichloroethane-d4         76.0 %         50-150         " " " " " "           U-3 (W004100-04) Water         Sampled: 04-Apr-00 13:40         Received: 05-Apr-00 17:30           Ethanol         ND         500         ug/l         1         0D04020         06-Apr-00         66-Apr-00         EPA 8260A           tert-Butyl alcohol         ND         100         " " " " " " " "         "         " " " " "           Methyl tert-butyl ether         ND         2.0 " " " " " " " " "         " " " " "           Di-isopropyl ether         ND         2.0 " " " " " " " " "         " " " " "           Ethyl tert-butyl ether         ND         2.0 " " " " " " " " " " "         " " " " " " "           tert-Amyl methyl ether         ND         2.0 " " " " " " " " " " " " " "         " " " " " " " " " "           1,2-Dichloroethane         ND         2.0 " " " " " " " " " " " " " " " " " " "	Ethylene dibromide	ND	10	IT	"	*	11	Ħ	н	
U-3 (W004100-04) Water   Sampled: 04-Apr-00 13:40   Received: 05-Apr-00 17:30	Surrogate: Dibromofluoron	ıethane	90.0 %	50-	150	"	"	"	"	
Ethanol ND 500 ug/l 1 0D04020 06-Apr-00 06-Apr-00 EPA 8260A tert-Butyl alcohol ND 100 " " " " " " " " " " " " " " " " " "	Surrogate: 1,2-Dichloroeth	ane-d4	76.0 %	50-	150	H	"	#	#	
tert-Butyl alcohol ND 100 " " " " " " " " " " " " " " " " " "	U-3 (W004100-04) Water	Sampled: 04-Apr-00 13:40	Received:	05-Apr-0	0 17:30					
tert-Butyl alcohol ND 100 " " " " " " " " " " " " " " " " " "	Ethanol	ND	500	ug/l	1	0D04020	06-Apr-00	06-Арг-00	EPA 8260A	
Di-isopropyl ether	tert-Butyl alcohol	ND	100		H	H	"	**	•	
Ethyl tert-butyl ether ND 2.0 " " " " " " " " tert-Amyl methyl ether ND 2.0 " " " " " " " " " " " " " " " " " " "	Methyl tert-butyl ether	ND	2.0	Ħ	"		H	**	n .	
tert-Amyl methyl ether ND 2.0 " " " " " " " " " " " " " " " " " " "	Di-isopropyl ether	ND	2.0	**	"		**	*1	n	
1,2-Dichloroethane       ND       2.0       " " " " " " " " " " " " " " " " " " "	Ethyl tert-butyl ether	ND	2.0	**	"	"	**	"	n	
Ethylene dibromide ND 2.0 " " " " " " " " " " " " " " " " " " "	tert-Amyl methyl ether	ND	2.0	*17	R	*	#	u	н	
Surrogate: Dibromofluoromethane 92.0 % 50-150 " " " "	1,2-Dichloroethane	ND	2.0	19	n	"	77	11	- 11	
<del>-</del>	Ethylene dibromide	ND	2.0	17	Ħ	"	**	n	11	
Surrogate: 1,2-Dichloroethane-d4 74.0 % 50-150 " " " "	Surrogate: Dibromofluoron	ethane	92.0 %	50-	150	"	"	"	н	
	Surrogate: 1,2-Dichloroethe	ane-d4	74.0 %	50-	150	"	"	"	"	

Sequoia Analytical - Walnut Creek

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







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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised: 12-May-00 08:48

### Volatile Organic Compounds by EPA Method 8260A Sequoia Analytical - Walnut Creek

	R	eporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (W004100-05) Water	Sampled: 04-Apr-00 14:50	Receive	d: 05-Apr	-00 17:30					
Ethanol	ND	500	ug/l	1	0D04020	06-Apr-00	06-Apr-00	EPA 8260A	
tert-Butyl alcohol	ND	100	**		"	**	**	**	
Methyl tert-butyl ether	22	2.0	11	**	"	"		77	
Di-isopropyl ether	ND	2.0	**	91	<b>\$1</b>	"	71	41	
Ethyl tert-butyl ether	ND	2.0	11	"	*1	**	Ħ	m	
tert-Amyl methyl ether	ND	2.0	li .	*1	11	**	**	H	
1,2-Dichloroethane	ND	2.0	п	*1	11	**	77	**	
Ethylene dibromide	ND	2.0	н	**	н	"	11	Ħ	
Surrogate: Dibromofluorometha	ine .	90.0 %	50-1	50	n	"	H	*	
Surrogate: 1,2-Dichloroethane-		74.0 %	50-1	50	11	"	H	*	
MW-5 (W004100-06) Water	Sampled: 04-Apr-00 14:15	Receive	d: 05-Apr	-00 17:30					
Ethanol	ND	500	ug/l	1	0D04020	06-Apr-00	06-Apr-00	EPA 8260A	
tert-Butyl alcohol	ND	100	н.	141	41	11	**	··	
Methyl tert-butyl ether	ND	2.0	Ħ	41	11	11	**	n	
Di-isopropyl ether	ND	2.0	**	*1	11	#1	77	•	
Ethyl tert-butyl ether	ND	2.0	n	И	ц	11	#	n	
tert-Amyl methyl ether	ND	2.0	u	н	Ħ	н	n	n	
1,2-Dichloroethane	ND	2.0	*1	н	17	н		w	
Ethylene dibromide	ND	2.0	n	и	н	н	"	h	
Surrogate: Dibromofluorometho	me	90.0 %	50-1	50	"	n	"	H	
Surrogate: 1,2-Dichloroethane-		72.0 %	50-1	E0	**	,,	#	"	

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. 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.







6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176
Project Manager: Deanna L. Harding

Report Revised: 12-May-00 08:48

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

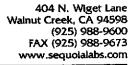
Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0D12001:	Prepared 12-Apr-00	Using I	EPA 5030B	[P/T]							
Blank (0D12001-BI	.K1)		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·				,	
Purgeable Hydrocarbon	3	ND	50	ug/l			<del></del>	<del></del>			
Benzene		ND	0.50	*							
Toluene		ND	0.50	**							
Ethylbenzene		ND	0,50	"							
Xylenes (total)		ND	0.50	77							
Methyl tert-butyl ether		ND	2.5	•							
Surrogate: a,a,a-Trifluc	rotoluene	30.5		"	30.0	v	102	70-130			
LCS (0D12001-BS1	)										
Benzene	<del>4. 41. g</del>	16.3	0.50	ug/l	20.0		81.5	70-130			·
Toluene		17.0	0.50	**	20.0		85.0	70-130			
Ethylbenzene		20.1	0.50	<b>5</b> T	20.0		101	70-130			
Xylenes (total)		55.5	0.50	<b>"</b>	60.0		92.5	70-130			
Surrogate: a,a,a-Trifluo	rotoluene	26.6	••••	"	30.0		88.7	70-130			
Matrix Spike (0D12	001 <b>-M</b> S1)					Source: V	V004117-	05			
Benzene	<u> </u>	18.3	0.50	ug/l	20.0	ND	91.5	70-130			
Toluene		19.1	0.50	**	20.0	ND	95.5	70-130			
Ethylbenzene		18.3	0.50	**	20.0	ND	91.5	70-130			
Xylenes (total)		61.6	0.50	**	60.0	ND	103	70-130			
Surrogate: a, a, a-Trifluo	rotoluene	27.0		"	30.0		90.0	70-130			
Matrix Spike Dup (	0D12001-MSD1)					Source: V	V004117-	05			
Benzene		17.3	0.50	ug/i	20.0	ND	86.5	70-130	5.62	20	
Toluene		17.9	0.50	"	20.0	ND	89.5	70-130	6.49	20	
Ethylbenzene		18.5	0,50		20.0	ND	92.5	70-130	1.09	20	
Xylenes (total)		58.7	0.50	u	60.0	ND	97.8	70-130	4.82	20	
Surrogate: a,a,a-Trifluo	rotoluene	26.9	<del>_</del>	"	30.0		89.7	70-130		<u> </u>	

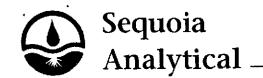
Sequoia Analytical - Walnut Creek

Charlie Westwater, Project Manager

This report represents a revision of the original document. 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.







6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised: 12-May-00 08:48

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

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0D12002:	Prepared 12-Apr-00	Using I	CPA 5030B	P/T]		<u> </u>					
Blank (0D12002-BL	K1)										
Purgeable Hydrocarbons		ND	50	ug/l							
Benzene		ND	0.50	"							
Toluene		ND	0.50	11							
Ethylbenzene		ND	0.50	"							
Xylenes (total)		ND	0.50	"						•	
Methyl tert-butyl ether		ND	2.5	11							
Surrogate: a,a,a-Trifluo	rotoluene	28.4		"	30.0		94.7	70-130			
LCS (0D12002-BS1)	1										
Benzene		16.5	0,50	ug/l	20.0		82.5	70-130			
Toluene		17.4	0.50	11	20.0		87.0	70-130			
Ethylbenzene		18.2	0.50	н	20.0		91.0	70-130			
Xylenes (total)		54.7	0.50	H	60.0		91.2	70-130			
Surrogate: a,a,a-Trifluo	rotoluene	28.4		"	30.0		94.7	70-130			
LCS Dup (0D12002-	-BSD1)							<u></u>			
Benzene		18.1	0.50	ug/l	20.0		90.5	70-130	9.25	20	
Toluene		19.1	0.50	"	20.0		95.5	70-130	9.32	20	
Ethylbenzene		19.7	0.50	**	20.0		98.5	70-130	7.92	20	
Xylenes (total)		59.2	0.50	H	60.0		98.7	70-130	7.90	20	
Surrogate: a,a,a-Trifluo	rotoluene	29.8		н	30.0		99.3	70-130		_	
Batch 0D12003:	Prepared 12-Apr-00	Using !	EPA 5030B	[P/T]							
Blank (0D12003-BL	K1)										
Purgeable Hydrocarbons	3	ND	50	ug/l							
Benzene		ND	0.50	,,							
Toluene		ND	0.50	**		÷					
Ethylbenzene		ND	0.50	п							
Xylenes (total)		ND	0.50	#							
Methyl tert-butyl ether		ND	2.5	11	=						
Surrogate: a,a,a-Trifluo	rotoluene	31.4		"	30.0		105	70-130			

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. 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.



6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised: 12-May-00 08:48

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

Barch OD12003:   Prepared 12-Apr-00   Using EPA 5030B [P/T]	Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzene 20.7 0.50 ug/l 20.0 104 70-130 Toluene 21.0 0.50 " 20.0 105 70-130 Ethylbenzene 21.2 0.50 " 20.0 106 70-130 Xylenes (total) 61.0 0.50 " 60.0 102 70-130  Surrogate: a, a, a-Trifluorotoluene 28.8 " 30.0 96.0 70-130  Benzene 20.7 0.50 ug/l 20.0 ND 104 70-130 Toluene 21.0 0.50 " 20.0 ND 105 70-130 Ethylbenzene 21.1 0.50 " 20.0 ND 105 70-130 Ethylbenzene 21.1 0.50 " 20.0 ND 105 70-130  Surrogate: a, a, a-Trifluorotoluene 27.6 " 30.0 92.0 70-130  Matrix Spike Dup (0D12003-MSD1)  Eenzene 19.5 0.50 ug/l 20.0 ND 102 70-130  Surrogate: a, a, a-Trifluorotoluene 19.8 0.50 " 20.0 ND 99.0 70-130  Ethylbenzene 19.5 0.50 ug/l 20.0 ND 97.5 70-130 5.97 20  Toluene 19.5 0.50 ug/l 20.0 ND 97.5 70-130 5.88 20  Ethylbenzene 19.7 0.50 " 20.0 ND 98.5 70-130 6.86 20  Xylenes (total) 57.3 0.50 " 20.0 ND 98.5 70-130 6.86 20  Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130  Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130  Batch 0D13001: Prepared 13-Apr-00 Using EPA S030B [P/T]  Blank (0D13001-BLKI)  Purgeable Hydrocarbons ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.26 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50.0 ug/l 50.0 ND 95.5 70-130 6.86 20  Ethylbenzene ND 0.50 " 50	Batch 0D12003:	Prepared 12-Apr-00	Using l	EPA 5030B	P/T]							
Toluene 21.0 0.50 " 20.0 105 70-130 Ethylbenzene 21.2 0.50 " 20.0 106 70-130 Xylenes (total) 61.0 0.50 " 60.0 102 70-130 Surrogate: a, a, a-Trifluorotoluene 28.8 " 30.0 96.0 70-130 Surrogate: a, a, a-Trifluorotoluene 28.8 " 30.0 96.0 70-130 Surrogate: a, a, a-Trifluorotoluene 28.8 " 30.0 96.0 70-130 Surrogate: a, a, a-Trifluorotoluene 20.7 0.50 ug/l 20.0 ND 104 70-130 Surrogate: a, a, a-Trifluorotoluene 21.0 0.50 " 20.0 ND 105 70-130 Surrogate: a, a, a-Trifluorotoluene 21.0 0.50 " 20.0 ND 105 70-130 Surrogate: a, a, a-Trifluorotoluene 27.6 " 30.0 P. 20.0 ND 105 70-130 Surrogate: a, a, a-Trifluorotoluene 27.6 " 30.0 P. 20.0 ND 102 70-130 Surrogate: a, a, a-Trifluorotoluene 27.6 " 30.0 P. 20.0 ND 102 70-130 Surrogate: a, a, a-Trifluorotoluene 27.0 " 30.0 P. 20.0 ND 97.5 70-130 Surrogate: a, a, a-Trifluorotoluene 19.8 0.50 " 20.0 ND 97.5 70-130 5.88 20 Sulvius (total) Surrogate: a, a, a-Trifluorotoluene 19.7 0.50 " 20.0 ND 98.5 70-130 6.86 20 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 " 30	LCS (0D12003-BS1	) .										
Ethylbenzene   21.2   0.50   "   20.0   106   70-130	Benzene		20,7	0,50	ug/l	20.0		104	70-130	-		
Sylenes (total)   61.0   0.50   "   60.0   102   70-130	Toluene		21.0	0.50	н	20.0		105	70-130			
Matrix Spike (0D12003-MS1)   Source: W004084-01	Ethylbenzene		21.2	0.50	#	20.0		106	70-130			
Matrix Spike (0D12003-MS1)   Source: W004084-01	Xylenes (total)		61.0	0.50	**	60.0		102	70-130			
Benzene 20.7 0.50 ug/l 20.0 ND 104 70-130 Toluene 21.0 0.50 " 20.0 ND 105 70-130 Ethylbenzene 21.1 0.50 " 20.0 ND 106 70-130 Xylenes (total) 61.0 0.50 " 60.0 ND 102 70-130 Surrogate: α, α, α-Trifluorotoluene 27.6 " 30.0 92.0 70-130  Benzene 19.5 0.50 ug/l 20.0 ND 97.5 70-130 5.97 20 Toluene 19.8 0.50 " 20.0 ND 99.0 70-130 5.88 20 Ethylbenzene 19.7 0.50 " 20.0 ND 99.0 70-130 5.88 20 Ethylbenzene 19.7 0.50 " 20.0 ND 98.5 70-130 6.86 20 Xylenes (total) 57.3 0.50 " 60.0 ND 95.5 70-130 6.26 20 Surrogate: α, α, α-Trifluorotoluene 27.1 " 30.0 90.3 70-130  Batch 0D13001: Prepared 13-Apr-00 Using EPA 5030B [P/T]  Blank (0D13001-BLK1)  Pugeable Hydrocarbons ND 50 ug/l Benzene ND 0.50 " Toluene ND 0.50 " Ethylbenzene ND 0.50 " Coluene ND 0.50 " Colue	Surrogate: a, a, a-Trifluo	rotoluene	28.8	<del></del>	"	30.0		96.0	70-130			
Toluene 21.0 0.50 " 20.0 ND 105 70-130  Ethylbenzene 21.1 0.50 " 20.0 ND 106 70-130  Xylenes (total) 61.0 0.50 " 60.0 ND 102 70-130  Surrogate: a, a, a-Trifluorotoluene 27.6 " 30.0 92.0 70-130  Matrix Spike Dup (0D12003-MSD1) Source: W004084-01  Eenzene 19.5 0.50 ug/l 20.0 ND 97.5 70-130 5.97 20  Toluene 19.8 0.50 " 20.0 ND 97.5 70-130 5.88 20  Ethylbenzene 19.7 0.50 " 20.0 ND 98.5 70-130 6.86 20  Xylenes (total) 57.3 0.50 " 60.0 ND 95.5 70-130 6.26 20  Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130  Batch 0D13001: Prepared 13-Apr-00 Using EPA 5030B [P/T]  Blank (0D13001-BLK1)  Purgeable Hydrocarbons ND 0.50 "  Foluene ND 0.50 "  Ethylbenzene ND 0.50 "  Ethylbenzene ND 0.50 "  Foluene ND 0.50 "  Ethylbenzene ND 0.50 "	Matrix Spike (0D12	003-MS1)					Source: V	V004084-	01			
Ethylbenzene 21.1 0.50 " 20.0 ND 106 70-130 Xylenes (total) 61.0 0.50 " 60.0 ND 102 70-130 Surrogate: a, a, a-Trifluorotoluene 27.6 " 30.0 92.0 70-130 Surrogate: a, a, a-Trifluorotoluene 19.5 0.50 ug/l 20.0 ND 97.5 70-130 5.97 20 Toluene 19.8 0.50 " 20.0 ND 99.0 70-130 5.88 20 Ethylbenzene 19.7 0.50 " 20.0 ND 99.0 70-130 6.86 20 Xylenes (total) 57.3 0.50 " 60.0 ND 95.5 70-130 6.26 20 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 6.26 20 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130 Ethylbenzene ND 0.50 " Toluene ND 0.50 " Toluene ND 0.50 " Mg/l Bank (0D13001-BLK1) Purgeable Hydrocarbons ND 0.50 " Toluene ND 0.50 " Mg/l Benzene ND	Benzene		20.7	0.50	ug/l	20.0	ND	104	70-130			
Surrogate: a, a, a-Trifluorotoluene   27.6   " 30.0   " 60.0   ND 102   70-130	Toluene		21.0	0.50	Ħ	20.0	ND	105	70-130			
Surrogate: a,a,a-Trifluorotoluene   27.6	Ethylbenzene		21.1	0.50	Ħ	20.0	ND	106	70-130			
Matrix Spike Dup (0D12003-MSD1)   Source: W004084-01	Xylenes (total)		61.0	0.50	#1	60.0	ND	102	70-130		-	
Benzene 19.5 0.50 ug/l 20.0 ND 97.5 70-130 5.97 20 Toluene 19.8 0.50 " 20.0 ND 99.0 70-130 5.88 20 Ethylbenzene 19.7 0.50 " 20.0 ND 98.5 70-130 6.86 20 Xylenes (total) 57.3 0.50 " 60.0 ND 95.5 70-130 6.26 20  Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130  Batch 0D13001: Prepared 13-Apr-00 Using EPA 5030B [P/T]  Blank (0D13001-BLK1)  Purgeable Hydrocarbons ND 50 ug/l Benzene ND 0.50 " Toluene ND 0.50 "  Ethylbenzene ND 0.50 "  Surrogate: a, a, a-Trifluorotoluene ND 0.50 "  Methyl tert-butyl ether ND 2.5 "	Surrogate: a,a,a-Trifluo	rotoluene	27.6		"	30.0		92.0	70-130			• •
Toluene 19.8 0.50 " 20.0 ND 99.0 70-130 5.88 20 Ethylbenzene 19.7 0.50 " 20.0 ND 98.5 70-130 6.86 20 Xylenes (total) 57.3 0.50 " 60.0 ND 95.5 70-130 6.26 20  Surrogate: a,a,a-Trifluorotoluene 27.1 " 30.0 90.3 70-130  Batch 0D13001: Prepared 13-Apr-00 Using EPA 5030B [P/T]  Blank (0D13001-BLK1)  Purgeable Hydrocarbons ND 50 ug/l  Benzene ND 0.50 "  Toluene ND 0.50 "  Ethylbenzene ND 0.50 "  Xylenes (total) ND 0.50 "  Xylenes (total) ND 0.50 "  Methyl tert-butyl ether ND 2.5 "	Matrix Spike Dup (	0D12003-MSD1)					Source: V	V004084-	01			
Ethylbenzene 19.7 0.50 " 20.0 ND 98.5 70-130 6.86 20 Xylenes (total) 57.3 0.50 " 60.0 ND 95.5 70-130 6.26 20 Surrogate: a, a, a-Trifluorotoluene 27.1 " 30.0 90.3 70-130	Benzene		19.5	0.50	ug/l	20.0	ND	97.5	70-130	5.97	20	
Systems (total)   57.3   0.50   60.0   ND   95.5   70-130   6.26   20	Toluene		19.8	0.50	11	20.0	ND	99.0	70-130	5.88	20	
Surrogate: a, a, a-Trifluorotoluene   27.1   " 30.0   90.3   70-130	Ethylbenzene		19.7	0.50	4	20.0	ND	98.5	70-130	6.86	20	
Batch 0D13001: Prepared 13-Apr-00   Using EPA 5030B [P/T]	Xylenes (total)		57.3	0.50	**	60.0	ND	95.5	70-130	6.26	20	
Purgeable Hydrocarbons	Surrogate: a,a,a-Trifluo	rotoluene	27.]		"	30.0		90.3	70-130			
Purgeable Hydrocarbons         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         2.5         "	Batch 0D13001:	Prepared 13-Apr-00	Using 1	EPA 5030B	<b>P/T</b> ]		٠					
Benzene         ND         0.50         "           Toluene         ND         0.50         "           Ethylbenzene         ND         0.50         "           Xylenes (total)         ND         0.50         "           Methyl tert-butyl ether         ND         2.5         "	Blank (0D13001-BL	K1)										
Toluene         ND         0.50         "           Ethylbenzene         ND         0.50         "           Xylones (total)         ND         0.50         "           Methyl tert-butyl ether         ND         2.5         "	Purgeable Hydrocarbons	3	ND	50	ug/l							
Ethylbenzene         ND         0.50         "           Xylenes (total)         ND         0.50         "           Methyl tert-butyl ether         ND         2.5         "	Benzene		ND	0.50	**							
Xylenes (total) ND 0.50 "  Methyl tert-butyl ether ND 2.5 "	Toluene		ND	0.50	11							
Methyl tert-butyl ether ND 2.5 "	Ethylbenzene		ND	0.50	•							
	Xyienes (total)		ND	0.50	**							
Surrogate: a,a,a-Trifluorotoluene 30.2 " 30.0 101 70-130	Methyl tert-butyl ether		ND	2.5	Ħ							
	surrogate: a,a,a-Trifluo	rotoluene	30.2		"	30.0		101	70-130		<del></del>	

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. 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.



6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised: 12-May-00 08:48

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

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes		
Batch 0D13001: P	repared 13-Apr-00	Using I	EPA 5030B [	P/T]				<u> </u>					
LCS (0D13001-BS1)													
Benzene		18.6	0.50	ug/l	20.0		93.0	70-130					
Toluene		19.4	0.50	••	20.0		97.0	70-130					
Ethylbenzene		19.1	0.50	•	20.0		95.5	70-130					
Xylenes (total)		63.3	0.50	••	60.0		105	70-130					
Surrogate: a,a,a-Trifluorot	oluene	27.4		"	30.0		91.3	70-130					
Matrix Spike (0D13001-MS1)			Source: W004085-07										
Benzene		16.9	0.50	ug/l	20.0	ND	84.5	70-130					
Toluene		17.5	0.50	11	20.0	ND	87.5	70-130					
Ethylbenzene		18.1	0.50	H	20.0	ND	90.5	70-130					
Xylenes (total)		57.2	0.50	n	60,0	ND	95.3	70-130					
Surrogate: a, a, a-Trifluorot	oluene	26.8	<del></del>	"	30.0		89.3	70-130					
Matrix Spike Dup (0D	13001-MSD1)		Source: W004085-07										
Benzene	<u> </u>	17.1	0.50	ug/l	20.0	ND	85.5	70-130	1.18	20			
Toluene		17.8	0.50	"	20.0	ND	89.0	70-130	1.70	20			
Ethylbenzene		19.2	0.50	н	20.0	ND	96.0	70-130	5.90	20			
Xylenes (total)		58.4	0.50	**	60.0	ND	97.3	70-130	2.08	20			
Surrogate: a,a,a-Trifluoroi	toluene	25.4		"	30.0		<b>84.</b> 7	70-130	**-				

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. 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.





6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176

Project Manager: Deanna L. Harding

Report Revised: 12-May-00 08:48

## Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control

#### Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0D18018: Prepared 18-Apr-00	Using l	EPA 3510B								
Blank (0D18018-BLK1)										
Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	40.0		н	33.3		120	50-150			
LCS (0D18018-BS1)										
Diesel Range Hydrocarbons	525	50	ug/l	500		105	60-140			
Surrogate: n-Pentacosane	40.0		"	33.3		120	50-150			
LCS Dup (0D18018-BSD1)										
Diesel Range Hydrocarbons	343	50	ug/i	500		68.6	60-140	41.9	50	
Surrogate: n-Pentacosane	35.0		"	33.3	_	105	50-150			

Sequoia Analytical - Walnut Creek



6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Report Revised: 12-May-00 08:48

### Diesel Hydrocarbons (C9-C24) with Silica Gel Cleanup by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0D25019: Prepared 18-Apr-00	Using E	PA 3510B								
Blank (0D25019-BLK1)										
Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	29.3		"	33.3		88.0	50-140			
LCS (0D25019-BS1)										
Diesel Range Hydrocarbons	260	50	ug/l	500		52.0	35-125			
Surrogate: n-Pentacosane	31.0	<u></u>	п	33,3		93.1	50-140	- 100		
LCS Dup (0D25019-BSD1)							<u> </u>			
Diesel Range Hydrocarbons	310	50	ug/l	500		62.0	35-125	17.5	50	
Surrogate: n-Pentacosane	31.0		"	33.3		93.1	50-140			

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. 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 antirety.







6747 Sierra Court Suite J

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176

Project Manager: Deanna L. Harding

Report Revised: 12-May-00 08:48

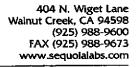
### Volatile Organic Compounds by EPA Method 8260A - Quality Control Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	D										
	Prepared 03-Apr-00	Using I	SPA 5030B [	r/Ij	<del></del>					-	
Blank (0D04020-BLK	(1)			<del></del> -							
Ethanol		ND	500	ug/l							
tert-Butyl alcohol		ND	100	Я							
Methyl tert-butyl ether		ND	2.0	*							
Di-isopropyl ether		ND	2.0	**							-
Ethyl tert-butyl ether		ND	2.0	**							
tert-Amyl methyl ether		ND	2.0								
1,2-Dichloroethane		ND	2.0	<b>**</b> ·							
Ethylene dibromide		ND	2.0	*							
Surrogate: Dibromofluoro	methane	46.0		"	50.0		92.0	50-150			
Surrogate: 1,2-Dichloroet	hane-d4	39.0		"	50.0		78.0	50-150			
Blank (0D04020-BLK	(2)										
Ethanol	<u> </u>	ND	500	ug/I	_						
tert-Butyl alcohol		ND	100	-							
Methyl tert-butyl ether		ND	2.0	₩.							
Di-isopropyl ether		ND	2.0	•							
Ethyl tert-butyl ether		ND	2.0	**							
tert-Amyl methyl ether		ND	2.0	•							
1,2-Dichloroethane		ND	2.0	**							
Ethylene dibromide		ND	2.0	**		4					
Surrogate: Dibromofluoro	methane	44.0		"	50.0		88. <b>0</b>	50-150	* ****		
Surrogate: 1,2-Dichloroet	hane-d4	35.0		*	50.0		70.0	50-150			
LCS (0D04020-BS1)											
Methyl tert-butyl ether		58.3	2.0	ug/l	50.0		117	70-130			
Surrogate: Dibromofluoro	methane	48,0		*	50.0		96.0	50-150			
Surrogate: 1,2-Dichloroet	hane-d4	39.0		*	50.0		78.0	50-150			

Sequoia Analytical - Walnut Creek

This report represents a revision of the original document. The results in this report apply to the samples analyzed in accordance with the chain of austody document. This analytical report must be reproduced in its entirety.





6747 Sierra Court Suite J

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176

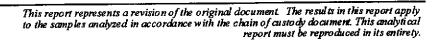
Project Manager: Deanna L. Harding

Report Revised: 12-May-00 08:48

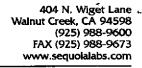
### Volatile Organic Compounds by EPA Method 8260A - Quality Control Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes		
Batch 0D04020:	Prepared 06-Apr-00	Using F	EPA 5030B	[P/T]		. <u> </u>							
LCS (0D04020-BS2	()												
Methyl tert-butyl ether		51.2	2.0	ug/l	50.0		102	70-130					
Surrogate: Dibromofluoromethane		43.0		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	50.0	<del></del>	86.0	50-150	•				
Surrogate: 1,2-Dichloroethane-d4		34.0		"	50.0		68.0	50-150					
Matrix Spike (0D04020-MS1)		Source: W003692-01											
Methyl tert-butyl ether	<u> </u>	66.9	2.0	ug/l	50.0	5.8	122	60-150					
Surrogate: Dibromoflu	oromethane	48.0		"	50.0	,	96.0	50-150					
Surrogate: 1,2-Dichlor	oethane-d4	41.0		n	50.0		82.0	50-150					
Matrix Spike Dup	(0D04020-MSD1)	Source: W003692-01											
Methyl tert-butyl ether	·	72.1	2.0	ug/l	50.0	5.8	133	60-150	7.48	25			
Surrogate: Dibromoflu	oromethane	49.0	<del> </del>	"	50.0		98.0	50-150					
Surrogate: 1,2-Dichlor	•	42.0		*	50.0		84.0	50-150					

Sequoia Analytical - Walnut Creek









6747 Sierra Court Suite J

**Dublin CA**, 94568

Project: Unocal

Project Number: Unocal #7176 Project Manager: Deanna L. Harding Report Revised:

12-May-00 08:48

#### **Notes and Definitions**

D-06 Discrete peaks.

D-11 Chromatogram Pattern: Unidentified Hydrocarbons < C16

D-14 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24

P-01 Chromatogram Pattern: 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

Sequoia Analytical - Walnut Creek

Charlie Westwater, Project Manager

This report represents a revision of the original document. 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.

