

# GETTLER-RYAN INC. 12/21/2000

## TRANSMITTAL

September 20, 2000 G-R#: 180022

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

FROM:

Deanna L. Harding

**Project Coordinator** 

Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568

RE: Tosco(Unocal) SS #7176

7850 Amador Valley Blvd.

Dublin, California

#### WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	September 15, 2000	Groundwater Monitoring and Sampling Report Third Quarter - Event of July 14, 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 October 3, 2000, this report will be distributed to the following:

#### Enclosure

Mr. Amir K. Gholami, REHS

Alameda County Health Care Services

1131 Harbor Bay Parkway Alameda, California 94502

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September 15, 2000 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 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 July 14, 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:

Potentiometric Map

Figure 2: Table 1:

Concentration Map

Groundwater Monitoring Data and Analytical Results

Table 2:

Groundwater Analytical Results - Oxygenate Compounds

Table 3:

Dissolved Oxygen Concentrations

Harden

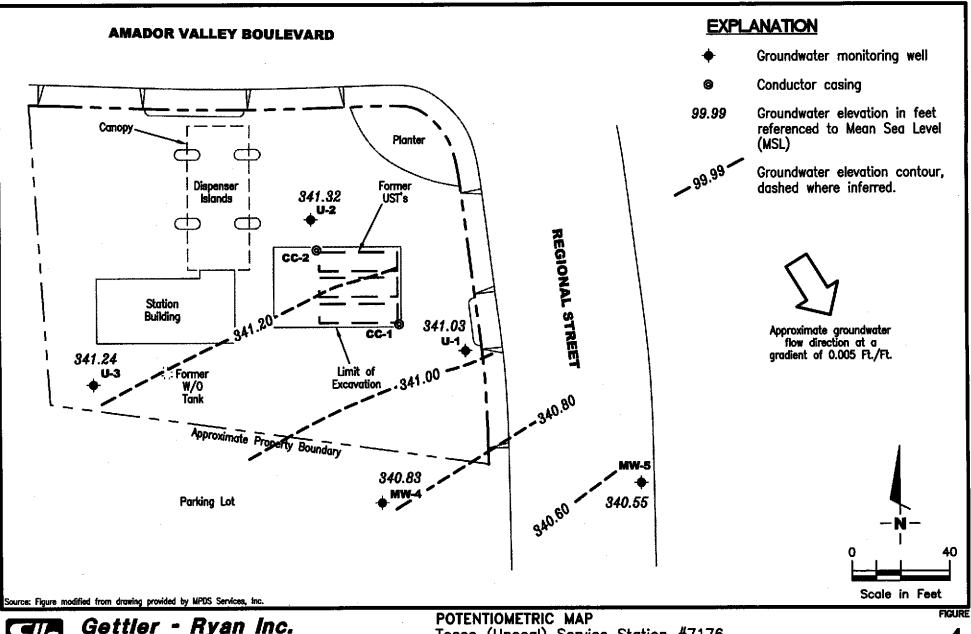
Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

7176.qmi





Gettler - Ryan Inc.

6747 Sierra Ct., Suite J Dublin, CA 94568

(925) 551-7555

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

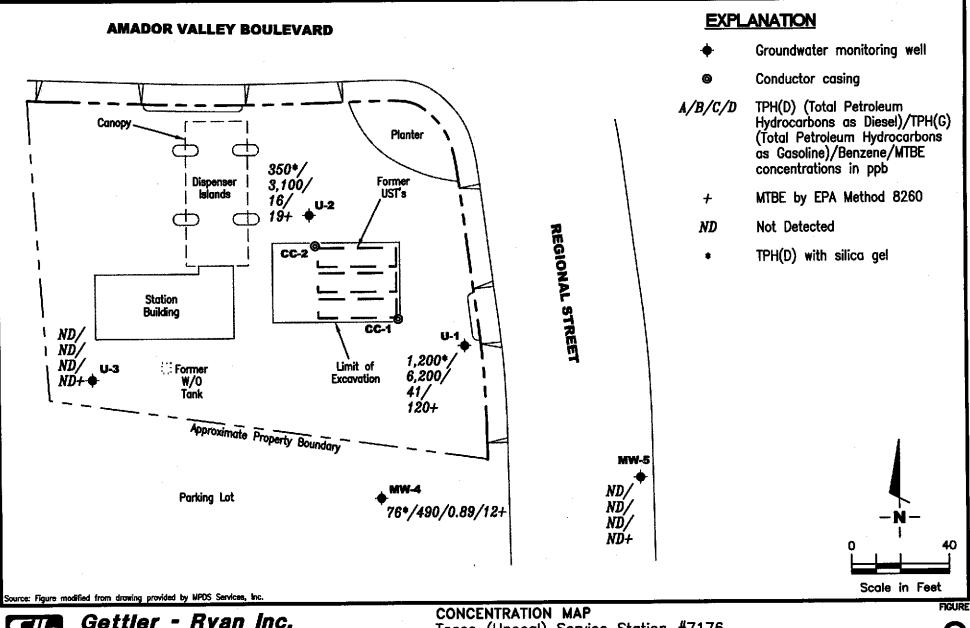
DATE

July 14, 2000

REVISED DATE

PROJECT NUMBER 180022

REVIEWED BY





PROJECT NUMBER

Gettler - Ryan Inc.

REVIEWED BY

6747 Sierra Ct., Suite J Dublin, CA 94568

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

REVISED DATE

DATE

July 14, 2000

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/		DATE	DTW	S.I.	GWE	TPH(D)♦	TPH(G)	В	T	E	X	MTBE
TOC*			(ft.)	(fl. bgs.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-1		05/00/05	10.50	100 200	343.03	9,400 <sup>3</sup>	39,000	1,500	19	1,600	5,200	
355.62		07/08/95	12.59	10.0-30.0	343.03	4,200 <sup>5</sup>	33,000	1,400	ND	1,400	3,100	7
		10/12/95 01/11/96 <sup>1</sup>	15.38		340.24	8,200 <sup>5</sup>	8,300	690	11	680	1,500	8
			16.33			630 <sup>5</sup>	3,200	110	ND	180	290	790
		04/11/96 <sup>2</sup>	12.20		343.42	2,200 <sup>5</sup>	2,600	81	4.4	210	230	510
		07/10/96	13.84		341.78	2,200 560 <sup>5</sup>	2,200	67	19	140	150	360
		10/30/96	15.85		339.77	2,300 <sup>5</sup>		98	ND	360	290	150
		01/27/97	12.20		343.42	2,300 1,300 <sup>5</sup>	4,600	98 50	ND ND	220	140	ND
		04/08/97	13.46		342.16		2,800			140	94	190
		07/17/97	15.30		340.32	460 <sup>6</sup> 510 <sup>6</sup>	2,300	30	4.5		88	220
		10/17/97	16.33		339.29		1,500	31	6.7	110	200	170
		01/19/98	14.34		341.28	101,900/1,300 <sup>10</sup>	3,100	46	3.4	310		
355.59	NP	04/23/98	11.16		344.43	/1,700 <sup>11</sup>	3,400	72	3.8 ND <sup>12</sup>	470	350	280
	NP	07/08/98	12.67		342.92	2,000 <sup>14</sup>	4,500	51	ND <sup>12</sup>	590	430	190 190/180 <sup>17</sup>
		10/05/98	14.57		341.02	/2,500 <sup>10</sup>	7,500 <sup>16</sup>	53		680	350	ND <sup>12</sup>
		01/04/99	15.35		340.24	112,700/2,50011	1 <b>0,000</b> <sup>19</sup>	ND <sup>12</sup>	ND <sup>12</sup>	1,200	540	
		04/05/99	13.64		341.95	10920/570 <sup>10</sup>	4,900	34	ND <sup>12</sup>	350	150	150/55 <sup>17</sup>
		07/01/99	14.39		341.20	102,700/3,600 <sup>26</sup>	10,000	45	ND <sup>12</sup>	850	420	260/110 <sup>17</sup>
		09/30/99	15.32		340.27	102,360/1,680 <sup>10</sup>	7,150 <sup>27</sup>	$ND^{12}$	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>
<b>U-2</b>												
356.59		07/08/95	12.68	10.0-30.0	343.91	$4,700^3$	17,000	430	ND	2,200	590	
550.57		10/12/95	16.01	10.0 20.0	340.58	3,600 <sup>5</sup>	24,000	310	60	1,900	190	7
		01/11/961	17.06		339.53	8,600 <sup>5</sup>	10,000	210	55	1,400	240	8
		04/11/96 <sup>2</sup>	12.75		343.84	1,900 <sup>5</sup>	7,700	130	27	1,100	110	340
		07/10/96	14.42		342.17	2,300 <sup>5</sup>	5,600	59	15	610	42	250
		10/30/96	16.82		339.77	1,800 <sup>5</sup>	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
					342.32 340.63	1,300 <sup>6</sup>		33 17				
		07/17/97	15.96		340.03	1,500	6,200	17	22	410	ND	130

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/		DATE	DTW	S.I.	GWE	TPH(D)♦	TPH(G)	В	T	R	Х	MTBE
TOC*			(ft.)	(ft. bgs.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ррь)	(ppb)
U-2		10/17/97	17.03	10.0-30.0	339.56	1,400 <sup>6</sup>	7,100	71	26	520	50	ND
(cont)		01/19/98	15.10	10.0-50.0	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
350.55	NP	07/08/98	13.27		343.28	1,10014	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	11670/250 <sup>20</sup>	2,200 <sup>21</sup>	35	$ND^{12}$	17	$ND^{12}$	86
		04/05/99	14.19		342.36	10660/490 <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	$ND^{12}$	ND <sup>12</sup>	ND <sup>12</sup>	<sup>12</sup> ND/35 <sup>17</sup>
		09/30/99	16.00		340.55	10483/340 <sup>10</sup>	256 <sup>27</sup>	1.85	ND <sup>12</sup>	2.42	$ND^{12}$	26.3/29.8 <sup>17</sup>
		01/03/00	17.20		339.35	<sup>26</sup> 2,400/1,900 <sup>26</sup>	$3,400^{27}$	23	13	$ND^{12}$	44	46/14 <sup>17</sup>
		04/04/00	13.50		343.05	<sup>26</sup> 1,000/1,000 <sup>26</sup>	$3,600^{27}$	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>
					·							
U-3												
358.13		07/08/95	14.58	10.0-30.0	343.55	$710^{3}$	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	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>

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	<b>8.1.</b>	GWE	TPH(D)♦	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(ft. bgs.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-3	01/03/00	18.86	10.0-30.0	339.23	ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	04/04/00	15.10	10.0-30.0	342.99	ND ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
(cont)	04/04/00 07/14/00	16.85		341.24	ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	071200	10.00									
MW-4											
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	1,400 <sup>11</sup>	1,000 <sup>13</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	10340/210 <sup>10</sup>	$620^{23}$	ND <sup>12</sup>	1.8	2.1	ND <sup>12</sup>	6.0/9.3 <sup>17</sup>
req.	07/01/99	15.43		340.98	<sup>24</sup> 260/310 <sup>26</sup>	700 <sup>19</sup>	2.1	$ND^{12}$	1.9	2.4	<sup>12</sup> ND/21 <sup>17</sup>
	09/30/99	16.27		340.14	10420/220 <sup>10</sup>	582 <sup>27</sup>	2.60	1.30	1.98	$ND^{12}$	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	31/1 <b>7</b> <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>
MW-5											
	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
355.03			10.0-25.0	342.40	170 <sup>10</sup>	ND	ND	ND	ND	ND	12
	07/08/98	12.63 14.00		341.03	/100 <sup>10</sup>	ND	ND	ND	ND	ND	12
	10/05/98			339.82	ND	ND	ND	ND	ND	ND	ND
	01/04/99	15.21		341.27	ND ND	ND	ND	ND	ND	ND	ND/ND <sup>17</sup>
	04/05/99	13.76		340.55	ND ND	ND	ND	ND	ND	ND	<sup>12</sup> ND/2.3 <sup>17</sup>
	07/01/99	14.48			<sup>10</sup> 60.4/ND	50.8 <sup>27</sup>	ND	ND	ND	ND	ND/ND <sup>17</sup>
	09/30/99	15.15		339.88			ND ND	ND ND	ND	ND	ND/ND <sup>17</sup>
	01/03/00	16.34		338.69	ND <sup>15</sup> 69/ND	ND		ND	ND ND	ND ND	ND/ND <sup>17</sup>
	04/04/00	12.90		342.13		ND	ND		ND ND	ND ND	ND/ND <sup>17</sup>
	07/14/00	14.48		340.55	ND	ND	ND	ND	ND	ND	MUMU

## Table 1 Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	SJ.	GWE	TPH(D)♦	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(ft. bgs.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
Trip Blank											
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			<del></del>		ND	ND	ND	ND	ND	ND
	07/01/99					ND	ND	ND	ND	ND	ND
	09/30/99				·	ND	ND	ND	ND	ND	ND
	01/03/00					ND	ND	ND	ND	ND	ND
	04/04/00					ND	ND	ND	ND	ND	ND
	07/14/00			••		ND	ND	ND	ND	ND ·	ND

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

DTW = Depth to Water B = Benzene ppb = Parts per billionS.I. = Screen Interval T = Toluene ND = Not Detected

(ft. bgs.) = Feet Below Ground Surface E = Ethylbenzene -- = Not Measured/Not Analyzed

(ft.) = Feet X = Xylenes NP = No purge

GWE = Groundwater Elevation MTBE = Methyl tertiary butyl ether PNA = Polynuclear Aromatic Hydrocarbons

msl = Mean sea level

TPH(D) = Total Petroleum Hydrocarbons as Diesel

- \* 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.
- 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.
- 3 Laboratory report indicates unidentified hydrocarbons C9-C26.
- 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.
- <sup>7</sup> 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.
- Laboratory report indicates diesel and unidentified hydrocarbons <C14.</p>
- 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.</p>
- Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- Laboratory report indicates diesel and unidentified hydrocarbons <C16.</p>
- Laboratory report indicates unidentified hydrocarbons C6-C12.
- Laboratory report indicates gasoline and unidentified hydrocarbons >C10.
- Laboratory report indicates gasoline and unidentified hydrocarbons <C7.</p>

## Table 1

## **Groundwater Monitoring Data and Analytical Results**

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

## EXPLANATIONS: (cont)

- Laboratory report indicates unidentified hydrocarbons C10-C24.
- <sup>25</sup> Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
- Laboratory report indicates unidentified hydrocarbons <C16.
- Laboratory report indicates gasoline C6-C12.
- Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons C6-C12.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Tosco (Unocal) Service Station #7176

WELL ID	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	$ND^1$	55	ND <sup>1</sup>	$ND^1$	ND¹	ND¹	$ND^{I}$
	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>t</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	$ND^1$	ND <sup>1</sup>	160	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	$ND^1$	ND <sup>1</sup>
	07/14/00	ND <sup>1</sup>	ND <sup>1</sup>	120	ND <sup>1</sup>	ND <sup>1</sup>	ND¹	ND¹	ND¹
U-2	04/05/99	$\mathbf{ND}^1$	$ND^1$	6.9	ND <sup>1</sup>	ND¹	ND <sup>1</sup>	$ND^1$	ND¹
	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>	$ND^1$	25	ND¹	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
U-3	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND
	07/01/99	ND	ND	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
MW-4	04/05/99	ND	ND	0.2	MD	NID.	NUD	MD	110
TAT AA wet	04/03/99	ND ND	ND ND	9.3 21	ND ND	ND ND	ND	ND	ND
	09/30/99	ND ND	ND	22.5	ND ND	ND ND	ND ND	ND ND	ND
	01/03/00	ND	ND	17	ND	ND ND	ND ND	ND ND	ND ND
	04/04/00	ND	ND	22	ND	ND ND	ND	ND ND	ND ND
	07/14/00	ND	ND	12	ND ND	ND ND	ND ND	ND	ND ND
	0112 H UU	1,25	112	12	H	1111	NU	שמ	ND

## Table 2

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

WELL ID	DATE	ETHANOL	TBA	МТВЕ	DIPE	ETBE	TAME	EDB	1,2-DCA
		(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ррь)	(ppb)	(ppb)
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

#### Table 2

## **Groundwater Analytical Results - Oxygenate Compounds**

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

## **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

## **ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

Detection limit raised. Refer to analytical reports.

## Table 3 Dissolved Oxygen Concentrations

Tosco (Unocal) Service Station #7176

7850 Amador Valley Boulevard Dublin, California

		ubini, Cambrina	
WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
	30.0		
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	
	04/08/971	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	
	04/08/971	1.69	
	07/17/9 <b>7</b> 1	2.08	
	10/17/97 <sup>1</sup>	1.80	<b></b>
	01/19/98 <sup>1</sup>	2.95	
	04/23/98 <sup>1</sup>	0.55	
	0 <b>7/08/98<sup>1</sup></b>	1.36	
U-3	01/11/96	<b></b>	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.

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

-- = Not Measured

mg/L = milligrams per liter

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.

	176	.1	Job#:	1800	1.000	
dress:7	850 Amador	Valley Blow.	Date:		( OD 1-	<del>,                                    </del>
<b>A</b> : —	Jublia, CA		Sampler:	<u>+ KD</u>	VURI	
Well ID	<u>u_l</u>	Well Condition	n: OK			
ell Diameter		Hydrocarbon Thickness: _	-	Amount Bail	=	igel.)
tal Depth	24,90 -	Volume	2" = 0.17	3" = 0.38	4" : 12" = 5.80	- 0.66
pth to Water	14.56	Factor (VF)	6" = 15		12- = 3.80	
	13.34	x v= 0.17 -2.2	X 3 (case volume) =	Estimated Purg	je Volume:	51 6 10al
urge juipment:	Disposable Baile Bailer	•	empling juipment: Dis	osable Baik		,
· læbræne	Stack	•	Bail	er ssure Bailer	- ···· <b>··</b>	
*··	Suction Grundfos			b Sample		
	Other:	<del></del>			111	
tarting Time:	14:4	Weather	Conditions:	SUNI	'	
ampling Time:	15:05		olor:	<del></del>	Odor:	
urging Flow Ra			t Description: Time:	Volume	:	(gal.)
id well de-wate	Volume pH	Conductivity	Temperature	D.O.	ORP	Alkalinity
	(gal.)	µmhos/cm	SE EO	(mg/L)	(mV)	(ppm)
1450 =	2,5 6.7	5.959	80.0			
	5 60	0 942	H8.9 H8.3	·		
4154-	7 6.6	7 928	71815			
						·
		LABORATORY	INFORMATION			
SAMPLE ID	(#) - CONTAINER	REFRIG. PRESER	V. TYPE: LABOR	IATORY	ANALY TPHG BTEX	
<u> </u>	X VOA w. HC	7 He			TPH Diesel	
	1 Liter Amber	(5,07)				
					<u></u>	
	New LOCK		+			

	Sco	FIELD DATA	Oneci		•
	7176		Job#:	18003	٧2
	7850 Amader	Valley Blud.	Date:	4/14/	(Q 1)
7	Dublia CA	0	Sampler:	HIKEV	ORK
ity:	DOSKA, CA	·	Sample: -	····	
Well ID	U-2	Well Condition	n: oK		
Vell Diameter	<b>_</b>	Hydrocarbon	J.	Amount Bailed (product/weter):	
otal Depth	26.50 m	Thickness:	2" = 0.17	3" = 0.38	4" = 0.66
epth to Water	15.23	Factor (VF)	6" = 1	1.50 12"	= 5.80
		vr 0:15-1:9	<b>V 6</b> (	Estimated Duras	/olume: 5.1 (gal.
	,			Estantated Purge	
Purge quipment:	Disposable Bailer Bailer			sposable Bailer	
	Stack Suction		Pr	eiler essure Bailer	
	Grundfos Other:		Gi Other:	rab Sample	
	Other:				1
Starting Time:	14:115	Weather	Conditions:	SUMM'	- Company of the Comp
Sampling Time:	14:32	- Water Co	olor:	Od	or:
Purging Flow Ra	1 6	<del>-</del>	t Description:   — 		(as
id well de-wat		if yes;	Time:	Volume:	
Time	Volume pH (gal.)	Conductivity µmhos/cm	Temperature	D.O. (mg/L)	ORP Alkalinit (mV) (ppm)
TUTH -	2 6.75	-: 1986	83.0		<u> </u>
	4 6.11	12.55	31.7	·	
14.33	6.76	1248	81.1		· · · · · · · · · · · · · · · · · · ·
<del>, , , , , , , , , , , , , , , , , , , </del>			VEORUÁTION		
	(#) - CONTAINER	LABORATORY I		RATORY	ANALYSES
SAMPLE ID		J 1	L SEC		GIBTEX /MISE/G
SAMPLE ID		Y HC			
	X VOA W, HCL 1 Liter Anter	7 HE	SE	<u>7</u>	H Pissel
	× VOA w, HCL		SE	0 <u>τ</u>	HVIESE
	× VOA w, HCL		Sel	Q τe	H 018821
	× VOA w, HCL		Sel	Q Te	H V 18821

ddress: 7	176 850 Amador Vo ublin, CA	Mey Blue.	Job#:  Date:   Sampler:	180022 /14/01 . KEVOR	)
Well ID	<u>U-3</u>	Well Condition	OK	w	
'eil Diameter		Hydrocarbon		mount Bailed	(gal.)
otal Depth	28.50 <u></u>	Thickness: Volume Factor (VF)	2° = 0.17 6° = 1.50	3* = 0.38	4" = 0.66 0
epth to Water		Sa	mpling	istimated Purge Volum	5-9 (cel.)
quipment:	Bailer Stack Suction Grundfos Other:	<b>E</b> q	Baile Pres	osable Bailer Bure Bailer Sample	
Starting Time: Sampling Time: Purging Flow Ra	12:35 12:51 te:	Water Co	plor: <u>Cloudy</u>	NONE	NONE
Did well de-wate	Volume pH (gal.)	Conductivity	Temperature	D.O. OR: (mg/L) (mV	P Alkalinity
12:37 12:39 12:41	2 7.04 4 6.95 6 6.81	1230 1358 1419	90 2 89.9 89.7		
		LABORATORY	INFORMATION IV. TYPE LABOR	<b></b>	ANALYSES
SAMPLE ID	4 VOA w. HCL	REFRIG. PRESER	6.40		TEX /MBE/CO PAIS
	1 City Arber	7 Alon		7945	riesel
4-3	4		<del></del>		

ent/	Goze					_	
	7176			Job#: _	180	022	
•	7850 A	Amador Vo	Men Blud	Date: _	1/14	100	
•	Dublin	CA	0	Sampler: _	44. KE	EVORK.	
ity:	DOBIIA	+ C F		Sample: -	<del> </del>		
	A . 1 . 1	11.	<u></u>	_ cK	)		
Well ID	MW		Well Condition		<del>``</del>		
/ell Diameter		<u> in</u>	Hydrocarbon	J.	Amount E		(nel.)
otal Depth	25.	50 th	Thickness: _	2" = 0.17	3" = 0.3		= 0.66
-	16	58 .	Factor (VF)		- 1.50	12" = 5.80	
epth to Water	<u> </u>					1.	· · · · · ·
	9,0	<u> 12 x vi</u>	<u>0.11. Pt.0</u>	X 3 (case volume)	= Estimated F	Purge Volume:	F.8 100L
			_	tina		in the second se	
Purge quipment:	Dispos: Bailer	able Bailer		ampling quipment:	Di <del>sposable</del> B	j	
deshinasiff	Stack	were the same of		4.	Bailer	and a street of the same of some or security.	
	Suction	Calledon and the same			Pressure Bail Grab Sample		
	Grundf Other:			Other	-	<u> </u>	
	05101.						
•		and the second					
tection Times		ろしナイー	Weather	r Conditions:	<u>SUU</u>		
_	1	7147		r Conditions: Color: <u>C LC い</u>	1	Odor:	_
ampling Time	$\sim$	102 102	_ Water C	Color: CLOV	1	·	
ampling Time urging Flow R	Rete:	<del> </del>	Water C		DY	·	(cel
ampling Time urging Flow R id well de-wa	Rete: nter?	0.1	Water C Sediments If yes;	nt Description:	Volui	Odor:	
ampling Time urging Flow R	Rete:	<del> </del>	Water C	Color: <u>CLOU</u> nt Description:	Volui D.O.	Odor:	Alkalinity (ppm)
ampling Time urging Flow R	Rete: nter?	0.1	Water Conductivity	nt Description: Time:	Volui D.O.	Odor:	Alkalinity
iampling Time Purging Flow R Did well de-wa	Volume (gal.)	0.1	Water Conductivity	Time:  Temperature	Volui D.O.	Odor:	Alkalinity
ampling Time urging Flow R id well de-wa	Volume (gal.)	рн	Water Conductivity	Time:  Temperature	Volui D.O.	Odor:	Alkalinity
ampling Time urging Flow R id well de-wa Time	Rete:	рн	Water Conductivity	Time:  Temperature	Volui D.O.	Odor:	Alkalinity
Sampling Time Purging Flow R Did well de-wa	Volume (gal.)	рн	Water Conductivity	Time:  Temperature	Volui D.O.	Odor:	Alkalinity
13150	Volume (gal.)	рн	Sediment if yes; Conductivity pmhos/cm	Temperature	Volui D.O.	Odor:	Alkalinity
Sampling Time Purging Flow R Did well de-wa Time	Volume (gal.)	pH  6.89  6:84	Sediment if yes; Conductivity umhoe/cm	Time:  Temperature  PR 8	D.O. (mg/L)	Odor:ORP (mV)	Alkalinity (ppm)
Sampling Time Purging Flow R Did well de-wa Time	Volume (gal.)	PH  6.89  6.89  6.81	Conductivity  µmhos/cm  LABORATORY REFRIG. PRESER	Time:  Temperature  PAR  INFORMATION  RV. TYPE:  LA	D.O. (mg/L)	Odor: ORP (mV)	Alkalinity (ppsn)
Sampling Time Purging Flow R Did well de-wa Time	Volume (gal.)	PH  6.89  6.89  6.81  ONTAINER  A w, HCL	Conductivity  µmhoe/cm  LABORATORY REFRIG. PRESERY	INFORMATION RV. TYPE: LA	D.O. (mg/L)  BORATORY	Odor:  ORP (mV)  ANALY  TRHG/BTEX	Alkalinity (ppss)  ses
Sampling Time Purging Flow R Did well de-wa Time	Volume (gal.)	PH  6.89  6.89  6.81	Conductivity  µmhos/cm  LABORATORY REFRIG. PRESER	INFORMATION RV. TYPE: LA	D.O. (mg/L)	Odor: ORP (mV)	Alkalinity (ppss)  ses
Sampling Time Purging Flow R Did well de-wa Time	Volume (gal.)	PH  6.89  6.89  6.81  ONTAINER  A w, HCL	Conductivity  µmhoe/cm  LABORATORY REFRIG. PRESERY	INFORMATION RV. TYPE: LA	D.O. (mg/L)  BORATORY	Odor:  ORP (mV)  ANALY  TRHG/BTEX	Alkalinity (ppss)  ses
Sampling Time Purging Flow R Did well de-wa Time	Volume (gal.)	PH  6.89  6.89  6.81  ONTAINER  A w, HCL	Conductivity  µmhoe/cm  LABORATORY REFRIG. PRESERY	INFORMATION RV. TYPE: LA	D.O. (mg/L)  BORATORY	Odor:  ORP (mV)  ANALY  TRHG/BTEX	Alkalinity (ppss)  ses
Sampling Time Purging Flow R Did well de-wa Time	Volume (gal.)  (9) - CO	PH  6.89  6.89  6.81  ONTAINER  A w, HCL	Conductivity  µmhoe/cm  LABORATORY REFRIG. PRESERY	INFORMATION RV. TYPE: LA	D.O. (mg/L)  BORATORY	Odor:  ORP (mV)  ANALY  TRHG/BTEX	Alkalinity (ppss)  ses

8/97-Heldet.hm

Well ID  Well Condition:  Hydrocarbon Thickness:  Amount Bailed (productivater):  (pal.)  Well Condition:  Hydrocarbon Thickness:  In. (productivater):  (pal.)  Yolume  2" = 0.17  3" = 0.38  4" = 0.66  Tactor (VF)  Sampling Equipment:  Stack Suction Grundfos Other:  Other:  Weather Conditions:  Water Color:  Grab Sample Other:  Water Color:  Graph  Water Color:  Water Color:  Sediment Description:  If yes; Time:  Volume:  (pal.)  Water Conductivity pumbos/cm  Time:  Volume (pal.)  Time:  Volume (pal.)  Amount Bailed (pal.)  Sampling Equipment:  Bailer Bailer  Bailer  Bailer  Bailer  Bailer  Bailer  Bailer  Bailer  Contactivity pumbos/cm  Time:  Volume:  (pal.)  Amount Bailed (pal.)  Sampling Equipment:  Bailer  B	Well ID  Well Condition:  Well Condition:  Well Condition:  Amount Bailed (product/weter):  In		.176		Job#:	FI / 1\(\frac{1}{2}\)	022	
Well ID  Well Condition:  Well Condition:  Amount Belled (product/weter):  In. Hydrocarbon Inickness:  In. Lydrocarbon Inickness:  Ini	Well ID  Well Condition:  Well Condition:  Well Condition:  Well Condition:  Well Condition:  Wydrocarbon Thickness:  In. Amount Beiled (productiveter):  In. (productiveter):	iress:7	850 Amador	Valley Blod.	Date:			
Diameter   Amount Beiled   Incompose   I	Diameter   Amount Bailed   Inc.   I	ν: <u> </u>	Jublia, CA		Sample	or: <u>H. Kr</u>	<u>-VORK</u>	
Thickness:  In (product/water):  In (product/water)	Thickness:  In. (product/water):  In. (produ	Well ID	MW-5	Well Condi	tion:	o K		
tal Depth    Column	tal Depth    The content of the cont	il Diameter	<u> </u>					
Pactor (VF)    Pactor (VF)	Purge Disposable Bailer Stack Suction Grundfos Other:  Tarting Time:  Urging Flow Rate:	tal Depth	25.00 0			3" = 0.3	8 4"	= 0.66
Disposable Bailer Bailer Stack Suction Grundfos Other:  Disposable Bailer Stack Suction Grundfos Other:  Disposable Bailer Bailer Stack Suction Grundfos Other:  Disposable Bailer Bailer Stack Suction Grundfos Other:  Disposable Bailer Bailer Bailer Fressure Bailer Grab Sample Other:  Disposable Bailer Bailer Fressure Bailer Grab Sample Other:  Dodor:  Disposable Bailer Bailer Stack Suction Grab Sample Other:  Dodor:  Sediment Description: If yes; Time:  Volume:  If yes; Time:  Volume:  If yes; Time:  Dodor:  January  Alicalinity (ppm)  January  J	Disposable Bailer Bailer Stack Suction Grundfos Other:  Disposable Bailer Stack Suction Grundfos Other:  Disposable Bailer Stack Suction Grundfos Other:  Disposable Bailer Bailer Fressure Bailer Grab Sample Other:  Disposable Bailer Bailer Fressure Bailer Grab Sample Other:  Disposable Bailer Bailer Fressure Bailer Grab Sample Other:  Disposable Bailer Bailer Fressure Bailer Other:  Disposable Bailer Bailer Fressure Bailer Grab Sample Other:  Disposable Bailer Bailer Fressure Bailer Other:  Disposable Bailer Bailer Fressure Bailer Grab Sample Other:  Disposable Bailer Bailer Fressure Bailer Fressur	oth to Water	14.48	Factor (VF)	) 	6" = 1.50	12" = 5.80	
Sampling Lipronent:  Baller Stack Suction Grundfos Other:  Disposable Bailer Bailer Fressure Bailer Grab Sample Other:  Other:  Weather Conditions: Water Color:  Sediment Description: If yes; Time:  Volume (gal.)  Time  Volume (gal.)  PH  Conductivity pmhos/cm  Temperature (gal.)  Conductivity pmhos/cm  Temperature (gal.)  LABORATORY INFORMATION  SAMPLE ID  (7) - CONTAINER  REFRIG.  REFRIG.  PRESERV. TYPE:  LABORATORY  LAB	Sampling Luipment:  Bailler Stack Suction Grundfos Other:  Disposable Bailer Equipment:  Bailler Pressure Bailer Grab Sample Other:  Other:  Other:  Other:  Other:  Weather Conditions:  Water Color:  Sediment Description: If yes; Time:  Volume:  (gal.)  Time  Volume (gal.)  PH  Conductivity Jemphos/cm  Temperature (mg/L)  Conductivity Jemphos/cm  Conductivity Jemphos/cm  Conductivity Jemphos/cm  LABORATORY INFORMATION  SAMPLE ID  (g) - CONTAINER  REFRIG.  PRESERV. TYPE  LABORATORY  INFORMATION  ANALYSES  TRAGISTEX. MIGGE  TEMPLE ID  THAGISTEX. MIGGE  TEMPLE ID  TO THAGISTEX. MIGGE  TO THAGISTEX MICROSTEX MI		10,59	-0.1H 1:1	V 3 (0000 W	.kuma) = Estimated	Purge Volume:	7 ( (gel)
Bailer Stack Suction Grundfos Other:  Disposable Bailer Bailer Stack Suction Grundfos Other:  Other:  Disposable Bailer Bailer Grab Sample Other:  Other:  Disposable Bailer Bailer Grab Sample Other:  Other:  Other:  Other:  Odor:  Sediment Description: If yes; Time:  Volume:  If yes; Time:  Volume:  (gal.)  Time  Volume (gal.)  PH  Conductivity pmbos/cm  Temperature (gal.)  CORP Alicalinity (ppm)  Conductivity pmbos/cm  Temperature (gal.)  D.O. ORP Alicalinity (ppm)  Conductivity pmbos/cm  Temperature (ppm)  Conductivity pmbos/cm  CLOUDY  Odor:  Ideal  Conductivity pmbos/cm  CLOUDY  Odor:  Cloudy  Odor  O	Bailer Stack Suction Grundfos Other:		The second secon	1	•	And the second s	Control of the Contro	,
Stack Suction Grundfos Other:    Conditions   Conditions	Stack Suction Grundfos Other:  terting Time:  ampling Time:  urging Flow Rate:  urging Flow Rate:  urging Weather Conditions:  Sediment Description:  If yes; Time:  Volume:  (gal.)  Pressure Bailer Grab Sample Other:  Other:  Odor:  If yes; Time:  Volume:  (gal.)  Odor:  If yes; Time:  Volume:  (gal.)  ORP Alicalization (gal.)		Bailer	.1			lailer .	
Other: Ot	Other:  Other:					Pressure Bai		
weather Color: CLCUDY Odor:  ampling Time:  Water Color: CLCUDY Odor:  Urging Flow Rate:	weather Conditions.  water Color: CLOUDY Odor:  urging Flow Rate: gpm. Sediment Description:  id well de-water?				o	•	<del></del>	
weather Color: CLCUDY Odor:  ampling Time:  Water Color: CLCUDY Odor:  Urging Flow Rate:	weather Conditions.  water Color: CLOUDY Odor:  urging Flow Rate: gpm. Sediment Description:  id well de-water?	<u> </u>				S.I.A	1114	
Time Volume pH Conductivity Temperature D.O. ORP Alkalinity (mg/L) (mV) (ppm)  Time Volume (gal.)  Time Volume (gal.)  Time Volume pH Conductivity Temperature (mg/L) (mV) (ppm)  Time (gal.)  Time Volume pH Conductivity Temperature (mg/L) (mV) (ppm)  Time (gal.)  Time Volume pH Conductivity Temperature (mg/L) (mV) (ppm)  Time (gal.)  Time Volume pH Conductivity Temperature (mg/L) (mV) (ppm)  Time (gal.)  Time Volume: (gal.)  Time (mg/L) (mV) (ppm)  Time (mg/L) (mV) (ppm)  Time (mg/L) (mV) (ppm)  Time (mg/L) (mV) (ppm)	Sediment Description:    Sediment Description:	_	13.15	Weatl	her Conditions	· <del></del>		
Time Volume pH Conductivity Temperature D.O. ORP Alkalinity (ppm)  3.18 3.15 6.99 12.19 23.2  3.10 5 7.10 12.80 8 4.0  3.10 12.36 82.9  LABORATORY INFORMATION  SAMPLE ID (3) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 X VOA w, HCL Y HCL SEQ. TRHG OTEX /MTGE/G)	Time Volume pH Conductivity Temperature D.O. ORP Alkalini (myl.) (myl.) (myl.) (ppm 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	· -	12:20					
Time Volume (gal.)  PH Conductivity Temperature (mg/L) (mV) (ppm)  3.15 6.49 12.19 23.9  5.103 12.36 29.9  LABORATORY INFORMATION  SAMPLE ID (17) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 4 × 10A w. Hcl. Y Hcl. SEQ. TRHG/BTEX /MTGE/G.	Time Volume (gal.)  PH Conductivity Temperature (mg/L) (mV) (ppm 2)  3.15 6.49 12.19 23.9  5.103 12.36 29.9  LABORATORY INFORMATION  SAMPLE ID (17) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 4 × 10.4 w. Hc. 7 Hc. SEQ. TRHG/BTEX /MTGE/	- <del>-</del> -	1 1 m	•—			me:	(gal.
SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES  MW-5 TX VOA w. Hc.L. Y Hc.L. SEQ. TRHG/BTEX /MTGE/G)	SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES  MW-5 Y WOA W. HCL Y HCL SEQ. TRIG BTEX MISE	Time	Volume nH	Conductivit	y Temper			
SAMPLE ID (7) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES  MW-5 Y X VOA w. HCL Y HCL SEQ. TRHG/BTEX/MTGE/G)	SAMPLE ID (7) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES  MW-5 Y X VOA w, HCL Y HCL SEQ. TRHG/BTEX/MTGE/	Allie			·	(mg/L)	(mV)	(bbw)
SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES  MW-5 X VOA w. HCL Y HCL SEQ. TRAG/BTEX/MTGE/GO	SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE: LABORATORY ANALYSES  MW-5 X VOA w. HCL Y HCL SEQ. TRHG/STEX/MTGE/	2110	<u> </u>	1981	त व्र	V (0		
LABORATORY INFORMATION  SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 X VOA w, HCL Y HCC SEQ. TRHG/BTEX/MTGE/G)	LABORATORY INFORMATION  SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 Y WOA W, HCL 7 HCL SEQ. TRIGISTEX MIGE!	<u> </u>		r to I	L Q			
SAMPLE ID (17) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 X VOA w. HCL Y HCL SEQ. TRHG/BTEX/MISE/C6)	SAMPLE ID (17) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 X VOA w. HCL Y HCL SEQ. TRIGISTEX MISE!	3191	5 4.02	1230	5 8 3	4		
SAMPLE ID (17) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 X VOA w. HCL Y HCL SEQ. TRHG/BTEX/MISE/C6)	SAMPLE ID (17) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 X VOA w. HCL Y HCL SEQ. TRIGISTEX MISE!							
SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 YX VOA w, HCL Y HCL SEQ. TPHG/BTEX/MTSE/C6)	SAMPLE ID (1) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES  MW-5 YX VOA W, HCL Y HCL SEQ. TRHG/BTEX/MTBE/	<u> </u>	· · · · · · · · · · · · · · · · · · ·	LABORATOF	RY INFORMAT	TION		
TOTAL TOTAL STATE OF THE STATE	TOTAL	SAMPLE ID	(#) - CONTAINER	REFRIG. PRE	SERV. TYPE	LABORATORY		
1 Gar Anber 7 Nony SEE	1 Gent Amber 7 None See 1777	MW-5	X VOA W. HCL					•
			1 Gen Amber	7 1 1	004		( ) ( ) ( )	
				<del>                                     </del>				

TOS	CO .	Con	Facili Hallant Pr Hallant Ha Address_1	ity Address roject Nu ome <u>Gr</u> 5747 S entect (N	mber ttler lerra lame)_D	OCAL SSI O Amador 18002 -Ryan In Court canna L. 0-551-75	Vall 2.85 c. (G Sulte Hard	ey Bl R In Lng	ubli	n, CA	9456	     5.8	Laborator Loberator Samples Collection Signoture	y Name y Rjelsa Collecte	Sec	)  uo1a 	Ana V HA	VÜ	77-23 273 773	13 EV(	RK
Sample Number	Lab Sample Number	Number of Containers	Metric S = Sol A = Air Y = Water C = Charcool	Type 6 = Grub C = Composite D = Discrete	Ą	. Sample Preservation	load (Yea or No.)	TPM Gas+ BTEX WANTBE	TPH Dissed (BO15)	Off and Great	Purpeable Helecarborus (8010)	100 100	Anolyse	e Te B	Letote CACTP LANG	60 60	9				DO NOT BILL TB-LB ANALYSI:
U-1 U-2 U-3 MW-4 MW-5	04   05	1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	33333	৬৬৬	15:05 14:32 12:51 14:02 13:30		YES	レ レ レ レ レ し し し し し し し し し し し し し	レンレン							ンソンン	ンソンソン				Run Silien Gel chem-up on an Diesel Lite.
Relinguished By	(Signoture)	$I_{i}$	5	enization R Inconization Cypenization	• D	ete/Time ete/Time L./ F//// 20 lete/Time	Rec	olved By	y (Signa	ralory B	y (Signal	(ure)	Organizati Sego Organizati	,	P./;	/Time	15		Turn Ara	24 48 5 (	no (Cirolo Choloo)  Hre. Hre. Dayo Daya ntructed



25 August, 2000

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

RE: Unocal Sequoia Report W007333

Enclosed are the results of analyses for samples received by the laboratory on 17-Jul-00 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charlie Westwater
Project Manager

CA ELAP Certificate #1271





**Dublin CA**, 94568

Project: Unocal

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

25-Aug-00 08:44

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W007333-01	Water	14-Jul-00 00:00	17-Jul-00 16:20
U-1	W007333-02	Water	14-Jul-00 15:05	17-Jul-00 16:20
U-2	W007333-03	Water	14-Jul-00 14:32	17-Jul-00 16:20
U-3	W007333-04	Water	14-Jul-00 12:51	17-Jul-00 16:20
MW-4	W007333-05	Water	14-Jul-00 14:02	17-Jul-00 16:20
MW-5	W007333-06	Water	14-Jul-00 13:30	17-Jul-00 16:20

Sequoia Analytical - Walnut Creek

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.

Charlie Westwater, Project Manager

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Project: Unocal

Project Number: Unocal # 7176

Reported: 25-Aug-00 08:44

Dublin CA, 94568

Project Manager: Deanna L. Harding

## 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 (W907333-02) Water	Sampled: 14-Jul-00 15:05	Received: 1	7-Jul- <b>0</b> 0	16:20		<u></u> _			
Diesel Range Hydrocarbons		50	ug/l	1	0G27004	27-Jul-00	23-Aug-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		33.9 %	50-	140	Ħ		#	*	S-04
-	Sampled: 14-Jul-00 14:32	Received: 1	7-Jul-00	16:20					
Diesel Range Hydrocarbons		50	ug/l	1	0G27004	27-Jul-00	23-Aug-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		56.2 %	50-	140	*	*	*	#	
MW-4 (W007333-05) Water	Sampled: 14-Jul-00 14:0	2 Received	l: 17-Jul-	00 16:20					
Diesel Range Hydrocarbons		50	ug/l	1	0G27004	27-Jul-00	23-Aug-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		41.1 %	50-	140	•	p	н	"	S-04

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Page 5 of 13



Gettler Ryan, Inc. - Dublin

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

Project Number: Unocal # 7176

Project Manager: Deanna L. Harding

Reported:

25-Aug-00 08:44

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

## Sequoia Analytical - Walnut Creek

	<u> </u>								
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W007333-02) Water	Sampled: 14-Jul-00 15:05	Received: 1	7-Jul-00	16:20					
Diesel Range Hydrocarbo	as 2800	50	ng/l	1	0G27004	27-Jul-00	03-Aug-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		65.2 %	50	-150	*	π	#	"	
U-2 (W007333-03) Water	Sampled: 14-Jul-00 14:32	Received: 1	7-Jul-00	16:20					
Diesel Range Hydrocarbo	ns 1000	50	ug/i	1	0G27004	27-Jul-00	03-Aug-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		103 %	50	-150		"	*	я	
U-3 (W007333-04) Water	Sampled: 14-Jul-00 12:51	Received: 1	7-Jul-00	16:20					
Diesel Range Hydrocarbons	ND	50	ug/l	1	0G27004	27-Jul-00	03-Aug-00	EPA 8015M	
Surrogate: n-Pentacosane		99.1 %	50	-150	"	*	*	"	
MW-4 (W007333-05) Wat	er Sampled: 14-Jul-00 14:0	2 Received	l: 17-Jul	-00 16:20					
Diesel Range Hydrocarbo	ns 220	50	ug/l	1	0G27004	27-Jul-00	03-Aug-00	EPA 8015M	D-11
Surrogate: n-Pentacosane		64.0 %	50	-150	.,,	#	"	*	
MW-5 (W007333-06) Wat	er Sampled: 14-Jul-00 13:3	0 Received	l: 17-Jul	-00 16:20					
Diesel Range Hydrocarbons	ND	50	ug/l	1	0G27004	27-Jul-00	04-Aug-00	EPA 8015M	
Surrogate: n-Pentacosane		102 %	50	-150	"	*	#	н	



**Dublin CA**, 94568

Project: Unocal

Project Number: Unocal # 7176

Project Manager: Deanna L. Harding 25-

Reported: 25-Aug-00 08:44

# 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 (W007333-04) Water	Sampled: 14-Jul-00 12:51	Received: 1	7-Jul-00	16:20					
Purgeable Hydrocarbons	ND	50	ug/l	1	0G24003	24-Jul-00	24-Jul-00	EPA 8015M/8020	
Benzene	ND	0.50	₩	#		•	*	•	
Toluene	ND	0.50	. "	Ħ	*	41	**	*	
Ethylbenzene	ND	0.50		•	P	**	Ħ	#	
Xylenes (total)	ND	0.50	•	*	*	*	*		
Methyl tert-butyl ether	ND	2.5	H	7	•	<b>-</b>	<b>.</b>	<b></b>	
Surrogate: a,a,a-Trifluorotol	uene	92.7 %	70	-130	н	И	*	*	
MW-4 (W007333-05) Wate			i: 17-Jul	-00 16:20				_ +	P-04
Purgeable Hydrocarbons	490	50	ug/l	1	0G24003	24-Ли-00	24-Jul-00	EPA 8015M/8020	
Benzene	0.89	0.50			. #	**		w	
Toluene	1.3	0.50		**	**	**	#	*	
Ethylbenzene	0.85	0.50	*	*		*	*		
Xylenes (total)	1.8	0.50		n	•	W	**	•	
Methyl tert-butyl ether	21	2.5		•	#	-		<b>T</b>	
Surrogate: a,a,a-Trifluoroto	····	78.3 %	70	-130	P	.,	#	•	
MW-5 (W007333-06) Wate		30 Receive	d: 17-Jul	-00 16:20					
Purgeable Hydrocarbons	ND	50		1	0G24003	24-Jul-00	24-Jul-00	EPA 8015M/80 <b>2</b> 0	
Benzene	ND	0.50	*	₩.		*	4		
Toluene	ND	0.50		*	•		#	#	
Ethylbenzene	ND	0.50			π	•	7	Ħ	
Xylenes (total)	ND	0.50		•	**	#		<b>H</b>	
Methyl tert-butyl ether	ND	2.5		=	•	₩.		• • • • • • • • • • • • • • • • • • •	
Surrogate: a,a,a-Trifluoroto		95.3 %		0-130	*	77			

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Gettler Ryan, Inc. - Dublin

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

Project Number: Unocal # 7176

Project Manager: Deanna L. Harding

Reported:

25-Aug-00 08:44

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

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (W007333-01) Water	Sampled: 14-Jul-00 00:00	Receive	d: 17-Ju	-00 16:20					
Purgeable Hydrocarbons	ND	50	ug/l	1	0G24003	24-Jul-00	24-Jul-00	EPA 8015M/8020	
Benzene	ND	0.50	•	H	*	*	•	-	
Toluene	ND	0.50	•	**	**	,			
Ethylbenzene	ND	0.50		**	# -	n		-	
Xylenes (total)	ND	0.50	•	•	Ħ	n			
Methyl tert-butyl ether	ND	2.5	•	#	*	**	N		
Surrogate: a,a,a-Trifluorotolue	ne	97.7%	70	-130	"	н	"	Ħ	
U-1 (W007333-02) Water Sa	ampled: 14-Jul-00 15:05 R	eceived: 1	7-Jul-00	16:20					P-01
Purgeable Hydrocarbons	6200	500	ug/l	10	0024003	24-Jul-00	24-Jul-00	EPA 8015M/8020	
Benzene	41	5.0	•		**	#	**	**	
Toluene	16	5.0	*	n	77	#		•	
Ethylbenzene	170	5.0	#		*	#	*		
Xylenes (total)	32	5.0	•	H	Ħ	н	Ħ		
Methyl tert-butyl ether	170	25	*	Ħ	**	#	Ħ	H	
Surrogate: a,a,a-Trifluorotolue	me	78.3 %	70	-130	H	"	"	"	
U-2 (W007333-03) Water Sa	ampled: 14-Jul-00 14:32 R	eceived: 1	7-Jul-00	16:20					P-01
Purgeable Hydrocarbons	3100	500	ug/l	10	0G24003	24-Jul-00	24-Jul-00	EPA 8015M/8020	
Benzene	16	5.0	•		77	#	•	**	•
Toluene	13	5.0	■,		#	#		•	
Ethylbenzene	15	5.0	-	•	*	#	n	•	
Xylenes (total)	10	5.0	*	<b>4</b>	M	*		•	
Methyl tert-butyl ether	100	25	. 4	-		*			
Surrogate: a,a,a-Trifluorotolue	ne	89.7 %	70	-130		*	w .	#	
		33.770	, •						

Project: Unocal

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

Reported: 25-Aug-00 08:44

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W007333-02) Water	Sampled:	14-Jul-00 15:05	Received: 1'	7-Jul-00	16:20					
Ethanol		ND	2500	ug/l	5	0G25017	24-Jul-00	25-Jul-00	EPA 8260B	
tert-Butyl alcohol		ND	500	Ħ	*	•	**	**	-	
Methyl tert-butyl ether		120	10	7	**	*			•	
Di-isopropyl ether		ND	10			π	**			
Ethyl tert-butyl ether		ND	10			*	•	**		
tert-Amyl methyl ether		ND	10		•	Ħ	*	H	*	
1,2-Dichloroethane		ND	10	*	•	•	H	•	91	
Ethylene dibromide		ND	10		•					
Surrogate: Dibromofluoron	rethane		84.0 %	50	-150	#	*	#	"	
Surrogate: 1,2-Dichloroeth			86.0 %	50-	-150	*	*	•	*	
U-2 (W007333-03) Water		: 14-Jul-00 14:32	Received: 1	7-Jul- <b>0</b> 0	16:20					
Ethanol	<del></del>	ND	500	ug/l	1	0G25017	24-Jul-00	25-Jul-00	EPA 8260B	
tert-Butyl alcohol		ND	100	**	**	•	•	Ħ	#	
Methyl tert-butyl ether		19	2.0		*	*		#	•	
Di-isopropyl ether		ND	2.0			Ħ	-	*	•	
Ethyl tert-butyl ether		ND	2.0	*	•	#	₩		#	
tert-Amyl methyl ether		ND	2.0	*	**	*	*	-	*	
1,2-Dichloroethane		ND	2.0		Ħ	•	**	#		
Ethylene dibromide		ND	2.0	•				#	# 	
Surrogate: Dibromofluoron	nethane		86.0 %	50	-150	н		"	~	
Surrogate: 1,2-Dichloroeth			94.0 %	50	-150	*	•	#	•	
U-3 (W007333-04) Water		: 14-Jul-00 12:51	Received: 1	7-Jul-00	16:20				· · · · · · · · · · · · · · · · · · ·	
Ethanol	<del>-</del>	ND	500	ug/l	1	0G25017	24-Jul-00	25-Jul-00	EPA 8260B	•
tert-Butyl alcohol		ND	100	Ħ		7		*	-	
Methyl tert-butyl ether		ND	2.0		#	*	•		ч	
Di-isopropyl ether		ND	2.0	*	*		•	*	**	
Ethyl tert-butyl ether		ND	2.0	•			Ħ	•	•	
tert-Amyl methyl ether		ND	2.0	**		**	#	•	#	
1,2-Dichloroethane		ND	2.0	*	**	П	Ħ	*	•	
Ethylene dibromide		ND	2.0	*	**	*		*		
Surrogate: Dibromofluoro	methane		86.0 %	51	0-150	W	"		"	
Surrogate: 1,2-Dichloroeti			84.0 %	. 50	0-150	"			*	





Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176

Reported: 25-Aug-00 08:44

Project Manager: Deanna L. Harding

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

	4							<del></del>	
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (W007333-05) Water	Sampled: 14-Jul-00 14:02	Received	l: 17-Jul-	00 16:20					
Ethanol	ND	500	ug/l	1	0G25017	24-Jul-00	25-Jul-00	EPA 8260B	
tert-Butyl alcohol	, ND	100	#	**	**	Ħ		•	
Methyl tert-butyl ether	12	2.0		#	**	H	*	#	
Di-isopropyl ether	ND	2.0		#			•	<b>#</b>	
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		M	•	•			
Surrogate: Dibromofluorometha	Die	86.0 %	50-	150	*	"	7	~	
Surrogate: 1,2-Dichloroethane-		82.0 %	50-	150	*	*	*	*	
MW-5 (W007333-06) Water	Sampled: 14-Jul-00 13:30	Received	i: 17-Jul-	00 16:20					
Ethanol	ND	500	ug/l	1	0G25017	24-Jul-00	25-Jul-00	EPA 8260B	
tert-Butyl alcohol	ND	100	**	*	W	*		•	
Methyl tert-butyl ether	ND	2.0			H	*	•		
Di-isopropyl ether	ND	2.0	17	**	H	*		*	
Ethyl tert-butyl ether	ND	2.0	•	"	*		•	•	
tert-Amyl methyl ether	ND	2.0	•		•			<b>«</b> ·	
1,2-Dichloroethane	ND	2.0	*	-	#		•	₩.	
Ethylene dibromide	ND	2.0	*	<b>M</b>				41	
Surrogate: Dibromofluorometh	zne	84.0 %	50-	150		"	*		

50-150

84.0 %

Surrogate: 1,2-Dichloroethane-d4



Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Reported: 25-Aug-00 08:44

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

Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
			<u> </u>			<u>·</u>			
			Prepared	& Analyz	ed: 24-Jul	-00			
ND	50	ug/l							
ND	0.50	11							
ND	0.50	•							
ND	0.50	*							
ND	0.50	*							
ND	2.5	M							
30.1		*	30.0		100	70-130			
			Prepared	& Analyz					
18.6	0.50	ug/i	20.0						
18.7	0.50	Ħ	20.0						
19.7	0.50	n	20.0						
55.1	0,50		60.0		91.8				
27.4		<i>a</i>	30.0		91.3	70-130			
			Prepared	& Analy:	zed: 24-Ju	1-00			
21.6	0.50	ug/l	20.0		108	70-130			
21.7	0.50	#	20.0		109	70-130			
21.9	0.50	*	20.0		109	70-130			
62.9	0.50		60.0		105	70-130	13.2	20	
27.9		- "	30.0		93.0	70-130			
5	Source: W607	317-07	Prepared	i & Analy	zed: 24-Ju	1-00			Q-0
			20.0	ND	123	70-130			
		_	20.0	ND	125	70-130			
=:			20.0	ND	131	70-130			
•			60.0	ND	126	70-130			
	0,50	<u> </u>	30.0		92.7	70-130		<del></del>	
	ND ND ND ND ND 30.1 18.6 18.7 19.7 55.1 27.4 21.6 21.7 21.9 62.9	ND 50 ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 2.5 30.1  18.6 0.50 18.7 0.50 19.7 0.50 55.1 0.50 27.4  21.6 0.50 21.7 0.50 21.9 0.50 21.9 0.50 27.9  Source: W007 24.6 0.50 25.0 0.50 26.3 0.50 75.3 0.50	ND 50 ug/l ND 0.50 " ND 0.50 " ND 0.50 " ND 0.50 " ND 2.5 " 30.1 "  18.6 0.50 ug/l 18.7 0.50 " 19.7 0.50 " 55.1 0.50 " 27.4 "  21.6 0.50 ug/l 21.7 0.50 " 21.9 0.50 " 22.9 0.50 "  Source: W007317-07 24.6 0.50 ug/l 25.0 0.50 " 26.3 0.50 "	Prepared  ND 50 ug/l  ND 0.50 "  ND 0.50 "  ND 0.50 "  ND 0.50 "  ND 2.5 "  30.1 " 30.0  Prepared  18.6 0.50 ug/l 20.0  18.7 0.50 " 20.0  19.7 0.50 " 20.0  55.1 0.50 " 60.0  27.4 " 30.0  Prepared  21.6 0.50 ug/l 20.0  21.7 0.50 " 20.0  21.9 0.50 " 20.0  62.9 0.50 " 20.0  62.9 0.50 " 60.0  Source: W007317-07 Prepared  24.6 0.50 ug/l 20.0  25.0 0.50 " 20.0  26.3 0.50 " 20.0  75.3 0.50 " 60.0	Prepared & Analyz  ND 50 ug/l  ND 0.50 "  ND 2.5 "  30.1 " 30.0  Prepared & Analyz  18.6 0.50 ug/l 20.0  18.7 0.50 " 20.0  19.7 0.50 " 20.0  55.1 0.50 " 60.0  27.4 " 30.0  Prepared & Analyz  21.6 0.50 ug/l 20.0  21.7 0.50 " 20.0  21.9 0.50 " 20.0  21.9 0.50 " 20.0  21.9 0.50 " 20.0  22.9 " 30.0  Source: W007317-07 Prepared & Analyz  24.6 0.50 ug/l 20.0 ND  25.0 0.50 " 20.0 ND  26.3 0.50 " 20.0 ND  75.3 0.50 " 20.0 ND	Prepared & Analyzed: 24-Jule  ND 50 ug/l  ND 0.50 "  ND 2.5 "  30.1 " 30.0 100  Prepared & Analyzed: 24-Jule  18.6 0.50 ug/l 20.0 93.0  18.7 0.50 " 20.0 93.5  19.7 0.50 " 20.0 98.5  55.1 0.50 " 60.0 91.8  27.4 " 30.0 92.3  Prepared & Analyzed: 24-Jule  21.6 0.50 ug/l 20.0 108  21.7 0.50 " 20.0 108  21.7 0.50 " 20.0 109  21.9 0.50 " 20.0 109  62.9 0.50 " 60.0 105  27.9 " 30.0 93.0  Source: W007317-07 Prepared & Analyzed: 24-Jule  24.6 0.50 ug/l 20.0 ND 123  25.0 0.50 " 20.0 ND 123  25.0 0.50 " 20.0 ND 125  26.3 0.50 " 20.0 ND 131  75.3 0.50 " 60.0 ND 126	Prepared & Analyzed: 24-Jul-00  ND 50 ug/l ND 0.50 " ND 2.5 "  30.1 " 30.0 100 70-130  Prepared & Analyzed: 24-Jul-00  18.6 0.50 ug/l 20.0 93.0 70-130  18.7 0.50 " 20.0 93.5 70-130  19.7 0.50 " 20.0 98.5 70-130  55.1 0.50 " 60.0 91.8 70-130  27.4 " 30.0 91.3 70-130  Prepared & Analyzed: 24-Jul-00  21.6 0.50 ug/l 20.0 108 70-130  27.9 " 30.0 109 70-130  27.9 " 30.0 93.0 70-130  27.9 " 30.0 93.0 70-130  27.9 " 30.0 93.0 70-130  27.9 " 30.0 93.0 70-130  27.9 " 30.0 93.0 70-130  27.9 " 30.0 93.0 70-130  27.9 " 30.0 ND 123 70-130  26.3 0.50 " 20.0 ND 125 70-130  27.9 " 30.0 ND 125 70-130  26.3 0.50 " 20.0 ND 125 70-130	Prepared & Analyzed: 24-Jul-00  ND 50 ug/l ND 0.50 " ND 2.5 "  30.1 " 30.0 100 70-130  Prepared & Analyzed: 24-Jul-00  18.6 0.50 ug/l 20.0 93.0 70-130 18.7 0.50 " 20.0 93.5 70-130 19.7 0.50 " 20.0 98.5 70-130 19.7 0.50 " 20.0 91.8 70-130  27.4 " 30.0 91.3 70-130  Prepared & Analyzed: 24-Jul-00  21.6 0.50 ug/l 20.0 108 70-130 21.7 0.50 " 20.0 109 70-130 14.9 21.9 0.50 " 20.0 109 70-130 14.9 21.9 0.50 " 20.0 109 70-130 10.6 62.9 0.50 " 20.0 109 70-130 10.6 62.9 0.50 " 60.0 105 70-130 13.2  27.9 " 30.0 93.0 70-130  Source: W007317-07 Prepared & Analyzed: 24-Jul-00  24.6 0.50 ug/l 20.0 ND 123 70-130 26.3 0.50 " 20.0 ND 125 70-130 26.3 0.50 " 20.0 ND 131 70-130 75.3 0.50 " 60.0 ND 131 70-130	Prepared & Analyzed: 24-Jul-00  ND 50 ug/l ND 0.50 " ND 2.5 "  Prepared & Analyzed: 24-Jul-00  18.6 0.50 ug/l 20.0 93.0 70-130  18.7 0.50 " 20.0 93.5 70-130  19.7 0.50 " 20.0 98.5 70-130  55.1 0.50 " 60.0 91.8 70-130  Prepared & Analyzed: 24-Jul-00  21.6 0.50 ug/l 20.0 108 70-130  Prepared & Analyzed: 24-Jul-00  21.6 0.50 ug/l 20.0 108 70-130 14.9 20  21.7 0.50 " 20.0 109 70-130 14.9 20  21.9 0.50 " 20.0 109 70-130 14.9 20  21.9 0.50 " 60.0 105 70-130 13.2 20  27.9 " 30.0 93.0 70-130  Source: W007317-07 Prepared & Analyzed: 24-Jul-00  24.6 0.50 ug/l 20.0 ND 123 70-130  25.0 0.50 " 20.0 ND 125 70-130  26.3 0.50 " 20.0 ND 125 70-130  26.3 0.50 " 20.0 ND 125 70-130  75.3 0.50 " 20.0 ND 131 70-130  75.7 20.120



Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176

Reported: 25-Aug-00 08:44

Project Manager: Deanna L. Harding

## 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 0G24003 - EPA 5030B [P/T]										
Matrix Spike Dup (0G24003-MSD1)	Sor	urce: W9073	17-07.	Prepared	& Analyz	ed: 24-Jul	-00			Q-01
Benzene	26.7	0.50	ug/l	20.0	ND	134	70-130	8.19	20	
Tohiene	26.9	0.50	n	20.0	ND	134	70-130	7.32	20	
Ethylbenzene	27.1	0.50		20.0	ND	136	70-130	3.00	20	
Xylenes (total)	78.6	0.50	Ħ	60.0	ND	131	70-130	4.29	20	
Surrogate: a, a, a-Triftwarotaluene	26.9	· · · · · · · · · · · · · · · · · · ·	7	30.0		89.7	70-130			

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Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176 Project Manager: Deanna L. Harding Reported: 25-Aug-00 08:44

## 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 0G27004 - EPA 3510B				· -						
Blank (0G27004-BLK1)				Prepared	27-Jul-00	Analyzed	l: 07-Aug-	00		····
Diesel Range Hydrocarbona	ND	50	ug/l							
Surrogate: n-Pentacosane	33.3		#	33.3		100	50-150		·	
LCS (0G27004-BS1)				Prepared	: 27-Jul-00	Analyze	l: 07-Aug-	00		
Diesel Range Hydrocarbons	441	50	ug/l	500		88.2	60-140			
Surrogate: n-Pentacosane	37.7		<u> </u>	33.3		113	50-150			
LCS Dup (0G27004-BSD1)				Prepared	: <b>27-Jul-</b> 00	Analyze:	i: 07-Aug-	00		
Diesel Range Hydrocarbons	425	50	ug/l	500		85.0	60-140	3.70	50	
Surrogate: n-Pentacosane	37.7		"	33.3		113	50-150			



**Dublin CA, 94568** 

Project: Unocal

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

**Reported:** 25-Aug-00 08:44

## 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 0G27004 - EPA 3510B													
Blank (0G27004-BLK1)				Prepared:	27-Jul-00	Analyzed	l: 22-Aug-	00					
Diesel Range Hydrocarbons	ND	50	ug/l										
Surrogate: n-Pentacosane	27.3		*	33.3		82.0	50-140			•			
LCS (0G27004-BS1)				Prepared:	27-Jul-00	Analyzed	l: 23-Aug-	00					
Diesel Range Hydrocarbons	277	50	ug/l	500		55.4	35-125	-					
Surrogate: n-Pentacosane	29.7		"	33.3	· · · · · · · · · · · · · · · · · · ·	89.2	50-140						
LCS Dup (0G27004-BSD1)			Prepared: 27-Jul-00 Analyzed: 23-Aug-00										
Diesel Range Hydrocarbons	274	50	ug/l	500		54.8	35-125	1.09	50				
Surrogate: n-Pertacosane	34,3		-	33.3	-	103	50-140						



Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 7176

Project Manager: Deanna L. Harding

Reported: 25-Aug-00 08:44

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

Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes					
ND	500	ug/l												
ND	100	#												
ND	2.0	*	•											
ND	2.0	Ħ												
ND	2.0													
, ND	2.0	•												
ND	2.0	*												
ND	2.0													
43.0			50.0		86.0	50-150								
42.0		•	50.0		84.0	50-150								
Prepared & Analyzed: 25-Jul-00														
40.9	2.0	ug/l	50.0		81.8	70-130								
43.0			50.0		86.0	50-150								
40.0		"	50.0		80.0	50-150								
S	ource: W007.	319-04	Prepared	& Analy2	ed: 24-Ju	1-00								
37.4	2.0	ug/l	50.0	ND	74.8	60-150								
41.0		Ħ	50.0		82.0	50-150								
40.0		•	50.0		80.0	50-150								
S	ource: W007	319-04	Prepared	& Analyz	zed: 24-Ju	1-00								
39.4	2.0	ug/l	50.0	ND	78.8	60-150	5.21	25						
			50.0	<del> </del>	82.0	50-150	<u> </u>							
			50.0		80.0	50-150								
	ND ND ND ND ND ND ND 43.0 42.0 40.9 43.0 40.0 S	ND   500   ND   100   ND   2.0   43.0   42.0   43.0   40.0   Source: W007.   37.4   2.0   41.0   40.0   Source: W007.   39.4   2.0   41.0	ND   500   ug/l     ND   100   "     ND   2.0   "     43.0   "       42.0   "       43.0   "       43.0   "       43.0   "       43.0   "       43.0   "       40.0   "       Source: W007319-04       37.4   2.0   ug/l     41.0   "       Source: W007319-04       39.4   2.0   ug/l	Result   Limit   Units   Level	Result   Limit   Units   Level   Result	ND   Sou   Limit   Units   Level   Result   %REC	Result   Limit   Units   Level   Result   %REC   Limits	Result   Limit   Units   Level   Result   %REC   Limits   RPD	Result   Limit   Units   Level   Result   %REC   Limits   RPD   Limit					



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

**6**23

Reported:

25-Aug-00 08:44

#### **Notes and Definitions**

D-11 Chromatogram Pattern: Unidentified Hydrocarbons < C16
P-01 Chromatogram Pattern: Gasoline C6-C12
P-04 Chromatogram Pattern: Gasoline C6-C12 + Unidentified Hydrocarbons C6-C12

Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.

The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

S-04

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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			Facility Number INOCAL SS# 7176 Facility Address 7850 Amador Valley Blvd. Dublin, CA											Contact (Name) MR. DAVE DEW: TI									
	7	Cone		Project Humber 180022.85										Laborator Name Sequoia Analytical									
TOS	CO	Cone	Consultant Name Gettler-Ryan Inc. (G-R Inc.)											Laboratory Relaces Number W001333									
معالية والمراجعة	Comment		Address 6747 Sierra Court, Suite I. Dublin, CA 94568												a by (H	ome)		16-			hrk		
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<b>t</b>	8	AE THE	Koth Koth	<u>\$</u>		Somple	I	SECTED SECTIONS	<b>E</b> 3	Off and (5520)	1 28	<b>£</b> §	<b>E</b>	1 2 3 3 E	1338	× (0,5)					Remerks		
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