



# GETTLER-RYAN INC.

ST 10 1059  
BC

## TRANSMITTAL

September 11, 2000  
G-R #180061

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

CC: Mr. David Vossler  
Gettler-Ryan Inc.  
Petaluma, California

ENVIRONMENTAL  
PROTECTION  
00 SEP 26 AM 9:02

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

RE: Tosco (Unocal) SS #5325  
3220 Lakeshore Avenue  
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 31, 2000	Groundwater Monitoring and Sampling Report Second Quarter 2000 - Event of June 21, 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 **September 22, 2000**, this report will be distributed to the following:

cc: Alameda County Health Care Services, 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Enclosure

trans/5325.dbd



# GETTLER-RYAN INC.

August 31, 2000  
G-R Job #180061

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 #5325  
3220 Lakeshore Avenue  
Oakland, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On June 21, 2000, field personnel monitored and sampled six wells (U-1 through U-6) 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 any 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 Standard Operating Procedure Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

*Deanna L. Harding*

Deanna L. Harding  
Project Coordinator

*Stephen J. Carter*

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

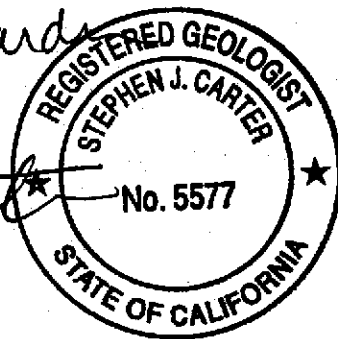
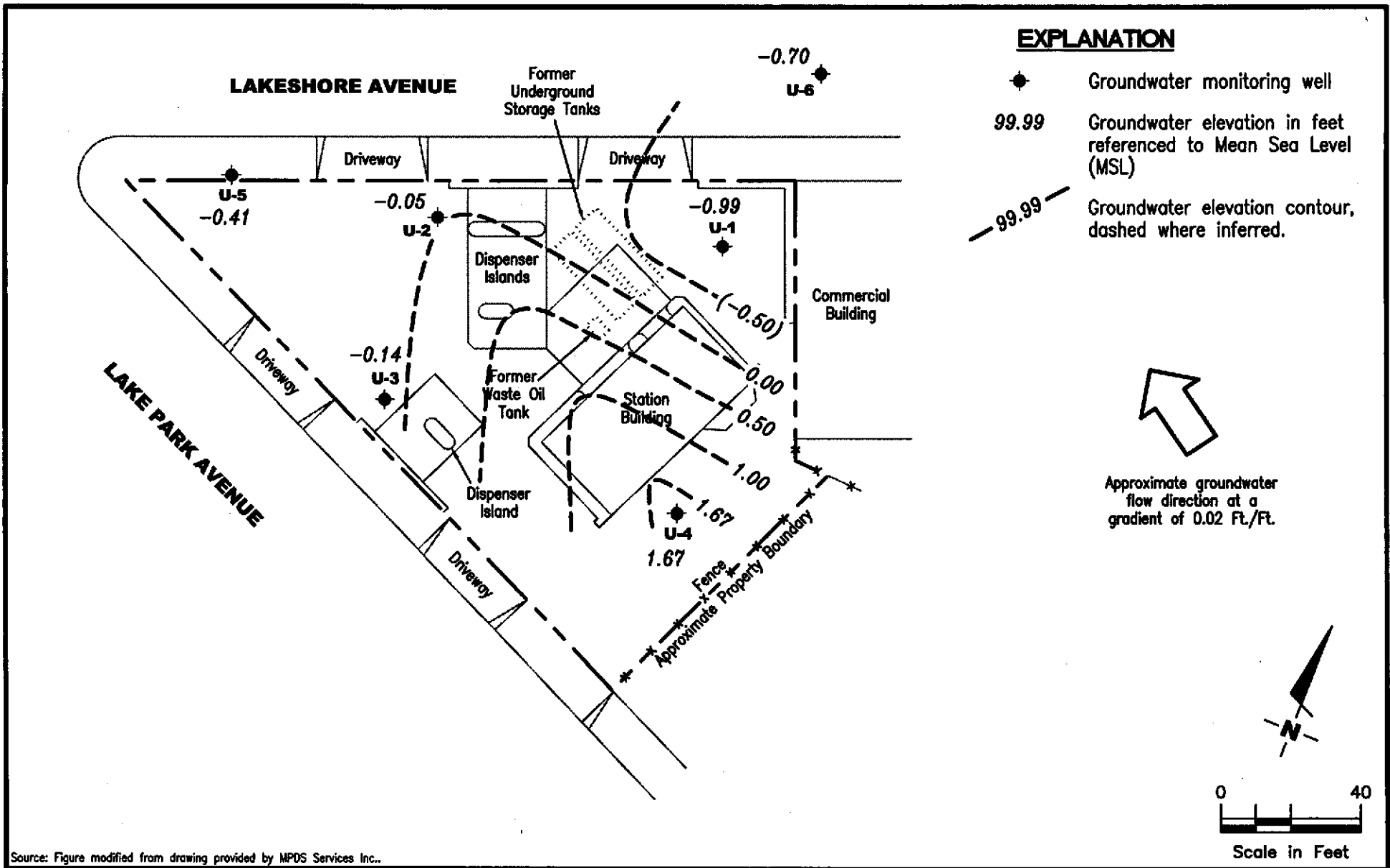


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results  
Table 3: Dissolved Oxygen Concentrations  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain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

5325.qml



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



**Gettler - Ryan Inc.**

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

**POTENTIOMETRIC MAP**  
 Tosco (Unocal) Services Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

FIGURE

1

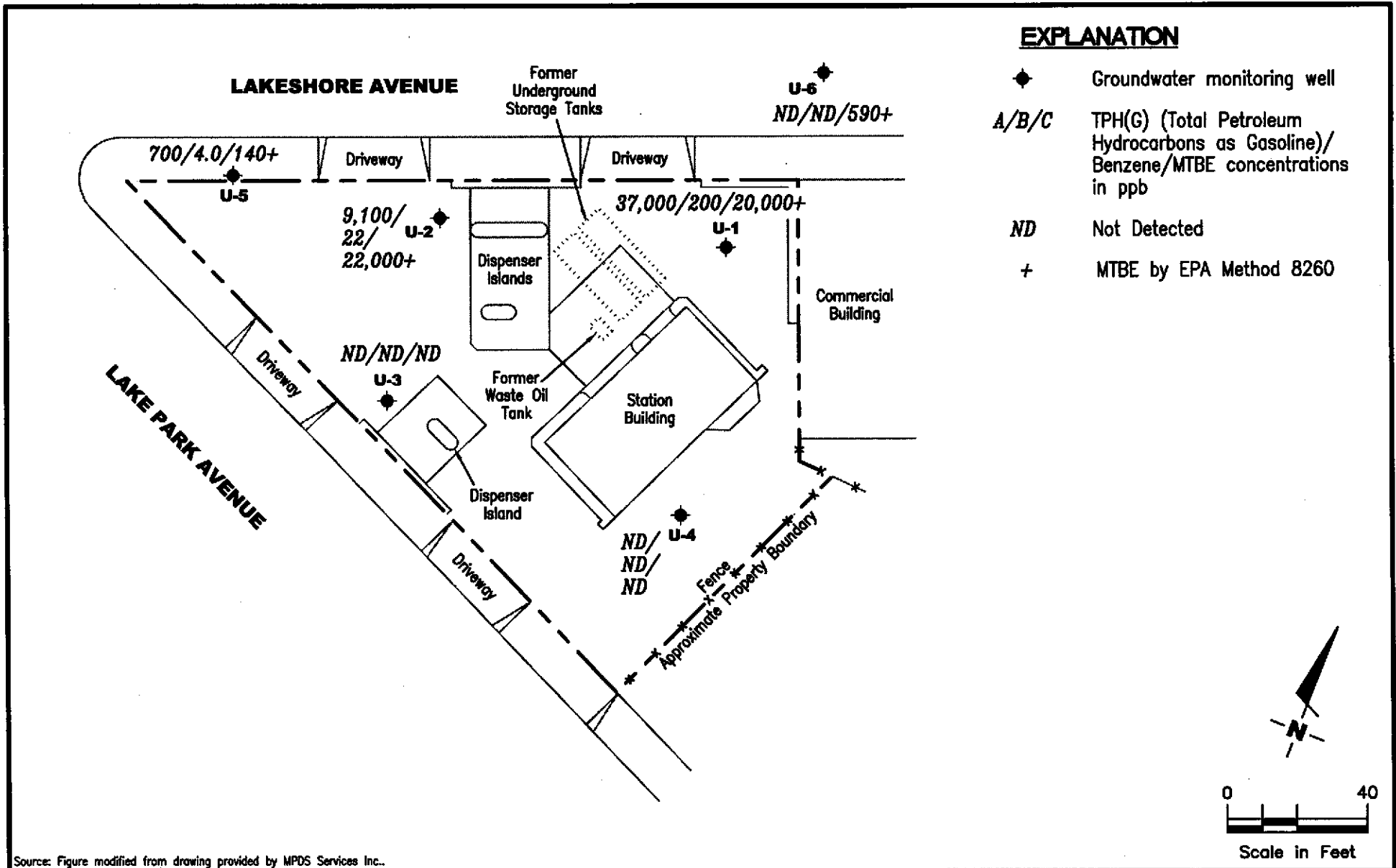
PROJECT NUMBER  
180061

REVIEWED BY

DATE  
June 21, 2000

REVISED DATE

FILE NAME: P:\ENVIRO\TOSCO\5325\000-5325.DWG | Layout Tab: Pot2



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



**Gettler - Ryan Inc.**

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

**CONCENTRATION MAP**  
 Tosco (Unocal) Services Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

FIGURE

**2**

PROJECT NUMBER  
180061

REVIEWED BY

DATE  
June 21, 2000

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1	08/10/90	--	--	--	690	38	75	8.6	130	--
	01/07/91	--	--	--	250	22	16	4.2	17	--
	04/01/91	--	--	--	160	13	8.6	1.0	15	--
	07/03/91	--	--	--	140	21	4.3	0.36	17	--
	10/09/91	--	--	--	ND	ND	ND	ND	ND	--
	02/12/92	--	--	--	250	ND	ND	ND	ND	--
	05/05/92	--	--	--	230	1.2	ND	ND	ND	--
	06/11/92	--	--	--	1,000	80	1.4	6.7	41	--
	08/20/92	--	--	--	400 <sup>1</sup>	1.0	ND	ND	0.6	--
	02/22/93	--	--	--	34,000	1,400	5,500	910	7,300	--
	05/07/93	--	--	--	8,700	600	240	650	3,300	--
08/08/93	--	--	--	4,900 <sup>2</sup>	79	ND	832	270	--	
5.32	11/16/93	8.61	-3.29	0.00	690 <sup>3</sup>	ND	ND	ND	ND	--
	02/16/94	8.54	-3.22	0.00	6,800 <sup>4</sup>	ND	ND	ND	ND	--
8.46	06/22/94	8.39	0.07	0.00	200	ND	ND	5.9	21	--
	09/22/94	8.66	-0.20	0.00	6,100 <sup>3</sup>	ND	ND	ND	ND	--
	12/24/94	8.04	0.42	0.00	50,000	2,500	9,700	2,400	17,000	--
	03/25/95	7.72	1.02**	0.37	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/21/95	9.30	-0.69**	0.20	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/95	9.29	-0.53**	0.40	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/19/95	8.98	-0.50**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/18/96	8.25	0.21	0.00	27,000	ND	2,300	1,400	11,000	4,900
	06/27/96	7.92	0.54	<0.01	120,000	540	4,300	2,600	26,000	ND
	09/26/96	9.10	-0.62**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/09/96	6.88	1.60**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/14/97	9.02	-0.15**	0.55	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/30/97	8.41	0.07**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/97	8.56	-0.08**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/12/97	8.58	-0.11**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/03/98	8.23	0.26**	0.04	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #5325  
3220 Lakeshore Avenue  
Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product						
				Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1	06/15/98	8.37	0.09	Sheen	52,000	ND <sup>7</sup>	900	1,800	13,000	ND <sup>7</sup>
(cont)	09/30/98	8.94	-0.48	Sheen	1,000,000 <sup>8</sup>	ND <sup>7</sup>	2,600	13,000	83,000	4,800
	12/28/98	8.57	-0.11	<0.01	1,100,000 <sup>9</sup>	ND <sup>7</sup>	1,600	8,600	71,000	5,700
	03/22/99	8.18	0.28	Sheen	130,000	470	1,100	2,000	28,000	5,700
	06/09/99	9.37	-0.91	0.00	40,000	230	640	590	13,000	3,500/2,100 <sup>10</sup>
	09/08/99	9.53	-1.07	0.00	55,000 <sup>11</sup>	217	202	745	14,300	6,890/6,690 <sup>10</sup>
	12/07/99	9.67	-1.21	0.00	41,200 <sup>13</sup>	89.3	ND <sup>7</sup>	385	6,930	15,800/14,700 <sup>12</sup>
	03/13/00	8.44	0.02	0.00	48,000 <sup>11</sup>	490	610	2,400	10,000	22,000/23,000 <sup>10</sup>
	06/21/00	9.45	-0.99	0.00	37,000 <sup>11</sup>	200	ND <sup>7</sup>	1,200	7,200	15,000/20,000 <sup>10</sup>
U-2	08/10/90	--	--	--	780	27	46	15	130	--
	01/07/91	--	--	--	1,900	67	5.8	58	69	--
	04/01/91	--	--	--	1,700	250	89	34	190	--
	07/03/91	--	--	--	2,100	150	25	3.1	290	--
	10/09/91	--	--	--	230	7.1	ND	ND	11	--
	02/12/92	--	--	--	410	1.9	ND	0.36	0.4	--
	05/05/92	--	--	--	1,600	120	52	6.2	290	--
	06/11/92	--	--	--	620	17	2.1	ND	37	--
	08/20/92	--	--	--	700	28	6.5	1.3	4.6	--
	02/22/93	--	--	--	3,400	2,400	2,100	1,200	5,800	--
	05/07/93	--	--	--	17,000	1,800	660	1,700	4,000	--
	08/08/93	--	--	--	5,600 <sup>2</sup>	420	ND	410	670	--
4.53	11/16/93	8.17	-3.64	0.00	510 <sup>3</sup>	ND	ND	ND	ND	--
	02/16/94	7.73	-3.20	0.00	980 <sup>4</sup>	49	13	2.7	40	--
7.62	06/22/94	7.60	0.02	0.00	31,000	2,200	62	1,500	3,500	--
	09/22/94	7.93	-0.31	0.00	8,500 <sup>3</sup>	29	ND	ND	ND	--
	12/24/94	7.27	0.35	0.00	32,000	1,500	890	1,300	5,000	--
	03/25/95	7.01	0.61	0.00	170,000	1,900	21,000	4,800	33,000	--
	06/21/95	6.98	0.64	0.00	16,000	2,100	ND	1,800	1,700	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
				Thickness (ft.)						
U-2	09/19/95	7.70	-0.08	0.00	3,000	610	ND	78	240	-- <sup>5</sup>
(cont)	12/19/95	7.30	0.32	0.00	1,600	140	55	52	270	-- <sup>6</sup>
	03/18/96	6.45	1.17	0.00	12,000	2,200	ND	1,200	2,200	22,000
	06/27/96	7.41	0.21	0.00	28,000	3,400	ND	2,800	3,100	3,000
	09/26/96	7.90	-0.28	0.00	5,900	750	ND	ND	ND	18,000
	12/09/96	6.76	0.86	0.00	13,000	5,100	290	980	370	2,700
	03/14/97	7.12	0.52**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/30/97	6.19	1.43	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/97	7.31	0.31	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/12/97	6.75	0.88**	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/03/98	6.36	1.26	Sheen	80,000	3,000	1,100	820	16,000	16,000
	06/15/98	6.51	1.11	Sheen	48,000	1,800	330	470	7,900	20,000
	09/30/98	7.17	0.45	Sheen	60,000	1,300	ND <sup>7</sup>	500	9,700	19,000
	12/28/98	7.06	0.56	0.00	63,000	590	160	320	5,600	16,000
	03/22/99	6.82	0.80	0.00	28,000	1,100	ND <sup>7</sup>	360	2,900	25,000
	06/09/99	7.51	0.11	0.00	21,000	110	190	310	2,600	7,900/7,800 <sup>10</sup>
	09/08/99	8.16	-0.54	0.00	23,300 <sup>11</sup>	477	138	286	4,110	16,400/15,300 <sup>10</sup>
	12/07/99	8.31	-0.69	0.00	4,840 <sup>13</sup>	17.2	ND <sup>7</sup>	ND <sup>7</sup>	157	14,900/15,600 <sup>12</sup>
	03/13/00	6.69	0.93	0.00	11,000 <sup>11</sup>	380	160	ND <sup>7</sup>	2,100	22,000/26,000 <sup>10</sup>
	<b>06/21/00</b>	<b>7.67</b>	<b>-0.05</b>	<b>0.00</b>	<b>9,100<sup>11</sup></b>	<b>22</b>	<b>ND<sup>7</sup></b>	<b>ND<sup>7</sup></b>	<b>800</b>	<b>16,000/22,000<sup>10</sup></b>
U-3	08/10/90	--	--	--	ND	ND	ND	ND	ND	--
	01/07/91	--	--	--	ND	ND	ND	ND	1.8	--
	04/01/91	--	--	--	ND	1.0	2.9	0.53	5.4	--
	07/03/91	--	--	--	ND	ND	ND	ND	ND	--
	10/09/91	--	--	--	ND	ND	ND	ND	ND	--
	02/12/92	--	--	--	ND	ND	ND	ND	ND	--
	05/05/92	--	--	--	ND	ND	ND	ND	ND	--
	06/11/92	--	--	--	ND	ND	ND	ND	ND	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-3	08/20/92	--	--	--	ND	ND	ND	ND	ND	--
(cont)	02/22/93	--	--	--	ND	ND	ND	ND	ND	--
	05/07/93	--	--	--	ND	ND	ND	ND	ND	--
	08/08/93	--	--	--	210	5.0	9.7	0.7	4.1	--
7.86	11/16/93	11.82	-3.96	0.00	ND	ND	ND	ND	ND	--
	02/16/94	11.62	-3.76	0.00	ND	ND	ND	ND	ND	--
10.98	06/22/94	11.64	-0.66	0.00	ND	ND	ND	ND	ND	--
	09/22/94	11.76	-0.78	0.00	ND	ND	ND	ND	ND	--
	12/24/94	11.28	-0.30	0.00	ND	ND	ND	ND	ND	--
	03/25/95	10.96	0.02	0.00	ND	ND	ND	ND	ND	--
	06/21/95	11.37	-0.39	0.00	ND	ND	ND	ND	ND	--
	09/19/95	11.55	-0.57	0.00	ND	ND	ND	ND	ND	-- <sup>5</sup>
	12/19/95	11.45	-0.47	0.00	ND	ND	ND	ND	ND	--
	03/18/96	11.10	-0.12	0.00	ND	ND	ND	ND	ND	--
	06/27/96	11.16	-0.18	0.00	440	49	50	51	140	50
	09/26/96	11.55	-0.57	0.00	ND	ND	ND	ND	ND	ND
	12/09/96	10.12	0.86	0.00	ND	ND	ND	ND	ND	29
	03/14/97	10.87	0.11	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	11.08	-0.10	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	11.05	-0.07	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	10.58	0.40	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	9.84	1.14	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	10.56	0.42	0.00	ND	ND	ND	ND	ND	ND
	09/30/98	11.12	-0.14	0.00	ND	ND	ND	ND	ND	ND
	12/28/98	10.96	0.02	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	9.46	1.52	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	11.01	-0.03	0.00	ND	ND	ND	ND	ND	ND



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product							
				Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
U-3	09/08/99	11.31	-0.33	0.00	ND	ND	ND	ND	ND	ND	ND
(cont)	12/07/99	11.26	-0.28	0.00	ND	ND	ND	ND	ND	ND	ND
	03/13/00	8.28	2.70	0.00	ND	ND	ND	ND	ND	ND	ND
	06/21/00	11.12	-0.14	0.00	ND	ND	ND	ND	ND	ND	ND
<b>U-4</b>											
11.15	06/22/94	10.16	0.99	0.00	ND	ND	ND	ND	ND	ND	--
	09/22/94	10.79	0.36	0.00	ND	0.78	1.3	ND	1.4	ND	--
	12/24/94	9.81	1.34	0.00	ND	ND	ND	ND	ND	ND	--
	03/25/95	9.51	1.64	0.00	ND	ND	ND	ND	ND	ND	--
	06/21/95	9.54	1.61	0.00	ND	ND	ND	ND	ND	ND	--
	09/19/95	10.17	0.98	0.00	ND	ND	ND	ND	ND	ND	--
	12/19/95	9.98	1.17	0.00	ND	ND	ND	ND	ND	ND	--
	03/18/96	9.66	1.49	0.00	ND	ND	ND	ND	ND	ND	--
	06/27/96	9.74	1.41	0.00	ND	ND	ND	ND	ND	ND	ND
	09/26/96	10.14	1.01	0.00	ND	ND	ND	ND	ND	ND	ND
	12/09/96	8.67	2.48	0.00	ND	ND	ND	ND	ND	ND	33
	03/14/97	9.35	1.80	0.00	ND	ND	ND	ND	ND	ND	ND
	06/30/97	9.89	1.26	0.00	ND	ND	ND	ND	ND	ND	ND
	09/19/97	9.96	1.19	0.00	ND	ND	ND	ND	ND	ND	ND
	12/12/97	8.56	2.59	0.00	ND	ND	ND	ND	ND	ND	ND
	03/03/98	7.85	3.30	0.00	ND	ND	ND	ND	ND	ND	ND
	06/15/98	9.08	2.07	0.00	ND	ND	ND	ND	ND	ND	ND
	09/30/98	9.75	1.40	0.00	ND	ND	ND	ND	ND	ND	ND
	12/28/98	9.59	1.56	0.00	ND	ND	ND	ND	ND	ND	ND
	03/22/99	8.34	2.81	0.00	ND	ND	ND	ND	ND	ND	ND
	06/09/99	9.39	1.76	0.00	ND	ND	ND	ND	ND	ND	ND
	09/08/99	9.90	1.25	0.00	ND	ND	ND	ND	ND	ND	ND

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-4	12/07/99	10.05	1.10	0.00	ND	ND	ND	ND	ND	ND
(cont)	03/13/00	7.24	3.91	0.00	ND	ND	ND	ND	ND	ND
	06/21/00	9.48	1.67	0.00	ND	ND	ND	ND	ND	ND
U-5										
6.98	06/22/94	6.83	0.15	0.00	210	7.1	13	4.5	26	--
	09/22/94	6.90	0.08	0.00	170	8.4	10	8.5	18	--
	12/24/94	6.43	0.55	0.00	8,700	560	70	670	430	--
	03/25/95	6.35	0.63	0.00	44,000	390	960	1,500	7,600	--
	06/21/95	7.11	-0.13	0.00	400	2.3	ND	9.1	3.5	--
	09/19/95	6.99	-0.01	0.00	850	14	7.1	13	66	-- <sup>5</sup>
	12/19/95	7.17	-0.19	0.00	ND	ND	ND	ND	ND	--
	03/18/96	6.65	0.33	0.00	100	0.67	0.5	0.51	5.4	--
	06/27/96	6.49	0.49	0.00	16,000	280	150	1,400	4,600	530
	09/26/96	7.13	-0.15	0.00	ND	ND	0.57	ND	0.96	ND
	12/09/96	5.90	1.08	0.00	1,300	29	46	ND	140	97
	03/14/97	6.99	-0.01	0.00	ND	ND	ND	ND	ND	14
	06/30/97	7.08	-0.10	0.00	4,200	74	51	180	980	270
	09/19/97	6.78	0.20	0.00	6,300	160	13	370	1000	480
	12/12/97	6.94	0.04	0.00	60	1.3	ND	1.6	2.1	47
	03/03/98	6.50	0.48	0.00	1,700	29	ND <sup>7</sup>	150	190	330
	06/15/98	6.85	0.13	0.00	1,500	32	ND <sup>7</sup>	91	83	330
	09/30/98	7.31	-0.33	0.00	1,700	44	ND <sup>7</sup>	39	150	60
	12/28/98	7.25	-0.27	0.00	1,400	59	ND <sup>7</sup>	13	27	150
	03/22/99	6.86	0.12	0.00	780	8.9	ND	0.76	4.5	350
	06/09/99	7.28	-0.30	0.00	1,000	ND <sup>7</sup>	ND <sup>7</sup>	10	35	280/350 <sup>10</sup>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-5 (cont)	09/08/99	7.52	-0.54	0.00	2,620 <sup>11</sup>	26.2	ND <sup>7</sup>	32.2	157	280/239 <sup>12</sup>
	12/07/99	7.67	-0.69	0.00	949 <sup>11</sup>	9.26	ND <sup>7</sup>	11.2	22.7	235/301 <sup>12</sup>
	03/13/00	6.73	0.25	0.00	880 <sup>14</sup>	12	1.0	5.6	8.7	46/37 <sup>10</sup>
	06/21/00	7.39	-0.41	0.00	700 <sup>11</sup>	4.0	ND	0.99	4.0	120/140 <sup>10</sup>
U-6 7.14	06/22/94	7.14	0.00	0.00	ND	ND	ND	ND	ND	--
	09/22/94	7.34	-0.20	0.00	130	1.3	0.8	ND	0.73	--
	12/24/94	6.67	0.47	0.00	6,900	500	59	600	380	--
	03/25/95	6.29	0.85	0.00	47,000	450	1,300	1,700	8,200	--
	06/21/95	7.60	-0.46	0.00	ND	ND	ND	ND	ND	--
	09/19/95	7.70	-0.56	0.00	ND	ND	ND	ND	ND	-- <sup>5</sup>
	12/19/95	7.75	-0.61	0.00	210	2.5	1.0	2.9	17	--
	03/18/96	6.86	0.28	0.00	ND	ND	ND	ND	ND	--
	06/27/96	6.52	0.62	0.00	ND	ND	ND	ND	ND	510
	09/26/96	7.62	-0.48	0.00	ND	ND	ND	ND	ND	1,400
	12/09/96	5.88	1.26	0.00	1,200	29	48	6.4	140	58
	03/14/97	7.30	-0.16	0.00	ND	ND	ND	ND	ND	1,500
	06/30/97	7.35	-0.21	0.00	ND	ND	ND	ND	ND	990
	09/19/97	7.25	-0.11	0.00	ND	ND	ND	ND	ND	1,400
	12/12/97	7.29	-0.15	0.00	ND	ND	ND	ND	ND	680
	03/03/98	7.00	0.14	0.00	ND	ND	ND	ND	ND	1,600
	06/15/98	7.18	-0.04	0.00	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>
09/30/98	7.90	-0.76	0.00	ND	ND	ND	ND	ND	1,200	
12/28/98	7.79	-0.65	0.00	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	730	
03/22/99	7.47	-0.33	0.00	ND	ND	ND	ND	ND	1,800	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-6	06/09/99	7.73	-0.59	0.00	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	1,000/850 <sup>10</sup>
(cont)	09/08/99	7.95	-0.81	0.00	ND	ND	ND	ND	ND	851/1,040 <sup>10</sup>
	12/07/99	8.10	-0.96	0.00	ND	ND	ND	ND	ND	1,140/1,150 <sup>12</sup>
	03/13/00	6.95	0.19	0.00	ND	ND	ND	ND	ND	560/670 <sup>10</sup>
	06/21/00	7.84	-0.70	0.00	ND	ND	ND	ND	ND	400/590 <sup>10</sup>
<b>Trip Blank</b>										
TB-LB	03/03/98	--	--	--	ND	ND	ND	ND	ND	ND
	06/15/98	--	--	--	ND	ND	ND	ND	ND	ND
	09/30/98	--	--	--	ND	ND	1.7	ND	2.2	ND
	12/28/98	--	--	--	ND	ND	0.71	ND	0.72	9.5
	03/22/99	--	--	--	ND	ND	ND	ND	ND	ND
	06/09/99	--	--	--	ND	ND	ND	ND	ND	ND
	09/08/99	--	--	--	ND	ND	ND	ND	ND	ND
	12/07/99	--	--	--	ND	ND	0.762	ND	ND	ND
	03/13/00	--	--	--	ND	ND	ND	ND	ND	ND
	06/21/00	--	--	--	ND	ND	ND	ND	ND	ND

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to March 3, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing	B = Benzene	ppb = Parts per billion
DTW = Depth to Water	T = Toluene	ppm = Parts per million
(ft.) = Feet	E = Ethylbenzene	ND = Not Detected
GWE = Groundwater Elevation	X = Xylenes	-- = Not Measured/Not Analyzed
TPH(G) = Total Petroleum Hydrocarbons as Gasoline	MTBE = Methyl tertiary butyl ether	

\* TOC elevations are surveyed relative to City of Oakland Benchmark, at the northeasterly corner of Weller and Cheney Avenue (Elevation = 9.055 feet, city datum; add 3.00' to U.S.G.S. datum). Prior to November 16, 1993, the DTW measurements were taken from the well cover.

\*\* Groundwater elevation corrected due to the presence of free product; correction factor = [(TOC-DTW)+(Product Thickness x 0.75)].

- 1 The positive result for gasoline does not appear to have a typical gasoline pattern.
- 2 The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
- 3 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline
- 4 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 5 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 6 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.
- 7 Detection limit raised. Refer to analytical reports.
- 8 Laboratory report indicates unidentified hydrocarbons C6-C12.
- 9 Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- 10 MTBE by EPA Method 8260.
- 11 Laboratory report indicates gasoline C6-C12.
- 12 MTBE by EPA Method 8260 analyzed past the recommended holding time.
- 13 Laboratory report indicates weathered gasoline C6-C12.
- 14 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.

**Table 2**  
**Groundwater Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID	DATE	Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV <sup>2</sup>
U-1	06/15/98	39	ND	ND	382 <sup>2</sup>
	09/30/98	17	ND	ND	366 <sup>2</sup>
	12/28/98	4.3	6.3	28	298 <sup>2</sup>
	03/22/99	4.9	ND	3.5	320 <sup>3</sup>
	06/09/99	1.2	ND	ND	260 <sup>3</sup>
	09/08/99	1.80	ND <sup>1</sup>	ND <sup>1</sup>	85 <sup>3</sup>
	12/07/99	5.70	ND <sup>1</sup>	17.0	404 <sup>3</sup>
	03/13/00	8.0	0.18	ND	<sup>2</sup> 117/262 <sup>3</sup>
	06/21/00	9.3	ND <sup>1</sup>	ND <sup>1</sup>	148 <sup>2</sup>
U-2	03/03/98	25	ND	ND	369 <sup>2</sup>
	06/15/98	42	ND	ND	341 <sup>2</sup>
	09/30/98	25	ND	ND	354 <sup>2</sup>
	12/28/98	28	ND	ND	276 <sup>2</sup>
	03/22/99	0.68	ND	2.3	320 <sup>3</sup>
	06/09/99	0.50	ND	ND	290 <sup>3</sup>
	09/08/99	1.90	ND <sup>1</sup>	ND <sup>1</sup>	235 <sup>3</sup>
	12/07/99	0.250	ND <sup>1</sup>	ND <sup>1</sup>	389 <sup>3</sup>
	03/13/00	4.3	0.31	ND	<sup>2</sup> 121/184 <sup>3</sup>
	06/21/00	0.26	ND <sup>1</sup>	ND <sup>1</sup>	136 <sup>2</sup>
U-3	06/30/97	1.4	21	0.86	190 <sup>3</sup>
	09/19/97	0.57	19	ND	75 <sup>3</sup>
	12/12/97	1.9	23	0.85	390 <sup>3</sup>
	03/03/98	0.013	36	ND	358 <sup>2</sup>
	06/15/98	0.16	33	ND	318 <sup>2</sup>
	09/30/98	0.040	31	ND	295 <sup>2</sup>
	12/28/98	ND	29	ND	281 <sup>2</sup>
	03/22/99	0.015	30	0.14	310 <sup>3</sup>
	06/09/99	ND	26	1.2	350 <sup>3</sup>
	09/08/99	ND	32.9	ND <sup>1</sup>	417 <sup>3</sup>
	12/07/99	0.0520	27.9	ND <sup>1</sup>	437 <sup>3</sup>
	03/13/00	0.15	33	ND	<sup>2</sup> 226/307 <sup>3</sup>
	06/21/00	0.20	32	ND <sup>1</sup>	225 <sup>2</sup>
U-4	06/30/97	0.13	35	0.52	200 <sup>3</sup>
	09/19/97	0.35	30	ND	45 <sup>3</sup>
	12/12/97	0.68	31	0.73	380 <sup>3</sup>
	03/03/98	0.018	3.2	ND	284 <sup>2</sup>
	06/15/98	0.14	33	ND	256 <sup>2</sup>
	09/30/98	0.049	31	ND	276 <sup>2</sup>
	12/28/98	0.36	31	ND	280 <sup>2</sup>

**Table 2**  
**Groundwater Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID	DATE	Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV <sup>2</sup>
U-4 (cont)	03/22/99	ND	30	0.14	320 <sup>3</sup>
	06/09/99	ND	35	0.91	340 <sup>3</sup>
	09/08/99	ND	24	ND <sup>1</sup>	391 <sup>3</sup>
	12/07/99	ND	27.7	ND <sup>1</sup>	478 <sup>3</sup>
	03/13/00	ND	33	ND	<sup>2</sup> 219/244 <sup>3</sup>
	06/21/00	0.034	32	ND <sup>1</sup>	248 <sup>2</sup>
U-5	06/30/97	16	ND	ND	160 <sup>3</sup>
	09/19/97	0.22	ND	ND	63 <sup>3</sup>
	12/12/97	6.7	ND	ND	400 <sup>3</sup>
	03/03/98	18	3.1	ND	345 <sup>2</sup>
	06/15/98	17	ND	ND	333 <sup>2</sup>
	09/30/98	17	ND	ND	318 <sup>2</sup>
	12/28/98	17	6.6	ND	305 <sup>2</sup>
	03/22/99	0.12	ND	2.4	340 <sup>3</sup>
	06/09/99	0.23	ND	ND	320 <sup>3</sup>
	09/08/99	2.10	ND <sup>1</sup>	ND <sup>1</sup>	335 <sup>3</sup>
	12/07/99	0.310	ND <sup>1</sup>	ND <sup>1</sup>	408 <sup>3</sup>
	03/13/00	0.33	0.16	ND	<sup>2</sup> 111/264 <sup>3</sup>
	06/21/00	0.15	ND <sup>1</sup>	ND <sup>1</sup>	159 <sup>2</sup>
U-6	06/30/97	88	0.80	ND	190 <sup>3</sup>
	09/19/97	2.9	1.80	ND	ND <sup>3</sup>
	12/12/97	51	ND	ND	380 <sup>3</sup>
	03/03/98	60	3.5	ND	327 <sup>2</sup>
	06/15/98	590	4.8	ND	315 <sup>2</sup>
	09/30/98	33	ND	ND	345 <sup>2</sup>
	12/28/98	83	7.2	ND	297 <sup>2</sup>
	03/22/99	2.1	ND	0.98	330 <sup>3</sup>
	06/09/99	0.47	0.20	ND	320 <sup>3</sup>
	09/08/99	0.140	5.59	ND <sup>1</sup>	305 <sup>3</sup>
	12/07/99	0.260	ND <sup>1</sup>	ND <sup>1</sup>	443 <sup>3</sup>
	03/13/00	0.79	0.26	ND	<sup>2</sup> 68/222 <sup>3</sup>
	06/21/00	1.9	ND <sup>1</sup>	ND <sup>1</sup>	159 <sup>2</sup>

**Table 2**  
**Groundwater Analytical Results**  
Tosco (Unocal) Service Station #5325  
3220 Lakeshore Avenue  
Oakland, California

---

**EXPLANATIONS:**

Groundwater analytical results prior to March 3, 1998, were compiled from reports prepared by MPDS Services, Inc.

ppm = Parts per million

ND = Not Detected

mV = millivolts

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

<sup>2</sup> Field measurement.

<sup>3</sup> Analyzed by laboratory.



**Table 3**  
**Groundwater Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

D.O.

WELL ID	DATE	Before Purge (mg/L)
U-1	12/07/99	1.36
	06/21/00	1.53
U-2	12/07/99	2.28
	06/21/00	1.96
U-3	06/30/97	4.1
	09/19/97	4.2
	12/12/97	2.97
	03/03/98	2.63
	06/15/98	2.93
	09/30/98	3.11
	12/28/98	3.59
	03/22/99	4.02
	06/09/99	3.70
	09/08/99	3.96
	12/07/99	4.21
06/21/00	4.27	
U-4	06/30/97	5.4
	09/19/97	5.1
	12/12/97	3.11
	03/03/98	2.94
	06/15/98	3.08
	09/30/98	4.05
	12/28/98	4.57
	03/22/99	4.26
	06/09/99	3.61
	09/08/99	3.75
	12/07/99	4.03
06/21/00	4.89	
U-5	06/30/97	3.4
	09/19/97	0.6
	12/12/97	1.75
	03/03/98	2.36
	06/15/98	2.55
09/30/98	1.93	

**Table 3**  
**Groundwater Analytical Results**  
 Tosco (Unocal) Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

WELL ID	DATE	Before Purge (mg/L)
U-5 (cont)	12/28/98	1.64
	03/22/99	1.99
	06/09/99	2.10
	09/08/99	2.21
	12/07/99	2.66
	<b>06/21/00</b>	<b>3.42</b>
U-6	06/30/97	0.30
	09/19/97	0.60
	12/12/97	2.70
	03/03/98	2.18
	06/15/98	2.48
	09/30/98	3.06
	12/28/98	3.42
	03/22/99	3.88
	06/09/99	3.29
	09/08/99	3.12
	12/07/99	3.44
<b>06/21/00</b>	<b>3.27</b>	

**EXPLANATIONS:**

Dissolved oxygen concentrations prior to March 3, 1998, were compiled from reports prepared by MPDS Services, Inc.

mg/L = milligrams per liter

## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 5325  
Address: 3220 Lakeshore Ave.  
City: Oakland

Job#: 180061  
Date: 6-21-00  
Sampler: Joc

Well ID: U-1  
Well Diameter: 3 in.  
Total Depth: 19.70 ft.  
Depth to Water: 9.45 ft.

Well Condition: O.K.  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
6" = 1.50 12" = 5.90

10.25 x VF 0.38 = 3.90 x 3 (case volume) = Estimated Purge Volume: 12 (gal.)

Purge Equipment: Disposable Bailer  
Bailer  
Stack  
Suction  
Grundfos  
Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
Bailer  
Pressure Bailer  
Grab Sample  
Other: \_\_\_\_\_

Starting Time: 11:40  
Sampling Time: 12:15 P.M.  
Purging Flow Rate: \_\_\_\_\_ l gpm.  
Did well de-water? \_\_\_\_\_

Weather Conditions: Hot  
Water Color: Clear Odor: yes  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100^\circ$	Temperature $^\circ\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:49</u>	<u>4</u>	<u>6.95</u>	<u>1.85</u>	<u>70.7</u>	<u>1.53</u>	<u>148</u>	
<u>11:52</u>	<u>8</u>	<u>7.05</u>	<u>1.82</u>	<u>71.7</u>			
<u>11:53</u>	<u>12</u>	<u>6.92</u>	<u>1.86</u>	<u>72.0</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>3 GAL</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate,</u>
					<u>phosphate</u>

COMMENTS: No FP found in skimmer

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 5325  
Address: 3220 Lakeshore Ave.  
City: Oakland

Job#: 180061  
Date: 6-21-00  
Sampler: Joc

Well ID: U-2  
Well Diameter: 3 in.  
Total Depth: 19.62 ft.  
Depth to Water: 7.67 ft.

Well Condition: O.k. "New Lock"  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
6" = 1.50 12" = 5.80

11.95 x VF 0.38 = 4.54 x 3 (case volume) = Estimated Purge Volume: 14 (gal.)

Purge Equipment: Disposable Bailer  
Bailer  
Stack  
Suction  
Grundfos  
Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
Bailer  
Pressure Bailer  
Grab Sample  
Other: \_\_\_\_\_

Starting Time: 11:05  
Sampling Time: 11:30 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: Hot  
Water Color: Clear Odor: yes  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}^\circ$	Temperature $^\circ\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:10</u>	<u>5</u>	<u>7.16</u>	<u>246</u>	<u>71.9</u>	<u>1.96</u>	<u>136</u>	
<u>11:12</u>	<u>10</u>	<u>7.21</u>	<u>245</u>	<u>71.0</u>			
<u>11:14</u>	<u>14</u>	<u>7.23</u>	<u>248</u>	<u>71.2</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-2</u>	<u>3YCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate,</u>
					<u>phosphate</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 5325  
Address: 3220 Lakeshore Ave.  
City: Oakland

Job#: 180061  
Date: 6-21-00  
Sampler: Joe

Well ID U-3  
Well Diameter 3 in.  
Total Depth 19.40 ft.  
Depth to Water 11.12 ft.

Well Condition: O.K.  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
6" = 1.50 12" = 5.90

8.28 X VF 0.38 = 3.15 X 3 (case volume) = Estimated Purge Volume: 10 (gal.)

Purge Equipment: Disposable Bailer  
Bailer  
Stack  
Suction  
Grundfos  
Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
Bailer  
Pressure Bailer  
Grab Sample  
Other: \_\_\_\_\_

Starting Time: 8:30  
Sampling Time: 9:00 A.M.  
Purging Flow Rate: 1 gpm.  
Did well de-water? \_\_\_\_\_

Weather Conditions: Hot  
Water Color: Clear Odor: none  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm <sup>100</sup>	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:40</u>	<u>3.5</u>	<u>7.65</u>	<u>8.47</u>	<u>72.0</u>	<u>4.27</u>	<u>225</u>	
<u>8:42</u>	<u>7</u>	<u>7.62</u>	<u>8.56</u>	<u>72.1</u>			
<u>8:44</u>	<u>10</u>	<u>7.55</u>	<u>8.57</u>	<u>72.3</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-3</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate,</u>
					<u>phosphate</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 5325 Job#: 180061  
 Address: 3220 Lakeshore Ave. Date: 6-21-00  
 City: Oakland Sampler: Joe

Well ID U-4 Well Condition: O.K.  
 Well Diameter 4 in. Hydrocarbon Amount Bailed  
 Thickness: 0 in. (product/water): 0 (gal.)  
 Total Depth 20.15 ft.  
 Depth to Water 9.48 ft.

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

10.67 x VF 0.66 = 7.04 x 3 (case volume) = Estimated Purge Volume: 21 (gal.)

Purge Equipment: Disposable Bailer  
 Bailer  
 Stack  
Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 9:10 Weather Conditions: Hot  
 Sampling Time: 9:40 A.M. Water Color: Clear Odor: None  
 Purging Flow Rate: 2 gpm Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{hos/cm} \times 10^2$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:20	7	7.71	10.11	71.9	4.89	248	
9:23	14	7.53	10.48	72.2			
9:25	21	7.55	10.20	72.4			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-4</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>(Iron</u>
					<u>Nitrate,</u>
					<u>phosphate</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 5325  
Address: 3220 Lakeshore Ave.  
City: Oakland

Job#: 180061  
Date: 6-21-00  
Sampler: Joe

Well ID U-5  
Well Diameter 4 in.  
Total Depth 20.05 ft.  
Depth to Water 7.39 ft.

Well Condition: O.K. "New Lock"  
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
6" = 1.50 12" = 5.90

12.66 x VF 0.66 = 8.36 x 3 (case volume) = Estimated Purge Volume: 25 (gal.)

Purge Equipment: Disposable Bailer  
Bailer  
Stack  
Suction  
Grundfos  
Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
Bailer  
Pressure Bailer  
Grab Sample  
Other: \_\_\_\_\_

Starting Time: 10:30  
Sampling Time: 10:55 A.M.  
Purging Flow Rate: 2 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: Hot  
Water Color: Clear Odor: yes  
Sediment Description: none  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:36</u>	<u>8</u>	<u>7.17</u>	<u>2.75</u>	<u>73.6</u>	<u>3.42</u>	<u>159</u>	
<u>10:39</u>	<u>17</u>	<u>7.10</u>	<u>2.85</u>	<u>72.9</u>			
<u>10:42</u>	<u>25</u>	<u>7.14</u>	<u>2.82</u>	<u>72.5</u>			
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-5</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>(Iron</u>
					<u>Nitrate,</u>
					<u>phosphate</u>

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



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 5325 Job#: 180061  
 Address: 3220 Lakeshore Ave. Date: 6-21-00  
 City: Oakland Sampler: Joe

Well ID U-6 Well Condition: O.K.  
 Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth 23.80 ft.  
 Depth to Water 7.84 ft.

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

$15.96 \times VF \ 0.17 = 2.71 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 8.5 \text{ (gal.)}$

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

Starting Time: 9:50 Weather Conditions: Hot  
 Sampling Time: 10:15 A.M. Water Color: Clear Odor: none  
 Purging Flow Rate: 1 gpm Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes: Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^3$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:00</u>	<u>3</u>	<u>7.51</u>	<u>6.41</u>	<u>71.6</u>	<u>3.27</u>	<u>159</u>	
<u>10:01</u>	<u>5</u>	<u>7.39</u>	<u>6.36</u>	<u>73.1</u>			
<u>10:02</u>	<u>8.5</u>	<u>7.38</u>	<u>6.32</u>	<u>73.2</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-6</u>	<u>3 YEA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>(Iron</u>
					<u>Nitrate,</u>
					<u>phosphate</u>

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





# Sequoia Analytical

---

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

13 July, 2000

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

RE: Unocal  
Sequoia Report: W006544

Enclosed are the results of analyses for samples received by the laboratory on 21-Jun-00 20:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charlie Westwater  
Project Manager

CA ELAP Certificate #1271





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W006544-01	Water	21-Jun-00 00:00	21-Jun-00 20:00
U-1	W006544-02	Water	21-Jun-00 12:15	21-Jun-00 20:00
U-2	W006544-03	Water	21-Jun-00 11:30	21-Jun-00 20:00
U-3	W006544-04	Water	21-Jun-00 09:00	21-Jun-00 20:00
U-4	W006544-05	Water	21-Jun-00 09:40	21-Jun-00 20:00
U-5	W006544-06	Water	21-Jun-00 10:55	21-Jun-00 20:00
U-6	W006544-07	Water	21-Jun-00 10:15	21-Jun-00 20:00

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





Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568	Project: Unocal Project Number: Unocal # 5325 Project Manager: Deanna L. Harding	Reported: 13-Jul-00 08:38
--	--	------------------------------

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

<b>TB-LB (W006544-01) Water</b> Sampled: 21-Jun-00 00:00    Received: 21-Jun-00 20:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	0F30001	30-Jun-00	30-Jun-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99.3 %	70-130		"	"	"	"	

P-01

<b>U-1 (W006544-02) Water</b> Sampled: 21-Jun-00 12:15    Received: 21-Jun-00 20:00									
Purgeable Hydrocarbons	37000	5000	ug/l	100	0F30001	30-Jun-00	30-Jun-00	EPA 8015M/8020	
Benzene	200	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	1200	50	"	"	"	"	"	"	
Xylenes (total)	7200	50	"	"	"	"	"	"	
Methyl tert-butyl ether	15000	250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		100 %	70-130		"	"	"	"	

P-01

<b>U-2 (W006544-03) Water</b> Sampled: 21-Jun-00 11:30    Received: 21-Jun-00 20:00									
Purgeable Hydrocarbons	9100	2000	ug/l	40	0F30001	30-Jun-00	30-Jun-00	EPA 8015M/8020	
Benzene	22	20	"	"	"	"	"	"	
Toluene	ND	20	"	"	"	"	"	"	
Ethylbenzene	ND	20	"	"	"	"	"	"	
Xylenes (total)	800	20	"	"	"	"	"	"	
Methyl tert-butyl ether	16000	100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		94.7 %	70-130		"	"	"	"	





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-3 (W006544-04) Water Sampled: 21-Jun-00 09:00 Received: 21-Jun-00 20:00</b>									
Purgeable Hydrocarbons	ND	50	ug/l	1	0F30001	30-Jun-00	30-Jun-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		95.3 %		70-130	"	"	"	"	
<b>U-4 (W006544-05) Water Sampled: 21-Jun-00 09:40 Received: 21-Jun-00 20:00</b>									
Purgeable Hydrocarbons	ND	50	ug/l	1	0F30001	30-Jun-00	30-Jun-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %		70-130	"	"	"	"	
<b>U-5 (W006544-06) Water Sampled: 21-Jun-00 10:55 Received: 21-Jun-00 20:00</b>									
Purgeable Hydrocarbons	700	50	ug/l	1	0F30001	30-Jun-00	30-Jun-00	EPA 8015M/8020	P-01
Benzene	4.0	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	0.99	0.50	"	"	"	"	"	"	
Xylenes (total)	4.0	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	120	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		176 %		70-130	"	"	"	"	S-04





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

**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-6 (W006544-07) Water Sampled: 21-Jun-00 10:15 Received: 21-Jun-00 20:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	0F30001	30-Jun-00	30-Jun-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Methyl tert-butyl ether	400	2.5	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		105 %		70-130	"	"	"	"	"





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

**MTBE Confirmation by EPA Method 8260A**  
**Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (W006544-02) Water</b> Sampled: 21-Jun-00 12:15 Received: 21-Jun-00 20:00									
Methyl tert-butyl ether	20000	1000	ug/l	500	0G05015	03-Jul-00	05-Jul-00	EPA 8260A	
Surrogate: Dibromofluoromethane		94.0 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		82.0 %	50-150		"	"	"	"	
<b>U-2 (W006544-03) Water</b> Sampled: 21-Jun-00 11:30 Received: 21-Jun-00 20:00									
Methyl tert-butyl ether	22000	1000	ug/l	500	0G05015	03-Jul-00	05-Jul-00	EPA 8260A	
Surrogate: Dibromofluoromethane		94.0 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		82.0 %	50-150		"	"	"	"	
<b>U-5 (W006544-06) Water</b> Sampled: 21-Jun-00 10:55 Received: 21-Jun-00 20:00									
Methyl tert-butyl ether	140	2.0	ug/l	1	0G05015	03-Jul-00	05-Jul-00	EPA 8260A	
Surrogate: Dibromofluoromethane		94.0 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		84.0 %	50-150		"	"	"	"	
<b>U-6 (W006544-07) Water</b> Sampled: 21-Jun-00 10:15 Received: 21-Jun-00 20:00									
Methyl tert-butyl ether	590	5.0	ug/l	2.5	0G05015	03-Jul-00	05-Jul-00	EPA 8260A	
Surrogate: Dibromofluoromethane		106 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		90.0 %	50-150		"	"	"	"	







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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

**Total Metals by EPA 6000/7000 Series Methods  
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (W006544-02) Water</b>	Sampled: 21-Jun-00 12:15		Received: 21-Jun-00 20:00						
Ferrous Iron	9.3	0.010	mg/l	1	0G05014	05-Jul-00	11-Jul-00	EPA 6010A	
<b>U-2 (W006544-03) Water</b>	Sampled: 21-Jun-00 11:30		Received: 21-Jun-00 20:00						
Ferrous Iron	0.26	0.010	mg/l	1	0G05014	05-Jul-00	11-Jul-00	EPA 6010A	
<b>U-3 (W006544-04) Water</b>	Sampled: 21-Jun-00 09:00		Received: 21-Jun-00 20:00						
Ferrous Iron	0.20	0.010	mg/l	1	0G05014	05-Jul-00	11-Jul-00	EPA 6010A	
<b>U-4 (W006544-05) Water</b>	Sampled: 21-Jun-00 09:40		Received: 21-Jun-00 20:00						
Ferrous Iron	0.034	0.010	mg/l	1	0G05014	05-Jul-00	11-Jul-00	EPA 6010A	
<b>U-5 (W006544-06) Water</b>	Sampled: 21-Jun-00 10:55		Received: 21-Jun-00 20:00						
Ferrous Iron	0.15	0.010	mg/l	1	0G05014	05-Jul-00	11-Jul-00	EPA 6010A	
<b>U-6 (W006544-07) Water</b>	Sampled: 21-Jun-00 10:15		Received: 21-Jun-00 20:00						
Ferrous Iron	1.9	0.010	mg/l	1	0G05014	05-Jul-00	11-Jul-00	EPA 6010A	





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

## Anions by EPA Method 300.0

### Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>U-1 (W006544-02) Water</b> Sampled: 21-Jun-00 12:15 Received: 21-Jun-00 20:00									
Nitrate as NO3	ND	1.0	mg/l	10	0F27016	23-Jun-00	23-Jun-00	EPA 300.0	
Phosphate	ND	5.00	"	"	"	"	"	"	
<b>U-2 (W006544-03) Water</b> Sampled: 21-Jun-00 11:30 Received: 21-Jun-00 20:00									
Nitrate as NO3	ND	1.0	mg/l	10	0F27016	23-Jun-00	23-Jun-00	EPA 300.0	
Phosphate	ND	5.00	"	"	"	"	"	"	
<b>U-3 (W006544-04) Water</b> Sampled: 21-Jun-00 09:00 Received: 21-Jun-00 20:00									
Nitrate as NO3	32	1.0	mg/l	10	0F27016	23-Jun-00	23-Jun-00	EPA 300.0	
Phosphate	ND	5.00	"	"	"	"	"	"	
<b>U-4 (W006544-05) Water</b> Sampled: 21-Jun-00 09:40 Received: 21-Jun-00 20:00									
Nitrate as NO3	32	1.0	mg/l	10	0F27016	23-Jun-00	23-Jun-00	EPA 300.0	
Phosphate	ND	5.00	"	"	"	"	"	"	
<b>U-5 (W006544-06) Water</b> Sampled: 21-Jun-00 10:55 Received: 21-Jun-00 20:00									
Nitrate as NO3	ND	1.0	mg/l	10	0F27016	23-Jun-00	23-Jun-00	EPA 300.0	
Phosphate	ND	5.00	"	"	"	"	"	"	
<b>U-6 (W006544-07) Water</b> Sampled: 21-Jun-00 10:15 Received: 21-Jun-00 20:00									
Nitrate as NO3	ND	1.0	mg/l	10	0F27016	23-Jun-00	23-Jun-00	EPA 300.0	
Phosphate	ND	5.00	"	"	"	"	"	"	





Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568	Project: Unocal Project Number: Unocal # 5325 Project Manager: Deanna L. Harding	<b>Reported:</b> 13-Jul-00 08:38
--	--	-------------------------------------

**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
<b>Batch 0F30001 - EPA 5030B [P/T]</b>										
<b>Blank (0F30001-BLK1)</b>										
Prepared & Analyzed: 30-Jun-00										
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	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	29.8		"	30.0		99.3	70-130			
<b>LCS (0F30001-BS1)</b>										
Prepared & Analyzed: 30-Jun-00										
Benzene	17.1	0.50	ug/l	20.0		85.5	70-130			
Toluene	19.0	0.50	"	20.0		95.0	70-130			
Ethylbenzene	20.9	0.50	"	20.0		104	70-130			
Xylenes (total)	61.9	0.50	"	60.0		103	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	25.0		"	30.0		83.3	70-130			
<b>LCS Dup (0F30001-BSD1)</b>										
Prepared & Analyzed: 30-Jun-00										
Benzene	16.9	0.50	ug/l	20.0		84.5	70-130	1.18	20	
Toluene	18.9	0.50	"	20.0		94.5	70-130	0.528	20	
Ethylbenzene	22.5	0.50	"	20.0		113	70-130	7.37	20	
Xylenes (total)	62.6	0.50	"	60.0		104	70-130	1.12	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	25.4		"	30.0		84.7	70-130			





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

**MTBE Confirmation 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
<b>Batch 0G05015 - EPA 5030B [P/T]</b>										
<b>Blank (0G05015-BLK1)</b> Prepared & Analyzed: 03-Jul-00										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	50.0		"	50.0		100	50-150			
Surrogate: 1,2-Dichloroethane-d4	47.0		"	50.0		94.0	50-150			
<b>Blank (0G05015-BLK2)</b> Prepared & Analyzed: 05-Jul-00										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	50.0		"	50.0		100	50-150			
Surrogate: 1,2-Dichloroethane-d4	46.0		"	50.0		92.0	50-150			
<b>Blank (0G05015-BLK3)</b> Prepared & Analyzed: 06-Jul-00										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	48.0		"	50.0		96.0	50-150			
Surrogate: 1,2-Dichloroethane-d4	48.0		"	50.0		96.0	50-150			
<b>LCS (0G05015-BS1)</b> Prepared & Analyzed: 03-Jul-00										
Methyl tert-butyl ether	43.9	2.0	ug/l	50.0		87.8	70-130			
Surrogate: Dibromofluoromethane	50.0		"	50.0		100	50-150			
Surrogate: 1,2-Dichloroethane-d4	45.0		"	50.0		90.0	50-150			
<b>LCS (0G05015-BS2)</b> Prepared & Analyzed: 05-Jul-00										
Methyl tert-butyl ether	45.7	2.0	ug/l	50.0		91.4	70-130			
Surrogate: Dibromofluoromethane	49.0		"	50.0		98.0	50-150			
Surrogate: 1,2-Dichloroethane-d4	45.0		"	50.0		90.0	50-150			
<b>LCS (0G05015-BS3)</b> Prepared & Analyzed: 06-Jul-00										
Methyl tert-butyl ether	46.4	2.0	ug/l	50.0		92.8	70-130			
Surrogate: Dibromofluoromethane	50.0		"	50.0		100	50-150			
Surrogate: 1,2-Dichloroethane-d4	45.0		"	50.0		90.0	50-150			





Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568	Project: Unocal Project Number: Unocal # 5325 Project Manager: Deanna L. Harding	Reported: 13-Jul-00 08:38
--	--	------------------------------

**MTBE Confirmation 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
<b>Batch 0G05015 - EPA 5030B [P/T]</b>										
<b>LCS Dup (0G05015-BSD1)</b>										
Prepared & Analyzed: 03-Jul-00										
Methyl tert-butyl ether	48.4	2.0	ug/l	50.0		96.8	70-130	9.75	25	
Surrogate: Dibromofluoromethane	50.0		"	50.0		100	50-150			
Surrogate: 1,2-Dichloroethane-d4	49.0		"	50.0		98.0	50-150			





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

**Reported:**  
13-Jul-00 08:38

**Total Metals by EPA 6000/7000 Series Methods - Quality Control  
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 0G05014 - 200.7</b>										
<b>Blank (0G05014-BLK1)</b> Prepared: 05-Jul-00 Analyzed: 11-Jul-00										
Ferrous Iron	ND	0.010	mg/l							
<b>LCS (0G05014-BS1)</b> Prepared: 05-Jul-00 Analyzed: 11-Jul-00										
Ferrous Iron	0.980	0.010	mg/l	1.00		98.0	80-120			
<b>LCS Dup (0G05014-BSD1)</b> Prepared: 05-Jul-00 Analyzed: 11-Jul-00										
Ferrous Iron	0.960	0.010	mg/l	1.00		96.0	80-120	2.06	20	
<b>Matrix Spike (0G05014-MS1)</b> Source: W006538-01 Prepared: 05-Jul-00 Analyzed: 11-Jul-00										
Ferrous Iron	1.10	0.010	mg/l	1.00	0.054	105	80-120			
<b>Matrix Spike Dup (0G05014-MSD1)</b> Source: W006538-01 Prepared: 05-Jul-00 Analyzed: 11-Jul-00										
Ferrous Iron	1.06	0.010	mg/l	1.00	0.054	101	80-120	3.70	20	





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

Reported:  
13-Jul-00 08:38

**Anions by EPA Method 300.0 - Quality Control  
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 0F27016 - General Preparation**

**Blank (0F27016-BLK1)**

Prepared & Analyzed: 23-Jun-00

Nitrate as NO3	ND	0.10	mg/l							
Phosphate	ND	0.500	"							

**LCS (0F27016-BS1)**

Prepared & Analyzed: 23-Jun-00

Nitrate as NO3	9.68	0.10	mg/l	10.0		96.8	80-120			
Phosphate	20.7	0.500	"	20.0		104	80-120			

**Matrix Spike (0F27016-MS1)**

Source: W006535-01

Prepared & Analyzed: 23-Jun-00

Nitrate as NO3	11.1	0.20	mg/l	10.0	1.5	96.0	75-125			
Phosphate	19.7	1.00	"	20.0	ND	98.5	75-125			

**Matrix Spike Dup (0F27016-MSD1)**

Source: W006535-01

Prepared & Analyzed: 23-Jun-00

Nitrate as NO3	11.0	0.20	mg/l	10.0	1.5	95.0	75-125	0.905	20	
Phosphate	19.7	1.00	"	20.0	ND	98.5	75-125	0	20	





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

Project: Unocal  
Project Number: Unocal # 5325  
Project Manager: Deanna L. Harding

**Reported:**  
13-Jul-00 08:38

### Notes and Definitions

- P-01 Chromatogram Pattern: Gasoline C6-C12
- S-04 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
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

