



# GETTLER-RYAN Inc.

ENVIRONMENTAL  
PROTECTION

60 FEB 30 PM 3:19

## TRANSMITTAL

February 15, 2000

G-R #:180066

TO: Mr. David B. De Witt  
Tosco Marketing Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94586

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

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

RE: Tosco (Unocal) SS #0752  
800 Harrison Street  
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	February 10, 2000	Groundwater Monitoring and Sampling Report Semi-Annual 2000 - Event of January 7, 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 **February 29, 2000**, this report will be distributed to the following:

Enclosure

cc: Ms. Jennifer Eberle, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, CA 94502

agency/0752dbd.qmt



# GETTLER-RYAN INC.

February 10, 2000  
G-R Job #180066

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

RE: Semi-Annual 2000 Groundwater Monitoring & Sampling Report  
Tosco (Unocal) Service Station #0752  
800 Harrison Street  
Oakland, California

Dear Mr. De Witt:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On January 7, 2000, field personnel monitored and sampled eight wells (MW-1 through MW-8) 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 4. 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, 2 and 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

Deanna L. Harding  
Project Coordinator

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

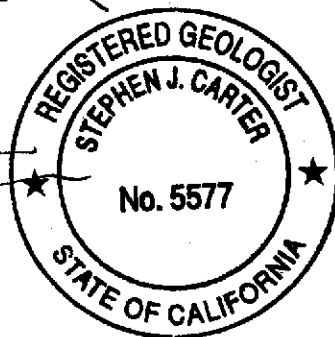
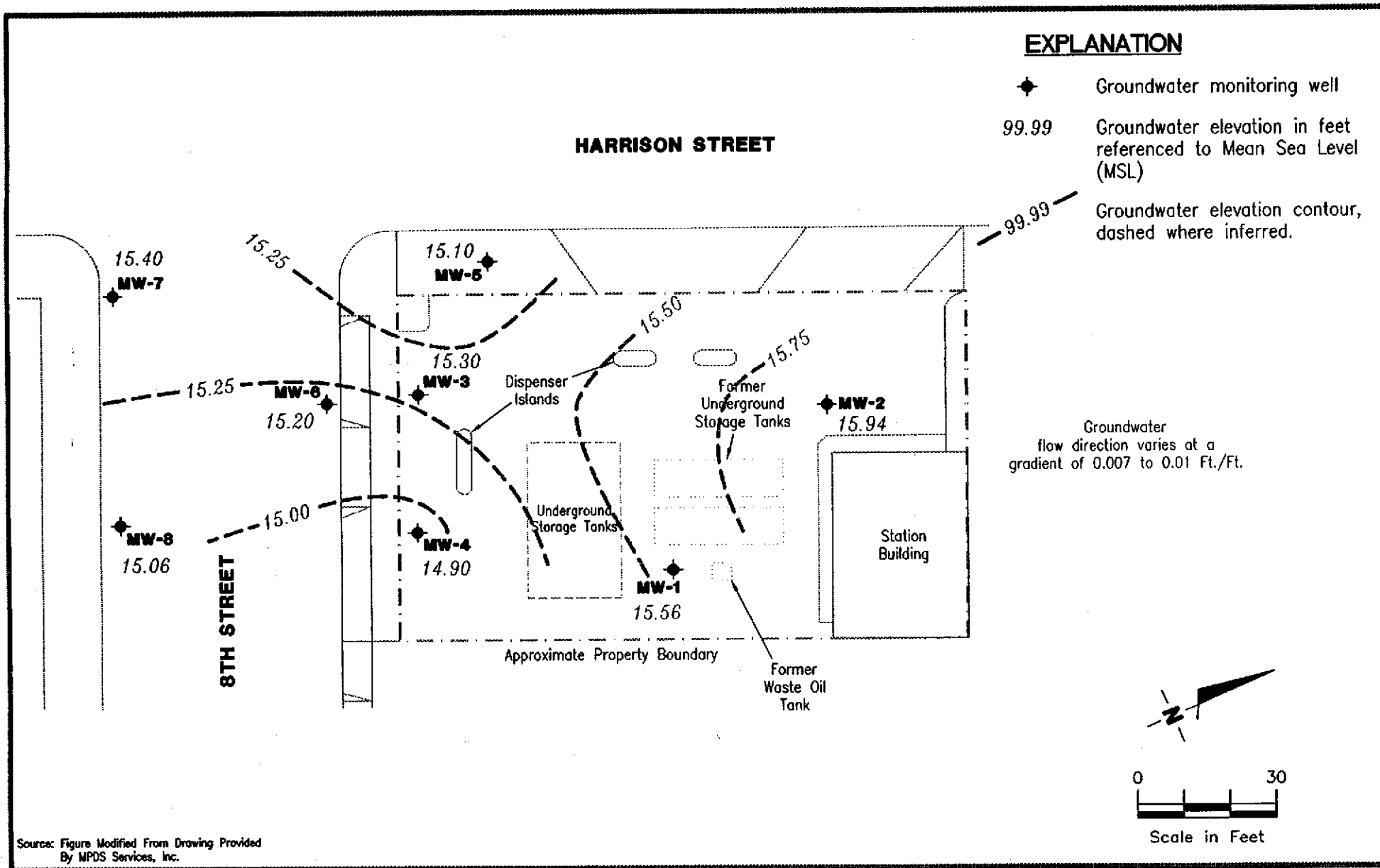


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results  
Table 3: Groundwater Analytical Results  
Table 4: Dissolved Oxygen Concentrations  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets



**Gettler - Ryan Inc.**

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

**POTENTIOMETRIC MAP**  
Tosco (Unocal) Service Station No. 0752  
800 Harrison Street  
Oakland, California

FIGURE

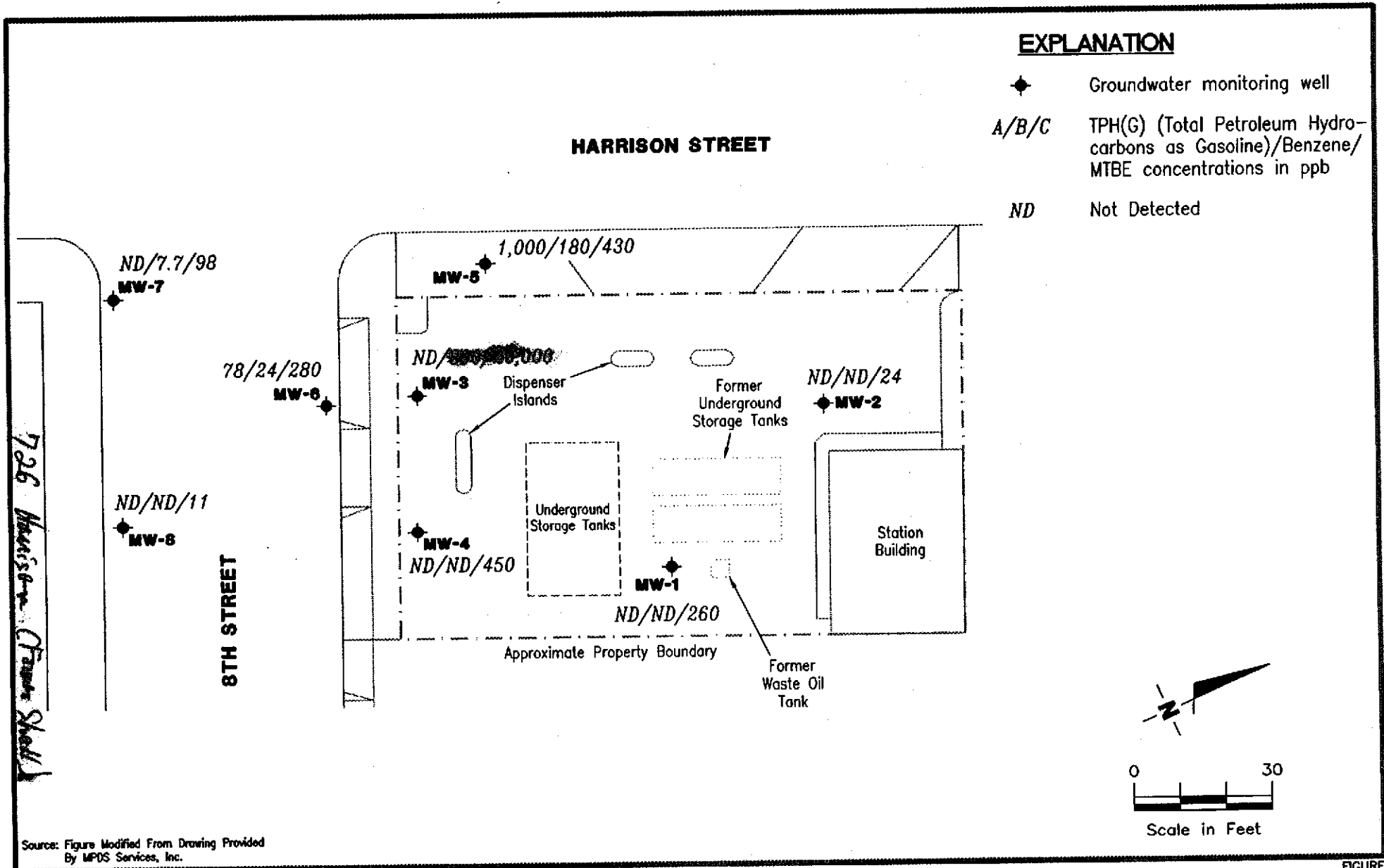
**1**

JOB NUMBER  
180066

REVIEWED BY

DATE  
January 7, 2000

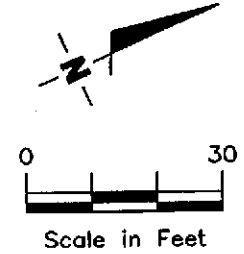
REVISED DATE



**EXPLANATION**

- ◆ Groundwater monitoring well
- A/B/C TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb
- ND Not Detected

Source: Figure Modified From Drawing Provided By MPDS Services, Inc.



**Gettler - Ryan Inc.**

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Dublin, CA 94568

**CONCENTRATION MAP**  
 Tosco (Unocal) Service Station No. 0752  
 800 Harrison Street  
 Oakland, California

FIGURE

**2**

JOB NUMBER  
180066

REVIEWED BY

DATE  
January 7, 2000

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	Chloro- form** (ppb)	PCE** (ppb)	TCE** (ppb)	
MW-1	06/05/91	--	--	ND	47	ND	ND	ND	ND	--	7.8	2.9	1.3	
	09/30/91	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--	
	12/30/91	--	--	ND	ND	ND	ND	ND	ND	--	6.4	2.1	0.9	
	04/02/92	--	--	94	ND	ND	ND	ND	ND	--	7.1	2.6	1.4	
	06/30/92	--	--	120	ND	ND	ND	ND	ND	--	9.5	2.2	1.3	
	09/15/92	--	--	ND	76	1.0	ND	ND	ND	--	12	2.2	1.3	
34.94	12/21/92	21.17	13.77	ND	95	0.69	ND	ND	1.0	--	12	1.4	0.83	
	04/28/93 <sup>1</sup>	--	--	470 <sup>2</sup>	920	3.1	2.3	1.2	9.7	--	12	0.89	0.85	
34.69	07/23/93	20.13	14.81	ND	ND	0.5	0.66	ND	ND	--	16	1.3	0.91	
	10/05/93	20.30	14.39	57 <sup>3</sup>	92 <sup>5</sup>	1.5	ND	ND	0.72	--	13	1.3	0.66	
	01/03/94 <sup>6</sup>	20.52	14.17	ND	ND	ND	ND	ND	ND	--	18	1.4	0.93	
	04/02/94	20.16	14.53	ND	ND	ND	ND	ND	ND	--	15	1.1	0.68	
	07/05/94	19.27	15.42	--	250	4.8	13	1.2	7.3	--	--	--	--	
	10/06/94	20.87	13.82	--	540	1.4	ND	0.66	11	--	--	--	--	
	01/02/95	19.67	15.02	--	140	ND	ND	ND	ND	--	--	--	--	
	04/03/95	17.61	17.08	--	580	3.6	0.75	ND	4.0	--	--	--	--	
	07/14/95	18.58	16.11	--	260	2.1	ND	ND	1.2	--	--	--	--	
	10/10/95	19.60	15.09	--	220	2.0	ND	25	5.6	29	--	--	--	
	01/03/96	19.69	15.00	--	190	2.4	ND	0.71	1.2	--	--	--	--	
	04/10/96	17.65	17.04	--	540	8.9	1.7	1.5	7.4	50	--	--	--	
	07/09/96	18.52	16.17	--	490	3.0	1.4	1.3	2.5	150	--	--	--	
	01/24/97	17.72	16.97	--	760	27	0.89	5.2	10	510	--	--	--	
	07/23/97	19.42	15.27	--	ND	ND	ND	ND	ND	550	--	--	--	
	NP	01/26/98	17.46	17.23	--	1,800 <sup>8</sup>	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	4,800	--	--	--
	NP	07/03/98	18.61	16.08	--	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	ND <sup>9</sup>	1,800	--	--	--
	01/14/99	18.92	15.77	--	83 <sup>10</sup>	ND	ND	ND	ND	230	--	--	--	
	07/15/99	17.84	16.85	--	110	ND	ND	ND	1.0	290	--	--	--	
	<b>01/07/00</b>	<b>19.13</b>	<b>15.56</b>	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>260</b>	--	--	--	
MW-2	06/05/91	--	--	--	49	ND	ND	ND	ND	--	--	--	--	
	09/30/91	--	--	--	130	18	0.53	14	9.6	--	--	--	--	
	12/30/91	--	--	--	91	16	0.89	11	1.9	--	--	--	--	
	04/02/92	--	--	--	88	12	0.32	6.3	7.2	--	--	--	--	

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #0752  
800 Harrison Street  
Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	Chloro- form** (ppb)	PCE** (ppb)	TCE** (ppb)
MW-2	06/30/92	--	--	--	76	9.3	0.76	4.8	6.9	--	--	--	--
(cont)	09/15/92	--	--	--	1,300	91	5.7	80	110	--	--	--	--
34.97	12/21/92	20.85	14.12	--	960	97	3.2	74	96	--	--	--	--
	04/28/93	--	--	--	1,300	76	1.9	130	87	--	--	--	--
	07/23/93	19.81	15.16	--	66	1.8	ND	2.5	2.0	--	--	--	--
34.72	10/05/93	19.95	14.77	--	120	12	ND	2.1	12	--	--	--	--
	01/03/94	20.21	14.51	--	260	25	ND	5.5	26	--	--	--	--
	04/02/94	19.88	14.84	--	ND	0.65	ND	ND	0.99	--	--	--	--
	07/05/94	19.07	15.65	--	160	16	ND	0.73	10	--	--	--	--
	10/06/94	20.55	14.17	--	170	15	ND	1.4	11	--	--	--	--
	01/02/95	19.25	15.47	--	190	27	ND	0.95	11	--	--	--	--
	04/03/95	17.49	17.23	--	2,400	65	6.6	19	63	--	--	--	--
	07/14/95	18.30	16.42	--	750	270	ND	ND	13	--	--	--	--
	10/10/95	19.25	15.47	--	50	1.6	ND	ND	ND	200	--	--	--
	01/03/96	19.40	15.32	--	ND	ND	ND	ND	ND	--	--	--	--
	04/10/96	17.35	17.37	--	300	42	ND	2.4	9.0	620	--	--	--
	07/09/96	18.22	16.50	--	760	230	ND	1.3	2.4	1,500	--	--	--
	01/24/97	17.59	17.13	--	2,900	400	350	190	720	1,300	--	--	--
	07/23/97	19.13	15.59	--	ND	ND	ND	ND	ND	65	--	--	--
NP	01/26/98	17.12	17.60	--	ND	ND	ND	ND	0.58	13	--	--	--
NP	07/03/98	18.20	16.52	--	140	26	ND	0.95	5.0	330	--	--	--
	01/14/99	18.56	16.16	--	ND	0.54	ND	ND	ND	350	--	--	--
	07/15/99	17.39	17.33	--	ND	0.88	ND	ND	ND	39	--	--	--
	<b>01/07/00</b>	<b>18.78</b>	<b>15.94</b>	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>24</b>	--	--	--
MW-3	06/05/91	--	--	--	5,800	1,200	40	140	97	--	--	--	--
	09/30/91	--	--	--	6,800	1,400	130	290	240	--	--	--	--
	12/30/91	--	--	--	7,200	2,100	690	410	550	--	--	--	--
	04/02/92	--	--	--	8,000	1,400	200	300	310	--	--	--	--
	06/30/92	--	--	--	8,900	1,900	210	430	550	--	--	--	--
	09/15/92	--	--	--	10,000	1,900	330	400	580	--	--	--	--
33.39	12/21/92	20.02	13.37	--	8,500	1,500	150	310	330	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #0752  
800 Harrison Street  
Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	Chloro- form** (ppb)	PCE** (ppb)	TCE** (ppb)
MW-3	04/28/93	--	--	--	2,600	220	7.6	41	27	--	--	--	--
(cont)	07/23/93	19.00	14.39	--	4,400	660	26	160	82	--	--	--	--
33.14	10/05/93	19.20	13.94	--	9,200	720	88	140	140	--	--	--	--
	01/03/94	19.40	13.74	--	4,900	830	100	170	150	--	--	--	--
	04/02/94	19.01	14.13	--	6,000	800	30	140	110	--	--	--	--
	07/05/94	18.14	15.00	--	25,000 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
	10/06/94	19.73	13.41	--	49,000 <sup>4</sup>	1,300	200	280	300	--	--	--	--
	01/02/95	18.36	14.78	--	480	1.6	ND	1.4	ND	--	--	--	--
	04/03/95	16.38	16.76	--	8,100 <sup>5</sup>	65	ND	ND	ND	--	--	--	--
	07/14/95	17.49	15.65	--	ND	1,300	ND	ND	ND	--	--	--	--
	10/10/95	18.50	14.64	--	3,100	1,400	36	50	53	190,000	--	--	--
	01/03/96 <sup>7</sup>	18.54	14.60	--	ND	2,300	110	150	140	--	--	--	--
	04/10/96	16.40	16.74	--	940	38	33	39	47	69,000	--	--	--
	07/09/96	17.43	15.71	--	ND	2,000	ND	150	160	140,000	--	--	--
	01/24/97	16.57	16.57	--	540	8.0	ND	11	9.9	45	--	--	--
	07/23/97	18.38	14.76	--	7,400	1,900	180	140	340	45,000	--	--	--
NP	01/26/98	16.22	16.92	--	250	2.2	1.9	0.87	1.9	4.0	--	--	--
NP	07/03/98	17.46	15.68	--	230	1.8	2.5	1.5	3.4	6.3	--	--	--
	01/14/99	17.73	15.41	--	400 <sup>10</sup>	8.2	2.7	0.90	5.9	140	--	--	--
	07/15/99	16.58	16.56	--	290 <sup>10</sup>	3.3	3.6	1.7	2.5	13	--	--	--
	<b>01/07/00</b>	<b>17.84</b>	<b>15.30</b>	--	<b>ND<sup>9</sup></b>	<b>890</b>	<b>91</b>	<b>100</b>	<b>480</b>	<b>20,000</b>	--	--	--
<b>MW-4</b>	10/19/92	--	--	--	480	0.51	2.1	2.8	6.8	--	--	--	--
33.12	12/21/92	19.73	13.39	--	220 <sup>4</sup>	ND	ND	0.97	0.74	--	--	--	--
	04/28/93	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	07/23/93	18.72	14.40	--	85 <sup>4</sup>	ND	ND	ND	ND	--	--	--	--
32.71	10/05/93	18.74	13.97	--	130 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
	01/03/94	18.93	13.78	--	210	ND	ND	0.76	1.6	240	9.0	1.0	ND
	04/02/94	18.53	14.18	--	89	ND	ND	ND	ND	--	--	--	--
	07/05/94	17.67	15.04	--	190 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
	10/06/94	19.25	13.46	--	170	0.85	ND	ND	0.74	--	--	--	--
	01/02/95	17.75	14.96	--	ND	ND	ND	ND	ND	--	--	--	--
	04/03/95	15.87	16.84	--	98 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
	07/14/95	17.01	15.70	--	ND	ND	ND	ND	ND	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #0752  
800 Harrison Street  
Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	Chloro- form** (ppb)	PCE** (ppb)	TCE** (ppb)
MW-4	10/10/95	18.03	14.68	--	ND	ND	ND	ND	ND	120	--	--	--
(cont)	01/03/96 <sup>7</sup>	18.05	14.66	--	ND	ND	ND	ND	ND	--	--	--	--
	04/10/96	16.00	16.71	--	ND	ND	ND	ND	ND	240	--	--	--
	07/09/96	16.96	15.75	--	ND	ND	ND	ND	ND	480	--	--	--
	01/24/97	16.04	16.67	--	ND	ND	ND	ND	ND	270	--	--	--
	07/23/97	17.87	14.84	--	ND	ND	ND	ND	ND	460	--	--	--
NP	01/26/98	16.05	16.66	--	ND	ND	ND	ND	ND	17	--	--	--
NP	07/03/98	16.95	15.76	--	ND	ND	ND	ND	ND	3.8	--	--	--
	01/14/99	17.34	15.37	--	ND	ND	ND	ND	ND	4,600	--	--	--
	07/15/99	16.36	16.35	--	ND	ND	ND	ND	ND	ND	--	--	--
	<b>01/07/00</b>	<b>17.81</b>	<b>14.90</b>	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>450</b>	--	--	--
MW-5	10/19/92	--	--	--	2,700	61	5.0	100	61	--	--	--	--
33.25	12/21/92	19.75	13.50	--	1,700	51	4.7	83	34	--	--	--	--
	04/28/93	--	--	--	6,700	200	190	250	430	--	--	--	--
	07/23/93	18.74	14.51	--	2,000	122	8.0	68	47	--	--	--	--
32.95	10/05/93	18.83	14.12	--	1,700	70	6.2	54	40	--	--	--	--
	01/03/94	19.05	13.90	--	1,500	44	ND	42	46	--	--	--	--
	04/02/94	18.68	14.27	--	1,800	46	5.1	38	35	--	--	--	--
	07/05/94	17.90	15.05	--	2,200	97	8.4	37	36	--	--	--	--
	10/06/94	19.37	13.58	--	1,600	79	5.7	28	22	--	--	--	--
	01/02/95	17.92	15.03	--	1,700	50	8.6	30	28	--	--	--	--
	04/03/95	16.15	16.80	--	5,400 <sup>5</sup>	190	240	170	420	--	--	--	--
	07/14/95	17.18	15.77	--	3,800	210	100	130	190	--	--	--	--
	10/10/95	18.15	14.80	--	1,300	92	14	15	39	1,100	--	--	--
	01/03/96 <sup>7</sup>	18.20	14.75	--	630	53	4.4	8.3	13	--	--	--	--
	04/10/96	16.05	16.90	--	500	25	18	7.0	20	640	--	--	--
	07/09/96	17.11	15.84	--	1,000	44	20	10	34	150	--	--	--
	01/24/97	16.36	16.59	--	4,000	190	400	160	430	600	--	--	--
	07/23/97	18.08	14.87	--	1,700	200	23	18	45	2,500	--	--	--
NP	01/26/98	16.27	16.68	--	ND	ND	ND	ND	ND	ND	--	--	--
NP	07/03/98	17.27	15.68	--	ND	ND	ND	ND	ND	ND	--	--	--



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Tosco (Unocal) Service Station #0752  
800 Harrison Street  
Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	Chloro- form** (ppb)	PCE** (ppb)	TCE** (ppb)
MW-5	01/14/99	17.55	15.40	--	330	61	4.1	2.2	2.9	560	--	--	--
(cont)	07/15/99	16.41	16.54	--	1,100	170	ND <sup>9</sup>	ND <sup>9</sup>	27	660	--	--	--
	<b>01/07/00</b>	<b>17.85</b>	<b>15.10</b>	--	<b>1,000<sup>11</sup></b>	<b>180</b>	<b>6.3</b>	<b>ND<sup>9</sup></b>	<b>14</b>	<b>430</b>	--	--	--
<b>MW-6</b>	10/19/92	--	--	--	3,900	420	12	60	28	--	--	--	--
32.42	12/21/92	19.17	13.25	--	2,300	370	11	39	15	--	--	--	--
	04/28/93	--	--	--	1,200	54	1.5	11	5.3	--	--	--	--
	07/23/93	18.17	14.25	--	580	19	0.99	3.4	2.7	--	--	--	--
32.16	10/05/93	18.35	13.81	--	1,400	34	ND	5.3	7.3	--	--	--	--
	01/03/94	18.54	13.62	--	1,400	57	ND	8.5	11	--	--	--	--
	04/02/94	18.15	14.01	--	5,300 <sup>4</sup>	ND	ND	ND	ND	--	--	--	--
	07/05/94	17.25	14.91	--	ND	ND	ND	ND	ND	--	--	--	--
	10/06/94	18.85	13.31	--	11,000 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
	01/02/95	17.51	14.65	--	550	18	0.92	2.0	1.8	--	--	--	--
	04/03/95	15.48	16.68	--	6,600 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
	07/14/95	16.63	15.53	--	ND	ND	ND	ND	ND	--	--	--	--
	10/10/95	17.68	14.48	--	ND	81	ND	ND	ND	75,000	--	--	--
	01/03/96 <sup>7</sup>	17.66	14.50	--	70	9.9	0.58	ND	0.81	--	--	--	--
	04/10/96	15.56	16.60	--	300	25	4.7	0.94	2.7	53,000	--	--	--
	07/09/96	16.59	15.57	--	1,800	410	ND	12	ND	76,000	--	--	--
	01/24/97	15.69	16.47	--	ND	0.80	ND	ND	ND	390	--	--	--
	07/23/97	17.53	14.63	--	5,700	1,100	240	240	700	16,000	--	--	--
NP	01/26/98	15.44	16.72	--	ND	ND	ND	ND	ND	ND	--	--	--
NP	07/03/98	16.58	15.58	--	ND	ND	ND	ND	ND	ND	--	--	--
	01/14/99	17.02	15.14	--	ND	ND	ND	ND	ND	14	--	--	--
	07/15/99	15.95	16.21	--	ND	ND	ND	ND	ND	2.8	--	--	--
	<b>01/07/00</b>	<b>16.96</b>	<b>15.20</b>	--	<b>78<sup>11</sup></b>	<b>24</b>	<b>ND</b>	<b>0.66</b>	<b>17</b>	<b>280</b>	--	--	--
<b>MW-7</b>													
32.49	04/28/93	--	--	--	110	2.8	1.3	1.4	1.7	--	--	--	--
	07/23/93	18.60	13.89	--	790	23	3.3	28	5.4	--	--	--	--
32.20	10/05/93	18.76	13.44	--	360	10	1.2	0.91	0.99	--	--	--	--
	01/03/94	18.91	13.29	--	ND	0.93	ND	0.75	1.9	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	Chloro- form** (ppb)	PCE** (ppb)	TCE** (ppb)
MW-7	04/02/94	18.50	13.70	--	360	2.0	ND	ND	0.8	--	--	--	--
(cont)	07/05/94	17.52	14.68	--	ND	ND	ND	ND	ND	--	--	--	--
	10/06/94	19.25	12.95	--	340	5.6	0.85	ND	1.2	--	--	--	--
	01/02/95	17.67	14.53	--	ND	ND	ND	ND	ND	--	--	--	--
	04/03/95	15.81	16.39	--	570	24	ND	3.4	5.8	--	--	--	--
	07/14/95	17.05	15.15	--	ND	14	ND	ND	ND	--	--	--	--
	10/10/95	18.08	14.12	--	740	170	ND	ND	ND	13,000	--	--	--
	01/03/96 <sup>7</sup>	18.02	14.18	--	360	16	1.3	2.7	1.4	--	--	--	--
	04/10/96	15.81	16.39	--	120	4.1	1.5	ND	0.88	3,200	--	--	--
	07/09/96	16.99	15.21	--	ND	ND	ND	ND	ND	3,400	--	--	--
	01/24/97	16.08	16.12	--	ND	16	ND	ND	ND	6,600	--	--	--
	07/23/97	17.99	14.21	--	ND	1.5	ND	ND	0.62	10,000	--	--	--
NP	01/26/98	15.56	16.64	--	ND	ND	ND	ND	0.56	ND	--	--	--
NP	07/03/98	17.04	15.16	--	ND	ND	ND	ND	ND	ND	--	--	--
	01/14/99	INACCESSIBLE (PARKED CAR)		--	--	--	--	--	--	--	--	--	--
	07/15/99	15.72	16.48	--	ND	ND	ND	ND	ND	290	--	--	--
	<b>01/07/00</b>	<b>16.80</b>	<b>15.40</b>	--	<b>ND</b>	<b>7.7</b>	<b>ND</b>	<b>ND</b>	<b>4.4</b>	<b>98</b>	--	--	--
<b>MW-8</b>													
32.33	04/28/93	--	--	--	450	18	1.8	1.8	1.4	--	--	--	--
	07/23/93	18.45	13.88	--	260	5.1	ND	0.6	ND	--	--	--	--
32.00	10/05/93	18.57	13.43	--	120 <sup>5</sup>	1.7	ND	ND	ND	--	--	--	--
	01/03/94 <sup>1</sup>	18.73	13.27	--	ND	ND	ND	ND	ND	51	1.5	1.2	ND
	04/02/94	18.30	13.70	--	150	1.2	ND	ND	ND	--	--	--	--
	07/05/94	17.41	14.59	--	730	17	ND	1.6	ND	--	--	--	--
	10/06/94	18.98	13.02	--	140 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
	01/02/95	17.58	14.42	--	440	18	0.72	2.0	1.8	--	--	--	--
	04/03/95	15.54	16.46	--	960	11	ND	ND	ND	--	--	--	--
	07/14/95	16.81	15.19	--	280	4.2	2.6	1.1	3.3	--	--	--	--
	10/10/95	17.85	14.15	--	110	1.3	0.62	0.67	ND	170	--	--	--
	01/03/96 <sup>7</sup>	17.82	14.18	--	63	ND	0.51	ND	1.8	--	--	--	--
	04/10/96	15.70	16.30	--	ND	1.1	0.61	ND	ND	60	--	--	--
	07/09/96	16.78	15.22	--	72	1.0	ND	ND	ND	140	--	--	--
	01/24/97	15.79	16.21	--	ND	ND	ND	ND	ND	76	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	Chloro- form** (ppb)	PCE** (ppb)	TCE** (ppb)
MW-8	07/23/97	17.69	14.31	--	ND	ND	ND	ND	ND	270	--	--	--
(cont) NP	01/26/98	15.50	16.50	--	ND	ND	ND	ND	0.76	2.9	--	--	--
NP	07/03/98	16.80	15.20	--	ND	ND	ND	ND	ND	ND	--	--	--
	01/14/99	17.13	14.87	--	ND	ND	ND	ND	ND	11	--	--	--
	07/15/99	15.85	16.15	--	ND	ND	ND	ND	ND	ND	--	--	--
	<b>01/07/00</b>	<b>16.94</b>	<b>15.06</b>	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>11</b>	--	--	--
<b>Trip Blank</b>													
TB-LB	01/26/98	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/03/98	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--
	01/14/99	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/15/99	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--
	<b>01/07/00</b>	--	--	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to January 26, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing elevation	B = Benzene	PCE = Tetrachloroethene
DTW = Depth to Water	T = Toluene	TCE = Trichloroethene
(ft.) = Feet	E = Ethylbenzene	ppb = Parts per billion
GWE = Groundwater Elevation	X = Xylenes	ND = Not Detected
msl = Relative to mean sea level	MTBE = Methyl tertiary butyl ether	-- = Not Measured/Not Analyzed
TPH(D) = Total Petroleum Hydrocarbons as Diesel		NP = No Purge
TPH(G) = Total Petroleum Hydrocarbons as Gasoline		

\* TOC elevations are relative to mean sea level (msl), per the City of Oakland benchmark disk stamped "25/A" at the northeast corner of 7th and Harrison (Elevation = 28.81 feet msl). Prior to October 5, 1993, the DTW measurements were taken from the top of well covers.

\*\* All EPA Method 8010 constituents were ND, except as indicated above.

- 1 1,2-dichloroethane (1,2-DCA) was detected in MW-8 at a concentration of 4.0 ppb on 01/03/94, and 1.1 ppb in MW-1 on 04/28/93.
- 2 Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- 3 Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- 4 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 5 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- 6 A fuel fingerprint analysis was conducted on this sample. Laboratory report indicates total extractable petroleum hydrocarbons in this sample were not detected in high enough concentrations to compare with known standards and approximate their makeup.
- 7 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.
- 8 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C8.
- 9 Detection limit raised. Refer to analytical reports.
- 10 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- 11 Laboratory report indicates gasoline C6-C12.

**Table 2**  
**Groundwater Analytical Results**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

Well ID	Date	TOG (ppm)	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)	Nickel (ppm)	Zinc (ppm)
MW-1	06/05/91	ND	ND	0.0083	0.011	0.063	0.023
	09/30/91	ND	ND	0.019	ND	ND	0.11
	12/30/91	ND	ND	0.0078	0.0057	ND	0.046
	04/02/92	ND	ND	0.015	0.016	ND	0.02
	06/30/92	ND	ND	0.079	0.009	0.1	0.087

**EXPLANATIONS:**

Groundwater analytical results were compiled from reports prepared by MPDS Services, Inc.

TOG = Total Oil and Grease

ppm = Parts per million

ND = Not Detected

**Table 3**  
**Groundwater Analytical Results**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

Well ID	Date	Bicarbonate							Heterotrophic Plate Count (CFU/mL)
		BOD (ppm)	Alkalinity (ppm)	Calcium (ppm)	Iron (ppm)	Manganese (ppm)	Nitrate (ppm)	Sulfate (ppm)	
MW-1	04/10/96	--	160	21	15	2.6	--	--	--
MW-2	01/03/96	2.2	130	27	77	3.0	0.22	97	> 5,700
	04/10/96	--	460	58	60	7.0	--	--	--
MW-3	01/03/96	4.3	430	43	61	5.4	0.23	16	350
	04/10/96	--	360	40	60	3.7	--	--	--
MW-4	01/03/96	ND	120	20	61	3.3	10	44	1,000
	04/10/96	--	160	25	43	2.0	--	--	--
MW-5	01/03/96	3.4	240	31	80	3.3	ND	17	> 5,700
	04/10/96	--	240	22	18	2.4	--	--	--
MW-6	04/10/96	--	240	35	61	3.7	--	--	--
MW-7	04/10/96	--	210	44	120	4.8	--	--	--
MW-8	01/03/96	ND	310	37	62	3.3	0.57	20	> 5,700
	04/10/96	--	380	37	63	3.6	--	--	--

**EXPLANATIONS:**

Groundwater analytical results were compiled from reports prepared by MPDS Services, Inc.

BOD = Biochemical Oxygen Demand

-- = Not Analyzed

ppm = Parts per million

ND = Not Detected

CFU/mL = Colony Forming Units per milliliter

**Table 4**  
**Dissolved Oxygen Concentrations**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

Well ID	Date	Before Purging (mg/L)	After Purging (mg/L)
MW-1	04/10/96	--	3.04
	07/09/96	--	3.13
	01/24/97	--	2.56
	07/23/97	2.26	2.81
	01/26/98	3.97	--
	07/03/98	3.58	--
MW-2	01/03/96		1.80
	04/10/96	--	5.88
	07/09/96	--	0.71
	01/24/97	--	2.37
	07/23/97	1.40	0.97
	01/26/98	4.12	--
	07/03/98	3.99	--
MW-3	01/03/96		1.50
	04/10/96	--	4.63
	07/09/96	--	1.04
	01/24/97	--	1.46
	07/23/97	3.84	1.37
	01/26/98	1.84	--
	07/03/98	2.16	--
MW-4	01/03/96		1.20
	04/10/96	--	5.23
	07/09/96	--	4.91
	01/24/97	--	3.04
	07/23/97	9.28	3.68
	01/26/98	3.36	--
	07/03/98	4.07	--
MW-5	01/03/96		2.80
	04/10/96	--	3.73
	07/09/96	--	3.25
	01/24/97	--	1.47
	07/23/97	7.96	4.56
	01/26/98	5.30	--
	07/03/98	4.73	--
MW-6	04/10/96		4.50
	07/09/96	--	3.62
	01/24/97	--	6.21
	07/23/97	10.90	3.31
	01/26/98	2.55	--
	07/03/98	3.11	--

**Table 4**  
**Dissolved Oxygen Concentrations**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

Well ID	Date	Before Purging (mg/L)	After Purging (mg/L)
MW-7	04/10/96	--	5.10
	07/09/96	--	2.34
	01/24/97	--	1.91
	07/23/97	3.25	2.83
	01/26/98	3.44	--
	07/03/98	3.83	--
MW-8	01/03/96	--	1.30
	04/10/96	--	4.80
	07/09/96	--	1.32
	01/24/97	--	2.09
	07/23/97	4.08	3.27
	01/26/98	4.71	--
	07/03/98	5.16	--

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**EXPLANATIONS:**

Dissolved oxygen concentrations prior to January 26, 1998, were compiled from reports prepared by MPDS Services, Inc.

mg/L = milligrams per liter

-- = Not Measured

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



## 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 a MMC flexi-dip 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.

FIELD DATA SHEET

Client/ Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID MW-1 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 33.50 ft.  
 Depth to Water 19.13 ft.

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

19.13 x VF 0.17 = 2.44 x 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

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

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

Starting Time: 10:10 Weather Conditions: cloudy  
 Sampling Time: 10:20 AM 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 °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:10</u>	<u>2.5</u>	<u>7.25</u>	<u>5.92</u>	<u>71.5</u>			
<u>10:12</u>	<u>5</u>	<u>7.26</u>	<u>5.90</u>	<u>71.6</u>			
<u>10:13</u>	<u>7.5</u>	<u>7.30</u>	<u>5.91</u>	<u>71.4</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE /	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3 Vol A</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/bTEX/mtbe</u>

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

FIELD DATA SHEET

Client/ Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID MW-2 Well Condition: O.K.  
 Well Diameter 2 in. Hydrocarbon Amount Bailed  
 Thickness: 0 (feet) (product/water): 0 (Gallons)  
 Total Depth 30.35 ft.  
 Depth to Water 18.78 ft.

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

11.57 X VF 0.17 = 1.97 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

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

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

Starting Time: 9:37 Weather Conditions: cloudy  
 Sampling Time: 9:53 AM 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 °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:43</u>	<u>2</u>	<u>7.37</u>	<u>4.66</u>	<u>71.0</u>			
<u>9:44</u>	<u>4</u>	<u>7.30</u>	<u>4.49</u>	<u>70.7</u>			
<u>9:46</u>	<u>6</u>	<u>7.24</u>	<u>4.51</u>	<u>70.2</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3 vials</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/bTEX/mtbe</u>

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

FIELD DATA SHEET

Client/  
 Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID MW-3 Well Condition: O.K.  
 Well Diameter 2 in. Hydrocarbon Amount Bailed  
 Thickness: 0 (feet) (product/water): 0 (Gallons)  
 Total Depth 30.50 ft.  
 Depth to Water 17.84 ft.

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

12.66 X VF 0.17 = 2.15 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

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

Starting Time: 10:25 Weather Conditions: cloudy  
 Sampling Time: 10:40 A.M. Water Color: clear Odor: some  
 Purging Flow Rate: 1 gpm. Sediment Description: none  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:30</u>	<u>2</u>	<u>7.10</u>	<u>3.11</u>	<u>72.8</u>			
<u>10:32</u>	<u>4</u>	<u>7.14</u>	<u>3.14</u>	<u>72.0</u>			
<u>10:33</u>	<u>6.5</u>	<u>7.14</u>	<u>3.18</u>	<u>71.7</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>

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

FIELD DATA SHEET

Client/  
 Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID MW-4 Well Condition: O.K.

Well Diameter 2 in.

Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 32.30 ft.

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

Depth to Water 17.81 ft.

14.49 X VF 0.17 = 2.46 X 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

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

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

Starting Time: 8:0 Weather Conditions: cloudy  
 Sampling Time: 8:18 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 °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:07</u>	<u>0.5</u>	<u>7.54</u>	<u>5.19</u>	<u>73.0</u>			
<u>8:09</u>	<u>5</u>	<u>7.38</u>	<u>5.30</u>	<u>72.7</u>			
<u>8:11</u>	<u>7.5</u>	<u>7.39</u>	<u>5.37</u>	<u>72.4</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>

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

FIELD DATA SHEET

Client/ Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID: MW-5 Well Condition: O.K.  
 Well Diameter: 2 in. Hydrocarbon Amount Bailed  
 Thickness: 0 (feet) (product/water): 0 (Gallons)  
 Total Depth: 31.65 ft.  
 Depth to Water: 17.85 ft.

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

13.8 x VF 0.17 = 2.35 x 3 (case volume) = Estimated Purge Volume: 7 (gal.)

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

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

Starting Time: 10:50 Weather Conditions: cloudy  
 Sampling Time: 11:10 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 (µmhos/cm) x 10 <sup>2</sup>	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:57</u>	<u>2.5</u>	<u>7.70</u>	<u>7.35</u>	<u>71.9</u>			
<u>10:59</u>	<u>5</u>	<u>7.50</u>	<u>7.38</u>	<u>72.4</u>			
<u>11:02</u>	<u>7</u>	<u>7.46</u>	<u>7.41</u>	<u>72.2</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3 vol</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>

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

FIELD DATA SHEET

Client/Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID MW-6 Well Condition: O.K.  
 Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)  
 Total Depth 30.90 ft.  
 Depth to Water 16.96 ft.

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

13.94 x VF 0.17 = 2.37 x 3 (case volume) = Estimated Purge Volume: 7 (gal.)

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

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

Starting Time: 8:30 Weather Conditions: cloudy  
 Sampling Time: 8:55 AM 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 $\mu\text{mhos/cm} \times 10^2$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:40</u>	<u>2.5</u>	<u>7.79</u>	<u>5.22</u>	<u>71.0</u>			
<u>8:42</u>	<u>5</u>	<u>7.37</u>	<u>5.32</u>	<u>70.8</u>			
<u>8:44</u>	<u>7</u>	<u>7.42</u>	<u>5.34</u>	<u>71.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btox/mtbe</u>

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

FIELD DATA SHEET

Client/ Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID MW-7

Well Condition: O.K.

Well Diameter 2 in.

Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 31.50 ft.

Depth to Water 16.80 ft.

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

14.70 X VF 0.17 = 2.49 X 3 (case volume) = Estimated Purge Volume: 7.5 (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: cloudy

Sampling Time: 9:30 AM

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 $\mu\text{hos/cm} \times 10^3$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:18</u>	<u>3</u>	<u>7.51</u>	<u>6.19</u>	<u>71.0</u>			
<u>9:20</u>	<u>5</u>	<u>7.42</u>	<u>6.27</u>	<u>72.0</u>			
<u>9:21</u>	<u>9.5</u>	<u>7.36</u>	<u>6.27</u>	<u>72.5</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/bTEX/mtbe</u>

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



FIELD DATA SHEET

Client/Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 1-7-00  
 City: Oakland Sampler: Joc

Well ID MW-8 Well Condition: O.K.  
 Well Diameter 2 in. Hydrocarbon Amount Bailed  
 Thickness: 0 (feet) (product/water): 0 (Gallons)  
 Total Depth 27.85 ft.  
 Depth to Water 16.94 ft.

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

10.91 x VF 0.17 = 1.85 x 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

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

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

Starting Time: 7:26 Weather Conditions: cloudy  
 Sampling Time: 7:45 AM 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 °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>7:30</u>	<u>1.5</u>	<u>7.50</u>	<u>7.44</u>	<u>71.8</u>			
<u>7:32</u>	<u>3</u>	<u>7.41</u>	<u>7.40</u>	<u>70.2</u>			
<u>7:34</u>	<u>5.5</u>	<u>7.38</u>	<u>7.38</u>	<u>70.7</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>

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





# Sequoia Analytical

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

24 January, 2000

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

RE: Unocal

Enclosed are the results of analyses for samples received by the laboratory on 11-Jan-00 10:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alan B. Kemp  
Laboratory Director





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

Project: Unocal  
Project Number: Unocal # 0752  
Project Manager: Deanna L. Harding


Reported:  
24-Jan-00 08:42

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W001154-01	Water	07-Jan-00 00:00	11-Jan-00 10:35
MW-1	W001154-02	Water	07-Jan-00 10:20	11-Jan-00 10:35
MW-2	W001154-03	Water	07-Jan-00 09:53	11-Jan-00 10:35
MW-3	W001154-04	Water	07-Jan-00 10:40	11-Jan-00 10:35
MW-4	W001154-05	Water	07-Jan-00 08:18	11-Jan-00 10:35
MW-5	W001154-06	Water	07-Jan-00 11:10	11-Jan-00 10:35
MW-6	W001154-07	Water	07-Jan-00 08:55	11-Jan-00 10:35
MW-7	W001154-08	Water	07-Jan-00 09:30	11-Jan-00 10:35
MW-8	W001154-09	Water	07-Jan-00 07:45	11-Jan-00 10:35

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.*

  
Alan B. Kemp, Laboratory Director





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

Project: Unocal  
Project Number: Unocal # 0752  
Project Manager: Deanna L. Harding

Reported:  
24-Jan-00 08:42

**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 (W001154-01) Water</b> Sampled: 07-Jan-00 00:00    Received: 11-Jan-00 10:35									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A18002	18-Jan-00	18-Jan-00	EPA	
Benzene	ND	0.50	"	"	"	"	"	8015M/8020	
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>		109 %	70-130	"	"	"	"	"	
<b>MW-1 (W001154-02) Water</b> Sampled: 07-Jan-00 10:20    Received: 11-Jan-00 10:35									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A18002	18-Jan-00	18-Jan-00	EPA	
Benzene	ND	0.50	"	"	"	"	"	8015M/8020	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	260	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		114 %	70-130	"	"	"	"	"	
<b>MW-2 (W001154-03) Water</b> Sampled: 07-Jan-00 09:53    Received: 11-Jan-00 10:35									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A18002	18-Jan-00	18-Jan-00	EPA	
Benzene	ND	0.50	"	"	"	"	"	8015M/8020	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	24	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		111 %	70-130	"	"	"	"	"	





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

Project: Unocal  
Project Number: Unocal # 0752  
Project Manager: Deanna L. Harding

Reported:  
24-Jan-00 08:42

**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>MW-3 (W001154-04) Water</b> Sampled: 07-Jan-00 10:40 Received: 11-Jan-00 10:35									
Purgeable Hydrocarbons	ND	5000	ug/l	100	0A18002	18-Jan-00	18-Jan-00	EPA	
Benzene	890	50	"	"	"	"	"	8015M/8020	
Toluene	91	50	"	"	"	"	"	"	
Ethylbenzene	100	50	"	"	"	"	"	"	
Xylenes (total)	480	50	"	"	"	"	"	"	
Methyl tert-butyl ether	20000	250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		106 %	70-130		"	"	"	"	
<b>MW-4 (W001154-05) Water</b> Sampled: 07-Jan-00 08:18 Received: 11-Jan-00 10:35									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A18001	18-Jan-00	18-Jan-00	EPA	
Benzene	ND	0.50	"	"	"	"	"	8015M/8020	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	450	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.7 %	70-130		"	"	"	"	
<b>MW-5 (W001154-06) Water</b> Sampled: 07-Jan-00 11:10 Received: 11-Jan-00 10:35 <span style="float: right;">P-01</span>									
Purgeable Hydrocarbons	1000	500	ug/l	10	0A19001	19-Jan-00	19-Jan-00	EPA	
Benzene	180	5.0	"	"	"	"	"	8015M/8020	
Toluene	6.3	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	14	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	430	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		114 %	70-130		"	"	"	"	

Sequoia Analytical - Walnut Creek

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Alan B. Kemp, Laboratory Director





Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568	Project: Unocal Project Number: Unocal # 0752 Project Manager: Deanna L. Harding	Reported: 24-Jan-00 08:42
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**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>MW-6 (W001154-07) Water</b> Sampled: 07-Jan-00 08:55 Received: 11-Jan-00 10:35									<b>P-01</b>
Purgeable Hydrocarbons	78	50	ug/l	1	0A18001	18-Jan-00	18-Jan-00	EPA	
Benzene	24	0.50	"	"	"	"	"	8015M/8020	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	0.66	0.50	"	"	"	"	"	"	
Xylenes (total)	17	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	280	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %	70-130	"	"	"	"	"	
<b>MW-7 (W001154-08) Water</b> Sampled: 07-Jan-00 09:30 Received: 11-Jan-00 10:35									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A18001	18-Jan-00	18-Jan-00	EPA	
Benzene	7.7	0.50	"	"	"	"	"	8015M/8020	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	4.4	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	98	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %	70-130	"	"	"	"	"	
<b>MW-8 (W001154-09) Water</b> Sampled: 07-Jan-00 07:45 Received: 11-Jan-00 10:35									
Purgeable Hydrocarbons	ND	50	ug/l	1	0A18001	18-Jan-00	18-Jan-00	EPA	
Benzene	ND	0.50	"	"	"	"	"	8015M/8020	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	11	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		96.7 %	70-130	"	"	"	"	"	





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

Project: Unocal  
Project Number: Unocal # 0752  
Project Manager: Deanna L. Harding

Reported:  
24-Jan-00 08:42

## 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 0A18001: Prepared 18-Jan-00 Using EPA 5030B [P/T]

### Blank (0A18001-BLK1)

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	"							
Surrogate: <i>a,a,α-Trifluorotoluene</i>	29.7		"	30.0		99.0	70-130			

### LCS (0A18001-BS1)

Benzene	19.2	0.50	ug/l	20.0		96.0	70-130			
Toluene	19.5	0.50	"	20.0		97.5	70-130			
Ethylbenzene	17.6	0.50	"	20.0		88.0	70-130			
Xylenes (total)	62.7	0.50	"	60.0		105	70-130			
Surrogate: <i>a,a,α-Trifluorotoluene</i>	28.4		"	30.0		94.7	70-130			

### Matrix Spike (0A18001-MS1)

Source: W001216-05

Benzene	21.1	0.50	ug/l	20.0	ND	106	70-130			
Toluene	21.4	0.50	"	20.0	ND	107	70-130			
Ethylbenzene	20.3	0.50	"	20.0	ND	101	70-130			
Xylenes (total)	68.5	0.50	"	60.0	ND	114	70-130			
Surrogate: <i>a,a,α-Trifluorotoluene</i>	28.8		"	30.0		96.0	70-130			

### Matrix Spike Dup (0A18001-MSD1)

Source: W001216-05

Benzene	22.1	0.50	ug/l	20.0	ND	111	70-130	4.63	20	
Toluene	20.7	0.50	"	20.0	ND	104	70-130	3.33	20	
Ethylbenzene	19.8	0.50	"	20.0	ND	99.0	70-130	2.49	20	
Xylenes (total)	68.3	0.50	"	60.0	ND	114	70-130	0.292	20	
Surrogate: <i>a,a,α-Trifluorotoluene</i>	29.0		"	30.0		96.7	70-130			

Sequoia Analytical - Walnut Creek

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Alan B. Kemp, Laboratory Director







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

Project: Unocal  
Project Number: Unocal # 0752  
Project Manager: Deanna L. Harding

Reported:  
24-Jan-00 08:42

**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
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**Batch 0A18002: Prepared 18-Jan-00 Using EPA 5030B [P/T]**

**Blank (0A18002-BLK1)**

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>	34.3		"	30.0		114	70-130			

**LCS (0A18002-BS1)**

Benzene	22.8	0.50	ug/l	20.0		114	70-130			
Toluene	22.8	0.50	"	20.0		114	70-130			
Ethylbenzene	23.1	0.50	"	20.0		116	70-130			
Xylenes (total)	70.1	0.50	"	60.0		117	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	30.8		"	30.0		103	70-130			

**Matrix Spike (0A18002-MS1)**

Source: W001216-10

Benzene	24.4	0.50	ug/l	20.0	ND	122	70-130			
Toluene	22.9	0.50	"	20.0	ND	114	70-130			
Ethylbenzene	23.3	0.50	"	20.0	ND	116	70-130			
Xylenes (total)	68.2	0.50	"	60.0	ND	114	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	30.2		"	30.0		101	70-130			

**Matrix Spike Dup (0A18002-MSD1)**

Source: W001216-10

Benzene	23.3	0.50	ug/l	20.0	ND	116	70-130	4.61	20	
Toluene	22.9	0.50	"	20.0	ND	114	70-130	0	20	
Ethylbenzene	23.0	0.50	"	20.0	ND	115	70-130	1.30	20	
Xylenes (total)	69.0	0.50	"	60.0	ND	115	70-130	1.17	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	30.3		"	30.0		101	70-130			





Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568	Project: Unocal Project Number: Unocal # 0752 Project Manager: Deanna L. Harding	Reported: 24-Jan-00 08:42
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**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
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**Batch 0A19001: Prepared 19-Jan-00 Using EPA 5030B [P/T]**

**Blank (0A19001-BLK1)**

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>	32.9		"	30.0		110	70-130			

**LCS (0A19001-BS1)**

Benzene	19.9	0.50	ug/l	20.0		99.5	70-130			
Toluene	21.1	0.50	"	20.0		106	70-130			
Ethylbenzene	21.9	0.50	"	20.0		109	70-130			
Xylenes (total)	64.7	0.50	"	60.0		108	70-130			
<i>Surrogate: a, a, a-Trifluorotoluene</i>	29.9		"	30.0		99.7	70-130			

**Matrix Spike (0A19001-MS1)**

**Source: W001269-11**

Benzene	19.5	0.50	ug/l	20.0	ND	97.5	70-130			
Toluene	19.9	0.50	"	20.0	ND	99.5	70-130			
Ethylbenzene	19.1	0.50	"	20.0	ND	95.5	70-130			
Xylenes (total)	65.1	0.50	"	60.0	ND	108	70-130			
<i>Surrogate: a, a, a-Trifluorotoluene</i>	28.0		"	30.0		93.3	70-130			

**Matrix Spike Dup (0A19001-MSD1)**

**Source: W001269-11**

Benzene	19.2	0.50	ug/l	20.0	ND	96.0	70-130	1.55	20	
Toluene	19.7	0.50	"	20.0	ND	98.5	70-130	1.01	20	
Ethylbenzene	20.7	0.50	"	20.0	ND	104	70-130	8.04	20	
Xylenes (total)	63.4	0.50	"	60.0	ND	106	70-130	2.65	20	
<i>Surrogate: a, a, a-Trifluorotoluene</i>	27.9		"	30.0		93.0	70-130			

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.*

  
Alan B. Kemp, Laboratory Director





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

Project: Unocal  
Project Number: Unocal # 0752  
Project Manager: Deanna L. Harding

Reported:  
24-Jan-00 08:42

### Notes and Definitions

- P-01 Chromatogram Pattern: Gasoline C6-C12
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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Alan B. Kemp, Laboratory Director

