



# GETTLER-RYAN INC.

## TRANSMITTAL

December 7, 2001

G-R #180066

20231 BC

TO: Mr. David B. De Witt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94586

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

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

RE: **Tosco (Unocal) Service Station  
#0752  
800 Harrison Street  
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 30, 2001	Groundwater Monitoring and Sampling Report Fourth Quarter - Event of October 15, 2001

### COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by **December 21, 2001**, this report will be distributed to the following:

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

Enclosure

trans/0752-DBD



# GETTLER-RYAN INC.

November 30, 2001  
G-R Job #180066

Mr. David B. De Witt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94583

**RE: Fourth Quarter Event of October 15, 2001**  
Groundwater Monitoring & Sampling Report  
Tosco (Unocal) Service Station #0752  
800 Harrison Street  
Oakland, California

Dear Mr. De Witt:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. Dissolved Oxygen Concentrations are summarized in Table 5. 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, 3 and 4. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

- For -

Deanna L. Harding  
Project Coordinator

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

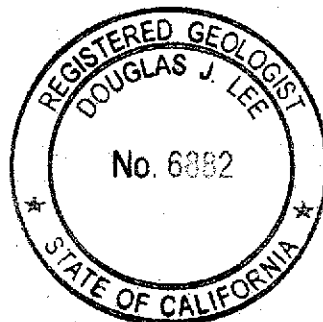
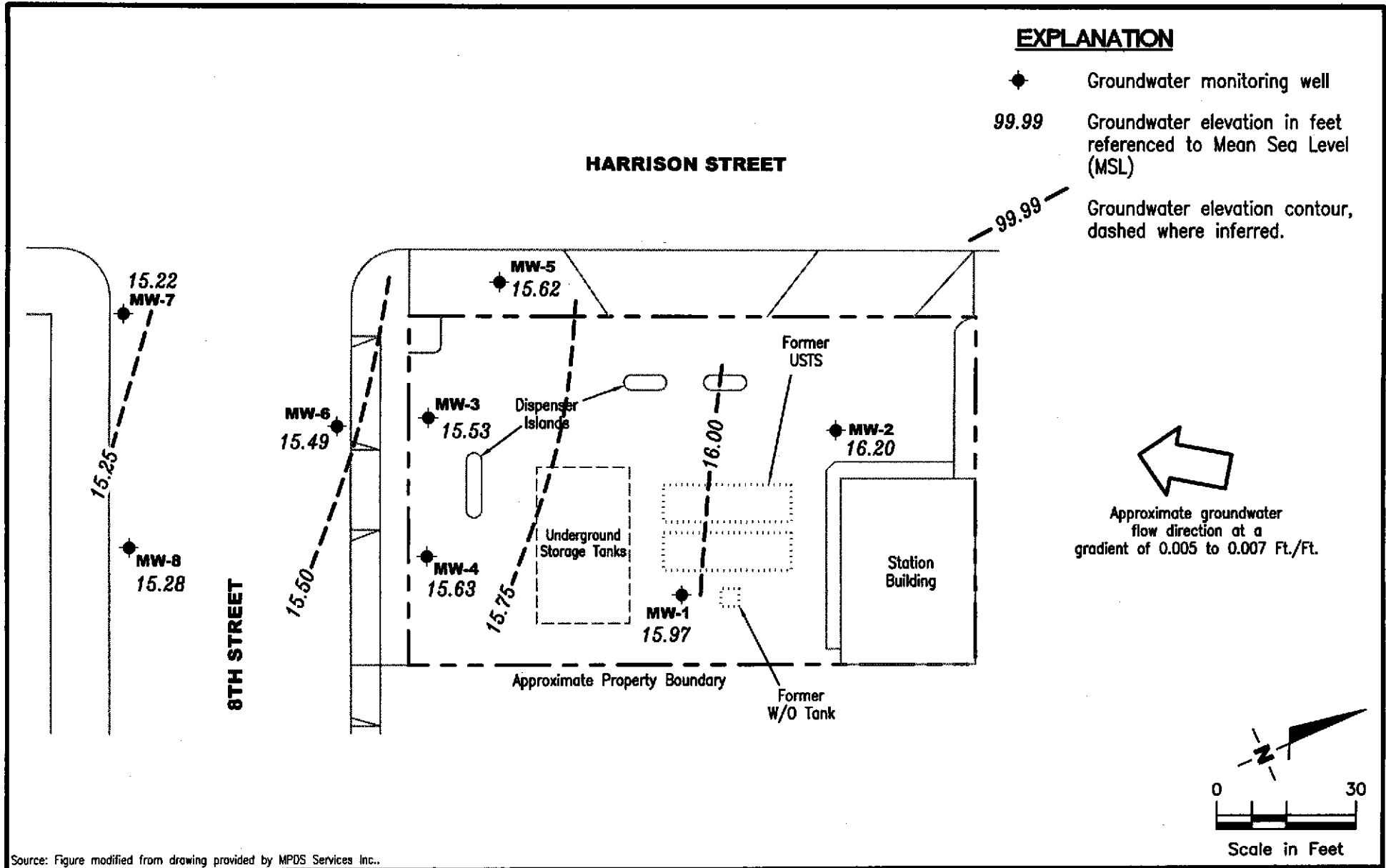


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Table 3: Groundwater Analytical Results  
Table 4: Groundwater Analytical Results  
Table 5: Dissolved Oxygen Concentrations  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports

0752.qml



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

**POTENTIOMETRIC MAP**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

FIGURE

1

PROJECT NUMBER  
 180066

REVIEWED BY

DATE  
 October 15, 2001

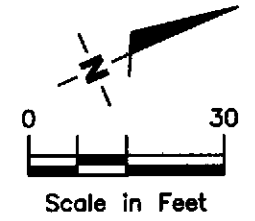
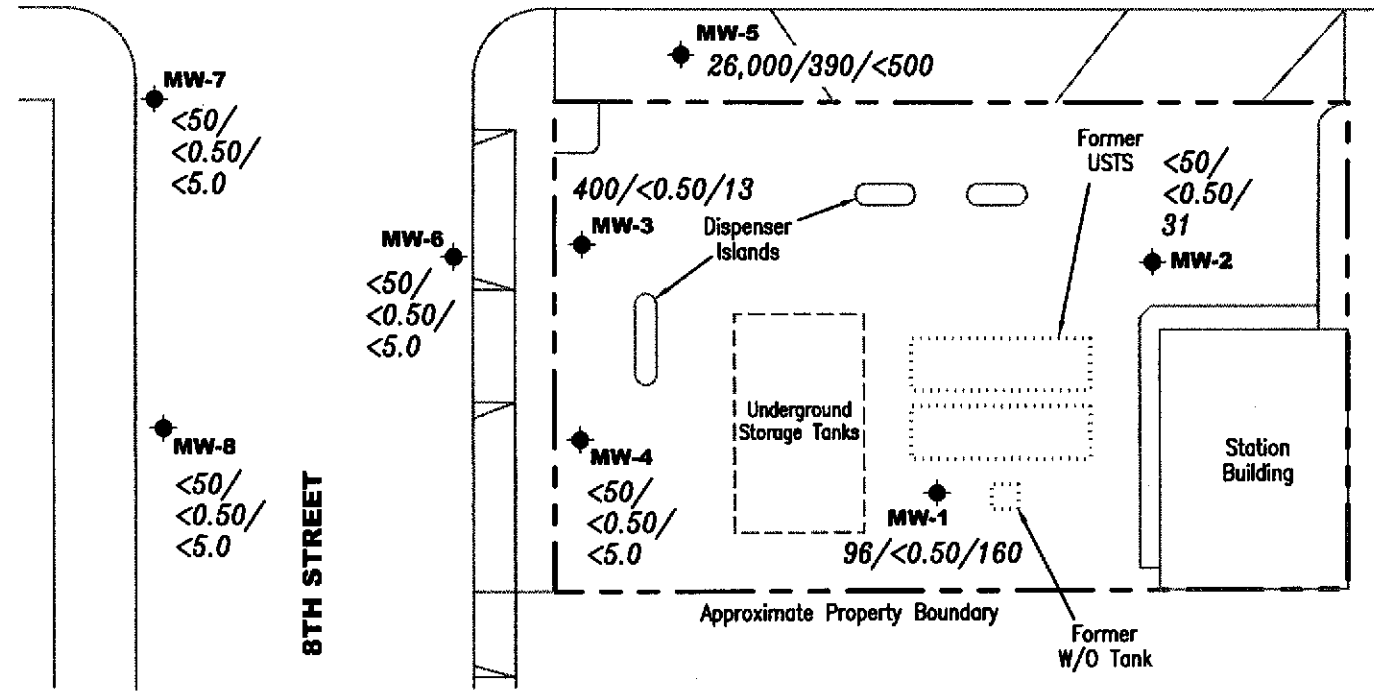
REVISED DATE

FILE NAME: P:\ENVIRO\TOSCO\0752\001-0752.DWG | Layout Tab: Pot4

**EXPLANATION**

- ◆ Groundwater monitoring well
- A/B/C TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/ Benzene/MTBE concentrations in ppb

**HARRISON STREET**



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

**GETTLER - RYAN INC.**  
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 Dublin, CA 94568 (925) 551-7555

**CONCENTRATION MAP**  
 Tosco (Unocal) Service Station #0752  
 800 Harrison Street  
 Oakland, California

FIGURE  
**2**

PROJECT NUMBER  
 180066

REVIEWED BY

DATE  
 October 15, 2001

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
	07/23/93	20.13	14.81	ND	ND	0.5	0.66	ND	ND	--	16	1.3	0.91
34.69	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	--	--	--
	01/07/00	19.13	15.56	--	ND	ND	ND	ND	ND	260	--	--	--
	07/19/00	20.27	14.42	--	ND	ND	ND	ND	ND	648	--	--	--

**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	01/02/01	20.04	14.65	--	ND	ND	ND	ND	ND	119	--	--	--
(cont)	05/23/01	18.27	16.42	--	84 <sup>12</sup>	ND	ND	ND	ND	760	--	--	--
	07/30/01	18.56	16.13	--	<50	<0.50	<0.50	<0.50	<0.50	350	--	--	--
	10/15/01	18.72	15.97	--	96 <sup>12</sup>	<0.50	<0.50	<0.50	<0.50	160	--	--	--
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	--	--	--	--
	06/30/92	--	--	--	76	9.3	0.76	4.8	6.9	--	--	--	--
	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	--	--	--

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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	NP	01/26/98	17.12	17.60	--	ND	ND	ND	ND	0.58	13	--	--
(cont)	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	--	--
		01/07/00	18.78	15.94	--	ND	ND	ND	ND	ND	24	--	--
		07/19/00	19.68	15.04	--	ND	1.45	ND	ND	ND	117	--	--
		01/02/01	19.73	14.99	--	ND	ND	ND	ND	ND	11.4	--	--
		05/23/01	18.16	16.56	--	ND	ND	ND	ND	ND	33	--	--
		07/30/01	18.34	16.38	--	<50	<0.50	<0.50	<0.50	<0.50	67	--	--
		10/15/01	18.52	16.20	--	<50	<0.50	<0.50	<0.50	<0.50	31	--	--
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	--	--	--
		04/28/93	--	--	--	2,600	220	7.6	41	27	--	--	--
		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	--	--	--

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MW-3	10/10/95	18.50	14.64	--	3,100	1,400	36	50	53	190,000	--	--	--
(cont)	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	--	--	--
	01/07/00	17.84	15.30	--	ND <sup>9</sup>	890	91	100	480	20,000	--	--	--
	07/19/00	18.92	14.22	--	354 <sup>12</sup>	3.87	2.61	0.646	ND	13.7	--	--	--
	01/02/01	19.07	14.07	--	464 <sup>12</sup>	ND	3.69	3.91	ND	21.1	--	--	--
	05/23/01	17.12	16.02	--	420 <sup>11</sup>	7.6	3.1	3.0	5.1	1,900	--	--	--
	07/30/01	17.38	15.76	--	290 <sup>12</sup>	4.6	4.1	<0.50	3.4	23	--	--	--
	10/15/01	17.61	15.53	--	400 <sup>12</sup>	<0.50	<0.50	<0.50	<0.50	13	--	--	--
MW-4	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	--	--	--	--



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
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 800 Harrison Street  
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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	07/14/95	17.01	15.70	--	ND	ND	ND	ND	ND	--	--	--	--
(cont)	10/10/95	18.03	14.68	--	ND	ND	ND	ND	ND	120	--	--	--
	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	--	--	--
	01/07/00	17.81	14.90	--	ND	ND	ND	ND	ND	450	--	--	--
	07/19/00	18.94	13.77	--	ND	ND	ND	ND	ND	ND	--	--	--
	01/02/01	18.85	13.86	--	ND	ND	ND	ND	ND	ND	--	--	--
	05/23/01	16.82	15.89	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/30/01	16.88	15.83	--	<50	<0.50	<0.50	<0.50	<0.50	4.9	--	--	--
	10/15/01	17.08	15.63	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--
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	--	--	--	--

**Table 1**  
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MW-5	04/03/95	16.15	16.80	--	5,400 <sup>5</sup>	190	240	170	420	--	--	--	--
(cont)	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	--	--	--
	01/14/99	17.55	15.40	--	330	61	4.1	2.2	2.9	560	--	--	--
	07/15/99	16.41	16.54	--	1,100	170	ND <sup>9</sup>	ND <sup>9</sup>	27	660	--	--	--
	01/07/00	17.85	15.10	--	1,000 <sup>11</sup>	180	6.3	ND <sup>9</sup>	14	430	--	--	--
	07/19/00	18.87	14.08	--	2,980 <sup>11</sup>	289	57.3	65.3	43.4	976	--	--	--
	10/03/00	18.47	14.48	--	--	--	--	--	--	--/553 <sup>13</sup>	--	--	--
	01/02/01	19.01	13.94	--	1,150 <sup>11</sup>	87.2	17.8	7.97	9.32	368	--	--	--
	05/23/01	17.38	15.57	--	840 <sup>11</sup>	42	10	13	7.1	130	--	--	--
	07/30/01	17.12	15.83	--	1,900 <sup>12</sup>	82	24	6.9	13	370	--	--	--
	10/15/01	17.33	15.62	--	26,000 <sup>14</sup>	390	230	58	1,300	<500	--	--	--
MW-6	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	--	--	--	--

**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-6	10/06/94	18.85	13.31	--	11,000 <sup>5</sup>	ND	ND	ND	ND	--	--	--	--
(cont)	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	--	--	--
	01/07/00	16.96	15.20	--	78 <sup>11</sup>	24	ND	0.66	17	280	--	--	--
	07/19/00	18.04	14.12	--	ND	ND	1.32	ND	0.974	ND	--	--	--
	01/02/01	18.10	14.06	--	ND	ND	ND	ND	ND	ND	--	--	--
	05/23/01	16.42	15.74	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/30/01	16.49	15.67	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	10/15/01	16.67	15.49	--	<50	<0.50	0.62	<0.50	<0.50	<5.0	--	--	--
<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	--	--	--	--
	04/02/94	18.50	13.70	--	360	2.0	ND	ND	0.8	--	--	--	--
	07/05/94	17.52	14.68	--	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-7	10/06/94	19.25	12.95	--	340	5.6	0.85	ND	1.2	--	--	--	--
(cont)	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	--	--	--
	01/07/00	16.80	15.40	--	ND	7.7	ND	ND	4.4	98	--	--	--
	07/19/00	17.88	14.32	--	ND	ND	1.27	ND	0.979	ND	--	--	--
	01/02/01	17.97	14.23	--	ND	ND	ND	ND	ND	ND	--	--	--
	05/23/01	16.81	15.39	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/30/01	16.79	15.41	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	10/15/01	16.98	15.22	--	<50	<0.50	0.58	<0.50	<0.50	<5.0	--	--	--
<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	--	--	--	--

**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)
	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	--	--	--
	07/23/97	17.69	14.31	--	ND	ND	ND	ND	ND	270	--	--	--
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	--	--	--
MW-8	07/15/99	15.85	16.15	--	ND	ND	ND	ND	ND	ND	--	--	--
(cont)	01/07/00	16.94	15.06	--	ND	ND	ND	ND	ND	11	--	--	--
	07/19/00	18.06	13.94	--	ND	ND	2.99	0.521	ND	ND	--	--	--
	01/02/01	18.12	13.88	--	ND	ND	ND	ND	ND	ND	--	--	--
	05/23/01	16.96	15.04	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/30/01	16.52	15.48	--	<50	<0.50	<0.50	<0.50	<0.50	2.7	--	--	--
	10/15/01	16.72	15.28	--	<50	<0.50	0.65	<0.50	<0.50	<5.0	--	--	--
<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	--	--	--
	01/07/00	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/19/00	--	--	--	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)
	01/02/01	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--
	05/23/01	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--
	07/30/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	10/15/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--

**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  
 DTW = Depth to Water  
 (ft.) = Feet  
 GWE = Groundwater Elevation  
 (msl) = Mean sea level  
 TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline  
 B = Benzene  
 T = Toluene  
 E = Ethylbenzene  
 X = Xylenes  
 MTBE = Methyl tertiary butyl ether

PCE = Tetrachloroethene  
 TCE = Trichloroethene  
 (ppb) = Parts per billion  
 ND = Not Detected  
 -- = Not Measured/Not Analyzed  
 NP = No Purge

\* TOC elevations are relative to 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 below.

<sup>1</sup> 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.

<sup>2</sup> Laboratory report indicates the hydrocarbons detected did not appear to be diesel.

<sup>3</sup> Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

<sup>4</sup> Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

<sup>5</sup> Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.

<sup>6</sup> 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.

<sup>7</sup> 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.

<sup>8</sup> Laboratory report indicates gasoline and unidentified hydrocarbons C6-C8.

<sup>9</sup> Detection limit raised. Refer to analytical reports.

<sup>10</sup> Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.

<sup>11</sup> Laboratory report indicates gasoline C6-C12.

<sup>12</sup> Laboratory report indicates unidentified hydrocarbons C6-C12.

<sup>13</sup> MTBE by EPA Method 8260.

<sup>14</sup> Laboratory report indicates weathered gasoline C6-C12.

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

WELL ID	DATE	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-5	10/03/00	ND <sup>1</sup>	553	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>

**EXPLANATIONS:**

TBA = Tertiary butyl alcohol  
 MTBE = Methyl tertiary butyl ether  
 DIPE = Di-isopropyl ether  
 ETBE = Ethyl tertiary butyl ether  
 TAME = Tertiary amyl methyl ether  
 1,2-DCA = 1,2-Dichloroethane  
 EDB = 1,2-Dibromoethane  
 (ppb) = Parts per billion  
 ND = Not Detected

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

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



**Table 3**  
**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 laboratory analytical results were compiled from reports prepared by MPDS Services, Inc.

TOG = Total Oil and Grease

(ppm) = Parts per million

ND = Not Detected

**Table 4**  
**Groundwater Analytical Results**  
Tosco (Unocal) Service Station #0752  
800 Harrison Street  
Oakland, California

WELL ID	DATE	BOD (ppm)	Bicarbonate Alkalinity (ppm)	Calcium (ppm)	Iron (ppm)	Manganese (ppm)	Nitrate (ppm)	Sulfate (ppm)	Heterotrophic Plate Count (CFU/mL)
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	--	--	--

**Table 4**  
**Groundwater Analytical Results**  
Tosco (Unocal) Service Station #0752  
880 Harrison Street  
Oakland, California

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**EXPLANATIONS:**

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

BOD = Biochemical Oxygen Demand

(ppm) = Parts per million

(CFU/mL) = Colony Forming Units per milliliter

-- = Not Analyzed

ND = Not Detected

**Table 5**  
**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	--

**Table 5**  
**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-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	--
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	--

**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

## 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 # 0752  
Address: 800 Harrison St.  
City: Oakland, CA.

Job#: 180066  
Date: 10-15-01  
Sampler: Joe

Well ID MW-1  
Well Diameter 2 in.  
Total Depth 33.47 ft.  
Depth to Water 18.72 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" = 5.80

14.75 X VF 0.17 = 2.51 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: 12:32  
Sampling Time: 12:34 P.M. (1254)  
Purging Flow Rate: 1 gpm.  
Did well de-water? \_\_\_\_\_

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

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm X	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:41</u>	<u>2.5</u>	<u>7.79</u>	<u>11.68</u>	<u>73.1</u>	_____	_____	_____
<u>12:43</u>	<u>5</u>	<u>7.36</u>	<u>11.95</u>	<u>72.9</u>	_____	_____	_____
<u>12:45</u>	<u>7.5</u>	<u>7.30</u>	<u>10.62</u>	<u>72.8</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3YOL</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 10-15-01  
 City: Oakland, CA. Sampler: Joe

Well ID MW-2 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth 30.32 ft.  
 Depth to Water 18.52 ft.

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

11.8 x VF 0.17 = 2.00 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: 12:00 Weather Conditions: Hot  
 Sampling Time: 12:20 P.M. (1220) Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm Sediment Description: \_\_\_\_\_  
 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>12:07</u>	<u>2</u>	<u>7.38</u>	<u>7.66</u>	<u>72.4</u>			
<u>12:09</u>	<u>4</u>	<u>7.43</u>	<u>7.72</u>	<u>72.5</u>			
<u>12:10</u>	<u>6</u>	<u>7.44</u>	<u>7.79</u>	<u>72.7</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3YOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

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



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 10-15-01  
 City: Oakland, CA. Sampler: Joc

Well ID MW-3 Well Condition: O.K.  
 Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth 30.46 ft  
 Depth to Water 17.61 ft

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

12.85 x VF 0.17 = 2.18 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: 1:07 Weather Conditions: Hot  
 Sampling Time: 1:30 P.M. (1330) Water Color: clear Odor: yes  
 Purging Flow Rate: 1 gpm Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm $\times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:15</u>	<u>2.5</u>	<u>6.75</u>	<u>2.66</u>	<u>73.1</u>			
<u>1:17</u>	<u>5</u>	<u>6.72</u>	<u>2.72</u>	<u>73.3</u>			
<u>1:18</u>	<u>7</u>	<u>6.80</u>	<u>2.77</u>	<u>73.1</u>			
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3YOL</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 10-15-01  
 City: Oakland, CA. Sampler: Joe

Well ID: MW-4 Well Condition: O.K.  
 Well Diameter: 2 in Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth: 32.37 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water: 17.08 ft. Factor (VF) 6" = 1.50 12" = 5.80

15.29 X VF 0.17 = 2.60 X 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

Starting Time: 11:15 Weather Conditions: Hot  
 Sampling Time: 11:36 AM (1136) Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm X	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:22</u>	<u>2.5</u>	<u>7.71</u>	<u>11.29</u>	<u>72.2</u>			
<u>11:24</u>	<u>5.5</u>	<u>7.57</u>	<u>11.19</u>	<u>73.0</u>			
<u>11:26</u>	<u>8</u>	<u>7.53</u>	<u>11.17</u>	<u>73.4</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3Y04</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 0752  
Address: 800 Harrison St.  
City: Oakland, CA.

Job#: 180066  
Date: 10-15-01  
Sampler: Joe

Well ID MW-5 Well Condition: O.K.

Well Diameter 2 in.  
Total Depth 31.64 ft.  
Depth to Water 17.33 ft.

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

14.31 x VF 0.17 = 2.43 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: 1:45  
Sampling Time: 2:06 p.m. (14:06)  
Purging Flow Rate: 1 gpm.  
Did well de-water? \_\_\_\_\_

Weather Conditions: Hot  
Water Color: clear Odor: yes  
Sediment Description: \_\_\_\_\_  
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>1:52</u>	<u>2.5</u>	<u>7.20</u>	<u>3.42</u>	<u>72.1</u>			
<u>1:54</u>	<u>5</u>	<u>7.28</u>	<u>3.45</u>	<u>72.6</u>			
<u>1:56</u>	<u>7.5</u>	<u>7.31</u>	<u>3.47</u>	<u>72.7</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3Y04</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPNH, BTEX, MTBE</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 0752 Job#: 180066  
Address: 800 Harrison St. Date: 10-15-01  
City: Oakland, CA. Sampler: Joe

Well ID MW-6 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
Total Depth 30.88 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
Depth to Water 16.67 ft. Factor (VF) 6" = 1.50 12" = 5.80

14.21 x VF 0.17 = 2.42 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: 9:30 Weather Conditions: HOL  
Sampling Time: 10:00 AM (1000) Water Color: clear Odor: none  
Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm $\times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:40</u>	<u>2.5</u>	<u>7.63</u>	<u>8.42</u>	<u>73.0</u>			
<u>9:42</u>	<u>5</u>	<u>7.60</u>	<u>8.45</u>	<u>73.2</u>			
<u>9:44</u>	<u>7.5</u>	<u>7.65</u>	<u>8.44</u>	<u>73.2</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3YOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 10-15-01  
 City: Oakland, CA. Sampler: Joe

Well ID: MW-7 Well Condition: O.K.  
 Well Diameter: 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)  
 Total Depth: 31.46 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water: 16.98 ft. Factor (VF) 6" = 1.50 12" = 5.80

14.48 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: 10:15 Weather Conditions: Hot  
 Sampling Time: 10:36 AM (1036) Water Color: clear Odor: mild  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:23</u>	<u>2.5</u>	<u>7.59</u>	<u>9.82</u>	<u>73.1</u>			
<u>10:25</u>	<u>5</u>	<u>7.62</u>	<u>9.87</u>	<u>73.3</u>			
<u>10:27</u>	<u>7.5</u>	<u>7.65</u>	<u>9.85</u>	<u>73.4</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3VOK</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 0752 Job#: 180066  
 Address: 800 Harrison St. Date: 10-15-01  
 City: Oakland, CA. Sampler: Joe

Well ID MW-8  
 Well Diameter 2 in.  
 Total Depth 27.85 ft.  
 Depth to Water 16.72 ft.

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

11.13 x VF 0.17 = 1.89 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: 10:47 Weather Conditions: Hot  
 Sampling Time: 11:07 A.M. (1107) Water Color: clear Odor: Mild  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm $\times 10^2$	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:56</u>	<u>2</u>	<u>7.39</u>	<u>9.07</u>	<u>73.1</u>			
<u>10:58</u>	<u>4</u>	<u>7.42</u>	<u>8.63</u>	<u>73.2</u>			
<u>10:59</u>	<u>6</u>	<u>7.42</u>	<u>8.67</u>	<u>73.5</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3YOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

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





**Sequoia  
Analytical**

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

30 October, 2001

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

RECEIVED

OCT 30 2001

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

RE: Tosco(1)  
Sequoia Report: L110101

Enclosed are the results of analyses for samples received by the laboratory on 10/15/01 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Latonya K. Pelt*

Latonya Pelt  
Project Manager

CA ELAP Certificate #2360





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

Project: Tosco(1)  
Project Number: Unocal SS#0752, Oakland, CA  
Project Manager: Deanna Harding

**Reported:**  
10/30/01 06:57

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L110101-01	Water	10/15/01 00:00	10/15/01 16:00
MW-1	L110101-02	Water	10/15/01 12:54	10/15/01 16:00
MW-2	L110101-03	Water	10/15/01 12:20	10/15/01 16:00
MW-3	L110101-04	Water	10/15/01 13:30	10/15/01 16:00
MW-4	L110101-05	Water	10/15/01 11:36	10/15/01 16:00
MW-5	L110101-06	Water	10/15/01 14:06	10/15/01 16:00
MW-6	L110101-07	Water	10/15/01 10:00	10/15/01 16:00
MW-7	L110101-08	Water	10/15/01 10:36	10/15/01 16:00
MW-8	L110101-09	Water	10/15/01 11:07	10/15/01 16:00

Sequoia Analytical - San Carlos

Latonya Pelt, Project Manager

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



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#0752, Oakland, CA Project Manager: Deanna Harding	Reported: 10/30/01 06:57
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**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>TB-LB (L110101-01) Water</b> Sampled: 10/15/01 00:00 Received: 10/15/01 16:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100103	10/24/01	10/25/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %	70-130		"	"	"	"	
<b>MW-1 (L110101-02) Water</b> Sampled: 10/15/01 12:54 Received: 10/15/01 16:00									
Purgeable Hydrocarbons as Gasoline	96	50	ug/l	1	1100103	10/24/01	10/24/01	DHS LUFT	P-03
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	160	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		111 %	70-130		"	"	"	"	
<b>MW-2 (L110101-03) Water</b> Sampled: 10/15/01 12:20 Received: 10/15/01 16:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100103	10/24/01	10/24/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	31	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		109 %	70-130		"	"	"	"	

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

 Project: Tosco(1)  
 Project Number: Unocal SS#0752, Oakland, CA  
 Project Manager: Deanna Harding

 Reported:  
 10/30/01 06:57

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (L110101-04) Water Sampled: 10/15/01 13:30 Received: 10/15/01 16:00</b>									
Purgeable Hydrocarbons as Gasoline	400	50	ug/l	1	1100107	10/25/01	10/25/01	DHS LUFT	P-03
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	13	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		151 %		70-130	"	"	"	"	S-04
<b>MW-4 (L110101-05) Water Sampled: 10/15/01 11:36 Received: 10/15/01 16:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100102	10/24/01	10/25/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %		70-130	"	"	"	"	
<b>MW-5 (L110101-06) Water Sampled: 10/15/01 14:06 Received: 10/15/01 16:00</b>									
Purgeable Hydrocarbons as Gasoline	26000	5000	ug/l	100	1100102	10/24/01	10/25/01	DHS LUFT	P-02
Benzene	390	50	"	"	"	"	"	"	
Toluene	230	50	"	"	"	"	"	"	
Ethylbenzene	58	50	"	"	"	"	"	"	
Xylenes (total)	1300	50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		113 %		70-130	"	"	"	"	

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

 Project: Tosco(1)  
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 Project Manager: Deanna Harding

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**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (L110101-07) Water</b> Sampled: 10/15/01 10:00 Received: 10/15/01 16:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100107	10/25/01	10/25/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.62</b>	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %		70-130	"	"	"	"	
<b>MW-7 (L110101-08) Water</b> Sampled: 10/15/01 10:36 Received: 10/15/01 16:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100107	10/25/01	10/25/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.58</b>	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		90.2 %		70-130	"	"	"	"	
<b>MW-8 (L110101-09) Water</b> Sampled: 10/15/01 11:07 Received: 10/15/01 16:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1100107	10/25/01	10/25/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.65</b>	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.8 %		70-130	"	"	"	"	

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 10/30/01 06:57

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1100102 - EPA 5030B (P/T)**
**Blank (1100102-BLK1)**

Prepared &amp; Analyzed: 10/24/01

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							

<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.99		"	10.0		89.9	70-130			
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**LCS (1100102-BS1)**

Prepared &amp; Analyzed: 10/24/01

Benzene	9.79	0.50	ug/l	10.0		97.9	70-130			
Toluene	9.82	0.50	"	10.0		98.2	70-130			
Ethylbenzene	10.2	0.50	"	10.0		102	70-130			
Xylenes (total)	30.6	0.50	"	30.0		102	70-130			

<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.3		"	10.0		103	70-130			
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**LCS (1100102-BS2)**

Prepared &amp; Analyzed: 10/24/01

Purgeable Hydrocarbons as Gasoline	235	50	ug/l	250		94.0	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	12.0		"	10.0		120	70-130			

**Matrix Spike (1100102-MS1)**

Source: L110084-03

Prepared: 10/24/01

Analyzed: 10/25/01

Benzene	10.4	0.50	ug/l	10.0	ND	104	60-140			
Toluene	10.4	0.50	"	10.0	ND	104	60-140			
Ethylbenzene	10.7	0.50	"	10.0	ND	107	60-140			
Xylenes (total)	31.8	0.50	"	30.0	ND	106	60-140			

<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.7		"	10.0		107	70-130			
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**Matrix Spike Dup (1100102-MSD1)**

Source: L110084-03

Prepared: 10/24/01

Analyzed: 10/25/01

Benzene	10.3	0.50	ug/l	10.0	ND	103	60-140	0.966	25	
Toluene	10.4	0.50	"	10.0	ND	104	60-140	0.00	25	
Ethylbenzene	10.8	0.50	"	10.0	ND	108	60-140	0.930	25	
Xylenes (total)	32.5	0.50	"	30.0	ND	108	60-140	2.18	25	

<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.0		"	10.0		110	70-130			
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 Reported:  
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**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1100103 - EPA 5030B (P/T)**
**Blank (1100103-BLK1)**

Prepared &amp; Analyzed: 10/24/01

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.1		"	10.0		101	70-130			

**LCS (1100103-BS1)**

Prepared &amp; Analyzed: 10/24/01

Benzene	9.24	0.50	ug/l	10.0		92.4	70-130			
Toluene	9.10	0.50	"	10.0		91.0	70-130			
Ethylbenzene	9.41	0.50	"	10.0		94.1	70-130			
Xylenes (total)	28.3	0.50	"	30.0		94.3	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.8		"	10.0		108	70-130			

**LCS (1100103-BS2)**

Prepared &amp; Analyzed: 10/24/01

Purgeable Hydrocarbons as Gasoline	240	50	ug/l	250		96.0	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	12.0		"	10.0		120	70-130			

**Matrix Spike (1100103-MS1)**

Source: L110084-06

Prepared &amp; Analyzed: 10/24/01

Benzene	11.3	0.50	ug/l	10.0	ND	113	60-140			
Toluene	11.3	0.50	"	10.0	ND	113	60-140			
Ethylbenzene	11.8	0.50	"	10.0	ND	118	60-140			
Xylenes (total)	34.4	0.50	"	30.0	ND	115	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.1		"	10.0		111	70-130			

**Matrix Spike Dup (1100103-MSD1)**

Source: L110084-06

Prepared &amp; Analyzed: 10/24/01

Benzene	11.3	0.50	ug/l	10.0	ND	113	60-140	0.00	25	
Toluene	11.3	0.50	"	10.0	ND	113	60-140	0.00	25	
Ethylbenzene	11.7	0.50	"	10.0	ND	117	60-140	0.851	25	
Xylenes (total)	34.6	0.50	"	30.0	ND	115	60-140	0.580	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.9		"	10.0		109	70-130			



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**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1100107 - EPA 5030B (P/T)</b>										
<b>Blank (1100107-BLK1)</b>										
Prepared & Analyzed: 10/25/01										
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.71		"	10.0		87.1	70-130			
<b>LCS (1100107-BS1)</b>										
Prepared & Analyzed: 10/25/01										
Benzene	9.60	0.50	ug/l	10.0		96.0	70-130			
Toluene	9.42	0.50	"	10.0		94.2	70-130			
Ethylbenzene	9.80	0.50	"	10.0		98.0	70-130			
Xylenes (total)	29.3	0.50	"	30.0		97.7	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.5		"	10.0		105	70-130			
<b>LCS (1100107-BS2)</b>										
Prepared & Analyzed: 10/25/01										
Purgeable Hydrocarbons as Gasoline	236	50	ug/l	250		94.4	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.9		"	10.0		109	70-130			
<b>Matrix Spike (1100107-MS1)</b>										
Source: L110102-03 Prepared & Analyzed: 10/25/01										
Purgeable Hydrocarbons as Gasoline	279	50	ug/l	250	ND	112	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.3		"	10.0		113	70-130			
<b>Matrix Spike Dup (1100107-MSD1)</b>										
Source: L110102-03 Prepared & Analyzed: 10/25/01										
Purgeable Hydrocarbons as Gasoline	263	50	ug/l	250	ND	105	60-140	5.90	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.0		"	10.0		110	70-130			

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### Notes and Definitions

P-02 Chromatogram Pattern: Weathered Gasoline C6-C12

P-03 Chromatogram Pattern: Unidentified Hydrocarbons 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