



GETTLER-RYAN INC.

April 27, 2000
G-R Job #180061

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

RE: First Quarter 2000 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

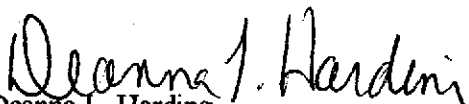
Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On March 13, 2000, field personnel monitored and sampled six wells (U-1 through U-6) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any wells. Static water level data and groundwater elevations are summarized in Table 1. Dissolved Oxygen Concentrations are summarized in Table 3. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports is also attached.

Sincerely,


Deanna L. Harding
Project Coordinator

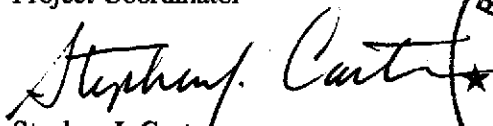
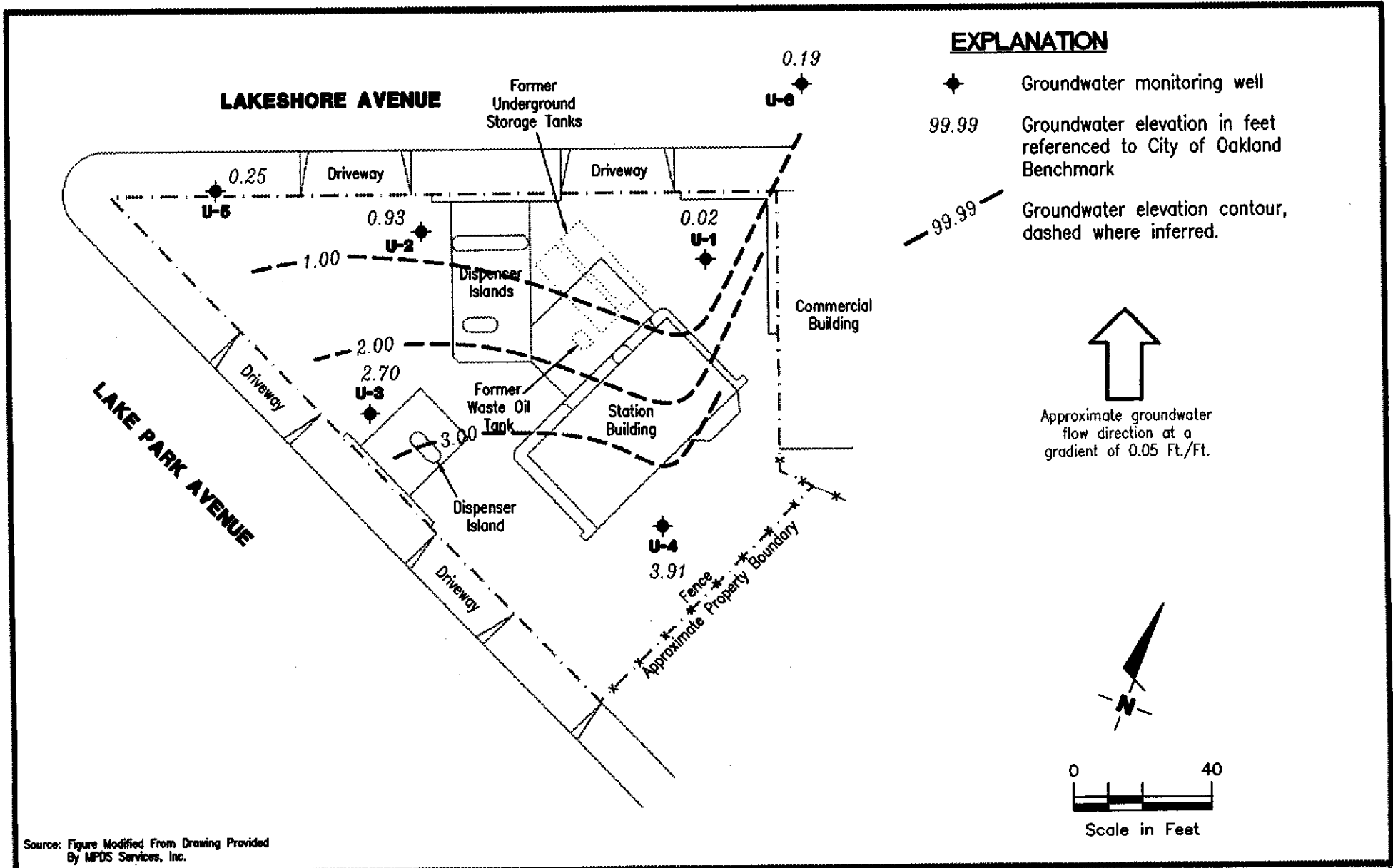

Stephen J. Carter
Senior Geologist, R.G. No. 5577



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

5325.qml



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



Gettler - Ryan Inc.

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

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California

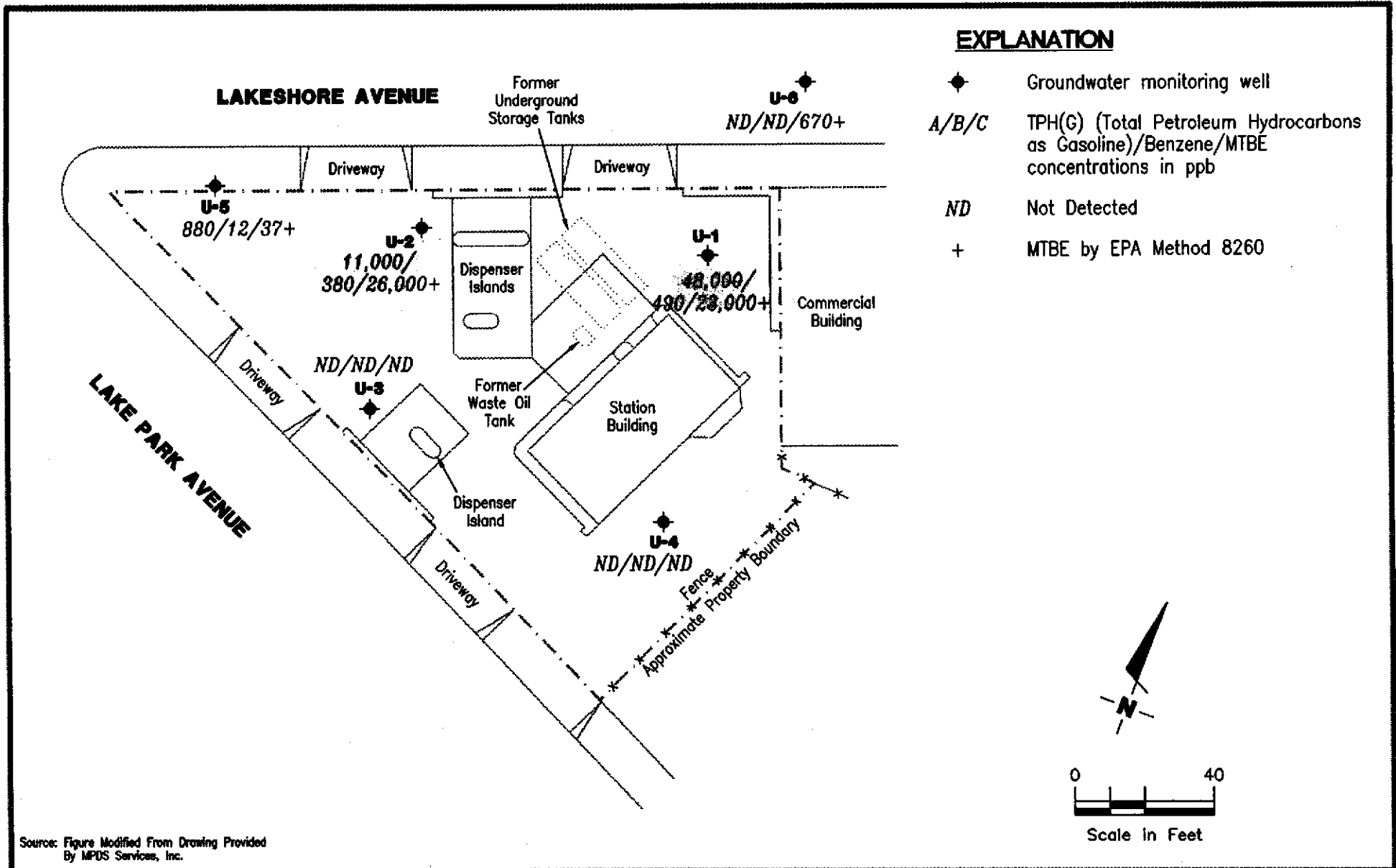
FIGURE 1

JOB NUMBER
180061

REVIEWED BY

DATE
March 13, 2000

REVISED DATE



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



Gettler - Ryan Inc.

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

CONCENTRATION MAP
Tosco (Unocal) Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California

FIGURE

2

JOB NUMBER
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REVIEWED BY

DATE
March 13, 2000

REVISED DATE

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

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1	08/10/90	--	--	--	690	38	75	8.6	130	--
	01/07/91	--	--	--	250	22	16	4.2	17	--
	04/01/91	--	--	--	160	13	8.6	1.0	15	--
	07/03/91	--	--	--	140	21	4.3	0.36	17	--
	10/09/91	--	--	--	ND	ND	ND	ND	ND	--
	02/12/92	--	--	--	250	ND	ND	ND	ND	--
	05/05/92	--	--	--	230	1.2	ND	ND	ND	--
	06/11/92	--	--	--	1,000	80	1.4	6.7	41	--
	08/20/92	--	--	--	400 ¹	1.0	ND	ND	0.6	--
	02/22/93	--	--	--	34,000	1,400	5,500	910	7,300	--
	05/07/93	--	--	--	8,700	600	240	650	3,300	--
	08/08/93	--	--	--	4,900 ²	79	ND	832	270	--
	5.32	11/16/93	8.61	-3.29	0.00	690 ³	ND	ND	ND	ND
02/16/94		8.54	-3.22	0.00	6,800 ⁴	ND	ND	ND	ND	--
8.46	06/22/94	8.39	0.07	0.00	200	ND	ND	5.9	21	--
	09/22/94	8.66	-0.20	0.00	6,100 ³	ND	ND	ND	ND	--
	12/24/94	8.04	0.42	0.00	50,000	2,500	9,700	2,400	17,000	--
	03/25/95	7.72	1.02**	0.37	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/21/95	9.30	-0.69**	0.20	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/95	9.29	-0.53**	0.40	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/19/95	8.98	-0.50**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/18/96	8.25	0.21	0.00	27,000	ND	2,300	1,400	11,000	4,900
	06/27/96	7.92	0.54	<0.01	120,000	540	4,300	2,600	26,000	ND
	09/26/96	9.10	-0.62**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/09/96	6.88	1.60**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/14/97	9.02	-0.15**	0.55	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/30/97	8.41	0.07**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/97	8.56	-0.08**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/12/97	8.58	-0.11**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/03/98	8.23	0.26**	0.04	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/15/98	8.37	0.09	Sheen	52,000	ND ⁷	900	1,800	13,000	ND ⁷
09/30/98	8.94	-0.48	Sheen	1,000,000 ⁸	ND ⁷	2,600	13,000	83,000	4,800	

Table 1
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 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1 (cont)	12/28/98	8.57	-0.11	<0.01	1,100,000 ⁹	ND ⁷	1,600	8,600	71,000	5,700
	03/22/99	8.18	0.28	Sheen	130,000	470	1,100	2,000	28,000	5,700
	06/09/99	9.37	-0.91	0.00	40,000	230	640	590	13,000	3,500/2,100 ¹⁰
	09/08/99	9.53	-1.07	0.00	55,000 ¹¹	217	202	745	14,300	6,890/6,690 ¹⁰
	12/07/99	9.67	-1.21	0.00	41,200 ¹³	89.3	ND ⁷	385	6,930	15,800/14,700 ¹²
	03/13/00	8.44	0.02	0.00	48,000 ¹¹	490	610	2,400	10,000	22,000/23,000 ¹⁰
U-2	08/10/90	--	--	--	780	27	46	15	130	--
	01/07/91	--	--	--	1,900	67	5.8	58	69	--
	04/01/91	--	--	--	1,700	250	89	34	190	--
	07/03/91	--	--	--	2,100	150	25	3.1	290	--
	10/09/91	--	--	--	230	7.1	ND	ND	11	--
	02/12/92	--	--	--	410	1.9	ND	0.36	0.4	--
	05/05/92	--	--	--	1,600	120	52	6.2	290	--
	06/11/92	--	--	--	620	17	2.1	ND	37	--
	08/20/92	--	--	--	700	28	6.5	1.3	4.6	--
	02/22/93	--	--	--	3,400	2,400	2,100	1,200	5,800	--
	05/07/93	--	--	--	17,000	1,800	660	1,700	4,000	--
	08/08/93	--	--	--	5,600 ²	420	ND	410	670	--
	4.53	11/16/93	8.17	-3.64	0.00	510 ³	ND	ND	ND	ND
02/16/94		7.73	-3.20	0.00	980 ⁴	49	13	2.7	40	--
7.62	06/22/94	7.60	0.02	0.00	31,000	2,200	62	1,500	3,500	--
	09/22/94	7.93	-0.31	0.00	8,500 ³	29	ND	ND	ND	--
	12/24/94	7.27	0.35	0.00	32,000	1,500	890	1,300	5,000	--
	03/25/95	7.01	0.61	0.00	170,000	1,900	21,000	4,800	33,000	--
	06/21/95	6.98	0.64	0.00	16,000	2,100	ND	1,800	1,700	--
	09/19/95	7.70	-0.08	0.00	3,000	610	ND	78	240	-- ⁵
	12/19/95	7.30	0.32	0.00	1,600	140	55	52	270	-- ⁶
	03/18/96	6.45	1.17	0.00	12,000	2,200	ND	1,200	2,200	22,000
	06/27/96	7.41	0.21	0.00	28,000	3,400	ND	2,800	3,100	3,000
	09/26/96	7.90	-0.28	0.00	5,900	750	ND	ND	ND	18,000

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Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-2	12/09/96	6.76	0.86	0.00	13,000	5,100	290	980	370	2,700
(cont)	03/14/97	7.12	0.52**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/30/97	6.19	1.43	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/97	7.31	0.31	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/12/97	6.75	0.88**	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/03/98	6.36	1.26	Sheen	80,000	3,000	1,100	820	16,000	16,000
	06/15/98	6.51	1.11	Sheen	48,000	1,800	330	470	7,900	20,000
	09/30/98	7.17	0.45	Sheen	60,000	1,300	ND ⁷	500	9,700	19,000
	12/28/98	7.06	0.56	0.00	63,000	590	160	320	5,600	16,000
	03/22/99	6.82	0.80	0.00	28,000	1,100	ND ⁷	360	2,900	25,000
	06/09/99	7.51	0.11	0.00	21,000	110	190	310	2,600	7,900/7,800 ¹⁰
	09/08/99	8.16	-0.54	0.00	23,300 ¹¹	477	138	286	4,110	16,400/15,300 ¹⁰
	12/07/99	8.31	-0.69	0.00	4,840 ¹³	17.2	ND ⁷	ND ⁷	157	14,900/15,600 ¹²
	03/13/00	6.69	0.93	0.00	11,000 ¹¹	380	160	ND ⁷	2,100	22,000/26,000 ¹⁰
U-3	08/10/90	--	--	--	ND	ND	ND	ND	ND	--
	01/07/91	--	--	--	ND	ND	ND	ND	1.8	--
	04/01/91	--	--	--	ND	1.0	2.9	0.53	5.4	--
	07/03/91	--	--	--	ND	ND	ND	ND	ND	--
	10/09/91	--	--	--	ND	ND	ND	ND	ND	--
	02/12/92	--	--	--	ND	ND	ND	ND	ND	--
	05/05/92	--	--	--	ND	ND	ND	ND	ND	--
	06/11/92	--	--	--	ND	ND	ND	ND	ND	--
	08/20/92	--	--	--	ND	ND	ND	ND	ND	--
	02/22/93	--	--	--	ND	ND	ND	ND	ND	--
	05/07/93	--	--	--	ND	ND	ND	ND	ND	--
	08/08/93	--	--	--	210	5.0	9.7	0.7	4.1	--
7.86	11/16/93	11.82	-3.96	0.00	ND	ND	ND	ND	ND	--
	02/16/94	11.62	-3.76	0.00	ND	ND	ND	ND	ND	--
10.98	06/22/94	11.64	-0.66	0.00	ND	ND	ND	ND	ND	--
	09/22/94	11.76	-0.78	0.00	ND	ND	ND	ND	ND	--

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U-3 (cont)	12/24/94	11.28	-0.30	0.00	ND	ND	ND	ND	ND	--
	03/25/95	10.96	0.02	0.00	ND	ND	ND	ND	ND	--
	06/21/95	11.37	-0.39	0.00	ND	ND	ND	ND	ND	--
	09/19/95	11.55	-0.57	0.00	ND	ND	ND	ND	ND	-- ⁵
	12/19/95	11.45	-0.47	0.00	ND	ND	ND	ND	ND	--
	03/18/96	11.10	-0.12	0.00	ND	ND	ND	ND	ND	--
	06/27/96	11.16	-0.18	0.00	440	49	50	51	140	50
	09/26/96	11.55	-0.57	0.00	ND	ND	ND	ND	ND	ND
	12/09/96	10.12	0.86	0.00	ND	ND	ND	ND	ND	29
	03/14/97	10.87	0.11	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	11.08	-0.10	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	11.05	-0.07	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	10.58	0.40	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	9.84	1.14	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	10.56	0.42	0.00	ND	ND	ND	ND	ND	ND
	09/30/98	11.12	-0.14	0.00	ND	ND	ND	ND	ND	ND
	12/28/98	10.96	0.02	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	9.46	1.52	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	11.01	-0.03	0.00	ND	ND	ND	ND	ND	ND
	09/08/99	11.31	-0.33	0.00	ND	ND	ND	ND	ND	ND
12/07/99	11.26	-0.28	0.00	ND	ND	ND	ND	ND	ND	
03/13/00	8.28	2.70	0.00	ND	ND	ND	ND	ND	ND	
U-4 11.15	06/22/94	10.16	0.99	0.00	ND	ND	ND	ND	ND	--
	09/22/94	10.79	0.36	0.00	ND	0.78	1.3	ND	1.4	--
	12/24/94	9.81	1.34	0.00	ND	ND	ND	ND	ND	--
	03/25/95	9.51	1.64	0.00	ND	ND	ND	ND	ND	--
	06/21/95	9.54	1.61	0.00	ND	ND	ND	ND	ND	--
	09/19/95	10.17	0.98	0.00	ND	ND	ND	ND	ND	--
	12/19/95	9.98	1.17	0.00	ND	ND	ND	ND	ND	--

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Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-4	03/18/96	9.66	1.49	0.00	ND	ND	ND	ND	ND	--
(cont)	06/27/96	9.74	1.41	0.00	ND	ND	ND	ND	ND	ND
	09/26/96	10.14	1.01	0.00	ND	ND	ND	ND	ND	ND
	12/09/96	8.67	2.48	0.00	ND	ND	ND	ND	ND	33
	03/14/97	9.35	1.80	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	9.89	1.26	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	9.96	1.19	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	8.56	2.59	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	7.85	3.30	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	9.08	2.07	0.00	ND	ND	ND	ND	ND	ND
	09/30/98	9.75	1.40	0.00	ND	ND	ND	ND	ND	ND
	12/28/98	9.59	1.56	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	8.34	2.81	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	9.39	1.76	0.00	ND	ND	ND	ND	ND	ND
	09/08/99	9.90	1.25	0.00	ND	ND	ND	ND	ND	ND
	12/07/99	10.05	1.10	0.00	ND	ND	ND	ND	ND	ND
	03/13/00	7.24	3.91	0.00	ND	ND	ND	ND	ND	ND
U-5										
6.98	06/22/94	6.83	0.15	0.00	210	7.1	13	4.5	26	--
	09/22/94	6.90	0.08	0.00	170	8.4	10	8.5	18	--
	12/24/94	6.43	0.55	0.00	8,700	560	70	670	430	--
	03/25/95	6.35	0.63	0.00	44,000	390	960	1,500	7,600	--
	06/21/95	7.11	-0.13	0.00	400	2.3	ND	9.1	3.5	--
	09/19/95	6.99	-0.01	0.00	850	14	7.1	13	66	-- ⁵
	12/19/95	7.17	-0.19	0.00	ND	ND	ND	ND	ND	--
	03/18/96	6.65	0.33	0.00	100	0.67	0.5	0.51	5.4	--
	06/27/96	6.49	0.49	0.00	16,000	280	150	1,400	4,600	530
	09/26/96	7.13	-0.15	0.00	ND	ND	0.57	ND	0.96	ND
	12/09/96	5.90	1.08	0.00	1,300	29	46	ND	140	97
	03/14/97	6.99	-0.01	0.00	ND	ND	ND	ND	ND	14

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Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-5 (cont)	06/30/97	7.08	-0.10	0.00	4,200	74	51	180	980	270
	09/19/97	6.78	0.20	0.00	6,300	160	13	370	1000	480
	12/12/97	6.94	0.04	0.00	60	1.3	ND	1.6	2.1	47
	03/03/98	6.50	0.48	0.00	1,700	29	ND ⁷	150	190	330
	06/15/98	6.85	0.13	0.00	1,500	32	ND ⁷	91	83	330
	09/30/98	7.31	-0.33	0.00	1,700	44	ND ⁷	39	150	60
	12/28/98	7.25	-0.27	0.00	1,400	59	ND ⁷	13	27	150
	03/22/99	6.86	0.12	0.00	780	8.9	ND	0.76	4.5	350
	06/09/99	7.28	-0.30	0.00	1,000	ND ⁷	ND ⁷	10	35	280/350 ¹⁰
	09/08/99	7.52	-0.54	0.00	2,620 ¹¹	26.2	ND ⁷	32.2	157	280/239 ¹²
	12/07/99	7.67	-0.69	0.00	949 ¹¹	9.26	ND ⁷	11.2	22.7	235/301 ¹²
	03/13/00	6.73	0.25	0.00	880 ¹⁴	12	1.0	5.6	8.7	46/37 ¹⁰
	U-6 7.14	06/22/94	7.14	0.00	0.00	ND	ND	ND	ND	ND
09/22/94		7.34	-0.20	0.00	130	1.3	0.8	ND	0.73	--
12/24/94		6.67	0.47	0.00	6,900	500	59	600	380	--
03/25/95		6.29	0.85	0.00	47,000	450	1,300	1,700	8,200	--
06/21/95		7.60	-0.46	0.00	ND	ND	ND	ND	ND	--
09/19/95		7.70	-0.56	0.00	ND	ND	ND	ND	ND	-- ⁵
12/19/95		7.75	-0.61	0.00	210	2.5	1.0	2.9	17	--
03/18/96		6.86	0.28	0.00	ND	ND	ND	ND	ND	--
06/27/96		6.52	0.62	0.00	ND	ND	ND	ND	ND	510
09/26/96		7.62	-0.48	0.00	ND	ND	ND	ND	ND	1,400
12/09/96		5.88	1.26	0.00	1,200	29	48	6.4	140	58
03/14/97		7.30	-0.16	0.00	ND	ND	ND	ND	ND	1,500
06/30/97		7.35	-0.21	0.00	ND	ND	ND	ND	ND	990
09/19/97		7.25	-0.11	0.00	ND	ND	ND	ND	ND	1,400
12/12/97		7.29	-0.15	0.00	ND	ND	ND	ND	ND	680
03/03/98		7.00	0.14	0.00	ND	ND	ND	ND	ND	1,600
06/15/98		7.18	-0.04	0.00	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	1,000

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

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-6 (cont)	09/30/98	7.90	-0.76	0.00	ND	ND	ND	ND	ND	1,200
	12/28/98	7.79	-0.65	0.00	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	730
	03/22/99	7.47	-0.33	0.00	ND	ND	ND	ND	ND	1,800
	06/09/99	7.73	-0.59	0.00	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	1,000/850 ¹⁰
	09/08/99	7.95	-0.81	0.00	ND	ND	ND	ND	ND	851/1,040 ¹⁰
	12/07/99	8.10	-0.96	0.00	ND	ND	ND	ND	ND	1,140/1,150 ¹²
	03/13/00	6.95	0.19	0.00	ND	ND	ND	ND	ND	560/670 ¹⁰
Trip Blank										
TB-LB	03/03/98	--	--	--	ND	ND	ND	ND	ND	ND
	06/15/98	--	--	--	ND	ND	ND	ND	ND	ND
	09/30/98	--	--	--	ND	ND	1.7	ND	2.2	ND
	12/28/98	--	--	--	ND	ND	0.71	ND	0.72	9.5
	03/22/99	--	--	--	ND	ND	ND	ND	ND	ND
	06/09/99	--	--	--	ND	ND	ND	ND	ND	ND
	09/08/99	--	--	--	ND	ND	ND	ND	ND	ND
	12/07/99	--	--	--	ND	ND	0.762	ND	ND	ND
	03/13/00	--	--	--	ND	ND	ND	ND	ND	ND

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

EXPLANATIONS:

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

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

- * TOC elevations are surveyed relative to City of Oakland Benchmark, at the northeasterly corner of Weller and Cheney Avenue (Elevation = 9.055 feet, city datum; add 3.00' to U.S.G.S. datum). Prior to November 16, 1993, the DTW measurements were taken from the well cover.
- ** Groundwater elevation corrected due to the presence of free product; correction factor = [(TOC-DTW)+(Product Thickness x 0.75)].

- ¹ The positive result for gasoline does not appear to have a typical gasoline pattern.
- ² The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
- ³ Laboratory report indicates the hydrocarbons detected did not appear to be gasoline
- ⁴ Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- ⁵ Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- ⁶ Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
- ⁷ Detection limit raised. Refer to analytical reports.
- ⁸ Laboratory report indicates unidentified hydrocarbons C6-C12.
- ⁹ Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- ¹⁰ MTBE by EPA Method 8260.
- ¹¹ Laboratory report indicates gasoline C6-C12.
- ¹² MTBE by EPA Method 8260 analyzed past the recommended holding time.
- ¹³ Laboratory report indicates weathered gasoline C6-C12.
- ¹⁴ Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.

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

Well ID	Date	Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV ²
U-1	06/15/98	39	ND	ND	382 ²
	09/30/98	17	ND	ND	366 ²
	12/28/98	4.3	6.3	28	298 ²
	03/22/99	4.9	ND	3.5	320 ³
	06/09/99	1.2	ND	ND	260 ³
	09/08/99	1.80	ND ¹	ND ¹	85 ³
	12/07/99	5.70	ND ¹	17.0	404 ³
	03/13/00	8.0	0.18	ND	² 117/262 ³
U-2	03/03/98	25	ND	ND	369 ²
	06/15/98	42	ND	ND	341 ²
	09/30/98	25	ND	ND	354 ²
	12/28/98	28	ND	ND	276 ²
	03/22/99	0.68	ND	2.3	320 ³
	06/09/99	0.50	ND	ND	290 ³
	09/08/99	1.90	ND ¹	ND ¹	235 ³
	12/07/99	0.250	ND ¹	ND ¹	389 ³
03/13/00	4.3	0.31	ND	² 121/184 ³	
U-3 BG	06/30/97	1.4	21	0.86	190 ³
	09/19/97	0.57	19	ND	75 ³
	12/12/97	1.9	23	0.85	390 ³
	03/03/98	0.013	36	ND	358 ²
	06/15/98	0.16	33	ND	318 ²
	09/30/98	0.040	31	ND	295 ²
	12/28/98	ND	29	ND	281 ²
	03/22/99	0.015	30	0.14	310 ³
	06/09/99	ND	26	1.2	350 ³
	09/08/99	ND	32.9	ND ¹	417 ³
	12/07/99	0.0520	27.9	ND ¹	437 ³
	03/13/00	0.15	33	ND	² 226/307 ³
	U-4 BG	06/30/97	0.13	35	0.52
09/19/97		0.35	30	ND	45 ³
12/12/97		0.68	31	0.73	380 ³
03/03/98		0.018	3.2	ND	284 ²
06/15/98		0.14	33	ND	256 ²
09/30/98		0.049	31	ND	276 ²
12/28/98		0.36	31	ND	280 ²
03/22/99		ND	30	0.14	320 ³
06/09/99		ND	35	0.91	340 ³
09/08/99		ND	24	ND ¹	391 ³
12/07/99		ND	27.7	ND ¹	478 ³
03/13/00		0.021	33	ND	² 219/244 ³

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

Well ID	Date	Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV ²
U-5	06/30/97	16	ND	ND	160 ³
	09/19/97	0.22	ND	ND	63 ³
	12/12/97	6.7	ND	ND	400 ³
	03/03/98	18	3.1	ND	345 ²
	06/15/98	17	ND	ND	333 ²
	09/30/98	17	ND	ND	318 ²
	12/28/98	17	6.6	ND	305 ²
	03/22/99	0.12	ND	2.4	340 ³
	06/09/99	0.23	ND	ND	320 ³
	09/08/99	2.10	ND ¹	ND ¹	335 ³
	12/07/99	0.310	ND ¹	ND ¹	408 ³
	03/13/00	0.33	0.16	ND	² 111/ ²⁶⁴ ³
	U-6	06/30/97	88	0.80	ND
09/19/97		2.9	1.80	ND	ND ³
12/12/97		51	ND	ND	380 ³
03/03/98		60	3.5	ND	327 ²
06/15/98		590	4.8	ND	315 ²
09/30/98		33	ND	ND	345 ²
12/28/98		83	7.2	ND	297 ²
03/22/99		2.1	ND	0.98	330 ³
06/09/99		0.47	0.20	ND	320 ³
09/08/99		0.140	5.59	ND ¹	305 ³
12/07/99		0.260	ND ¹	ND ¹	443 ³
03/13/00		0.79	0.26	ND	² 68/ ²²² ³

EXPLANATIONS:

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

ppm = Parts per million

ND = Not Detected

mV = millivolts

¹ Detection limit raised. Refer to analytical reports.

² Field measurement.

³ Analyzed by laboratory.

Table 3
Dissolved Oxygen Concentrations
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

Well ID	Date	Before Purge (mg/L)
U-1	12/07/99	1.36
	03/13/00	1.44
U-2	12/07/99	2.28
	03/13/00	2.68
U-3	06/30/97	4.1
	09/19/97	4.2
	12/12/97	2.97
	03/03/98	2.63
	06/15/98	2.93
	09/30/98	3.11
	12/28/98	3.59
	03/22/99	4.02
	06/09/99	3.70
	09/08/99	3.96
	12/07/99	4.21
03/13/00	4.82	
U-4	06/30/97	5.4
	09/19/97	5.1
	12/12/97	3.11
	03/03/98	2.94
	06/15/98	3.08
	09/30/98	4.05
	12/28/98	4.57
	03/22/99	4.26
	06/09/99	3.61
	09/08/99	3.75
	12/07/99	4.03
03/13/00	4.33	
U-5	06/30/97	3.4
	09/19/97	0.6
	12/12/97	1.75
	03/03/98	2.36
	06/15/98	2.55
	09/30/98	1.93
	12/28/98	1.64
	03/22/99	1.99
	06/09/99	2.10
	09/08/99	2.21
	12/07/99	2.66
03/13/00	3.04	

Table 3
Dissolved Oxygen Concentrations
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

Well ID	Date	Before Purge (mg/L)
U-6	06/30/97	0.30
	09/19/97	0.60
	12/12/97	2.70
	03/03/98	2.18
	06/15/98	2.48
	09/30/98	3.06
	12/28/98	3.42
	03/22/99	3.88
	06/09/99	3.29
	09/08/99	3.12
	12/07/99	3.44
	03/13/00	2.81

EXPLANATIONS:

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

mg/L = milligrams per liter

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using 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.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 5325 Job#: 180061
 Address: 3220 Lakeshore Ave. Date: 3-13-00
 City: Oakland Sampler: Joe

Well ID: U-1 Well Condition: O.K.
 Well Diameter: 3 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)
 Total Depth: 19.70 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66
 Depth to Water: 8.44 ft. Factor (VF) 6" = 1.50 12" = 5.80

$11.26 \times \text{VF } 0.38 = 4.28 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 13 \text{ (gal.)}$

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

Starting Time: 8:50 Weather Conditions: Cloudy
 Sampling Time: 4:20 P.M. Water Color: clear Odor: yes
 Purging Flow Rate: 1 gpm. Sediment Description: none
 Did well de-water? _____ If yes: Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity 10^{20} $\mu\text{mhos/cm} \times$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>4:00</u>	<u>4</u>	<u>6.75</u>	<u>1.66</u>	<u>69.2</u>	<u>1.44</u>	<u>117</u>	
<u>4:03</u>	<u>8</u>	<u>6.78</u>	<u>1.46</u>	<u>69.4</u>			
<u>4:05</u>	<u>13</u>	<u>6.79</u>	<u>1.45</u>	<u>69.4</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>3VOL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/brex/mtbe</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate, phosphate</u>
					<u>Redox</u>

COMMENTS: No FP found in skimmer.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Facility # 5325 Job#: 180061
 Address: 3220 Lakeshore Ave. Date: 3-13-00
 City: Oakland Sampler: Joe

Well ID: U-2 Well Condition: O.K.
 Well Diameter: 3 in. Hydrocarbon Amount Bailed
 Thickness: 0 (feet) (product/water): 0 (Gallons)
 Total Depth: 19.62 ft.
 Depth to Water: 6.69 ft.

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

$12.93 \times VF \ 0.38 = 4.91 / \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 15 \text{ (gal.)}$

Purge Equipment: Disposable Bailer
 Bailer
 Stack
~~Suction~~
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 8:15 Weather Conditions: cloudy
 Sampling Time: 2:38 pm Water Color: clear Odor: yes
 Purging Flow Rate: 1.5 gpm. Sediment Description: none
 Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal)	pH	Conductivity $\mu\text{mhos/cm} \times 1000$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>3:22</u>	<u>5</u>	<u>7.11</u>	<u>1.97</u>	<u>69.3</u>	<u>2.68</u>	<u>121</u>	
<u>3:24</u>	<u>10</u>	<u>7.07</u>	<u>2.22</u>	<u>69.0</u>			
<u>3:26</u>	<u>15</u>	<u>7.09</u>	<u>2.25</u>	<u>68.8</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-2</u>	<u>3 vOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/bTEX/mtbe</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate, phosphate</u>
					<u>Redox</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Facility # 5325 Job#: 180061
 Address: 3220 Lakeshore Ave. Date: 3-13-00
 City: Oakland Sampler: Joe

Well ID U-3 Well Condition: O.K.
 Well Diameter 3 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)
 Total Depth 19.40 ft. Volume 2' = 0.17 3' = 0.38 4' = 0.66
 Depth to Water 8.28 ft. Factor (VF) 6' = 1.50 12' = 5.80

11.12 x VF 0.38 = 4.23 x 3 (case volume) = Estimated Purge Volume: 13 (gal.)

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

Starting Time: 1:15 Weather Conditions: cloudy
 Sampling Time: 1:46 PM 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 10^2 μ mhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1:30	4	7.59	10.12	70.1	4.82	226	
1:31	8.5	7.42	9.67	69.4			
1:33	13	7.40	9.62	69.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-3</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/brax/mtbe</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate, phosphate</u>
					<u>Redox</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Facility # 5325 Job#: 180061
 Address: 3220 Lakeshore Ave. Date: 3-13-00
 City: Oakland Sampler: Joe

Well ID U-4 Well Condition: O.K.
 Well Diameter 4 in. Hydrocarbon Amount Bailed
 Thickness: 0 (feet) (product/water): 0 (Gallons)
 Total Depth 20.15 ft.
 Depth to Water 7.24 ft.

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

12.91 x VF 0.66 = 8.52 x 3 (case volume) = Estimated Purge Volume: 26 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 12:25 Weather Conditions: cloudy
 Sampling Time: 1:00 P.M. Water Color: clear Odor: none
 Purging Flow Rate: 2 gpm. Sediment Description: none
 Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity 10^3 μ mhos/cm \times	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:35</u>	<u>8</u>	<u>7.80</u>	<u>9.66</u>	<u>69.2</u>	<u>4.33</u>	<u>219</u>	
<u>12:38</u>	<u>16</u>	<u>7.39</u>	<u>9.51</u>	<u>70.4</u>			
<u>12:40</u>	<u>26</u>	<u>7.47</u>	<u>9.48</u>	<u>69.7</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-4</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI/btex/mtbe</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate, phosphate</u>
					<u>Redox</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Facility # 5325 Job#: 180061
 Address: 3220 Lakeshore Ave. Date: 3-13-00
 City: Oakland Sampler: Joe

Well ID U-5 Well Condition: O.K.
 Well Diameter 4 in. Hydrocarbon Amount Bailed
 Thickness: 0 (feet) (product/water): 0 (Gallons)
 Total Depth 20.05 ft.
 Depth to Water 6.73 ft.

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

13.32 x VF 0.66 = 8.79 x 3 (case volume) = Estimated Purge Volume: 27 (gal.)

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

Starting Time: 2:35 Weather Conditions: cloudy
 Sampling Time: 3:05 p.m. Water Color: clear Odor: yes
 Purging Flow Rate: 2 gpm. Sediment Description: none
 Did well de-water? _____ If yes: Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity 10^2 μ mhos/cm \times	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>2:45</u>	<u>9</u>	<u>7.27</u>	<u>3.14</u>	<u>70.0</u>	<u>3.04</u>	<u>111</u>	
<u>2:47</u>	<u>18</u>	<u>7.30</u>	<u>3.17</u>	<u>69.2</u>			
<u>2:50</u>	<u>27</u>	<u>7.25</u>	<u>3.19</u>	<u>69.2</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-5</u>	<u>3 vol A</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Iron</u>
					<u>Nitrate, phosphate</u>
					<u>Redox</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Facility # 5325 Job#: 180061
 Address: 3220 Lakeshore Ave. Date: 3-13-00
 City: Oakland Sampler: Joe

Well ID U-6 Well Condition: O.k.

Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: 0 (feet) (product/water): 0 (Gallons)
 Total Depth 23.80 ft.
 Depth to Water 6.95 ft.

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

16.85 x VF 0.17 = 2.87 x 3 (case volume) = Estimated Purge Volume: 9 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 1:55 Weather Conditions: cloudy
 Sampling Time: 2:25 p.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 10^3 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>2:07</u>	<u>3</u>	<u>7.48</u>	<u>5.36</u>	<u>72.5</u>	<u>2.81</u>	<u>68</u>	
<u>2:09</u>	<u>6</u>	<u>7.42</u>	<u>4.87</u>	<u>73.0</u>			
<u>2:10</u>	<u>9</u>	<u>7.40</u>	<u>4.92</u>	<u>72.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-6</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe</u>
	<u>1 plastic</u>	<u>//</u>	<u>-</u>	<u>//</u>	<u>Iron</u>
					<u>Nitrate, phosphate</u>
					<u>Redox</u>

COMMENTS: _____



Sequoia Analytical

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

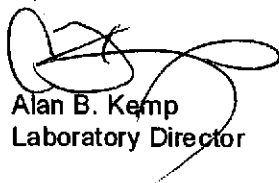
6 April, 2000

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

RE: Unocal
Sequoia Report: W003327

Enclosed are the results of analyses for samples received by the laboratory on 13-Mar-00 19:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alan B. Kemp
Laboratory Director

CA ELAP Certificate #1271





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

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

Reported:
06-Apr-00 13:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W003327-01	Water	14-Mar-00 00:00	13-Mar-00 19:00
U-1	W003327-02	Water	14-Mar-00 16:20	13-Mar-00 19:00
U-2	W003327-03	Water	14-Mar-00 15:38	13-Mar-00 19:00
U-3	W003327-04	Water	14-Mar-00 13:46	13-Mar-00 19:00
U-4	W003327-05	Water	14-Mar-00 13:00	13-Mar-00 19:00
U-5	W003327-06	Water	14-Mar-00 15:05	13-Mar-00 19:00
U-6	W003327-07	Water	14-Mar-00 14:25	13-Mar-00 19:00

Sequoia Analytical - Walnut Creek

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

Alan B. Kemp, Laboratory Director





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

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

Reported:
06-Apr-00 13:33

**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
TB-LB (W003327-01) Water Sampled: 14-Mar-00 00:00 Received: 13-Mar-00 19:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	0C23001	23-Mar-00	23-Mar-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	70-130		"	"	"	"	
U-1 (W003327-02) Water Sampled: 14-Mar-00 16:20 Received: 13-Mar-00 19:00 P-01									
Purgeable Hydrocarbons	48000	10000	ug/l	200	0C25002	25-Mar-00	25-Mar-00	EPA 8015M/8020	
Benzene	490	100	"	"	"	"	"	"	
Toluene	610	100	"	"	"	"	"	"	
Ethylbenzene	2400	100	"	"	"	"	"	"	
Xylenes (total)	10000	100	"	"	"	"	"	"	
Methyl tert-butyl ether	22000	500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		93.7 %	70-130		"	"	"	"	
U-2 (W003327-03) Water Sampled: 14-Mar-00 15:38 Received: 13-Mar-00 19:00 P-01									
Purgeable Hydrocarbons	11000	10000	ug/l	200	0C24001	24-Mar-00	24-Mar-00	EPA 8015M/8020	
Benzene	380	100	"	"	"	"	"	"	
Toluene	160	100	"	"	"	"	"	"	
Ethylbenzene	ND	100	"	"	"	"	"	"	
Xylenes (total)	2100	100	"	"	"	"	"	"	
Methyl tert-butyl ether	22000	500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.0 %	70-130		"	"	"	"	





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

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

Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (W003327-04) Water Sampled: 14-Mar-00 13:46 Received: 13-Mar-00 19:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	0C24001	24-Mar-00	24-Mar-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %		70-130	"	"	"	"	
U-4 (W003327-05) Water Sampled: 14-Mar-00 13:00 Received: 13-Mar-00 19:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	0C24001	24-Mar-00	24-Mar-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %		70-130	"	"	"	"	
U-5 (W003327-06) Water Sampled: 14-Mar-00 15:05 Received: 13-Mar-00 19:00									
Purgeable Hydrocarbons	880	50	ug/l	1	0C26001	26-Mar-00	26-Mar-00	EPA 8015M/8020	
Benzene	12	0.50	"	"	"	"	"	"	
Toluene	1.0	0.50	"	"	"	"	"	"	
Ethylbenzene	5.6	0.50	"	"	"	"	"	"	
Xylenes (total)	8.7	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	46	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		312 %		70-130	"	"	"	"	S-04





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

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

Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-6 (W003327-07) Water Sampled: 14-Mar-00 14:25 Received: 13-Mar-00 19:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	0C26001	26-Mar-00	26-Mar-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	560	2.5	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		110 %		70-130	"	"	"	"	





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Project: Unocal
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Project Manager: Deanna L. Harding

Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water Sampled: 14-Mar-00 16:20 Received: 13-Mar-00 19:00									
Methyl tert-butyl ether	23000	1000	ug/l	500	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	
Surrogate: Dibromofluoromethane		84.0 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		78.0 %	50-150		"	"	"	"	
U-2 (W003327-03) Water Sampled: 14-Mar-00 15:38 Received: 13-Mar-00 19:00									
Methyl tert-butyl ether	26000	1000	ug/l	500	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	
Surrogate: Dibromofluoromethane		86.0 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		76.0 %	50-150		"	"	"	"	
U-5 (W003327-06) Water Sampled: 14-Mar-00 15:05 Received: 13-Mar-00 19:00									
Methyl tert-butyl ether	37	2.0	ug/l	1	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	
Surrogate: Dibromofluoromethane		88.0 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		86.0 %	50-150		"	"	"	"	
U-6 (W003327-07) Water Sampled: 14-Mar-00 14:25 Received: 13-Mar-00 19:00									
Methyl tert-butyl ether	670	10	ug/l	5	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	
Surrogate: Dibromofluoromethane		84.0 %	50-150		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		78.0 %	50-150		"	"	"	"	





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

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

Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water	Sampled: 14-Mar-00 16:26	Received: 13-Mar-00 19:00							
Ferrous Iron	8.0	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-2 (W003327-03) Water	Sampled: 14-Mar-00 15:38	Received: 13-Mar-00 19:00							
Ferrous Iron	4.3	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-3 (W003327-04) Water	Sampled: 14-Mar-00 13:46	Received: 13-Mar-00 19:00							
Ferrous Iron	0.15	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-4 (W003327-05) Water	Sampled: 14-Mar-00 13:00	Received: 13-Mar-00 19:00							
Ferrous Iron	0.021	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-5 (W003327-06) Water	Sampled: 14-Mar-00 15:05	Received: 13-Mar-00 19:00							
Ferrous Iron	0.33	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-6 (W003327-07) Water	Sampled: 14-Mar-00 14:25	Received: 13-Mar-00 19:00							
Ferrous Iron	0.79	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	

maybe indicator of anaerobic biodegradation





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

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

Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water Sampled: 14-Mar-00 16:20 Received: 13-Mar-00 19:00									
Nitrate as NO3	0.18	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	"	"	"	"	"	"	
U-2 (W003327-03) Water Sampled: 14-Mar-00 15:38 Received: 13-Mar-00 19:00									
Nitrate as NO3	0.31	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	"	"	"	"	"	"	
U-3 (W003327-04) Water Sampled: 14-Mar-00 13:46 Received: 13-Mar-00 19:00									
Nitrate as NO3	33	0.50	mg/l	5	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	"	1	"	"	"	"	
U-4 (W003327-05) Water Sampled: 14-Mar-00 13:00 Received: 13-Mar-00 19:00									
Nitrate as NO3	33	0.50	mg/l	5	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	"	1	"	"	"	"	
U-5 (W003327-06) Water Sampled: 14-Mar-00 15:05 Received: 13-Mar-00 19:00									
Nitrate as NO3	0.16	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	"	"	"	"	"	"	
U-6 (W003327-07) Water Sampled: 14-Mar-00 14:25 Received: 13-Mar-00 19:00									
Nitrate as NO3	0.26	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	"	"	"	"	"	"	





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

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

Reported:
06-Apr-00 13:33

**Subcontracted Analyses
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water Sampled: 14-Mar-00 16:20 Received: 13-Mar-00 19:00									
Oxidation/Reduction Potential	262	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-2 (W003327-03) Water Sampled: 14-Mar-00 15:38 Received: 13-Mar-00 19:00									
Oxidation/Reduction Potential	184	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-3 (W003327-04) Water Sampled: 14-Mar-00 13:46 Received: 13-Mar-00 19:00									
Oxidation/Reduction Potential	307	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-4 (W003327-05) Water Sampled: 14-Mar-00 13:00 Received: 13-Mar-00 19:00									
Oxidation/Reduction Potential	244	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-5 (W003327-06) Water Sampled: 14-Mar-00 15:05 Received: 13-Mar-00 19:00									
Oxidation/Reduction Potential	264	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-6 (W003327-07) Water Sampled: 14-Mar-00 14:25 Received: 13-Mar-00 19:00									
Oxidation/Reduction Potential	222	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	





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

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

Reported:
06-Apr-00 13:33

**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 0C23001 - EPA 5030B [P/T]

Blank (0C23001-BLK1)

Prepared & Analyzed: 23-Mar-00

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: α,α,α-Trifluorotoluene</i>	31.2		"	30.0		104	70-130			

LCS (0C23001-BS1)

Prepared & Analyzed: 23-Mar-00

Benzene	16.0	0.50	ug/l	20.0		80.0	70-130			
Toluene	16.6	0.50	"	20.0		83.0	70-130			
Ethylbenzene	17.3	0.50	"	20.0		86.5	70-130			
Xylenes (total)	55.7	0.50	"	60.0		92.8	70-130			
<i>Surrogate: α,α,α-Trifluorotoluene</i>	27.6		"	30.0		92.0	70-130			

Matrix Spike (0C23001-MS1)

Source: W003347-05

Prepared & Analyzed: 23-Mar-00

Benzene	16.1	0.50	ug/l	20.0	ND	80.5	70-130			
Toluene	16.7	0.50	"	20.0	ND	83.5	70-130			
Ethylbenzene	15.6	0.50	"	20.0	ND	78.0	70-130			
Xylenes (total)	54.6	0.50	"	60.0	ND	91.0	70-130			
<i>Surrogate: α,α,α-Trifluorotoluene</i>	26.3		"	30.0		87.7	70-130			

Matrix Spike Dup (0C23001-MSD1)

Source: W003347-05

Prepared & Analyzed: 23-Mar-00

Benzene	16.3	0.50	ug/l	20.0	ND	81.5	70-130	1.23	20	
Toluene	16.9	0.50	"	20.0	ND	84.5	70-130	1.19	20	
Ethylbenzene	17.3	0.50	"	20.0	ND	86.5	70-130	10.3	20	
Xylenes (total)	54.9	0.50	"	60.0	ND	91.5	70-130	0.548	20	
<i>Surrogate: α,α,α-Trifluorotoluene</i>	26.6		"	30.0		88.7	70-130			





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

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

Reported:
06-Apr-00 13:33

**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 0C24001 - EPA 5030B [P/T]

Blank (0C24001-BLK1)

Prepared & Analyzed: 24-Mar-00

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	31.4		"	30.0		105	70-130			

LCS (0C24001-BS1)

Prepared & Analyzed: 24-Mar-00

Benzene	17.0	0.50	ug/l	20.0	ND	85.0	70-130			
Toluene	17.6	0.50	"	20.0	ND	88.0	70-130			
Ethylbenzene	17.4	0.50	"	20.0	ND	87.0	70-130			
Xylenes (total)	57.8	0.50	"	60.0	ND	96.3	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	26.9		"	30.0		89.7	70-130			

Matrix Spike (0C24001-MS1)

Source: W003333-01

Prepared & Analyzed: 24-Mar-00

Benzene	14.9	0.50	ug/l	20.0	ND	74.5	70-130			
Toluene	15.4	0.50	"	20.0	ND	77.0	70-130			
Ethylbenzene	14.6	0.50	"	20.0	ND	73.0	70-130			
Xylenes (total)	49.8	0.50	"	60.0	ND	83.0	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	25.8		"	30.0		86.0	70-130			

Matrix Spike Dup (0C24001-MSD1)

Source: W003333-01

Prepared & Analyzed: 24-Mar-00

Benzene	15.5	0.50	ug/l	20.0	ND	77.5	70-130	3.95	20	
Toluene	17.5	0.50	"	20.0	ND	87.5	70-130	12.8	20	
Ethylbenzene	16.2	0.50	"	20.0	ND	81.0	70-130	10.4	20	
Xylenes (total)	51.7	0.50	"	60.0	ND	86.2	70-130	3.74	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	26.4		"	30.0		88.0	70-130			





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

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

Reported:
06-Apr-00 13:33

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 0C25002 - EPA 5030B [P/T]

Blank (0C25002-BLK1)

Prepared & Analyzed: 25-Mar-00

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a, a, a-Trifluorotoluene</i>	30.6		"	30.0		102	70-130			

LCS (0C25002-BS1)

Prepared & Analyzed: 25-Mar-00

Benzene	18.4	0.50	ug/l	20.0		92.0	70-130			
Toluene	19.0	0.50	"	20.0		95.0	70-130			
Ethylbenzene	18.8	0.50	"	20.0		94.0	70-130			
Xylenes (total)	54.7	0.50	"	60.0		91.2	70-130			
<i>Surrogate: a, a, a-Trifluorotoluene</i>	27.8		"	30.0		92.7	70-130			

Matrix Spike (0C25002-MS1)

Source: W003473-11

Prepared & Analyzed: 25-Mar-00

Benzene	24.2	0.50	ug/l	20.0	6.1	90.5	70-130			
Toluene	19.2	0.50	"	20.0	ND	96.0	70-130			
Ethylbenzene	20.3	0.50	"	20.0	1.5	94.0	70-130			
Xylenes (total)	55.5	0.50	"	60.0	1.1	90.7	70-130			
<i>Surrogate: a, a, a-Trifluorotoluene</i>	29.3		"	30.0		97.7	70-130			

Matrix Spike Dup (0C25002-MSD1)

Source: W003473-11

Prepared & Analyzed: 25-Mar-00

Benzene	23.1	0.50	ug/l	20.0	6.1	85.0	70-130	4.65	20	
Toluene	18.6	0.50	"	20.0	ND	93.0	70-130	3.17	20	
Ethylbenzene	19.8	0.50	"	20.0	1.5	91.5	70-130	2.49	20	
Xylenes (total)	54.0	0.50	"	60.0	1.1	88.2	70-130	2.74	20	
<i>Surrogate: a, a, a-Trifluorotoluene</i>	28.1		"	30.0		93.7	70-130			





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

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

Reported:
06-Apr-00 13:33

**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 0C26001 - EPA 5030B [P/T]

Blank (0C26001-BLK1)

Prepared & Analyzed: 26-Mar-00

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	32.6		"	30.0		109	70-130			

LCS (0C26001-BS1)

Prepared & Analyzed: 26-Mar-00

Benzene	18.0	0.50	ug/l	20.0		90.0	70-130			
Toluene	18.7	0.50	"	20.0		93.5	70-130			
Ethylbenzene	21.3	0.50	"	20.0		106	70-130			
Xylenes (total)	60.3	0.50	"	60.0		100	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	27.1		"	30.0		90.3	70-130			

Matrix Spike (0C26001-MS1)

Source: W003474-11

Prepared & Analyzed: 26-Mar-00

Benzene	18.5	0.50	ug/l	20.0	ND	92.5	70-130			
Toluene	19.0	0.50	"	20.0	ND	95.0	70-130			
Ethylbenzene	21.7	0.50	"	20.0	ND	109	70-130			
Xylenes (total)	61.8	0.50	"	60.0	ND	103	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	26.3		"	30.0		87.7	70-130			

Matrix Spike Dup (0C26001-MSD1)

Source: W003474-11

Prepared & Analyzed: 26-Mar-00

Benzene	18.1	0.50	ug/l	20.0	ND	90.5	70-130	2.19	20	
Toluene	18.6	0.50	"	20.0	ND	93.0	70-130	2.13	20	
Ethylbenzene	21.0	0.50	"	20.0	ND	105	70-130	3.28	20	
Xylenes (total)	59.7	0.50	"	60.0	ND	99.5	70-130	3.46	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	26.5		"	30.0		88.3	70-130			





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Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0C28024 - EPA 5030B [P/T]

Blank (0C28024-BLK1)

Prepared: 28-Mar-00 Analyzed: 29-Mar-00

Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	51.0		"	50.0		102	50-150			
Surrogate: 1,2-Dichloroethane-d4	45.0		"	50.0		90.0	50-150			

LCS (0C28024-BS1)

Prepared: 28-Mar-00 Analyzed: 29-Mar-00

Methyl tert-butyl ether	46.0	2.0	ug/l	50.0		92.0	70-130			
Surrogate: Dibromofluoromethane	46.0		"	50.0		92.0	50-150			
Surrogate: 1,2-Dichloroethane-d4	41.0		"	50.0		82.0	50-150			

LCS Dup (0C28024-BSD1)

Prepared & Analyzed: 29-Mar-00

Methyl tert-butyl ether	51.5	2.0	ug/l	50.0		103	70-130	11.3	25	
Surrogate: Dibromofluoromethane	52.0		"	50.0		104	50-150			
Surrogate: 1,2-Dichloroethane-d4	45.0		"	50.0		90.0	50-150			





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Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits RPD	RPD	RPD Limit	Notes
Batch 0C27021 - 200.7										
Blank (0C27021-BLK1)										
				Prepared: 26-Mar-00 Analyzed: 27-Mar-00						
Ferrous Iron	ND	0.010	mg/l							
LCS (0C27021-BS1)										
				Prepared: 26-Mar-00 Analyzed: 27-Mar-00						
Ferrous Iron	0.860	0.010	mg/l	1.00		86.0	80-120			
LCS Dup (0C27021-BS1)										
				Prepared: 26-Mar-00 Analyzed: 27-Mar-00						
Ferrous Iron	0.850	0.010	mg/l	1.00		85.0	80-120	1.17	20	
Matrix Spike (0C27021-MS1)										
				Source: W003280-01		Prepared: 26-Mar-00 Analyzed: 27-Mar-00				
Ferrous Iron	0.910	0.010	mg/l	1.00	ND	91.0	80-120			
Matrix Spike Dup (0C27021-MSD1)										
				Source: W003280-01		Prepared: 26-Mar-00 Analyzed: 27-Mar-00				
Ferrous Iron	1.00	0.010	mg/l	1.00	ND	100	80-120	9.42	20	





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6747 Sierra Court Suite J
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Project: Unocal
Project Number: Unocal # 5325
Project Manager: Deanna L. Harding

Reported:
06-Apr-00 13:33

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0C15018 - General Preparation

Blank (0C15018-BLK2)

Prepared & Analyzed: 15-Mar-00

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

LCS (0C15018-BS2)

Prepared & Analyzed: 15-Mar-00

Nitrate as NO3	10.8	0.10	mg/l	10.0		108	80-120			
Phosphate	20.4	0.500	"	20.0		102	80-120			

Matrix Spike (0C15018-MS2)

Source: W003327-02

Prepared & Analyzed: 15-Mar-00

Nitrate as NO3	11.3	0.20	mg/l	10.0	0.18	111	75-125			
Phosphate	15.2	1.00	"	20.0	ND	76.0	75-125			

Matrix Spike Dup (0C15018-MSD2)

Source: W003327-02

Prepared & Analyzed: 15-Mar-00

Nitrate as NO3	11.2	0.20	mg/l	10.0	0.18	110	75-125	0.889	20	
Phosphate	15.2	1.00	"	20.0	ND	76.0	75-125	0	20	





Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568	Project: Unocal Project Number: Unocal # 5325 Project Manager: Deanna L. Harding	Reported: 06-Apr-00 13:33
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**Subcontracted Analyses - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0C16015 - General Preparation

Duplicate (0C16015-DUP1)	Source: W003327-07		Prepared & Analyzed: 16-Mar-00							
Oxidation/Reduction Potential	241	10.0	mv		222			8.21	20	





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

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

Reported:
06-Apr-00 13:33

Notes and Definitions

- P-01 Chromatogram Pattern: Gasoline C6-C12
- P-02 Chromatogram Pattern: Gasoline C6-C12 + Unidentified Hydrocarbons <C6
- 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

