GETTLER-RYAN INC.

STID 2465

TRANSMITTAL

December 2, 1999
G-R #: 180047

RESPONDED TO 1/13/99 (AG)

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

CC: Mr. Doug Lee
Gettler-Ryan Inc.
Dublin, California

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

RE: Tosco (Unocal) SS #6034
4700 First Street
Livermore, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 23, 1999	Groundwater Monitoring and Sampling Report Semi-Annual 1999 - Event of October 12, 1999

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 15, 1999***, this report will be distributed to the following:

Enclosure

cc: **Alameda County Health Care Services**
1131 Harbor Bay Parkway
Alameda, California 94502

99 DEC 20 PM 10:15
ENVIRONMENTAL PROTECTION

agency/6034dbd.qmt

GETTLER-RYAN INC.

November 23, 1999
G-R Job #180047

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

RE: Semi-Annual 1999 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #6034
4700 First Street
Livermore, California

Dear Mr. De Witt:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On October 12, 1999, field personnel monitored seven wells (MW-1 through MW-7) and sampled two wells (MW-2 and MW-4) at the above referenced site. Joint groundwater monitoring was not conducted with the Chevron Facility No. 9-1924 located at 4904 South Front Road, Livermore, California.

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

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1, 2 and 4. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

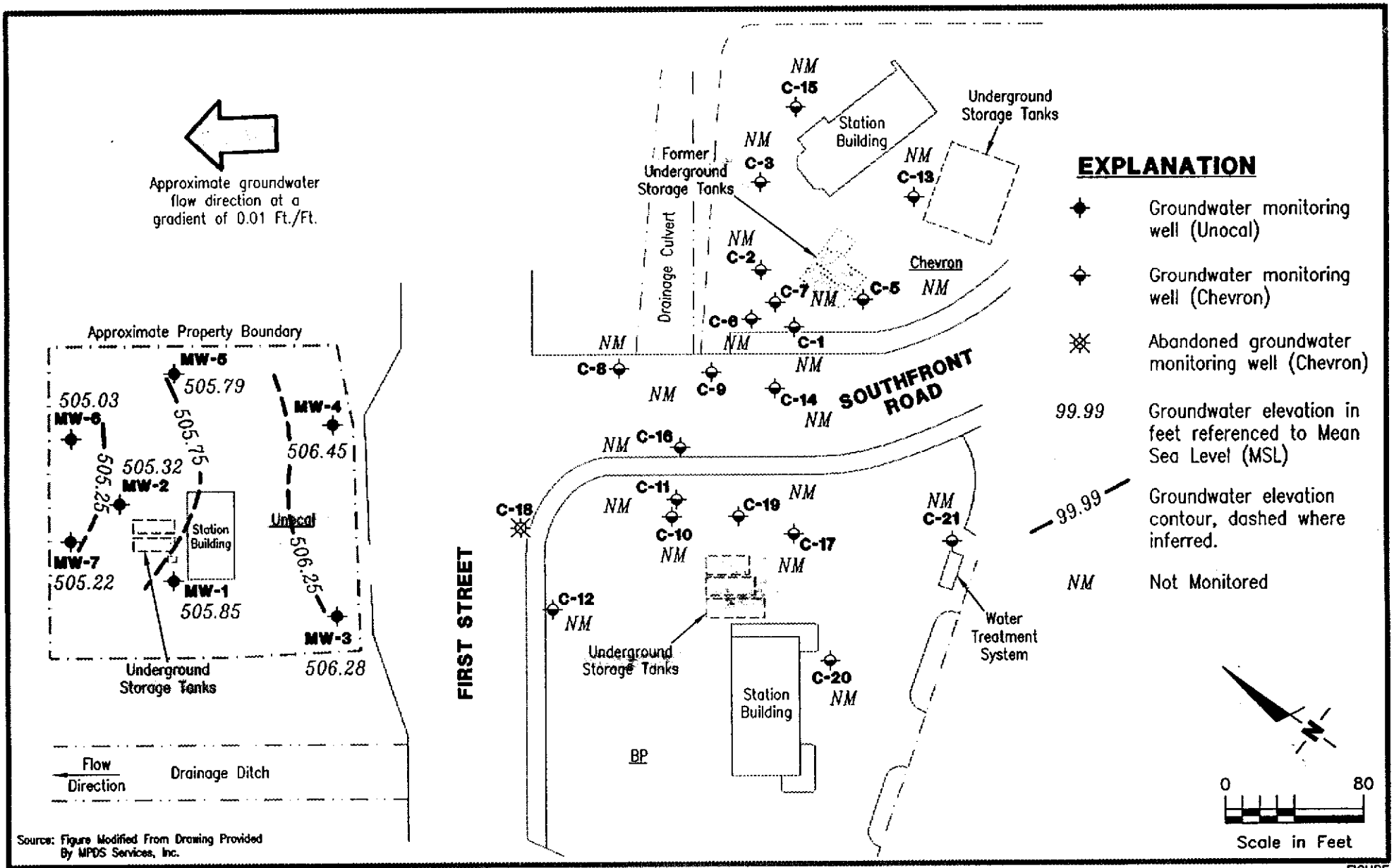
Sincerely,

Deanna L. Harding
Project Coordinator

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

REGISTERED GEOLOGIST
DOUGLAS J. LEE
No. 6882
STATE OF CALIFORNIA

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
Table 4: Groundwater Analytical Results - Oxygenate Compounds
Table 5: Joint Groundwater Monitoring Data - Chevron Facility No. 9-1924
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
6034.qml Chain of Custody Document and Laboratory Analytical Reports



Gettler - Ryan Inc.
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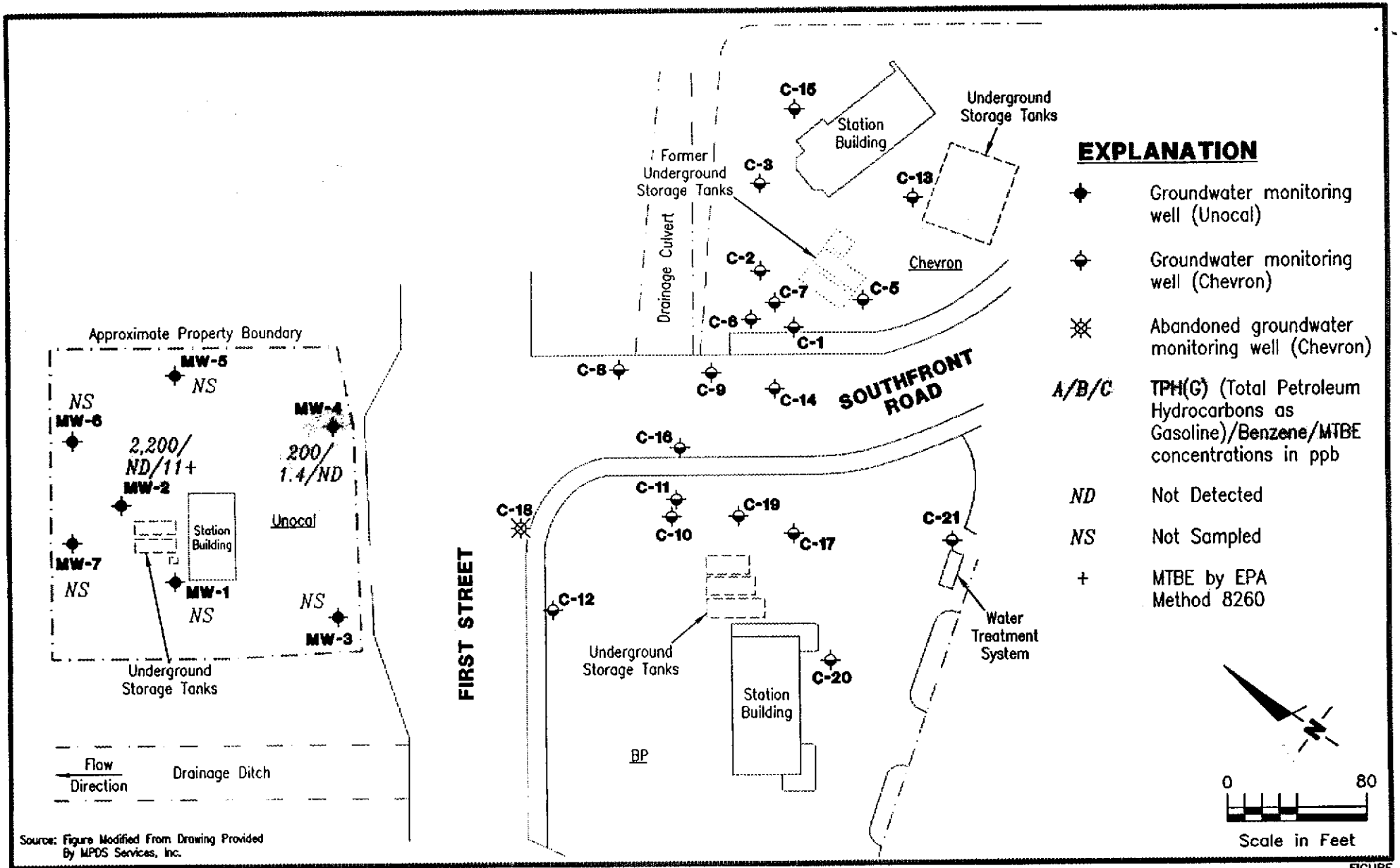
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 6034
4700 First Street
Livermore, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180047		October 12, 1999	



FIGURE

2

Gettler - Ryan Inc.

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Dublin, CA 94568

CONCENTRATION MAP
Tosco (Unocal) Service Station No. 6034
4700 First Street
Livermore, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180047		October 12, 1999	

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	11/18/89	--	--	ND	ND	ND	ND	ND	--
	03/08/90	--	--	ND	ND	ND	ND	ND	--
	06/05/90	--	--	ND	ND	ND	ND	ND	--
	09/07/90	--	--	ND	ND	1.2	ND	ND	--
	12/24/90	--	--	ND	ND	ND	ND	0.40	--
	04/10/91	--	--	ND	ND	ND	ND	ND	--
	07/10/91	--	--	ND	ND	ND	ND	ND	--
520.88	04/22/93	15.47	505.41	--	--	--	--	--	--
	07/20/93	18.04	502.84	--	--	--	--	--	--
520.64	10/20/93	15.69	504.95	--	--	--	--	--	--
	01/20/94	15.65	504.99	--	--	--	--	--	--
	04/21/94	15.58	505.06	ND	ND	ND	ND	ND	--
	07/21/94	15.62	505.02	SAMPLED ANNUALLY		--	--	--	--
	10/19/94	15.28	505.36	--	--	--	--	--	--
	01/18/95	14.56	506.08	--	--	--	--	--	--
	04/17/95	14.82	505.82	ND	ND	ND	ND	ND	--
	07/18/95	14.78	505.86	--	--	--	--	--	--
	10/17/95	14.83	505.81	--	--	--	--	--	--
	01/17/96	14.96	505.68	--	--	--	--	--	--
	04/17/96	14.47	506.17	ND	ND	ND	ND	ND	ND
	07/16/96	14.57	506.07	--	--	--	--	--	--
	10/16/96	14.50	506.14	--	--	--	--	--	--
	04/08/97	15.05	505.59	SAMPLING DISCONTINUED		--	--	--	--
	10/06/97	15.00	505.64	--	--	--	--	--	--
	04/02/98	14.80	505.84	--	--	--	--	--	--
	10/07/98	14.72	505.92	--	--	--	--	--	--
	04/14/99	14.89	505.75	--	--	--	--	--	--
	10/12/99	**14.79**	**505.85**	**--**	**--**	**--**	**--**	**--**	**--**
MW-2	11/18/89	--	--	53,000	540	500	130	22,000	--
	03/08/90	--	--	26,000	230	410	1,300	2,100	--
	06/05/90	--	--	31,000	250	460	950	9,200	--
	09/07/90	--	--	ND	ND	1.5	ND	ND	--
	12/24/90	--	--	32,000	440	340	460	13,000	--
	04/10/91	--	--	22,000	170	190	490	6,200	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)[4]	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2	07/10/91	--	--	14,000	70	160	570	5,400	--
(cont)	10/14/91	--	--	11,000	79	130	660	4,700	--
	01/14/92	--	--	5,600	36	120	450	2,600	--
	04/06/92	--	--	760	6.3	2.1	ND	130	--
	07/07/92	--	--	44,000	160	1,100	1,000	17,000	--
	10/16/92	--	--	290	2.3	ND	5.1	15	--
	01/14/93	--	--	19,000	75	430	900	8,400	--
520.17	04/22/93	14.98	505.19	49,000	150	1,000	3,000	18,000	--
	07/20/93	17.41	502.76	25,000	68	94	1,000	6,200	--
519.82	10/20/93	15.08	504.74	12,000	27	10	100	3,000	--
	01/20/94	15.02	504.80	20,000	ND	ND	270	3,300	--
	04/21/94	14.96	504.86	27,000	85	65	880	5,300	--
	07/21/94	14.99	504.83	31,000	58	29	940	6,200	--
	10/19/94	14.80	505.02	4,100	16	3.5	8.6	1,100	--
	01/18/95	14.10	505.72	5,100	6.8	7.3	100	1,500	--
	04/17/95	14.13	505.69	320	1.3	0.67	6.6	74	--
	07/18/95	14.11	505.71	12,000	25	24	550	3,700	--
	10/17/95	14.15	505.67	77,000	60	58	760	8,300	220
	01/17/96	14.35	505.47	7,000	15	ND	150	1,600	370
	04/17/96	13.93	505.89	19,000	ND	ND	600	4,900	6,100
	07/16/96	14.00	505.82	23,000	16	22	900	4,500	410
	10/16/96	14.12	505.70	14,000	28	31	1,600	6,900	9,600
	01/13/97	--	--	4,300	12	5.0	28	890	1,300
	04/08/97	14.49	505.33	4,700	ND	6.5	170	830	290
	10/06/97	14.41	505.41	5,800	14	ND	19	860	570
	04/02/98	14.26	505.56	24,000	ND[3]	ND[3]	980	5,200	6,800
	10/07/98	14.35	505.47	41,000[5]	ND[3]	ND[3]	2,100	7,800	3,700/2,700[6]
	04/14/99	14.54	505.28	720	1.2	ND	29	260	95/57[6]
	10/12/99	**14.50**	**505.32**	**2,200[8]**	**ND[3]**	**ND[3]**	**78**	**480**	**52/11[6]**
MW-3	11/18/89	--	--	ND	0.35	ND	ND	ND	--
	03/08/90	--	--	ND	ND	ND	ND	ND	--
	06/05/90	--	--	ND	ND	ND	ND	ND	--
	09/07/90	--	--	1,100	11	ND	6.6	16	--
	12/24/90	--	--	ND	ND	ND	ND	ND	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	04/10/91	--	--	ND	ND	ND	ND	ND	--
(cont)	07/10/91	--	--	ND	ND	ND	ND	ND	--
	10/14/91	--	--	ND	ND	ND	ND	ND	--
	01/14/92	--	--	ND	ND	ND	ND	ND	--
	04/06/92	--	--	ND	ND	ND	ND	ND	--
	07/07/92	--	--	ND	ND	ND	ND	ND	--
	10/16/92	--	--	ND	ND	ND	ND	ND	--
	01/14/93	--	--	ND	ND	ND	ND	ND	--
519.91	04/22/93	14.33	505.58	ND	ND	ND	ND	ND	--
	07/20/93	16.90	503.01	ND	ND	ND	ND	ND	--
519.66	10/20/93	14.42	505.24	ND	ND	ND	ND	ND	--
	01/20/94	14.37	505.29	SAMPLED ANNUALLY		--	--	--	--
	04/21/94	14.30	505.36	ND	ND	ND	ND	ND	--
	07/21/94	14.34	505.32	SAMPLED SEMI-ANNUALLY		--	--	--	--
	10/19/94	14.08	505.58	ND	ND	0.61	ND	0.51	--
	01/18/95	13.23	506.43	--	--	--	--	--	--
	04/17/95	13.2	506.46	ND	ND	ND	ND	ND	--
	07/18/95	13.19	506.47	--	--	--	--	--	--
	10/17/95	13.24	506.42	ND	ND	ND	ND	ND	ND
	01/17/96	13.68	505.98	SAMPLED ANNUALLY[2]		--	--	--	--
	04/17/96	13.04	506.62	ND	ND	ND	ND	ND	ND
	07/16/96	13.24	506.42	--	--	--	--	--	--
	10/16/96	13.10	506.56	--	--	--	--	--	--
	04/08/97	13.73	505.93	SAMPLING DISCONTINUED		--	--	--	--
	10/06/97	13.70	505.96	--	--	--	--	--	--
	04/02/98	13.43	506.23	--	--	--	--	--	--
	10/07/98	13.33	506.33	--	--	--	--	--	--
	04/14/99	13.47	506.19	--	--	--	--	--	--
	10/12/99	**13.38**	**506.28**	**--**	**--**	**--**	**--**	**--**	**--**
MW-4	11/18/89	--	--	990	9.8	10	7.1	4.7	--
	03/08/90	--	--	1,200	18	8.4	37	28	--
	06/05/90	--	--	1,400	1.2	4.7	24	12	--
	09/07/90	--	--	15,000	100	140	210	4,600	--
	12/24/90	--	--	1,400	ND	8.7	15	10	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4	04/10/91	--	--	950	0.84	4.3	9.6	5.0	--
(cont)	07/10/91	--	--	830	8.4	19	7.7	7.2	--
	10/14/91	--	--	880	3.8	2.2	8.6	5.8	--
	01/14/92	--	--	1,500	4.2	7.1	18	9.2	--
	04/06/92	--	--	660	1.3	3.8	2.9	4.1	--
	07/07/92	--	--	340	ND	2.2	2.4	2.4	--
	10/16/92	--	--	300	2.1	ND	4.8	13	--
	01/14/93	--	--	920	ND	6.3	12	3.9	--
520.12	04/22/93	14.30	505.82	1,100	8.8	1.0	7.2	6.0	--
	07/20/93	16.35	503.77	NOT SAMPLED - SAMPLING ACCESS DENIED			--	--	--
519.61	10/20/93	14.16	505.45	640	ND	2.5	2.3	1.9	--
	01/20/94	14.15	505.46	1,200	ND	2.6	4.7	7.4	--
	04/21/94	14.13	505.48	380	0.83	1.2	1.2	1.7	--
	07/21/94	14.26	505.35	320	0.51	1.4	1.0	1.6	--
	10/19/94	13.95	505.66	750	ND	3.6	4.2	3.4	--
	01/18/95	13.16	506.45	790	1.5	3.3	1.2	2.6	--
	04/17/95	13.19	506.42	570	2.8	ND	3.3	3.9	--
	07/18/95	13.21	506.40	340	1.0	1.9	2.8	2.7	--
	10/17/95	13.22	506.39	260	1.1	0.57	0.69	1.6	2.0
	01/17/96	13.02	506.59	SAMPLED SEMI-ANNUALLY		--	--	--	--
	04/17/96	13.08	506.53	720	3.0	2.6	6.1	6.9	ND
	07/16/96	12.91	506.70	--	--	--	--	--	--
	10/16/96	12.98	506.63	1,100	6.6	23	24	85	15
	01/13/97	--	--	--	--	--	--	--	--
	04/08/97	13.36	506.25	470	1.2	1.9	1.2	6.9	ND
	10/06/97	13.42	506.19	240	ND	0.85	0.83	2.3	ND
	04/02/98	12.76	506.85	270[4]	ND[3]	1.2	ND[3]	4.5	10
	10/07/98	13.04	506.57	350[7]	ND	ND	ND	4.8	ND
	04/14/99	13.21	506.40	250[7]	1.6	ND	3.1	5.6	ND/16[6]
	10/12/99	**13.16**	**506.45**	**200[7]**	**1.4**	**ND**	**2.3**	**3.9**	**ND**
MW-5	04/10/91	--	--	630	35	14	47	30	--
	07/10/91	--	--	220	5.1	8.7	9.1	9.7	--
	10/14/91	--	--	660	55	4.4	50	66	--
	01/14/92	--	--	99	1.0	1.2	ND	0.32	1.2

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	04/06/92	--	--	240[1]	ND	ND	0.35	ND	--
(cont)	07/07/92	--	--	76	0.48	1.1	0.32	1.3	1.5
	10/16/92	--	--	180	7.8	1.1	17	6.4	2.0
	01/14/93	--	--	91	ND	0.53	1.2	11	--
520.58	04/22/93	15.24	505.34	94	1.2	ND	ND	1.3	0.82
	07/20/93	17.38	503.20	89	1.1	0.51	ND	1.8	2.2
520.27	10/20/93	15.56	504.71	110	0.8	ND	ND	ND	--
	01/20/94	15.39	504.88	ND	ND	ND	ND	ND	--
	04/21/94	15.41	504.86	ND	ND	ND	ND	ND	--
	07/21/94	15.55	504.72	ND	ND	ND	ND	ND	--
	10/19/94	15.20	505.07	ND	ND	0.71	ND	0.57	--
	01/18/95	14.52	505.75	ND	ND	ND	ND	ND	--
	04/17/95	14.50	505.77	ND	ND	ND	ND	ND	--
	07/18/95	14.41	505.86	ND	ND	ND	ND	1.1	--
	10/17/95	14.46	505.81	ND	ND	ND	ND	ND	ND
	01/17/96	14.48	505.79	SAMPLED ANNUALLY[2]		--	--	--	--
	04/17/96	14.22	506.05	ND	ND	ND	ND	ND	ND
	07/16/96	14.27	506.00	--	--	--	--	--	--
	10/16/96	14.15	506.12	--	--	--	--	--	--
	04/08/97	14.71	505.56	SAMPLING DISCONTINUED		--	--	--	--
	10/06/97	14.71	505.56	--	--	--	--	--	--
	04/02/98	14.28	505.99	--	--	--	--	--	--
	10/07/98	14.40	505.87	--	--	--	--	--	--
	04/14/99	14.63	505.64	--	--	--	--	--	--
	10/12/99	**14.48**	**505.79**	**--**	**--**	**--**	**--**	**--**	**--**
MW-6	04/10/91	--	--	ND	ND	ND	ND	ND	--
	07/10/91	--	--	ND	ND	ND	ND	ND	--
	10/14/91	--	--	ND	ND	ND	ND	ND	--
	01/14/92	--	--	ND	ND	ND	ND	ND	--
	04/06/92	--	--	ND	ND	ND	ND	ND	--
	07/07/92	--	--	ND	ND	ND	ND	ND	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6	10/16/92	OBSTRUCTED	--	--	--	--	--	--	--
(cont)	01/14/93	OBSTRUCTED	--	--	--	--	--	--	--
519.34	04/22/93	OBSTRUCTED	--	--	--	--	--	--	--
	07/20/93	OBSTRUCTED	--	--	--	--	--	--	--
518.75	10/20/93	14.20	504.55	ND	ND	ND	ND	ND	--
	01/20/94	14.14	504.61	ND	ND	ND	ND	ND	--
	04/21/94	14.10	504.65	ND	ND	ND	ND	ND	--
	07/21/94	14.12	504.63	ND	ND	ND	ND	ND	--
	10/19/94	OBSTRUCTED BY ROOTS		--	--	--	--	--	--
	01/18/95	OBSTRUCTED BY ROOTS		--	--	--	--	--	--
	04/17/95	13.82	504.93	ND	ND	ND	ND	ND	--
	07/18/95	13.84	504.91	ND	ND	ND	ND	ND	--
	10/17/95	13.90	504.85	ND	ND	ND	ND	ND	2.2
	01/17/96	OBSTRUCTED BY ROOTS		SAMPLED ANNUALLY[2]		--	--	--	--
	04/17/96	13.66	505.09	ND	ND	ND	ND	ND	ND
	07/16/96	OBSTRUCTED BY ROOTS		--	--	--	--	--	--
	10/16/96	13.72	505.03	--	--	--	--	--	--
	04/08/97	OBSTRUCTED BY ROOTS		--	--	--	--	--	--
	10/06/97	OBSTRUCTED BY ROOTS		--	--	--	--	--	--
	04/02/98	OBSTRUCTED BY ROOTS		--	--	--	--	--	--
	10/07/98	OBSTRUCTED BY ROOTS		--	--	--	--	--	--
	04/14/99	13.82	504.93	--	--	--	--	--	--
	10/12/99	**13.72**	**505.03**	--	--	--	--	--	--
MW-7	04/10/91	--	--	ND	ND	ND	ND	ND	--
	07/10/91	--	--	ND	ND	ND	ND	ND	--
	10/14/91	--	--	ND	ND	ND	ND	ND	--
	01/14/92	--	--	ND	ND	ND	ND	ND	--
	4/06/92	--	--	ND	ND	ND	ND	ND	--
	07/07/92	--	--	ND	ND	ND	ND	ND	--
	10/16/92	--	--	ND	ND	ND	ND	ND	--
	01/14/93	--	--	ND	ND	ND	ND	ND	--
519.37	04/22/93	14.25	505.12	ND	ND	ND	ND	ND	--
	07/20/93	16.68	502.69	ND	ND	ND	ND	ND	--
518.83	10/20/93	14.29	504.54	ND	ND	ND	ND	ND	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-7	01/20/94	14.22	504.61	ND	ND	ND	ND	ND	--
(cont)	04/21/94	14.17	504.66	ND	ND	ND	ND	ND	--
	07/21/94	14.21	504.62	ND	ND	ND	ND	ND	--
	10/19/94	14.05	504.78	ND	ND	0.87	ND	0.61	--
	01/18/95	13.34	505.49	ND	ND	ND	ND	ND	--
	04/17/95	13.38	505.45	ND	ND	ND	ND	ND	--
	07/18/95	13.36	505.47	ND	ND	ND	ND	ND	--
	10/17/95	13.41	505.42	ND	ND	ND	ND	ND	3.5
	01/17/96	13.56	505.27	SAMPLED ANNUALLY[2]		--	--	--	--
	04/17/96	13.21	505.62	ND	ND	ND	ND	ND	ND
	07/16/96	13.22	505.61	--	--	--	--	--	--
	10/16/96	13.58	505.25	--	--	--	--	--	--
	04/08/97	13.73	505.10	SAMPLING DISCONTINUED		--	--	--	--
	10/06/97	13.65	505.18	--	--	--	--	--	--
	04/02/98	13.55	505.28	--	--	--	--	--	--
	10/07/98	13.64	505.19	--	--	--	--	--	--
	04/14/99	13.75	505.08	--	--	--	--	--	--
	10/12/99	**13.61**	**505.22**	**--**	**--**	**--**	**--**	**--**	**--**
Trip Blank									
TB-LB	04/02/98	--	--	ND	ND	ND	ND	ND	ND
	10/07/98	--	--	ND	ND	ND	ND	ND	ND
	04/14/99	--	--	ND	ND	ND	ND	ND	ND
	10/12/99	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #6034

4700 First Street

Livermore, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to April 2, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing elevation
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
msl = Relative to mean sea level
TPH(G) = Total Petroleum Hydrocarbons as Gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether

ppb = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed

* TOC elevations are relative to Mean Sea Level (msl), per the City of Livermore Benchmark No. C-18-5 (Elevation = 551.77 feet msl). Prior to October 20, 1998, DTW measurements were taken from the top of the well covers.

1 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
2 Annual sampling beginning April, 1996.
3 Detection limit raised. Refer to analytical reports.
4 Laboratory report indicates gasoline and unidentified hydrocarbons < C7.
5 Laboratory report indicates weathered gas C6-C12.
6 MTBE by EPA Method 8260.
7 Laboratory report indicates unidentified hydrocarbons C6-C12.
8 Laboratory report indicates gasoline C6-C12.

Table 2

Groundwater Analytical Results

Tosco (Unocal) Service Station #6034
4700 First Street
Livermore, California

Well ID	Date	TPH(D) *(ppb)*	Total Oil & Grease *(ppm)*	Trichloroethene *(ppb)*	Chloroform *(ppb)*
MW-1	11/18/89	--	3.1	0.55	ND
	03/08/90	--	4.7	ND	ND
	06/05/90	--	ND	ND	ND
	09/07/90	--	ND	ND	ND
	12/24/90	--	ND	ND	ND
	04/10/91	--	ND	ND	ND
	07/10/91	--	ND	ND	ND
	04/21/94	--	ND	ND	ND
	04/17/95	ND	ND	ND	0.69
	04/17/96	100	ND	ND	ND

EXPLANATIONS:

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

TPH(D) = Total Petroleum Hydrocarbons as Diesel
ppb = Parts per billion
ppm = Parts per million
ND = Not Detected
-- = Not Analyzed

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

Table 3

Dissolved Oxygen Concentrations

Tosco (Unocal) Service Station #6034
4700 First Street
Livermore, California

Well ID	Date	Before Purging *(mg/L)*	After Purging *(mg/L)*
MW-1	07/16/96	4.24	4.28
MW-2	07/18/95	--	4.22
	10/17/95	--	3.96
	01/17/96	--	5.25
	04/17/96	--	2.59
	07/16/96	4.46	4.35
	10/16/96	3.87	2.92
	01/13/97	4.76	--
	04/08/97	3.76	3.42
	10/06/97	4.13	3.59
	04/02/98	6.32	3.16
	10/07/98[1]	3.85	--
	04/14/99	3.14	--
	10/12/99	**2.96**	--
MW-3	07/16/96	4.19	4.20
MW-4	07/16/96	4.25	4.30
	01/13/97	4.97	--
MW-5	07/16/96	4.18	4.21
MW-6	07/16/96	OBSTRUCTED BY ROOTS	--
MW-7	07/16/96	4.20	4.19

EXPLANATIONS:

Dissolved oxygen concentrations prior to April 2, 1998, were compiled from reports prepared by MPDS Services, Inc.

mg/L = milligrams per liter
-- = Not Measured

[1] ORC removed from well.

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

Table 4

Groundwater Analytical Results - Oxygenate Compounds

TOSCO (Unocal) Service Station #6034
4700 First Street
Livermore, California

Well ID	Date	Ethanol (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-2	04/14/99	ND	ND	57	ND	ND	ND	ND/ND[1]	ND/ND[1]
	10/12/99	**ND**	**ND**	**11**	**ND**	**ND**	**ND**	--	--
MW-4	04/14/99	ND	ND	16	ND	ND	ND	ND/ND[1]	ND/ND[1]

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-Dibromethane
ppb = Parts per billion
ND = Not Detected
-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

[1] Halogenated Volatile Organics by EPA Method 8010.

Table 5

Joint Groundwater Monitoring Data

Chevron Facility No. 9-1924

4904 South Front Road

Livermore, California

WELL ID/ TOC*	Date	DTW *(ft.)*	GWE *(msl)*
C-1			
520.39	04/17/95	11.81	508.58
	07/18/95	12.12	508.27
	10/17/95	12.58	507.81
	04/17/96	10.87	509.52
	07/16/96	11.38	509.01
	10/16/96	11.81	508.58
C-2			
520.76	04/17/95	12.04	508.72
	07/18/95	12.42	508.34
	10/17/95	12.79	507.97
	04/17/96	11.27	509.49
	07/16/96	11.95	508.81
	10/16/96	12.40	508.36
	10/07/98	11.54	509.22
	04/14/99	11.41	509.35
C-3			
521.31	07/18/95	12.89	508.42
	10/17/95	13.26	508.05
C-5			
520.82	04/17/95	12.17	508.65
	07/18/95	12.31	508.51
	10/17/95	12.46	508.36
	04/17/96	11.11	509.71
	07/16/96	11.42	509.40
	10/16/96	12.00	508.82
	10/07/98	11.04	509.78
	04/14/99	11.29	509.53
C-6			
519.62	04/17/95	11.27	508.35
	07/18/95	11.46	508.16
	10/17/95	11.98	507.64
	04/17/96	10.47	509.15
	07/16/96	10.97	508.65
	10/16/96	11.50	508.12
	10/07/98	10.91	508.71
	04/14/99	10.85	508.77
C-7			
520.30	04/17/95	11.74	508.56
	07/18/95	11.98	508.32

Table 5

Joint Groundwater Monitoring Data

Chevron Facility No. 9-1924

4904 South Front Road

Livermore, California

WELL ID/ TOC*	Date	DTW *(ft.)*	GWE *(msl)*
C-7	10/17/95	12.48	507.82
(cont)	04/17/96	10.96	509.34
	07/16/96	11.51	508.79
	10/16/96	12.00	508.30
C-8			
519.74	04/17/95	*DRY*	--
	07/18/95	*DRY*	--
	10/17/95	12.20	507.54
	04/17/96	10.87	508.87
	07/16/96	11.48	508.26
	10/16/96	11.96	507.78
C-9			
519.72	04/17/95	11.31	508.41
	07/18/95	11.66	508.06
	10/17/95	11.73	507.99
	04/17/96	10.05	509.67
	07/16/96	10.92	508.80
	10/16/96	11.30	508.42
	10/07/98	10.85	508.87
	04/14/99	10.83	508.89
C-10			
520.41	04/17/95	13.54	506.87
	07/18/95	13.44	506.97
	10/17/95	13.78	506.63
	04/17/96	13.18	507.23
	07/16/96	13.11	507.30
	10/16/96	13.50	506.91
C-11			
520.04	04/17/95	13.01	507.03
	07/18/95	13.00	507.04
	10/17/95	13.32	506.72
	04/17/96	12.48	507.56
	07/16/96	12.67	507.37
	10/16/96	13.05	506.99
	10/07/98	12.68	507.36
	04/14/99	13.11	506.84
C-12			
519.82	07/18/95	13.12	506.70
	10/17/95	13.52	506.30

Table 5

Joint Groundwater Monitoring Data

Chevron Facility No. 9-1924

4904 South Front Road

Livermore, California

WELL ID/ TOC*	Date	DTW (ft.)	GWE (msl)
C-13			
522.24	07/18/95	13.33	508.91
	10/17/95	13.78	508.46
C-14			
520.08	04/17/95	*DRY*	--
	07/18/95	*DRY*	--
	10/17/95	12.44	507.64
	04/17/96	12.17	507.91
	07/16/96	11.53	508.55
	10/16/96	12.10	507.98
	10/07/98	11.81	508.27
	04/14/99	11.93	508.15
C-15			
522.41	07/18/95	13.80	508.61
	10/17/95	14.26	508.15
C-16			
	04/17/95	INACCESSIBLE - PAVED OVER	
	07/18/95	INACCESSIBLE - PAVED OVER	
	10/17/95	--	--
	04/17/96	INACCESSIBLE - PAVED OVER	
	07/16/96	INACCESSIBLE - PAVED OVER	
	10/16/96	INACCESSIBLE - UNABLE TO LOCATE	
C-17			
520.82	04/17/95	13.25	507.57
	07/18/95	13.44	507.38
	10/17/95	13.50	507.32
	04/17/96	12.70	508.12
	07/16/96	12.67	508.15
	10/16/96	13.70	507.12
	10/07/98	12.93	507.89
	04/14/99	13.05	507.48
C-18	04/17/95	ABANDONED	--
C-19			
518.96	04/17/95	13.80	505.16
	07/18/95	13.72	505.24
	10/17/95	14.10	504.86
	04/17/96	13.40	505.56
	07/16/96	13.47	505.49
	10/16/96	13.83	505.13
	10/07/98	13.09	505.87
	04/14/99	INACCESSIBLE	--

Table 5

Joint Groundwater Monitoring Data

Chevron Facility No. 9-1924

4904 South Front Road

Livermore, California

WELL ID/ TOC*	Date	DTW (ft.)	GWE (msl)
C-20			
520.67	07/16/96	12.93	507.74
	10/16/96	13.24	507.43
	10/07/98	12.68	507.99
	04/14/99	13.30	507.37
C-21			
519.64	07/16/96	11.40	508.24
	10/16/96	11.47	508.17

EXPLANATIONS:

Groundwater monitoring data provided by Blaine Tech Services, Inc.

* TOC elevations were surveyed relative to mean sea level (msl).

TOC = Top of Casing elevation
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
msl = Relative to mean sea level
-- = 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 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 # 6034 Job#: 180047

Address: 4700 First st. Date: 10-12-99

City: Livermore Sampler: Joe

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

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

Total Depth 27.90 ft.

Depth to Water 14.79 ft.

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

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
		~~Y~~		~~SEQUOIA~~	~~TPH(G)/btex/mtbe~~

COMMENTS: M. only

FIELD DATA SHEET

Client/
Facility # 6034 Job#: 180047

Address: 4700 First st. Date: 10-12-99

City: Livermore Sampler: Joe

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

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

Total Depth 25.65 ft.

Depth to Water 14.50 ft.

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

11.15 X VF 0.17 = 1.90 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment: Disposable Bailer, Bailer, Stack, (Suction), Grundfos, Other: _____

Sampling Equipment: (Disposable Bailer), Bailer, Pressure Bailer, Grab Sample, Other: _____

Starting Time: 9:30 Weather Conditions: Hot

Sampling Time: 9:45 A.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 (@ 25°C) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:36	2	7.20	2.35	71.5	2.96		
9:39	4	7.16	2.36	72.3			
9:39 -	6	7.07	2.39	73.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	3 VOA	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe
"	2 VOA	"	"	"	6 OXY's

COMMENTS: _____

WELL MONITORING/SAMPLING

FIELD DATA SHEET

Client/
Facility # 6034 Job#: 180047

Address: 4700 First st. Date: 10-12-99

City: Livermore Sampler: Joe

Well ID MW-3 Well Condition: O.K.

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

Total Depth 25.43 ft.

Depth to Water 13.38 ft.

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

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
		Y		~~SEQUOIA~~	~~TPH(G)/btex/mtbe~~

COMMENTS: MW-3 only

WELL MONITORING/SAMPLING

FIELD DATA SHEET

Client/
Facility # 6034 Job#: 180047

Address: 4700 First st. Date: 10-12-99

City: Livermore Sampler: Joe

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

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

Total Depth 25.48 ft.

Depth to Water 13.16 ft.

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

12.32 X VF 0.17 = 2.09 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

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

Starting Time: 10:00 Weather Conditions: Hot

Sampling Time: 10:20 A.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 (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:08	2	7.17	3.38	72.1			
10:10	4	7.25	3.96	73.1			
10:11 -	6.5	7.14	3.41	73.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	[redacted] 3 VOA	Y	HCL	SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: _____

WELL MONITORING/SAMPLING

FIELD DATA SHEET

Client/
Facility # 6034 Job#: 180047

Address: 4700 First st. Date: 10-12-99

City: Livermore Sampler: Joe

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

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

Total Depth 23.61 ft.

Depth to Water 14.48 ft.

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

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
		Y		~~SEQUOIA~~	~~TPH(G)/btex/mtbe~~

COMMENTS: monly

9/97-fieldst.frm

WELL MONITORING/SAMPLING

FIELD DATA SHEET

Client/
Facility # 6034 Job#: 180047

Address: 4700 First st. Date: 10-12-99

City: Livermore Sampler: Joe

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

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

Total Depth 20.40 ft.

Depth to Water 13.72 ft.

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

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
		Y		~~SEQUOIA~~	~~TPH(G)/btex/mtbe~~

COMMENTS: M. only

WELL MONITORING/SAMPLING

FIELD DATA SHEET

Client/
Facility # 6034 Job#: 180047

Address: 4700 First st. Date: 10-12-99

City: Livermore Sampler: Joe

Well ID MW-7 Well Condition: O.K.

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

Total Depth 23.65 ft.

Depth to Water 13.61 ft.

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

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
		Y		SEQUOIA	TPH(G)/btex/mtbe

COMMENTS: M. only

TOSCO

Facility Number UNOCAL SS#6034
Facility Address 4700 FIRST STREET, LIVERMORE, CA
Consultant Project Number 180047.85
Consultant Name Gettler-Ryan Inc. (G-R Inc.)
Address 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name) Deanna L. Harding
(Phone) 925-551-7555 (Fax Number) 925-551-7888

Contact (Name) MR. DAVID DEWITT
(Phone) 925-277-2384
Laboratory Name Sequoia Analytical
Laboratory Release Number W910743
Samples Collected by (Name) Joe ASEMIAN
Collection Date 10-12-99
Signature Joe Asemian

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	6 oxy Compounds				DO NOT BILL TB-LB ANALYSIS: Remarks
TB-LB	01A	VOA	W	G	–	HCL	Y	✓								✓				
MW-2	02A-E	5VOA	/	/	9:45 AM	/	/	✓												
MW-4	03A-C	3VOA	/	/	10:20 AM	/	/	✓												

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Joe Asemian	G-R Inc.	10-12-99	John Weber	G-R Inc.	10-12-99
John Weber	G-R Inc.	10-12-99	Michele Michaels	Sequoia	10-12-99 10:15
Michele Michaels	Sequoia	10/12 1320	Received For Laboratory By (Signature)		Date/Time 10/12 13:00

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia Analytical

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(925) 988-9600
FAX (925) 988-9673

Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 6034	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	28-Oct-99 13:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W910243-01	Water	12-Oct-99 00:00	12-Oct-99 13:00
MW-2	W910243-02	Water	12-Oct-99 09:45	12-Oct-99 13:00
MW-4	W910243-03	Water	12-Oct-99 10:20	12-Oct-99 13:00

Julianne Fegley, Project Manager

Sequoia Analytical

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Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 6034	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	28-Oct-99 13:58

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 (W910243-01) Water Sampled: 12-Oct-99 00:00 Received: 12-Oct-99 13:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	9J18002	18-Oct-99	18-Oct-99	DHS LUFT	
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: a,a,a-Trifluorotoluene		*90.0 %*		*70-130*	"	"	"	"	
MW-2 (W910243-02) Water Sampled: 12-Oct-99 09:45 Received: 12-Oct-99 13:00									**P-01**
Purgeable Hydrocarbons	**2200**	200	ug/l	4	9J18002	18-Oct-99	18-Oct-99	DHS LUFT	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	**78**	2.0	"	"	"	"	"	"	
Xylenes (total)	**480**	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**52**	10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.0 %*		*70-130*	"	"	"	"	
MW-4 (W910243-03) Water Sampled: 12-Oct-99 10:20 Received: 12-Oct-99 13:00									**P-03**
Purgeable Hydrocarbons	**200**	50	ug/l	1	9J19012	19-Oct-99	19-Oct-99	DHS LUFT	
Benzene	**1.4**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	**2.3**	0.50	"	"	"	"	"	"	
Xylenes (total)	**3.9**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*83.3 %*		*70-130*	"	"	"	"	

Julianne Pegley, Project Manager

Sequoia Analytical

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Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 6034	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	28-Oct-99 13:58

Volatile Organic Compounds by EPA Method 8260A

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (W910243-02) Water	**Sampled: 12-Oct-99 09:45**	**Received: 12-Oct-99 13:00**							
Ethanol	ND	500	ug/l	1	9J20014	19-Oct-99	19-Oct-99	EPA 8260A	
tert-Butyl alcohol	ND	100	"	"	"	"	20-Oct-99	"	
Methyl tert-butyl ether	11	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*82.0 %*	*50-150*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*80.0 %*	*50-150*		"	"	"	"	

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.

Julianne Fegley, Project Manager

Sequoia Analytical

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Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 6034	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	28-Oct-99 13:58

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9J18002: Prepared 18-Oct-99 Using EPA 5030B [P/T]										
Blank (9J18002-BLK1)										
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*39.0*		"	*30.0*		*130*	*70-130*			
LCS (9J18002-BS1)										
Benzene	20.0	0.50	ug/l	20.0		100	70-130			
Toluene	18.3	0.50	"	20.0		91.5	70-130			
Ethylbenzene	21.2	0.50	"	20.0		106	70-130			
Xylenes (total)	68.1	0.50	"	60.0		113	70-130			
Surrogate: a,a,a-Trifluorotoluene	*26.9*		"	*30.0*		*89.7*	*70-130*			
LCS Dup (9J18002-BSD1)										
Benzene	16.7	0.50	ug/l	20.0		83.5	70-130	18.0	20	
Toluene	15.4	0.50	"	20.0		77.0	70-130	17.2	20	
Ethylbenzene	18.1	0.50	"	20.0		90.5	70-130	15.8	20	
Xylenes (total)	61.4	0.50	"	60.0		102	70-130	10.3	20	
Surrogate: a,a,a-Trifluorotoluene	*27.2*		"	*30.0*		*90.7*	*70-130*			
Batch 9J19012: Prepared 19-Oct-99 Using EPA 5030B [P/T]										
Blank (9J19012-BLK1)										
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*28.3*		"	*30.0*		*94.3*	*70-130*			

Julianne Fegley, Project Manager

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Gettler Ryan, Inc. - Dublin	Project: Unocal	
6747 Sierra Court Suite J	Project Number: Unocal # 6034	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	28-Oct-99 13:58

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9J19012: Prepared 19-Oct-99 Using EPA 5030B [P/T]										
LCS (9J19012-BS1)										
Benzene	19.4	0.50	ug/l	20.0		97.0	70-130			
Toluene	17.8	0.50	"	20.0		89.0	70-130			
Ethylbenzene	20.7	0.50	"	20.0		104	70-130			
Xylenes (total)	64.7	0.50	"	60.0		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	*27.0*		"	*30.0*		*90.0*	*70-130*			
Matrix Spike (9J19012-MS1)					**Source: W910244-02**					
Benzene	20.2	0.50	ug/l	20.0	ND	101	70-130			
Toluene	18.5	0.50	"	20.0	ND	92.5	70-130			
Ethylbenzene	20.9	0.50	"	20.0	ND	104	70-130			
Xylenes (total)	67.0	0.50	"	60.0	ND	112	70-130			
Surrogate: a,a,a-Trifluorotoluene	*26.3*		"	*30.0*		*87.7*	*70-130*			
Matrix Spike Dup (9J19012-MSD1)					**Source: W910244-02**					
Benzene	18.8	0.50	ug/l	20.0	ND	94.0	70-130	7.18	20	
Toluene	17.5	0.50	"	20.0	ND	87.5	70-130	5.56	20	
Ethylbenzene	17.3	0.50	"	20.0	ND	86.5	70-130	18.8	20	
Xylenes (total)	62.0	0.50	"	60.0	ND	103	70-130	7.75	20	
Surrogate: a,a,a-Trifluorotoluene	*25.4*		"	*30.0*		*84.7*	*70-130*			

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6747 Sierra Court Suite J	Project Number: Unocal # 6034	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	28-Oct-99 13:58

Volatile Organic Compounds 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
Batch 9J20014: Prepared 19-Oct-99 Using EPA 5030B [P/T]										
Blank (9J20014-BLK1)										
tert-Butyl alcohol	ND	100	ug/l							
Methyl tert-butyl ether	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
tert-Amyl methyl ether	ND	2.0	"							
Surrogate: Dibromofluoromethane	*49.0*		"	*50.0*		*98.0*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*51.0*		"	*50.0*		*102*	*50-150*			
LCS (9J20014-BS1)										
Methyl tert-butyl ether	59.1	2.0	ug/l	50.0		118	70-130			
Surrogate: Dibromofluoromethane	*50.0*		"	*50.0*		*100*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*50.0*		"	*50.0*		*100*	*50-150*			
Matrix Spike (9J20014-MS1)					**Source: W910153-02**					
Methyl tert-butyl ether	69.9	2.0	ug/l	50.0	ND	140	60-150			
Surrogate: Dibromofluoromethane	*54.0*		"	*50.0*		*108*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*64.0*		"	*50.0*		*128*	*50-150*			
Matrix Spike Dup (9J20014-MSD1)					**Source: W910153-02**					
Methyl tert-butyl ether	69.0	2.0	ug/l	50.0	ND	138	60-150	1.30	25	
Surrogate: Dibromofluoromethane	*56.0*		"	*50.0*		*112*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*66.0*		"	*50.0*		*132*	*50-150*			

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6747 Sierra Court Suite J	Project Number: Unocal # 6034	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	28-Oct-99 13:58

Notes and Definitions

P-01	Chromatogram Pattern: Gasoline C6-C12
P-03	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Julianne Fegley, Project Manager