



GETTLER-RYAN INC.

TRANSMITTAL

Alameda County November 27, 2002

DEC 18 2002

G-R #180047

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

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

Handwritten:
12/18/02
AL

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

Handwritten:
No 258

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

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 19, 2002	Groundwater Monitoring and Sampling Report Second Semi-Annual - Event of October 16, 2002

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 11, 2002**, this report will be distributed to the following:

cc: Alameda County Health Care Services, 1131 Harbor Bay Pkwy., Alameda, CA 94502

Enclosure

trans/6034-dbd



GETTLER - RYAN INC.

November 19, 2002
G-R Job #180047

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

RE: Second Semi-Annual Event October 16, 2002
Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #6034
4700 First Street
Livermore, California

Dear Mr. De Witt:

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

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

Sincerely,

Deanna L. Harding
Project Coordinator

Robert C. Mallory
Registered Geologist No. 7285

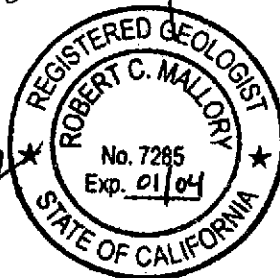
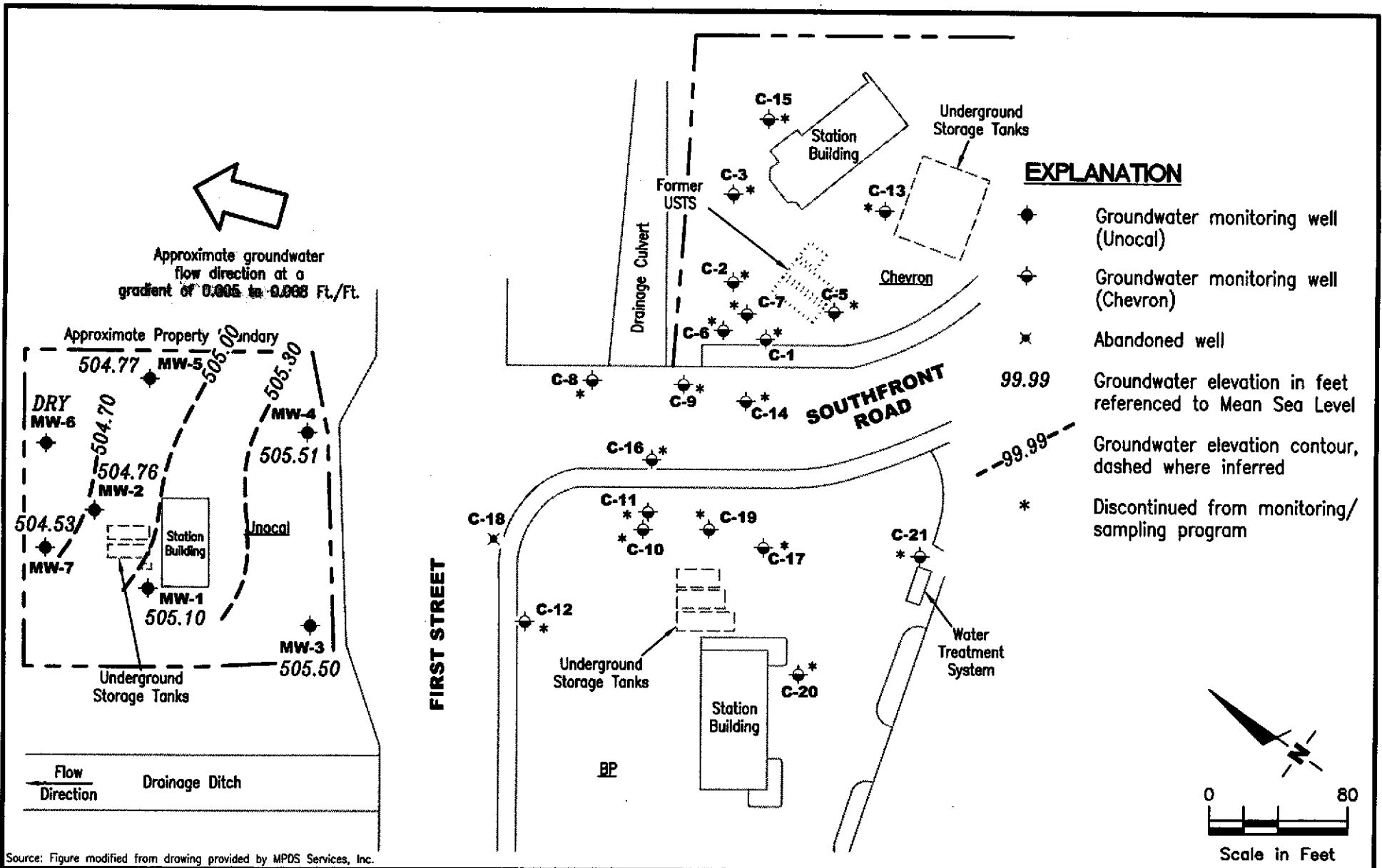


Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results
Table 3: Dissolved Oxygen Concentrations
Table 4: Joint Groundwater Monitoring Data - Chevron Service Station #9-1924
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

6034.qml



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

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

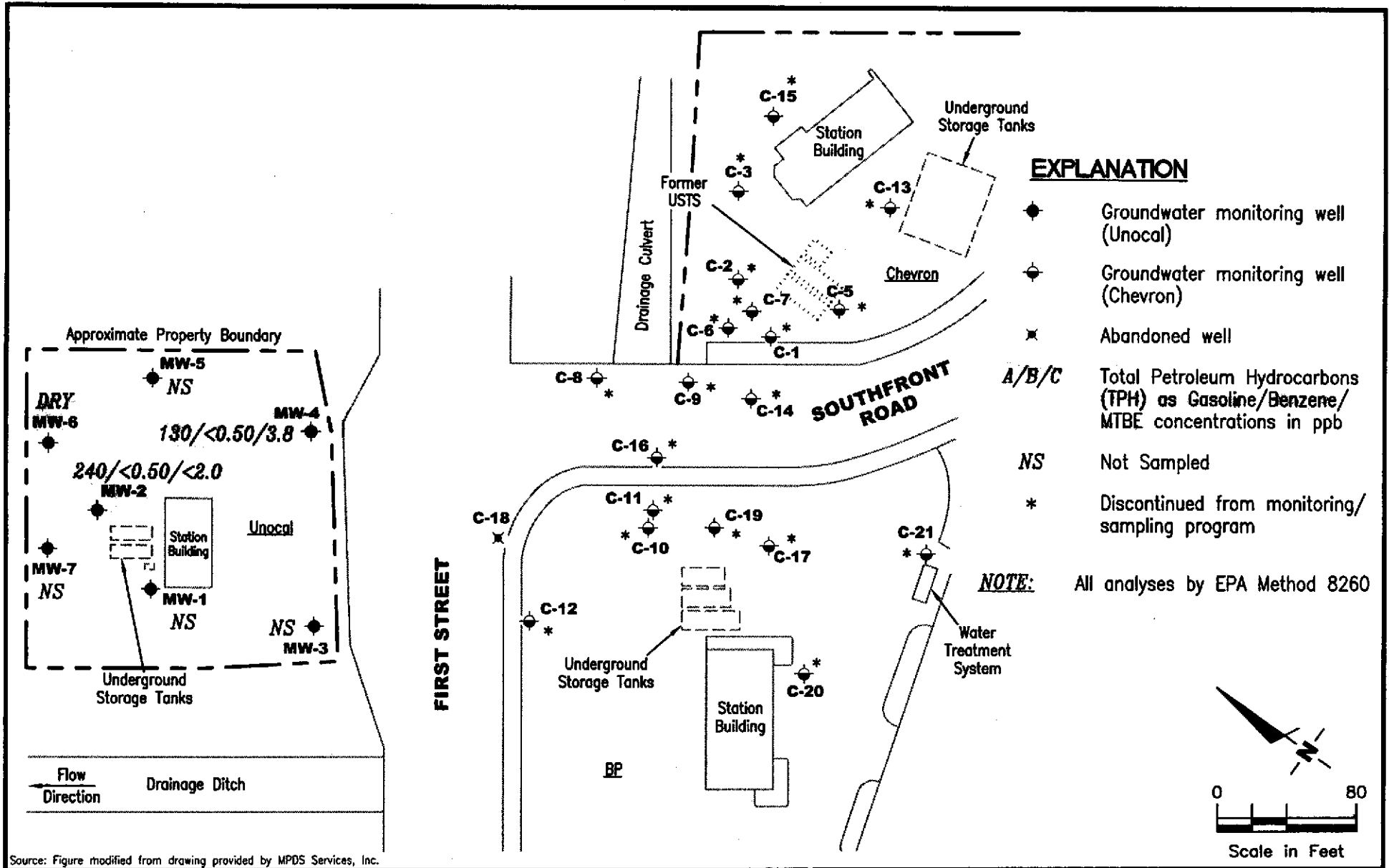
FIGURE
1

PROJECT NUMBER
 180047

REVIEWED BY

DATE
 October 16, 2002

REVISED DATE



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

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

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

FIGURE
2

PROJECT NUMBER 180047	REVIEWED BY	DATE October 16, 2002	REVISED DATE
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Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6034
 4700 First Street
 Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	11/18/89 ⁹	--	11.0-28.5	--	ND	ND	ND	ND	ND	--
	03/08/90 ¹⁰	--		--	ND	ND	ND	ND	ND	--
	06/05/90 ¹¹	--		--	ND	ND	ND	ND	ND	--
	09/07/90 ¹¹	--		--	ND	ND	1.2	ND	ND	--
	12/24/90 ¹¹	--		--	ND	ND	ND	ND	0.40	--
	04/10/91 ¹¹	--		--	ND	ND	ND	ND	ND	--
	07/10/91 ¹¹	--		--	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 ¹¹	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 ¹²	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 ¹³	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	--	--	--	--	--	--
	04/10/00	14.93		505.71	--	--	--	--	--	--
10/02/00	15.18		505.46	--	--	--	--	--	--	
04/02/01	14.72		505.92	--	--	--	--	--	--	

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6034
 4700 First Street
 Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (mst)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	10/05/01	15.51	11.0-28.5	505.13	--	--	--	--	--	--
(cont)	04/01/02	15.40		505.24	--	--	--	--	--	--
	10/16/02	15.54		505.10	--	--	--	--	--	--
MW-2	11/18/89	--	11.0-25.0	--	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	--
	07/10/91	--		--	14,000	70	160	570	5,400	--
	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

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #6034
4700 First Street
Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.L. (ft.bgs)	GWE (mst)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2	10/16/96	14.12	11.0-25.0	505.70	14,000	28	31	1,600	6,900	9,600
(cont)	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
	04/10/00	14.72		505.10	ND	ND	ND	0.815	2.99	28.5/40.1 ⁶
	10/02/00	14.91		504.91	ND	ND	ND	0.71	1.0	9.2/11 ⁶
	04/02/01	14.12		505.70	ND	ND	ND	ND	ND	ND/ND ⁶
	10/05/01	15.02		504.80	1,300 ⁵	4.4	<2.5	29	79	<25/12 ⁶
	04/01/02	14.94		504.88	3,500 ⁵	5.1	<5.0	120	460	<50/14 ⁶
	10/16/02 ¹⁴	15.06		504.76	240	<0.50	<0.50	8.2	15	<2.0
MW-3	11/18/89	--	11.0-25.0	--	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	--
	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	--
	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	--

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 Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	01/20/94	14.37	11.0-25.0	505.29	SAMPLED ANNUALLY		--	--	--	--
(cont)	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	--	--	--	--	--	--
	04/10/00	13.51		506.15	--	--	--	--	--	--
	10/02/00	13.62		506.04	--	--	--	--	--	--
	04/02/01	13.38		506.28	--	--	--	--	--	--
	10/05/01	14.10		505.56	--	--	--	--	--	--
	04/01/02	13.98		505.68	--	--	--	--	--	--
	10/16/02	14.16		505.50	--	--	--	--	--	--
 MW-4	11/18/89	--	11.0-25.0	--	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	--
	04/10/91	--		--	950	0.84	4.3	9.6	5.0	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6034
 4700 First Street
 Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-4	07/10/91	--	11.0-25.0	--	830	8.4	19	7.7	7.2	--	
(cont)	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 ¹	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	
	04/10/00	13.48		506.13	52.8 ⁷	ND	ND	ND	ND	ND	
	10/02/00	13.25		506.36	57 ⁸	ND	ND	0.50	0.90	30	
	04/02/01	13.11		506.50	ND	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*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4	10/05/01	14.04	11.0-25.0	505.57	150 ⁷	<0.50	<0.50	<0.50	<0.50	<5.0
(cont)	04/01/02	13.76		505.85	130 ⁷	<0.50	<0.50	<0.50	<0.50	<5.0
	10/16/02 ¹⁴	14.10		505.51	130	<0.50	<0.50	<0.50	<1.0	3.8
MW-5	04/10/91	--	10.0-24.0	--	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
	04/06/92	--		--	240 ¹	ND	ND	0.35	ND	--
	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	--	--	--	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6034
 4700 First Street
 Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	04/14/99	14.63	10.0-24.0	505.64	--	--	--	--	--	--
(cont)	10/12/99	14.48		505.79	--	--	--	--	--	--
	04/10/00	14.76		505.51	--	--	--	--	--	--
	10/02/00	14.65		505.62	--	--	--	--	--	--
	04/02/01	14.20		506.07	--	--	--	--	--	--
	10/05/01	15.47		504.80	--	--	--	--	--	--
	04/01/02	15.18		505.09	--	--	--	--	--	--
	10/16/02	15.50		504.77	--	--	--	--	--	--
MW-6	04/10/91	--	10.0-24.0	--	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	--
	10/16/92	OBSTRUCTED		--	--	--	--	--	--	--
	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		--	--	--	--	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6034
 4700 First Street
 Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6	10/16/96	13.72	10.0-24.0	505.03	--	--	--	--	--	--
(cont)	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	--	--	--	--	--	--
	04/10/00	13.40		505.35	--	--	--	--	--	--
	10/02/00	13.63		505.12	--	--	--	--	--	--
	04/02/01	13.31		505.44	--	--	--	--	--	--
	10/05/01	OBSTRUCTION IN WELL		--	--	--	--	--	--	--
	04/01/02	OBSTRUCTION IN WELL		--	--	--	--	--	--	--
	10/16/02	DRY		--	--	--	--	--	--	--
MW-7	04/10/91	--	10.0-24.0	--	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	--
	01/20/94	14.22		504.61	ND	ND	ND	ND	ND	--
	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	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6034
 4700 First Street
 Livermore, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-7	07/18/95	13.36	10.0-24.0	505.47	ND	ND	ND	ND	ND	--
(cont)	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	--	--	--	--	--	--
	04/10/00	13.85		504.98	--	--	--	--	--	--
	10/02/00	14.19		504.64	--	--	--	--	--	--
	04/02/01	13.86		504.97	SAMPLING DISCONTINUED		--	--	--	--
	10/05/01	14.30		504.53	--	--	--	--	--	--
	04/01/02	14.23		504.60	--	--	--	--	--	--
	10/16/02	14.30		504.53	--	--	--	--	--	--
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
	04/10/00	--	--	--	ND	ND	ND	ND	ND	ND
	10/02/00	--	--	--	ND	ND	ND	ND	ND	ND
	04/02/01	--	--	--	ND	ND	ND	ND	ND	ND
	10/05/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	04/01/02	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
QA	10/16/02 ¹⁴	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<2.0

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	TPH-G = Total Petroleum Hydrocarbons as Gasoline	ND = Not Detected
DTW = Depth to Water	B = Benzene	-- = Not Measured/Not Analyzed
(ft.) = Feet	T = Toluene	QA = Quality Assurance
S.I. = Screen Interval	E = Ethylbenzene	
(ft.bgs) = Feet Below Ground Surface	X = Xylenes	
GWE = Groundwater Elevation	MTBE = Methyl tertiary butyl ether	
(msl) = Mean sea level	(ppb) = Parts per billion	

* TOC elevations are relative to 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 gasoline C6-C12.
- 6 MTBE by EPA Method 8260.
- 7 Laboratory report indicates unidentified hydrocarbons C6-C12.
- 8 Laboratory report indicates gasoline C6-C12.
- 9 Laboratory report indicates Total Oil & Grease (TOG) at 3.1 ppm, Trichloroethene (TCE) at 0.55 ppb, and Chloroform was ND.
- 10 Laboratory report indicates TOG at 4.7 ppm, TCE and Chloroform were ND.
- 11 Laboratory report indicates TOG, TCE and Chloroform were ND.
- 12 Laboratory report indicates TPH-Diesel (TPH-D), TOG, and TCE were ND, and Chloroform was 0.69 ppb.
- 13 Laboratory report indicates TPH-D at 100 ppb, and TOG, TCE and Chloroform were ND.
- 14 TPH-G, BTEX and MTBE by EPA Method 8260.

Table 2
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	--	--
	04/10/00	ND	ND	40.1	ND	ND	ND	ND	ND
	10/02/00	ND	ND	11	ND	ND	ND	ND	ND
	04/02/01	ND	ND	ND	ND	ND	ND	ND	ND
	10/05/01	<1,000	<100	12	<2.0	<2.0	<2.0	<2.0	<2.0
	04/01/02	<500	<100	14	<2.0	<2.0	<2.0	<2.0	<2.0
	10/16/02	<500	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
MW-4	04/14/99	ND	ND	16	ND	ND	ND	ND/ND ¹	ND/ND ¹
	10/16/02	--	--	3.8	--	--	--	--	--

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 Compounds (HVOCs) by EPA Method 8010.

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	--
	04/10/00	3.47	--
	10/02/00	3.77	--
	04/02/01	3.95	--
	10/05/01	2.89	--
	04/01/02	3.15	--
10/16/02	3.08	--	
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.

Table 4
Joint Groundwater Monitoring Data
Chevron Service Station #9-1924
4904 South Front Road
Livermore, California

WELL ID/ TOC*(ft)	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

Table 4
Joint Groundwater Monitoring Data
Chevron Service Station #9-1924
4904 South Front Road
Livermore, California

WELL ID/ TOC*(ft)	DATE	DTW (ft.)	GWE (msl)
C-7			
520.30	04/17/95	11.74	508.56
	07/18/95	11.98	508.32
	10/17/95	12.48	507.82
	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

Table 4
Joint Groundwater Monitoring Data
Chevron Service Station #9-1924
4904 South Front Road
Livermore, California

WELL ID/ TOC*(ft)	DATE	DTW (ft.)	GWE (msl)
C-11 (cont)	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
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

Table 4
Joint Groundwater Monitoring Data
Chevron Service Station #9-1924
4904 South Front Road
Livermore, California

WELL ID/ TOC*(ft)	DATE	DTW (ft.)	GWE (msl)
C-17 (cont)	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	--
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 = Top of Casing

DTW = Depth to Water

(ft.) = Feet

GWE = Groundwater Elevation

(msl) = Mean sea level

-- = Not Measured

* TOC elevations were surveyed relative to msl.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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 disposable 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 and is labeled as QA. 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 Phillips 66 Company, the purge water and decontamination water generated during sampling activities is transported to Phillips 66 - San Francisco Refinery, located in Rodeo, California.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #6034 Job Number: 180047
 Site Address: 4700 First Street Event Date: 10-16-02 (inclusive)
 City: Livermore, CA Sampler: K. Kelly

Well ID: MW-1
 Well Diameter: 2 in.
 Total Depth: 27.90 ft.
 Depth to Water: 15.54 ft.

Well Condition: OK

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

 xVF = x3 (case volume) = Estimated Purge Volume: gal.

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer
 Stack Pump
 Suction Pump
 Grundfos
 Other:

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer
 Discrete Bailer
 Other:

Time Started: (2400 hrs)
 Time Bailed: (2400 hrs)
 Depth to Product: ft
 Depth to Water: ft
 Hydrocarbon Thickness: ft
 Visual Confirmation/Description:
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: gal
 Amt Removed from Well: gal
 Product Transferred to:

Start Time (purge): Weather Conditions: Clear
 Sample Time/Date: / Water Color: Odor:
 Purging Flow Rate: gpm. Sediment Description:
 Did well de-water? If yes, Time: Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	x voa vial	YES	HCL	STL Pleasanton	TPH-G/BTEX/MTBE(8260)/ 8 Oxy's(8260)

COMMENTS: Monitor only.

Add/Replaced Lock: Add/Replaced Plug: Size:



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #6034 Job Number: 180047
 Site Address: 4700 First Street Event Date: 10-16-02 (inclusive)
 City: Livermore, CA Sampler: K Kelly

Well ID: MW-2
 Well Diameter: 2 in.
 Total Depth: 25.65 ft.
 Depth to Water: 15.06 ft.
 Well Condition: Poor

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

10.59 xVF 0.17 = 1.80 x3 (case volume) = Estimated Purge Volume: 5.40 gal.

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 1724 Weather Conditions: Clear/Windy
 Sample Time/Date: 1738 / 10-16-02 Water Color: light yellow Odor: yes
 Purging Flow Rate: _____ gpm. Sediment Description: Specs
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>1724</u>	<u>1.75</u>	<u>7.15</u>	<u>618</u>	<u>18.9</u>	<u>3.08</u>	
<u>1731</u>	<u>3.50</u>	<u>6.90</u>	<u>591</u>	<u>19.6</u>		
<u>1733</u>	<u>5.25</u>	<u>6.84</u>	<u>577</u>	<u>19.8</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3 x vov vial</u>	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-GVBTEX/MTBE(8260)/ 8 Oxy's(8260)</u>

COMMENTS: Enclosed Picture - mw-2 had 1 1/2 gal of sludge/dirty water inside well casing. Hand Bailed before Removing Plug. (45 min) extra time. Replaced Seal and lid - also Used a 5 gal. Bucket - Now in trash. and used absorbant sheets.
 Add/Replaced Lock: _____ Add/Replaced Plug: Size: 2in
 (Needs a new lock)



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #6034 Job Number: 180047
 Site Address: 4700 First Street Event Date: 10-16-02 (inclusive)
 City: Livermore, CA Sampler: K Kelly

Well ID: MW-1 ^{MW-3} Well Condition: Well Cover broken
 Well Diameter: 2 in.
 Total Depth: 25.45 ft.
 Depth to Water: 14.16 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

_____ xVF _____ = _____ x3 (case volume) = Estimated Purge Volume: _____ gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): _____ Weather Conditions: clear
 Sample Time/Date: / Water Color: _____ Odor: _____
 Purging Flow Rate: gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	x voa vial	YES	HCL	STL Pleasanton	TPH-G/BTEX/MTBE(8260)/ 8 Oxy's(8260)

COMMENTS: Well Cover is Broken Picture enclosed

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #6034 Job Number: 180047
 Site Address: 4700 First Street Event Date: 10-16-02 (inclusive)
 City: Livermore, CA Sampler: K Kelly

Well ID: MW-1, MW-4 Well Condition: OK
 Well Diameter: 2 in.
 Total Depth: 25.50 ft.
 Depth to Water: 14.10 ft.
 Volume Factor (VF): 11.40 xVF 0.14 = 1.93 x3 (case volume) = Estimated Purge Volume: 5.81 gal.

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.36
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): 1700 Weather Conditions: Clear / Windy
 Sample Time/Date: 1713 / 10-16-02 Water Color: Cloudy Light Grey Odor: Yes
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (°C/°F)	D.O. (mg/L)	ORP (mV)
<u>1703</u>	<u>2.0</u>	<u>7.21</u>	<u>540</u>	<u>20.6</u>		
<u>1706</u>	<u>4.0</u>	<u>6.83</u>	<u>523</u>	<u>20.7</u>		
<u>1709</u>	<u>6.0</u>	<u>6.91</u>	<u>533</u>	<u>19.8</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3 x vov vial</u>	<u>YES</u>	<u>HCL</u>	<u>STL Pleasanton</u>	<u>TPH-G/BTEX/MTBE(8260)/ 8 Oxy's(8260)</u>

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #6034 Job Number: 180047
 Site Address: 4700 First Street Event Date: 10-16-02 (inclusive)
 City: Livermore, CA Sampler: K. Kelly

Well ID: MW-1 ^{mw-5} Well Condition: OK
 Well Diameter: 2 in.
 Total Depth: 23.60 ft.
 Depth to Water: 15.50 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

_____ xVF _____ = _____ x3 (case volume) = Estimated Purge Volume: _____ gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): _____ Weather Conditions: Clear
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: _____
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	x voa vial	YES	HCL	STL Pleasanton	TPH-G/BTEX/MTBE(8260)/ 8 Oxy's(8260)

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #6034 Job Number: 180047
 Site Address: 4700 First Street Event Date: 10-16-02 (inclusive)
 City: Livermore, CA Sampler: K. Kelly

Well ID: MW-1 mw-4 Well Condition: OK - Buried under tree cuttings
 Well Diameter: 2 in.
 Total Depth: 20.31 ft.
 Depth to Water: 00.00 ft.

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Dry Well xVF _____ = _____ x3 (case volume) = Estimated Purge Volume: _____ gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Bailed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbent Sock (circle one)	
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Product Transferred to:	_____

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: _____
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	x voa vial	YES	HCL	STL Pleasanton	TPH-G/BTEX/MTBE(8260)/ 8 Oxy's(8260)

COMMENTS: MW-1 Dry Well

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Tosco #6034 Job Number: 180047
 Site Address: 4700 First Street Event Date: 10-16-02 (inclusive)
 City: Livermore, CA Sampler: K. Kelly

Well ID: ~~MW-1~~ MW-2 Well Condition: OK: Buried under tree logs.
 Well Diameter: 2 in.
 Total Depth: 23.45 ft.
 Depth to Water: 14.30 ft.

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

_____ xVF _____ = _____ x3 (case volume) = Estimated Purge Volume: _____ gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Discrete Bailer _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Bailed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Product Transferred to: _____

Start Time (purge): _____ Weather Conditions: Clear
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: _____
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	x voa vial	YES	HCL	STL Pleasanton	TPH-G/BTEX/MTBE(8260)/ 8 Oxy's(8260)

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____

2002-10-0416

1076
Gettler-Ryan Inc., Chain-of-Custod

Tosco Corp./ Phillips 66 Co. 2000 Crow Canyon Place Suite 400 San Ramon, CA 94583	Facility Number	#6034	Laboratory Name	STL - PLEASANTON, CA
	Facility Address	4700 FIRST STREET, LIVERMORE, CA	Consultant	GETTLER-RYAN, INC. DEANNA L. HARDING
	Global ID	T0600101477 Project 180047.80	Address	6747 SIERRA CT., SUITE J, DUBLIN CA 94568
	Client Contact	MR. DAVID B. DEWITT	Phone	(925) 551-7555 Fax (925) 551-7899
	Phone	(925) 277-2384	Sample Collected by	Krishna Kelly

SAMPLE ID	Number of Containers Matrix	S = Soil A = Air W = Water C = Charnsed	Sample Preservation	Date/Time (2400 Hrs)	TPH-GAS/BTEX/MTBE EPA 8015/8021B	TPH-DIESEL EPA 8015	TPH-DIESEL w/Silica gel EPA 8015	TPH-GAS EPA 8015	TPH-GAS/BTEX/MTBE EPA 8260	OXYGENATES EPA 8260	METHANOL EPA 8015	TOTAL OIL & GREASE EPA 5520	METALS Cd, Cr, Pb, Zn, Ni	NITRATE/SULFATE/ALKALINITY EPA 300 SERIES	HWOC'S (8010) EPA 8021B	VOC'S (8240) EPA 8260	SVOC'S EPA 8270	Remarks
QA	2	W		10-16-02					X									
MW-2	3	W	H	1738					X	X								
MW-4	3	W	H	1713					X	X								

- OXYGENATES 8260
- 1 - MTBE
 - 2 - TBA
 - 3 - TAME
 - 4 - DIPE
 - 5 - ETBE
 - 6 - 1,2-DCA
 - 7 - EDB
 - 8 - ETHANOL

Relinquished By (Signature) <i>Krishna Kelly</i>	Organization Gettler-Ryan Inc	Date/Time 10/16/02	Received By (Signature)	Organization	Date/Time	Rec'd Y/N	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 72 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Rec'd Y/N	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <i>JL</i>	Organization	Date/Time 10-15-02	Rec'd Y/N 1210	

6.00

Submission#: 2002-10-0416

November 06, 2002

SEVERN

TRENT

LABORATORY

Gettler Ryan

6747 Sierra Court Suite J
Dublin, CA 94568

Attn.: Deanna Harding

Project#: 180047.80

Project: Tosco #6034

Site: 4700 First Street
Livermore, CA

RECEIVED

NOV 06 2002

GETTLER RYAN INC.
GENERAL CONTRACTORS

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Dear Ms. Harding,

Attached is our report for your samples received on 10/18/2002 12:10

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/02/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: tgranicher@chromalab.com

Sincerely,



Tod Granicher
Project Manager

Submission #: 2002-10-0416

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding
6747 Sierra Court Suite J
Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180047.80
Tosco #6034

Received: 10/18/2002 12:10

Site: 4700 First Street
Livermore, CA

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
QA	10/16/2002	Water	1
MW-2	10/16/2002 17:38	Water	2
MW-4	10/16/2002 17:13	Water	3

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding
 6747 Sierra Court Suite J
 Dublin, CA 94568
 Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180047.80
 Tosco #6034

Received: 10/18/2002 12:10

Site: 4700 First Street
 Livermore, CA

STL San Francisco
 1220 Quarry Lane
 Pleasanton, CA 94566

Tel: (925) 484-1919
 Fax: (925) 484-1096
 www.stl-inc.com
 www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: QA	Lab ID: 2002-10-0416 - 1
Sampled: 10/16/2002	Extracted: 10/24/2002 12:59
Matrix: Water	QC Batch#: 2002/10/24-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	10/24/2002 12:59	
Benzene	ND	0.50	ug/L	1.00	10/24/2002 12:59	
Toluene	ND	0.50	ug/L	1.00	10/24/2002 12:59	
Ethylbenzene	ND	0.50	ug/L	1.00	10/24/2002 12:59	
Total xylenes	ND	1.0	ug/L	1.00	10/24/2002 12:59	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	10/24/2002 12:59	
Surrogates(s)						
1,2-Dichloroethane-d4	109.8	76-114	%	1.00	10/24/2002 12:59	
Toluene-d8	95.5	88-110	%	1.00	10/24/2002 12:59	

Submission #: 2002-10-0416

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding
6747 Sierra Court Suite J
Dublin, CA 94568
Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180047.80
Tosco #6034

Received: 10/18/2002 12:10

Site: 4700 First Street
Livermore, CA

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-2	Lab ID:	2002-10-0416 - 2
Sampled:	10/16/2002 17:38	Extracted:	10/25/2002 16:26
Matrix:	Water	QC Batch#:	2002/10/25-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	240	50	ug/L	1.00	10/25/2002 16:26	
Benzene	ND	0.50	ug/L	1.00	10/25/2002 16:26	
Toluene	ND	0.50	ug/L	1.00	10/25/2002 16:26	
Ethylbenzene	8.2	0.50	ug/L	1.00	10/25/2002 16:26	
Total xylenes	15	1.0	ug/L	1.00	10/25/2002 16:26	
tert-Butyl alcohol (TBA)	ND	100	ug/L	1.00	10/25/2002 16:26	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	10/25/2002 16:26	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	10/25/2002 16:26	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	10/25/2002 16:26	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	10/25/2002 16:26	
1,2-DCA	ND	2.0	ug/L	1.00	10/25/2002 16:26	
EDB	ND	2.0	ug/L	1.00	10/25/2002 16:26	
Ethanol	ND	500	ug/L	1.00	10/25/2002 16:26	
Surrogates(s)						
1,2-Dichloroethane-d4	104.7	76-114	%	1.00	10/25/2002 16:26	
Toluene-d8	103.5	88-110	%	1.00	10/25/2002 16:26	

Gas/BTEX Fuel Oxygenates by 8260B

TRENT

LABORATORY

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J

Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180047.80

Tosco #6034

Received: 10/18/2002 12:10

Site: 4700 First Street
Livermore, CASTL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-4	Lab ID:	2002-10-0416 - 3
Sampled:	10/16/2002 17:13	Extracted:	10/25/2002 16:48
Matrix:	Water	QC Batch#:	2002/10/25-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	130	50	ug/L	1.00	10/25/2002 16:48	
Benzene	ND	0.50	ug/L	1.00	10/25/2002 16:48	
Toluene	ND	0.50	ug/L	1.00	10/25/2002 16:48	
Ethylbenzene	ND	0.50	ug/L	1.00	10/25/2002 16:48	
Total xylenes	ND	1.0	ug/L	1.00	10/25/2002 16:48	
Methyl tert-butyl ether (MTBE)	3.8	2.0	ug/L	1.00	10/25/2002 16:48	
Surrogates(s)						
1,2-Dichloroethane-d4	101.0	76-114	%	1.00	10/25/2002 16:48	
Toluene-d8	100.9	88-110	%	1.00	10/25/2002 16:48	

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding

6747 Sierra Court Suite J

Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180047.80

Tosco #6034

Received: 10/18/2002 12:10

Site: 4700 First Street
Livermore, CASTL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2002/10/24-01.27-016

Water

Test(s): 8260FAB

QC Batch # 2002/10/24-01.27

Date Extracted: 10/24/2002 11:07

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/24/2002 11:07	
Benzene	ND	0.5	ug/L	10/24/2002 11:07	
Toluene	ND	0.5	ug/L	10/24/2002 11:07	
Ethylbenzene	ND	0.5	ug/L	10/24/2002 11:07	
Total xylenes	ND	1.0	ug/L	10/24/2002 11:07	
tert-Butyl alcohol (TBA)	ND	100	ug/L	10/24/2002 11:07	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/24/2002 11:07	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	10/24/2002 11:07	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	10/24/2002 11:07	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	10/24/2002 11:07	
1,2-DCA	ND	2.0	ug/L	10/24/2002 11:07	
EDB	ND	2.0	ug/L	10/24/2002 11:07	
Ethanol	ND	500	ug/L	10/24/2002 11:07	
Surrogates(s)					
1,2-Dichloroethane-d4	111.4	76-114	%	10/24/2002 11:07	
Toluene-d8	95.8	88-110	%	10/24/2002 11:07	

Submission #: 2002-10-0416

Gas/BTEX Fuel Oxygenates by 8260B

Gettler Ryan

Attn.: Deanna Harding
6747 Sierra Court Suite J
Dublin, CA 94568

Phone: (925) 551-7444 Fax: (925) 551-7899

Project: 180047.80
Tosco #6034

Received: 10/18/2002 12:10

Site: 4700 First Street
Livermore, CA

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2002/10/25-01.27-009

Water

Test(s): 8260FAB

QC Batch # 2002/10/25-01.27

Date Extracted: 10/25/2002 15:24

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/25/2002 15:24	
Benzene	ND	0.5	ug/L	10/25/2002 15:24	
Toluene	ND	0.5	ug/L	10/25/2002 15:24	
Ethylbenzene	ND	0.5	ug/L	10/25/2002 15:24	
Total xylenes	ND	1.0	ug/L	10/25/2002 15:24	
tert-Butyl alcohol (TBA)	ND	100	ug/L	10/25/2002 15:24	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/25/2002 15:24	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	10/25/2002 15:24	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	10/25/2002 15:24	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	10/25/2002 15:24	
1,2-DCA	ND	2.0	ug/L	10/25/2002 15:24	
EDB	ND	2.0	ug/L	10/25/2002 15:24	
Ethanol	ND	500	ug/L	10/25/2002 15:24	
Surrogates(s)					
1,2-Dichloroethane-d4	102.5	76-114	%	10/25/2002 15:24	
Toluene-d8	98.5	88-110	%	10/25/2002 15:24	

Submission #: 2002-10-0416

Gas/BTEX Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2002/10/24-01.27

LCS 2002/10/24-01.27-003

Extracted: 10/24/2002

Analyzed: 10/24/2002 10:17

LCSD 2002/10/24-01.27-004

Extracted: 10/24/2002

Analyzed: 10/24/2002 10:46

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	25.8	26.1	25.0	103.2	104.4	1.2	65-165	20		
Benzene	22.1	23.0	25.0	88.4	92.0	4.0	69-129	20		
Toluene	23.9	24.0	25.0	95.6	96.0	0.4	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	537	537	500	107.4	107.4		76-114			
Toluene-d8	484	478	500	96.8	95.6		88-110			

Submission #: 2002-10-0416

Gas/BTEX Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike

Water

QC Batch # 2002/10/25-01.27

LCS 2002/10/25-01.27-007

Extracted: 10/25/2002

Analyzed: 10/25/2002 14:39

LCSD 2002/10/25-01.27-008

Extracted: 10/25/2002

Analyzed: 10/25/2002 15:01

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	21.9	22.7	25.0	87.6	90.8	3.6	69-129	20		
Toluene	22.6	23.7	25.0	90.4	94.8	4.8	70-130	20		
Methyl tert-butyl ether (MTBE)	23.4	24.0	25.0	93.6	96.0	2.5	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	545	547	500	109.0	109.4		76-114			
Toluene-d8	504	496	500	100.8	99.2		88-110			