GETTLER-RYAN INC.

TRANSMITTAL

SEP 10 2001

August 23, 2001
G-R #180064

R0251

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

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

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

RE: Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 8, 2001	Groundwater Monitoring and Sampling Report Second Semi-Annual - Event of July 16, 2001

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by ***September 6, 2001***, this report will be distributed to the following:

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

Enclosure

trans/3538-DBD

GETTLER-RYAN INC.

August 8, 2001
G-R Job #180064

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

RE: Second Semi-Annual Event of July 16, 2001
Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

Dear Mr. De Witt:

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

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

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1, 2, and 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

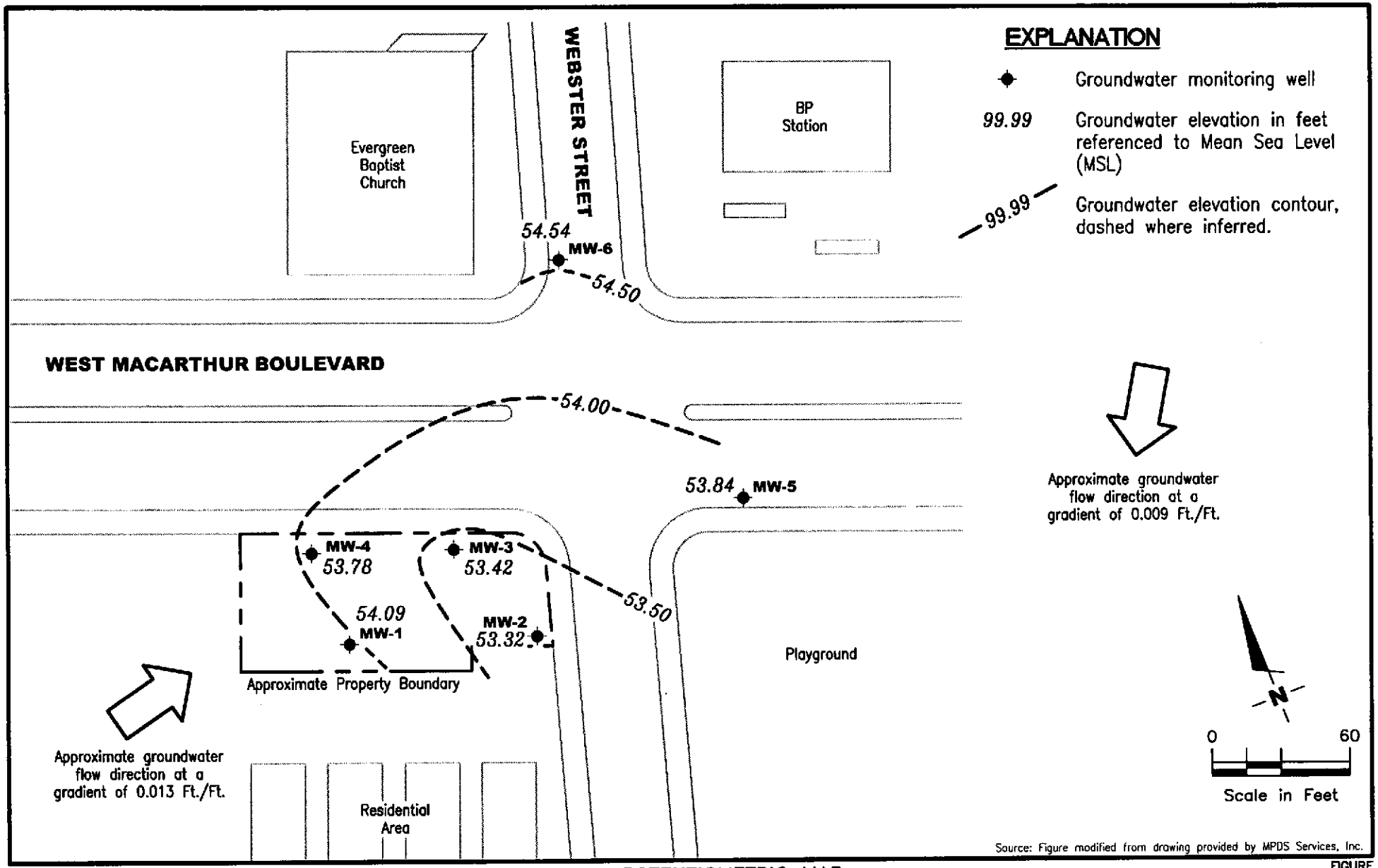
Anamarie Nevau
-FOR-
Deanna L. Harding
Project Coordinator

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

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

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

3538.qml



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

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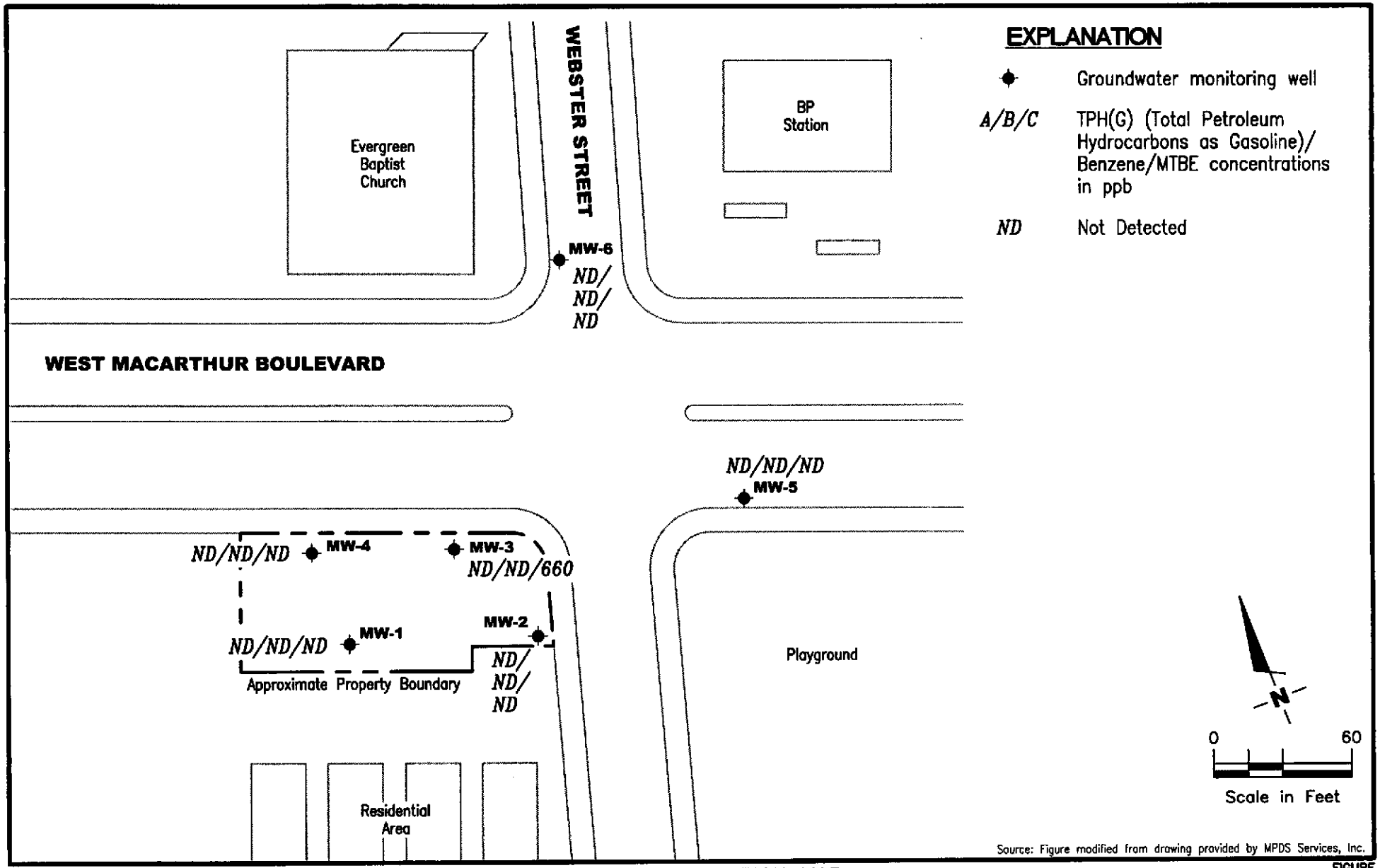
POTENTIOMETRIC MAP
Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180064		July 16, 2001	

FILE NAME: P:\ENVIRO\TOSCO\3538\Q01-3538.DWG | Layout Tab: Pot3



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

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

CONCENTRATION MAP
Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180064		July 16, 2001	

FILE NAME: P:\ENVIRO\TOSCO\3538\Q01-3538.DWG | Layout Tab: Con3

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #3538

411 West MacArthur Boulevard

Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	09/15/89	--	5.0-29.0	--	ND	ND	0.61	ND	ND	--
	01/23/90	--		--	ND	1.5	2.3	ND	4.3	--
	04/19/90	--		--	ND	ND	ND	ND	ND	--
	07/17/90	--		--	ND	ND	ND	ND	ND	--
	10/16/90	--		--	ND	ND	ND	ND	ND	--
	01/15/91	--		--	ND	ND	ND	ND	ND	--
	04/12/91	--		--	ND	ND	ND	ND	ND	--
	07/15/91	--		--	ND	ND	ND	ND	ND	--
	07/14/92	--		--	ND	ND	ND	ND	ND	--
72.43	04/13/93	17.70		54.73	SAMPLED ANNUALLY		--	--	--	--
	07/14/93	18.49		53.94	ND	2.2	2.1	1.1	6.2	--
72.10	10/14/93	18.32		53.78	--	--	--	--	--	--
	01/12/94	18.18		53.92	--	--	--	--	--	--
	04/11/94	17.80		54.30	--	--	--	--	--	--
	07/07/94	18.28		53.82	ND	ND	ND	ND	ND	--
	10/05/94	18.55		53.55	--	--	--	--	--	--
	01/09/95	17.90		54.20	--	--	--	--	--	--
	04/17/95	17.22		54.88	--	--	--	--	--	--
	07/19/95	18.03		54.07	ND	ND	ND	ND	ND	--
	10/26/95	18.67		53.43	--	--	--	--	--	--
	01/16/95	17.20		54.90	--	--	--	--	--	--
	04/15/96	17.40		54.70	--	--	--	--	--	--
	07/11/96	18.03		54.07	ND	ND	ND	ND	ND	ND
	01/17/97	16.54		55.56	--	--	--	--	--	--
	07/21/97	18.16		53.94	ND	ND	ND	ND	ND	ND
	01/14/98	16.05		56.05	--	--	--	--	--	--
	07/06/98[5]	16.46		55.64	ND	ND	ND	ND	ND	ND
	01/13/99	17.37		54.73	--	--	--	--	--	--
72.12	08/31/99	17.00		55.12	ND	ND	ND	ND	ND	ND
	01/21/00	17.04		55.08	--	--	--	--	--	--
	07/10/00[5]	18.10		54.02	ND	ND	ND	ND	ND	ND
	01/04/01	17.95		54.17	--	--	--	--	--	--
	07/16/01	**18.03**		**54.09**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2	09/15/89	--	3.5-28.5	--	290	ND	12	ND	ND	--
	01/23/90	--		--	400	73	36	10	40	--
	04/19/90	--		--	3,900	550	5.1	91	390	--
	07/17/90	--		--	490	76	0.59	11	46	--
	10/16/90	--		--	1,400	430	2.0	48	240	--
	01/15/91	--		--	680	170	0.7	19	81	--
	04/12/91	--		--	2,200	160	4.3	23	62	--
	07/15/91	--		--	2,200	770	12	72	370	--
	10/15/91	--		--	140	44	0.56	1.5	12	--
	01/15/92	--		--	220	37	0.52	1.1	7	--
	04/14/92	--		--	150	6.2	ND	ND	1.4	--
	07/14/92	--		--	130	3.7	ND	ND	ND	--
	10/12/92	--		--	370	3.4	0.56	ND	11	--
	01/08/93	--		--	510[1]	ND	ND	ND	ND	--
71.63	04/13/93	17.86		53.77	410[2]	42	7.7	6.4	28	200
	07/14/93	18.38		53.25	110[1]	6.5	ND	ND	1.1	250
71.38	10/14/93	18.20		53.18	230[1]	5.3	ND	ND	2.1	--
	01/12/94	18.08		53.30	300	7.8	3.8	1.8	10	--
	04/09/94	17.97		53.41	120	10	0.88	1.1	4.9	--
	04/11/94	17.88		53.50	--	--	--	--	--	--
	07/07/94	17.81		53.57	110[1]	4.4	ND	ND	ND	--
	10/05/94	18.33		53.05	720[1]	20	ND	ND	3.1	--
	01/09/95	17.40		53.98	ND	ND	ND	ND	ND	--
	04/17/95	17.50		53.88	93	5.6	0.62	1.7	5.5	--
	07/19/95	18.01		53.37	77	32	0.58	1.7	4.1	--
	10/26/95	18.21		53.17	54[2]	13	ND	ND	0.72	220
	01/16/96[3]	16.58		54.80	120	23	ND	ND	0.99	--
	04/15/96	17.61		53.77	340	21	ND	2.2	3.7	45
	07/11/96	17.98		53.40	540	34	ND	4.3	12	150
	01/17/97	17.08		54.30	320	63	2.4	9.4	26	260
	07/21/97	18.06		53.32	160	13	ND	1.3	1.6	180
	01/14/98	16.52		54.86	66	6.3	ND	ND	0.98	100

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2	07/06/98	16.87	3.5-28.5	54.51	ND	2.3	ND	ND	ND	11
(cont)	01/13/99	17.88		53.50	53	24	ND	0.52	0.98	120
71.34	08/31/99	18.45		52.89	86[10]	14	ND	0.63	ND	21
	01/21/00	17.73		53.61	ND	1.94	ND	ND	ND	10.1
	07/10/00	18.14		53.20	ND	ND	ND	ND	ND	46.6
	01/04/01	18.02		53.32	ND	0.925	ND	ND	ND	ND
	07/16/01	**18.02**		**53.32**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-3	09/15/89	--	5.0-29.0	--	32	ND	ND	ND	ND	--
	01/23/90	--		--	450	110	1.2	4.4	11	--
	04/19/90	--		--	3,100	600	27	54	220	--
	07/17/90	--		--	4,000	270	48	130	250	--
	10/16/90	--		--	740	210	1.4	2.5	82	--
	01/15/91	--		--	3,200	460	1.5	120	270	--
	04/12/91	--		--	880	170	1.1	34	110	--
	07/15/91	--		--	9,200	1,300	230	490	1,900	--
	10/15/91	--		--	3,100	390	34	150	390	--
	01/15/92	--		--	3,000	590	14	310	750	--
	04/14/92	--		--	14,000	660	48	560	2,000	--
	07/14/92	--		--	21,000	890	200	1,200	4,300	--
	10/12/92	--		--	3,200	160	10	230	540	--
	01/08/93	--		--	1,100[2]	48	0.99	0.9	93	--
72.06	04/13/93	17.96		54.10	12,000[2]	290	38	760	2,300	1,400
	07/14/93	18.54		53.52	6,300	190	ND	430	1,000	860
71.86	10/14/93	18.45		53.41	2,500	52	ND	110	250	--
	01/12/94	18.34		53.52	3,800	78	ND	180	390	--
	04/09/94	18.19		53.67	1,800	22	ND	140	280	--
	04/11/94	18.12		53.74	--	--	--	--	--	--
	07/07/94	18.21		53.65	110[1]	4.5	ND	ND	ND	--
	10/05/94	18.58		53.28	ND	ND	ND	ND	ND	--
	01/09/95	17.69		54.17	ND	0.68	ND	ND	ND	--
	04/17/95	17.68		54.18	3,700	80	10	270	510	--
	07/19/95	18.20		53.66	15,000	330	27	990	2,400	--

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Groundwater Monitoring Data and Analytical Results

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Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	10/26/95	18.32	5.0-29.0	53.54	14,000	420	180	750	1,600	4,800
(cont)	01/16/96[3]	17.95		53.91	920	38	ND	30	57	--
	04/15/96	17.78		54.08	9,700	240	ND	570	860	3,200
	07/11/96	18.19		53.67	13,000	69	5.5	430	900	740
	01/17/97	17.23		54.63	4,400	25	ND	270	580	1,600
	07/21/97	18.29		53.57	9,000	36	ND	450	800	950
	01/14/98	16.71		55.15	7,100	40	ND[4]	380	360	930
	07/06/98	17.03		54.83	6,800[6]	39	ND[4]	320	360	370
	01/13/99[7]	18.00		53.86	1,800	9.4	ND[4]	58	36	180
71.40	08/31/99	--[8]		--	--	--	--	--	--	--
	01/21/00	17.58		53.82	ND	ND	ND	ND	ND	21.4
	07/10/00	18.05		53.35	ND	ND	ND	ND	ND	162
	08/25/00	17.82		53.58	--	--	--	--	--	180[11]
	01/04/01	18.16		53.24	ND	ND	ND	ND	ND	193
	07/16/01	**17.98**		**53.42**	**ND**	**ND**	**ND**	**ND**	**ND**	**660**
MW-4	09/15/89	--	5.0-29.0	--	ND	ND	ND	ND	ND	--
	01/23/90	--		--	ND	ND	0.4	ND	ND	--
	04/19/90	--		--	ND	ND	0.48	ND	ND	--
	07/17/90	--		--	ND	ND	ND	ND	ND	--
	10/16/90	--		--	ND	ND	ND	ND	ND	--
	01/15/91	--		--	ND	ND	ND	--	ND	--
	04/12/91	--		--	ND	ND	ND	ND	ND	--
	07/15/91	--		--	ND	ND	ND	ND	ND	--
	07/14/92	--		--	ND	1.3	2.5	ND	1.0	--
71.98	04/13/93	17.67		54.31	SAMPLED ANNUALLY		--	--	--	--
	07/14/93	18.31		53.67	ND	ND	ND	ND	ND	--
71.64	10/14/93	18.08		53.56	--	--	--	--	--	--
	01/12/94	17.97		53.67	--	--	--	--	--	--
	04/11/94	17.70		53.94	--	--	--	--	--	--
	07/07/94	17.80		53.84	ND	ND	ND	ND	ND	--
	10/05/94	18.28		53.36	--	--	--	--	--	--
	01/09/95	17.38		54.26	--	--	--	--	--	--

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Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #3538

411 West MacArthur Boulevard

Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4	04/17/95	17.21	5.0-29.0	54.43	SAMPLED ANNUALLY		--	--	--	--
(cont)	07/19/95	17.82		53.82	ND	ND	ND	ND	ND	--
	10/26/95	18.17		53.47	--	--	--	--	--	--
	01/16/96	16.45		55.19	--	--	--	--	--	--
	04/15/96	17.35		54.29	--	--	--	--	--	--
	07/11/96	17.81		53.83	ND	ND	ND	ND	ND	ND
	01/17/97	16.73		54.91	--	--	--	--	--	--
	07/21/97	17.91		53.73	ND	ND	ND	ND	ND	ND
	01/14/98	16.18		55.46	--	--	--	--	--	--
	07/06/98	16.49		55.15	ND	ND	ND	ND	ND	ND
	01/13/99	17.29		54.35	--	--	--	--	--	--
71.54	08/31/99	--[9]		--	--	--	--	--	--	--
	01/21/00	17.51		54.03	--	--	--	--	--	--
	07/10/00	17.93		53.61	ND	ND	ND	ND	ND	ND
	01/04/01	18.10		53.44	--	--	--	--	--	--
	07/16/01	**17.76**		**53.78**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-5	11/30/92	--	13.0-30.0	--	ND	ND	ND	ND	ND	--
	01/08/93	--		--	ND	ND	ND	ND	ND	--
71.51	04/13/93	17.49		54.02	ND	ND	ND	ND	ND	--
	07/14/93	18.02		53.49	ND	ND	0.57	ND	ND	--
71.23	10/14/93	17.82		53.41	ND	ND	ND	ND	ND	--
	01/12/94	17.74		53.49	ND	ND	0.84	ND	1.6	--
	04/11/94	17.56		53.67	SAMPLED ANNUALLY		--	--	--	--
	07/07/94	17.50		53.73	ND	ND	ND	ND	ND	--
	10/05/94	17.98		53.25	--	--	--	--	--	--
	01/09/95	17.13		54.10	--	--	--	--	--	--
	04/17/95	17.05		54.18	--	--	--	--	--	--
	07/19/95	17.59		53.64	ND	ND	ND	ND	ND	--
	10/26/95	18.10		53.13	--	--	--	--	--	--
	01/16/96	17.11		54.12	--	--	--	--	--	--
	04/15/96	17.22		54.01	--	--	--	--	--	--
	07/11/96	17.59		53.64	ND	ND	ND	ND	ND	ND

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #3538

411 West MacArthur Boulevard

Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	01/17/97	16.75	13.0-30.0	54.48	SAMPLED ANNUALLY		--	--	--	--
(cont)	07/21/97	17.59		53.64	ND	ND	ND	ND	ND	ND
	01/14/98	16.16		55.07	--	--	--	--	--	--
	07/06/98	16.52		54.71	ND	ND	ND	ND	ND	ND
	01/13/99	17.62		53.61	--	--	--	--	--	--
71.16	08/31/99	17.76		53.40	ND	ND	ND	ND	ND	ND
	01/21/00	16.83		54.33	--	--	--	--	--	--
	07/10/00	17.46		53.70	ND	ND	ND	ND	ND	ND
	01/04/01	17.51		53.65	--	--	--	--	--	--
	07/16/01	**17.32**		**53.84**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-6	11/30/92	--	13.0-30.0	--	ND	ND	ND	ND	ND	--
	01/08/93	--		--	ND	ND	ND	ND	ND	--
71.79	04/13/93	11.94		59.85	ND	ND	ND	ND	ND	--
	07/14/93	17.20		54.59	ND	0.99	2.4	ND	1.9	--
71.44	10/14/93	17.21		54.23	ND	ND	0.64	ND	ND	--
	01/12/94	17.44		54.00	ND	ND	1.2	ND	2.9	--
	04/11/94	13.66		57.78	SAMPLED ANNUALLY		--	--	--	--
	07/07/94	14.05		57.39	ND	ND	ND	ND	ND	--
	10/05/94	14.16		57.28	--	--	--	--	--	--
	01/09/95	13.73		57.71	--	--	--	--	--	--
	04/17/95	11.30		60.14	--	--	--	--	--	--
	07/19/95	12.32		59.12	ND	ND	ND	ND	ND	--
	10/26/95	17.88		53.56	--	--	--	--	--	--
	01/16/96	16.38		55.06	--	--	--	--	--	--
	04/15/96	14.00		57.44	--	--	--	--	--	--
	07/11/96	13.58		57.86	ND	ND	ND	ND	ND	ND
	01/17/97	15.42		56.02	--	--	--	--	--	--
	07/21/97	13.78		57.66	ND	ND	ND	ND	ND	ND
	01/14/98	13.65		57.79	--	--	--	--	--	--
	07/06/98	13.90		57.54	ND	ND	ND	ND	ND	ND
	01/13/99	14.93		56.51	--	--	--	--	--	--
71.37	08/31/99	15.81		55.56	ND	ND	ND	ND	ND	ND

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #3538

411 West MacArthur Boulevard

Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6	01/21/00	16.13	13.0-30.0	55.24	SAMPLED ANNUALLY		--	--	--	--
(cont)	07/10/00	16.95		54.42	ND	ND	ND	ND	ND	ND
	01/04/01	17.09		54.28	--	--	--	--	--	--
	07/16/01	**16.83**		**54.54**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Trip Blank										
TB-LB	01/14/98	--	--	--	ND	ND	ND	ND	ND	ND
	07/06/98	--		--	ND	ND	ND	ND	ND	ND
	01/13/99	--		--	ND	ND	ND	ND	ND	ND
	08/31/99	--		--	ND	ND	1.5	ND	2.3	39
	01/21/00	--		--	ND	ND	ND	ND	ND	ND
	07/10/00	--		--	ND	ND	ND	ND	ND	ND
	01/04/01	--		--	ND	ND	ND	ND	ND	ND
	07/16/01	**--**		**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing
DTW = Depth to Water
(ft.) = Feet
S.I. = Screen Interval
(ft. bgs) = Feet Below Ground Surface
GWE = Groundwater Elevation
(msl) = 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 msl, per the City of Oakland Benchmark #9NW10. (Elevation = 75.50 feet msl). Prior to October 14, 1994, the DTW measurements were taken from the top of well covers. On September 15, 1999, TOC elevations were resurveyed City of Oakland Benchmark being a square brass pin in the concrete gutter at the southwest corner of Webster & MacArthur. The stationing data is with reference to the back of sidewalk on MacArthur in front of the site. Benchmark (Elevation = 71.055 feet, msl)

1 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
2 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and a non-gasoline mixture.
3 Laboratory report indicates the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb.
4 Detection limit raised. Refer to analytical reports.
5 All EPA Method 8010 constituents were ND.
6 Laboratory report indicates gasoline and unidentified hydrocarbons <C7.
7 TOC measurement may have been altered due to damaged casing.
8 Well was obstructed by a solid at 0.5 feet.
9 Well was obstructed by a solid (concrete or soil) at 10.4 feet.
10 Laboratory report indicates gasoline C6-C12.
11 MTBE by EPA Method 8260.

Table 2

Groundwater Analytical Results

Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

WELL ID	DATE	TPH-D (ppb)	TOG (ppb)	Tetrachloroethene[1] (ppb)
MW-1	09/15/89	ND	ND	2.7
	01/23/90	ND	1.5	2.1
	04/19/90	ND	ND	2.2
	07/17/90	ND	ND	1.7
	10/16/90	ND	ND	2.0
	01/15/91	ND	ND	2.1
	04/12/91	ND	ND	2.0
	07/15/91	ND	ND	1.8
	07/14/92	--	--	1.4
	07/14/93	--	--	0.95
	07/07/94	--	--	0.83
	07/19/95	--	--	0.52
	07/11/96[2]	--	--	0.73
	07/21/97[3]	--	--	0.70
	08/31/99	--	--	ND
	07/16/01[4]	**--**	**--**	**ND**

EXPLANATIONS:

Groundwater laboratory analytical results prior to August 31, 2001, were compiled from reports prepared by MPDS Services, Inc.

TPH-D = Total Petroleum Hydrocarbons as Diesel
TOG = Total Oil and Grease
(ppb) = Parts per billion
ND = Not Detected
-- = Not Analyzed

1 All other EPA Method 8010 constituents were ND.

2 Chloroform was detected at a concentration of 0.96 ppb.

3 Chloroform was detected at a concentration of 1.0 ppb.

4 All EPA Method 8021B constituents were ND with a raised detection limit, except Chloroform was detected at a concentration of 45 ppb and Bromodichloromethane at 1.7 ppb.

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

WELL ID	DATE	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-3	08/25/00	ND[1]	180	ND[1]	ND[1]	ND[1]	ND[1]	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-Dibromoethane
(ppb) = Parts per billion
ND = Not Detected

[1] Detection limit raised. Refer to analytical reports.

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

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

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

Total Depth: 23.32 ft.

Depth to Water: 18.03 ft.

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

5.29 X VF 0.17 = 0.90 X 3 (case volume) = Estimated Purge Volume: 3 (gal.)

Purge Equipment: (Disposable Bailer) / Bailer / Stack / Suction / Grundfos / Other:

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other:

Starting Time: 1:10 Weather Conditions: Clear

Sampling Time: 1:25 p.m. (1325) Water Color: Clear Odor: none

Purging Flow Rate: 0.5 gpm Sediment Description:

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

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1:10	1	7.66	10.85	65.5			
1:14	2	7.55	10.80	65.7			
1:18	3	7.55	10.82	65.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	2 VOA	"	"	"	8010

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

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

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

Total Depth: 24.26 ft.

Depth to Water: 18.02 ft.

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

6.24 X VF 0.17 = 1.06 X 3 (case volume) = Estimated Purge Volume: 3.5 (gal.)

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

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

Starting Time: 2:05 Weather Conditions: Clear

Sampling Time: 2:30 p.m. (1430) Water Color: Clear Odor: none

Purging Flow Rate: 0.5 gpm. Sediment Description:

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

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
2:15	1	7.49	5.86	67.0			
2:19	2	7.40	5.90	66.2			
2:22	3.5	7.44	5.93	66.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

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

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

Total Depth 27.18 ft

Depth to Water 17.98 ft

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

9.2 X VF 0.17 = 1.56 X 3 (case volume) = Estimated Purge Volume: 5 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; (Suction); Grundfos; Other:

Sampling Equipment: (Disposable Bailer); Bailer; Pressure Bailer; Grab Sample; Other:

Starting Time: 2:40 Weather Conditions: Clear

Sampling Time: 3:02 p.m (1502) Water Color: Clear Odor: None

Purging Flow Rate: 1 gpm. Sediment Description:

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

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
2:47	1.5	7.47	6.31	72.9			
2:49	3	7.40	5.82	73.0			
2:51	5.5	7.39	5.75	73.1			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

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

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

Total Depth: 24.82 ft.

Depth to Water: 17.76 ft.

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

7.06 X VF 0.17 = 1.20 X 3 (case volume) = Estimated Purge Volume: 3.5 (gal.)

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

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

Starting Time: 1:35 Weather Conditions: Clear

Sampling Time: 1:56 p.m (1356) Water Color: Clear Odor: none

Purging Flow Rate: 0.5 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)
1:42	1	7.80	10.31	65.8			
1:45	2	7.60	10.25	65.7			
1:47	3.5	7.54	10.26	65.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

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

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

Total Depth 30.12 ft.

Depth to Water 17.32 ft.

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

12.8 x VF 0.17 = 2.18 X 3 (case volume) = Estimated Purge Volume: 7 (gal.)

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

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other:

Starting Time: 11:45 Weather Conditions: Clear

Sampling Time: 12:08 p.m. (1208) Water Color: Clear Odor: None

Purging Flow Rate: 1 gpm Sediment Description:

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:55	2.5	7.91	11.27	72.1			
11:56	5	7.63	11.30	72.4			
11:58	7	7.58	11.26	72.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-16-01

City: Oakland Sampler: Joe

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

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

Total Depth: 30.06 ft.

Depth to Water: 16.83 ft.

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

13.23 X VF 0.17 = 2.50 X 3 (case volume) = Estimated Purge Volume: 9 (gal.)

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

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

Starting Time: 12:20 Weather Conditions: Clear

Sampling Time: 12:41 PM (1241) Water Color: Clear Odor: none

Purging Flow Rate: 1 gpm Sediment Description: _____

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

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:28	2.5	7.44	12.29	71.9			
12:30	5	7.48	12.22	72.5			
12:32	7	7.53	12.25	72.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS: _____

3/97-field.frm

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number: UNOCAL SS #3538
Facility Address: 411 W. MACARTHUR BLVD. OAKLAND, CA
Consultant Project Number: 180064.85
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:
Samples Collected by (Name): JOE ATJEMIAN
Collection Date: 7-16-01
Signature:

107135

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water 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 (8015) (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)					DO NOT BILL TB-LB ANALYSIS: Remarks
TB-LB	01	3 VOA	W	G	—	HCl	Y	✓												
MW-1	02	5 VOA	"	"	1325	"	"	✓			✓									
MW-2	03	3 VOA	"	"	1430	"	"	✓												
MW-3	04	4	"	"	1502	"	"	✓												
MW-4	05	4	"	"	1356	"	"	✓												
MW-5	06	4	"	"	1208	"	"	✓												
MW-6	07	4	"	"	1241	"	"	✓												

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	7-16-01 1800			7/16/01 1800
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

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

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612
www.sequoialabs.com

July 31 , 2001

Deanna Harding
Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568
RE: Tosco(1) / L107135

Enclosed are the results of analyses for samples received by the laboratory on 07/16/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya K. Pelt

Latonya Pelt
Project Manager

CA ELAP Certificate Number 2360

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#3538, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 16:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L107135-01	Water	07/16/01 00:00	07/16/01 18:00
MW-1	L107135-02	Water	07/16/01 13:25	07/16/01 18:00
MW-2	L107135-03	Water	07/16/01 14:30	07/16/01 18:00
MW-3	L107135-04	Water	07/16/01 15:02	07/16/01 18:00
MW-4	L107135-05	Water	07/16/01 13:56	07/16/01 18:00
MW-5	L107135-06	Water	07/16/01 12:08	07/16/01 18:00
MW-6	L107135-07	Water	07/16/01 12:41	07/16/01 18:00

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538, Oakland, CA	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	07/31/01 16:40

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L107135-01) Water Sampled: 07/16/01 00:00 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070120	07/26/01	07/27/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*	*70-130*		"	"	"	"	
MW-1 (L107135-02) Water Sampled: 07/16/01 13:25 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070120	07/26/01	07/27/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.9 %*	*70-130*		"	"	"	"	
MW-2 (L107135-03) Water Sampled: 07/16/01 14:30 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070131	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.0 %*	*70-130*		"	"	"	"	

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538, Oakland, CA	Reported:
Dublin CA, 94568	Project Manager: Deanna Harding	07/31/01 16:40

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L107135-04) Water Sampled: 07/16/01 15:02 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070131	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**660**	25	"	5	"	"	"	"	M-04
Surrogate: a,a,a-Trifluorotoluene		*83.3 %*		*70-130*	"	"	"	"	
MW-4 (L107135-05) Water Sampled: 07/16/01 13:56 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070131	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*97.3 %*		*70-130*	"	"	"	"	
MW-5 (L107135-06) Water Sampled: 07/16/01 12:08 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070131	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.5 %*		*70-130*	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#3538, Oakland, CA Project Manager: Deanna Harding	**Reported:** 07/31/01 16:40

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (L107135-07) Water Sampled: 07/16/01 12:41 Received: 07/16/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070131	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.4 %*		*70-130*	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#3538, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 16:40

Volatile Organic Compounds by EPA Method 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107135-02) Water Sampled: 07/16/01 13:25 Received: 07/16/01 18:00									
Freon 113	ND	2.0	ug/l	2	1070124	07/26/01	07/27/01	EPA 8021B	
Bromodichloromethane	**1.7**	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Chloroform	**45**	1.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	2.0	"	"	"	"	"	"	
Surrogate: 1-Chloro-2-fluorobenzene		*81.8 %*		*70-130*	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Unocal SS#3538, Oakland, CA Project Manager: Deanna Harding	Reported: 07/31/01 16:40

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

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070120 - EPA 5030B (P/T)										
Blank (1070120-BLK1)				Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	*9.68*		"	*10.0*		*96.8*	*70-130*			
LCS (1070120-BS1)				Prepared & Analyzed: 07/26/01						
Benzene	7.92	0.50	ug/l	10.0		79.2	70-130			
Toluene	7.60	0.50	"	10.0		76.0	70-130			
Ethylbenzene	7.64	0.50	"	10.0		76.4	70-130			
Xylenes (total)	22.7	0.50	"	30.0		75.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.31*		"	*10.0*		*93.1*	*70-130*			
LCS (1070120-BS2)				Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	265	50	ug/l	250		106	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.73*		"	*10.0*		*97.3*	*70-130*			
Matrix Spike (1070120-MS1)		Source: L107118-03		Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	281	50	ug/l	250	ND	112	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.2*		"	*10.0*		*102*	*70-130*			
Matrix Spike Dup (1070120-MSD1)		Source: L107118-03		Prepared & Analyzed: 07/26/01						
Purgeable Hydrocarbons as Gasoline	256	50	ug/l	250	ND	102	60-140	9.31	25	
Surrogate: a,a,a-Trifluorotoluene	*10.1*		"	*10.0*		*101*	*70-130*			

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538, Oakland, CA	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	07/31/01 16:40

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

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070131 - EPA 5030B (P/T)										
Blank (1070131-BLK1)				Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	*9.77*		"	*10.0*		*97.7*	*70-130*			
LCS (1070131-BS1)				Prepared & Analyzed: 07/29/01						
Benzene	10.6	0.50	ug/l	10.0		106	70-130			
Toluene	10.3	0.50	"	10.0		103	70-130			
Ethylbenzene	10.5	0.50	"	10.0		105	70-130			
Xylenes (total)	30.9	0.50	"	30.0		103	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.85*		"	*10.0*		*98.5*	*70-130*			
LCS (1070131-BS2)				Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	270	50	ug/l	250		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.87*		"	*10.0*		*98.7*	*70-130*			
Matrix Spike (1070131-MS1)		Source: L107135-03		Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	253	50	ug/l	250	ND	101	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.43*		"	*10.0*		*94.3*	*70-130*			
Matrix Spike Dup (1070131-MSD1)		Source: L107135-03		Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	275	50	ug/l	250	ND	110	60-140	8.33	25	
Surrogate: a,a,a-Trifluorotoluene	*9.76*		"	*10.0*		*97.6*	*70-130*			

Volatile Organic Compounds by EPA Method 8021B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070124 - EPA 5030B (P/T)										
Blank (1070124-BLK1)				Prepared & Analyzed: 07/26/01						
Freon 113	ND	1.0	ug/l							
Bromodichloromethane	ND	0.50	"							
Bromoform	ND	0.50	"							
Bromomethane	ND	1.0	"							
Carbon tetrachloride	ND	0.50	"							
Chlorobenzene	ND	0.50	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	0.50	"							
Chloromethane	ND	1.0	"							
Dibromochloromethane	ND	0.50	"							
1,3-Dichlorobenzene	ND	0.50	"							
1,4-Dichlorobenzene	ND	0.50	"							
1,2-Dichlorobenzene	ND	0.50	"							
1,1-Dichloroethane	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	0.50	"							
cis-1,2-Dichloroethene	ND	0.50	"							
trans-1,2-Dichloroethene	ND	0.50	"							
1,2-Dichloropropane	ND	0.50	"							
cis-1,3-Dichloropropene	ND	0.50	"							
trans-1,3-Dichloropropene	ND	0.50	"							
Methylene chloride	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	0.50	"							
Tetrachloroethene	ND	0.50	"							
1,1,1-Trichloroethane	ND	0.50	"							
1,1,2-Trichloroethane	ND	0.50	"							
Trichloroethene	ND	0.50	"							
Trichlorofluoromethane	ND	0.50	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Toluene	ND	0.50	"							
Total Xylenes	ND	0.50	"							
Surrogate: 1-Chloro-2-fluorobenzene	*8.53*		"	*10.0*		*85.3*	*70-130*			

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538, Oakland, CA	**Reported:**
Dublin CA, 94568	Project Manager: Deanna Harding	07/31/01 16:40

Volatile Organic Compounds by EPA Method 8021B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070124 - EPA 5030B (P/T)										
LCS (1070124-BS1)				Prepared & Analyzed: 07/26/01						
Chlorobenzene	22.7	0.50	ug/l	20.0		114	70-130			
1,1-Dichloroethene	25.3	0.50	"	20.0		126	70-130			
Trichloroethene	21.5	0.50	"	20.0		108	70-130			
Benzene	22.3	0.50	"	20.0		112	70-130			
Toluene	23.0	0.50	"	20.0		115	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	*8.73*		"	*10.0*		*87.3*	*70-130*			
Matrix Spike (1070124-MS1)		**Source: L107225-02**		Prepared: 07/26/01		Analyzed: 07/27/01				
Chlorobenzene	22.8	0.50	ug/l	20.0	ND	114	60-140			
1,1-Dichloroethene	22.6	0.50	"	20.0	ND	113	60-140			
Trichloroethene	21.1	0.50	"	20.0	ND	106	60-140			
Benzene	22.0	0.50	"	20.0	ND	110	60-140			
Toluene	22.6	0.50	"	20.0	ND	113	60-140			
Surrogate: 1-Chloro-2-fluorobenzene	*8.91*		"	*10.0*		*89.1*	*70-130*			
Matrix Spike Dup (1070124-MSD1)		**Source: L107225-02**		Prepared: 07/26/01		Analyzed: 07/27/01				
Chlorobenzene	21.5	0.50	ug/l	20.0	ND	108	60-140	5.87	25	
1,1-Dichloroethene	22.9	0.50	"	20.0	ND	114	60-140	1.32	25	
Trichloroethene	20.7	0.50	"	20.0	ND	104	60-140	1.91	25	
Benzene	20.8	0.50	"	20.0	ND	104	60-140	5.61	25	
Toluene	21.5	0.50	"	20.0	ND	108	60-140	4.99	25	
Surrogate: 1-Chloro-2-fluorobenzene	*8.61*		"	*10.0*		*86.1*	*70-130*			

Notes and Definitions

M-04 MTBE was reported from second analysis.

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