GETTLER-RYAN INC.

TRANSMITTAL

RO251

September 14, 2000
G-R #180064

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) SS #3538
411 West MacArthur Blvd.
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	September 12, 2000	Groundwater Monitoring and Sampling Report Semi-Annual - Events of July 10, and August 25, 2000

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 25, 2000***, this report will be distributed to the following:

Enclosure

cc: **Ms. Susan Hugo**
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

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ENVIRONMENTAL PROTECTION

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GETTLER-RYAN INC.

September 12, 2000
G-R Job #180064

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

RE: Semi-Annual 2000 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #3538
411 West MacArthur Boulevard
Oakland, California

Dear Mr. De Witt:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On July 10, 2000, field personnel monitored and sampled six wells (MW-1 through MW-6) at the above referenced site. In addition, on August 25, 2000, field personnel monitored and sampled one well (MW-3).

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,

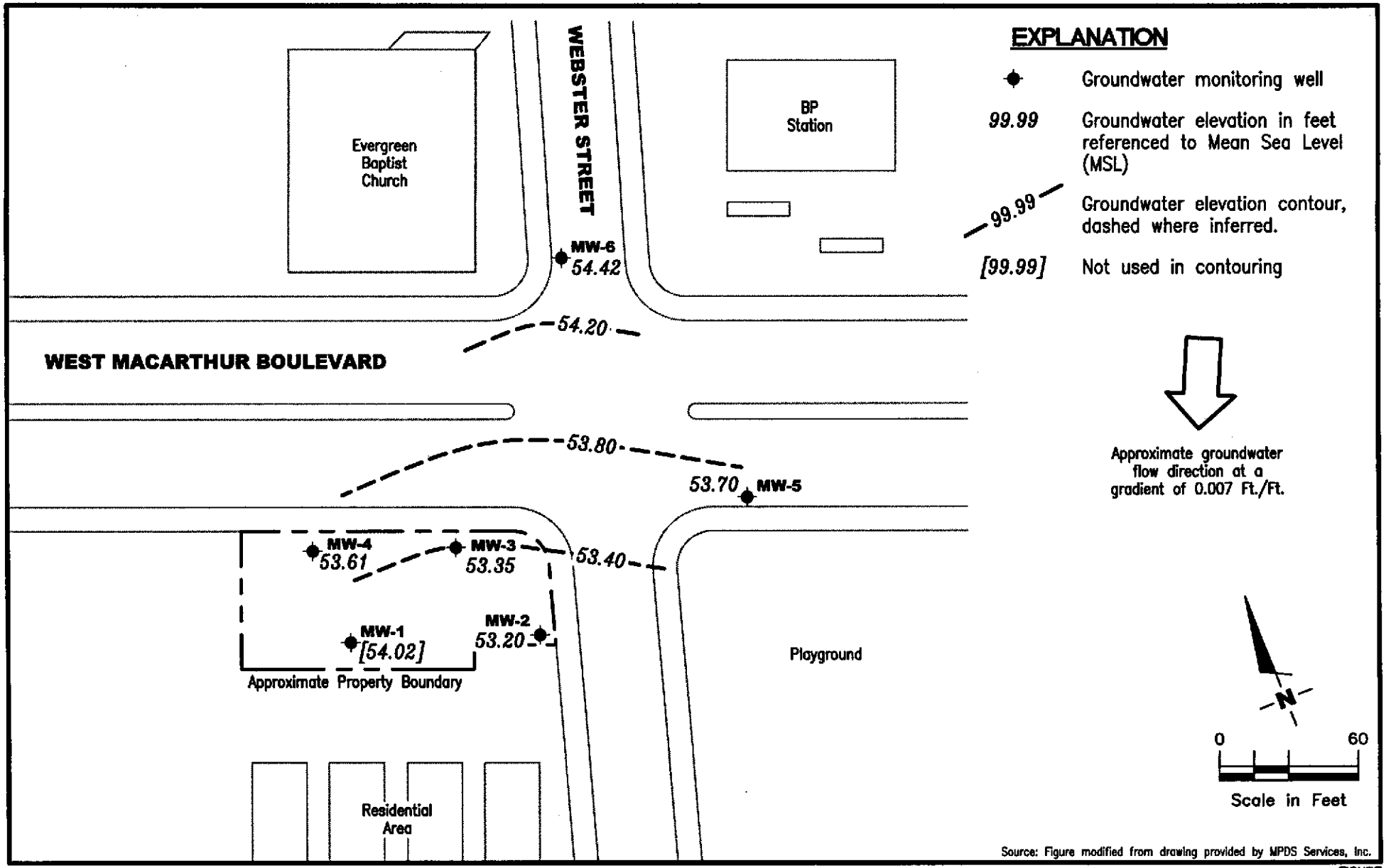
Deanna L. Harding
Project Coordinator

Barbara Sieminski
Project Geologist, R.G. No. 6676

REGISTERED GEOLOGIST
BARBARA SIEMINSKI
No. 6676
STATE OF CALIFORNIA

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

3538.qml



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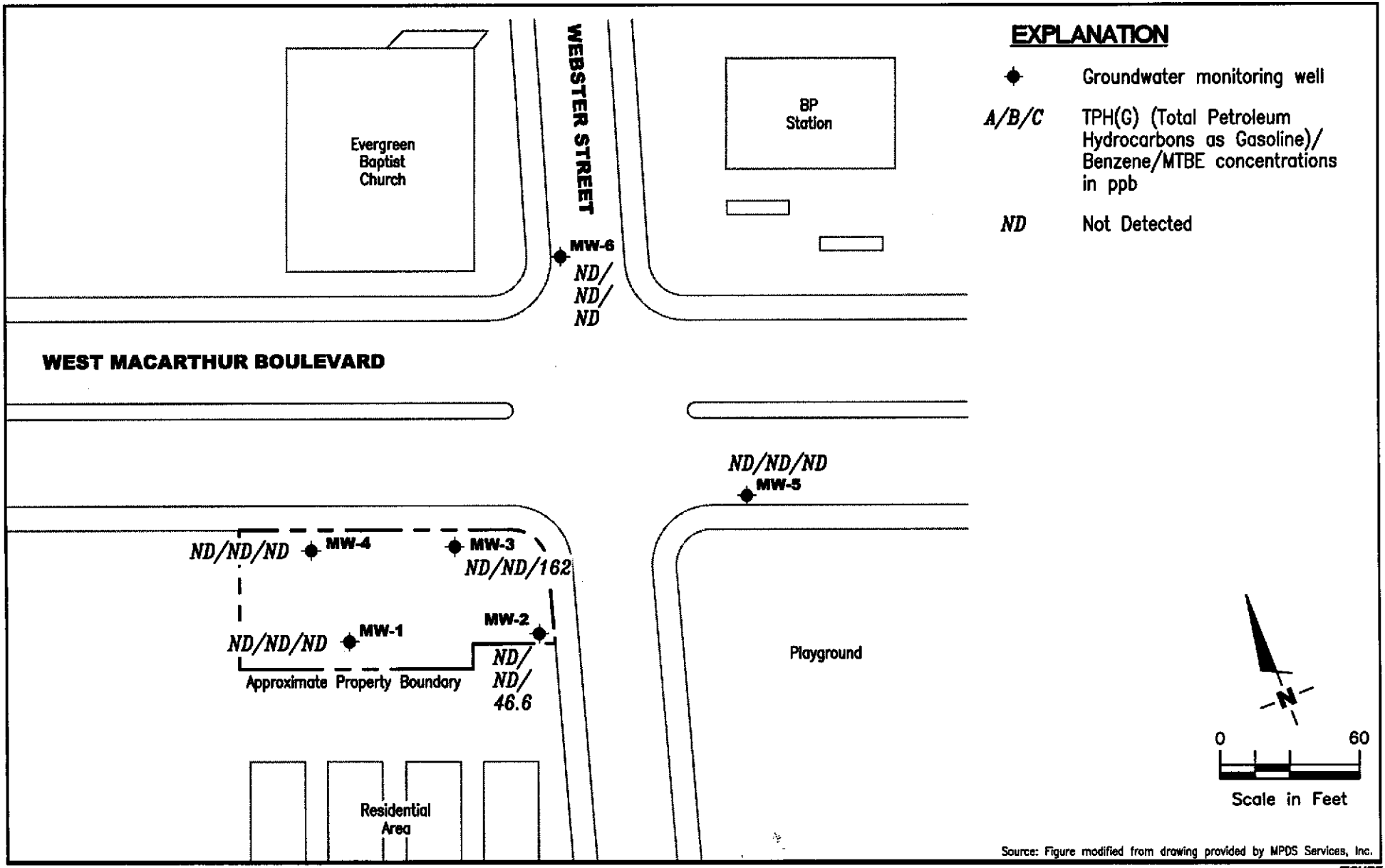
Dublin, CA 94568 (925) 551-7555

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

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180064		July 10, 2000	

FILE NAME: P:\ENVIRO\TOSCO\3538\Q00-3538.DWG | Layout Tab: pot3



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

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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 10, 2000	

FILE NAME: P:\Enviro\Tosco\3538\q00-3538.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**

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**
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	--
	10/26/95	18.32		53.54	14,000	420	180	750	1,600	4,800
	01/16/96[3]	17.95		53.91	920	38	ND	30	57	--

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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-3	04/15/96	17.78	5.0-29.0	54.08	9,700	240	ND	570	860	3,200
(cont)	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]
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	--	--	--	--	--	--
	04/17/95	17.21		54.43	--	--	--	--	--	--
	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	--	--	--	--	--	--

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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	04/15/96	17.35	5.0-29.0	54.29	--	--	--	--	--	--
(cont)	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**
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
	01/17/97	16.75		54.48	--	--	--	--	--	--
	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

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	01/21/00	16.83	13.0-30.0	54.33	--	--	--	--	--	--
(cont)	**07/10/00**	**17.46**		**53.70**	**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
	01/21/00	16.13		55.24	--	--	--	--	--	--
	07/10/00	**16.95**		**54.42**	**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

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)
TB-LB	08/31/99	--	--	--	ND	ND	1.5	ND	2.3	39
(cont)	01/21/00	--		--	ND	ND	ND	ND	ND	ND
	07/10/00	--		--	**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 mean sea level (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

EXPLANATIONS:

Groundwater analytical results prior to January 14, 1998, 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.

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

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

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

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: 7-10-00

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 23.35 ft.

Depth to Water 18.10 ft.

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

5.25 X VF 0.17 = 0.89 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: 11:40 Weather Conditions: clear

Sampling Time: 12:05 P.M. Water Color: clear Odor: none

Purging Flow Rate: 0.5 gpm Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity x100 µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:47	1	7.57	9.38	65.8			
11:50	2	7.67	9.55	66.0			
11:52	3	7.62	9.56	65.4			

LABORATORY INFORMATION

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

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-10-00

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 24.30 ft.

Depth to Water 18.14 ft.

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

6.16 X VF 0.17 = 1.05 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: 12:50 Weather Conditions: clear

Sampling Time: 1:15 p.m. Water Color: clear Odor: none

Purging Flow Rate: 0.5 gpm Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity (x 100) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1:00	1	7.17	5.88	65.8			
1:03	2	7.27	6.05	65.1			
1:06	3.5	7.32	6.09	65.5			

LABORATORY INFORMATION

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

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-10-00

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 27.20 ft.

Depth to Water 18.05 ft.

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

9.15 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: 1:25 Weather Conditions: clear

Sampling Time: 1:47 A.M Water Color: clear Odor: none

Purging Flow Rate: 1 gpm Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm x 1000	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1:35	1.5	7.37	3.92	73.2			
1:36	3	7.41	4.14	72.5			
1:37	5	7.46	4.21	72.4			

LABORATORY INFORMATION

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

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-10-00

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 24.80 ft.

Depth to Water 17.93 ft.

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

6.87 X VF 0.17 = 1.17 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: 12:15 Weather Conditions: clear

Sampling Time: 12:39 P.M. Water Color: clear Odor: None

Purging Flow Rate: 0.5 gpm Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity x100 µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:25	1	7.95	12.68	65.1			
12:28	2	7.72	12.72	65.2			
12:31	3.5	7.61	12.70	65.0			

LABORATORY INFORMATION

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

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-10-00

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 30.10 ft.

Depth to Water 17.46 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.90	

12.64 X VF 0.17 = 2.15 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

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

Starting Time: 11:00 Weather Conditions: clear

Sampling Time: 11:25 AM Water Color: clear Odor: none

Purging Flow Rate: 1 gpm Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity (x 100) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:12	2	7.70	10.37	71.9			
11:13	4	7.50	10.47	74.0			
11:14	6.5	7.55	10.52	73.8			

LABORATORY INFORMATION

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

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 3538 Job#: 180064

Address: 411 W. MacArthur Blvd. Date: 7-10-00

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 30.00 ft.

Depth to Water 16.95 ft.

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

13.05 x VF 0.17 = 2.22 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: 10:20 Weather Conditions: clear

Sampling Time: 10:45 A.M. Water Color: clear Odor: none

Purging Flow Rate: 1 gpm Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity x 1.50 µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:30	2.5	7.40	11.91	72.5			
10:32	5	7.35	11.52	73.0			
10:33	7	7.48	11.46	73.7			

LABORATORY INFORMATION

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

COMMENTS:

Chain of Custody Record

TOSCO

Tosco Marketing Company
3500 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number UNOCAL SS #3538 / 7007052
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 AJEMIAN
Collection Date 7-10-00
Signature

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 (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		1 VOA	W	G	—	HCl	Y	✓												
✓ MW-1		5 VOA	/	/	12:05	/	/	✓			✓									
✓ MW-2		3 VOA	/	/	11:15	/	/	✓												
✓ MW-3		6	/	/	1:47	/	/	✓												
✓ MW-4		6	/	/	12:39	/	/	✓												
✓ MW-5		3	/	/	11:25	/	/	✓												
✓ MW-6		6	/	/	10:45	/	/	✓												

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	7-10-00 3:30 PM			7/10/00 15:30
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
(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
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July 25, 2000

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

RE: Tosco(4)/L007067

Dear Deanna Harding:

Enclosed are the results of analyses for sample(s) received by the laboratory on July 10, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson
Project Manager

CA ELAP Certificate Number I-2360

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Gettler-Ryan/Geostrategies(1)	Project: Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager: Deanna Harding	Reported: 7/25/00

ANALYTICAL REPORT FOR L007067

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB	L007067-01	Water	7/10/00
MW-1	L007067-02	Water	7/10/00
MW-2	L007067-03	Water	7/10/00
MW-3	L007067-04	Water	7/10/00
MW-4	L007067-05	Water	7/10/00
MW-5	L007067-06	Water	7/10/00
MW-6	L007067-07	Water	7/10/00

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Sample Description: **TB-LB**
Laboratory Sample Number: **L007067-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0070068	7/18/00	7/18/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*102*	%	

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Sample Description: **MW-1**
Laboratory Sample Number: **L007067-02**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0070058	7/14/00	7/15/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*91.4*	%	
Volatile Organic Compounds by EPA Method 8010B								
Freon 113	0070049	7/12/00	7/13/00		1.00	ND	ug/l	
Bromodichloromethane	"	"	"		0.500	ND	"	
Bromoform	"	"	"		0.500	ND	"	
Bromomethane	"	"	"		1.00	ND	"	
Carbon tetrachloride	"	"	"		0.500	ND	"	
Chlorobenzene	"	"	"		0.500	ND	"	
Chloroethane	"	"	"		1.00	ND	"	
2-Chloroethylvinyl ether	"	"	"		1.00	ND	"	
Chloroform	"	"	"		0.500	ND	"	
Chloromethane	"	"	"		1.00	ND	"	
Dibromochloromethane	"	"	"		0.500	ND	"	
1,3-Dichlorobenzene	"	"	"		0.500	ND	"	
1,4-Dichlorobenzene	"	"	"		0.500	ND	"	
1,2-Dichlorobenzene	"	"	"		0.500	ND	"	
1,1-Dichloroethane	"	"	"		0.500	ND	"	
1,2-Dichloroethane	"	"	"		0.500	ND	"	
1,1-Dichloroethene	"	"	"		0.500	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.500	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.500	ND	"	
1,2-Dichloropropane	"	"	"		0.500	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.500	ND	"	
trans-1,3-Dichloropropene	"	"	"		5.00	ND	"	
Methylene chloride	"	"	"		0.500	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.500	ND	"	
Tetrachloroethene	"	"	"		0.500	ND	"	
1,1,1-Trichloroethane	"	"	"		0.500	ND	"	
1,1,2-Trichloroethane	"	"	"		0.500	ND	"	
Trichloroethene	"	"	"		0.500	ND	"	
Trichlorofluoromethane	"	"	"		0.500	ND	"	
Vinyl chloride	"	"	"		0.500	ND	"	
Surrogate: 1-Chloro-2-fluorobenzene	"	"	"	*70.0-130*		*81.8*	%	

**Refer to end of report for text of notes and definitions.*

Sequoia Analytical

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San Carlos, CA 94070-4111
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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Sample Description: **MW-2**
Laboratory Sample Number: **L007067-03**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0070068	7/18/00	7/18/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**46.6**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*109*	*%*	

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Gettler-Ryan/Geostrategies(1)	Project: Tosco(4)	Sampled: 7/10/00
5747 Sierra Court, Suite J	Project Number: Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager: Deanna Harding	Reported: 7/25/00

Sample Description: **MW-3**
Laboratory Sample Number: **L007067-04**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0070068	7/18/00	7/19/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	**162**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*123*	*%*	

*Refer to end of report for text of notes and definitions.

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Sample Description: **MW-4**
Laboratory Sample Number: **L007067-05**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0070068	7/18/00	7/18/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*117*	%	

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Sample Description: **MW-5**
Laboratory Sample Number: **L007067-06**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0070068	7/18/00	7/19/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*108*	*%*	

**Refer to end of report for text of notes and definitions.*

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Sample Description: **MW-6**
Laboratory Sample Number: **L007067-07**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0070068	7/18/00	7/19/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*106*	%	

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Gettler-Ryan/Geostrategies(1)	Project: Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager: Deanna Harding	Reported: 7/25/00

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0070058	**Date Prepared: 7/14/00**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**0070058-BLK1**									
Purgeable Hydrocarbons as Gasoline	7/14/00			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**5.00**				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*11.3*	"	*70.0-130*	*113*			
LCS	**0070058-BS1**									
Benzene	7/14/00	10.0		8.49	ug/l	70.0-130	84.9			
Toluene	"	10.0		8.02	"	70.0-130	80.2			
Ethylbenzene	"	10.0		7.67	"	70.0-130	76.7			
Xylenes (total)	"	30.0		23.2	"	70.0-130	77.3			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*11.5*	"	*70.0-130*	*115*			
LCS	**0070058-BS2**									
Purgeable Hydrocarbons as Gasoline	7/14/00	250		216	ug/l	70.0-130	86.4			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.8*	"	*70.0-130*	*108*			
Matrix Spike	**0070058-MS1**	**L007051-10**								
Benzene	7/14/00	10.0	ND	9.54	ug/l	60.0-140	**95.4**			
Toluene	"	10.0	ND	9.16	"	60.0-140	**91.6**			
Ethylbenzene	"	10.0	ND	9.02	"	60.0-140	**90.2**			
Xylenes (total)	"	30.0	ND	26.8	"	60.0-140	**89.3**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.7*	"	*70.0-130*	*107*			
Matrix Spike Dup	**0070058-MSD1**	**L007051-10**								
Benzene	7/14/00	10.0	ND	10.0	ug/l	60.0-140	**100**	25.0	**4.71**	
Toluene	"	10.0	ND	9.66	"	60.0-140	**96.6**	25.0	**5.31**	
Ethylbenzene	"	10.0	ND	9.52	"	60.0-140	**95.2**	25.0	**5.39**	
Xylenes (total)	"	30.0	ND	28.6	"	60.0-140	**95.3**	25.0	**6.50**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.6*	"	*70.0-130*	*106*			
Batch: 0070068	**Date Prepared: 7/18/00**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**0070068-BLK1**									
Purgeable Hydrocarbons as Gasoline	7/18/00			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**0070068-BLK1**									
Methyl tert-butyl ether	7/18/00			ND	ug/l	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*11.5*	"	*70.0-130*	*115*			
LCS	**0070068-BS1**									
Benzene	7/18/00	10.0		8.11	ug/l	70.0-130	81.1			
Toluene	"	10.0		7.47	"	70.0-130	74.7			
Ethylbenzene	"	10.0		7.40	"	70.0-130	74.0			
Xylenes (total)	"	30.0		22.6	"	70.0-130	75.3			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.5*	"	*70.0-130*	*105*			
LCS	**0070068-BS2**									
Purgeable Hydrocarbons as Gasoline	7/18/00	250		257	ug/l	70.0-130	103			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*11.3*	"	*70.0-130*	*113*			
Matrix Spike	**0070068-MS1**		**L007067-05**							
Benzene	7/18/00	10.0	ND	10.6	ug/l	60.0-140	**106**			
Toluene	"	10.0	ND	9.75	"	60.0-140	**97.5**			
Ethylbenzene	"	10.0	ND	9.83	"	60.0-140	**98.3**			
Xylenes (total)	"	30.0	ND	30.0	"	60.0-140	**100**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.8*	"	*70.0-130*	*108*			
Matrix Spike Dup	**0070068-MSD1**		**L007067-05**							
Benzene	7/18/00	10.0	ND	10.7	ug/l	60.0-140	**107**	25.0	**0.939**	
Toluene	"	10.0	ND	10.0	"	60.0-140	**100**	25.0	**2.53**	
Ethylbenzene	"	10.0	ND	10.1	"	60.0-140	**101**	25.0	**2.71**	
Xylenes (total)	"	30.0	ND	30.9	"	60.0-140	**103**	25.0	**2.96**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.9*	"	*70.0-130*	*109*			

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Gettler-Ryan/Geostrategies(1)	Project: Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager: Deanna Harding	Reported: 7/25/00

Volatile Organic Compounds by EPA Method 8010B/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0070049	**Date Prepared: 7/12/00**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**0070049-BLK1**									
Freon 113	7/12/00			ND	ug/l	1.00				
Bromodichloromethane	"			ND	"	0.500				
Bromoform	"			ND	"	0.500				
Bromomethane	"			ND	"	1.00				
Carbon tetrachloride	"			ND	"	0.500				
Chlorobenzene	"			ND	"	0.500				
Chloroethane	"			ND	"	1.00				
2-Chloroethylvinyl ether	"			ND	"	1.00				
Chloroform	"			ND	"	0.500				
Chloromethane	"			ND	"	1.00				
Dibromochloromethane	"			ND	"	0.500				
1,3-Dichlorobenzene	"			ND	"	0.500				
1,4-Dichlorobenzene	"			ND	"	0.500				
1,2-Dichlorobenzene	"			ND	"	0.500				
1,1-Dichloroethane	"			ND	"	0.500				
1,2-Dichloroethane	"			ND	"	0.500				
1,1-Dichloroethene	"			ND	"	0.500				
cis-1,2-Dichloroethene	"			ND	"	0.500				
trans-1,2-Dichloroethene	"			ND	"	0.500				
1,2-Dichloropropane	"			ND	"	0.500				
cis-1,3-Dichloropropene	"			ND	"	0.500				
trans-1,3-Dichloropropene	"			ND	"	5.00				
Methylene chloride	"			ND	"	0.500				
1,1,2,2-Tetrachloroethane	"			ND	"	0.500				
Tetrachloroethene	"			ND	"	0.500				
1,1,1-Trichloroethane	"			ND	"	0.500				
1,1,2-Trichloroethane	"			ND	"	0.500				
Trichloroethene	"			ND	"	0.500				
Trichlorofluoromethane	"			ND	"	0.500				
Vinyl chloride	"			ND	"	0.500				
Surrogate: 1-Chloro-2-fluorobenzene	"	*10.0*		*8.66*	"	*70.0-130*	*86.6*			
LCS	**0070049-BS1**									
Chlorobenzene	7/12/00	10.0		9.16	ug/l	70.0-130	91.6			
1,1-Dichloroethene	"	10.0		9.22	"	65.0-135	92.2			
Trichloroethene	"	10.0		8.94	"	70.0-130	89.4			
Surrogate: 1-Chloro-2-fluorobenzene	"	*10.0*		*9.12*	"	*70.0-130*	*91.2*			
Matrix Spike	**0070049-MS1**		**L007042-01**							
Chlorobenzene	7/12/00	10.0	ND	9.96	ug/l	60.0-140	99.6			

*Refer to end of report for text of notes and definitions.

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 7/25/00

Volatile Organic Compounds by EPA Method 8010B/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike (continued)	**0070049-MS1**		**L007042-01**							
1,1-Dichloroethene	7/12/00	10.0	ND	8.31	ug/l	60.0-140	**83.1**			
Trichloroethene	"	10.0	ND	9.39	"	60.0-140	**93.9**			
Surrogate: 1-Chloro-2-fluorobenzene	"	*10.0*		*9.53*	"	*70.0-130*	*95.3*			
Matrix Spike Dup	**0070049-MSD1**		**L007042-01**							
Chlorobenzene	7/12/00	10.0	ND	9.82	ug/l	60.0-140	**98.2**	25.0	**1.42**	
1,1-Dichloroethene	"	10.0	ND	8.43	"	60.0-140	**84.3**	25.0	**1.43**	
Trichloroethene	"	10.0	ND	8.86	"	60.0-140	**88.6**	25.0	**5.81**	
Surrogate: 1-Chloro-2-fluorobenzene	"	*10.0*		*9.32*	"	*70.0-130*	*93.2*			

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Gettler-Ryan/Geostrategies(1)	Project: Tosco(4)	Sampled: 7/10/00
6747 Sierra Court, Suite J	Project Number: Unocal SS#3538	Received: 7/10/00
Dublin, CA 94568	Project Manager: Deanna Harding	Reported: 7/25/00

Notes and Definitions

#	Note
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
Recov.	Recovery
RPD	Relative Percent Difference

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/ Tosco
Facility # 3538 — Job#: 180064
Address: 411 West MacArthur Blvd. — Date: 8/25/00
City: Oakland — Sampler: Vartkes

Well ID: MW-3 — Well Condition: OK
Well Diameter: 2 in. — Hydrocarbon Thickness: ϕ (feet) — Amount Bailed (product/water): ϕ (Gallons)
Total Depth: 27.20 ft.
Depth to Water: 17.82 ft.

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

9.38 x VF 0.17 = 1.59 X 3 (case volume) = Estimated Purge Volume: 5.0 (gal.)

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

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

Starting Time: 9:05 — Weather Conditions: clear
Sampling Time: 9:20 — Water Color: clear — Odor: no
Purging Flow Rate: 1 gpm. — Sediment Description: _____
Did well de-water? no — If yes; Time: _____ — Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:07	1.5	7.68	446	67.3			
9:09	3	7.52	470	68.1			
9:10	5	7.49	483	68.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3 x VOA	Y	HCl	SEQUOIA	[redacted] 5) Oxys + 1,2 DCA + EDB (8260)

COMMENTS: _____

9/97-fieldst.frm

TOSCO

Tosco Marketing Company
3500 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) Vartkes Tashjian
Collection Date 8/25/00
Signature

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)	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)	(5) 8240 (8260) 1,2 DCA + EDB				DO NOT BILL TB-LB ANALYSIS / Remarks
~~TB-LB~~																				
MW-3	01	3	W	G	9:20 AM	HCl	Y									X				1008185

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	8/25/00			8/25 2035
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

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August 31, 2000

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

RE: Tosco(4)/L008185

Dear Deanna Harding:

Enclosed are the results of analyses for sample(s) received by the laboratory on August 25, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Richard G. Yee
Organics Dept. Manager

CA ELAP Certificate Number I-2360

Sequoia Analytical

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 8/25/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS# 3538/ 411 W. MacArthur Blvd., Oakland	Received: 8/25/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 8/31/00

ANALYTICAL REPORT FOR L008185

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-3	L008185-01	Water	8/25/00

Sequoia Analytical

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 8/25/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS# 3538/ 411 W. MacArthur Blvd., Oakland	Received: 8/25/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 8/31/00

Sample Description: MW-3
Laboratory Sample Number: L008185-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Volatile Organic Oxygenated Compounds by EPA Method 8260B								
1,2-Dibromoethane	0080132	8/29/00	8/29/00		4.00	ND	ug/l	
1,2-Dichloroethane	"	"	"		4.00	ND	"	
Di-isopropyl ether	"	"	"		4.00	ND	"	
Ethyl tert-butyl ether	"	"	"		4.00	ND	"	
Methyl tert-butyl ether	"	"	"		4.00	**180**	"	
Tert-amyl methyl ether	"	"	"		4.00	ND	"	
Tert-butyl alcohol	"	"	"		200	ND	"	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*76.0-114*		*102*	%	
Surrogate: Toluene-d8	"	"	"	*88.0-110*		*102*	"	

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 8/25/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS# 3538/ 411 W. MacArthur Blvd., Oakland	Received: 8/25/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 8/31/00

Volatile Organic Oxygenated Compounds by EPA Method 8260B/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0080132	**Date Prepared: 8/29/00**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**0080132-BLK1**									
1,2-Dibromoethane	8/29/00			ND	ug/l	2.00				
1,2-Dichloroethane	"			ND	"	2.00				
Di-isopropyl ether	"			ND	"	2.00				
Ethyl tert-butyl ether	"			ND	"	2.00				
Methyl tert-butyl ether	"			ND	"	2.00				
Tert-amyl methyl ether	"			ND	"	2.00				
Tert-butyl alcohol	"			ND	"	100				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*49.9*	"	*76.0-114*	*99.8*			
Surrogate: Toluene-d8	"	*50.0*		*50.1*	"	*88.0-110*	*100*			
Blank	**0080132-BLK2**									
1,2-Dibromoethane	8/30/00			ND	ug/l	2.00				
1,2-Dichloroethane	"			ND	"	2.00				
Di-isopropyl ether	"			ND	"	2.00				
Ethyl tert-butyl ether	"			ND	"	2.00				
Methyl tert-butyl ether	"			ND	"	2.00				
Tert-amyl methyl ether	"			ND	"	2.00				
Tert-butyl alcohol	"			ND	"	100				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*51.6*	"	*76.0-114*	*103*			
Surrogate: Toluene-d8	"	*50.0*		*49.5*	"	*88.0-110*	*99.0*			
LCS	**0080132-BS1**									
Methyl tert-butyl ether	8/29/00	50.0		52.1	ug/l	70.0-130	104			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*50.4*	"	*76.0-114*	*101*			
Surrogate: Toluene-d8	"	*50.0*		*50.2*	"	*88.0-110*	*100*			
LCS	**0080132-BS2**									
Methyl tert-butyl ether	8/30/00	50.0		52.6	ug/l	70.0-130	105			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*52.0*	"	*76.0-114*	*104*			
Surrogate: Toluene-d8	"	*50.0*		*50.7*	"	*88.0-110*	*101*			
Matrix Spike	**0080132-MS1**		**L008198-01**							
Methyl tert-butyl ether	8/29/00	50.0	ND	46.7	ug/l	60.0-140	**93.4**			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*50.5*	"	*76.0-114*	*101*			
Surrogate: Toluene-d8	"	*50.0*		*51.3*	"	*88.0-110*	*103*			
Matrix Spike Dup	**0080132-MSD1**		**L008198-01**							
Methyl tert-butyl ether	8/29/00	50.0	ND	53.3	ug/l	60.0-140	**107**	25.0	**13.6**	
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*51.3*	"	*76.0-114*	*103*			
Surrogate: Toluene-d8	"	*50.0*		*50.8*	"	*88.0-110*	*102*			

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Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled: 8/25/00
6747 Sierra Court, Suite J	Project Number:	Unocal SS# 3538/ 411 W. MacArthur Blvd., Oakland	Received: 8/25/00
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported: 8/31/00

Notes and Definitions

#	Note
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
Recov.	Recovery
RPD	Relative Percent Difference