#521

GETTLER-RYAN INC.

June 4, 1999
G-R Job #180065

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

- FP still present in MW-6 - maybe should consider dual phase extraction
- MTBE being detected in MW-9, 1st time need to confirm by 8260 & see if it's coming from offsite (Chevron).

RE: Second Quarter 1999 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #5043
449 Hegenberger Road
Oakland, California

Dear Mr. De Witt:

This report documents the monthly site visits and the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On February 22, and March 22, 1999, field personnel monitored one well (MW-6). On April 15, 1999, field personnel monitored six wells (MW-3, MW-6, MW-7, MW-8, MW-9, and MW-10) and sampled five wells (MW-3, MW-7, MW-8, MW-9 and MW-10) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were present in one well (MW-6). Static water level data and groundwater elevations are summarized in Table 1. Product Thickness/Removal Data is summarized in Table 2. 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 Table 1, and a Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

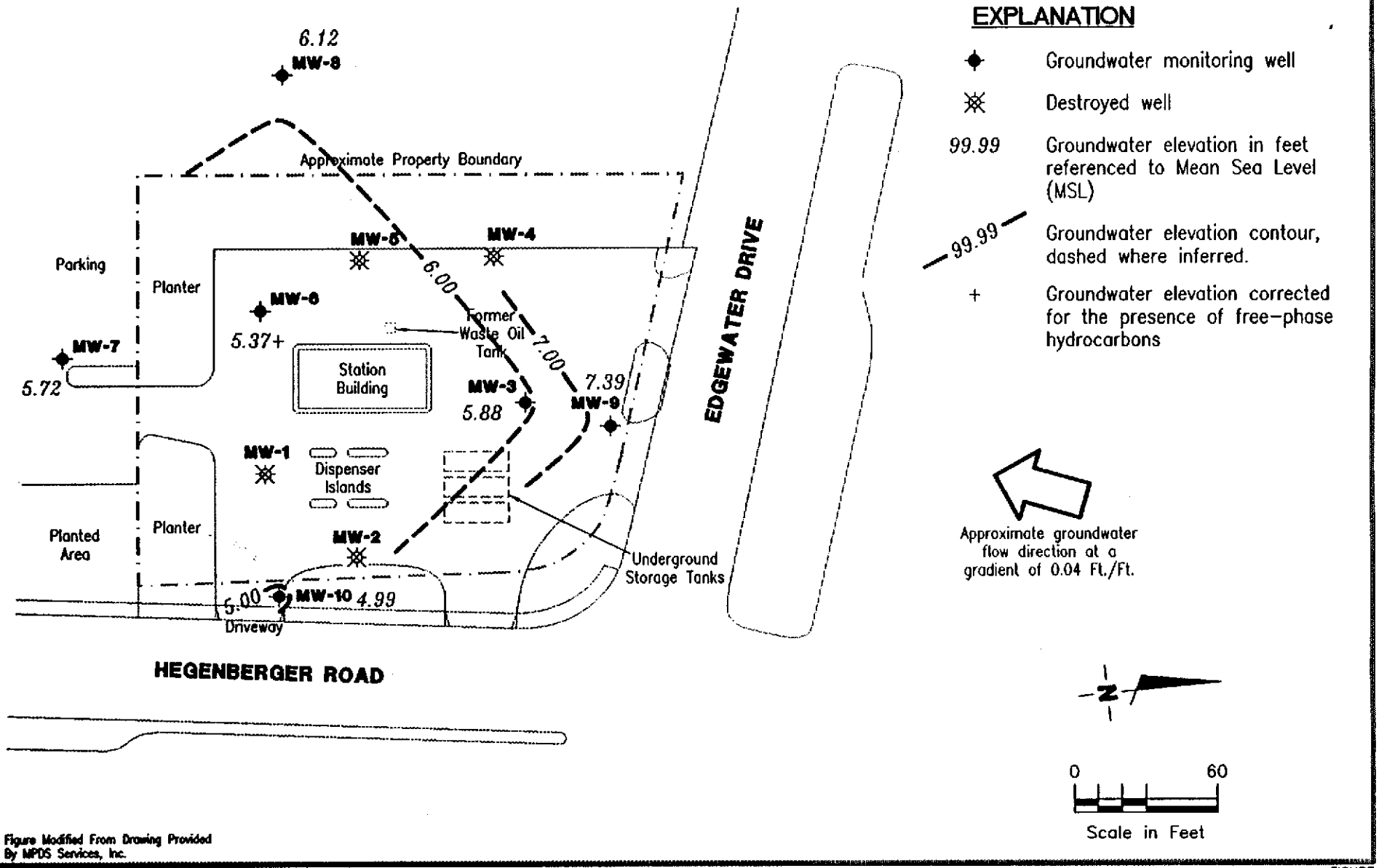
Sincerely,

Deanna L. Harding
Project Coordinator

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

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

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Product Thickness/Removal Data
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
5043.qml Chain of Custody Document and Laboratory Analytical Reports



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

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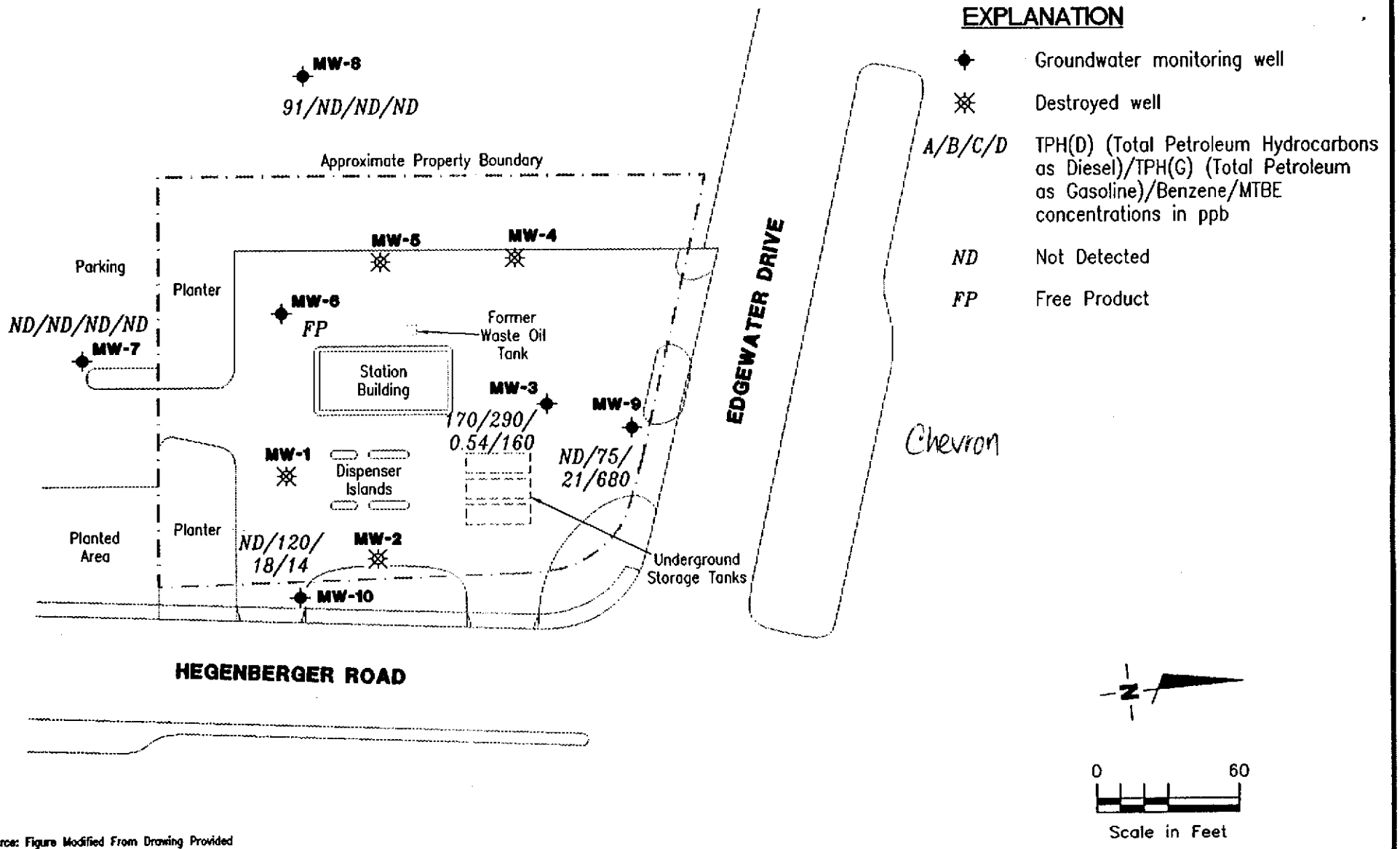
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 5043
449 Hegenberger Road
Oakland, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180065		April 15, 1999	



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

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Dublin, CA 94568

CONCENTRATION MAP
Tosco (Unocal) Service Station No. 5043
449 Hegenberger Road
Oakland, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180065		April 15, 1999	

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043
449 Hegenberger Road
Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	02/18/92	--	--	--	13,000	150,000	17,000	26,000	5,200	26,000	--
	05/20/92	--	--	--	--	--	--	--	--	--	--
	08/31/92	--	--	--	8,900[1]	64,000	13,000	12,000	2,500	22,000	--
	11/30/92	--	--	--	--	--	--	--	--	--	--
	02/04/93	--	--	--	--	--	--	--	--	--	--
8.96◆	05/04/93	2.13	5.73**	0.10	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	08/04/93	2.92	4.88**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
7.38	11/03/93	3.04	4.74	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/07/94	2.55	4.85**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	05/19/94	2.23	5.16**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	06/25/94	2.49	4.90**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	07/27/94	3.10	4.28	0.00	--	--	--	--	--	--	--
	08/15/94	2.85	4.61**	0.11	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	11/14/94	2.97	4.50**	0.12	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/21/95	1.53	5.87**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	05/18/95	DESTROYED (3/95)	--	--	--	--	--	--	--	--	--
MW-2	02/18/92	--	--	--	4,300	29,000	1,000	5,300	260	7,900	--
	05/20/92	--	--	--	4,300[1]	24,000	2,200	7,600	630	11,000	--
	08/31/92	--	--	--	1,600[1]	9,000	1,800	640	140	2,000	--
	11/30/92	--	--	--	5,700[1]	29,000	2,000	3,400	1,200	6,900	--
	02/04/93	--	--	--	6,100[1]	18,000	1,600	3,000	ND	6,900	--
8.96◆	05/04/93	2.48	6.48	0.00	7,100[1]	63,000	3,200	17,000	470	17,000	--
	08/04/93	3.20	5.76	0.00	1,800[2]	45,000	2,100	6,600	1,400	12,000	--
8.58	11/03/93	3.37	5.21	0.00	2,600[2]	72,000	3,700	16,000	3,700	20,000	--
	02/07/94	2.40	6.18	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	05/19/94	2.13	6.45	0.00	3,000[2]	42,000	2,500	1,300	2,300	13,000	--
	06/25/94	2.65	5.93	0.00	--	--	--	--	--	--	--
	07/27/94	3.44	5.14	0.00	--	--	--	--	--	--	--
	08/15/94	3.25	5.33	0.00	2,800[2]	35,000	2,400	850	1,700	15,000	--
	11/14/94	2.13	6.45	0.00	10,000[1]	43,000	2,200	6,500	1,800	14,000	--
	02/21/95	1.65	6.93	0.00	2,000[2]	44,000	2,200	3,200	1,300	1,500	--
	05/18/95	DESTROYED (3/95)	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043

449 Hegenberger Road

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	02/18/92	--	--	--	ND	230	4.8	22	1.8	33	--
	05/20/92	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	08/31/92	--	--	--	92[2]	210[4]	1	ND	ND	ND	--
	11/30/92	--	--	--	94	790[4]	ND	ND	ND	ND	--
	02/04/93	--	--	--	550[2]	3,300	320	ND	96	6.1	--
7.84♦	05/04/93	4.32	3.52	0.00	250[2]	1,800[3]	95	ND	ND	ND	--
	08/04/93	4.94	2.90	0.00	100	210[4]	ND	ND	ND	ND	--
7.42	11/03/93	4.53	2.89	0.00	160	640[4]	ND	ND	ND	ND	--
	02/07/94	2.40	5.02	0.00	620[2]	2,700	110	ND	17	ND	--
	05/19/94	3.60	3.82	0.00	480[2]	1,800	83	ND	6.2	9.1	--
	06/25/94	4.58	2.84	0.00	--	--	--	--	--	--	--
	07/27/94	4.58	2.84	0.00	--	--	--	--	--	--	--
	08/15/94	4.65	2.77	0.00	110[2]	130	1.1	0.54	ND	0.97	--
	11/14/94	3.18	4.24	0.00	150[2]	1,600[4]	ND	ND	ND	ND	--
	02/21/95	1.81	5.61	0.00	850[2]	3,800	350	ND	130	22	--
	05/18/95	4.56	2.86	0.00	150[1]	1,300[3]	42	ND	ND	ND	--
	08/17/95	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	07/26/96	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	10/28/96[6]	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	01/29/97	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	04/15/97	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	05/27/97	3.45	4.59	0.00	--	670	6.5	ND	ND	ND	250
	06/01/97	3.50	4.54	0.00	610[2]	--	--	--	--	--	--
8.04	07/15/97	3.71	4.33	0.00	240[2]	240	ND	ND	ND	ND	490
	10/09/97	3.70	4.34	0.00	500[2]	270	1.1	ND	2.4	1.4	910
	01/14/98	2.16	5.88	0.00	340[7]	310	ND	ND	0.62	0.65	140
	04/01/98	2.20	5.84	0.00	320[7]	370	5.7	ND[9]	ND[9]	ND[9]	93
	07/15/98	3.38	4.66	0.00	510[10]	460[11]	ND[9]	ND[9]	ND[9]	ND[9]	230
	10/16/98	2.30	5.74	0.00	67[13]	330[14]	4.7	ND[9]	ND[9]	ND[9]	60
	01/25/99	2.42	5.62	0.00	120[7]	420[14]	1.5	ND[9]	ND[9]	ND[9]	180
	04/15/99	**2.16**	**5.88**	**0.00**	**170[17]**	**290**	**0.54**	**ND**	**ND**	**ND**	**160**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043

449 Hegenberger Road

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4	08/31/92	--	--	--	90[2]	240[4]	ND	ND	ND	0.54	--
	11/30/92	--	--	--	61	420[4]	ND	ND	ND	ND	--
	02/04/93	--	--	--	ND	ND	ND	ND	ND	ND	--
9.00*	05/04/93	4.09	4.91	0.00	ND	110[3]	0.95	ND	ND	ND	--
	08/04/93	5.01	3.99	0.00	81	250[4]	ND	3.5	ND	4.1	--
8.41	11/03/93	4.23	4.18	0.00	68	130[4]	ND	ND	ND	ND	--
	02/07/94	3.35	5.06	0.00	ND	56[4]	ND	ND	ND	ND	--
	05/19/94	3.92	4.49	0.00	90[2]	140[4]	ND	ND	ND	ND	--
	06/25/94	4.35	4.06	0.00	--	--	--	--	--	--	--
	07/27/94	4.28	4.13	0.00	--	--	--	--	--	--	--
	08/15/94	4.27	4.14	0.00	72[2]	59[4]	ND	0.6	ND	ND	--
	11/14/94	4.05	4.36	0.00	ND	130[4]	ND	ND	ND	ND	--
	02/21/95	DESTROYED (1/95)	--	--	--	--	--	--	--	--	--
MW-5	08/31/92	--	--	--	690[1]	78	0.89	ND	ND	13	--
	11/30/92[5]	--	--	--	470[2]	930	70	290	0.79	14	--
	02/04/93[5]	--	--	--	5,500[2]	5,700	38	ND	620	170	--
	05/04/93[5]	4.37	4.90	0.00	4,600[1]	7,400	41	ND	1,000	35	--
	08/04/93[5]	5.81	3.46	0.00	970[2]	1,500	130	1	460	11	--
8.95	11/03/93	5.68	3.27	0.00	2,100[2]	13,000	350	ND	3,500	530	--
	02/07/94	5.11	3.84	0.00	830[2]	2,000	87	ND	370	110	--
	05/19/94	5.09	3.86	0.00	600[2]	260	44	ND	32	4.1	--
	06/25/94	4.55	4.40	0.00	--	--	--	--	--	--	--
	07/27/94	5.72	3.23	0.00	--	--	--	--	--	--	--
	08/15/94	5.68	3.27	0.00	860[2]	1,600	110	ND	340	72	--
	11/14/94	5.63	3.32	0.00	290[1]	250	40	ND	ND	5	--
	02/21/95	DESTROYED (1/95)	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043

449 Hegenberger Road

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6	08/31/92	--	--	--	750[2]	ND	ND	ND	ND	ND	--
	11/30/92	--	--	--	1,400[1]	9,200	550	ND	740	1,600	--
	02/04/93	--	--	--	890[2]	3,600	340	ND	290	550	--
9.12◆	05/04/93	3.72	5.40	0.00	1,800[1]	4,900	360	18	450	430	--
	08/04/93	5.15	3.97	0.00	1,100[2]	3,400	390	ND	440	190	--
8.87	11/03/93	5.25	3.62	0.00	390[2]	1,400	320	ND	200	7.7	--
	02/07/94	4.55	4.32	0.00	970[2]	4,900	650	ND	250	35	--
	05/19/94	4.62	4.25	0.00	1,400[2]	3,600	300	1.7	210	41	--
	08/15/94	5.08	3.79	0.00	790[2]	1,300	130	6.7	54	57	--
	11/14/94	5.30	3.57	0.00	800[2]	730	50	ND	ND	39	--
	02/21/95	5.37	3.50	0.00	730[2]	2,000	250	4.6	25	30	--
	05/18/95	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	08/17/95	INACCESSIBLE	--	--	--	--	--	--	--	--	--
	07/26/96	6.40	5.03**	3.33	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	10/28/96	4.10	4.93**	0.21	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	11/13/96	4.02	5.04**	0.25	--	--	--	--	--	--	--
	11/25/96	4.01	5.44**	0.75	--	--	--	--	--	--	--
	12/04/96	3.65	5.61**	0.50	--	--	--	--	--	--	--
	12/19/96	4.80	5.76**	2.20	--	--	--	--	--	--	--
	01/08/97	4.84	5.38**	1.75	--	--	--	--	--	--	--
	01/14/97	4.51	5.25**	1.15	--	--	--	--	--	--	--
	01/27/97	4.00	6.22**	1.75	--	--	--	--	--	--	--
	01/29/97	3.24	5.87**	0.31	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/11/97	4.65	5.14**	1.20	--	--	--	--	--	--	--
	02/24/97	4.81	4.91**	1.10	--	--	--	--	--	--	--
	03/10/97	4.60	5.00**	0.95	--	--	--	--	--	--	--
	03/17/97	4.50	5.06**	0.89	--	--	--	--	--	--	--
	03/31/97	4.65	4.99**	1.00	--	--	--	--	--	--	--
	04/15/97	4.90	4.76**	1.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	04/28/97	4.78	4.11**	0.03	--	--	--	--	--	--	--
	05/15/97	4.60	4.46**	0.25	--	--	--	--	--	--	--
	05/27/97	4.50	4.56**	0.25	--	--	--	--	--	--	--
	06/09/97	4.60	4.42**	0.20	--	--	--	--	--	--	--
	06/24/97	4.50	4.56**	0.25	--	--	--	--	--	--	--
	07/09/97	4.80	4.53**	0.60	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043

449 Hegenberger Road

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6	07/15/97	4.63	4.56**	0.42	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
(cont)	07/21/97	4.75	4.31**	0.25	--	--	--	--	--	--	--
	08/06/97	4.50	4.45**	0.10	--	--	--	--	--	--	--
	08/20/97	4.55	4.40**	0.10	--	--	--	--	--	--	--
	09/02/97	4.75	4.16**	0.05	--	--	--	--	--	--	--
	10/09/97	4.84	4.06**	0.04	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	01/14/98	3.90	5.69**	0.94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/12/98	3.35	6.01**	0.64	--	--	--	--	--	--	--
	03/03/98	4.51	4.38**	0.02	--	--	--	--	--	--	--
	04/01/98	3.67	6.43**	1.60	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	05/26/98	4.11	5.15**	0.50	--	--	--	--	--	--	--
	06/15/98	5.03	4.07**	0.30	--	--	--	--	--	--	--
	07/15/98	4.56	4.35**	0.05	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	08/21/98	4.77	4.12**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	09/30/98	5.08	3.81**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	10/16/98	4.31	6.41**	2.40	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	11/06/98	3.98	5.02**	0.17	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	11/25/98	3.92	5.03**	0.10	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	12/28/98	3.90	5.12**	0.20	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	01/25/99	4.18	5.15**	0.60	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	--
	02/22/99	**4.07**	**4.97****	**0.22**	**NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT**					--	--
	03/22/99	**4.32**	**4.67****	**0.15**	**NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT**					--	--
	04/15/99	**4.23**	**5.37****	**0.95**	**NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT**					--	--
MW-7	05/27/97	4.50	4.33	0.00	--	68	ND	ND	ND	ND	ND
8.83	06/01/97	4.54	4.29	0.00	69[2]	--	--	--	--	--	--
	07/15/97	4.70	4.13	0.00	ND	ND	ND	ND	ND	ND	ND
	10/09/97	4.30	4.53	0.00	190[1]	ND	ND	ND	ND	ND	ND
	01/14/98	2.88	5.95	0.00	65[7]	ND	ND	ND	ND	ND	36
	04/01/98	3.13	5.70	0.00	ND	ND	ND	ND	ND	ND	ND
	07/15/98	4.45	4.38	0.00	74[12]	ND	ND	ND	ND	ND	ND
	10/16/98	3.45	5.38	0.00	ND	ND	ND	ND	ND	ND	ND
	01/25/99	3.22	5.61	0.00	ND	ND	ND	ND	ND	ND	ND
	04/15/99	**3.11**	**5.72**	**0.00**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043

449 Hegenberger Road

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-8	05/27/97	3.42	5.10	0.00	--	310	0.88	0.67	15	70	ND
8.52	06/01/97	3.46	5.06	0.00	320[2]	--	--	--	--	--	--
	07/15/97	3.49	5.03	0.00	ND	ND	ND	ND	2.7	3.8	ND
	10/09/97	3.73	4.79	0.00	390[1]	590	1.4	ND	32	4.1	ND
	01/14/98	1.92	6.60	0.00	230[7]	ND	ND	ND	ND	ND	ND
	04/01/98	2.38	6.14	0.00	510[7]	ND	ND	ND	ND	ND	4.7
	07/15/98	3.53	4.99	0.00	140[12]	ND	ND	ND	0.56	1.1	ND
	10/16/98	3.04	5.48	0.00	170[15]	ND	ND	ND	ND	ND	ND
	01/25/99	2.92	5.60	0.00	ND[9]	ND	ND	ND	ND	ND	ND
	04/15/99	**2.40**	**6.12**	**0.00**	**91[12]**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-9	02/21/95	1.98	6.31	0.00	71[2]	70[4]	ND	ND	ND	ND	--
8.29	05/18/95	3.47	4.82	0.00	ND	52	ND	1.1	ND	1.9	--
	08/17/95	1.49	6.80	0.00	ND	ND	ND	ND	ND	ND	--
	07/26/96	0.28	8.01	0.00	98	ND	ND	ND	ND	ND	ND
	10/28/96	1.15	7.14	0.00	99[1]	ND	ND	ND	ND	ND	7.6
	01/29/97	1.05	7.24	0.00	54	ND	ND	ND	ND	ND	5.4
	04/15/97	1.88	6.41	0.00	94[1]	ND	ND	ND	ND	ND	5.4
	05/27/97	1.05	7.24	0.00	--	--	--	--	--	--	--
	07/15/97	1.90	6.39	0.00	ND	ND	ND	ND	ND	ND	ND
	10/09/97	1.76	6.53	0.00	160[1]	ND	ND	ND	ND	ND	ND
	01/14/98	1.26	7.03	0.00	110[7]	ND	ND	ND	ND	ND	3.0
	04/01/98	0.85	7.44	0.00	110[7]	ND	ND	ND	ND	ND	ND
	07/15/98	1.52	6.77	0.00	200[12]	ND	ND	ND	ND	ND	ND
	10/16/98	0.81	7.48	0.00	ND	ND	ND	ND	ND	ND	ND
	01/25/99	0.92	7.37	0.00	ND	ND	ND	ND	ND	ND	ND
	04/15/99	**0.90**	**7.39**	**0.00**	**ND**	**75[18]**	**21**	**ND**	**ND**	**1.1**	**680**
MW-10	02/21/95	4.69	3.93	0.00	270[2]	1,500	250	26	9.1	160	--
8.62	05/18/95	4.92	3.70	0.00	75[1]	810	520	ND	18	23	--
	08/17/95	4.05	4.57	0.00	ND	67	25	ND	2.4	ND	--
	07/26/96	4.08	4.54	0.00	ND	ND	3.7	ND	ND	ND	ND
	10/28/96	4.09	4.53	0.00	ND	ND	1.1	ND	ND	ND	ND

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043

449 Hegenberger Road

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-10	01/29/97	2.94	5.68	0.00	ND	210	41	0.67	7.2	4.8	11
(cont)	04/15/97	4.07	4.55	0.00	ND	110	12	ND	0.77	ND	9.7
	05/27/97	4.40	4.22	0.00	--	--	--	--	--	--	--
	07/15/97	4.19	4.43	0.00	ND	ND	2.1	ND	0.67	0.73	ND
	10/09/97	4.75	3.87	0.00	ND	190	38	0.92	6.6	7.6	ND
	01/14/98	2.66	5.96	0.00	--[8]	59	9.5	0.85	1.2	1.7	4.5
	04/01/98	3.45	5.17	0.00	62[7]	230	66	1.7	12	17	6.4
	07/15/98	4.21	4.41	0.00	78[12]	290	98	45	21	38	21
	10/16/98	4.11	4.51	0.00	ND	160[16]	44	0.96	2.5	10	17
	01/25/99	3.26	5.36	0.00	ND	140	27	ND	2.8	6.8	23
	04/15/99	**3.63**	**4.99**	**0.00**	**ND**	**120**	**18**	**ND**	**1.8**	**5.1**	**14**
Trip Blank											
TB-LB	01/14/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/01/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	07/15/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	10/16/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	01/25/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	04/15/99	**--**	**--**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5043
449 Hegenberger Road
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 elevation
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
msl = Relative to mean sea level
TPH(G) = Total Petroleum Hydrocarbons as Gasoline

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

ppb = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed
TOG = Total Oil and Grease

* TOC elevations are relative to msl, per the City of Oakland Benchmark #3880 (Elevation = 20.37 feet msl).

** Groundwater elevation corrected for the presence of free product [(TOC-DTW)+(Product Thickness x 0.77)].

◆ Elevations were based on the top of the well covers, and were surveyed relative to msl, per the City of Oakland Benchmark #3880 (Elevation = 20.37 feet).

[1] Laboratory report indicates the hydrocarbons detected did not appear to be diesel.

[2] Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

[3] Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

[4] Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.

[5] TOG was ND.

[6] The well was obstructed with debris at 0.55 feet. A water sample was collected but was not analyzed as it was considered not representative of groundwater in this well.

[7] Laboratory report indicates unidentified hydrocarbons C9-C24

[8] Sample bottle broken at Laboratory.

[9] Detection limit raised. Refer to analytical results.

[10] Laboratory report indicates unidentified hydrocarbons >C14 and <C12.

[11] Laboratory report indicates gasoline and unidentified hydrocarbons >C8.

[12] Laboratory report indicates unidentified hydrocarbons >C14.

[13] Laboratory report indicates non diesel mix >C14.

[14] Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.

[15] Laboratory report indicates non diesel mix C9-C27.

[16] Laboratory report indicates unidentified hydrocarbons <C7.

[17] Laboratory report indicates unidentified hydrocarbons >C10.

[18] Laboratory report indicates unidentified hydrocarbons C6-C12.

Table 2

Product Thickness/Removal Data

Tosco (Unocal) Service Station #5043

449 Hegenberger Road

Oakland, California

Well ID	Date	DTW *(ft.)*	Product Thickness *(ft.)*	Amount Bailed (Product + Water) *Gallons*
MW-6	07/26/96	6.40	3.33	2.10
	10/28/96	4.10	0.21	0.14
	11/13/96	4.02	0.25	0.09
	11/25/96	4.01	0.75	0.47
	12/04/96	3.65	0.50	0.43
	12/19/96	4.80	2.20	1.02
	01/08/97	4.84	1.75	0.59
	01/14/97	4.51	1.15	0.66
	01/27/97	4.00	1.75	0.78
	01/29/97	3.24	0.31	0.25
	02/11/97	4.65	1.20	0.62
	02/24/97	4.81	1.10	0.50
	03/10/97	4.60	0.95	0.47
	03/17/97	4.50	0.89	0.35
	03/31/97	4.65	1.00	0.50
	04/15/97	4.90	1.03	0.51
	04/28/97	4.78	0.03	0.20
	05/15/97	4.60	0.25	0.20
	05/27/97	4.50	0.25	0.00
	06/09/97	4.60	0.20	0.23
	06/24/97	4.50	0.25	0.25
	07/09/97	4.80	0.60	0.25
	07/15/97	4.63	0.42	0.20
	07/21/97	4.75	0.25	0.27
	08/06/97	4.50	0.10	0.16
	08/20/97	4.55	0.10	0.20
	09/02/97	4.75	0.05	0.12
	10/09/97	4.84	0.04	0.12
	01/14/98[1]	3.90	0.94	1.50
	02/12/98[1]	3.35	0.64	0.32
	03/03/98[1]	4.51	0.02	2.00
	04/01/98[1]	3.67	1.60	0.50
	05/26/98[1]	4.11	0.50	0.08
	06/15/98[1]	5.03	0.30	0.060
	07/15/98[1]	4.56	0.05	0.10
	08/21/98[1]	4.77	0.02	0.040
	09/30/98[1]	5.08	0.03	0.027
	10/16/98[1]	4.32	2.40	0.98
	11/06/98[1]	3.98	0.17	0.16
	11/25/98[1]	3.92	0.10	0.12
	12/28/98[1]	3.90	0.20	0.14
	01/25/99[1]	4.18	0.60	0.27
	02/22/99[1]	**4.07**	**0.22**	**0.078 product/3.0 water**
	03/22/99[1]	**4.32**	**0.15**	**0.039 product/5.0 water**
	04/15/99[1]	**4.23**	**0.95**	**1.0 product**

Table 2

Product Thickness/Removal Data

Tosco (Unocal) Service Station #5043

449 Hegeberger Road

Oakland, California

EXPLANATIONS:

Product Thickness/Removal Data prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

DTW = Depth to Water

(ft.) = Feet

[1] Skimmer present in well.

TOSCO (UNOCAL) SS#5043
OAKLAND, CA

MONITORING
EVENT OF FEBRUARY 22, 1999

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility #5043 Job#: 180065

Address: 4449 Hegenberger Rd. Date: 2-22-99

City: Oakland Sampler: Joe

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

Well Diameter 2 in. Hydrocarbon Thickness: 0.22' (feet) Amount Bailed (product/water): 2 ounces in skimmer, 8 ounces in well, 10 ounces FP / 3 g. water (Gallons)

Total Depth 12.84 ft.

Depth to Water 4.07 ft.

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

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

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

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

LABORATORY INFORMATION

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

COMMENTS: Approximately 2 ounces in skimmer and 8 ounces of FP removed from well. A total of 10 ounces of FP removed from well

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TOSCO (UNOCAL) SS#5043
OAKLAND, CA

MONITORING
EVENT OF MARCH 22, 1999

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility #5043 Job#: 180065

Address: 449 Hegenberger Date: 3-22-99

City: Oakland Sampler: Joe

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

Well Diameter 2 in. Hydrocarbon Thickness: 0.15 (feet) Amount Bailed 1 ounce in skimmer, 4 ounces in well (product/water): 5 ounces FP & 5 g. wat. (Gallons)

Total Depth 12.84 ft.

Depth to Water 4.32 ft.

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

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

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

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

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

LABORATORY INFORMATION

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

COMMENTS: Approximately 1 ounce in skimmer & 4 ounces of FP removed from well. In the process 5 g. of water ~~purged~~ purged from well.

TOSCO (UNOCAL) SS#5043
OAKLAND, CA

MONITORING & SAMPLING
EVENT OF APRIL 15, 1999

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility UNOCAL SS#5043 (TOLCO) Job#: 180065

Address: 449 HEGENBERGER ROAD Date: 4-15-99

City: OAKLAND, CA Sampler: STEVE BALIAN

Well ID MW-3 Well Condition: O.K

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

Total Depth 14.07 ft.

Depth to Water 2.16 ft.

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

11.91 X VF 0.17 = 2.02 X 3 (case volume) = Estimated Purge Volume: 6.07 (gal.)

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

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

Starting Time: 11:30 Weather Conditions: SUNNY

Sampling Time: 12:00 Water Color: CLEAR Odor: —

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)
11:32	2.5	6.84	909	74.0			
11:34	4.5	6.77	973	72.8			
11:36	6.5	6.78	998	72.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3-VOA's	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
MW-3	1-AMBER	Y	—	"	TPH-D

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility: UNOCAL SS#5043 (TOSCO) Job#: 180065

Address: 449 HEGENBERGER ROAD Date: 4-15-99

City: OAKLAND, CA Sampler: STEVE BALIAN

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

Well Diameter: 2" in. Hydrocarbon Thickness: 0.95 (feet) (YELLOW-BROWN) Amount Bailed (product/water): 1 (Gallons) *

Total Depth: 12.75 ft.

Depth to Water: 4.23 ft.

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

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

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

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

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

LABORATORY INFORMATION

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

COMMENTS: SKIMMER IN THE WELL
NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT
* DUMPED IN TANK #6 (TRUCK #6)

9/97-fldsht.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility: UNOCAL SS#5043 (TOSCO) Job#: 180065

Address: 449 HEGENBERGER ROAD Date: 4-15-99

City: OAKLAND, CA Sampler: STEVE BALIAN

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

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

Total Depth: 13.15 ft.

Depth to Water: 3.11 ft.

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

10.04 X VF 0.17 = 1.71 X 3 (case volume) = Estimated Purge Volume: 5.12 (gal.)

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

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

Starting Time: 9:33 Weather Conditions: PARTLY SUNNY

Sampling Time: 10:00 Water Color: CLEAR Odor: —

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)
9:35	2	7.06	675 mv	70.8			
9:37	4	7.03	710 uc	69.3			
9:39	5.5	7.01	668 uc	69.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	3-VOA's	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
MW-7	1-AMBER	Y	—	"	TPH-D

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility UNOCAL SS#5043 (TOSCO) Job#: 180065

Address: 449 HEGENBERGER ROAD Date: 4-15-99

City: OAKLAND, CA Sampler: STEVE BALIAN

Well ID MW-8 Well Condition: O.K

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

Total Depth 14.82 ft.

Depth to Water 2.40 ft.

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

12.42 x VF 0.17 = 2.11 X 3 (case volume) = Estimated Purge Volume: 6.33 (gal.)

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

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

Starting Time: 8:56 Weather Conditions: PARTLY SUNNY

Sampling Time: 9:20 Water Color: CLEAR Odor: —

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)
8:58	2.5	6.34	1.43 mm	73.0			
9:00	4.5	6.34	1.75 mm	70.3			
9:02	6.5	6.49	1.95 mm	70.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	3-VOA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
MW-8	1-AMBER	Y	—	"	TPH-D

COMMENTS:

9/97-field1.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility UNOCAL SS#5043 (TOSCO) Job#: 180065

Address: 449 HEGENBERGER ROAD Date: 4-15-99

City: OAKLAND, CA Sampler: STEVE BALIAN

Well ID MW-9 Well Condition: * THE CASING IS TOO LOW THE DIRT CAN CONTAMINATE THE WELL

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

Total Depth 11.98 ft.

Depth to Water 0.90 ft.

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

11.08 x VF 0.17 = 1.88 x 3 (case volume) = Estimated Purge Volume: 5.65 (gal.)

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

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

Starting Time: 10:14 Weather Conditions: SUNNY

Sampling Time: 10:40 Water Color: MOT CLEAR Odor: —

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)
10:16	2	6.81	986 uncr	71.6			
10:18	4	6.70	0.95 mhos	71.5			
10:25	6	6.77	1.10 mhos	72.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-9	3-VOA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
MW-9	1-AMBER	Y	—	"	TPH-D

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility UNOCAL SS#5043 (TOSCO) Job#: 180065

Address: 449 HEGENBERGER ROAD Date: 4-15-99

City: OAKLAND, CA Sampler: STEVE BALIAN

Well ID MW-10 Well Condition: O.K

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

Total Depth 12.80 ft.

Depth to Water 3.63 ft.

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

9.17 x VF 0.17 = 1.56 X 3 (case volume) = Estimated Purge Volume: 4.68 (gal.)

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

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

Starting Time: 10:54 Weather Conditions: PARTLY CLOUDY

Sampling Time: 11:15 Water Color: CLEAR Odor: —

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)
10:56	2	6.98	1.06 mS	79.1			
10:58	3.5	7.03	0.74 mS	73.0			
11:00	5	7.05	0.69 mS	72.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-10	3-VOA'S	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
MW-10	1-AMBER	X	—	"	TPH-D

COMMENTS: _____

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured 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.

TOSCO

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

Facility Number: UNOCAL SS# 5043
Facility Address: 449 Hegenberger Road, Oakland, CA
Consultant Project Number: 180065.85
Consultant Name: Gettler-Ryan Inc. (G-R Inc.)
Address: 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name): Deanna L. Harding
(Phone): 510-551-7555 (Fax Number): 510-551-7888

Contact (Name): MR. DAVID DEWITT
(Phone): 925-277-2384
Laboratory Name: Sequoia Analytical
Laboratory Release Number: 99.01404
Samples Collected by (Name): STEVE BALIAN
Collection Date: 4-15-99
Signature: STEVE BALIAN

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	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)						DO NOT BILL TB-LB ANALYSIS Remarks
								Analyses To Be Performed													
TB-LB		1	W	G		HCl	Y	X			9041385										
MW-3		4	"	"	12:00	"	Y	X	X		9041386			A-D							
MW-7		4	"	"	10:00	"	Y	X	X		9041387			↓							
MW-8		4	"	"	9:20	"	Y	X	X		9041388										
MW-9		4	"	"	10:40	"	Y	X	X		9041389										
MW-10		4	"	"	11:15	"	Y	X	X		9041390			↓							

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
STEVE BALIAN	G-R Inc.	4-15-99 16:15			
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
					4/15/99 16:15

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342
1551 Industrial Road, San Carlos, CA 94070-4111, (650) 232-9600, FAX (650) 232-9612

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#5043, Oakland	Sampled: Apr 15, 1999
6747 Sierra Court, Suite J	Sample Matrix:	Water	Received: Apr 15, 1999
Dublin, CA 94568	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: May 12, 1999
Attention: Deanna Harding	First Sample #:	904-1385	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 904-1385 TB-LB	Sample I.D. 904-1386 MW-3	Sample I.D. 904-1387 MW-7	Sample I.D. 904-1388 MW-8	Sample I.D. 904-1389 MW-9	Sample I.D. 904-1390 MW-10
Purgeable Hydrocarbons	50	N.D.	290	N.D.	N.D.	75	120
Benzene	0.50	N.D.	0.54	N.D.	N.D.	21	18
Toluene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	1.8
Total Xylenes	0.50	N.D.	N.D.	N.D.	N.D.	1.1	5.1
MTBE	2.5	N.D.	160	N.D.	N.D.	680	14
Chromatogram Pattern:		--	Gasoline	--	--	Unidentified Hydrocarbons C6 - C12	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	4/22/99	4/23/99	4/22/99	4/22/99	4/22/99	4/22/99
Instrument Identification:	HP-9	HP-2	HP-5	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	90	107	87	87	92	104

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

9041385.GET <1>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1551 Industrial Road, San Carlos, CA 94070-4111, (650) 232-9600, FAX (650) 232-9612

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#5043, Oakland	Sampled: Apr 15, 1999
6747 Sierra Court, Suite J	Sample Matrix:	Water	Received: Apr 15, 1999
Dublin, CA 94568	Analysis Method:	EPA 3510/8015 Mod.	Reported: May 12, 1999
Attention: Deanna Harding	First Sample #:	904-1386	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 904-1386 MW-3	Sample I.D. 904-1387 MW-7	Sample I.D. 904-1388 MW-8	Sample I.D. 904-1389 MW-9	Sample I.D. 904-1390 MW-10
Extractable Hydrocarbons	50	170	N.D.	91	N.D.	N.D.
Chromatogram Pattern:		Unidentified Hydrocarbons >C10	--	Unidentified Hydrocarbons >C14	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Extracted:	4/23/99	4/23/99	4/23/99	4/23/99	4/23/99
Date Analyzed:	4/27/99	4/27/99	4/27/99	4/27/99	4/27/99
Instrument Identification:	HP-3A	HP-3B	HP-3B	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

9041385.GET <2>

Sequoia Analytical

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#5043, Oakland
Matrix: Liquid
QC Sample Group: 9041385-390

Reported: May 12, 1999

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater
MS/MSD Batch#:	9041735	9041735	9041735	9041735
Date Prepared:	4/22/99	4/22/99	4/22/99	4/22/99
Date Analyzed:	4/22/99	4/22/99	4/22/99	4/22/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	90	90	90	95
Matrix Spike Duplicate % Recovery:	90	90	90	95
Relative % Difference:	0.0	0.0	0.0	0.0
LCS Batch#:	5LCS042299	5LCS042299	5LCS042299	5LCS042299
Date Prepared:	4/22/99	4/22/99	4/22/99	4/22/99
Date Analyzed:	4/22/99	4/22/99	4/22/99	4/22/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	95	95	95	98
% Recovery Control Limits:	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#5043, Oakland
Matrix: Liquid
QC Sample Group: 9041385-390

Reported: May 12, 1999

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater
MS/MSD Batch#:	9041477	9041477	9041477	9041477
Date Prepared:	4/22/99	4/22/99	4/22/99	4/22/99
Date Analyzed:	4/22/99	4/22/99	4/22/99	4/22/99
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	95	100	100	97
Matrix Spike Duplicate % Recovery:	95	100	100	98
Relative % Difference:	0.0	0.0	0.0	1.7
LCS Batch#:	9LCS042299	9LCS042299	9LCS042299	9LCS042299
Date Prepared:	4/22/99	4/22/99	4/22/99	4/22/99
Date Analyzed:	4/22/99	4/22/99	4/22/99	4/22/99
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
LCS % Recovery:	90	100	100	97
% Recovery Control Limits:	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#5043, Oakland
Matrix: Liquid
QC Sample Group: 9041385-390
Reported: May 12, 1999

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M.
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater	K. Grubb
MS/MSD Batch#:	9041503	9041503	9041503	9041503	BLK042399
Date Prepared:	4/23/99	4/23/99	4/23/99	4/23/99	4/23/99
Date Analyzed:	4/23/99	4/23/99	4/23/99	4/23/99	4/26/99
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-8B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	500 µg/L
Matrix Spike % Recovery:	90	85	90	97	70
Matrix Spike Duplicate % Recovery:	90	85	85	92	64
Relative % Difference:	0.0	0.0	5.7	5.3	9.0
LCS Batch#:	2LCS042399	2LCS042399	2LCS042399	2LCS042399	LCS042399
Date Prepared:	4/23/99	4/23/99	4/23/99	4/23/99	4/23/99
Date Analyzed:	4/23/99	4/23/99	4/23/99	4/23/99	4/26/99
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-8B
LCS % Recovery:	95	90	90	98	66
% Recovery Control Limits:	70-130	70-130	70-130	70-130	60-140

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

GETTLER-RYAN INC.

TRANSMITTAL

June 9, 1999
G-R #:180065

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

CC: Mr. Doug Lee
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

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

RE: Tosco (Unocal) SS#5043
449 Hegenberger Road
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	June 4,1999	Groundwater Monitoring and Sampling Report Second Quarter 1999 - Event of April 15, 1999

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by ***June 21, 1999***, this report will be distributed to the following:

Enclosure

cc: [redacted]
Mr. Frank deFurio, Shuwa Investment Group, 515 S. Flower Street, Suite 1270, Los Angeles, CA 90071

agency/5043dbd.qmt