

STOP 3695
BC



GETTLER-RYAN INC.

TRANSMITTAL

April 9, 1999
G-R #:180067

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.
Novato, California

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

RE: Tosco (Unocal) SS #3135
845 - 66th Street
Oakland, California


WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	March 31, 1999	Groundwater Monitoring and Sampling Report Annual 1999 - Event of February 4, 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 **April 22, 1999**, this report will be distributed to the following:

Enclosure

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

agency/3135dbd.qmt

99 APR 23 PM 4:02
ENVIRONMENTAL
PROTECTION



GETTLER-RYAN INC. *STIP*

BC
3693

March 31, 1999
G-R Job #180067

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

RE: Annual 1999 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #3135
845 66th Avenue
Oakland, California

Dear Mr. De Witt:

This report documents the annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On February 4, 1999, field personnel monitored and sampled ten wells (MW-1 through MW-10) at the above referenced site. In addition, on February 12, 1999, field personnel sampled ten wells (MW-1 through MW-10).

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. Dissolved Oxygen Concentrations are presented 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 Tables 1 and 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

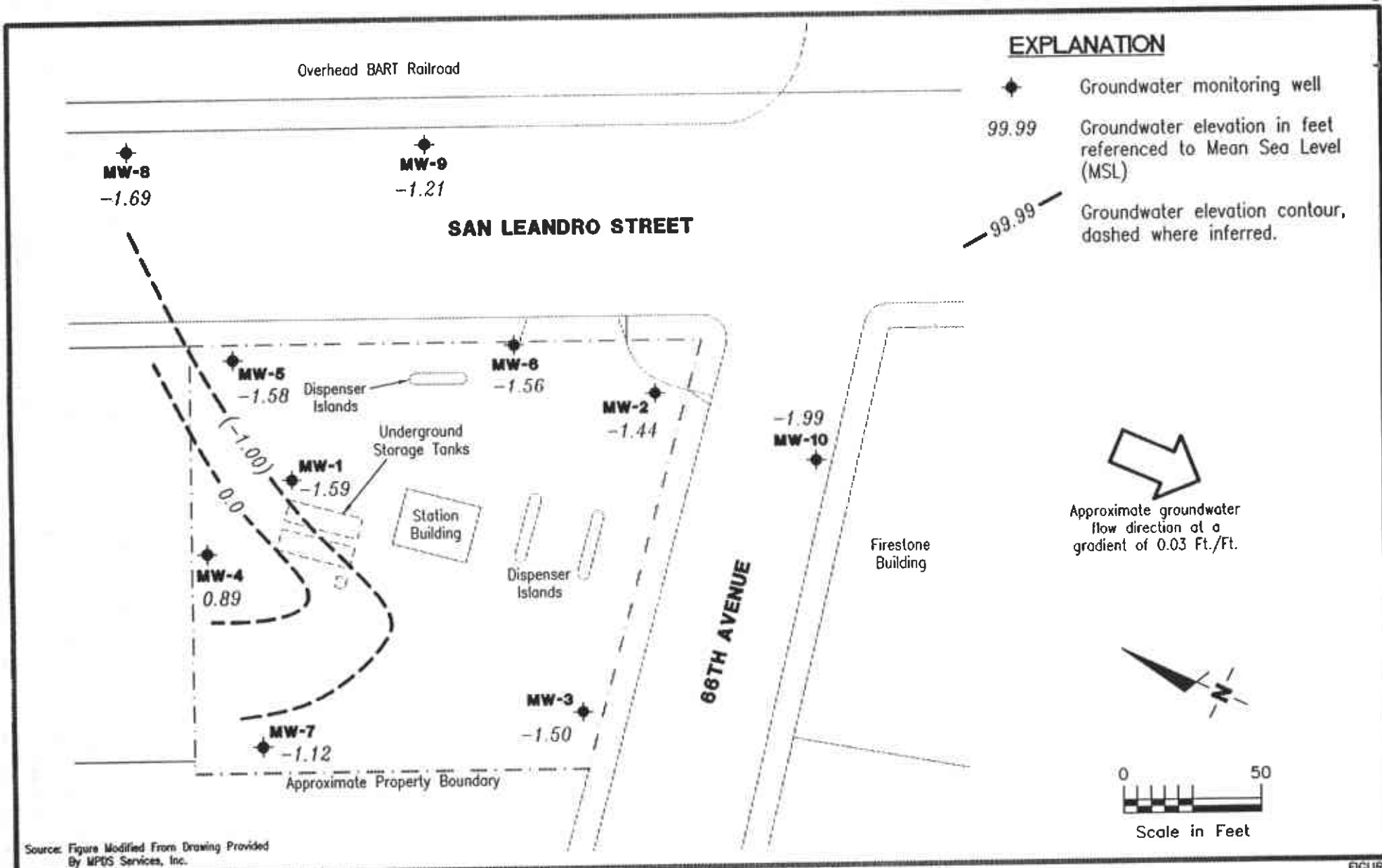
Deanna L. Harding
Deanna L. Harding
Project Coordinator

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



- Figure 1: Potentiometric Map
- Figure 2: Concentration Map
- Table 1: Groundwater Monitoring Data and Analytical Results
- Table 2: Dissolved Oxygen Concentrations
- Table 3: Groundwater Analytical Results
- Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets

59 APR 23 PM 1:02
ENVIRONMENTAL PROTECTION



Gettler - Ryan Inc.

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

POTENTIOMETRIC MAP
Unocal Service Station No. 3135
845 66th Avenue
Oakland, California

FIGURE

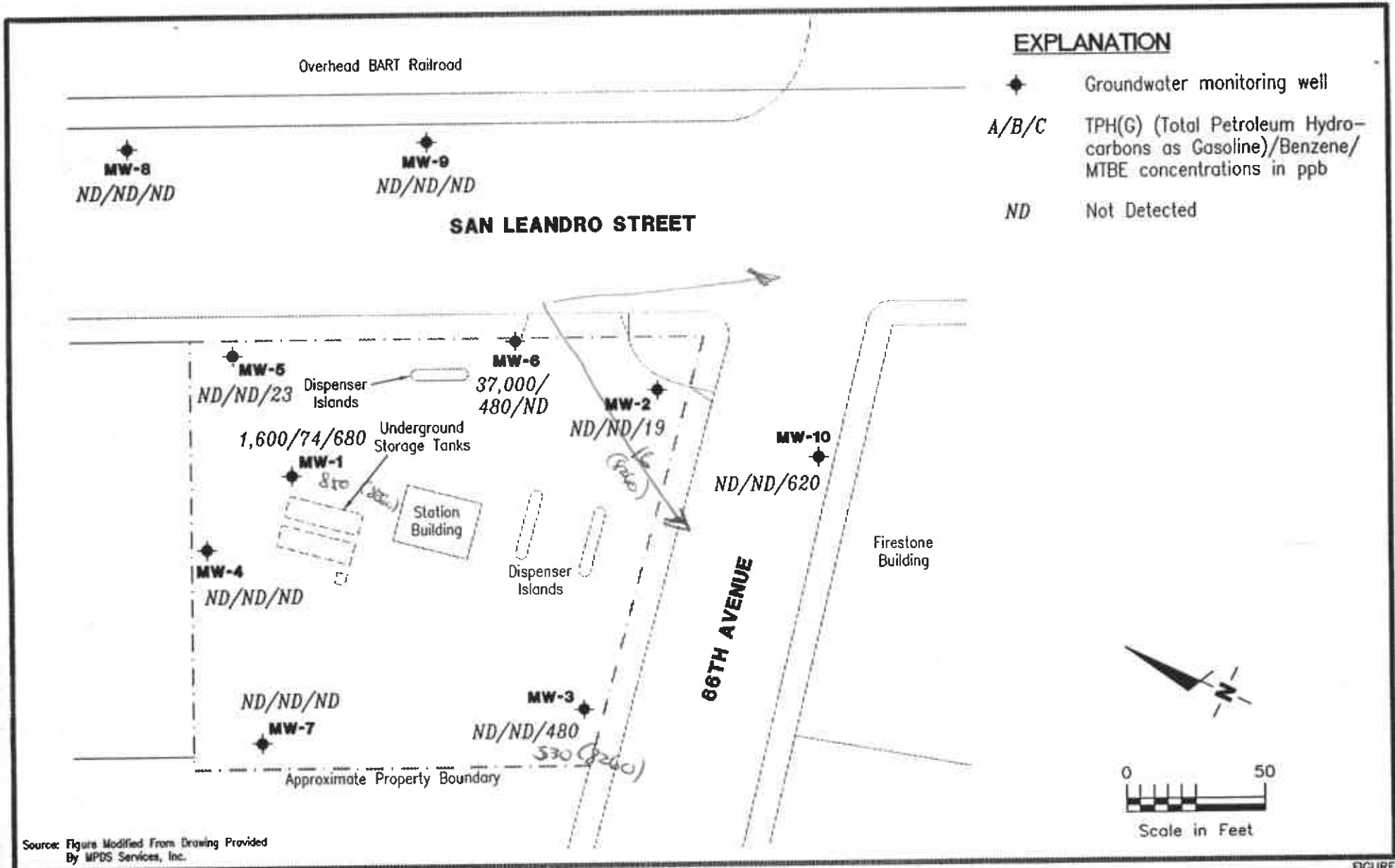
1

JOB NUMBER
180067

REVIEWED BY

DATE
February 4, 1999

REVISED DATE



Gettler - Ryan Inc.

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

CONCENTRATION MAP
Unocal Service Station No. 3135
845 66th Avenue
Oakland, California

FIGURE

2

JOB NUMBER
180067

REVIEWED BY

DATE
February 4, 1999

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1 (D)	05/11/90	--	--	--	22,000	590	42	1,200	3,600	--
	08/28/90	--	--	--	1,700	140	1.4	180	150	--
	08/28/90	--	--	--	2,600	180	3	810	270	--
	11/26/90	--	--	--	2,900	160	2.3	330	320	--
	02/21/91	--	--	690	26,000	280	39	1,200	1,900	--
	08/05/91	--	--	200	1,200	95	6.2	230	80	--
	11/05/91	--	--	260	4,900	80	ND	150	160	--
	02/07/92	--	--	ND	220	2.1	ND	10	16	--
	05/05/92	--	--	120	310	5.7	ND	7.1	15	--
	08/03/92	--	--	220 ⁴	980	22	0.69	77	82	--
	11/03/92	--	--	400 ⁴	1,100	28	ND	80	78	--
	02/03/93	--	--	ND	94 ⁷	ND	ND	1.4	1.6	--
	5.18	03/01/93	7.30	-2.12	--	--	--	--	--	--
04/01/93		7.12	-1.94	--	--	--	--	--	--	--
05/17/93		8.25	-3.07	490 ⁵	960 ⁷	39	ND	57	60	--
06/15/93		INACCESSIBLE	--	--	--	--	--	--	--	--
07/14/93		9.48	-4.30	--	--	--	--	--	--	--
08/13/93		10.00	-4.82	170 ⁵	860	3.5	ND	17	20	--
09/13/93		10.40	-5.22	--	--	--	--	--	--	--
4.99	10/14/93	10.73	-5.55	--	--	--	--	--	--	--
	11/11/93	10.80	-5.81	160 ⁵	930	7.3	ND	25	19	--
	12/14/93	9.50	-4.51	--	--	--	--	--	--	--
	01/10/94	9.80	-4.81	--	--	--	--	--	--	--
	02/10/94	8.58	-3.59	ND	170 ⁶	0.9	2.3	ND	ND	--
	03/14/94	7.73	-2.74	--	--	--	--	--	--	--
	04/23/94	8.28	-3.29	--	--	--	--	--	--	--
	05/05/94	8.11	-3.12	ND	96 ⁶	ND	ND	ND	ND	--
	06/07/94	8.09	-3.10	--	--	--	--	--	--	--
	07/05/94	8.43	-3.44	--	--	--	--	--	--	--
	08/02/94	8.76	-3.77	130 ⁵	700	13	0.62	2	3.6	--
	11/07/94	8.26	-3.27	270 ⁴	890	16	ND	31	21	--
12/03/94	6.59	-1.60	--	--	--	--	--	--	--	
01/10/95	6.12	-1.13	--	--	--	--	--	--	--	
02/01/95	6.04	-1.05	ND	120	1.7	ND	ND	ND	--	
03/03/95	6.73	-1.74	--	--	--	--	--	--	--	

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-1 (cont)	05/02/95	6.57	-1.58	120 ⁴	460	14	ND	14	13	--	
	08/01/95	7.70	-2.71	86 ⁴	190	4	ND	3.7	2	--	
	11/01/95	9.08	-4.09	190 ⁵	160	2.5	ND	0.82	0.57	280	
	02/01/96	6.22	-1.23	90 ⁴	240	8.7	2	ND	0.66	250	
	02/04/97	8.48	-3.49	--	120 ⁶	0.58	ND	ND	ND	150	
	02/05/98	5.50	-0.51	--	130	1.3	ND	2.7	11	220	
	02/04/99	6.58	-1.59	--	1,600	74	16	ND ⁹	ND ⁹	680/850 ¹⁰	
											8260
MW-2	05/11/90	--	--	--	65,000	3,300	3,300	4,100	12,000	--	
	08/28/90 ¹	--	--	3,100	27,000	2,600	1,300	1,900	3,000	--	
	11/26/90 ¹	--	--	3,800	15,000	1,600	450	1,100	2,100	--	
	02/21/91 ¹	--	--	7,000	3,400	160	61	200	490	--	
	08/05/91 ¹	--	--	4,200	33,000	2,900	190	3,400	7,900	--	
	11/05/91 ²	--	--	3,900	110,000	4,200	200	3,400	8,600	--	
	02/07/92 ¹	--	--	2,300	11,000	1,400	30	1,900	1,400	--	
	05/05/92 ¹	--	--	4,600	26,000	2,300	110	2,700	6,900	--	
	08/03/92 ¹	--	--	3,300 ⁵	37,000	4,500	480	3,300	9,700	--	
	11/03/92 ¹	--	--	9,600 ⁴	40,000	5,600	130	3,000	6,100	--	
	02/03/93 ¹	--	--	3,900 ⁴	9,300	780	68	830	1,200	--	
	3.83	03/01/93	5.92	-2.09	--	--	--	--	--	--	--
		04/01/93	5.76	-1.93	--	--	--	--	--	--	--
05/17/93		7.08	-3.25	5,500 ⁵	46,000	4,400	510	2,900	9,900	--	
06/15/93		7.02	-3.19	--	--	--	--	--	--	--	
07/14/93		8.13	-4.30	--	--	--	--	--	--	--	
08/13/93		8.64	-4.81	2,800 ⁵	44,000	5,100	600	2,900	8,500	--	
09/13/93		9.00	-5.17	--	--	--	--	--	--	--	
3.57	10/14/93	9.03	-5.20	--	--	--	--	--	--	--	
	11/11/93	9.22	-5.65	7,000 ⁵	36,000	4,800	970	3,000	8,100	--	
	12/14/93	8.05	-4.48	--	--	--	--	--	--	--	
	01/10/94	8.29	-4.72	--	--	--	--	--	--	--	
	02/10/94	6.93	-3.36	2,000 ⁵	12,000	1,000	17	880	940	--	
	03/14/94	6.41	-2.84	--	--	--	--	--	--	--	
	04/23/94	6.66	-3.09	--	--	--	--	--	--	--	
	05/05/94	6.38	-2.81	3,100 ⁵	36,000	3,200	670	2,700	9,600	--	

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #3135
845 66th Avenue
Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-2 (cont)	06/07/94	6.33	-2.76	--	--	--	--	--	--	--	
	07/05/94	6.52	-2.95	--	--	--	--	--	--	--	
	08/02/94	6.75	-3.18	8,500 ⁴	32,000	2,400	2,200	2,900	12,000	--	
	11/07/94	6.04	-2.47	3,100 ⁵	49,000	1,700	2,000	3,000	10,000	--	
	12/03/94	4.95	-1.38	--	--	--	--	--	--	--	
	01/10/95	4.59	-1.02	--	--	--	--	--	--	--	
	02/01/95	4.54	-0.97	1,800 ⁴	9,300	300	210	630	2,600	--	
	03/03/95	5.17	-1.60	--	--	--	--	--	--	--	
	05/02/95	5.03	-1.46	2,300 ⁵	5,600	150	ND	150	180	--	
	08/01/95	6.16	-2.59	2,900 ⁴	13,000	700	140	1,400	5,500	--	
	11/01/95	7.30	-3.73	4,100 ⁴	18,000	490	110	1,300	4,600	190	
	02/01/96	4.57	-1.00	5,500 ⁴	22,000	470	77	1,400	5,900	ND	
	02/04/97	7.10	-3.53	--	100 ^b	ND	0.89	ND	ND	81	
	02/05/98	4.12	-0.55	--	330	2.6	2.6	17	58	5.5	
	08/28/98	6.26	-2.69	--	--	--	--	--	--	--	
	02/04/99	5.01	-1.44	--	ND	ND	0.54	0.60	1.5	19/16 ¹⁰	
	MW-3	5/11/90	--	--	--	ND	ND	ND	ND	ND	--
08/28/90		--	--	--	ND	ND	ND	ND	0.7	--	
11/26/90		--	--	--	ND	ND	ND	ND	ND	--	
02/21/91		--	--	--	ND	ND	ND	ND	0.64	--	
08/05/91		--	--	63	ND	ND	ND	ND	ND	--	
11/05/91		--	--	ND	31	ND	ND	ND	0.65	--	
02/07/92		--	--	ND	ND	ND	ND	ND	ND	--	
05/05/92		--	--	56	ND	ND	ND	0.43	1.8	--	
08/03/92		--	--	58	ND	ND	ND	ND	ND	--	
11/03/92		--	--	52 ⁴	ND	ND	ND	ND	ND	--	
02/03/93		--	--	ND	ND	ND	ND	ND	ND	--	
3.30		03/01/93	4.84	-1.54	--	--	--	--	--	--	--
		04/01/93	4.60	-1.30	--	--	--	--	--	--	--
	05/17/93	5.47	-2.17	53	ND	ND	ND	ND	ND	--	
	06/15/93	5.57	-2.27	--	--	--	--	--	--	--	
	07/14/93	6.92	-3.62	--	--	--	--	--	--	--	
	08/13/93	7.85	-4.55	ND	ND	ND	ND	ND	ND	--	

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	09/13/93	8.42	-5.12	--	--	--	--	--	--	--
(cont)	10/14/93	8.90	-5.60	--	--	--	--	--	--	--
3.12	11/11/93	8.92	-5.80	51	ND	ND	ND	ND	ND	--
	12/14/93	7.36	-4.24	--	--	--	--	--	--	--
	01/10/94	7.54	-4.42	--	--	--	--	--	--	--
	02/10/94	6.23	-3.11	50 ⁵	ND	ND	ND	ND	0.84	--
	03/14/94	5.56	-2.44	--	--	--	--	--	--	--
	04/23/94	7.72	-4.60	--	--	--	--	--	--	--
	05/05/94	5.50	-2.38	66	62 ⁶	ND	ND	ND	ND	--
	06/07/94	5.35	-2.23	--	--	--	--	--	--	--
	07/02/94	5.46	-2.34	--	--	--	--	--	--	--
	08/02/94	5.84	-2.72	76	150 ⁶	ND	ND	ND	ND	--
	11/07/94	6.05	-2.93	ND	94 ⁶	ND	ND	ND	ND	--
	12/03/94	4.51	-1.39	--	--	--	--	--	--	--
	01/10/95	3.82	-0.70	--	--	--	--	--	--	--
	02/01/95	3.84	-0.72	ND	100 ⁶	ND	ND	ND	ND	--
	03/03/95	4.27	-1.15	--	--	--	--	--	--	--
	05/02/95	4.11	-0.99	56	360 ⁶	ND	ND	ND	ND	--
	08/01/95	5.10	-1.98	ND	ND	ND	ND	ND	ND	--
	11/01/95	6.65	-3.53	200 ⁴	ND	ND	ND	ND	ND	200
	02/01/96	4.29	-1.17	160 ⁴	ND	ND	ND	ND	ND	190
	02/04/97	6.43	-3.31	--	ND	ND	ND	ND	ND	ND
	02/05/98	4.68	-1.56	--	ND	ND	ND	ND	ND	490
	02/04/99	4.62	-1.50	--	ND	ND	ND	ND	ND	480/530 ¹⁰
MW-4	08/28/90	--	--	--	62,000	810	72	4,400	4,600	--
	11/26/90	--	--	--	49,000	360	36	3,800	11,000	--
	02/21/91	--	--	4,100	33,000	210	21	3,800	12,000	--
	08/05/91	--	--	6,200	37,000	310	70	3,600	9,700	--
	11/05/91	--	--	7,700	140,000	320	ND	4,800	13,000	--
	02/07/92	--	--	2,300	8,100	24	4.9	1,800	3,200	--
	05/05/92	--	--	3,200	15,000	82	12	2,000	5,600	--
	08/03/92	--	--	2,400 ⁴	24,000	61	ND	2,100	5,400	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4	11/03/92	--	--	8,300 ⁴	36,000	69	ND	3,000	7,400	--
(cont)	02/03/93	--	--	720 ⁵	370	2.6	ND	1.2	53	--
5.27	03/01/93	7.63	-2.36	--	--	--	--	--	--	--
	04/01/93	7.25	-1.98	--	--	--	--	--	--	--
	05/17/93	8.46	-3.19	3,100 ⁴	2,500	ND	ND	170	410	--
	06/15/93	9.00	-3.73	--	--	--	--	--	--	--
	07/14/93	9.74	-4.47	--	--	--	--	--	--	--
	08/13/93	10.23	-4.96	2,000 ⁵	19,000	ND	ND	1,600	4,100	--
	09/13/93	10.62	-5.35	--	--	--	--	--	--	--
	10/14/93	10.84	-5.57	--	--	--	--	--	--	--
4.93	11/11/93	10.88	-5.95	4,000 ⁴	16,000	110	12	1,800	3,800	--
	12/14/93	9.60	-4.67	--	--	--	--	--	--	--
	01/10/94	9.92	-4.99	--	--	--	--	--	--	--
	02/10/94	8.79	-3.86	170 ⁴	830	3.5	1.4	36	80	--
	03/14/94	7.91	-2.98	--	--	--	--	--	--	--
	04/23/94	8.41	-3.48	--	--	--	--	--	--	--
	05/05/94	8.27	-3.34	2,000 ⁵	6,900	17	ND	480	1,300	--
	06/07/94	8.27	-3.34	--	--	--	--	--	--	--
	07/05/94	8.58	-3.65	--	--	--	--	--	--	--
	08/02/94	8.91	-3.98	2,500 ⁵	17,000	38	ND	1,800	4,300	--
	11/07/94	8.64	-3.71	2,200 ⁴	20,000	84	17	1,500	3,000	--
	12/03/94	6.78	-1.85	--	--	--	--	--	--	--
	01/10/95	6.35	-1.42	--	--	--	--	--	--	--
	02/01/95	5.73	-0.80	ND	ND	ND	ND	ND	ND	--
	03/03/95	6.82	-1.89	--	--	--	--	--	--	--
	05/02/95	5.74	-0.81	2,500 ⁴	5,400	36	ND	130	710	--
	08/01/95	7.78	-2.85	3,400 ⁴	7,900	21	ND	210	860	--
	11/01/95	9.16	-4.23	3,300 ⁴	4,900	12	ND	190	710	210
	02/01/96	4.64	0.29	ND	91	2.7	ND	1.2	6.8	7.8
	02/04/97	8.65	-3.72	--	130 ⁶	0.58	ND	ND	ND	150
	02/05/98	PAVED OVER	--	--	--	--	--	--	--	--
	02/04/99	4.04	0.89	--	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-5	08/28/90	--	--	--	ND	ND	ND	ND	1.2	--	
	11/26/90	--	--	--	ND	ND	ND	ND	ND	--	
	02/21/91	--	--	--	56	ND	ND	ND	4.7	--	
	08/05/91	--	--	ND	ND	ND	ND	ND	ND	--	
	11/05/91	--	--	ND	ND	ND	ND	ND	ND	--	
	02/07/92	--	--	ND	ND	ND	ND	0.36	0.94	--	
	05/05/92	--	--	72	ND	ND	ND	0.42	1.4	--	
	08/03/92	--	--	ND	ND	ND	ND	ND	ND	--	
	11/03/92	--	--	ND	ND	ND	ND	ND	ND	--	
	02/03/93	--	--	ND	ND	ND	ND	ND	ND	--	
4.61	03/01/93	6.68	-2.07	--	--	--	--	--	--	--	
	04/01/93	6.51	-1.90	--	--	--	--	--	--	--	
	05/17/93	7.75	-3.14	ND	ND	ND	ND	ND	ND	--	
	06/15/93	8.18	-3.57	--	--	--	--	--	--	--	
	07/14/93	8.98	-4.37	--	--	--	--	--	--	--	
	08/13/93	9.49	-4.88	ND	ND	ND	ND	ND	ND	--	
	09/13/93	9.88	-5.27	--	--	--	--	--	--	--	
	10/14/93	10.04	-5.43	--	--	--	--	--	--	--	
	4.27	11/11/93	10.13	-5.86	ND	ND	ND	ND	ND	ND	--
		12/14/93	8.85	-4.58	--	--	--	--	--	--	--
01/10/94		9.10	-4.83	--	--	--	--	--	--	--	
02/10/94		7.71	-3.44	ND	ND	ND	ND	ND	0.59	--	
03/14/94		7.02	-2.75	--	--	--	--	--	--	--	
04/23/94		7.57	-3.30	--	--	--	--	--	--	--	
05/05/94		7.38	-3.11	SAMPLED SEMI-ANNUALLY			--	--	--	--	--
06/07/94		7.39	-3.12	--	--	--	--	--	--	--	
07/05/94		7.72	-3.45	--	--	--	--	--	--	--	
08/02/94		8.05	-3.78	ND	ND	ND	ND	ND	ND	--	
11/07/94	7.56	-3.29	--	--	--	--	--	--	--		
12/03/94	5.80	-1.53	--	--	--	--	--	--	--		
01/10/95	5.37	-1.10	--	--	--	--	--	--	--		
02/01/95	5.24	-0.97	ND	ND	ND	ND	ND	ND	--		
03/03/95	5.99	-1.72	--	--	--	--	--	--	--		
05/02/95	5.85	-1.58	--	--	--	--	--	--	--		
08/01/95	7.00	-2.73	ND	ND	ND	ND	ND	ND	--		

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #3135
845 66th Avenue
Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	11/01/95	8.40	-4.13	--	--	--	--	--	--	--
(cont)	02/01/96	5.45	-1.18	ND	ND	ND	ND	ND	ND	0.72
	02/04/97	7.82	-3.55	--	ND	ND	ND	ND	ND	ND
	02/05/98	3.85	0.42	--	ND	ND	ND	ND	ND	490
	02/04/99	5.85	-1.58	--	ND	ND	ND	ND	ND	23/26 ¹⁰
MW-6	08/28/90 ³	--	--	1,000	12,000	1,700	1,400	230	2,100	--
	11/26/90 ¹	--	--	320	4,800	1,000	200	340	650	--
(D)	11/26/90	--	--	--	4,000	800	120	250	440	--
	02/21/91 ¹	--	--	160	750	77	14	23	140	--
	08/05/91 ¹	--	--	130	860	130	11	92	150	--
	11/05/91 ¹	--	--	300	7,100	200	ND	190	580	--
	02/07/92 ¹	--	--	ND	180	22	0.68	22	20	--
	05/05/92 ¹	--	--	47	ND	ND	ND	ND	1.3	--
	08/03/92	--	--	170 ⁴	1,100	180	1.1	62	78	--
	11/03/92	--	--	220 ⁴	920	45	0.76	12	110	--
	02/03/93 ¹	--	--	ND	ND	1.2	ND	ND	ND	--
4.31	03/01/93	6.20	-1.89	--	--	--	--	--	--	--
	04/01/93	6.04	-1.73	--	--	--	--	--	--	--
	05/17/93	7.50	-3.19	1,400 ⁴	4,900	890	46	210	530	--
	06/15/93	7.76	-3.45	--	--	--	--	--	--	--
	07/14/93	8.69	-4.38	--	--	--	--	--	--	--
	08/13/93	9.20	-4.89	440 ⁵	2,300	330	ND	95	40	--
	09/13/93	9.59	-5.28	--	--	--	--	--	--	--
	10/14/93	9.75	-5.44	--	--	--	--	--	--	--
4.03	11/11/93	9.87	-5.84	650 ⁵	3,000	470	ND	220	270	--
	12/14/93	8.60	-4.57	--	--	--	--	--	--	--
	01/10/94	8.81	-4.78	--	--	--	--	--	--	--
	02/10/94	7.23	-3.20	ND	ND	3.5	ND	1.5	ND	--
	03/14/94	6.68	-2.65	--	--	--	--	--	--	--
	04/23/94	7.24	-3.21	--	--	--	--	--	--	--
	05/05/94	7.01	-2.98	630 ⁵	2,600	430	99	24	420	--
	06/07/94	7.02	-2.99	--	--	--	--	--	--	--
	07/05/94	7.41	-3.38	--	--	--	--	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-6 (cont)	08/02/94	7.66	-3.63	2,400 ⁵	28,000	2,200	940	1,600	7,500	--	
	11/07/94	6.78	-2.75	770 ⁴	23,000	3,800	970	1,400	4,700	--	
	12/03/94	5.44	-1.41	--	--	--	--	--	--	--	
	01/10/95	5.00	-0.97	--	--	--	--	--	--	--	
	02/01/95	4.98	-0.95	2,700 ⁵	55,000	7,700	9,100	4,500	20,000	--	
	03/03/95	5.71	-1.68	--	--	--	--	--	--	--	
	05/02/95	5.58	-1.55	3,600 ⁵	59,000	4,700	4,400	4,000	18,000	--	
	08/01/95	6.76	-2.73	2,800 ⁴	23,000	1,400	510	940	7,300	--	
	11/01/95	8.10	-4.07	4,300 ⁴	24,000	1,100	200	1,900	6,000	170	
	02/01/96	5.09	-1.06	3,700 ⁴	58,000	2,700	1,800	4,200	17,000	ND	
	02/04/97	7.61	-3.58	--	95 ⁶	ND	1.0	ND	ND	96	
	02/05/98	4.55	-0.52	--	44,000	2,100	1,600	5,200	20,000	2,800	
	08/28/98 ⁸	6.95	-2.92	--	--	--	--	--	--	--	
	02/04/99	5.59	-1.56	--	37,000	480	250	2,900	10,000	ND ⁹	
MW-7 4.84	05/11/93	4.52	0.32	--	--	--	--	--	--	--	
	05/17/93	7.00	-2.16	ND	ND	ND	ND	ND	ND	--	
	06/15/93	7.47	-2.63	--	--	--	--	--	--	--	
	07/14/93	8.55	-3.71	--	--	--	--	--	--	--	
	08/13/93	9.23	-4.39	ND	ND	ND	ND	ND	ND	--	
	09/13/93	10.08	-5.24	--	--	--	--	--	--	--	
	10/14/93	10.25	-5.41	--	--	--	--	--	--	--	
	4.42	11/11/93	10.27	-5.85	66	ND	ND	ND	ND	ND	--
	12/14/93	8.52	-4.10	--	--	--	--	--	--	--	
	01/10/94	9.30	-4.88	--	--	--	--	--	--	--	
	02/10/94	7.93	-3.51	ND	ND	ND	ND	ND	ND	--	
	03/14/94	6.78	-2.36	--	--	--	--	--	--	--	
	04/23/94	INACCESSIBLE	--	--	--	--	--	--	--	--	
	05/05/94	7.13	-2.71	SAMPLED SEMI-ANNUALLY			--	--	--	--	--
	06/07/94	7.09	-2.67	--	--	--	--	--	--	--	
	07/05/94	7.49	-3.07	--	--	--	--	--	--	--	
	08/02/94	7.98	-3.56	ND	ND	ND	ND	ND	0.63	--	
11/07/94	7.86	-3.44	--	--	--	--	--	--	--		

ND⁹ — Not Given

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	
MW-7 (cont)	12/03/94	5.95	-1.53	--	--	--	--	--	--	--	
	01/10/95	5.50	-1.08	--	--	--	--	--	--	--	
	02/01/95	5.43	-1.01	ND	ND	ND	ND	ND	ND	--	
	03/03/95	5.97	-1.55	--	--	--	--	--	--	--	
	05/02/95	5.73	-1.31	--	--	--	--	--	--	--	
	08/01/95	7.62	-3.20	ND	ND	ND	ND	ND	ND	--	
	11/01/95	8.58	-4.16	--	--	--	--	--	--	--	
	02/01/96	5.77	-1.35	96 ⁴	ND	ND	ND	ND	ND	ND	1.4
	02/04/97	7.64	-3.22	--	ND	ND	ND	ND	ND	ND	ND
	02/05/98	PAVED OVER	--	--	--	--	--	--	--	--	--
	02/04/99	5.54	-1.12	--	ND	ND	ND	ND	ND	ND	ND
MW-8	11/03/92	--	--	ND	ND	ND	ND	ND	ND	--	
	02/03/93	--	--	ND	ND	ND	ND	ND	ND	--	
5.12	03/01/93	6.64	-1.52	--	--	--	--	--	--	--	
	04/01/93	6.55	-1.43	--	--	--	--	--	--	--	
	05/17/93	8.25	-3.13	ND	ND	ND	ND	ND	ND	--	
	06/15/93	8.67	-3.55	--	--	--	--	--	--	--	
	07/14/93	9.47	-4.35	--	--	--	--	--	--	--	
	08/13/93	10.00	-4.88	ND	ND	ND	ND	ND	ND	--	
	09/13/93	10.40	-5.28	--	--	--	--	--	--	--	
	10/14/93	10.23	-5.11	--	--	--	--	--	--	--	
	4.43	11/11/93	10.22	-5.79	ND	ND	ND	ND	ND	ND	--
		12/14/93	9.00	-4.57	--	--	--	--	--	--	--
01/10/94		9.17	-4.74	--	--	--	--	--	--	--	
02/10/94		7.23	-2.80	ND	ND	ND	ND	ND	ND	--	
03/14/94		6.94	-2.51	--	--	--	--	--	--	--	
04/23/94		7.63	-3.20	--	--	--	--	--	--	--	
05/05/94		7.39	-2.96	SAMPLED SEMI-ANNUALLY			--	--	--	--	--
06/07/94		7.44	-3.01	--	--	--	--	--	--	--	
07/05/94		7.86	-3.43	--	--	--	--	--	--	--	
08/02/94		8.23	-3.80	ND	ND	ND	ND	ND	ND	--	
11/07/94	6.56	-2.13	--	--	--	--	--	--	--		
12/03/94	5.60	-1.17	--	--	--	--	--	--	--		

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to February 5, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing elevation	B = Benzene	(D) = Duplicate
DTW = Depth to Water	T = Toluene	ppb = Parts per billion
(ft.) = Feet	E = Ethylbenzene	ppm = Parts per million
GWE = Groundwater Elevation	X = Xylenes	ND = Not Detected
msl = Relative to mean sea level	MTBE = Methyl tertiary butyl ether	-- = Not Measured/Not Analyzed
TPH(D) = Total Petroleum Hydrocarbons as Diesel		TOG = Total Oil and Grease
TPH(G) = Total Petroleum Hydrocarbons as Gasoline		

* TOC elevations are relative to Mean Sea Level (msl), per the City of Oakland Benchmark No. 3881 (Elevation = 4.72 feet msl). Prior to November 11, 1999, DTW measurements were taken from the top of well covers.

- 1 TOG was ND.
- 2 TOG was detected at a concentration of 78 ppb.
- 3 TOG was detected at a concentration of 16 ppb.
- 4 Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- 5 Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- 6 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- 7 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 8 ORC installed in well.
- 9 Detection limit raised. Refer to analytical results.
- 10 MTBE by EPA Method 8260.
- 11 Laboratory analyzed sample 9 minutes past holding time.

Table 2
Dissolved Oxygen Compounds
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID	Date	Before Purging (mg/L)	After Purging (mg/L)
MW-1	02/04/99	3.56	--
MW-2	08/28/98	0.70	--
	02/04/99	3.64	--
MW-3	02/04/99	5.34	--
MW-4	02/04/99	6.46	--
MW-5	02/04/99	6.65	--
MW-6 ¹	08/29/98	0.32	--
	02/05/99	2.78	--
MW-7	02/04/99	5.05	--
MW-8	08/28/98	0.32	--
	02/04/99	4.95	--
MW-9	02/04/99	4.77	--
MW-10	02/04/99	4.02	--

EXPLANATIONS:

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

NOTES:

¹ ORC installed in well.

Table 3
Groundwater Analytical Results
 Tosco (Unocal) Service Station #3135
 845 66th Avenue
 Oakland, California

Well ID	Date	Nitrate as NO ₃ (ppm)	Sulfate (ppm)	Redox Potential (mV)	Ferrous Iron (ppm)
MW-1	02/04/99	7.0	4.4	-054 ¹	--
	NP 02/12/99	--	--	470	3.3
MW-2	02/04/99	ND	12	-104 ¹	--
	NP 02/12/99	--	--	380	4.3
MW-3	02/04/99	ND	47	-064 ¹	--
	NP 02/12/99	--	--	460	1.4
MW-4	02/04/99	5.4	15	007 ¹	--
	NP 02/12/99	--	--	610	6.0
MW-5	02/04/99	10	79	102 ¹	--
	NP 02/12/99	--	--	480	0.16
MW-6	02/04/99	ND	4.8	-034 ¹	--
	NP 02/12/99	--	--	400	3.2
MW-7	02/04/99	ND	4.6	-071 ¹	--
	NP 02/12/99	--	--	450	1.8
MW-8	02/04/99	ND	41	90 ¹	--
	NP 02/12/99	--	--	470	0.15
MW-9	02/04/99	22	30	78 ¹	--
	NP 02/12/99	--	--	470	0.26
MW-10	02/04/99	ND	36	94 ¹	--
	NP 02/12/99	--	--	470	0.24

EXPLANATIONS:

ppm = Parts per million
 mV = millivolts
 -- = Not Analyzed

¹ Redox Potential was measured in the field.

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 (UNOCAL) SS NO #3135
OAKLAND, CA*

*MONITORING & SAMPLING
EVENT OF FEBRUARY 4, 1999*

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 3135
Address: 845 66th Ave.
City: Oakland

Job#: 180067
Date: 2-4-99
Sampler: Joe

Well ID MW-1
Well Diameter 2 in.
Total Depth 22.67 ft.
Depth to Water 6.58 ft.

Well Condition: O.K.
Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

16.09 x VF 0.17 = 2.74 x 3 (case volume) = Estimated Purge Volume: 8.5 (gal.)

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

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

Starting Time: 11:58
Sampling Time: 12:30 P.M.
Purging Flow Rate: 1 gpm.
Did well de-water? _____

Weather Conditions: clear
Water Color: clear Odor: none
Sediment Description: none
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity, $\mu\text{mhos/cm} \times 10^3$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:07</u>	<u>3</u>	<u>6.88</u>	<u>2.33</u>	<u>69.4</u>	<u>3.56</u>	<u>-054</u>	
<u>12:10</u>	<u>5</u>	<u>7.11</u>	<u>2.46</u>	<u>69.9</u>			
<u>12:12</u>	<u>8.5</u>	<u>7.12</u>	<u>2.55</u>	<u>70.4</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe - 64826</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 3135
Address: 845 66th Ave
City: Oakland

Job#: 180067
Date: 2-4-99
Sampler: Joe

Well ID MW-3
Well Diameter 2 in.
Total Depth 21.70 ft.
Depth to Water 4.62 ft.

Well Condition: O.K.

Hydrocarbon Thickness:	Amount Bailed (Gallons)		
(feet)	(product/water):		
<u>8</u>	<u>8</u>		
Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	6" = 1.50	12" = 5.80	

17.08 X VF 0.17 = 2.90 X 3 (case volume) = Estimated Purge Volume: 9 (gal.)

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

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

Starting Time: 7:14
Sampling Time: 7:45 AM
Purging Flow Rate: 1 gpm.
Did well de-water? _____

Weather Conditions: clear
Water Color: clear Odor: none
Sediment Description: none
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>7:25</u>	<u>3</u>	<u>7.85</u>	<u>6.84</u>	<u>71.5</u>	<u>5.34</u>	<u>-064</u>	
<u>7:28</u>	<u>6</u>	<u>7.60</u>	<u>6.35</u>	<u>71.0</u>			
<u>7:30</u>	<u>9</u>	<u>7.49</u>	<u>6.32</u>	<u>71.3</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 JCA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe - 648240</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
 Facility # 3135 Job#: 180067
 Address: 845 60th Ave Date: 2-4-99
 City: Oakland Sampler: Joe

Well ID MW-4 Well Condition: O.K.
 Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: 0 (feet) (product/water): 0 (Gallons)
 Total Depth 25.15 ft.
 Depth to Water 4.04 ft.

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

21.11 x VF 0.17 = 3.59 x 3 (case volume) = Estimated Purge Volume: 11 (gal.)

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

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

Starting Time: 8:38 Weather Conditions: clear
 Sampling Time: 9:05 p.m. 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 $\mu\text{mhos/cm}^1$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:45</u>	<u>4</u>	<u>7.99</u>	<u>6.10</u>	<u>71.2</u>	<u>6.46</u>	<u>007</u>	
<u>8:47</u>	<u>8</u>	<u>7.38</u>	<u>4.12</u>	<u>70.4</u>			
<u>8:49</u>	<u>11</u>	<u>7.42</u>	<u>4.22</u>	<u>69.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3 JCA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe - 648260</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility #3135
Address: 845 66th Ave
City: Oakland

Job#: 180067
Date: 2-4-99
Sampler: Joe

Well ID MW-5

Well Condition: O.K.

Well Diameter 2 in.

Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 25.98 ft.

Depth to Water 5.85 ft.

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

20.13 X VF 0.17 = 3.42 X 3 (case volume) = Estimated Purge Volume: 10.5 (gal.)

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

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

Starting Time: 12:42

Weather Conditions: clear

Sampling Time: 1:10 P.M.

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 $\mu\text{hos/cm} \times 10^3$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:52</u>	<u>3.5</u>	<u>7.41</u>	<u>5.82</u>	<u>69.3</u>	<u>6.65</u>	<u>102</u>	
<u>12:54</u>	<u>7</u>	<u>7.58</u>	<u>6.07</u>	<u>69.8</u>			
<u>12:56</u>	<u>10.5</u>	<u>7.66</u>	<u>6.04</u>	<u>70.5</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe - 648260</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility #3135 Job#: 180067
Address: 845 66th Ave Date: 2-4-99
City: Oakland Sampler: Joe

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

Well Diameter 2 in.

Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 25.80 ft.

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

Depth to Water 5.59 ft.

20.21 X VF 0.17 = 3.44 X 3 (case volume) = Estimated Purge Volume: 10.5 (gal.)

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

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

Starting Time: 1:18 Weather Conditions: clear
Sampling Time: 1:56 P.M. Water Color: clear Odor: yes
Purging Flow Rate: 1 gpm. Sediment Description: none?
Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity, $\mu\text{mhos/cm} \cdot \text{d}$	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:35</u>	<u>3.5</u>	<u>7.31</u>	<u>6.35</u>	<u>71.3</u>	<u>2.78</u>	<u>-034</u>	
<u>1:38</u>	<u>7</u>	<u>7.25</u>	<u>6.36</u>	<u>71.0</u>			
<u>1:40</u>	<u>10.5</u>	<u>7.18</u>	<u>6.42</u>	<u>71.3</u>			
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3 JCA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(G)/btex/mtbe-b4824c</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>
_____	_____	_____	_____	_____	_____

COMMENTS: Well Gas ORC.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility #3135 Job#: 180067
Address: 845 66th Ave Date: 2-4-99
City: Oakland Sampler: Joe

Well ID MW-7 Well Condition: O.K.
Well Diameter 2 in. Hydrocarbon Amount Bailed
Thickness: 0 (feet) (product/water): 0 (Gallons)
Total Depth 19.85 ft.
Depth to Water 5.54 ft.

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

14.31 X VF 0.17 = 2.43 X 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

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

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

Starting Time: 8:00 Weather Conditions: clear
Sampling Time: 8:30 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 $\mu\text{mhos/cm} \times 10^3$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:10</u>	<u>2.5</u>	<u>7.55</u>	<u>5.24</u>	<u>69.8</u>	<u>5.05</u>	<u>-071</u>	
<u>8:12</u>	<u>5</u>	<u>7.35</u>	<u>5.31</u>	<u>72.1</u>			
<u>8:14</u>	<u>7.5</u>	<u>7.25</u>	<u>5.29</u>	<u>72.3</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/bTEX/mtbe - by 824c</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>---</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility #3135
Address: 845 66th Ave
City: Oakland

Job#: 180067
Date: 2-4-99
Sampler: Joe

Well ID MW-8
Well Diameter 2 in.
Total Depth 23.09 ft.
Depth to Water 6.12 ft.

Well Condition: O.K.

Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

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

16.97 X VF 0.17 = 289 X 3 (case volume) = Estimated Purge Volume: 9 (gal.)

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

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

Starting Time: 11:10
Sampling Time: 11:38 AM
Purging Flow Rate: 1 gpm.
Did well de-water? _____

Weather Conditions: clear
Water Color: clear Odor: none
Sediment Description: soil
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \cdot 10^3$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:16</u>	<u>3</u>	<u>7.49</u>	<u>7.56</u>	<u>71.9</u>	<u>4.95</u>	<u>90</u>	
<u>11:18</u>	<u>6</u>	<u>7.32</u>	<u>7.50</u>	<u>71.2</u>			
<u>11:21</u>	<u>9</u>	<u>7.37</u>	<u>7.47</u>	<u>71.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe-648240</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility #3135
Address: 845 60th Ave.
City: Oakland

Job#: 180067
Date: 2-4-99
Sampler: Joe

Well ID MW-9 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Amount Bailed

Total Depth 23.08 ft. Thickness: A (feet) (product/water): G (Gallons)

Depth to Water 5.81 ft.

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

17.27 X VF 0.17 = 2.94 X 3 (case volume) = Estimated Purge Volume: 9 (gal.)

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

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

Starting Time: 10:28 Weather Conditions: clear
Sampling Time: 11:00 A.M. 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 $\mu\text{mhos/cm} \cdot 10^3$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:40</u>	<u>3</u>	<u>7.82</u>	<u>5.89</u>	<u>69.3</u>	<u>4.77</u>	<u>78</u>	
<u>10:43</u>	<u>6</u>	<u>7.52</u>	<u>5.95</u>	<u>71.2</u>			
<u>10:45</u>	<u>9</u>	<u>7.46</u>	<u>5.99</u>	<u>70.5</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe - 648260</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility #3135
Address: 845 66th Ave.
City: Oakland

Job#: 180067
Date: 2-4-99
Sampler: Joe

Well ID MW-10
Well Diameter 2 in.
Total Depth 23.07 ft.
Depth to Water 4.68 ft.

Well Condition: ~~OK~~ Cover is missing
Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

18.39 x VF 0.17 = 3.13 x 3 (case volume) = Estimated Purge Volume: 10 (gal.)

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

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

Starting Time: 9:36
Sampling Time: 10:07 A.M.
Purging Flow Rate: 1 gpm.
Did well de-water? _____

Weather Conditions: clear
Water Color: clear Odor: none
Sediment Description: none
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm ⁵⁰	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:50</u>	<u>3.5</u>	<u>7.42</u>	<u>5.11</u>	<u>73.2</u>	<u>4.02</u>	<u>94</u>	
<u>9:53</u>	<u>7</u>	<u>7.28</u>	<u>5.07</u>	<u>72.1</u>			
<u>9:55</u>	<u>10</u>	<u>7.39</u>	<u>5.17</u>	<u>72.0</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>3 vca</u>	<u>Y</u>	<u>HCL</u>	<u>SEQUOIA</u>	<u>TPH(GI)/btex/mtbe-b4824c</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>HNO₃</u>	<u>"</u>	<u>Ferrous Iron</u>
<u>"</u>	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Nitrate, Sulfate</u>

COMMENTS: Well cover is missing.



Tosco Marketing Company
3000 Cross Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number UNOCAL SS# 3135
Facility Address 845 66th Avenue, Oakland, CA
180067.85
Consultant Project Number _____
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. Dave Dewitt
(Phone) (925) 277-2384
Laboratory Name Sequoia Analytical 9902213
Laboratory Release Number _____
Samples Collected by (Name) JOE ASEMIAN
Collection Date 2-4-99
Signature [Signature]

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	Iod (Yes or No)	Analytes To Be Performed											Remarks				
								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)	Redox Potential	Nitrate/Sulfate FE + 2	Ferrous Iron					
TB-LB		1	W	-	-	HCL	Y	✓															DO NOT BILL TB-LB ANALYSIS CONFIRM ANY MTBE HIT by EPA 8260 Remarks
MW-1	01	3 vials 2 plast.	-	G	12:30 P.W.			✓															Cancel
MW-2	02	"	"	"	2:40 P.W.			✓															Ferrous Iron
MW-3	03	"	"	"	7:45 A.W.			✓															as per John
MW-4	04	"	"	"	9:05 A.W.			✓															Webster 2/9/99
MW-5	05	"	"	"	1:10 P.W.			✓															
MW-6	06	"	"	"	1:56 P.W.			✓															
MW-7	07	"	"	"	8:30 A.W.			✓															
MW-8	08	"	"	"	11:59 A.W.			✓															
MW-9	09	"	"	"	11:00 A.W.			✓															
MW-10	10	"	"	"	10:01 A.W.			✓															

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>G-R Inc.</u>	Date/Time <u>5:00 P.M.</u> <u>2-4-99</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>CS-C</u>	Date/Time <u>2-5-1600</u>
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>abc</u>	Date/Time <u>2-5 1740</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>CS-C</u>	Date/Time <u>2-5-1600</u>
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>CS-C</u>	Date/Time <u>2-5 1748</u>	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time <u>2-4-99/16:50</u>

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

9902265
DO NOT BILL
TB-LB ANALYSIS
CONFIRM
ANY MTBE
HIT by EPA
8260
Remarks



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiger Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

RECEIVED

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

Client Project ID: Unocal SS#3135, Oakland
Sample Matrix: Water
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 902-0841

Sampled: Feb 4, 1999
Received: Feb 5, 1999
Reported: Feb 24, 1999

NR 02

GETTLER-RYAN INC.

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 902-0841 TB-LB	Sample I.D. 902-0842 MW-1	Sample I.D. 902-0843 MW-2	Sample I.D. 902-0844 MW-3	Sample I.D. 902-0845 MW-4	Sample I.D. 902-0846 MW-5
Purgeable Hydrocarbons	50	N.D.	1,600	N.D.	N.D.	N.D.	N.D.
Benzene	0.50	N.D.	74	N.D.	N.D.	N.D.	N.D.
Toluene	0.50	N.D.	16	0.54	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	0.60	N.D.	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.	1.5	N.D.	N.D.	N.D.
MTBE	2.5	N.D.	680	19	480	N.D.	23
Chromatogram Pattern:		--	Gasoline	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	10	1.0	1.0	1.0	1.0
Date Analyzed:	2/17/99	2/18/99	2/17/99	2/17/99	2/17/99	2/17/99
Instrument Identification:	HP-5	HP-5	HP-5	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	108	92	92	94	94	94

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
Julianne Fegley
Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Client Project ID: Unocal SS#3135, Oakland
Sample Matrix: Water
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 902-0847

Sampled: Feb 4, 1999
Received: Feb 5, 1999
Reported: Feb 24, 1999

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 902-0847 MW-6	Sample I.D. 902-0848 MW-7	Sample I.D. 902-0849 MW-8	Sample I.D. 902-0850 MW-9	Sample I.D. 902-0851 MW-10
Purgeable Hydrocarbons	50	37,000	N.D.	N.D.	N.D.	N.D.
Benzene	0.50	480	N.D.	N.D.	N.D.	N.D.
Toluene	0.50	250	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	2,900	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	10,000	N.D.	N.D.	N.D.	N.D.
MTBE	2.5	N.D.	N.D.	N.D.	N.D.	620
Chromatogram Pattern:		Gasoline	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	100	1.0	1.0	1.0	5.0
Date Analyzed:	2/17/99	2/17/99	2/17/99	2/17/99	2/17/99
Instrument Identification:	HP-5	HP-5	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	87	89	95	95	98

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
Julianne Fegley
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

Gettler-Ryan - Dublin	Client Project ID: Unocal SS#3135, Oakland	Sampled: Feb 4, 1999
6747 Sierra Court, Suite J	Sample Descript: Water, MW-1	Received: Feb 5, 1999
Dublin, CA 94568	Analysis Method: EPA 8260	Analyzed: Feb 18, 1999
Attention: Deanna Harding	Lab Number: 902-0842	Reported: Feb 24, 1999

MTBE by EPA 8260

Analyte	Detection Limit µg/L	Sample Results µg/L
Methyl t-Butyl Ether (MTBE)	2.0	850

Surrogates	Control Limit %	% Recovery
Dibromofluoromethane	50	150
		105

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Julianne Fegley
Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiger Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Client Project ID: Unocal SS#3135, Oakland
Sample Descript: Water, MW-2
Analysis Method: EPA 8260
Lab Number: 902-0843

Sampled: Feb 4, 1999
Received: Feb 5, 1999
Analyzed: Feb 18, 1999
Reported: Feb 24, 1999

MTBE by EPA 8260

Analyte	Detection Limit µg/L	Sample Results µg/L
Methyl t-Butyl Ether (MTBE).....	2.0	16

Surrogates	Control Limit %	% Recovery
Dibromofluoromethane.....	50	150
		110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Client Project ID: Unocal SS#3135, Oakland
Sample Descript: Water, MW-3
Analysis Method: EPA 8260
Lab Number: 902-0844

Sampled: Feb 4, 1999
Received: Feb 5, 1999
Analyzed: Feb 18, 1999
Reported: Feb 24, 1999

MTBE by EPA 8260

Analyte	Detection Limit $\mu\text{g/L}$	Sample Results $\mu\text{g/L}$
Methyl t-Butyl Ether (MTBE).....	2.0	530

Surrogates	Control Limit %	% Recovery
Dibromofluoromethane.....	50	150
		109

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Julianne Fegley
Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite B
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

Gettler-Ryan - Dublin	Client Project ID: Unocal SS#3135, Oakland	Sampled: Feb 4, 1999
6747 Sierra Court, Suite J	Sample Descript: Water, MW-5	Received: Feb 5, 1999
Dublin, CA 94568	Analysis Method: EPA 8260	Analyzed: Feb 18, 1999
Attention: Deanna Harding	Lab Number: 902-0846	Reported: Feb 24, 1999

MTBE by EPA 8260

Analyte	Detection Limit µg/L	Sample Results µg/L
Methyl t-Butyl Ether (MTBE).....	2.0	26

Surrogates	Control Limit %	% Recovery
Dibromofluoromethane.....	50	150
		111

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
 Julianne Fegley
 Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd., North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Client Project ID: Unocal SS#3135, Oakland
Sample Descript: Water, MW-10 *
Analysis Method: EPA 8260
Lab Number: 902-0851

Sampled: Feb 4, 1999
Received: Feb 5, 1999
Analyzed: Feb 19, 1999
Reported: Feb 24, 1999

MTBE by EPA 8260

Analyte	Detection Limit µg/L	Sample Results µg/L
Methyl t-Butyl Ether (MTBE).....	2.0	850

Surrogates	Control Limit %	% Recovery
Dibromofluoromethane.....	50	108

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Please Note:

* Ran at 12:09 am. 9min. Past Holding Time.

Julianne Fegley
Julianne Fegley
Project Manager

9020841.GET <9>





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiger Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Client Project ID: Unocal SS#3135, Oakland
Sample Descript: Water
Analysis for: Nitrate as NO3
First Sample #: 902-0842

Sampled: Feb 4, 1999
Received: Feb 5, 1999
Analyzed: Feb 5, 1999
Reported: Feb 24, 1999

LABORATORY ANALYSIS FOR: Nitrate as NO3

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
902-0842	MW-1	1.0	7.0
902-0843	MW-2	1.0	N.D.
902-0844	MW-3	1.0	N.D.
902-0845	MW-4	1.0	5.4
902-0846	MW-5	1.0	10
902-0847	MW-6	1.0	N.D.
902-0848	MW-7	1.0	N.D.
902-0849	MW-8	1.0	N.D.
902-0850	MW-9	1.0	22
902-0851	MW-10	1.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1210

Julianne Fegley
Julianne Fegley
Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Client Project ID: Unocal SS#3135, Oakland
Sample Descript: Water
Analysis for: Sulfate
First Sample #: 902-0842

Sampled: Feb 4, 1999
Received: Feb 5, 1999
Analyzed: Feb 9, 1999
Reported: Feb 24, 1999

LABORATORY ANALYSIS FOR: Sulfate

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
902-0842	MW-1	1.0	4.4
902-0843	MW-2	1.0	12
902-0844	MW-3	1.0	47
902-0845	MW-4	1.0	15
902-0846	MW-5	1.0	79
902-0847	MW-6	1.0	4.8
902-0848	MW-7	1.0	4.6
902-0849	MW-8	1.0	41
902-0850	MW-9	1.0	30
902-0851	MW-10	1.0	36

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1210

Julianne Fegley
Julianne Fegley
Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Client Project ID: Unocal SS#3135, Oakland
Matrix: Liquid

QC Sample Group: 9020481-851

Reported: Feb 25, 1999

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Nitrate as NO3
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 300.0
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater	B.E.

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Nitrate as NO3
Batch#:	9020943	9020943	9020943	9020943	9902265-1A
Date Prepared:	2/18/99	2/18/99	2/18/99	2/18/99	2/5/99
Date Analyzed:	2/18/99	2/18/99	2/18/99	2/18/99	2/5/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	INAC-1
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	100 mg/L
Matrix Spike % Recovery:	100	105	105	107	89
Matrix Spike Duplicate % Recovery:	95	100	100	100	89
Relative % Difference:	5.1	4.9	4.9	6.5	0.0

LCS Batch#:	5LCS021899	5LCS021899	5LCS021899	5LCS021899	LCS020599
Date Prepared:	2/18/99	2/18/99	2/18/99	2/18/99	2/5/99
Date Analyzed:	2/18/99	2/18/99	2/18/99	2/18/99	2/5/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	INAC-1
LCS % Recovery:	95	100	100	103	93

% Recovery Control Limits:	70-130	70-130	70-130	70-130	90-110
----------------------------	--------	--------	--------	--------	--------

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.

SEQUOIA ANALYTICAL, #1271 & #1210

Julianne Fegley
Julianne Fegley
Project Manager

9020841.GET <5>





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

Client Project ID: Unocal SS#3135, Oakland
Matrix: Liquid

QC Sample Group: 9020481-851

Reported: Feb 25, 1999

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Sulfate
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 300.0
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	B.E.

MS/MSD Batch#:	9020747	9020747	9020747	9020747	9902265-1A
Date Prepared:	2/17/99	2/17/99	2/17/99	2/17/99	2/5/99
Date Analyzed:	2/17/99	2/17/99	2/17/99	2/17/99	2/5/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	INAC-1
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	100 mg/L
Matrix Spike % Recovery:	95	95	95	100	89
Matrix Spike Duplicate % Recovery:	90	95	95	95	89
Relative % Difference:	5.4	0.0	0.0	5.1	0.0

LCS Batch#:	5LCS021799	5LCS021799	5LCS021799	5LCS021799	LCS020599
Date Prepared:	2/17/99	2/17/99	2/17/99	2/17/99	2/5/99
Date Analyzed:	2/17/99	2/17/99	2/17/99	2/17/99	2/5/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	INAC-1
LCS % Recovery:	95	95	95	100	90

% Recovery Control Limits:	70-130	70-130	70-130	70-130	90-110
-----------------------------------	--------	--------	--------	--------	--------

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.

SEQUOIA ANALYTICAL, #1271 & #1210

Julianne Fegley
Julianne Fegley
Project Manager



*TOSCO (UNOCAL) SS NO #3135
OAKLAND, CA*

*SAMPLING
EVENT OF FEBRUARY 12, 1999*

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-99
 City: OAKLAND Sampler: JOE

Well ID MW-1 Well Condition: Grab Sample Only
 Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)
 Total Depth _____ ft.
 Depth to Water _____ ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	1 500 ml pl.	Y	N.P.	SEQUOIA	Ferrous IRON
MW-1	1 500 ml pl.	Y	N.P.	SEQUOIA	REDOX Potential

COMMENTS: Grab Sample Only - Not Monitored

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-99
 City: OAKLAND Sampler: JOE

Well ID MW-2 Well Condition: Grab Sample Only

Well Diameter 2 in.

Total Depth _____ ft.

Depth to Water _____ ft.

Hydrocarbon Thickness:	Amount Bailed		
	(feet)	(product/water):	(Gallons)
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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>1 500 ml pl.</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>Ferrous IRON</u>
<u>MW-2</u>	<u>1 500 ml pl.</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>REDOX Potential</u>

COMMENTS: Grab Sample Only - Not Monitored

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-99
 City: OAKLAND Sampler: JOE

Well ID MW-3 Well Condition: Grab Sample Only
 Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)
 Total Depth _____ ft.
 Depth to Water _____ ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>1 500 ml pl.</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>Ferrous IRON</u>
<u>MW-3</u>	<u>1 500 ml pl.</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>REDOX Potential</u>

COMMENTS: Grab Sample Only - Not Monitored

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-97
 City: OAKLAND Sampler: JOE

Well ID MW-4 Well Condition: Grab Sample Only
 Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: (feet) (product/water): (Gallons)
 Total Depth _____ ft.
 Depth to Water _____ ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	1 500 ml pl.	Y	N.P.	SEQUOIA	Ferrous IRON
MW-4	1 500 ml. pl	Y	N.P.	SEQUOIA	REDOX Potential

COMMENTS: Grab Sample Only - Not Monitored

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-99
 City: OAKLAND Sampler: JOE

Well ID MW-5 Well Condition: Grab Sample Only
 Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)
 Total Depth _____ ft.
 Depth to Water _____ ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>1 500 ml pl.</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>Ferrous IRON</u>
<u>MW-5</u>	<u>1 500 ml pl.</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>REDOX Potential</u>

COMMENTS: Grab Sample Only - Not Monitored

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-97
 City: OAKLAND Sampler: JOE

Well ID MW-6 Well Condition: Grab Sample Only

Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)
 Total Depth _____ ft.
 Depth to Water _____ 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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>1 500 ml pl.</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>Ferrous IRON</u>
<u>MW-6</u>	<u>1 500 ml. pl</u>	<u>Y</u>	<u>N.P.</u>	<u>SEQUOIA</u>	<u>Redox Potential</u>

COMMENTS: Grab Sample Only - Not Monitored

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-97
 City: OAKLAND Sampler: JOE

Well ID MW-7

Well Condition: Grab Sample Only

Well Diameter 2 in.

Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)

Total Depth _____ ft.

Depth to Water _____ ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	1 500 ml pl.	Y	N.P.	SEQUOIA	Ferrous IRON
MW-7	1 500 ml pl.	Y	N.P.	SEQUOIA	REDOX Potential

COMMENTS: Grab Sample Only - Not Monitored

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-97
 City: OAKLAND Sampler: JOE

Well ID MW-8 Well Condition: Grab Sample Only

Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)
 Total Depth _____ ft.
 Depth to Water _____ ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	1 500 ml pl.	Y	N.P.	SEQUOIA	Ferrous IRON
MW-8	1 500 ml pl.	Y	N.P.	SEQUOIA	REDOX Potential

COMMENTS: Grab Sample Only - Not Monitored

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 3135 Job#: 180067
 Address: 845 66th Ave Date: 2-12-99
 City: OAKLAND Sampler: JOE

Well ID MW-9 Well Condition: Grab Sample Only
 Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ (feet) (product/water): _____ (Gallons)
 Total Depth _____ ft.
 Depth to Water _____ ft.

Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-9	1 500 ml pl.	Y	N.P.	SEQUOIA	Ferrous IRON
MW-9	1 500 ml pl.	Y	N.P.	SEQUOIA	REDOX Potential

COMMENTS: Grab Sample Only - Not Monitored

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 3135

Job#: 180067

Address: 845 66th Ave

Date: 2-12-97

City: OAKLAND

Sampler: JOE

Well ID MW-10

Well Condition: Grab Sample Only

Well Diameter 2 in.

Hydrocarbon Thickness: _____ (feet) Amount Bailed (product/water): _____ (Gallons)

Total Depth _____ ft.

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

Depth to Water _____ ft.

_____ 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 μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-10	1 500 ml. pl.	Y	N.P.	SEQUOIA	Ferrous IRON
MW-10	1 500 ml. pl.	Y	N.P.	SEQUOIA	Redox Potential

COMMENTS: Grab Sample Only - Not Monitored



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954
San Carlos, CA 94070-4111

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865
(650) 232-9600

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342
FAX (650) 232-9612

Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: 180067.85/SS#3135, 845 66th Sample Descript: TB-LB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9902631-01	Sampled: 02/12/99 Received: 02/12/99 Analyzed: 02/22/99 Reported: 02/25/99
---	---	---

QC Batch Number: GC022299BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	86

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager





Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Client Proj. ID: 180067.85/SS#3135, 845 66th
Lab Proj. ID: 9902631

Sampled: 02/12/99
Received: 02/12/99
Analyzed: see below

Attention: Deanna Harding

Reported: 02/25/99

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9902631-02 Sample Desc: LIQUID,MW-1				
Redox Potential	mV	02/12/99	10	470
Ferrous Iron	mg/L	02/16/99	0.010	3.3
Lab No: 9902631-03 Sample Desc: LIQUID,MW-2				
Redox Potential	mV	02/12/99	10	380
Ferrous Iron	mg/L	02/16/99	0.010	4.3
Lab No: 9902631-04 Sample Desc: LIQUID,MW-3				
Redox Potential	mV	02/12/99	10	460
Ferrous Iron	mg/L	02/16/99	0.010	1.4
Lab No: 9902631-05 Sample Desc: LIQUID,MW-4				
Redox Potential	mV	02/12/99	10	610
Ferrous Iron	mg/L	02/16/99	0.010	6.0
Lab No: 9902631-06 Sample Desc: LIQUID,MW-5				
Redox Potential	mV	02/12/99	10	480
Ferrous Iron	mg/L	02/16/99	0.010	0.16
Lab No: 9902631-07 Sample Desc: LIQUID,MW-6				
Redox Potential	mV	02/12/99	10	400
Ferrous Iron	mg/L	02/16/99	0.010	3.2

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiger Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954
San Carlos, CA 94070-4111

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865
(650) 232-9600

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342
FAX (650) 232-9612

Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Client Proj. ID: 180067.85/SS#3135, 845 66th
Lab Proj. ID: 9902631

Sampled: 02/12/99
Received: 02/12/99
Analyzed: see below

Attention: Deanna Harding

Reported: 02/25/99

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9902631-08 Sample Desc: LIQUID,MW-7				
Redox Potential	mV	02/12/99	10	450
Ferrous Iron	mg/L	02/16/99	0.010	1.8
Lab No: 9902631-09 Sample Desc: LIQUID,MW-8				
Redox Potential	mV	02/12/99	10	470
Ferrous Iron	mg/L	02/16/99	0.010	0.15
Lab No: 9902631-10 Sample Desc: LIQUID,MW-9				
Redox Potential	mV	02/12/99	10	470
Ferrous Iron	mg/L	02/16/99	0.010	0.26
Lab No: 9902631-11 Sample Desc: LIQUID,MW-10				
Redox Potential	mV	02/12/99	10	470
Ferrous Iron	mg/L	02/16/99	0.010	0.24

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

Redwood City, CA 94063 (650) 364-9600
Walnut Creek, CA 94598 (925) 988-9600
Sacramento, CA 95834 (916) 921-9600
Petaluma, CA 94954 (707) 792-1865
San Carlos, CA 94070-4111 (650) 232-9600

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342
FAX (650) 232-9612

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

Client Project ID: 180067.85/SS#3135, 845 66th

QC Sample Group: 9902631-01

Reported: Feb 25, 1999

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015
Analyst: BTF

ANALYTE Gasoline

QC Batch #: GC022299BTEX03A

Sample No.: GW9902477-04MS

Date Prepared: 2/22/99

Date Analyzed: 2/22/99

Instrument I.D.#: GCHP03

Sample Conc., ug/L: N.D.
Conc. Spiked, ug/L: 250

Matrix Spike, ug/L: 250
% Recovery: 98

Matrix
Spike Duplicate, ug/L: 270
% Recovery: 108

Relative % Difference: 9.7

RPD Control Limits: 0-25

LCS Batch#: GWLCS022299A

Date Prepared: 2/22/99

Date Analyzed: 2/22/99

Instrument I.D.#: GCHP03

Conc. Spiked, ug/L: 250

LCS Recovery, ug/L: 280
LCS % Recovery: 112

Percent Recovery Control Limits:

MS/MSD 60-140
LCS 70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Ronald M. Chew
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.



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite B
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954
San Carlos, CA 94070-4111

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865
(650) 232-9600

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342
FAX (650) 232-9612

Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: 180067.85/SS#3135, 845 66th
Matrix: Liquid

Work Order #: 9902631 02-11

Reported: Mar 10, 1999

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0216992007MDA	ME0216992007MDA	ME0216992007MDA	ME0216992007MDA
Analy. Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7
Prep. Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7

Analyst:	S. LaBarron	S. LaBarron	S. LaBarron	S. LaBarron
MS/MSD #:	990262001	990262001	990262001	990262001
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/16/99	2/16/99	2/16/99	2/16/99
Analyzed Date:	2/16/99	2/16/99	2/16/99	2/16/99
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.10	1.10	1.10	1.10
MS % Recovery:	110	110	110	110
Dup. Result:	1.10	1.10	1.10	1.10
MSD % Recov.:	110	110	110	110
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK021699	BLK021699	BLK021699	BLK021699
Prepared Date:	2/16/99	2/16/99	2/16/99	2/16/99
Analyzed Date:	2/16/99	2/16/99	2/16/99	2/16/99
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.10	1.10	1.10	1.10
LCS % Recov.:	110	110	110	110

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mei Mei Shin
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9902631.GET <1>





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954
San Carlos, CA 94070-4111

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865
(650) 232-9600

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342
FAX (650) 232-9612

Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: 180067.85/SS#3135, 845 66th
Matrix: Liquid

Work Order #: 9902631 02-11

Reported: Mar 10, 1999

QUALITY CONTROL DATA REPORT

Analyte: Redox

QC Batch#: IN021299149800A
Analy. Method: ATSM D149876
Prep. Method:

Analyst: K. Cesar
MS/MSD #: 990263111
Sample Conc.: N.D.
Prepared Date: 2/12/99
Analyzed Date: 2/12/99
Instrument I.D.#: MANUAL

Result: 470 mV
MS % Recovery: -

Dup. Result: 470 mV
MSD % Recov.: -

RPD: 0.0
RPD Limit: 0-20

LCS #: LCS021299

Prepared Date: 2/12/99
Analyzed Date: 2/12/99
Instrument I.D.#: MANUAL
Conc. Spiked: 480 mV

LCS Result: 480
LCS % Recov.: 100

MS/MSD 75-125
LCS 80-120
Control Limits

SEQUOIA ANALYTICAL


Mei Mei Shin
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.

** MS= Matrix Spike, MSD= MS Duplicate, RPD=Relative % Difference

9902631.GET <2>





**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954
San Carlos, CA 94070-4111

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865
(650) 232-9600

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342
FAX (650) 232-9612

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

Client Proj. ID: 180067.85/SS#3135, 845 66th

Lab Proj. ID: 9902631

Received: 02/12/99

Reported: 02/25/99

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 8 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Project Manager