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GETTLER-RYAN Inc.

TRANSMITTAL

TO: Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

DATE: August 3, 1998
G-R #: 180105

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

RE: Tosco (Unocal) SS #3292
15008 East 14th Street
San Leandro, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	July 17, 1998	Groundwater Monitoring and Sampling Report Second Quarter 1998 - Event of May 15, 1998

COMMENTS:

At the request of Tosco Marketing Company, we are providing you a copy of the above referenced report. The site is monitored and sampled on an quarterly basis. If you have questions please contact the Tosco Project Manager, Ms. Tina R. Berry at (925) 277-2321.

Enclosure

cc: Mr. Doug Lee, Gettler-Ryan Inc., Dublin, CA

agency/3292trb.qmt



GETTLER-RYAN INC.

July 17, 1998
G-R Job #180105

Ms. Tina R. Berry
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Second Quarter 1998 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #3292
15008 East 14th Street
San Leandro, California

Dear Ms. Berry:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On May 15, 1998, field personnel monitored and sampled thirteen wells (MW-1 through MW-11, MW-2(SP) and MW-3(SP)) at the above referenced site. A joint monitoring event was conducted with the Chevron Facility #9-2013, located at 15002 Hesperian Boulevard, San Leandro, California.

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

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Table 1, and Dissolved Oxygen Concentrations are summarized in Table 2. Joint Groundwater Monitoring Data are summarized in Tables 3 and 4. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

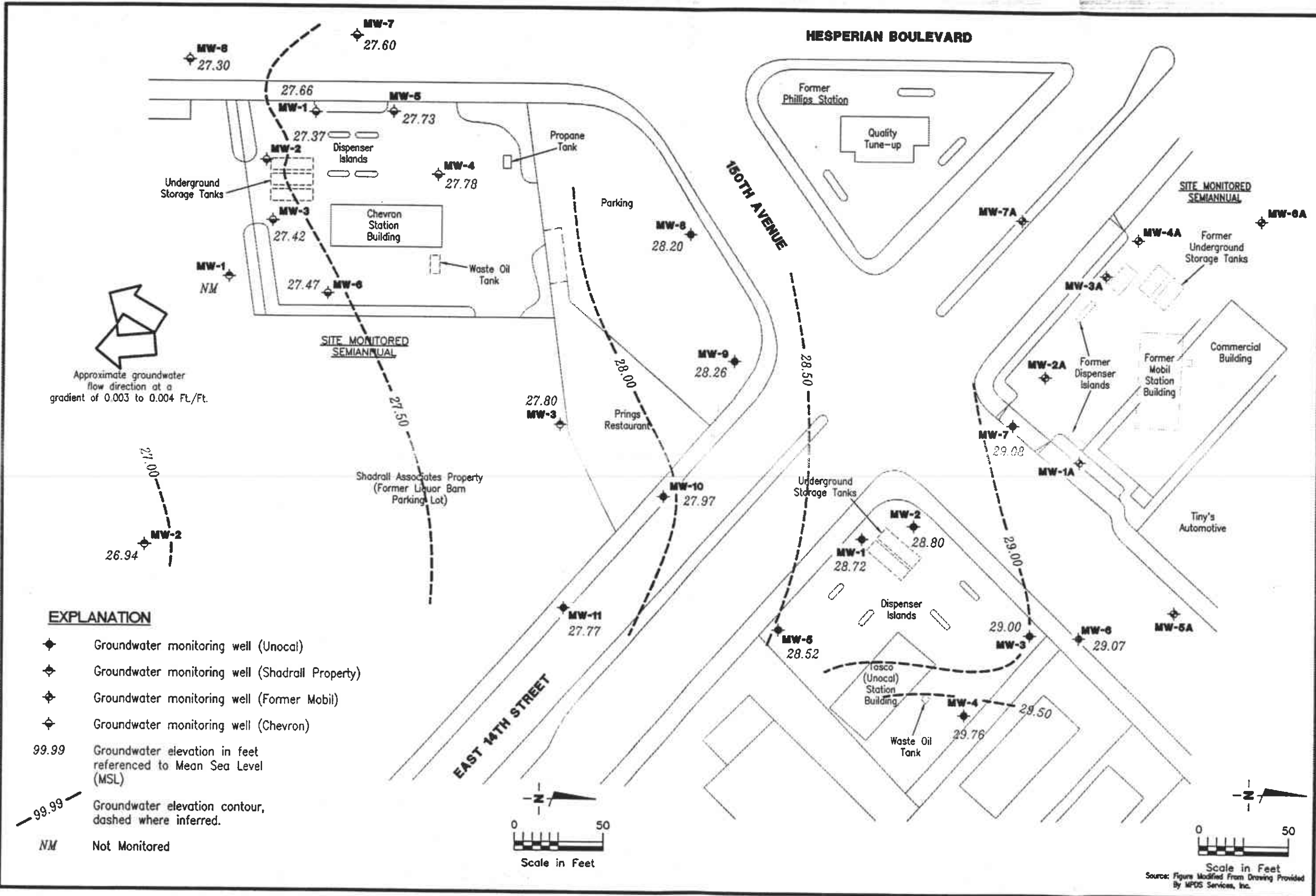
Deanna L. Harding
Deanna L. Harding
Project Coordinator

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: Joint Groundwater Monitoring Data - Mobil Facility
Table 4: Joint Groundwater Monitoring Data - Chevron Facility
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

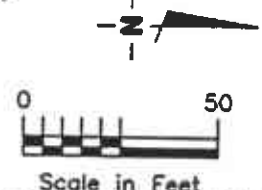
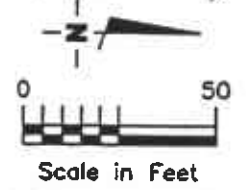
3292.qml



Approximate groundwater flow direction at a gradient of 0.003 to 0.004 Ft./Ft.

EXPLANATION

- ◆ Groundwater monitoring well (Unocal)
- ◆ Groundwater monitoring well (Shadrall Property)
- ◆ Groundwater monitoring well (Former Mobil)
- ◆ Groundwater monitoring well (Chevron)
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- - - 99.99 Groundwater elevation contour, dashed where inferred.
- NM Not Monitored



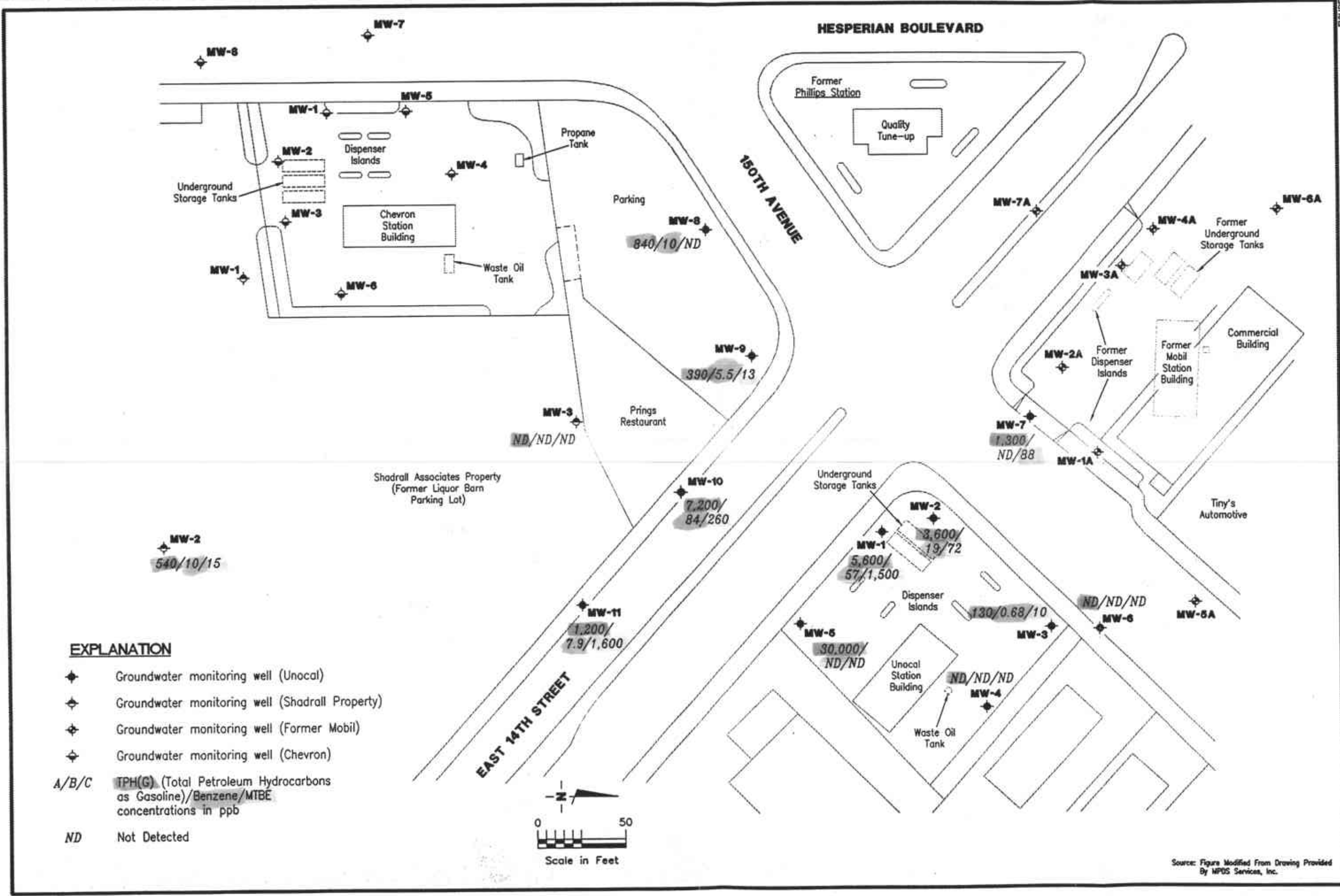
Source: Figure Modified From Drawing Provided By MPOS Services, Inc.

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

POTENTIOMETRIC MAP
 Tosco (Unocal) Service Station No. 3292
 15008 East 14th Street
 San Leandro, California

DATE: May 15, 1998
 REVISION: DATE

JOB NUMBER: 180105

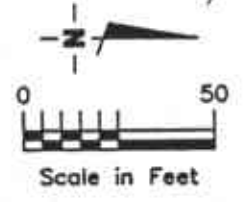


EXPLANATION

- ◆ Groundwater monitoring well (Unocal)
- ◆ Groundwater monitoring well (Shadrall Property)
- ◆ Groundwater monitoring well (Former Mobil)
- ◆ Groundwater monitoring well (Chevron)

A/B/C TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb

ND Not Detected



CONCENTRATION MAP
 Tosco (Unocal) Service Station No. 3292
 15008 East 14th Street
 San Leandro, California

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



DATE: May 15, 1998
 REVISED DATE:

JOB NUMBER: 180105

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

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				←-----pph----->					
MW-1	05/04/91			31,000	74	20	920	1,500	--
	09/19/91			26,000	130	16	1,300	1,800	--
	12/18/91			17,000	160	20	1,400	1,600	--
	03/17/92			23,000	320	19	1,000	940	--
	05/19/92			29,000	650	370	1,100	1,200	--
	08/20/92			18,000	230	22	640	950	--
	11/10/92			18,000	220	ND	690	830	--
	02/20/93			19,000	190	ND	880	620	--
	05/21/93			27,000	150	200	1,200	950	--
	08/23/93			24,000	160	110	840	810	--
	11/23/93			18,000	210	63	900	620	--
	02/24/94			18,000	74	30	940	480	--
	05/25/94 ³			6,400	72	ND	170	67	--
	08/23/94			24,000	130	57	970	320	--
	11/23/94			23,000	180	44	970	270	--
	02/03/95			20,000	77	17	950	390	--
	05/10/95			16,000	230	27	880	630	--
	08/02/95			18,000	190	ND	860	590	--
	11/20/95 ⁴			20,000	180	ND	960	450	970
	02/08/96			15,000	43	16	940	410	5,200
05/08/96			16,000	37	16	930	410	1,600	
08/09/96			2,300	25	ND	77	39	1,200	
11/07/96			38,000	140	ND	1,900	5,600	ND	
36.37	02/10-11/97	7.92	28.45	7,300	91	ND	170	68	1,700
	05/07/97	9.24	27.13	11,000	120	ND	470	110	1,200
	08/05/97	10.20	26.17	530 ¹	5.9	ND	5.6	ND	430
	11/04/97	10.71	25.66	4,100	50	7.0	64	14	97
	02/12/98	6.27	30.10	8,500	160	ND ⁷	550	ND ⁷	1,900
36.34	05/15/98	7.62	28.72	5,600	57	ND ⁷	290	ND ⁷	1,500
MW-2	05/04/91			19,000	6.6	1.4	460	630	--
	09/19/91			19,000	100	6.8	790	310	--
	12/18/91			10,000	110	5.1	420	96	--
	03/17/92			16,000	110	ND	730	220	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) <-----ppb----->	B	T	E	X	MTBE
MW-2	05/19/92			17,000	140	87	680	170	--
(cont)	08/20/92			13,000	52	ND	660	70	--
	11/10/92			11,000	36	7.2	570	45	--
	02/20/93			1,500	2.9	3.8	9.1	ND	--
	05/21/93			9,500	37	ND	470	62	--
	08/23/93			15,000	110	ND	590	64	--
	11/23/93			11,000	80	10	480	20	--
	02/24/94 ⁵			11,000	44	ND	580	32	--
	05/25/94			11,000	50	ND	400	22	--
	08/23/94			12,000	45	10	360	20	--
	11/23/94			15,000	61	24	440	ND	--
	02/03/95			9,700	5.7	ND	250	10	--
	05/10/95			7,500	56	4.7	310	33	--
	08/02/95			8,200	53	22	220	25	--
	11/02/95			5,000	56	4.5	170	7.7	110
	02/08/96			7,200	ND	ND	170	ND	ND
	05/08/96			8,400	5.6	9.0	170	10	130
	08/09/96			3,100	24	ND	80	ND	64
	11/07/96			36,000	140	ND	1,900	5,600	ND
36.34	02/10-11/97	7.75	28.59	4,600	27	ND	53	ND	ND
	05/07/97	9.14	27.20	5,300	61	ND	78	20	180
	08/05/97	10.23	26.11	3,100	35	ND	13	ND	58
	11/04/97	10.65	25.69	1,200	16	ND	11	25	53
	02/12/98	6.20	30.14	630	12	ND ⁷	7.3	ND ⁷	48
36.30	05/15/98	7.50	28.80	3,600	19	ND ⁷	33	ND ⁷	72
MW-3	05/04/91			9,100	2.0	ND	55	180	--
	09/19/91			7,600	ND	13	190	170	--
	12/18/91			5,900	54	6.4	110	64	--
	03/17/92			5,800	66	7.5	100	58	--
	05/19/92			3,400	25	3.6	66	41	--
	08/20/92			4,500	58	ND	65	35	--
	11/10/92			3,400	37	ND	85	34	--
	02/20/93			1,600	12	18	8.9	12	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	←-----ppb----->					
				TPH(G)	B	T	E	X	MTBE
MW-3 (cont)	05/21/93			2,600	42	ND	43	15	--
	08/23/93			2,900	25	ND	50	18	--
	11/23/93			2,300	34	ND	24	5.6	--
	02/24/94			3,400	46	ND	53	11	--
	05/25/94			1,400	20	ND	ND	ND	--
	08/23/94			2,900	37	49	14	2.9	--
	11/23/94			3,200	48	ND	22	ND	--
	02/03/95			780	13	ND	2.1	ND	--
	05/10/95			1,300	ND	ND	ND	ND	--
	08/02/95			1,500	6.3	ND	16	2.1	--
	11/02/95			1,100	5.2	2.1	7.4	0.5	15
	02/08/96			450	ND	ND	ND	ND	ND
	05/08/96			590	ND	11	10	ND	ND
	08/09/96			ND	ND	ND	ND	ND	ND
	11/07/96			140	1.2	ND	ND	ND	5.6
	36.42	02/10-11/97	7.71	28.71	89	1.8	ND	ND	ND
05/07/97		9.17	27.25	52 ²	ND	ND	ND	5.1	5.1
08/05/97		10.27	26.15	ND	ND	ND	ND	ND	ND
11/04/97		10.83	25.59	93	1.8	ND	ND	ND	6.2
02/12/98		6.00	30.42	56	0.59	ND	ND	ND	2.7
36.42	05/15/98	7.42	29.00	130 ⁸	0.68	ND	ND	0.63	10
MW-4	05/04/91			6,300	ND	ND	2.8	61	--
	09/19/91			1,800	0.83	ND	54	46	--
	12/18/91			2,500	28	2.5	54	22	--
	03/17/92			1,800	3.7	1.4	90	21	--
	05/19/92			2,000	20	3.5	42	8.3	--
	08/20/92			1,000	15	ND	11	3.0	--
	11/10/92			690	9.1	ND	16	2.8	--
	02/20/93			2,400	40	2.1	33	ND	--
	05/21/93			1,900	31	ND	20	4.5	--
	08/23/93			1,200	5.0	ND	16	ND	--
	11/23/93			720	10	ND	8.7	ND	--
	02/24/94			1,300	8.9	ND	20	ND	--

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #3292
15008 East 14th Street
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) ←-----ppb----->	B	T	E	X	MTBE
MW-4	05/25/94			1,700	22	ND	4.5	ND	--
(cont)	08/23/94			690	9.2	1.3	7.1	1.9	--
	11/23/94			420	5.0	1.1	4.2	1.2	--
	02/03/95			620	6.4	ND	9.3	ND	--
	05/10/95			280	2.8	ND	2.7	2.4	--
	08/02/95			290	3.6	ND	2.8	ND	--
	11/02/95			42,000	390	210	2,800	6,300	270
	02/08/96			130	2.1	ND	1.5	0.69	ND
	05/08/96	INACCESSIBLE	--	--	--	--	--	--	--
	08/09/96			ND	ND	ND	ND	ND	ND
	11/07/96			ND	ND	ND	ND	ND	ND
37.04	02/10-11/97	8.45	28.59	ND	ND	ND	ND	ND	ND
	05/07/97	9.85	27.19	ND	ND	ND	ND	ND	ND
	08/05/97	11.04	26.00	50	0.76	ND	ND	ND	ND
	11/04/97	11.46	25.58	ND	ND	ND	ND	ND	ND
	02/12/98	5.75	31.29	ND	ND	ND	ND	ND	ND
37.04	05/15/98	7.28	29.76	ND	ND	ND	ND	ND	ND
MW-5	05/04/91			69,000	1,400	2,500	3,500	15,000	--
	09/19/91			57,000	1,600	2,700	5,200	20,000	--
	12/18/91			31,000	1,600	3,100	4,800	19,000	--
	03/17/92			81,000	850	1,600	4,800	18,000	--
	05/19/92			84,000	760	1,500	4,000	17,000	--
	08/20/92			58,000	660	1,700	4,200	19,000	--
	11/10/92			57,000	800	1,800	4,400	18,000	--
	02/20/93			17,000	75	ND	1,000	620	--
	05/21/93			55,000	ND	160	3,500	12,000	--
	08/23/93			61,000	340	380	3,600	14,000	--
	11/23/93			46,000	290	310	4,100	15,000	--
	02/24/94			57,000	140	400	4,400	16,000	--
	05/25/94			53,000	ND	ND	4,000	14,000	--
	08/23/94			61,000	360	380	4,800	17,000	--
	11/23/94			46,000	230	260	3,900	14,000	--
	02/03/95			56,000	140	330	3,500	13,000	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
MW-5 (cont)	05/10/95			27,000	160	170	2,200	5,200	--
	08/02/95			65,000	260	300	3,500	12,000	--
	11/02/95			240	0.76	ND	1.1	ND	ND
	02/08/96			54,000	210	150	3,400	12,000	170
	05/08/96			52,000	170	200	3,600	11,000	170
	08/09/96			25,000	54	16	1,700	4,700	ND
	11/07/96			2,100	42	ND	9.3	ND	2,300
	02/10-11/97	7.63	28.31	15,000	46	29	1,400	4,100	ND
35.94	05/07/97	8.98	26.96	38,000	120	ND	2,000	5,100	380
	08/05/97	11.08	24.86	310	1.0	ND	17	40	ND
	11/04/97	10.72	25.22	20,000	ND	ND	1,500	2,800	280
	02/12/98	6.08	29.86	33,000	120	ND ⁷	1,700	3,800	ND ⁷
	05/15/98	7.40	28.52	30,000	ND ⁷	ND ⁷	2,200	4,900	ND ⁷
MW-6	05/19/92			1,300	2.0	2.1	ND	2.7	--
	08/20/92			280	8.4	ND	0.51	0.84	--
	11/10/92			490	7.0	1.2	1.7	ND	--
	02/20/93			2,400	43	ND	33	2.0	--
	05/21/93			940	18	1.0	7.1	2.7	--
	08/23/93			1,000	9.4	2.3	5.0	2.3	--
	11/23/93			520	ND	1.7	1.9	0.82	--
	02/24/94 ⁵			810	12	ND	2.6	0.77	--
	05/25/94			500	11	ND	ND	0.73	--
	08/23/94			570	8.8	2.5	3.2	2.6	--
	11/23/94			460	6.4	1.1	1.9	1.1	--
	02/03/95			660	4.8	13	1.4	ND	--
	05/10/95			470	ND	0.65	1.4	0.67	--
	08/02/95			360	3.2	ND	1.6	ND	--
	11/02/95			470	ND	0.92	0.89	0.58	5.5
	02/08/96			450	3.1	ND	1.1	0.68	ND
	05/08/96			ND	ND	ND	ND	ND	ND
	08/09/96			ND	ND	ND	ND	ND	ND
	11/07/96			ND	ND	ND	ND	ND	ND
	02/10-11/97	6.88	28.79	ND	ND	ND	ND	ND	ND
35.67									

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	←-----ppb----->					
				TPH(G)	B	T	E	X	MTBE
MW-6 (cont)	05/07/97	8.32	27.35	ND	ND	1.1	ND	ND	ND
	08/05/97	9.64	26.03	55	0.79	ND	ND	ND	ND
	11/04/97	10.30	25.37	ND	ND	ND	ND	ND	ND
	02/12/98	5.10	30.57	ND	ND	ND	ND	ND	ND
35.68	05/15/98	6.61	29.07	ND	ND	ND	ND	ND	ND
MW-7	05/19/92			17,000	540	90	1,200	1,900	--
	08/20/92			13,000	460	54	ND	3,100	--
	11/10/92			1,800	74	ND	230	350	--
	02/20/93			1,800	37	4.6	11	7.7	--
	05/21/93			22,000	330	37	2,100	2,900	--
	08/23/93			33,000	360	ND	2,500	4,300	--
	11/23/93			19,000	310	30	2,500	2,300	--
	02/24/94 ⁵			16,000	220	19	2,400	3,200	--
	05/25/94			14,000	200	ND	1,500	1,800	--
	08/23/94			19,000	210	50	2,000	2,800	--
	11/23/94			10,000	220	ND	1,000	730	--
	02/03/95			26,000	170	ND	2,300	3,700	--
	05/10/95			1,300	13	1.5	170	230	--
	08/02/95			15,000	200	ND	2,200	2,000	--
	11/02/95			18,000	190	9.4	2,100	2,200	72
	02/08/96			19,000	150	ND	2,100	3,000	ND
	05/08/96			13,000	130	18	1,900	1,600	85
	08/09/96			11,000	67	ND	1,700	1,800	ND
	11/07/96			32,000	160	ND	3,300	8,400	570
36.09	02/10-11/97	7.22	28.87	7,100	55	ND	ND	620	ND
	05/07/97	8.47	27.62	6,000	74	ND	560	330	250
	08/05/97	10.25	25.84	5,000	66	ND	420	240	ND
	11/04/97	10.69	25.40	20,000	67	ND	2,300	4,300	430
	02/12/98	5.02	31.07	5,500	95	ND ⁷	150	110	ND ⁷
36.06	05/15/98	6.98	29.08	1,300	ND⁷	ND⁷	69	64	88

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) ←-----ppb----->	B	T	E	X	MTBE
MW-8	05/19/92			5,300	28	3.3	2.6	2.1	--
	08/20/92			3,500 ¹	67	11	ND	ND	--
	11/10/92			1,800	20	ND	ND	ND	--
	02/20/93			2,200	32	ND	42	5.0	--
	05/21/93			2,500	44	ND	ND	ND	--
	08/23/93			280 ¹	49	4.5	ND	ND	--
	11/23/93			1,800	ND	3.4	ND	ND	--
	02/24/94			1,200	10	2.3	ND	3.2	--
	05/25/94			14,000	29	ND	ND	ND	--
	08/23/94			3,200	46	18	2.0	7.2	--
	11/23/94			1,700	34	ND	ND	3.1	--
	02/03/95			800	6.1	ND	ND	ND	--
	05/10/95			1,400	15	1.5	0.65	0.84	--
	08/02/95			690	8.3	1.9	ND	ND	--
	11/02/95			1,200	ND	1.9	0.56	ND	6.4
	02/14/96 ⁶			650	9.0	1.2	ND	0.52	ND
	05/08/96			1,200	0.7	35	2.2	3.0	ND
	08/09/96			350	ND	12	0.81	0.95	ND
	11/07/96			1,000	23	ND	ND	ND	ND
36.89	02/10-11/97	8.84	28.05	630	13	ND	ND	8.1	ND
	05/07/97	10.12	26.77	1,200 ¹	26	3.4	ND	20	20
	08/05/97	11.26	25.63	590 ¹	9.8	ND	ND	ND	ND
	11/04/97	11.58	25.31	640	14	1.9	5.7	11	ND
	02/12/98	7.34	29.55	770 ⁸	20	3.0	ND ⁷	ND ⁷	ND ⁷
36.87	05/15/98	8.67	28.20	840 ⁸	10	ND ⁷	ND ⁷	3.1	ND ⁷
MW-9	05/19/92			8,100	11	ND	25	5.8	--
	08/20/92			3,800 ¹	37	ND	ND	ND	--
	11/10/92			4,200	ND	ND	21	23	--
	02/20/93			2,300	47	ND	32	ND	--
	05/21/93			3,200	32	ND	8.1	ND	--
	08/23/93			3,000	29	ND	ND	ND	--
	11/23/93			2,500	23	2.1	ND	ND	--
	02/24/94			2,900	35	ND	ND	ND	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) ←-----ppb----->	B	T	E	X	MTBE
MW-9	05/25/94			ND	ND	ND	ND	ND	--
(cont)	08/23/94			2,800	28	32	ND	ND	--
	11/23/94			2,000	24	2.2	2.2	2.5	--
	02/03/95			2,100	26	2.5	ND	ND	--
	05/10/95			1,700	0.81	2.2	1.0	1.4	--
	08/02/95			1,900	26	6.6	ND	3.9	--
	11/02/95			1,600	ND	1.3	ND	ND	11
	02/08/96			1,900	ND	ND	ND	ND	ND
	05/08/96			1,700	1.9	22	1.7	2.7	ND
	08/09/96			200	ND	4.5	ND	0.58	ND
	11/07/96			920	24	ND	ND	ND	ND
36.29	02/10-11/97	8.15	28.14	580	14	2.4	ND	ND	16
	05/07/97	9.45	26.84	810	11	3.9	1.7	9.9	13
	08/05/97	10.70	25.59	850 ¹	21	ND	ND	ND	33
	11/04/97	11.05	25.24	730	11	ND	5.1	11	ND
	02/12/98	6.60	29.69	820 ⁸	23	3.2	ND ⁷	ND ⁷	18
36.27	05/15/98	8.01	28.26	390	5.5	1.2	ND	13	13
MW-10	08/20/92			15,000	230	ND	1,000	350	--
	11/10/92			15,000	300	42	3,500	330	--
	02/20/93			17,000	74	ND	1,000	620	--
	05/21/93			23,000	250	ND	3,000	240	--
	08/23/93			20,000	230	13	3,200	140	--
	11/23/93			18,000	300	10	2,800	110	--
	02/24/94			15,000	330	19	2,000	83	--
	05/25/94			14,000	240	ND	230	62	--
	08/23/94			16,000	250	41	1,800	74	--
	11/23/94			16,000	260	ND	1,600	49	--
	02/03/95			17,000	310	ND	1,500	93	--
	05/10/95			12,000	260	16	1,200	54	--
	08/02/95			8,900	240	ND	780	40	--
	11/02/95			9,300	190	ND	470	1.7	110
	02/08/96			9,700	170	ND	440	ND	ND
	05/08/96			7,100	100	ND	240	ND	43

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) <-----ppb----->	B	T	E	X	MTBE
MW-10	08/09/96			4,400	59	7.5	110	6.5	73
(cont)	11/07/96			6,300	65	ND	110	ND	130
36.04	02/10-11/97	8.10	27.94	6,800	91	ND	100	ND	210
	05/07/97	9.28	26.76	4,800	76	ND	50	ND	160
	08/05/97	10.51	25.53	4,200	52	ND	40	ND	81
	11/04/97	11.02	25.02	4,500	49	ND	63	ND	84
	02/12/98	6.85	29.19	6,200	98	ND ⁷	91	ND ⁷	420
36.02	05/15/98	8.05	27.97	7,200	84	ND ⁷	84	ND ⁷	260
MW-11	08/20/92			4,600 ¹	62	ND	ND	54	--
	11/10/92			5,800	130	ND	260	42	--
	02/20/93			18,000	76	ND	1,000	630	--
	05/21/93			7,100	64	ND	340	120	--
	08/23/93			5,400	68	ND	230	43	--
	11/23/93			3,400	105	ND	120	43	--
	02/24/94			4,600	170	ND	140	36	--
	05/25/94			1,400	49	ND	26	ND	--
	08/23/94			7,300	250	13	150	42	--
	11/23/94			5,800	250	10	120	22	--
	02/03/95			4,400	110	ND	150	37	--
	05/10/95			4,200	120	ND	170	38	--
	08/02/95			4,200	110	ND	110	22	--
	11/02/95			6,100	150	ND	78	6.8	6,200
	02/14/96 ⁶			3,100	60	ND	98	ND	4,000
	05/08/96			3,500	120	ND	160	ND	6,400
	08/09/96			1,100	42	ND	15	ND	4,300
	11/07/96			2,900	57	ND	13	ND	3,400
35.50	02/10-11/97	7.88	27.62	600	9.5	ND	ND	ND	3,100
	05/07/97	9.07	26.43	1,900	45	ND	31	ND	2,400
	08/05/97	10.23	25.27	2,100	35	ND	24	ND	1,800
	11/04/97	10.51	24.99	98	1.6	ND	ND	ND	ND
	02/12/98	6.59	28.91	670	12	ND ⁷	ND ⁷	ND ⁷	1,400
35.50	05/15/98	7.73	27.77	1,200 ⁹	7.9	ND ⁷	30	ND ⁷	1,600

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				←-----ppb----->					
MW-2(SP)	05/08/96			540	0.68	21	1.0	1.7	ND
	08/09/96			170	ND	7.8	ND	ND	ND
	11/07/96			430	8.9	1.5	ND	ND	10
35.44	02/10-11/97	8.63	26.81	230 ²	4.6	1.0	ND	ND	10
	05/07/97	9.58	25.86	ND	ND	ND	ND	ND	14
	08/05/97	10.62	24.82	360	5.5	50	ND	ND	ND
	11/04/97	11.06	24.38	280	2.9	13	ND	0.54	ND
	02/12/98	7.71	27.73	440 ⁸	10	1.6	ND	0.69	13
	05/15/98	8.50	26.94	540 ⁸	10	1.1	ND	1.1	15
MW-3(SP)	05/08/96			4,700	7.9	36	13	4.0	42
	08/09/96			2,000	ND	14	7.6	ND	ND
	11/07/96			1,800	29	ND	ND	ND	40
35.81	02/10-11/97	8.16	27.65	3,500	70	14	ND	ND	150
	05/07/97	9.35	26.46	3,100	48	ND	ND	ND	110
	08/05/97	10.44	25.37	3,200	43	5.7	ND	ND	61
	11/04/97	10.90	24.91	2,600	34	ND	ND	ND	53
	02/12/98	6.77	29.04	3,200	62	ND ⁷	ND ⁷	ND ⁷	100
35.82	05/15/98	8.02	27.80	ND	ND	ND	ND	ND	2.5
Trip Blank									
TB-LB	02/12/98	--	--	ND	ND	ND	ND	ND	ND
	05/15/98	--	--	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to February 12, 1998, were compiled from reports prepared by MPDS Services, Inc.

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

* TOC elevations are relative to Mean Sea Level (msl), per a Benchmark located at the northwest corner of East 14th Street and 150th Avenue (Elevation = 36.88 feet msl). TOC elevations for MW-2(SP) and MW-3(SP) are relative to msl, per Chevron monitoring well MW-6 used as a benchmark (Elevation = 36.92 feet msl). On April 16, 1998, three wells were re-surveyed using City of San Leandro Benchmark being a cinch nail in the top of curb at a catch basin at the westerly corner of East 14th Street and 150th Avenue, Benchmark (Elevation = 36.883 feet, msl).

- ¹ Laboratory report indicates that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- ² Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- ³ The analytical results of the groundwater were inconsistent with the previous analytical results for this well. The laboratory re-analyzed the sample past hold time; therefore the results may be biased low.
- ⁴ The monitoring well was resampled on November 20, 1995. The vial containing the water sample collected from this well on November 2, 1995, was inadvertently broken by the laboratory.
- ⁵ All EPA Method 8010 constituents were ND.
- ⁶ The monitoring wells MW-8 and MW-11 were resampled on February 14, 1996. The vials containing the water samples collected from the wells on February 8, 1996, were inadvertently broken by the laboratory.
- ⁷ Detection limit raised. Refer to analytical results.
- ⁸ Laboratory report indicates gasoline and unidentified hydrocarbons < C7.
- ⁹ Laboratory report indicates gasoline and discrete peaks C6-C12.

Depth to water and groundwater elevation history will be updated in future reports.

Table 2
Dissolved Oxygen Concentrations
 Tosco (Unocal) Service Station #3292
 15008 East 14th Street
 San Leandro, California

Well ID	Date	@ Laboratory (mg/L)	Before Purging (mg/L) *	After Purging (mg/L) *
MW-1	11/02/95	1.80	2.83	--
	02/08/96	--	2.58	--
	05/08/96	--	--	1.92
	08/09/96	--	2.14	--
	11/07/96	--	2.11	2.18
	02/11/97	--	--	2.05
	08/05/97	--	--	1.88
	11/04/97	--	--	2.67
	02/12/98	--	2.38	--
	05/15/98	--	2.12	--
MW-2	11/02/95	2.30	2.80	--
	02/08/96	--	2.21	--
	05/08/96	--	--	3.89
	08/09/96	--	3.36	--
	11/07/96	--	1.96	1.98
	02/11/97	--	--	2.12
	08/05/97	--	--	2.38
	11/04/97	--	--	2.18
	02/12/98	--	2.04	--
	05/15/98	--	2.33	--
MW-3	11/02/95	2.20	4.98	--
	02/08/96	--	2.78	--
	05/08/96	--	--	3.73
	08/09/96	--	3.29	--
	11/07/96	--	3.15	3.98
	02/10/97	--	--	3.59
	08/05/97	--	--	2.86
	11/04/97	--	--	2.95
	02/12/98	--	3.12	--
	05/15/98	--	3.97	--
MW-4	11/02/95	3.00	7.91	--
	02/08/96	--	2.66	--
	05/08/96	--	--	--
	08/09/96	--	2.92	--
	11/07/96	--	4.32	4.38
	02/10/97	--	--	3.87
	08/05/97	--	--	5.12
	11/04/97	--	--	3.98
	02/12/98	--	4.88	--
	05/15/98	--	5.13	--
MW-5	11/02/95	3.00	2.30	--
	02/08/96	--	2.35	--
	05/08/96	--	--	1.29
	08/09/96	--	2.19	--
	11/07/96	--	1.84	1.82
	02/10/97	--	--	2.07

Table 2
Dissolved Oxygen Concentrations
Tosco (Unocal) Service Station #3292
15008 East 14th Street
San Leandro, California

Well ID	Date	@ Laboratory (mg/L)	Before Purging (mg/L) *	After Purging (mg/L) *
MW-5 (cont)	08/05/97	--	--	2.36
	11/04/97	--	--	1.99
	02/12/98	--	1.79	--
	05/15/98	--	1.66	--
MW-6	11/02/95	3.80	4.55	--
	02/08/96	--	3.77	--
	05/08/96	--	--	3.40
	08/09/96	--	3.53	--
	11/07/96	--	3.99	4.06
	02/10/97	--	--	3.85
	08/05/97	--	--	5.37
	11/04/97	--	--	3.67
	02/12/98	--	4.05	--
	05/15/98	--	5.28	--
MW-7	11/02/95	--	--	--
	02/08/96	--	2.67	--
	05/08/96	--	--	2.20
	08/09/96	--	2.37	--
	11/07/96	--	2.22	2.28
	02/11/97	--	--	2.33
	08/05/97	--	--	2.69
	11/04/97	--	--	2.82
	02/12/98	--	3.24	--
	05/15/98	--	2.95	--
MW-8	11/02/95	--	--	--
	02/08/96	--	3.85	--
	05/08/96	--	--	2.09
	08/09/96	--	2.56	--
	11/07/96	--	1.67	1.84
	02/10/97	--	--	2.10
	08/05/97	--	--	3.04
	11/04/97	--	--	2.11
	02/12/98	--	1.98	--
	05/15/98	--	2.44	--
MW-9	11/02/95	--	--	--
	02/08/96	--	3.62	--
	05/08/96	--	--	2.20
	08/09/96	--	2.51	--
	11/07/96	--	2.06	2.02
	02/10/97	--	--	1.96
	08/05/97	--	--	2.57
	11/04/97	--	--	2.60
	02/12/98	--	2.27	--
	05/15/98	--	2.62	--

Table 2
Dissolved Oxygen Concentrations
Tosco (Unocal) Service Station #3292
15008 East 14th Street
San Leandro, California

Well ID	Date	@ Laboratory (mg/L)	Before Purging (mg/L) ♦	After Purging (mg/L) ♦
MW-10	11/02/95	3.10	3.96	--
	02/08/96	--	2.88	--
	05/08/96	--	--	2.71
	08/09/96	--	2.63	--
	11/07/96	--	1.81	1.84
	02/10/97	--	--	2.03
	08/05/97	--	--	2.78
	11/04/97	--	--	2.11
	02/12/98	--	2.63	--
	05/15/98	--	2.24	--
MW-11	11/02/95	2.60	3.55	--
	02/08/96	--	2.19	--
	05/08/96	--	--	2.06
	08/09/96	--	2.11	--
	11/07/96	--	2.35	2.36
	02/10/97	--	--	2.18
	08/05/97	--	--	3.19
	11/04/97	--	--	2.01
	02/12/98	--	2.44	--
	05/15/98	--	1.80	--
MW-2 (SP) ¹	11/07/96	--	2.85	2.80
	02/11/97	--	--	2.73
	08/05/97	--	--	3.99
	11/04/97	--	--	3.06
	02/12/98	--	3.11	--
	05/15/98	--	3.97	--
MW-3 (SP) ¹	11/07/96	--	2.41	2.40
	02/11/97	--	--	2.55
	08/05/97	--	--	3.74
	11/04/97	--	--	2.95
	02/12/98	--	3.17	--
	05/15/98	--	4.06	--

EXPLANATIONS:

Dissolved oxygen concentrations prior to February 12, 1998, were compiled from reports prepared by MPDS Services, Inc.

- ♦ = Measurement taken in field
- = Not Measured/Not Analyzed
- SP = Shadrall Property wells

¹ Wells located on Shadrall Property.

Table 3
Joint Groundwater Monitoring Data
 Former Mobil Facility #04-FGN
 14994 East 14th Street
 San Leandro, California

Well ID/ TOC*	Date	DTW (ft)	GWE (msl)
MW-1A 36.63	02/12/98	5.52	31.11
MW-2A 36.62	02/12/98	5.59	31.03
MW-3A 36.93	02/12/98	5.72	31.21
MW-4A 37.18	02/12/98	5.90	31.28
MW-5A 35.91	02/12/98	5.32	30.59
MW-6A 37.10	02/12/98	5.52	31.58
MW-7A 37.39	02/12/98	6.55	30.84

EXPLANATIONS:

Groundwater monitoring data provided by Alton GeoScience. Site monitored on a semi-annual basis.

TOC = Top of Casing elevation

DTW = Depth to Water

(ft.) = Feet

GWE = Groundwater Elevation

msl = Relative to mean sea level

* TOC elevations have been surveyed relative to msl.

Table 4
Joint Groundwater Monitoring Data
Chevron Facility #9-2013
15002 Hesperian Boulevard
San Leandro, California

Well ID/ TOC*	Date	DTW (ft)	GWE (msl)
MW-1			
35.77	11/04/97	11.35	24.42
	05/15/98	8.11	27.66
MW-2			
35.00	11/04/97	10.70	24.30
	05/15/98	7.63	27.37
MW-3			
36.17	11/04/97	11.75	24.42
	05/15/98	8.75	27.42
MW-4			
36.05	11/04/97	11.47	24.58
	05/15/98	8.27	27.78
MW-5			
35.65	11/04/97	11.17	24.48
	05/15/98	7.92	27.73
MW-6			
36.92	11/04/97	12.42	24.50
	05/15/98	9.45	27.47
MW-7			
35.71	11/04/97	11.01	24.70
	05/15/98	8.11	27.60
MW-8			
35.28	11/04/97	10.63	24.65
	05/15/98	7.98	27.30
MW-A			
	11/04/97	11.45	--
	05/15/98	8.51	--

EXPLANATIONS:

Groundwater monitoring data provided by Blaine Tech Services, Inc. Site monitored on a semi-annual basis.

TOC = Top of Casing elevation

GWE = Groundwater Elevation

DTW = Depth to Water

msl = Relative to mean sea level

(ft.) = Feet

* TOC elevations have been surveyed relative to msl.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using 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.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 3292 Job#: 180105
 Address: 15008 E. 14th St. Date: 5-15-98
 City: San Leandro Sampler: Joe

Well ID MW-1 Well Condition: O.K.
 Well Diameter 2 in. Hydrocarbon Amount Bailed
 Thickness: _____ in. (product/water): _____ (gal.)
 Total Depth 18.94 ft
 Depth to Water 7.62 ft

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

11.32 x VF 0.17 = 1.92 x 3 (case volume) = Estimated Purge Volume: 6 (gal.)

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

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

Starting Time: 8:50 Weather Conditions: cloudy
 Sampling Time: 9:15 A.M. Water Color: clear Odor: quite
 Purging Flow Rate: 0.5 gpm Sediment Description: None
 Did well de-water? _____ If yes: Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm X 1000)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:00</u>	<u>2</u>	<u>8.05</u>	<u>1.96</u>	<u>65.5</u>	<u>2.12</u>		
<u>9:04</u>	<u>4</u>	<u>7.59</u>	<u>2.02</u>	<u>65.2</u>			
<u>9:08</u>	<u>6</u>	<u>7.62</u>	<u>2.05</u>	<u>65.0</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-2
Well Diameter 2 in.
Total Depth 19.10 ft
Depth to Water 7.50 ft

Well Condition: O.K.
Hydrocarbon Thickness: _____ in. Amount Bailed (product/water): _____ (gal.)

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

11.6 X VF 0.17 = 1.97 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

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

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

Starting Time: 9:35
Sampling Time: 9:55 A.M.
Purging Flow Rate: 0.5 gpm
Did well de-water? _____

Weather Conditions: cloudy
Water Color: clear Odor: strong
Sediment Description: None
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>9:42</u>	<u>2</u>	<u>7.25</u>	<u>2.83</u>	<u>64.6</u>	<u>2.33</u>		
<u>9:46</u>	<u>4</u>	<u>7.32</u>	<u>2.74</u>	<u>64.8</u>			
<u>9:49</u>	<u>6</u>	<u>7.36</u>	<u>2.76</u>	<u>64.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-3

Well Condition: O.K.

Well Diameter 2 in

Hydrocarbon
Thickness: _____ in. (product/water): _____ (gal.)

Total Depth 22.13 ft

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

Depth to Water 7.42 ft

14.71 x VF 0.17 = 2.5 x 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

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

Starting Time: 10:12
Sampling Time: 10:38 A.M.
Purging Flow Rate: 1 gpm
Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:17</u>	<u>3</u>	<u>7.48</u>	<u>5.17</u>	<u>68.9</u>	<u>3.97</u>		
<u>10:20</u>	<u>5</u>	<u>7.37</u>	<u>4.83</u>	<u>70.0</u>			
<u>10:23</u>	<u>8</u>	<u>7.31</u>	<u>4.73</u>	<u>70.2</u>			
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-4

Well Condition: O.K.

Well Diameter 2 in.

Hydrocarbon Thickness: _____ in. Amount Bailed (product/water): _____ (gal.)

Total Depth 19.63 ft.

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

Depth to Water 7.28 ft.

12.35 X VF 0.17 = 2.10 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

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

Starting Time: 10:50
Sampling Time: 11:06 A.M.
Purging Flow Rate: 0.5 gpm.
Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:02</u>	<u>2</u>	<u>7.26</u>	<u>6.16</u>	<u>65.1</u>	<u>5.13</u>		
<u>11:03</u>	<u>4</u>	<u>7.24</u>	<u>6.22</u>	<u>65.2</u>			
<u>11:07</u>	<u>6.5</u>	<u>7.18</u>	<u>6.25</u>	<u>65.3</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-5

Well Condition: O.K.

Well Diameter 2 in

Hydrocarbon
Thickness: _____ in. Amount Bailed
(product/water): _____ (gal.)

Total Depth 22.07 ft

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

Depth to Water 7.40 ft

14.67 X VF 0.17 = 2.49 X 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

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

Starting Time: 11:30
Sampling Time: 11:52 A.M.
Purging Flow Rate: 1 gpm.
Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 1000$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:38</u>	<u>3</u>	<u>7.16</u>	<u>1.58</u>	<u>64.9</u>	<u>1.66</u>		
<u>11:41</u>	<u>5</u>	<u>7.24</u>	<u>1.55</u>	<u>65.2</u>			
<u>11:44</u>	<u>8</u>	<u>7.29</u>	<u>1.54</u>	<u>65.0</u>			
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3VGA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHC, BTEX, MTBE.</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-6
Well Diameter 2 in
Total Depth 20.10 ft
Depth to Water 6.61 ft

Well Condition: O.K.

Hydrocarbon Thickness:	Amount Bailed (product/water):		
in.	gal.	gal.	gal.
2" = 0.17	3" = 0.38	4" = 0.66	
6" = 1.50	12" = 5.80		

13.49 X VF 0.17 = 2.29 X 3 (case volume) = Estimated Purge Volume: 7 (gal)

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

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

Starting Time: 12:35
 Sampling Time: 1:02 P.M.
 Purging Flow Rate: 1 gpm
 Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:48</u>	<u>2.5</u>	<u>7.70</u>	<u>7.19</u>	<u>68.1</u>	<u>5.28</u>		
<u>12:50</u>	<u>5</u>	<u>7.50</u>	<u>6.92</u>	<u>68.2</u>			
<u>12:53</u>	<u>7</u>	<u>7.58</u>	<u>6.85</u>	<u>69.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3VGA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHC, BTEX, MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID: MW-7 Well Condition: ~~OK~~ Well cover loose.
Well Diameter: 2 in Hydrocarbon Thickness: _____ in. Amount Bailed (product/water): _____ (gal.)
Total Depth: 21.08 ft
Depth to Water: 6.98 ft

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

14.10 x VF 0.17 = 2.40 x 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

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

Starting Time: 11:33 Weather Conditions: cloudy
 Sampling Time: 1:45 PM Water Color: clear Odor: qu. L
 Purging Flow Rate: 1 gpm Sediment Description: None
 Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:30</u>	<u>2.5</u>	<u>7.20</u>	<u>3.36</u>	<u>69.8</u>	<u>2.95</u>		
<u>1:32</u>	<u>5</u>	<u>7.17</u>	<u>3.38</u>	<u>70.1</u>			
<u>1:36</u>	<u>7.5</u>	<u>7.15</u>	<u>3.31</u>	<u>70.2</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHC, BTEX, MTBE</u>

COMMENTS: Well cover can't be secured by bolts.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-8
Well Diameter 2 in
Total Depth 19.00 ft
Depth to Water 8.67 ft

Well Condition: O.K.
Hydrocarbon Thickness: _____ in. Amount Bailed (product/water): _____ (gal.)

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

10.33 x VF 0.17 = 1.76 x 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

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

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

Starting Time: 2:08
Sampling Time: 2:30 PM
Purging Flow Rate: 0.5 gpm
Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity (µmhos/cm X 100)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>2:15</u>	<u>1.5</u>	<u>7.61</u>	<u>2.75</u>	<u>65.5</u>	<u>2.44</u>		
<u>2:17</u>	<u>3</u>	<u>7.29</u>	<u>2.74</u>	<u>64.8</u>			
<u>2:20</u>	<u>5.5</u>	<u>7.38</u>	<u>2.72</u>	<u>64.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-9
Well Diameter 2 in.
Total Depth 19.03 ft
Depth to Water 8.01 ft

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

11.02 X VF 0.17 = 1.87 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

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

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

Starting Time: 2:45
Sampling Time: 3:12 P.M.
Purging Flow Rate: 0.5 gpm
Did well de-water? _____

Weather Conditions: cloudy
Water Color: clear Odor: quite
Sediment Description: None
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>2:56</u>	<u>2</u>	<u>6.84</u>	<u>2.63</u>	<u>65.6</u>	<u>2.62</u>		
<u>2:59</u>	<u>4</u>	<u>6.94</u>	<u>2.67</u>	<u>65.0</u>			
<u>3:03</u>	<u>6</u>	<u>6.05</u>	<u>2.61</u>	<u>64.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHC, BTEX, MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-10

Well Condition: O.K.

Well Diameter 2 in

Hydrocarbon Thickness: _____ in. Amount Bailed (product/water): _____ (gal.)

Total Depth 19.83 ft

Depth to Water 8.05 ft

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

11.78 x VF 0.17 = 2.00 x 3 (case volume) = Estimated Purge Volume: 6 (gal.)

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

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

Starting Time: 3:35
 Sampling Time: 4:07 P.M.
 Purging Flow Rate: 0.5 gpm
 Did well de-water? _____

Weather Conditions: cloudy
 Water Color: clear Odor: slight
 Sediment Description: None
 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>3:48</u>	<u>2</u>	<u>7.20</u>	<u>3.16</u>	<u>65.8</u>	<u>2.24</u>		
<u>3:51</u>	<u>4</u>	<u>7.30</u>	<u>3.22</u>	<u>65.6</u>			
<u>3:54</u>	<u>6</u>	<u>7.21</u>	<u>3.25</u>	<u>65.7</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>3VGA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-11
Well Diameter 2 in.
Total Depth 18.90 ft
Depth to Water 7.73 ft

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

11.17 X VF 0.17 = 1.90 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

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

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

Starting Time: 4:25
Sampling Time: 4:50 P.M.
Purging Flow Rate: 0.7 gpm
Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>4:35</u>	<u>2</u>	<u>7.63</u>	<u>2.09</u>	<u>64.6</u>	<u>1.80</u>		
<u>4:38</u>	<u>4</u>	<u>7.44</u>	<u>1.98</u>	<u>65.0</u>			
<u>4:41</u>	<u>6</u>	<u>7.48</u>	<u>1.94</u>	<u>64.8</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-11</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-2(SP) Well Condition: O.K.

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

Total Depth 20.88 ft

Depth to Water 8.50 ft

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

12.38 X VF 0.17 = 2.10 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

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

Starting Time: 5:15
Sampling Time: 5:40 P.M.
Purging Flow Rate: 0.5 gpm
Did well de-water? _____

Weather Conditions: cloudy
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 $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>5:26</u>	<u>2</u>	<u>7.12</u>	<u>5.46</u>	<u>65.2</u>	<u>3.97</u>		
<u>5:29</u>	<u>4</u>	<u>7.07</u>	<u>5.54</u>	<u>65.1</u>			
<u>5:31</u>	<u>6.5</u>	<u>7.04</u>	<u>5.57</u>	<u>65.0</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2(SP)</u>	<u>3VOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHC, BTEX, MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # 3292
Address: 15008 E. 14th St.
City: San Leandro

Job#: 180105
Date: 5-15-98
Sampler: Joe

Well ID MW-3(SP)
Well Diameter 2 in
Total Depth 20.68 ft
Depth to Water 8.02 ft

Well Condition: O.K.

Hydrocarbon Thickness:	Amount Bailed (product/water):		
	in.		(gal.)
Volume	2" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	6" = 1.50	12" = 5.80	

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

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

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

Starting Time: 5:52
Sampling Time: 6:15 P.M.
Purging Flow Rate: 0.5 gpm
Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>5:58</u>	<u>2</u>	<u>7.55</u>	<u>3.52</u>	<u>65.8</u>	<u>4.06</u>		
<u>6:02</u>	<u>4</u>	<u>7.56</u>	<u>3.47</u>	<u>66.0</u>			
<u>6:05</u>	<u>6.5</u>	<u>7.46</u>	<u>3.44</u>	<u>65.3</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3(SP)</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>

COMMENTS: _____

Chain-of-Custody-Record



TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94563

Facility Number Unocal SS# 3292
Facility Address 15008 East 14th St. San Leandro
Consultant Project Number 180105.85
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) Ms. Tina R. Berry
(Phone) (510) 277-2321
Laboratory Name Sequoia Analytical
Laboratory Release Number _____
Samples Collected by (Name) JOE ASEMIAN
Collection Date 5-15-98
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	Lead (Yes or No)	Analysis To Be Performed										Remarks							
								TPH Gas + BTEX w/MTBE (8016)	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)	9705A17									
TB-LB	1	1	W	-	-	HCL	Y	✓																	
MW-1	2	3	W	G	9:15 A.M.	"	"	✓																	
MW-2	3	-	"	-	9:55 A.M.	"	"	✓																	
MW-3	4	-	"	-	10:33 A.M.	"	"	✓																	
MW-4	5	-	"	-	11:16 A.M.	"	"	✓																	
MW-5	6	-	"	-	11:52 A.M.	"	"	✓																	
MW-6	7	-	"	-	1:02 P.M.	"	"	✓																	
MW-7	8	-	"	-	1:45 P.M.	"	"	✓																	
MW-8	9	-	"	-	2:30 P.M.	"	"	✓																	
MW-9	10	-	"	-	3:12 P.M.	"	"	✓																	
MW-10	11	-	"	-	4:07 P.M.	"	"	✓																	
MW-11	12	-	"	-	4:50 P.M.	"	"	✓																	
MW-2(SP)	13	-	"	-	5:40 P.M.	"	"	✓																	
MW-3(SP)	14	-	"	-	6:15 P.M.	"	"	✓																	

DO NOT BILL TB-LB ANALYSIS

Relinquished By (Signature) <u>[Signature]</u>	Organization G-R Inc.	Date/Time 5-15-98	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time 5/15/98	

JN:DO



**Sequoia
Analytical**

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

Client Proj. ID: Unocal 3292, 180105.85
Sample Descript: TB-LB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9805A98-01

Sampled: 05/15/98
Received: 05/15/98
Analyzed: 05/20/98
Reported: 06/01/98

RECEIVED

QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

GETTLER-RYAN INC.
GENERAL CONTRACTORS

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	70

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

SEQUOIA ANALYTICAL - ELAP #1271


Tod Granicher
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-02	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/21/98 Reported: 06/01/98
Attention: Deanna Harding		

QC Batch Number: GC052198BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	5600
Methyl t-Butyl Ether	250	1500
Benzene	50	57
Toluene	50	N.D.
Ethyl Benzene	50	290
Xylenes (Total)	50	N.D.
Chromatogram Pattern:		Gasoline
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	115

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

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court. Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-03	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/27/98 Reported: 06/01/98
Attention: Deanna Harding		


QC Batch Number: GC052798BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	3600
Methyl t-Butyl Ether	50	72
Benzene	10	19
Toluene	10	N.D.
Ethyl Benzene	10	33
Xylenes (Total)	10	N.D.
Chromatogram Pattern:		Gasoline
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	96

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-04	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/20/98 Reported: 06/01/98
Attention: Deanna Harding		


QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	130
Methyl t-Butyl Ether	2.5	10
Benzene	0.50	0.68
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	0.63
Chromatogram Pattern: Unidentified HC		Gasoline < C7
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	72

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





Gettier Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-05	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/20/98 Reported: 06/01/98
Attention: Deanna Harding		


QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

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	80

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-06	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/21/98 Reported: 06/01/98
Attention: Deanna Harding		

QC Batch Number: GC052198BTEX02A
Instrument ID: HP2


Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	30000
Methyl t-Butyl Ether	500	N.D.
Benzene	100	N.D.
Toluene	100	N.D.
Ethyl Benzene	100	2200
Xylenes (Total)	100	4900
Chromatogram Pattern:		Gasoline

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	103

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





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

Attention: Deanna Harding

Client Proj. ID: Unocal 3292, 180105.85
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9805A98-07

Sampled: 05/15/98
Received: 05/15/98
Analyzed: 05/20/98
Reported: 06/01/98

QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

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	70

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

SEQUOIA ANALYTICAL - ELAP #1271


Tod Granicher
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court - Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-7 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-08	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/20/98 Reported: 06/01/98
Attention: Deanna Harding		


QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	1300
Methyl t-Butyl Ether	50	88
Benzene	10	N.D.
Toluene	10	N.D.
Ethyl Benzene	10	69
Xylenes (Total)	10	64
Chromatogram Pattern:		Gasoline
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	71

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





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

Client Proj. ID: Unocal 3292, 180105.85
Sample Descript: MW-8
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9805A98-09

Sampled: 05/15/98
Received: 05/15/98
Analyzed: 05/27/98
Reported: 06/01/98

Attention: Deanna Harding

QC Batch Number: GC052798BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	200	840
Methyl t-Butyl Ether	10	N.D.
Benzene	2.0	10
Toluene	2.0	N.D.
Ethyl Benzene	2.0	N.D.
Xylenes (Total)	2.0	3.1
Chromatogram Pattern:		Gasoline
Unidentified HC		< C7
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	72

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-9 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-10	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/20/98 Reported: 06/01/98
Attention: Deanna Harding		


QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	390
Methyl t-Butyl Ether	2.5	13
Benzene	0.50	5.5
Toluene	0.50	1.2
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	13
Chromatogram Pattern:		Gasoline
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	85

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-10 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-11	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/20/98 Reported: 06/01/98
--	--	---


QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	7200
Methyl t-Butyl Ether	50	260
Benzene	10	84
Toluene	10	N.D.
Ethyl Benzene	10	84
Xylenes (Total)	10	N.D.
Chromatogram Pattern:		Gasoline
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	70

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-11 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-12	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/21/98 Reported: 06/01/98
Attention: Deanna Harding		

QC Batch Number: GC052198BTEX02A
Instrument ID: HP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	1200
Methyl t-Butyl Ether	25	1600
Benzene	5.0	7.9
Toluene	5.0	N.D.
Ethyl Benzene	5.0	30
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern: Discrete Peak		Gasoline C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	108

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

SEQUOIA ANALYTICAL - ELAP #1271

TG

Tod Granicher
Project Manager





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

Attention: Deanna Harding

Client Proj. ID: Unocal 3292, 180105.85
Sample Descript: MW-2(SP)
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9805A98-13

Sampled: 05/15/98
Received: 05/15/98
Analyzed: 05/20/98
Reported: 06/01/98


QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	540
Methyl t-Butyl Ether	2.5	15
Benzene	0.50	10
Toluene	0.50	1.1
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	1.1
Chromatogram Pattern:		Gasoline
Unidentified HC		<C7
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	84

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal 3292, 180105.85 Sample Descript: MW-3(SP) Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805A98-14	Sampled: 05/15/98 Received: 05/15/98 Analyzed: 05/20/98 Reported: 06/01/98
Attention: Deanna Harding		

QC Batch Number: GC052098BTEX05A
Instrument ID: HP5

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	2.5
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	74

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

SEQUOIA ANALYTICAL - ELAP #1271



Tod Granicher
Project Manager





Sequoia Analytical

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

Client Project ID: Unocal 3292, 180105.85
Matrix: Liquid

Work Order #: 9805A98 01-14

Reported: Jun 5, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC052098802005A	GC052098802005A	GC052098802005A	GC052098802005A	GC052098802005A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD #:	8051384	8051384	8051384	8051384	8051384
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/20/98	5/20/98	5/20/98	5/20/98	5/20/98
Analyzed Date:	5/20/98	5/20/98	5/20/98	5/20/98	5/20/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	350 µg/L
Result:	18	18	18	57	350
MS % Recovery:	90	90	90	95	100
Dup. Result:	22	22	22	68	340
MSD % Recov.:	110	110	110	113	97
RPD:	20	20	20	17.6	2.9
RPD Limit:	0-20	0-20	0-20	0-20	0-50

LCS #:	LCS052098	LCS052098	LCS052098	LCS052098	LCS052098
Prepared Date:	5/20/98	5/20/98	5/20/98	5/20/98	5/20/98
Analyzed Date:	5/20/98	5/20/98	5/20/98	5/20/98	5/20/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	350 µg/L
LCS Result:	19	19	19	61	370
LCS % Recov.:	95	95	95	102	106

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140

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
ELAP #1271

Tod Granicher
Project Manager

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

9805A98.GET <1>





Sequoia Analytical

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

Client Project ID: Unocal 3292, 180105.85
Matrix: Liquid

Work Order #: 9805A98 01-14

Reported: Jun 5, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC052198802002A	GC052198802002A	GC052198802002A	GC052198802002A	GC052198802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater	C. Westwater
MS/MSD #:	8051519	8051519	8051519	8051519	8051519
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/21/98	5/21/98	5/21/98	5/21/98	5/21/98
Analyzed Date:	5/21/98	5/21/98	5/21/98	5/21/98	5/21/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	410 µg/L
Result:	20	21	21	63	350
MS % Recovery:	100	105	105	105	85
Dup. Result:	19	19	20	60	340
MSD % Recov.:	95	95	100	100	83
RPD:	5.1	10	4.9	4.9	2.9
RPD Limit:	0-20	0-20	0-20	0-20	0-50

LCS #:	LCS052198	LCS052198	LCS052198	LCS052198	LCS052198
Prepared Date:	5/21/98	5/21/98	5/21/98	5/21/98	5/21/98
Analyzed Date:	5/21/98	5/21/98	5/21/98	5/21/98	5/21/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	410 µg/L
LCS Result:	17	18	19	55	340
LCS % Recov.:	85	90	95	92	83

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140

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
ELAP #1271


Tod Granicher
Project Manager

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

9805A98.GET <2>





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

Client Project ID: Unocal 3292, 180105.85
Matrix: Liquid

Work Order #: 9805A98 01-14

Reported: Jun 5, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC052798802002A	GC052798802002A	GC052798802002A	GC052798802002A	GC052798802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill
MS/MSD #:	8051834	8051834	8051834	8051834	8051834
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Analyzed Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	380 µg/L
Result:	17	16	16	49	370
MS % Recovery:	85	80	80	82	97
Dup. Result:	15	14	14	43	370
MSD % Recov.:	75	70	70	72	97
RPD:	12.5	13.3	13.3	13	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-50

LCS #:	LCS052798	LCS052798	LCS052798	LCS052798	LCS052798
Prepared Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Analyzed Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	380 µg/L
LCS Result:	19	19	19	58	350
LCS % Recov.:	95	95	95	97	92

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140
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Please Note:

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SEQUOIA ANALYTICAL
ELAP #1271


Tod Granicher
Project Manager

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

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Attention: Deanna Harding

Client Project ID: Unocal 3292, 180105.85
Matrix: Liquid

Work Order #: 985A98 01-14

Reported: Jun 5, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC052798802005A	GC052798802005A	GC052798802005A	GC052798802005A	GC052798802005A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill
MS/MSD #:	8051127	8051127	8051127	8051127	8051127
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Analyzed Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	320 µg/L
Result:	20	21	21	64	390
MS % Recovery:	100	105	105	107	122
Dup. Result:	22	22	22	68	370
MSD % Recov.:	110	110	110	113	116
RPD:	9.5	4.7	4.7	6.1	5.3
RPD Limit:	0-20	0-20	0-20	0-20	0-50

LCS #:	LCS052798	LCS052798	LCS052798	LCS052798	LCS052798
Prepared Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Analyzed Date:	5/27/98	5/27/98	5/27/98	5/27/98	5/27/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	320 µg/L
LCS Result:	19	19	19	58	350
LCS % Recov.:	95	95	95	97	109

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140

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
ELAP #1271


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Project Manager

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

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Client Proj. ID: Unocal 3292, 180105.85

Received: 05/15/98

Lab Proj. ID: 9805A98

Reported: 06/01/98

LABORATORY NARRATIVE

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Project Manager



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LABORATORY NARRATIVE

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SEQUOIA ANALYTICAL


Tod Granicher
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