



GETTLER-RYAN INC.

TRANSMITTAL

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10:34 am, Apr 02, 2009

Alameda County
Environmental Health

April 29, 2002
G-R #180061

TO Mr David B De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

CC Mr David Vossler
Gettler-Ryan Inc
Petaluma, California

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

RE: **Tosco (Unocal) Service Station
#5325
3220 Lakeshore Avenue
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING

COPIES	DATED	DESCRIPTION
1	April 18, 2002	Groundwater Monitoring and Sampling Report First Quarter - Event of March 11, 2002

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 **May 10, 2002**, this report will be distributed to the following

cc Alameda County Health Care Services 1131 Harbor Bay Parkway, Suite 250 Alameda CA 94502

Enclosure

Store#	25325
Report Type Code:	GUM
Description	M&S report
Date	4-29-02

25325	SS	x	BP
QM	TRANSMITTAL	x	
3	4	5	6

trans/5325 DBD



GETTLER - RYAN INC.

April 18, 2002
G-R Job #180061

Mr David B De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: First Quarter Event of March 11, 2002
Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

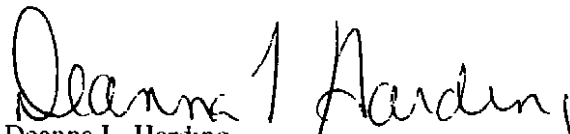
Dear Mr De Witt

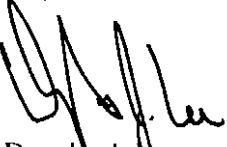
This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached)

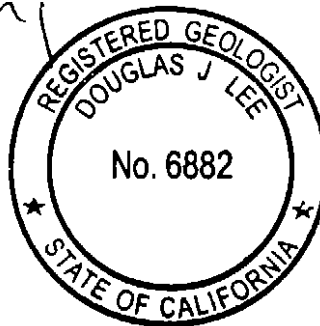
Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any wells. Static water level data and groundwater elevations are summarized in Table 1. Dissolved Oxygen Concentrations are summarized in Table 4. A Potentiometric Map is included as Figure 1.

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

Sincerely,


Deanna L. Harding
Project Coordinator

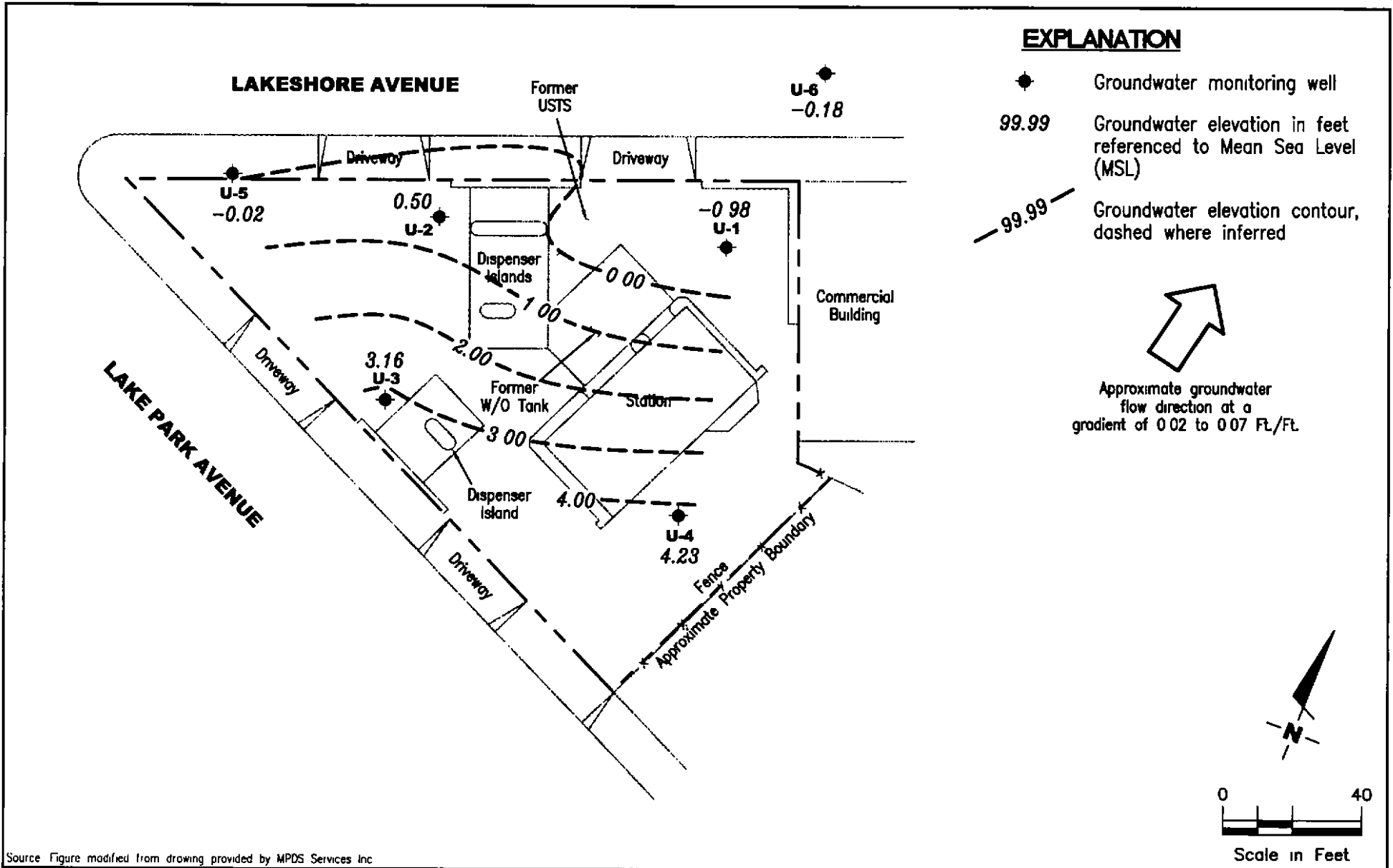

Douglas J. Lee
Senior Geologist, R G No 6882



- Figure 1 Potentiometric Map
- Figure 2 Concentration Map
- Table 1 Groundwater Monitoring Data and Analytical Results
- Table 2 Groundwater Analytical Results - Oxygenate Compounds
- Table 3 Groundwater Analytical Results
- Table 4 Dissolved Oxygen Concentrations
- Attachments Standard Operating Procedure - Groundwater Sampling
- Field Data Sheets
- Chain of Custody Document and Laboratory Analytical Reports

Project #	25325	SS	X	BP
		QM	X	TRANSMITTAL
		3	4	5

5325 qml



Source: Figure modified from drawing provided by MPDS Services Inc

GETTLER - RYAN INC.
 6/47 Sierra Ct Suite J
 Dublin, CA 94568 (925) 551 7555

POTENTIOMETRIC MAP
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

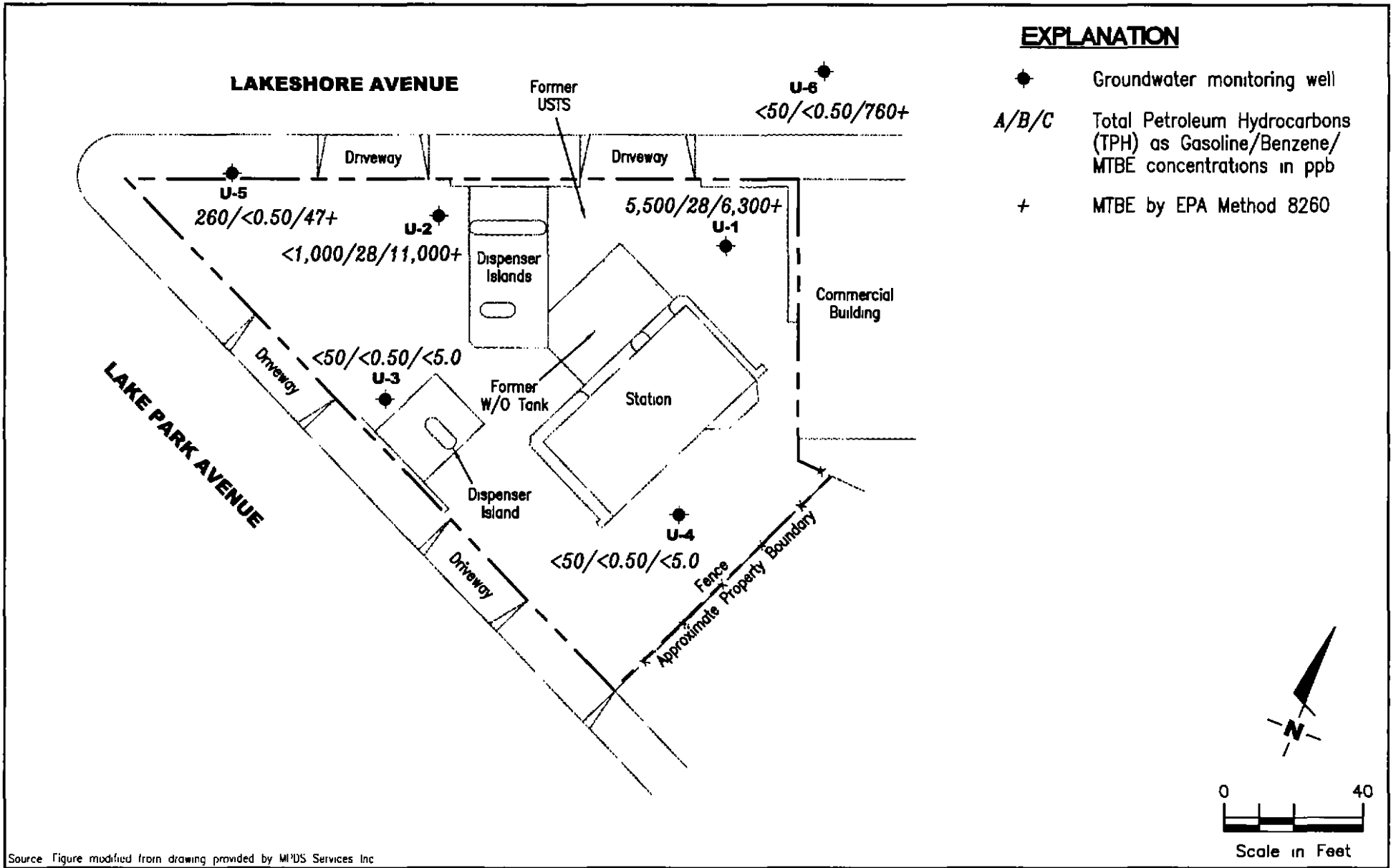
FIGURE
1

PROJECT NUMBER
 180061

REVIEWED BY

DATE
 March 11, 2002

REVISED DATE



Source: Figure modified from drawing provided by MIDS Services Inc.

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

CONCENTRATION MAP
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

FIGURE
2

PROJECT NUMBER
 180061

REVIEWED BY

DATE
 March 11, 2002

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (ft.)	Product						
					Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTRE (ppb)
U-1	08/10/90	--	5 0-20 0	--	--	690	38	75	8 6	130	--
	01/07/91	--		--	--	250	22	16	4 2	17	--
	04/01/91	--		--	--	160	13	8 6	1 0	15	--
	07/03/91	--		--	--	140	21	4 3	0 36	17	--
	10/09/91	--		--	--	ND	ND	ND	ND	ND	--
	02/12/92	--		--	--	250	ND	ND	ND	ND	--
	05/05/92	--		--	--	230	1 2	ND	ND	ND	--
	06/11/92	--		--	--	1,000	80	1 4	6 7	41	--
	08/20/92	--		--	--	400 ¹	1 0	ND	ND	0 6	--
	02/22/93	--		--	--	34,000	1,400	5,500	910	7,300	--
	05/07/93	--		--	--	8,700	600	240	650	3,300	--
	08/08/93	--		--	--	4,900 ²	79	ND	832	270	--
5 32	11/16/93	8 61		-3 29	0 00	690 ¹	ND	ND	ND	ND	--
	02/16/94	8 54		-3 22	0 00	6,800 ⁴	ND	ND	ND	ND	--
8 46	06/22/94	8 39		0 07	0 00	200	ND	ND	5 9	21	--
	09/22/94	8 66		-0 20	0 00	6,100 ¹	ND	ND	ND	ND	--
	12/24/94	8 04		0 42	0 00	50,000	2,500	9,700	2,400	17 000	--
	03/25/95	7 72		1 02**	0 37	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	06/21/95	9 30		-0 69**	0 20	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	09/19/95	9 29		-0 53**	0 40	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/19/95	8 98		-0 50**	0 03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	03/18/96	8 25		0 21	0 00	27,000	ND	2,300	1,400	11,000	4,900
	06/27/96	7 92		0 54	<0 01	120,000	540	4,300	2,600	26,000	ND
	09/26/96	9 10		-0 62**	0 02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/09/96	6 88		1 60**	0 03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	03/14/97	9 02		-0 15**	0 55	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	06/30/97	8 41		0 07**	0 02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
09/19/97	8 56		-0 08**	0 02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	
12/12/97	8 58		-0 11**	0 01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	
03/03/98 ¹⁷	8 23		0 26**	0 04	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--	
06/15/98 ¹⁷	8 37		0 09	Sheen	52,000	ND ⁷	900	1,800	13,000	ND ⁷	

Table 1
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 Tosco (Unocal) Service Station #5325
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 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1	09/30/98 ¹⁷	8.94	5.0-20.0	-0.48	Sheen	1,000,000 ⁸	ND ⁷	2,600	13,000	83,000	4,800
(cont)	12/28/98 ¹⁷	8.57		-0.11	<0.01	1,100,000 ⁹	ND ⁷	1,600	8,600	71,000	5,700
	03/22/99 ¹⁷	8.18		0.28	Sheen	130,000	470	1,100	2,000	28,000	5,700
	06/09/99	9.37		-0.91	0.00	40,000	230	640	590	13,000	3,500/2,100 ¹⁰
	09/08/99 ¹⁷	9.53		-1.07	0.00	55,000 ¹¹	217	202	745	14,300	6,890/6,690 ¹⁰
	12/07/99 ¹⁷	9.67		-1.21	0.00	41,200 ¹³	89.3	ND ⁷	385	6,930	15,800/14,700 ¹²
	03/13/00 ¹⁷	8.44		0.02	0.00	48,000 ¹¹	490	610	2,400	10,000	22,000/23,000 ¹⁰
	06/21/00 ¹⁷	9.45		-0.99	0.00	37,000 ¹¹	200	ND ⁷	1,200	7,200	15,000/20,000 ¹⁰
	09/27/00 ¹⁷	9.29		-0.83	0.00	15,000 ¹¹	92	ND ⁷	540	2,800	74,000/83,000 ¹⁵
	12/12/00 ¹⁷	9.37		-0.91	0.00	50,000 ¹⁶	ND ⁷	ND ⁷	250	1,900	12,000/15,000 ¹²
	03/07/01 ¹⁷	8.45		0.01	0.00	6,220 ¹³	29.8	10.4	96.3	638	11,200/11,800 ¹⁰
	06/06/01 ¹⁷	9.29		-0.83	0.00	5,200 ¹³	17	ND ⁷	69	420	6,500/8,700 ¹²
	09/24/01 ¹⁷	9.39		-0.93	0.00	4,300 ¹⁸	36	<25	65	590	4,400/4,400 ¹⁰
	12/10/01 ²⁰	9.17		-0.71	0.00	11,000 ¹⁸	220	<100	380	1,500	5,100/5,100 ¹⁰
	03/11/02 ²⁰	9.44		-0.98	0.00	5,500 ¹³	28	<20	360	690	6,400/6,300 ¹⁰
U-2	08/10/90	--	5.0-20.0	--	--	780	27	46	15	130	--
	01/07/91	--		--	--	1,900	67	5.8	58	69	--
	04/01/91	--		--	--	1,700	250	89	34	190	--
	07/03/91	--		--	--	2,100	150	25	3.1	290	--
	10/09/91	--		--	--	230	7.1	ND	ND	11	--
	02/12/92	--		--	--	410	1.9	ND	0.36	0.4	--
	05/05/92	--		--	--	1,600	120	52	6.2	290	--
	06/11/92	--		--	--	620	17	2.1	ND	37	--
	08/20/92	--		--	--	700	28	6.5	1.3	4.6	--
	02/22/93	--		--	--	3,400	2,400	2,100	1,200	5,800	--

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U-2	05/07/93	--	5 0-20 0	--	--	17,000	1,800	660	1,700	4,000	--
(cont)	08/08/93	--		--	--	5,600 ²	420	ND	410	670	--
4 53	11/16/93	8 17		-3 64	0 00	510 ³	ND	ND	ND	ND	--
	02/16/94	7 73		-3 20	0 00	980 ⁴	49	13	2 7	40	--
7 62	06/22/94	7 60		0 02	0 00	31,000	2,200	62	1,500	3,500	--
	09/22/94	7 93		-0 31	0 00	8,500 ³	29	ND	ND	ND	--
	12/24/94	7 27		0 35	0 00	32,000	1,500	890	1,300	5,000	--
	03/25/95	7 01		0 61	0 00	170,000	1,900	21,000	4,800	33,000	--
	06/21/95	6 98		0 64	0 00	16,000	2,100	ND	1,800	1,700	--
	09/19/95	7 70		-0 08	0 00	3,000	610	ND	78	240	-- ⁵
	12/19/95	7 30		0 32	0 00	1,600	140	55	52	270	-- ⁶
	03/18/96	6 45		1 17	0 00	12,000	2,200	ND	1,200	2,200	22,000
	06/27/96	7 41		0 21	0 00	28,000	3,400	ND	2,800	3,100	3,000
	09/26/96	7 90		-0 28	0 00	5,900	750	ND	ND	ND	18,000
	12/09/96	6 76		0 86	0 00	13,000	5,100	290	980	370	2,700
	03/14/97	7 12		0 52**	0 03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	06/30/97	6 19		1 43	<0 01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	09/19/97	7 31		0 31	<0 01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/12/97	6 75		0 88**	<0 01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	03/03/98	6 36		1 26	Sheen	80,000	3,000	1,100	820	16,000	16,000
	06/15/98	6 51		1 11	Sheen	48,000	1,800	330	470	7 900	20,000
	09/30/98	7 17		0 45	Sheen	60,000	1,300	ND ⁷	500	9,700	19 000
	12/28/98	7 06		0 56	0 00	63,000	590	160	320	5,600	16,000
	03/22/99	6 82		0 80	0 00	28,000	1,100	ND ⁷	360	2,900	25,000
	06/09/99	7 51		0 11	0 00	21,000	110	190	310	2,600	7,900/7,800 ¹⁰
	09/08/99	8 16		-0 54	0 00	23,300 ¹¹	477	138	286	4,110	16,400/15,300 ¹⁰
	12/07/99	8 31		-0 69	0 00	4,840 ¹³	17 2	ND ⁷	ND ⁷	157	14,900/15,600 ¹²
	03/13/00	6 69		0 93	0 00	11,000 ¹¹	380	160	ND ⁷	2,100	22,000/26,000 ¹⁰
	06/21/00	7 67		-0 05	0 00	9,100 ¹¹	22	ND ⁷	ND ⁷	800	16,000/22,000 ¹⁰
	09/27/00	7 44		0 18	0 00	2,900 ¹¹	43	ND ⁷	ND ⁷	39	20,000/26,000 ¹⁵
	12/12/00	7 51		0 11	0 00	3,600 ¹¹	17	ND ⁷	ND ⁷	87	8,000/7,800 ¹²

Table 1
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 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-2	03/07/01	7.15	5.0-20.0	0.47	0.00	1,670 ¹³	51.0	ND ⁷	7.20	19.5	5,930/7,900 ¹⁰
(cont)	06/06/01	7.57		0.05	0.00	1,100 ¹¹	14	ND ⁷	9.3	35	9,200/10,000 ¹²
	09/24/01	7.63		-0.01	0.00	1,000 ¹⁸	25	<2.5	12	100	9,800/11,000 ¹⁰
	12/10/01	6.78		0.84	0.00	83	14	0.55	3.4	6.8	2,500/2,500 ¹⁰
	03/11/02	7.12		0.50	0.00	<1,000	28	<10	40	31	11,000/11,000 ¹⁰
U-3	08/10/90	--	5.0-20.0	--	--	ND	ND	ND	ND	ND	--
	01/07/91	--		--	--	ND	ND	ND	ND	1.8	--
	04/01/91	--		--	--	ND	1.0	2.9	0.53	5.4	--
	07/03/91	--		--	--	ND	ND	ND	ND	ND	--
	10/09/91	--		--	--	ND	ND	ND	ND	ND	--
	02/12/92	--		--	--	ND	ND	ND	ND	ND	--
	05/05/92	--		--	--	ND	ND	ND	ND	ND	--
	06/11/92	--		--	--	ND	ND	ND	ND	ND	--
	08/20/92	--		--	--	ND	ND	ND	ND	ND	--
	02/22/93	--		--	--	ND	ND	ND	ND	ND	--
	05/07/93	--		--	--	ND	ND	ND	ND	ND	--
	08/08/93	--		--	--	210	5.0	9.7	0.7	4.1	--
7.86	11/16/93	11.82		-3.96	0.00	ND	ND	ND	ND	ND	--
	02/16/94	11.62		-3.76	0.00	ND	ND	ND	ND	ND	--
10.98	06/22/94	11.64		-0.66	0.00	ND	ND	ND	ND	ND	--
	09/22/94	11.76		-0.78	0.00	ND	ND	ND	ND	ND	--
	12/24/94	11.28		-0.30	0.00	ND	ND	ND	ND	ND	--
	03/25/95	10.96		0.02	0.00	ND	ND	ND	ND	ND	--
	06/21/95	11.37		-0.39	0.00	ND	ND	ND	ND	ND	--
	09/19/95	11.55		-0.57	0.00	ND	ND	ND	ND	ND	-- ⁵
	12/19/95	11.45		-0.47	0.00	ND	ND	ND	ND	ND	--
	03/18/96	11.10		-0.12	0.00	ND	ND	ND	ND	ND	--
	06/27/96	11.16		-0.18	0.00	440	49	50	51	140	50
	09/26/96	11.55		-0.57	0.00	ND	ND	ND	ND	ND	ND

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 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-3	12/09/96	10 12	5 0-20 0	0 86	0 00	ND	ND	ND	ND	ND	29
(cont)	03/14/97	10 87		0 11	0 00	ND	ND	ND	ND	ND	ND
	06/30/97	11 08		-0 10	0 00	ND	ND	ND	ND	ND	ND
	09/19/97	11 05		-0 07	0 00	ND	ND	ND	ND	ND	ND
	12/12/97	10 58		0 40	0 00	ND	ND	ND	ND	ND	ND
	03/03/98	9 84		1 14	0 00	ND	ND	ND	ND	ND	ND
	06/15/98	10 56		0 42	0 00	ND	ND	ND	ND	ND	ND
	09/30/98	11 12		-0 14	0 00	ND	ND	ND	ND	ND	ND
	12/28/98	10 96		0 02	0 00	ND	ND	ND	ND	ND	ND
	03/22/99	9 46		1 52	0 00	ND	ND	ND	ND	ND	ND
	06/09/99	11 01		-0 03	0 00	ND	ND	ND	ND	ND	ND
	09/08/99	11 31		-0 33	0 00	ND	ND	ND	ND	ND	ND
	12/07/99	11 26		-0 28	0 00	ND	ND	ND	ND	ND	ND
	03/13/00	8 28		2 70	0 00	ND	ND	ND	ND	ND	ND
	06/21/00	11 12		-0 14	0 00	ND	ND	ND	ND	ND	ND
	09/27/00	11 07		-0 09	0 00	ND	ND	ND	ND	ND	ND
	12/12/00	10 94		0 04	0 00	ND	ND	ND	ND	ND	ND
	03/07/01	8 32		2 66	0 00	ND	ND	ND	ND	ND	ND
	06/06/01	10 94		0 04	0 00	ND	ND	ND	ND	ND	ND
	09/24/01	11 03		-0 05	0 00	<50	<0 50	<0 50	<0 50	<0 50	<2 5
	12/10/01	8 16		2 82	0 00	<50	<0 50	<0 50	<0 50	<0 50	<2 5
	03/11/02	7.82		3.16	0.00	<50	<0.50	<0.50	<0.50	<0.50	<5.0
U-4											
11 15	06/22/94	10 16	5 0-20 0	0 99	0 00	ND	ND	ND	ND	ND	--
	09/22/94	10 79		0 36	0 00	ND	0 78	1 3	ND	1 4	--
	12/24/94	9 81		1 34	0 00	ND	ND	ND	ND	ND	--
	03/25/95	9 51		1 64	0 00	ND	ND	ND	ND	ND	--
	06/21/95	9 54		1 61	0 00	ND	ND	ND	ND	ND	--
	09/19/95	10 17		0 98	0 00	ND	ND	ND	ND	ND	--

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Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5325
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WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. hgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-4	12/19/95	9.98	5.0-20.0	1.17	0.00	ND	ND	ND	ND	ND	--
(cont)	03/18/96	9.66		1.49	0.00	ND	ND	ND	ND	ND	--
	06/27/96	9.74		1.41	0.00	ND	ND	ND	ND	ND	ND
	09/26/96	10.14		1.01	0.00	ND	ND	ND	ND	ND	ND
	12/09/96	8.67		2.48	0.00	ND	ND	ND	ND	ND	33
	03/14/97	9.35		1.80	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	9.89		1.26	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	9.96		1.19	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	8.56		2.59	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	7.85		3.30	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	9.08		2.07	0.00	ND	ND	ND	ND	ND	ND
	09/30/98	9.75		1.40	0.00	ND	ND	ND	ND	ND	ND
	12/28/98	9.59		1.56	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	8.34		2.81	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	9.39		1.76	0.00	ND	ND	ND	ND	ND	ND
	09/08/99	9.90		1.25	0.00	ND	ND	ND	ND	ND	ND
	12/07/99	10.05		1.10	0.00	ND	ND	ND	ND	ND	ND
	03/13/00	7.24		3.91	0.00	ND	ND	ND	ND	ND	ND
	06/21/00	9.48		1.67	0.00	ND	ND	ND	ND	ND	ND
	09/27/00	9.42		1.73	0.00	ND	ND	ND	ND	ND	ND
	12/12/00	9.50		1.65	0.00	ND	ND	ND	ND	ND	ND
	03/07/01	6.88		4.27	0.00	ND	ND	ND	ND	ND	ND
	06/06/01	9.18		1.97	0.00	ND	ND	ND	ND	ND	ND
	09/24/01	9.21		1.94	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/10/01	7.32		3.83	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	03/11/02	6.92		4.23	0.00	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-5											
6 98	06/22/94	6 83	5 0-20 0	0 15	0 00	210	7 1	13	4 5	26	--
	09/22/94	6 90		0 08	0 00	170	8 4	10	8 5	18	--
	12/24/94	6 43		0 55	0 00	8,700	560	70	670	430	--
	03/25/95	6 35		0 63	0 00	44,000	390	960	1,500	7,600	--
	06/21/95	7 11		-0 13	0 00	400	2 3	ND	9 1	3 5	--
	09/19/95	6 99		-0 01	0 00	850	14	7 1	13	66	-- ⁵
	12/19/95	7 17		-0 19	0 00	ND	ND	ND	ND	ND	--
	03/18/96	6 65		0 33	0 00	100	0 67	0 5	0 51	5 4	--
	06/27/96	6 49		0 49	0 00	16,000	280	150	1,400	4,600	530
	09/26/96	7 13		-0 15	0 00	ND	ND	0 57	ND	0 96	ND
	12/09/96	5 90		1 08	0 00	1,300	29	46	ND	140	97
	03/14/97	6 99		-0 01	0 00	ND	ND	ND	ND	ND	14
	06/30/97	7 08		-0 10	0 00	4,200	74	51	180	980	270
	09/19/97	6 78		0 20	0 00	6,300	160	13	370	1000	480
	12/12/97	6 94		0 04	0 00	60	1 3	ND	1 6	2 1	47
	03/03/98	6 50		0 48	0 00	1,700	29	ND ⁷	150	190	330
	06/15/98	6 85		0 13	0 00	1,500	32	ND ⁷	91	83	330
	09/30/98	7 31		-0 33	0 00	1,700	44	ND ⁷	39	150	60
	12/28/98	7 25		-0 27	0 00	1,400	59	ND ⁷	13	27	150
	03/22/99	6 86		0 12	0 00	780	8 9	ND	0 76	4 5	350
	06/09/99	7 28		-0 30	0 00	1,000	ND ⁷	ND ⁷	10	35	280/350 ¹⁰
	09/08/99	7 52		-0 54	0 00	2,620 ¹¹	26 2	ND ⁷	32 2	157	280/239 ¹²
	12/07/99	7 67		-0 69	0 00	949 ¹¹	9 26	ND ⁷	11 2	22 7	235/301 ¹²
	03/13/00	6 73		0 25	0 00	880 ¹⁴	12	1 0	5 6	8 7	46/37 ¹⁰
	06/21/00	7 39		-0 41	0 00	700 ¹¹	4 0	ND	0 99	4 0	120/140 ¹⁰
	09/27/00	7 45		-0 47	0 00	400 ¹¹	1 9	ND	ND	1 5	160/250 ¹⁵
	12/12/00	7 68		-0 70	0 00	770 ¹¹	3 2	ND ⁷	ND ⁷	ND ⁷	27/13 ¹²
	03/07/01	6 83		0 15	0 00	623 ¹³	5 15	ND	ND	0 669	35 7/43 4 ¹⁰
	06/06/01	7 42		-0 44	0 00	110 ¹³	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-5	09/24/01	7.50	5.0-20.0	-0.52	0.00	270 ¹⁹	<0.50	<0.50	<0.50	<0.50	40/42 ¹⁰
(cont)	12/10/01	6.65		0.33	0.00	420 ¹⁸	13	0.60	0.66	<0.50	<2.5
	03/11/02	7.00		-0.02	0.00	260 ¹³	<0.50	<0.50	<0.50	<0.50	42/47 ¹⁰
U-6											
7.14	06/22/94	7.14	5.0-24.0	0.00	0.00	ND	ND	ND	ND	ND	--
	09/22/94	7.34		-0.20	0.00	130	13	0.8	ND	0.73	--
	12/24/94	6.67		0.47	0.00	6,900	500	59	600	380	--
	03/25/95	6.29		0.85	0.00	47,000	450	1,300	1,700	8,200	--
	06/21/95	7.60		-0.46	0.00	ND	ND	ND	ND	ND	--
	09/19/95	7.70		-0.56	0.00	ND	ND	ND	ND	ND	-- ⁵
	12/19/95	7.75		-0.61	0.00	210	2.5	1.0	2.9	17	--
	03/18/96	6.86		0.28	0.00	ND	ND	ND	ND	ND	--
	06/27/96	6.52		0.62	0.00	ND	ND	ND	ND	ND	510
	09/26/96	7.62		-0.48	0.00	ND	ND	ND	ND	ND	1,400
	12/09/96	5.88		1.26	0.00	1,200	29	48	6.4	140	58
	03/14/97	7.30		-0.16	0.00	ND	ND	ND	ND	ND	1,500
	06/30/97	7.35		-0.21	0.00	ND	ND	ND	ND	ND	990
	09/19/97	7.25		-0.11	0.00	ND	ND	ND	ND	ND	1,400
	12/12/97	7.29		-0.15	0.00	ND	ND	ND	ND	ND	680
	03/03/98	7.00		0.14	0.00	ND	ND	ND	ND	ND	1,600
	06/15/98	7.18		-0.04	0.00	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	1,000
	09/30/98	7.90		-0.76	0.00	ND	ND	ND	ND	ND	1,200
	12/28/98	7.79		-0.65	0.00	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	730
	03/22/99	7.47		-0.33	0.00	ND	ND	ND	ND	ND	1,800
	06/09/99	7.73		-0.59	0.00	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	1,000/850 ⁹
	09/08/99	7.95		-0.81	0.00	ND	ND	ND	ND	ND	851/1,040 ⁹
	12/07/99	8.10		-0.96	0.00	ND	ND	ND	ND	ND	1,140/1,150 ¹²
	03/13/00	6.95		0.19	0.00	ND	ND	ND	ND	ND	560/670 ¹⁰
	06/21/00	7.84		-0.70	0.00	ND	ND	ND	ND	ND	400/590 ¹⁰

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.L. (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-6	09/27/00	7.68	5.0-24.0	-0.54	0.00	ND	ND	ND	ND	ND	2,500/2,800 ¹⁵
(cont)	12/12/00	7.74		-0.60	0.00	ND	ND	ND	ND	ND	590/580 ¹²
	03/07/01	7.27		-0.13	0.00	ND	ND	ND	ND	ND	310/321 ¹²
	06/06/01	7.80		-0.66	0.00	ND	ND	ND	ND	ND	250/330 ¹²
	09/24/01	7.82		-0.68	0.00	<50	<0.50	<0.50	<0.50	<0.50	530/660 ¹⁰
	12/10/01	7.15		-0.01	0.00	<50	<0.50	<0.50	<0.50	<0.50	220/220 ¹⁰
	03/11/02	7.32		-0.18	0.00	<50	<0.50	<0.50	<0.50	<0.50	720/760 ¹⁰
Trip Blank											
TB-LB	03/03/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	06/15/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	09/30/98	--	--	--	--	ND	ND	1.7	ND	2.2	ND
	12/28/98	--	--	--	--	ND	ND	0.71	ND	0.72	9.5
	03/22/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	06/09/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	09/08/99	--	--	--	--	ND	ND	ND	ND	ND	ND
	12/07/99	--	--	--	--	ND	ND	0.762	ND	ND	ND
	03/13/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	06/21/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	09/27/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	12/12/00	--	--	--	--	ND	ND	ND	ND	ND	ND
	03/07/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	06/06/01	--	--	--	--	ND	ND	ND	ND	ND	ND
	09/24/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/10/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	03/11/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

EXPLANATIONS.

Groundwater monitoring data and laboratory analytical results prior to March 3 1998, were compiled from reports prepared by MPDS Services, Inc

FOC = Top of Casing	B = Benzene	(ppb) = Parts per billion
(ft) = Feet	T = Toluene	ND = Not Detected
DTW = Depth to Water	E = Ethylbenzene	-- = Not Measured/Not Analyzed
SI = Screen Interval	X = Xylenes	
(ft bgs) = Feet Below Ground Surface	MTBE = Methyl tertiary butyl ether	
GWE = Groundwater Elevation		
TPH-G = Total Petroleum Hydrocarbons as Gasoline		

- * TOC elevations are surveyed relative to City of Oakland Benchmark, at the northeasterly corner of Weller and Cheney Avenue (Elevation = 9 055 feet, city datum, add 3 00' to U S G S datum) Prior to November 16, 1993, the DTW measurements were taken from the well cover
- ** Groundwater elevation corrected due to the presence of free product, correction factor = [(TOC-DTW)+(Product Thickness x 0.75)]
- 1 The positive result for gasoline does not appear to have a typical gasoline pattern
- 2 The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline
- 3 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline
- 4 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture
- 5 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well
- 6 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well
- 7 Detection limit raised Refer to analytical reports
- 8 Laboratory report indicates unidentified hydrocarbons C6-C12
- 9 Laboratory report indicates gasoline and unidentified hydrocarbons >C8
- 10 MTBE by EPA Method 8260
- 11 Laboratory report indicates gasoline C6-C12
- 12 MTBE by EPA Method 8260 analyzed past the recommended holding time
- 13 Laboratory report indicates weathered gasoline C6-C12
- 14 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6
- 15 Laboratory report indicates sample was originally analyzed within holding time Re-analysis for confirmation or dilution was performed past the recommended holding time
- 16 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons >C10
- 17 Skimmer present in well
- 18 Laboratory report indicates gasoline C6-C10
- 19 Laboratory report indicates unidentified hydrocarbons C6-C10
- 20 Skimmer not present in well

Table 2
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-1	09/27/00 ¹	--	ND ²	83,000	ND ²	ND ²	ND ²	ND ²	ND ²
	12/12/00	--	--	15,000 ³	--	--	--	--	--
	03/07/01	ND ²	ND ²	11,800	ND ²	ND ²	ND ²	ND ²	ND ²
	06/06/01 ³	ND ²	ND ²	8,700	ND ²	ND ²	ND ²	ND ²	ND ²
	09/24/01	<400,000	<20,000	4,400	<1,000	<1,000	<1,000	<1,000	<1,000
	12/10/01	<8,000	<4,000	5,100	<100	<100	<100	<100	<100
	03/11/02	<25,000	<5,000	6,300	<100	<100	<100	<100	<100
U-2	09/27/00	--	--	26,000 ¹	--	--	--	--	--
	12/12/00	--	--	7,800 ³	--	--	--	--	--
	03/07/01	ND ²	ND ²	7,900	ND ²	ND ²	ND ²	ND ²	ND ²
	06/06/01 ³	ND ²	ND ²	10,000	ND ²	ND ²	ND ²	ND ²	ND ²
	09/24/01	<400,000	<20,000	11,000	<1,000	<1,000	<1,000	<1,000	<1,000
	12/10/01	<4,000	<2,000	2,500	<50	<50	<50	<50	<50
	03/11/02	<50,000	<10,000	11,000	<200	<200	<200	<200	<200
U-5	09/27/00	--	--	250 ¹	--	--	--	--	--
	12/12/00	--	--	13 ³	--	--	--	--	--
	03/07/01	ND	ND	43.4	ND	ND	ND	ND	ND
	09/24/01	<4,000	<200	42	<10	<10	<10	<10	<10
	03/11/02	<500	<100	47	<2.0	<2.0	<2.0	<2.0	<2.0
U-6	09/27/00	--	--	2,800 ¹	--	--	--	--	--
	12/12/00	--	--	580 ³	--	--	--	--	--
	03/07/01 ³	ND ²	ND ²	321	ND ²	ND ²	ND ²	ND ²	ND ²
	06/06/01 ³	ND ²	ND ²	330	ND ²	ND ²	ND ²	ND ²	ND ²

Table 2
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-6	09/24/01	<40,000	<2,000	660	<100	<100	<100	<100	<100
(cont)	12/10/01	<400	<200	220	<5.0	<5.0	<5.0	<5.0	<5.0
	03/11/02	<2,000	<400	760	<8.0	<8.0	<8.0	<8.0	<8.0

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
(ppb) = Parts per billion
ND = Not Detected
-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

- ¹ Laboratory report indicates sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.
- ² Detection limit raised. Refer to analytical reports.
- ³ Laboratory report indicates sample was analyzed outside the EPA recommended holding time.

Table 3
Groundwater Analytical Results
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV
U-1	06/15/98	39	ND	ND	382 ²
	09/30/98	17	ND	ND	366 ²
	12/28/98	4.3	6.3	28	298 ²
	03/22/99	4.9	ND	3.5	320 ³
	06/09/99	1.2	ND	ND	260 ³
	09/08/99	1.80	ND ¹	ND ¹	85 ³
	12/07/99	5.70	ND ¹	17.0	404 ¹
	03/13/00	8.0	0.18	ND	² 117/262 ³
	06/21/00	9.3	ND ¹	ND ¹	148 ²
	09/27/00	2.8	ND ¹	18.4	119 ²
	12/12/00	0.49	ND ¹	16.0	131 ²
	03/07/01	0.483	2.64	6.89	125 ²
	06/06/01	1.0 ⁴	ND	2.7	141 ²
	09/24/01	<0.10	0.45 ⁵	--	125 ²
	12/10/01	14	<0.50	2.2	141 ²
	03/11/02	15	<0.50	0.11	132²
U-2	03/03/98	25	ND	ND	369 ²
	06/15/98	42	ND	ND	341 ²
	09/30/98	25	ND	ND	354 ²
	12/28/98	28	ND	ND	276 ²
	03/22/99	0.68	ND	2.3	320 ³
	06/09/99	0.50	ND	ND	290 ³
	09/08/99	1.90	ND ¹	ND ¹	235 ³
	12/07/99	0.250	ND ¹	ND ¹	389 ³
	03/13/00	4.3	0.31	ND	² 121/184 ³
	06/21/00	0.26	ND ¹	ND ¹	136 ²
	09/27/00	0.64	ND ¹	10.5	142 ²
	12/12/00	2.7	ND ¹	ND ¹	155 ²
	03/07/01	0.677	2.24	3.02	148 ²
	06/06/01	0.80 ⁴	ND	2.8	163 ²
	09/24/01	<0.10	0.49 ⁵	--	151 ²
	12/10/01	<0.10	<0.50	0.20	171 ²
03/11/02	<0.10	<0.50	0.65	156²	
U-3	06/30/97	1.4	21	0.86	190 ³
	09/19/97	0.57	19	ND	75 ³
	12/12/97	1.9	23	0.85	390 ³
	03/03/98	0.013	36	ND	358 ²
	06/15/98	0.16	33	ND	318 ²
	09/30/98	0.040	31	ND	295 ²
	12/28/98	ND	29	ND	281 ²
	03/22/99	0.015	30	0.14	310 ³

Table 3
Groundwater Analytical Results
 Tosco (Unocal) Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV
U-3	06/09/99	ND	26	1.2	350 ³
(cont)	09/08/99	ND	32.9	ND ¹	417 ³
	12/07/99	0.0520	27.9	ND ¹	437 ³
	03/13/00	0.15	33	ND	² 226/ ³ 307 ³
	06/21/00	0.20	32	ND ¹	225 ²
	09/27/00	ND	34	15.7	211 ²
	12/12/00	ND	31	ND ¹	246 ²
	03/07/01	ND	36.5	0.443	251 ²
	06/06/01	ND ⁴	8.0	0.18	214 ²
	09/24/01	<0.10	23 ⁵	--	198 ²
	12/10/01	<0.10	21	0.11	188 ²
	03/11/02	<0.10	30	0.14	166²
U-4	06/30/97	0.13	35	0.52	200 ³
	09/19/97	0.35	30	ND	45 ³
	12/12/97	0.68	31	0.73	380 ³
	03/03/98	0.018	3.2	ND	284 ²
	06/15/98	0.14	33	ND	256 ²
	09/30/98	0.049	31	ND	276 ²
	12/28/98	0.36	31	ND	280 ²
	03/22/99	ND	30	0.14	320 ¹
	06/09/99	ND	35	0.91	340 ¹
	09/08/99	ND	24	ND ¹	391 ³
	12/07/99	ND	27.7	ND ¹	478 ³
	03/13/00	ND	33	ND	² 219/ ³ 244 ³
	06/21/00	0.034	32	ND ¹	248 ²
	09/27/00	ND	28	ND ¹	198 ²
	12/12/00	ND	30	ND ¹	210 ²
	03/07/01	ND	33.9	0.226	233 ²
	06/06/01	ND ⁴	7.4	0.21	248 ²
	09/24/01	<0.10	24 ⁵	--	262 ²
	12/10/01	<0.10	19	0.10	242 ²
	03/11/02	<0.10	31	0.14	195²
U-5	06/30/97	16	ND	ND	160 ³
	09/19/97	0.22	ND	ND	63 ³
	12/12/97	6.7	ND	ND	400 ³
	03/03/98	18	3.1	ND	345 ²
	06/15/98	17	ND	ND	333 ²
	09/30/98	17	ND	ND	318 ²
	12/28/98	17	6.6	ND	305 ²
	03/22/99	0.12	ND	2.4	340 ³
	06/09/99	0.23	ND	ND	320 ³

Table 3
Groundwater Analytical Results
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV
U-5	09/08/99	2.10	ND ¹	ND ¹	335 ³
(cont)	12/07/99	0.310	ND ¹	ND ¹	408 ³
	03/13/00	0.33	0.16	ND	² 111/ ³ 264
	06/21/00	0.15	ND ¹	ND ¹	159 ²
	09/27/00	0.33	ND ¹	ND ¹	136 ²
	12/12/00	0.086	ND ¹	ND ¹	122 ²
	03/07/01	1.07	3.02	4.00	141 ²
	06/06/01	ND ⁴	ND	1.2	112 ²
	09/24/01	<0.10	0.77 ⁵	--	146 ²
	12/10/01	3.7	<0.50	2.6	96 ²
	03/11/02	0.10	<0.50	0.52	108²
U-6	06/30/97	88	0.80	ND	190 ³
	09/19/97	2.9	1.80	ND	ND ³
	12/12/97	51	ND	ND	380 ³
	03/03/98	60	3.5	ND	327 ²
	06/15/98	590	4.8	ND	315 ²
	09/30/98	33	ND	ND	345 ²
	12/28/98	83	7.2	ND	297 ²
	03/22/99	2.1	ND	0.98	330 ³
	06/09/99	0.47	0.20	ND	320 ³
	09/08/99	0.140	5.59	ND ¹	305 ³
	12/07/99	0.260	ND ¹	ND ¹	443 ³
	03/13/00	0.79	0.26	ND	² 68/ ³ 222
	06/21/00	1.9	ND ¹	ND ¹	159 ²
	09/27/00	2.6	ND ¹	ND ¹	170 ²
	12/12/00	ND	2.7	ND ¹	128 ²
	03/07/01	2.52	3.11	37.0	117 ²
	06/06/01	0.47 ⁴	0.15	0.70	97 ²
	09/24/01	<0.10	0.58 ⁵	--	123 ²
	12/10/01	0.99	0.50	2.0	112 ²
	03/11/02	1.2	<0.50	0.089	128²

Table 3
Groundwater Analytical Results
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

EXPLANATIONS:

Groundwater analytical results prior to March 3, 1998, were compiled from reports prepared by MPDS Services, Inc

(ppm) = Parts per million

ND = Not Detected

mV = millivolts

-- = Not Analyzed

- ¹ Detection limit raised Refer to analytical reports
- ² Field measurement
- ³ Analyzed by laboratory
- ⁴ Due to the transfer of samples from one laboratory to another laboratory, the sample was received beyond the EPA recommended holding time
- ⁵ Laboratory report indicates the sample was analyzed beyond the EPA recommended holding time

Table 4
Dissolved Oxygen Concentrations
Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Before Purge (mg/L)
U-1	12/07/99	1.36
	06/21/00	1.53
	09/27/00	1.63
	12/12/00	1.48
	03/07/01	1.91
	06/06/01	1.77
	09/24/01	1.64
	12/10/01	1.82
	03/11/02	2.21
U-2	12/07/99	2.28
	06/21/00	1.96
	09/27/00	2.12
	12/12/00	2.35
	03/07/01	2.21
	06/06/01	2.67
	09/24/01	2.10
	12/10/01	2.81
	03/11/02	2.77
U-3	06/30/97	4.1
	09/19/97	4.2
	12/12/97	2.97
	03/03/98	2.63
	06/15/98	2.93
	09/30/98	3.11
	12/28/98	3.59
	03/22/99	4.02
	06/09/99	3.70
	09/08/99	3.96
	12/07/99	4.21
	06/21/00	4.27
	09/27/00	4.67
	12/12/00	4.79
	03/07/01	5.16
	06/06/01	4.79
	09/24/01	4.27
12/10/01	4.66	
03/11/02	5.06	
U-4	06/30/97	5.4
	09/19/97	5.1
	12/12/97	3.11
	03/03/98	2.94

Table 4
Dissolved Oxygen Concentrations
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Before Purge (mg/L)
U-4 (cont)	06/15/98	3.08
	09/30/98	4.05
	12/28/98	4.57
	03/22/99	4.26
	06/09/99	3.61
	09/08/99	3.75
	12/07/99	4.03
	06/21/00	4.89
	09/27/00	5.09
	12/12/00	4.86
	03/07/01	4.97
	06/06/01	5.12
	09/24/01	4.86
	12/10/01	5.05
03/11/02	4.83	
U-5	06/30/97	3.4
	09/19/97	0.6
	12/12/97	1.75
	03/03/98	2.36
	06/15/98	2.55
	09/30/98	1.93
	12/28/98	1.64
	03/22/99	1.99
	06/09/99	2.10
	09/08/99	2.21
	12/07/99	2.66
	06/21/00	3.42
	09/27/00	3.85
	12/12/00	3.53
	03/07/01	2.98
	06/06/01	2.67
09/24/01	3.15	
12/10/01	2.85	
03/11/02	3.15	
U-6	06/30/97	0.30
	09/19/97	0.60
	12/12/97	2.70
	03/03/98	2.18
	06/15/98	2.48
	09/30/98	3.06
	12/28/98	3.42
	03/22/99	3.88
	06/09/99	3.29

Table 4
Dissolved Oxygen Concentrations
Tosco (Inocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Before Purge (mg/L)
U-6	09/08/99	3 12
(cont)	12/07/99	3 44
	06/21/00	3 27
	09/27/00	3 49
	12/12/00	3 06
	03/07/01	2 85
	06/06/01	2 46
	09/24/01	3 10
	12/10/01	2 57
	03/11/02	3 03

Table 4
Dissolved Oxygen Concentrations
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

EXPLANATIONS:

Dissolved oxygen concentrations prior to March 3, 1998, were compiled from reports prepared by MPDS Services, Inc

(mg/L) = milligrams per liter

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

As requested by Phillips 66 Company, the purge water and decontamination water generated during sampling activities is transported to Phillips 66 - San Francisco Refinery, located in Rodeo, California.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5325
Address: 3220 Lakeshore Ave
City: Oakland, CA

Job#: 180061
Date: 3-11-02
Sampler: Joc

Well ID U-1
Well Diameter 3 in.
Total Depth 19.67 ft.
Depth to Water 9.44 ft.

Well Condition: OK
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
5" = 1.50 6" = 1.50 12" = 5.80

$10.23 \times VF_{0.38} = 3.89 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 12 \text{ (gal.)}$

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

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

Starting Time: 10:08
Sampling Time: 10:36 AM (1036)
Purging Flow Rate: _____ gpm.
Did well de-water? _____

Weather Conditions: cloudy
Water Color: clear Odor: yes
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:16</u>	<u>4</u>	<u>7.15</u>	<u>265</u>	<u>70.8</u>	<u>2.21</u>	<u>132</u>	
<u>10:18</u>	<u>8</u>	<u>7.24</u>	<u>266</u>	<u>69.6</u>			
<u>10:20</u>	<u>12</u>	<u>7.28</u>	<u>272</u>	<u>70.4</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-1</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPNH, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Ferrous Iron</u>
	<u>1 Amber</u>				<u>Nitrate</u>
					<u>Phosphate</u>

COMMENTS: No skimmer found in well

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5325
Address: 3220 Lakeshore Ave.
City: Oakland, CA

Job#: 180061
Date: 3-11-02
Sampler: Joc

Well ID U-2

Well Condition: OK

Well Diameter 3 in

Hydrocarbon Thickness: 0 in Amount Bailed (product/water): 0 (gal)

Total Depth 19.61 ft

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

Depth to Water 7.12 ft

12.49 x VF 0.38 = 4.75 x 3 (case volume) = Estimated Purge Volume: 14.5 (gal)

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

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

Starting Time: 9:30
Sampling Time: 10:00 AM (1000)
Purging Flow Rate: 1 gpm
Did well de-water? _____

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

Time	Volume (gal)	pH	Conductivity 10^2 μ mhos/cm X	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:38</u>	<u>5</u>	<u>7.36</u>	<u>0.14</u>	<u>71.2</u>	<u>2.77</u>	<u>156</u>	
<u>9:41</u>	<u>10</u>	<u>7.39</u>	<u>6.12</u>	<u>70.6</u>			
<u>9:44</u>	<u>14.5</u>	<u>7.31</u>	<u>6.15</u>	<u>70.5</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-2</u>	<u>3Y04</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>plastic</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>Ferrous Iron</u>
					<u>Nitrate</u>
					<u>Phosphate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5325
Address: 3220 Lakeshore Ave.
City: Oakland, CA

Job#: 180061
Date: 3-11-02
Sampler: Joc

Well ID U-3

Well Condition: OK

Well Diameter 3 in.

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

Total Depth 1935 ft

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

Depth to Water 7.82 ft

11.53 X VF 0.38 = 4.38 X 3 (case volume) = Estimated Purge Volume: 13.5 (gal.)

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

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

Starting Time: 6:35
Sampling Time: 7:02 AM (0702)
Purging Flow Rate: 1.5 gpm.
Did well de-water? _____

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>6:43</u>	<u>4</u>	<u>7.56</u>	<u>9.41</u>	<u>71.6</u>	<u>5.06</u>	<u>166</u>	
<u>6:46</u>	<u>9</u>	<u>7.82</u>	<u>9.36</u>	<u>72.0</u>			
<u>6:49</u>	<u>13.5</u>	<u>7.59</u>	<u>9.38</u>	<u>72.1</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-3</u>	<u>3 vol plastic</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
		<u>"</u>	<u>-</u>	<u>"</u>	<u>Ferrous Iron</u>
					<u>Nitrate</u>
					<u>Phosphate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5325
Address: 3220 Lakeshore Ave
City: Oakland, CA

Job#: 180061
Date: 3-11-02
Sampler: Joc

Well ID: U-4
Well Diameter: 4 in.
Total Depth: 20.17 ft
Depth to Water: 6.92 ft

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

$1325 \times VF 0.66 = 875 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 26 \text{ (gal)}$

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

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

Starting Time: 7:15
Sampling Time: 7:43 Am (0743)
Purging Flow Rate: 2.5 gpm
Did well de-water? _____

Weather Conditions: cloudy
Water Color: clear Odor: none
Sediment Description: _____
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)
7:23	9	7.40	11.33	69.8	4.83	195	
7:26	17	7.30	11.42	69.5			
7:30	26	7.34	11.41	69.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-4	3 Vol 1 plastic	Y	HCL	Seq.	TPHG, BTEX, MTBE
		"		"	Ferrous Iron
					Nitrate
					Phosphate

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5325
Address: 3220 Lakeshore Ave
City: Oakland, CA

Job#: 180061
Date: 3-11-02
Sampler: Joc

Well ID U-5

Well Condition: O.K

Well Diameter 4 in

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

Total Depth 20.04 ft

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

Depth to Water 7.00 ft

$13.04 \times VF \ 0.66 = 8.61 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 26 \text{ (gal.)}$

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

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

Starting Time: 8:43
Sampling Time: 9:15 AM (0915)
Purging Flow Rate: 2 gpm
Did well de-water? _____

Weather Conditions: cloudy
Water Color: clear Odor: mild
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:55</u>	<u>8</u>	<u>7.20</u>	<u>6.78</u>	<u>70.2</u>	<u>3.15</u>	<u>108</u>	
<u>8:59</u>	<u>17</u>	<u>7.18</u>	<u>6.74</u>	<u>69.4</u>			
<u>9:03</u>	<u>26</u>	<u>7.16</u>	<u>6.69</u>	<u>69.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-5</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>1 plastic</u>	<u>"</u>	<u>—</u>	<u>"</u>	<u>Ferrous Iron</u>
					<u>Nitrate</u>
					<u>Phosphate</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 5325
Address: 3220 Lakeshore Ave
City: Oakland, CA

Job#: 180061
Date: 3-11-02
Sampler: Joc

Well ID: U-6

Well Condition: OK

Well Diameter: 2 in

Hydrocarbon Thickness: 0 in Amount Bailed (product/water): 0 (gal)

Total Depth: 2375 ft

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

Depth to Water: 7.32 ft

16.43 x VF 0.17 = 2.79 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: 8:10
 Sampling Time: 8:30 AM (0830)
 Purging Flow Rate: 1 gpm
 Did well de-water? _____

Weather Conditions: cloudy
 Water Color: clear Odor: mild
 Sediment Description: _____
 if yes; Time: _____ Volume: _____ (gal)

Time	Volume (gal)	pH	Conductivity (µmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:12</u>	<u>3</u>	<u>7.47</u>	<u>6.85</u>	<u>69.9</u>	<u>3.03</u>	<u>128</u>	
<u>8:14</u>	<u>55</u>	<u>7.51</u>	<u>6.82</u>	<u>72.1</u>			
<u>8:16</u>	<u>85</u>	<u>7.39</u>	<u>6.69</u>	<u>70.6</u>			
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>U-6</u>	<u>3 vol plastic</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
		<u>"</u>	<u>—</u>	<u>"</u>	<u>Ferrous Iron</u>
					<u>Nitrate</u>
					<u>Phosphate</u>

COMMENTS: _____



26 March, 2002

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

RE Tosco(1)
Sequoia Report L203045

DEANNA H.
3/26/02

Enclosed are the results of analyses for samples received by the laboratory on 03/11/02 18 50 If you have any questions concerning this report, please feel free to contact me

Sincerely,

Wayne Stevenson
Project Manager

CA ELAP Certificate #2360



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

Project Tosco(1)
Project Number Tosco (Unocal) SS#5325, Oakland
Project Manager Deanna Harding

Reported
03/26/02 16 01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L203045-01	Water	03/11/02 00 00	03/11/02 18 50
U-1	L203045-02	Water	03/11/02 10 36	03/11/02 18 50
U-2	L203045-03	Water	03/11/02 10 08	03/11/02 18 50
U-3	L203045-04	Water	03/11/02 07 02	03/11/02 18 50
U-4	L203045-05	Water	03/11/02 07 43	03/11/02 18 50
U-5	L203045-06	Water	03/11/02 09 15	03/11/02 18 50
U-6	L203045-07	Water	03/11/02 08 30	03/11/02 18 50

Sequoia Analytical - San Carlos

Wayne Stevenson, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project Tosco(1)
Project Number Tosco (Unocal) SS#5325, Oakland
Project Manager Deanna Harding

Reported
03/26/02 16 01

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L203045-01) Water Sampled 03/11/02 00:00 Received 03/11/02 18:50									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate a,a,a-Trifluorotoluene</i>		87.0 %	70-130		"	"	"	"	
U-1 (L203045-02) Water Sampled 03/11/02 10:36 Received: 03/11/02 18:50									
Purgeable Hydrocarbons as Gasoline	5500	2000	ug/l	40	2030064	03/23/02	03/23/02	EPA 8021B	P-02
Benzene	28	20	"	"	"	"	"	"	
Toluene	ND	20	"	"	"	"	"	"	
Ethylbenzene	360	20	"	"	"	"	"	"	
Xylenes (total)	690	20	"	"	"	"	"	"	
Methyl tert-butyl ether	6400	200	"	"	"	"	"	"	
<i>Surrogate a,a,a-Trifluorotoluene</i>		110 %	70-130		"	"	"	"	
U-2 (L203045-03) Water Sampled 03/11/02 10:08 Received 03/11/02 18:50									
Purgeable Hydrocarbons as Gasoline	ND	1000	ug/l	20	2030066	03/23/02	03/24/02	EPA 8021B	
Benzene	28	10	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	40	10	"	"	"	"	"	"	
Xylenes (total)	31	10	"	"	"	"	"	"	
Methyl tert-butyl ether	11000	200	"	40	"	"	03/23/02	"	M-04
<i>Surrogate a,a,a-Trifluorotoluene</i>		74.5 %	70-130		"	"	03/24/02	"	

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 Project Tosco(1)
 Project Number Tosco (Unocal) SS#5325, Oakland
 Project Manager Deanna Harding

Reported
 03/26/02 16 01

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (L203045-04) Water Sampled 03/11/02 07:02 Received 03/11/02 18:50									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate a,a,a-Trifluorotoluene</i>		89.3 %	70-130		"	"	"	"	
U-4 (L203045-05) Water Sampled 03/11/02 07:43 Received 03/11/02 18:50									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate a,a,a-Trifluorotoluene</i>		96.4 %	70-130		"	"	"	"	
U-5 (L203045-06) Water Sampled 03/11/02 09:15 Received 03/11/02 18:50									
Purgeable Hydrocarbons as Gasoline	260	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	P-02
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	42	5.0	"	"	"	"	"	"	
<i>Surrogate a,a,a-Trifluorotoluene</i>		92.8 %	70-130		"	"	"	"	



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Reported
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Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-6 (L203045-07) Water Sampled 03/11/02 08:30 Received 03/11/02 18:50									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2030065	03/23/02	03/23/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	720	50	"	10	"	"	03/24/02	"	M-04
Surrogate <i>a,a,a</i> -Trifluorotoluene		93.8%		70-130	"	"	03/23/02	"	



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Reported.
03/26/02 16 01

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L203045-02) Water Sampled 03/11/02 10 36 Received 03/11/02 18 50									
Ethanol	ND	25000	ug/l	50	2030058	03/25/02	03/25/02	EPA 8260B	
1,2-Dibromoethane	ND	100	"	"	"	"	"	"	
1,2-Dichloroethane	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	6300	100	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	100	"	"	"	"	"	"	
Tert-butyl alcohol	ND	5000	"	"	"	"	"	"	
<i>Surrogate 1,2-Dichloroethane-d4</i>		117 %	70-130		"	"	"	"	
<i>Surrogate Toluene-d8</i>		99.2 %	70-130		"	"	"	"	
U-2 (L203045-03) Water Sampled 03/11/02 10 08 Received 03/11/02 18 50									
Ethanol	ND	50000	ug/l	100	2030058	03/25/02	03/25/02	EPA 8260B	
1,2-Dibromoethane	ND	200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	200	"	"	"	"	"	"	
Di-isopropyl ether	ND	200	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	200	"	"	"	"	"	"	
Methyl tert-butyl ether	11000	200	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	200	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10000	"	"	"	"	"	"	
<i>Surrogate 1,2-Dichloroethane-d4</i>		121 %	70-130		"	"	"	"	
<i>Surrogate Toluene-d8</i>		99.0 %	70-130		"	"	"	"	
U-5 (L203045-06) Water Sampled 03/11/02 09 15 Received: 03/11/02 18 50									
Ethanol	ND	500	ug/l	1	2030058	03/25/02	03/25/02	EPA 8260B	
1,2-Dibromoethane	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	47	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate 1,2-Dichloroethane-d4</i>		115 %	70-130		"	"	"	"	
<i>Surrogate Toluene-d8</i>		98.0 %	70-130		"	"	"	"	



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Reported
03/26/02 16 01

Volatile Organic & Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-6 (L203045-07) Water Sampled 03/11/02 08 30 Received 03/11/02 18 50									
Ethanol	ND	2000	ug/l	4	2030058	03/25/02	03/25/02	EPA 8260B	
1,2-Dibromoethane	ND	80	"	"	"	"	"	"	
1,2-Dichloroethane	ND	80	"	"	"	"	"	"	
Di-isopropyl ether	ND	80	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	80	"	"	"	"	"	"	
Methyl tert-butyl ether	760	80	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	80	"	"	"	"	"	"	
Tert-butyl alcohol	ND	400	"	"	"	"	"	"	
<i>Surrogate 1,2-Dichloroethane-d4</i>		<i>117 %</i>		<i>70-130</i>	"	"	"	"	
<i>Surrogate Toluene-d8</i>		<i>98.6 %</i>		<i>70-130</i>	"	"	"	"	



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**Conventional Chemistry Parameters by APHA/EPA Methods
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L203045-02) Water Sampled 03/11/02 10:36 Received 03/11/02 18:50									
Phosphate (Ortho)	0.11	0.010	mg/l	1	2C20018	03/11/02	03/11/02	EPA 365.3	
U-2 (L203045-03) Water Sampled 03/11/02 10:08 Received 03/11/02 18:50									
Phosphate (Ortho)	0.65	0.015	mg/l	1.5	2C20018	03/11/02	03/11/02	EPA 365.3	
U-3 (L203045-04) Water Sampled 03/11/02 07:02 Received 03/11/02 18:50									
Phosphate (Ortho)	0.14	0.010	mg/l	1	2C20018	03/11/02	03/11/02	EPA 365.3	
U-4 (L203045-05) Water Sampled 03/11/02 07:43 Received 03/11/02 18:50									
Phosphate (Ortho)	0.14	0.010	mg/l	1	2C20018	03/11/02	03/11/02	EPA 365.3	
U-5 (L203045-06) Water Sampled 03/11/02 09:15 Received 03/11/02 18:50									
Phosphate (Ortho)	0.52	0.015	mg/l	1.5	2C20018	03/11/02	03/11/02	EPA 365.3	
U-6 (L203045-07) Water Sampled 03/11/02 08:30 Received 03/11/02 18:50									
Phosphate (Ortho)	0.089	0.010	mg/l	1	2C20018	03/11/02	03/11/02	EPA 365.3	



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**Ferrous Iron by Hach method 8146/1;10 Phenanthroline Method
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L203045-02) Water Sampled 03/11/02 10 36 Received 03/11/02 18:50									
Ferrous Iron	15	2.5	mg/l	25	2C20013	03/11/02	03/20/02	Hach Co 8146	
U-2 (L203045-03) Water Sampled 03/11/02 10 08 Received: 03/11/02 18:50									
Ferrous Iron	ND	0.10	mg/l	1	2C20013	03/11/02	03/20/02	Hach Co 8146	
U-3 (L203045-04) Water Sampled 03/11/02 07 02 Received 03/11/02 18:50									
Ferrous Iron	ND	0.10	mg/l	1	2C20013	03/11/02	03/20/02	Hach Co 8146	
U-4 (L203045-05) Water Sampled 03/11/02 07 43 Received 03/11/02 18 50									
Ferrous Iron	ND	0.10	mg/l	1	2C20013	03/11/02	03/20/02	Hach Co 8146	
U-5 (L203045-06) Water Sampled 03/11/02 09:15 Received 03/11/02 18:50									
Ferrous Iron	0.10	0.10	mg/l	1	2C20013	03/11/02	03/20/02	Hach Co 8146	
U-6 (L203045-07) Water Sampled 03/11/02 08 30 Received 03/11/02 18:50									
Ferrous Iron	1.2	0.50	mg/l	5	2C20013	03/11/02	03/20/02	Hach Co 8146	



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Anions by EPA Method 300.0
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L203045-02) Water Sampled 03/11/02 10 36 Received 03/11/02 18 50									
Nitrate as NO3	ND	0.50	mg/l	1	2C15007	03/12/02	03/12/02	EPA 300.0	
U-2 (L203045-03) Water Sampled: 03/11/02 10 08 Received 03/11/02 18:50									
Nitrate as NO3	ND	0.50	mg/l	1	2C15007	03/12/02	03/12/02	EPA 300.0	
U-3 (L203045-04) Water Sampled 03/11/02 07-02 Received. 03/11/02 18 50									
Nitrate as NO3	30	5.0	mg/l	10	2C15007	03/12/02	03/12/02	EPA 300.0	
U-4 (L203045-05) Water Sampled 03/11/02 07 43 Received: 03/11/02 18 50									
Nitrate as NO3	31	5.0	mg/l	10	2C15007	03/12/02	03/12/02	EPA 300.0	
U-5 (L203045-06) Water Sampled 03/11/02 09 15 Received: 03/11/02 18 50									
Nitrate as NO3	ND	0.50	mg/l	1	2C15007	03/12/02	03/12/02	EPA 300.0	
U-6 (L203045-07) Water Sampled 03/11/02 08:30 Received 03/11/02 18-50									
Nitrate as NO3	ND	0.50	mg/l	1	2C15007	03/12/02	03/12/02	EPA 300.0	

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Reported
 03/26/02 16 01

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2030064 - EPA 5030B (P/T)
Blank (2030064-BLK1)

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate a,a,a-Trifluorotoluene</i>	10.6		"	10.0		106	70-130			

LCS (2030064-BS1)

Prepared & Analyzed 03/23/02

Benzene	9.79	0.50	ug/l	10.0		97.9	70-130			
Toluene	10.6	0.50	"	10.0		106	70-130			
Ethylbenzene	11.3	0.50	"	10.0		113	70-130			
Xylenes (total)	34.5	0.50	"	30.0		115	70-130			
<i>Surrogate a,a,a-Trifluorotoluene</i>	11.3		"	10.0		113	70-130			

LCS (2030064-BS2)

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	275	50	ug/l	250		110	70-130			
<i>Surrogate a,a,a-Trifluorotoluene</i>	13.0		"	10.0		130	70-130			

Matrix Spike (2030064-MS1)

Source L203044-02

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	250	50	ug/l	250	ND	100	60-140			
<i>Surrogate a,a,a-Trifluorotoluene</i>	12.0		"	10.0		120	70-130			

Matrix Spike Dup (2030064-MSD1)

Source L203044-02

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	262	50	ug/l	250	ND	105	60-140	4.69	25	
<i>Surrogate a,a,a-Trifluorotoluene</i>	10.9		"	10.0		109	70-130			

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 Project Tosco(1)
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Reported
 03/26/02 16 01

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2030065 - EPA 5030B (P/T)
Blank (2030065-BLK1)

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate a,a,a-Trifluorotoluene	9.56		"	10.0		95.6	70-130			

LCS (2030065-BS1)

Prepared & Analyzed 03/23/02

Benzene	7.48	0.50	ug/l	10.0		74.8	70-130			
Toluene	7.48	0.50	"	10.0		74.8	70-130			
Ethylbenzene	8.03	0.50	"	10.0		80.3	70-130			
Xylenes (total)	24.5	0.50	"	30.0		81.7	70-130			
Surrogate a,a,a-Trifluorotoluene	9.87		"	10.0		98.7	70-130			

LCS (2030065-BS2)

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	255	50	ug/l	250		102	70-130			
Surrogate a,a,a-Trifluorotoluene	8.59		"	10.0		85.9	70-130			

Matrix Spike (2030065-MS1)

Source L203053-01

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	253	50	ug/l	250	ND	101	60-140			
Surrogate a,a,a-Trifluorotoluene	10.6		"	10.0		106	70-130			

Matrix Spike Dup (2030065-MSD1)

Source L203053-01

Prepared & Analyzed 03/23/02

Purgeable Hydrocarbons as Gasoline	259	50	ug/l	250	ND	104	60-140	2.34	25	
Surrogate a,a,a-Trifluorotoluene	10.0		"	10.0		100	70-130			

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Reported
 03/26/02 16:01

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2030066 - EPA 5030B (P/T)
Blank (2030066-BLK1)

Prepared & Analyzed 03/24/02

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate a,a-Trifluorotoluene</i>	10.6		"	10.0		106	70-130			

LCS (2030066-BS1)

Prepared & Analyzed 03/24/02

Benzene	8.88	0.50	ug/l	10.0		88.8	70-130			
Toluene	9.66	0.50	"	10.0		96.6	70-130			
Ethylbenzene	10.5	0.50	"	10.0		105	70-130			
Xylenes (total)	31.9	0.50	"	30.0		106	70-130			
<i>Surrogate a,a-Trifluorotoluene</i>	11.7		"	10.0		117	70-130			

LCS (2030066-BS2)

Prepared & Analyzed 03/24/02

Purgeable Hydrocarbons as Gasoline	270	50	ug/l	250		108	70-130			
<i>Surrogate a,a-Trifluorotoluene</i>	11.2		"	10.0		112	70-130			



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Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2030058 - EPA 5030B [P/T]

Blank (2030058-BLK1)			Prepared & Analyzed 03/21/02							
Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	20	"							
1,2-Dichloroethane	ND	20	"							
Di-isopropyl ether	ND	20	"							
Ethyl tert-butyl ether	ND	20	"							
Methyl tert-butyl ether	ND	20	"							
Tert-amyl methyl ether	ND	20	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate 1,2-Dichloroethane-d4</i>	55.8		"	50.0		112	70-130			
<i>Surrogate Toluene-d8</i>	51.2		"	50.0		102	70-130			

Blank (2030058-BLK2)			Prepared & Analyzed 03/22/02							
Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	20	"							
1,2-Dichloroethane	ND	20	"							
Di-isopropyl ether	ND	20	"							
Ethyl tert-butyl ether	ND	20	"							
Methyl tert-butyl ether	ND	20	"							
Tert-amyl methyl ether	ND	20	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate 1,2-Dichloroethane-d4</i>	57.2		"	50.0		114	70-130			
<i>Surrogate Toluene-d8</i>	52.5		"	50.0		105	70-130			

Blank (2030058-BLK3)			Prepared & Analyzed 03/25/02							
Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	20	"							
1,2-Dichloroethane	ND	20	"							
Di-isopropyl ether	ND	20	"							
Ethyl tert-butyl ether	ND	20	"							
Methyl tert-butyl ether	ND	20	"							
Tert-amyl methyl ether	ND	20	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate 1,2-Dichloroethane-d4</i>	53.1		"	50.0		106	70-130			
<i>Surrogate Toluene-d8</i>	48.4		"	50.0		96.8	70-130			

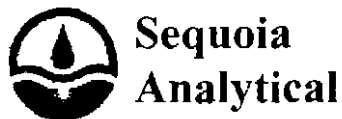
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 Dublin CA, 94568

 Project Tosco(1)
 Project Number Tosco (Unocal) SS#5325, Oakland
 Project Manager Deanna Harding

Reported
 03/26/02 16 01

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%RLC	%REC Limits	RPD	RPD Limit	Notes
Batch 2030058 - EPA 5030B [P/T]										
LCS (2030058-BS1)										
Prepared & Analyzed 03/21/02										
Methyl tert-butyl ether	41.4	2.0	ug/l	50.0		82.8	70-130			
Surrogate 1,2-Dichloroethane-d4	55.5		"	50.0		111	70-130			
Surrogate Toluene-d8	50.0		"	50.0		100	70-130			
LCS (2030058-BS2)										
Prepared & Analyzed 03/22/02										
Methyl tert-butyl ether	39.0	2.0	ug/l	50.0		78.0	70-130			
Surrogate 1,2-Dichloroethane-d4	58.7		"	50.0		117	70-130			
Surrogate Toluene-d8	50.3		"	50.0		101	70-130			
LCS (2030058-BS3)										
Prepared & Analyzed 03/25/02										
Methyl tert-butyl ether	44.7	2.0	ug/l	50.0		89.4	70-130			
Surrogate 1,2-Dichloroethane-d4	54.7		"	50.0		109	70-130			
Surrogate Toluene-d8	47.4		"	50.0		94.8	70-130			
Matrix Spike (2030058-MS1)										
Source L203082-04 Prepared & Analyzed 03/21/02										
Methyl tert-butyl ether	44.7	2.0	ug/l	50.0	ND	89.4	60-140			
Surrogate 1,2-Dichloroethane-d4	57.9		"	50.0		116	70-130			
Surrogate Toluene-d8	50.5		"	50.0		101	70-130			
Matrix Spike Dup (2030058-MSD1)										
Source L203082-04 Prepared & Analyzed 03/21/02										
Methyl tert-butyl ether	43.9	2.0	ug/l	50.0	ND	87.8	60-140	1.81	25	
Surrogate 1,2-Dichloroethane-d4	58.9		"	50.0		118	70-130			
Surrogate Toluene-d8	50.0		"	50.0		100	70-130			



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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2C20018 - General Preparation										
Blank (2C20018-BLK1) Prepared & Analyzed 03/11/02										
Phosphate (Ortho)	ND	0.010	mg/l							
LCS (2C20018-BS1) Prepared & Analyzed 03/11/02										
Phosphate (Ortho)	0.260	0.010	mg/l	0.250		104	80-120			
Matrix Spike (2C20018-MS1) Source L203045-04 Prepared & Analyzed 03/11/02										
Phosphate (Ortho)	0.395	0.010	mg/l	0.250	0.14	102	75-125			
Matrix Spike Dup (2C20018-MSD1) Source L203045-04 Prepared & Analyzed 03/11/02										
Phosphate (Ortho)	0.399	0.010	mg/l	0.250	0.14	104	75-125	1.01	20	



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**Ferrous Iron by Hach method 8146/1;10 Phenanthroline Method - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2C20013 - General Preparation										
Blank (2C20013-BLK1)					Prepared 03/11/02 Analyzed 03/20/02					
Ferrous Iron	ND	0.10	mg/l							
LCS (2C20013-BS1)					Prepared 03/11/02 Analyzed 03/20/02					
Ferrous Iron	0.414	0.10	mg/l	0.400	ND	104	90-110			
Matrix Spike (2C20013-MS1)					Source L203045-04 Prepared 03/11/02 Analyzed 03/20/02					
Ferrous Iron	0.424	0.10	mg/l	0.400	ND	106	80-120			
Matrix Spike Dup (2C20013-MSD1)					Source L203045-04 Prepared 03/11/02 Analyzed 03/20/02					
Ferrous Iron	0.431	0.10	mg/l	0.400	ND	108	80-120	1.64	20	

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Anions by EPA Method 300.0 - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2C15007 - General Preparation										
Blank (2C15007-BLK1)				Prepared & Analyzed 03/12/02						
Nitrate as NO3	ND	0.50	mg/l							
LCS (2C15007-BS1)				Prepared & Analyzed 03/12/02						
Nitrate as NO3	9.69	0.50	mg/l	10.0		96.9	90-110			
Matrix Spike (2C15007-MS1)				Source: L203045-04 Prepared & Analyzed 03/12/02						
Nitrate as NO3	141	5.0	mg/l	100	30	111	80-120			
Matrix Spike Dup (2C15007-MSD1)				Source: L203045-04 Prepared & Analyzed 03/12/02						
Nitrate as NO3	137	5.0	mg/l	100	30	107	80-120	2.88	20	



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Notes and Definitions

M-04 MTBE was reported from second analysis
P-02 Chromatogram Pattern Weathered Gasoline C6-C12
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference