

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

RECEIVED

April 18, 2001 G-R Job #180061

11:00 am, Apr 02, 2009

Alameda County
Environmental Health

RE: First Quarter Event of March 7, 2001

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

Hagop Kevork P.E. No. C55734

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map Groundwater Monitoring Data and Analytical Results

Table 1: Table 2:

Groundwater Monitoring Data and Analytical Results

Groundwater Analytical Results – Oxygenate Compounds

Table 3:

Groundwater Analytical Results
Dissolved Oxygen Concentrations

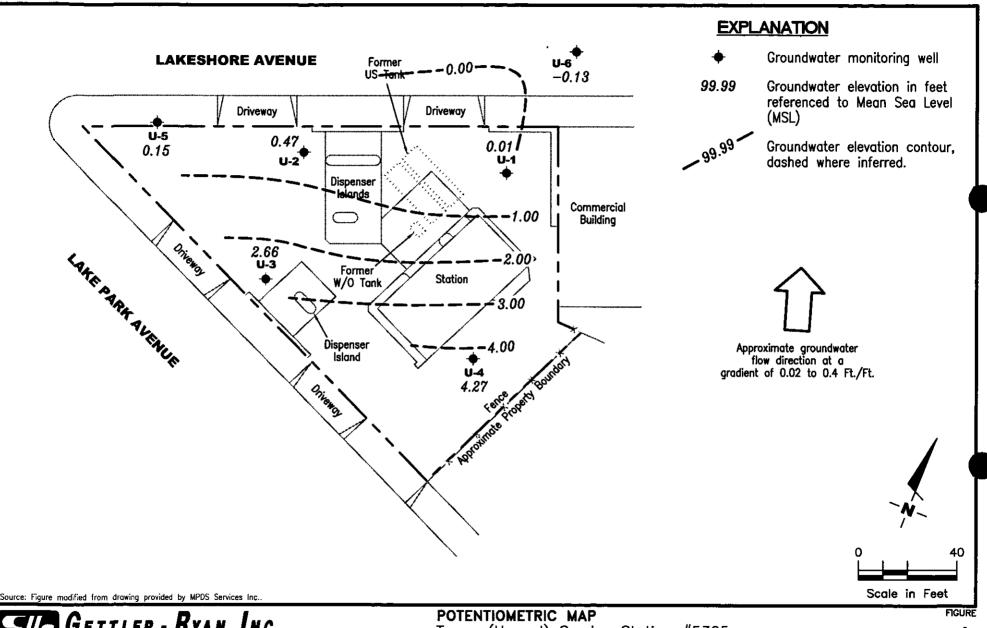
Table 4: Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

5325.qml



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

REVIEWED BY

Tosco (Unocal) Service Station #5325 3220 Lakeshore Avenue

Oakland, California

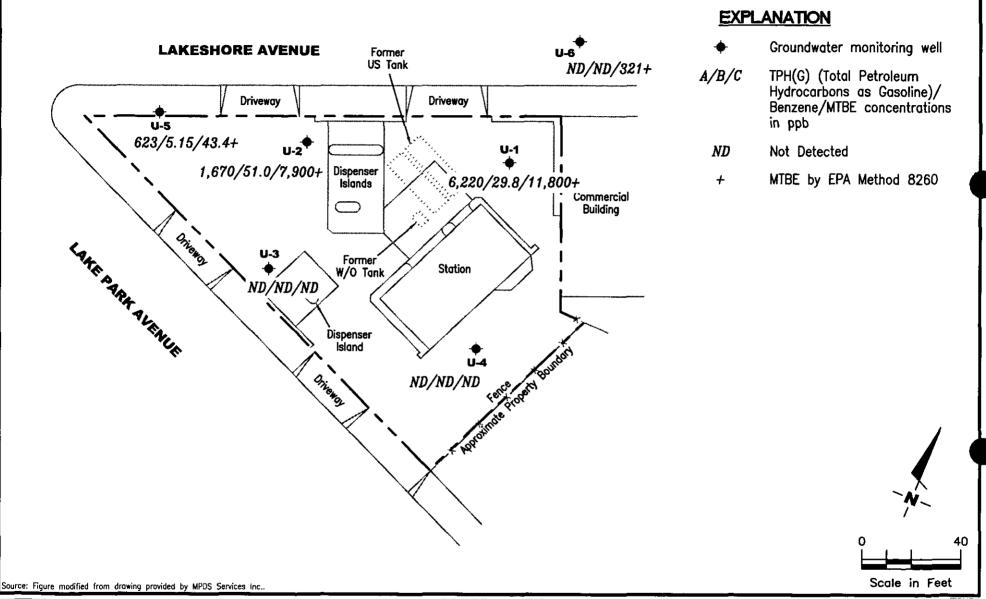
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March 7, 2001

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PROJECT NUMBER

180061

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CONCENTRATION MAP

Tosco (Unocal) Service Station #5325 3220 Lakeshore Avenue

Oakland, California

PROJECT NUMBER REVIEWED BY DATE REVISED DATE
180061 March 7, 2001

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FIGURE

2

Table 1
Groundwater Monitoring Data and Analytical Results

				Product						
WELL ID/ TOC*	DATE	DTW	GWE	Thickness		В	T	E	X	MTBE
TOC.		(ft.)	(ft.)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-1	08/10/90				690	20		0.1		
~ 1	01/07/91					38	75	8.6	130	
	04/01/91				250	22	16	4.2	17	
	07/03/91				160	13	8.6	1.0	15	
					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 ³	ND	ND	ND	ND	
	02/16/94	8.54	-3.22	0.00	6,800⁴	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	$6,100^3$	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 SAMPLE	D DUE TO THE PR	ESENCE OF FREE			
	06/21/95	9.30	-0.69**	0.20		D DUE TO THE PR				
	09/19/95	9.29	-0.53**	0.40		D DUE TO THE PR				
	12/19/95	8.98	-0.50**	0.03		D DUE TO THE PR				
	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 SAMPLE	D DUE TO THE PR				ND
	12/09/96	6.88	1.60**	0.03		D DUE TO THE PR				
	03/14/97	9.02	-0.15**	0.55		D DUE TO THE PR				
	06/30/97	8.41	0.07**	0.02		D DUE TO THE PR				
	09/19/97	8.56	-0.08**	0.02		D DUE TO THE PR				
	12/12/97	8.58	-0.11**	0.01		D DUE TO THE PR				
	03/03/98 ¹⁷	8.23	0.26**	0.04		D DUE TO THE PR				
	06/15/98	8.37	0.09	Sheen	52,000	ND ⁷	900	1,800	13,000	ND ⁷

Table 1
Groundwater Monitoring Data and Analytical Results

ang time sa			***	Product						
WELL ID/	DATE	DTW	GWE	Thickness	TPH-G	В	T	E	X	MTBE
TOC*		(ft.)	(ft.)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
T T 1	00/20/02	0.04	0.40	C 1	1 000 0008	ND7	• • • • •			
U-1	09/30/98	8.94	-0.48	Sheen	1,000,0008	ND ⁷	2,600	13,000	83,000	4,800
(cont)	12/28/98	8.57	-0.11	<0.01	1,100,0009	ND ⁷	1,600	8,600	71,000	5,700
	03/22/99	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 ¹⁶
	09/08/99	9.53	-1.07	0.00	55,00011	217	202	745	14,300	6,890/6,690 ¹⁰
	12/07/99	9.67	-1.21	0.00	41,200 ¹³	89.3	ND ⁷	385	6,930	15,800/14,700 ¹²
	03/13/00	8.44	0.02	0.00	48,00011	490	610	2,400	10,000	22,000/23,000 ¹⁰
	06/21/00	9.45	-0.99	0.00	37,000 ¹¹	200	ND^7	1,200	7,200	15,000/20,000 ^{to}
	09/27/00	9.29	-0.83	0.00	15,00011	92	ND^7	540	2,800	74,000/83,000 ¹⁵
	12/12/00	9.37	-0.91	0.00	50,000 ¹⁶	ND^7	ND^7	250	1,900	12,000/15,000 ^{t2}
	03/07/01	8.45	0.01	0.00	6,22013	29.8	10.4	96.3	638	11,200/11,800 ¹⁰
U-2	08/10/90	••			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	
	05/07/93				17,000	1,800	660	1,700	4,000	
	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	

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/ TOC*	DATE	DTW (fi.)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-2	06/21/95	6.98	0.64	0.00	16,000	2,100	ND	1,800	1,700	<u></u>
(cont)	09/19/95	7.70	-0.08	0.00	3,000	610	ND	78	240	5
(cont)	12/19/95	7.70	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	7.41	-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 D					
	06/30/97	6.19	1.43	<0.01	NOT SAMPLED D				~-	
	09/19/97	7.31	0.31	<0.01	NOT SAMPLED D				#-	
	12/12/97	6.75	0.88**	<0.01	NOT SAMPLED D					
	03/03/98	6.36	1.26	Sheen	80,000	3,000	1,100	820	16,000	16,000
	05/05/98	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	7.17	0.43	0.00	63,000	590	160	320	5,600	16,000
	03/22/99	6.82	0.30	0.00	28,000	1,100	ND ⁷	360	2,900	25,000
	05/22/99	7.51	0.80	0.00	21,000	110	190	310	2,600	7,900/7,800
	09/08/99	7.31 8.16	-0.54	0.00	23,300 ¹¹	477	138	286	4,110	16,400/15,300
	12/07/99	8.16	-0.54 -0.69	0.00	4,840 ¹³	17.2	ND ⁷	ND ⁷	157	14,900/15,600
		6.69	0.93	0.00	11,000 ¹¹	380	160	ND ⁷	2,100	22,000/26,000
	03/13/00	7.67	-0.05	0.00	9,100 ¹¹	22	ND ⁷	ND ⁷	800	16,000/22,000
	06/21/00	7.44	-0.03 0.18	0.00	2,900 ¹¹	43	ND ⁷	ND ⁷	39	20,000/26,000
	09/27/00		0.18	0.00	3,600 ¹¹	17	ND ⁷	ND ⁷	87	8,000/7,800 ¹
	12/12/00	7.51		0.00 0.00	1,670 ¹³	51.0	ND ⁷	7.20	19.5	5,930/7,900 ¹
	03/07/01	7.15	0.47	0.00	1,070	51.0	ND	7.20	19.5	5,750/ 7,700
U-3	08/10/90				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	

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	GWE	Product Thickness	TPH-G	В	т	E	X	МТВЕ
TOC*	DAIL	(ft.)	(fi.)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-3	02/12/92				ND	ND	ND	ND	ND	
(cont)	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
	12/09/96	10.12	0.86	0.00	ND	ND	ND	ND	ND	29
	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

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/ TOC*	DATE	DTW (ft.)	GWE	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
100	<u> (8. 8. 78. january 1 m. 6.)</u>	<u> </u>		<u> </u>		<u> </u>		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<u> </u>
U-3	12/07/99	11.26	-0.28	0.00	ND	ND	ND	ND	ND	ND
(cont)	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
U-4										
11.15	06/22/94	10.16	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	
	12/19/95	9.98	1.17	0.00	ND	ND	ND	ND	ND	
	03/18/96	9.66	1.49	0.00	ND	ND	ŃД	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

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH-G	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-4	12/07/99	10.05	1.10	0.00	ND	ND	ND	ND	ND	ND
cont)	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
U-5										
6.98	06/22/94	6.83	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	280/23912

Table 1
Groundwater Monitoring Data and Analytical Results

						ina, Camorna				
WELL ID/ TOC*	DATE	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	ТРН-G <i>(ppb)</i>	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
								***	Andrew M. B. Colonia	
U-5	12/07/99	7.67	-0.69	0.00	94911	9.26	ND^7	11.2	22.7	235/30112
(cont)	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	70011	4.0	ND	0.99	4.0	120/140 ¹⁰
	09/27/00	7.45	-0.47	0.00	40011	1.9	ND	ND	1.5	160/250 ¹⁵
	12/12/00	7.68	-0.70	0.00	77011	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
U-6										
7.14	06/22/94	7.14	0.00	0.00	ND	ND	ND	ND	ND	
	09/22/94	7.34	-0.20	0.00	130	1.3	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	NĎ	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	1,000/85010
	09/08/99	7.95	-0.81	0.00	ND	ND	ND	ND	ND	851/1,040 ¹⁰

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (fi.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-6	12/07/99	8.10	-0.96	0.00	ND	ND	ND	ND	ND	1,140/1,150 ¹²
(cont)	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	400/59010
	09/27/00	7.68	-0.54	0.00	ND	ND	ND	ND	ND	2,500/2,800 ¹⁵
	12/12/00	7.74	-0.60	0.00	ND	ND	ND	ND	ND	590/580 ¹²
	03/0701	7.27	-0.13	0.00	ND	ND	ND	ND	ND	310/32112
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

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.

TOC = 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

GWE = Groundwater Elevation

X = Xylenes

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tertiary butyl ether

- * 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)].
- 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.
- Laboratory report indicates the hydrocarbons detected did not appear to be gasoline
- Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 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.
- Detection limit raised. Refer to analytical reports.
- 8 Laboratory report indicates unidentified hydrocarbons C6-C12.
- Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- 10 MTBE by EPA Method 8260.
- Laboratory report indicates gasoline C6-C12.
- MTBE by EPA Method 8260 analyzed past the recommended holding time.
- 3 Laboratory report indicates weathered gasoline C6-C12.
- Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.
- Laboratory report indicates sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.
- Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons >C10.
- 17 Skimmer present in well.

Table 2
Groundwater Analytical Results - Oxygenate Compounds

ELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (<i>ppb</i>)	EDB (ppb)
-1	09/27/00 ¹		ND^2	83,000	ND^2	ND^2	ND^2	ND ²	ND ²
	12/12/00 03/07/01	ND ²	ND ²	15,000 ³ 11,800	ND ²	ND ²	ND ²	ND ²	ND^2
J-2	09/27/00		**	26,000 ¹		<u></u>	 	 	
12/12/00 03/07/01	ND ²	ND ²	7,800 ³ 7,900	ND ²	ND^2	ND^2	ND ²	ND ²	
-5	09/27/00			250 ^t			 	<i>y-</i> 	
	12/12/00 03/07/01	ND	ND	13 ³ 43.4	ND	ND	ND	ND	ND
J- 6	09/27/00			2,800 ^t				<u>.</u> .	
	12/12/00 03/07/01 ³	ND ²	ND ²	580 ³ 321	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

EXPLANATIONS:

ANALYTICAL METHOD:

TBA = Tertiary butyl alcohol

EPA Method 8260 for Oxygenate Compounds

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

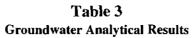
(ppb) = Parts per billion

ND = Not Detected

Laboratory report indicates sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.

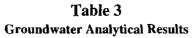
² Detection limit raised. Refer to analytical reports.

³ Laboratory report indicates sample was analyzed outside the EPA recommended holding time.





		Ferrous Iron	Nitrate as NO3	Phosphate as PO4	Redox Potential
WELL ID	DATE	(ppm)	(ррт)	(ppm)	mV^2
U-1	06/15/98	39	ND	ND	382 ²
0-1	09/30/98	17	ND	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}
		1.80	ND ¹	ND ¹	85 ³
	09/08/99		ND ¹	17.0	404 ³
	12/07/99	5.70			² 117/262 ³
	03/13/00	8.0	0.18 ND ¹	ND	148 ²
	06/21/00	9.3		ND ¹	148 119 ²
	09/27/00	2.8	ND ¹	18.4	
	12/12/00	0.49	ND	16.0	131 ²
	03/07/01	0.483	2.64	6.89	125 ²
U-2	03/03/98	25	ND	ND	369 ²
U-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 ^t	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 ^t	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
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}
	06/09/99	ND	26	1.2	350^{3}
	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	² 226/307 ³
	06/21/00	0.20	32	ND^1	225 ²
	09/27/00	ND	34	15.7	2112
	12/12/00	ND	31	ND^1	246 ²
	03/07/01	ND	36.5	0.443	251 ²

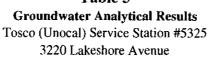




		Ferrous Iron	Nitrate as NO3	Phosphate as PO4	Redox Potential
WELL ID	DATE	(ppm)	(ppm)	(ppm)	mV'
	0.5(20.10=	0.40			2003
U-4	06/30/97	0.13	35	0.52	200^{3} 45^{3}
	09/19/97	0.35	30	ND	
	12/12/97	0.68	31	0.73	380^3
	03/03/98	0.018	3.2	ND	284 ² 256 ²
	06/15/98	0.14	33	ND	
	09/30/98	0.049	31	ND	276 ²
	12/28/98	0.36	31	ND	280^2 320^3
	03/22/99	ND	30	0.14	
	06/09/99	ND	35	0.91	340 ³
	09/08/99	ND	24	ND ^t	391 ³
	12/07/99	ND	27.7	ND ¹	478 ³
	03/13/00	ND	33	ND	² 219/244 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	2102
	03/07/01	ND	33.9	0.226	233 ²
U-5	06/30/97	16	ND	ND	160 ³
0-5	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 ND	333 ²
	09/30/98	17	ND	ND	318 ²
	12/28/98	17	6.6	ND ND	305^{2}
	03/22/99	0.12	ND	2.4	340 ³
	06/09/99	0.23	ND	ND	320^{3}
	09/08/99	2.10	ND ¹	ND ¹	335 ³
	12/07/99	0.310	ND ¹	ND ¹	408 ³
	03/13/00	0.33	0.16	ND	² 111/264 ³
	06/21/00	0.15	ND ¹	ND ¹	159 ²
	09/27/00	0.13	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	1412
	00/07/02	1.07			
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}

Table 3

Groundwater Analytical Results



Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV'
U-6	09/08/99	0.140	5.59	ND ¹	305^{3}
(cont)	12/07/99	0.260	ND^1	ND^1	443 ³
	03/13/00	0.79	0.26	ND	² 68/222 ³
	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

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

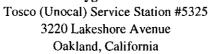
Detection limit raised. Refer to analytical reports.

Field measurement.

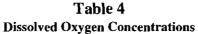
Analyzed by laboratory.



Dissolved Oxygen Concentrations



WELL ID	DATE	Before Purge
		(mg/L)
TT 4	10/07/00	1.26
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
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
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
U-4	06/30/97	5.4
0-4	09/19/97	5.4 5.1
	12/12/97	
	03/03/98	3.11
		2.94
	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



Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue Oakland, California

WELL ID	DATE	Before Purge (mg/L)
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
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
	09/08/99	3.12
	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

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 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.

Client/ Facility #_53	325		Job	#: _1	80061		
	220 Lakesh	oce Ave	Date	· "	3-7-01		
City: <u>Oa</u>				npler:		-	
City:	FIGNO		San	ipiei			
Weil ID	<u>U-1</u>	Well	Condition: _	0.	٠ -		
Well Diameter	3in.		ocarbon	•	Amount Ba		
Total Depth	19.68	Volu	ness:	<u>in_</u> _ 0.17	(product/war 3" = 0.38		(gal.)
Depth to Water	8:45 m		or (VF)	6* ≈		12* = 5.80	
	11.23 x	VF 0.38	= 4.27 x 3 (cas	e volume) :	≃ Estimated Pu	ırge Volume:	13 (gal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	· ·	Sampling Equipmen	at: Di Bi Pi ·G	isposable Ba ailer ressure Baile rab Sample	_	y
Starting Time: Sampling Time: Purging Flow Ra	12'. 15 12'. 3	78.M 1	Weather Conditi Water Color: Sediment Descri	cle	ar '	Odor: 4	<u>e S</u>
Did well de-wat	er?	I	f yes; Time: _		, Volum	e:	(gai.)
Time	Volume pH (gal.)		activity Tem	perature -C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:22	4 7.17	1.2	7 6	$\frac{q}{\alpha}$	1.91	125	
12:24	3 7.10 13 7.16		26 6 30 6	9.6		`	r
12:26	15 _7.10			' 			 -
	· · · · · · · · · · · · · · · · · · ·	LABORA	TORY INFORM	ATION			
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE		DRATORY	ANALY	
U-1	3 YOA Iplastic	Y	HCL_	Se	4'	TPHG, BT	
		11		+		Nitrate	
						phospha	
COMMENTS:	NO FP fo	از لمدر	ck: ware	· C .			
COMMENTS:	TO TO	<u> </u>					

O			D DATA OTTE	• •			
Client/ Facility #_ 53:	25		Job#	<i>t</i> :	80061		
Address: 32	20 Lakesh	oce Av	<u>د -</u> Date	: _	3-7-01		
City: Oak	land		Sam	pler: _	Joe		
Well ID	<u>U-2</u>	Well	Condition: _	0.	k ·		·
Well Diameter		-	ocarbon kness:	in_	Amount B		(nal.)
Total Depth Depth to Water	7.15 #	Vol		0.17	3" = 0.3: 1.50		= 0.66
Purge	12.4) x Disposable Bailer	VF 0.38	= 4.73 x 3 (case	volume)	= Estimated P	urge Volume:	4. 5 (gal.)
Equipment:	Bailer Stack Suction Grundfos Other:	· · · · · · · · · · · · · · · · · · ·	Equipment	8 9 .0	isposable Ba ailer ressure Baile irab Sample		2
Starting Time: Sampling Time: Purging Flow Rate	1: A: 12:05	Pin	Weather Condition Water Color: Sediment Descri	<u>cle</u>	ear '		<u> </u>
Did well de-water	, -		If yes; Time: _			ne:	(gal.)
	oiume pH (gal.)	Cond µmh	uctivity () Temp	erature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
	5 7.37 10 7.30 14.5 7.15	3.	14 71 24 70 26 70	.3	2:21	<u>148</u> 	
SAMPLE ID	(#) - CONTAINER	LABOR	ATORY INFORM		ORATORY	ANAL	YSES
U-2	3404	Y	HCL	Se	29.	TPHG, BT	EX, MTBE
	Iplastic	-11		"		Ferrous I	
				-	· · · · ·	Nitrate Phospha	
COMMENTS:						1 Mostvie	

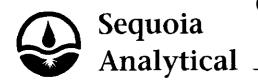
Client/ Facility #_53	25		Job i	#: <u>13</u>	80061		
Address: 32	.20 Lakesho	ore A	<u>ve </u>	: _3	-7-01		
City: Oak				pler:	Toe		
Well ID	<u>U-3</u>	We	Il Condition:	o.k			
Well Diameter	3 _{in.}	-	irocarbon ckness:		Amount Ba	ailed	(00)
Total Depth	19.36 #			0.17			= 0.66
Depth to Water	8.32 4	Fa	ctor (VF)			12" = 5.80	
Purge Equipment:	Disposable Bailer	vf <u>0.38</u>	Sampling Equipmen		Estimated Poposable Ba		
Equipment.	Stack Suction Grundfos Other:	· ·	Equipment	Bai Pre	ler ssure Baile b Sample		,
	9'.30 9'.30	Am	Weather Condition Water Color: Sediment Descri	<u> </u>	· ·	Odor:	
Did well de-wate	er?	-	If yes; Time: _	•	Volum	ne:	(gal.)
	Volume pH (gal.)		ductivity () Temp	perature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:10	4 7.66		51 71		5.16	251	<u> </u>
9:13	7.60		.37 <u>70</u> 1.32 <u>70</u>				
		LARO	RATORY INFORM	ATION			
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV, TYPE		RATORY	ANAL	YSES
U-3	3404	Υ	HCL	Se	7 ·	TPHG, BT	
	lplastic	11	=	"		Ferrous 3	
						Nitrate	
<u></u>			<u> </u>	1		1 phospha	<u>re</u>
COMMENTS: _							
	—· ——•						

Facility # \$325	
Well ID Well Diameter Well Diameter Total Depth Depth to Water Disposable Bailer Equipment: Bailer Stack Sundfos Other: Starting Time: Sampling Time: Purging Flow Rate: Did well de-water? Time Volume Purging Flow Rate: Did well de-water? Time Volume Purging Flow Rate: Did well de-water? Time Volume PH Conductivity IN Temperature (gal.) PH Conductivity IN Temperature Diamos/can X Factor (VF) Sampling Time: Other: Diamos/can X Factor (VF) Sediment Description: Fyes; Time: Volume: Diamos/can X Factor (VF) Sediment Description: Fyes; Time: Volume: Diamos/can X Factor (VF) Sediment Description: Fyes; Time: Volume: Diamos/can X Factor (VF) Sediment Description: Sediment Description: Fyes; Time: Volume: Diamos/can X Factor (VF) Sediment Description: Fyes; Time:	
Well Diameter A	
Total Depth	
Total Depth	(nal_l
Depth to Water 13.27 X VF 0.66 = 8.76 X 3 (case volume) = Estimated Purge Volume:	· = 0.66
Purge Disposable Bailer Sampling Equipment: Disposable Bailer Stack Bailer Pressure Bailer Pressure Bailer Grundfos Other: Other	
Equipment: Bailer Stack Suction Grundfos Other: Other: Other: Starting Time: 9.40 Weather Conditions: Cloudy Sampling Time: 10.084 Water Color: Clear Odor: A Purging Flow Rate: 2 gpm. Sediment Description: Did well de-water? If yes; Time: Volume: Time Volume pH Conductivity 10 Temperature D.O. ORP (mg/L) (m/V) 9:50 9 7.51 10.36 19.2 4.97 2.33 9:54 18 7.44 10.45 69.8 9:58 27 7.39 10.49 69.6 LABORATORY INFORMATION SAMPLE ID (#) - CONTAINER REFRIG. PRESERY. TYPE LABORATORY ANAL	27 (gal.)
Sampling Time: 10:084.44 Water Color: Clear Odor: M. Purging Flow Rate: 2 gpm. Sediment Description: Did well de-water? If yes; Time: Volume: D.O. ORP (gal.) pmhos/cm X F (mg/L) (mV) 9:50 9 7.51 10.36 69.2 4.97 2.33 9:54 18 7.44 10.45 69.8 9:58 27 7.39 10.49 69.6 LABORATORY INFORMATION SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANAL 10.45 87.8 10:45 4 4 5 69.8 10:45 5 69.8 10:45 5 69.8 10:45 69.8	ż
Time Volume pH Conductivity 7 Temperature D.O. ORP (gal.) 4	
SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANAL U-4 3404 Y HCL Seq. TPHG. BT 1 plastic // Ferrous 3	Alkalinity (ppm)
Iplastic 11 - " Ferrous 3	YSES
1 Nitrate	
COMMENTS	<u>re</u>
COMMENTS:	

9/97-HeldetJim

Client/ Facility #_53	25	., <u></u> .	Job#	' :	80061		4
	.20 Lakesh	ore A	<u>ve-</u> Date	:	3-7-01		
City: <u>Oak</u>	claud		Sam	pler:	Joe		
Well ID	<u>U-5</u>	We	ll Condition: _	0.1	د		
Well Diameter	4_in_		irocarbon		Amount B		
Total Depth	20.05 tr		ckness:	<u>in.</u>).17	(product/wa 3" = 0_38		(Jac) = 0.66
Depth to Water	6.83 tr	Fa	ctor (VF)	6" = I	.50	12" = 5.80	
Purge	13.22 x	7	$\mathcal{E} = \frac{\mathcal{E}}{12} \times 3$ (case)				27 (gel.)
Equipment:	Bailer Stack		Equipment		sposable Ba	iller	Z
	Suction Grundfos Other:	·.		Pr ∙Gr	essure Baile ab Sample		
Sampling Time: Purging Flow Rat Did well de-wate	te:2	361.m	Water Color: Sediment Descrip If yes; Time:	otion: _	<u>ar</u> `		<u> </u>
	Volume pH (gal.)	Con	ductivity () Temp	erature E	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:15	9 7.50	4.	61 69	9	2.98	141	
11:19	18 7.40 27 7.27		66 70	<u>.4</u> .X			<u></u>
		4 					
						<u> </u>	
SAMPLE ID	(#) - CONTAINER	LABOI REFRIG.	RATORY INFORMA		PRATORY	ANAL	.YSES
U-5	BYOK	Υ	HC L	Se	9 '	TPHG, BT	EX, MTBE
	Iplastic	11		ir		Ferrous :	
				·		Nitrate Phospha	
COMMENTS: _							

Client/ Facility #_53	25		Job	o#: <u> </u>	80061		-
	.20 Lakesh	oce A	ve- Da	te:2	3-7-01		
City: Oak				mpler:	Toe	· 	
Well ID	U-6	We	II Condition:	O.k			
Well Diameter	2 _{in}	_	drocarbon ckness:	*_	Amount B		<i>(</i>)
Total Depth	23.78 tr	Γ_			3" = 0.38	tor):	1" = 0.66
Depth to Water	7.27 4	1	actor (VF)				2 - 0.00
	16.51_ x	VF	2-81 x 3 (ca	ise volume) =	Estimated Po	urge Volume: .	9 (08)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampling Equipme	nt: Dis Ba Pro Gr	posable Ba iler essure Baile ab Sample		7
Sampling Time: Purging Flow Rate Did well de-water			Water Color: _ Sediment Desc If yes; Time:	ription:	· .		
	Volume pH (gal.)	, pu	ductivity Q Ter	₽	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:37 10:37 (0:39	$\frac{7}{4}$ $\frac{7.35}{7.38}$ $\frac{7.38}{9}$ $\frac{7.32}{7.32}$	<u>ک</u> ـ ـ	.19 7 .18 7	2.0		117	·
			RATORY INFORM				
SAMPLE ID	3YOA	REFRIG.	PRESERV. TYPE	Se	RATORY		LYSES
0-6	1 plastic		HUL_	11	<u>T`</u>	Ferrous:	TEX, MTBE
	1,1,2,1,3					Nitrat	
		 -		1		Phospha	
COMMENTS: _							
				 .			



1551 Industrial Road San Carlos, CA 94070-4111 (650) 232-9600 FAX (650) 232-9612 www.sequoialabs.com

March 22, 2001

Deanna Harding Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568 RE: Tosco(1) / L103032

Enclosed are the results of analyses for samples received by the laboratory on 03/07/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt Project Manager

CA ELAP Certificate Number 2360

donya K. Pett

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding

Reported:

03/22/01 13:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L103032-01	Water	03/07/01 00:00	03/07/01 14:30
U-1	L103032-02	Water	03/07/01 12:37	03/07/01 14:30
U-2	L103032-03	Water	03/07/01 12:05	03/07/01 14:30
U-3	L103032-04	Water	03/07/01 09:30	03/07/01 14:30
U-4	L103032-05	Water	03/07/01 10:08	03/07/01 14:30
U-5	L103032-06	Water	03/07/01 11:36	03/07/01 14:30
U-6	L103032-07	Water	03/07/01 10:53	03/07/01 14:30

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Tosco #5325

Reported:

Dublin CA, 94568

Project Manager: Deanna Harding

03/22/01 13:42

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L103032-01) Water Samp	oled: 03/07/01 00:00	Received:	03/07/01	14:30					
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1030047	03/14/01	03/14/01	DHS LUFT	
Benzene	ND	0.500		#	11	•	11	#	
Toluene	ND	0.500	"	*	"	M	м	н	
Ethylbenzene	ND	0.500	**	"		**	Ħ	и	
Xylenes (total)	ND	0.500	n		**	**	11	**	
Methyl tert-butyl ether	ND	5.00	n	n		_ n			
Surrogate: a,a,a-Trifluorotoluene		92.6 %	70-	-130	"	"	"	"	
U-1 (L103032-02) Water Sampled	: 03/07/01 12:37 Re	eceived: 03/0	07/01 14:	30					
Purgeable Hydrocarbons as Gasolin	ne 6220	1000	ug/l	20	1030048	03/14/01	03/14/01	DHS LUFT	P-02
Benzene	29.8	10.0	**	*	*	Ħ	**	,,	
Toluene	10.4	10.0	H	tt	Ħ	н	11	н	
Ethylbenzene	96.3	10.0	**	u	ħ	Ħ	17	H	
Xylenes (total)	638	10.0	**	#	4	H	**	**	
Methyl tert-butyl ether	11200	500	Ħ	100				<u>"</u>	M-04
Surrogate: a,a,a-Trifluorotoluene		101 %	70-	-130	H	"	"	"	
U-2 (L103032-03) Water Sampled	: 03/07/01 12:05 Re	eceived: 03/(07/01 14:	30					
Purgeable Hydrocarbons as Gasolin	ne 1670	500	ug/l	10	1030052	03/15/01	03/15/01	DHS LUFT	P-02
Benzene	51.0	5.00	**	**	"			4	
Toluene	ND	5.00	#	m	#	Ħ	#	*	
Ethylbenzene	7.20	5.00	**	Ħ	n	Ħ	н	Ħ	
Xylenes (total)	19.5	5.00	71	n	"	"	11	u	
Methyl tert-butyl ether	5930	100	**	20			03/14/01		M-04
Surrogate: a,a,a-Trifluorotoluene		99.0 %	70-	-130	H	"	03/15/01	Ħ	

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (L103032-04) Water San	npled: 03/07/01 09:30	Received: 03/0	07/01 14:	30					
Purgeable Hydrocarbons as Gaso	oline ND	50.0	ug/l	1	1030048	03/14/01	03/14/01	DHS LUFT	
Benzene	ND	0.500	n	n	n	"	*	•	
Toluene	ND	0.500	Ħ	n	W	a	н	n	
Ethylbenzene	ND	0.500	n	n	n		4	n	
Xylenes (total)	ND	0.500	n	n	**	**	6 7	n	
Methyl tert-butyl ether	ND	5.00	. "	n	**		#	n	
Surrogate: a,a,a-Trifluorotoluen	ie .	107 %	70-	-130	н	n	n	"	
U-4 (L103032-05) Water San	npled: 03/07/01 10:08	Received: 03/0	07/01 14:	30			_		
Purgeable Hydrocarbons as Gaso	oline ND	50.0	ug/l	1	1030048	03/14/01	03/14/01	DHS LUFT	
Benzene	ND	0.500	n	**	n	n	, 4	m m	
Toluene	ND	0.500	n	"	n	**	н	"	
Ethylbenzene	ND	0.500	n	TI TI			**	n	
Xylenes (total)	ND	0.500	n	n	n	н	Ħ	π	
Methyl tert-butyl ether	ND	5.00	n	"	n	H	u	т.	
Surrogate: a,a,a-Trifluorotoluen	<u></u>	100 %	70	-130	"	"	н	н	
U-5 (L103032-06) Water San	npled: 03/07/01 11:36	Received: 03/	07/01 14:	:30					
Purgeable Hydrocarbons as Ga	asoline 623	50.0	ug/l	1	1030047	03/14/01	03/15/01	DHS LUFT	P-02
Benzene	5.15	0.500	н	н	H	н	Ħ	n	
Toluene	ND	0.500		n	n	n	Ħ	Ħ	
Ethylbenzene	ND	0.500	*	**	Ħ		н	n	
Xylenes (total)	0.669	0.500	*	н		"	**	n	
Methyl tert-butyl ether	3 <u>5.7</u>	5.00	n				Ħ		
Surrogate: a,a,a-Trifluorotoluen	ne	116%	70	-130	"	"	#	"	

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-6 (L103032-07) Water	Sampled: 03/07/01 10:53	Received: 03/0	7/01 14:3	10	_				
Purgeable Hydrocarbons as	Gasoline ND	50.0	ug/l	1	1030047	03/14/01	03/15/01	DHS LUFT	
Benzene	ND	0.500	n	n	n	n	н	19	
Toluene	ND	0.500	II	п	Ħ	π	"	11	
Ethylbenzene	ND	0.500	**		n	n	#	**	
Xylenes (total)	ND	0.500	11	**	n	**	n	п	
Methyl tert-butyl ether	310	5.00		n .	Ħ	**	π .		
Surrogate: a,a,a-Trifluoroto	luene	106 %	70-1	130	н	"	"	"	

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported: 03/22/01 13:42

Volatile Organic 8 Oxyganated Compounds by EPA Method 8260B Sequoia Analytical - San Carlos

	<u> </u>	equoia Alla	ary tica.	- 541	<u></u>					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note	
U-1 (L103032-02) Water	Sampled: 03/07/01 12:37	Received: 03/07/01 14:30								
Ethanol	ND	100000	ug/l	100	1030066	03/21/01	03/21/01	EPA 8260B		
1,2-Dibromoethane	ND	200	**	"		H	"	71		
1,2-Dichloroethane	ND	200	#	Ħ	n	11	n	Ħ		
Di-isopropyl ether	ND	200	11	#	*	н		Ħ		
Ethyl tert-butyl ether	ND	200	n	**	n	n	H	•		
Methyl tert-butyl ether	11800	200	*1	**	"	"	n	**		
Tert-amyl methyl ether	ND	200		17	n	n	n	H		
Tert-butyl alcohol	ND	10000	H	**	**	n	n	"		
Surrogate: 1,2-Dichloroeth	98.6 %	76-	114	ff	n	n	41			
Surrogate: Toluene-d8		100 %		110	#	n	"	"		
U-2 (L103032-03) Water	Sampled: 03/07/01 12:05	Received: 03/0	7/01 14:	30		_				
Ethanol	ND	50000	ug/l	50	1030066	03/21/01	03/21/01	EPA 8260B		
1,2-Dibromoethane	ND	100	#	n	"	#	ħ	Ħ		
1,2-Dichloroethane	ND	100	**	p	**	tt	n	π		
Di-isopropyl ether	ND	100	Ħ	n	IT	Ħ	Ħ	n		
Ethyl tert-butyl ether	ND	100	#	n	**	n	n	n		
Methyl tert-butyl ether	7900	100	**	n	Ħ	n	π	H		
Tert-amyl methyl ether	ND	100	#	n	**	**	π	H		
Tert-butyl alcohoi	ND	5000	tr	п	11	n	#	n		
Surrogate: 1,2-Dichloroeth	hane-d4	95.8 %	76-	114	п	n	"	"		
Surrogate: Toluene-d8		105 %		110	"	"	*	"		
U-5 (L103032-06) Water	Sampled: 03/07/01 11:36	Received: 03/0	7/01 14:	30						
Ethanol	ND	1000	ug/l	1	1030073	03/21/01	03/21/01	EPA 8260B		
1,2-Dibromoethane	ND	2.00	n		11	H	11	n		
1,2-Dichloroethane	ND	2.00	11	II.	*	н	ū	n		
Di-isopropyl ether	ND	2.00	Ħ	"	Ħ	*	H	"		
Ethyl tert-butyl ether	ND	2.00	*	**	"	"				
Methyl tert-butyl ether	43.4	2.00	**	**	n	**	"	n		
Tert-amyl methyl ether	. ND	2.00	**	Ħ		7	"	н		
Tert-butyl alcohol	ND	100	#	н	H	H	**	11		
Surrogate: 1,2-Dichloroeth	hane-d4	103 %	76-	114	"	#	n	"		
0		103.07	0.0	110	,,	#	"	,,		

102 %

88-110

Surrogate: Toluene-d8

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Tosco #5325

Dublin CA, 94568

Project Manager: Deanna Harding

Reported: 03/22/01 13:42

Volatile Organic 8 Oxyganated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-6 (L103032-07) Water	Sampled: 03/07/01 10:53	Received: 03/0	07/01 14:30)					I-02
Ethanol	ND	2500	ug/I	2.5	1030072	03/22/01	03/22/01	EPA 8260B	
1,2-Dibromoethane	ND	5.00	n	"	"	n	**	"	
1,2-Dichloroethane	ND	5.00	11	e	#	H	**	"	
Di-isopropyl ether	ND	5.00	n	Ħ	Ħ	n	#	•	
Ethyl tert-butyl ether	ND	5.00	н	н	H	11	н	11	
Methyl tert-butyl ether	321	5.00	**	#	n	m	17	n	
Tert-amyl methyl ether	ND	5.00	#	H	n	H	π	n	
Tert-butyl alcohol	ND	250	**	*	n	н	#	n	
Surrogate: 1,2-Dichloroeth	nane-d4	86.2 %	76-1	14	"	*	n	H	<u> </u>
Surrogate: Toluene-d8		103 %	88-1	10	Ħ	n	"	H	

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

Total Metals by EPA 6000/7000 Series Methods Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L103032-02) Water	Sampled: 03/07/01 12:37	Received: 03/07	//01 14:30)					
Ferrous Iron	0.483	0.0100	mg/l	1	1C21019	03/21/01	03/21/01	EPA 6010A	
U-2 (L103032-03) Water	Sampled: 03/07/01 12:05	Received: 03/07	//01 14:30)					
Ferrous Iron	0.677	0.0100	mg/l	1	1C21019	03/21/01	03/21/01	EPA 6010A	
U-3 (L103032-04) Water	Sampled: 03/07/01 09:30	Received: 03/07	7/01 14:30)					
Ferrous Iron	ND	0.0100	mg/l	1	1C21019	03/21/01	03/21/01	EPA 6010A	
U-4 (L103032-05) Water	Sampled: 03/07/01 10:08	Received: 03/07	//01 14:30)					
Ferrous Iron	ND	0.0100	mg/l	1	1C21019	03/21/01	03/21/01	EPA 6010A	
U-5 (L103032-06) Water	Sampled: 03/07/01 11:36	Received: 03/07	//01 14:30)					
Ferrous Iron	1.07	0.0100	mg/l	1	1C21019	03/21/01	03/21/01	EPA 6010A	
U-6 (L103032-07) Water	Sampled: 03/07/01 10:53	Received: 03/07	//01 14:30)					
Ferrous Iron	2.52	0.0100	mg/l	1	1C21019	03/21/01	03/21/01	EPA 6010A	

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Tosco #5325

Reported: 03/22/01 13:42

Dublin CA, 94568

Project Manager: Deanna Harding

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L103032-02) Water	Sampled: 03/07/01 12:37	Received: 03/0	7/01 14:30			_			
Phosphorus (Ortho)	6.89	0.100	mg/l	10	1C12032	03/09/01	03/09/01	EPA 365.3	
U-2 (L103032-03) Water	Sampled: 03/07/01 12:05	Received: 03/0	7/01 14:30)					
Phosphorus (Ortho)	3.02	0.100	mg/l	10	1C12032	03/09/01	03/09/01	EPA 365.3	<u>-</u> .
U-3 (L103032-04) Water	Sampled: 03/07/01 09:30	Received: 03/0	7/01 14:30)					
Phosphorus (Ortho)	0.443	0.0100	mg/l	1	1C12032	03/09/01	03/09/01	EPA 365.3	
U-4 (L103032-05) Water	Sampled: 03/07/01 10:08	Received: 03/0	7/01 14:30)					
Phosphorus (Ortho)	0.226	0.0100	mg/l	1	1C12032	03/09/01	03/09/01	EPA 365.3	
U-5 (L103032-06) Water	Sampled: 03/07/01 11:36	Received: 03/0	7/01 14:30	•					-
Phosphorus (Ortho)	4.00	0.120	mg/l	12	1C12032	03/09/01	03/09/01	EPA 365.3	
U-6 (L103032-07) Water	Sampled: 03/07/01 10:53	Received: 03/0	7/01 14:30)					
Phosphorus (Ortho)	37.0	0.610	mg/l	61	1C12032	03/09/01	03/09/01	EPA 365.3	

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported: 03/22/01 13:42

Anions by EPA Method 300.0

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (L103032-02) Water	Sampled: 03/07/01 12:37	Received: 03/0	7/01 14:3	0					
Nitrate as NO3	2.64	1.00	mg/l	10	1C20011	03/09/01	03/09/01	EPA 300.0	
U-2 (L103032-03) Water	Sampled: 03/07/01 12:05	Received: 03/0	7/01 14:3	0					
Nitrate as NO3	2.24	1.00	mg/l	10	1C20011	03/09/01	03/09/01	EPA 300.0	
U-3 (L103032-04) Water	Sampled: 03/07/01 09:30	Received: 03/0	7/01 14:3	0					
Nitrate as NO3	36.5	1.00	mg/l	10	1C20011	03/09/01	03/09/01	EPA 300.0	
U-4 (L103032-05) Water	Sampled: 03/07/01 10:08	Received: 03/0	7/01 14:3	0					
Nitrate as NO3	33.9	1.00	mg/l	10	1C20011	03/09/01	03/09/01	EPA 300.0	
U-5 (L103032-06) Water	Sampled: 03/07/01 11:36	Received: 03/0	7/01 14:3	0					
Nitrate as NO3	3.02	1.00	mg/l	10	1C20011	03/09/01	03/09/01	EPA 300.0	
U-6 (L103032-07) Water	Sampled: 03/07/01 10:53	Received: 03/0	7/01 14:3	0					
Nitrate as NO3	3.11	1.00	mg/l	10	1C20011	03/09/01	03/09/01	EPA 300.0	

Project: Tosco(1)

6747 Sierra Court, Suite J

Dublin CA, 94568

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported: 03/22/01 13:42

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030047 - EPA 5030B (P/T)										
Blank (1030047-BLK1)			**	Prepared	& Analyz	ed: 03/14/	01			
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500								
Toluene	ND	0.500	•							
Ethylbenzene	ND	0.500	н							
Xylenes (total)	ND	0.500	**							
Methyl tert-butyl ether	ND	5.00	n							
Surrogate: a,a,a-Trifluorotoluene	8.23		"	10.0		82.3	70-130			
LCS (1030047-BS1)		_		Prepared	& Analyz	ed: 03/14/	01			
Benzene	8.46	0.500	ug/l	10.0		84.6	70-130			
Toluene	8.55	0.500		10.0		85.5	70-130			
Ethylbenzene	8.77	0.500	**	10.0		87.7	70-130			
Xylenes (total)	26.9	0.500	H	30.0		89.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.19		н	10.0		91.9	70-130			
LCS (1030047-BS2)				Prepared	& Analyz	ed: 03/14/	01			
Purgeable Hydrocarbons as Gasoline	293	50.0	ug/l	250		117	70-130	-		
Surrogate: a,a,a-Trifluorotoluene	10.6	·	77	10.0		106	70-130			
Matrix Spike (1030047-MS1)	Sor	urce: L10304	7-06	Prepared	& Analyz	ed: 03/14/	01			
Benzene	9.07	0.500	ug/l	10.0	ND	90.7	60~140			
Toluene	9.01	0.500	Ħ	10.0	ND	90.1	60-140			
Ethylbenzene	9.13	0.500	n	10.0	ND	91.3	60-140			
Xylenes (total)	27.5	0.500	#	30.0	· ND	91.7	60-140			
Surrogate: a,a,a-Trifluorotoluene	10.1		"	10.0		101	70-130			
Matrix Spike Dup (1030047-MSD1)	Sor	urce: L10304	7-06	Prepared	& Analyz					
Benzene	8.85	0.500	ug/l	10.0	ND	88.5	60-140	2.46	25	
Toluene	8.76	0.500	#	10.0	ND	87.6	60-140	2.81	25	
Ethylbenzene	8.80	0.500	**	10.0	ND	88.0	60-140	3.68	25	
Xylenes (total)	26.8	0.500	n	30.0	NŲ	89.3	60-140	2.58	25	
Surrogate: a,a,a-Trifluorotoluene	10.4		"	10.0		104	70-130	····		

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030048 - EPA 5030B (P/T)	·				<u>.</u>					
Blank (1030048-BLK1)				Prepared	& Analyze	ed: 03/14/	01			
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/i							
Benzene	ND	0.500	ıı							
Toluene	ND	0.500	н							
Ethylbenzene	ND	0.500								
Xylenes (total)	ND	0.500	**							
Methyl tert-butyl ether	ND	5.00	н							
Surrogate: a,a,a-Trifluorotoluene	10.3		"	10.0		103	70-130			
LCS (1030048-BS1)				Prepared	& Analyze	:d: 03/14/	01			
Benzene	.10.4	0.500	ug/l	10.0		104	70-130			
Toluene	10.3	0.500	н	10.0		103	70-130			
Ethylbenzene	10.5	0.500	**	10.0		105	70-130			
Xylenes (total)	31.5	0.500	Ħ	30.0		105	70-130			
Surrogate: a,a,a-Trifluorotoluene	11.2		"	10.0		112	70-130			
LCS (1030048-BS2)				Prepared	& Analyza	ed: 03/14/	01			
Purgeable Hydrocarbons as Gasoline	252	50.0	ug/l	250		101	70-130			
Surrogate: a,a,a-Trifluorotoluene	12.0		H	10.0		120	70-130			
Matrix Spike (1030048-MS1)	Sou	ırce: L10303	2-04	Prepared	& Analyza	ed: 03/14/	01			
Benzene	9.92	0.500	ug/l	10.0	ND	99.2	60-140			
Toluene	9.56	0.500	#	10.0	ND	95.6	60-140			
Ethylbenzene	10.3	0.500	#	10.0	ND	103	60-140			
Xylenes (total)	30.0	0.500	Ħ	30.0	ND	100	60-140			
Surrogate: a,a,a-Trifluorotoluene	12.5		"	10.0		125	70-130		· · · · ·	
Matrix Spike Dup (1030048-MSD1)	Sou	ource: L103032-04 Prepared & Analyzed: 03/14/01								.
Benzene	9.22	0.500	ug/l	10.0	ND	92.2	60-140	7.31	25	
Toluene Toluene	9.22	0.500	"	10.0	ND	92.2	60-140	3.62	25	
Ethylbenzene	9.48	0.500	н	10.0	ND	94.8	60-140	8.29	25	
Xylenes (total)	28.1	0.500	M	30.0	ND	93.7	60-140	6.54	25	
Surrogate: a,a,a-Trifluorotoluene	11.7		"	10.0		117	70-130			

Project: Tosco(1)

6747 Sierra Court, Suite J **Dublin CA, 94568**

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030052 - EPA 5030B (P/T)										
Blank (1030052-BLK1)				Prepared	& Analyz	ed: 03/15/	01		-	
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l						<u>-</u>	
Benzene	ND	0.500	n							
Toluene	ND	0.500	**							
Ethylbenzene	ND	0.500	н							
Xylenes (total)	ND	0.500	n							
Methyl tert-butyl ether	ND	5.00	n							
Surrogate: a,a,a-Trifluorotoluene	11.8		n	10.0	••	118	70-130			
LCS (1030052-BS1)				Prepared	& Analyz	ed: 03/15/	01			
Benzene	9.39	0.500	ug/l	10.0		93.9	70-130			
Toluene	9.29	0.500	n	10.0		92. 9	70-130			
Ethylbenzene	9.48	0.500	**	10.0		94.8	70-130			
Xylenes (total)	28.5	0.500	'n	30.0		95.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	11.4		"	10.0		114	70-130			
LCS (1030052-BS2)				Prepared	& Analyz	ed: 03/15/	01			
Purgeable Hydrocarbons as Gasoline	242	50.0	ug/l	250		96.8	70-130			
Surrogate: a,a,a-Trifluorotoluene	11.5	· <u>-</u> .	"	10.0		115	70-130			
Matrix Spike (1030052-MS1)	Sou	ırce: L10309	1-01	Prepared	& Analyz	ed: 03/15/	01			
Purgeable Hydrocarbons as Gasoline	242	50.0	ug/i	250	ND	96.8	60-140			
Surrogate: a,a,a-Trifluorotoluene	12.8		n	10.0		128	70-130			
Matrix Spike Dup (1030052-MSD1)	Sou	ırce: L10309	1-01	Prepared	& Analyz	ed: 03/15/	01		<u>.</u>	
Purgeable Hydrocarbons as Gasoline	228	50.0	ug/l	250	ND	91.2	60-140	5.96	25	
Surrogate: a,a,a-Trifluorotoluene	12.5		"	10.0		125	70-130		·	

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding

Reported:

03/22/01 13:42

RPD

%REC

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

Reporting

Spike

Source

		Reporting		эріке	Source		76REC		KPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Note
Batch 1030066 - EPA 5030B [P/T]									<u>.</u>	
Blank (1030066-BLK1)				Prepared	& Analyze	d: 03/19/	01			
Ethanol	ND	1000	ug/l						<u></u>	
1,2-Dibromoethane	ND	2.00	н							
1,2-Dichloroethane	ND	2.00	*							
Di-isopropyl ether	ND	2.00	н							
Ethyl tert-butyl ether	ND	2.00	**							
Methyl tert-butyl ether	ND	2.00	11							
Tert-amyl methyl ether	ND	2.00	#							
Tert-butyl alcohol	ND	100	**							
Surrogate: 1,2-Dichloroethane-d4	49.3		#	50.0		98.6	76-114			
Surrogate: Toluene-d8	50.7		"	50.0		101	88-110			
Blank (1030066-BLK2)				Prepared	& Analyze	ed: 03/20/	01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00	Ħ							
1,2-Dichloroethane	ND	2.00	**							
Di-isopropyl ether	ND	2.00	11							
Ethyl tert-butyl ether	ND	2.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Tert-amyl methyl ether	ND	2.00	"							
Tert-butyl alcohol	ND	100	н							
Surrogate: 1,2-Dichloroethane-d4	49.2		"	50.0		98.4	76-114			
Surrogate: Toluene-d8	49.6		"	50.0		99.2	88-110			
Blank (1030066-BLK3)				Prepared	& Analyze	ed: 03/21/	01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00	п							
1,2-Dichloroethane	ND	2.00	**							
Di-isopropyl ether	ND	2.00	**							
Ethyl tert-butyl ether	ND	2.00	Ħ							
Methyl tert-butyl ether	ND	2.00	#							
Tert-amyl methyl ether	ND	2.00	n							
Tert-butyl alcohol	ND	100	Ħ							
Surrogate: 1,2-Dichloroethane-d4	49.6		*	50.0		99.2	76-114			
Surrogate: Toluene-d8	51.7		"	50.0		103	88-110			

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported: 03/22/01 13:42

Dublin CA, 94568

Volatile Organic 8 Oxyganated 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	
Batch 1030066 - EPA 5030B [P/T]											
LCS (1030066-BS1)				Prepared	& Analyze	ed: 03/19/	01				
Methyl tert-butyl ether	52.8	2.00	ug/l	50.0		106	70-130	·	·		
Surrogate: 1,2-Dichloroethane-d4	49.6		"	50.0		99.2	76-114				
Surrogate: Toluene-d8	50.2		n	50.0		100	88-110				
LCS (1030066-BS2)				Prepared	& Analyza	ed: 03/20/	01				
Methyl tert-butyl ether	52.1	2.00	ug/l	50.0		104	70-130				
Surrogate: 1,2-Dichloroethane-d4	50.6		п	50.0		101	76-114				
Surrogate: Toluene-d8	48.5		"	50.0		97.0	88-110				
LCS (1030066-BS3)				Prepared	& Analyza	ed: 03/21/	01				
Methyl tert-butyl ether	50.3	2.00	ug/l	50.0	<u> </u>	101	70-130			1,,	
Surrogate: 1,2-Dichloroethane-d4	51.4			50.0		103	76-114				
Surrogate: Toluene-d8	50.6		*	50.0		101	88-110				
Matrix Spike (1030066-MS1)	Sou	Source: L103105-04 Prepared & Analyzed: 03/19/01									
Methyl tert-butyl ether	50.9	2.00	ug/l	50.0	ND	102	60-140				
Surrogate: 1,2-Dichloroethane-d4	48.9		"	50.0		97.8	76-114	 -			
Surrogate: Toluene-d8	50.5		W	50.0		101	88-110				
Matrix Spike Dup (1030066-MSD1)	Sou	rce: L10310	5-04	Prepared	& Analyza	ed: 03/19/	01				
Methyl tert-butyl ether	53.1	2.00	ug/l	50.0	ND	106	60-140	4.23	25		
Surrogate: 1,2-Dichloroethane-d4	50.5		"	50.0		101	76-114				
Surrogate: Toluene-d8	49.2		*	50.0		98.4	88-110				
Batch 1030072 - EPA 5030B [P/T]											
Blank (1030072-BLK1)		,		Prepared	& Analyz	ed: 03/21/	01	**			
Ethanol	ND	1000	ug/l								
1,2-Dibromoethane	ND	2.00	11								
1,2-Dichloroethane	ND	2.00	#								
Di-isopropyl ether	ND	2.00	**								
Ethyl tert-butyl ether	ND	2.00	*								
Methyl tert-butyl ether	ND	2.00	**								
Tert-amyl methyl ether	ND	2.00	n								
Tert-butyl alcohol	ND	100	*								
Surrogate: 1,2-Dichloroethane-d4	45.4	·	"	50.0		90.8	76-114				
Surrogate: Toluene-d8	50.4		"	50.0		101	88-110				

Sequoia Analytical - San Carlos

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.

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

RPD

%REC

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

Spike

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1030072 - EPA 5030B [P/T]					. <u> </u>					
Blank (1030072-BLK2)				Prepared	& Analyze	ed: 03/22/	01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00	n							
1,2-Dichloroethane	ND	2.00	n							
Di-isopropyl ether	ND	2.00	n							
Ethyl text-butyl ether	ND	2.00	н							
Methyl tert-butyl ether	ND	2.00	n							
Tert-amyl methyl ether	NĎ	2.00	n							
Tert-butyl alcohol	ND	100	H							
Surrogate: 1,2-Dichloroethane-d4	44.6		"	50.0		89.2	76-114			
Surrogate: Toluene-d8	53.9		Ħ	50.0		108	88-110			
LCS (1030072-BS1)				Prepared	& Analyzo	ed: 03/21/	01			
Methyl tert-butyl ether	49.8	2.00	ug/l	50.0		99.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	47.5		"	50.0		95.0	76-114			· · · · · · · · · · · · · · · · · · ·
Surrogate: Toluene-d8	49.4		"	50.0		98.8	88-110			
LCS (1030072-BS2)				Prepared	& Analyze	ed: 03/22/	01			
Methyl tert-butyl ether	46.8	2.00	ug/l	50.0		93.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	45.6	-t.····, ···	H	50.0		91.2	76-114	_		
Surrogate: Toluene-d8	49.7		**	50.0		99.4	88-110			
Matrix Spike (1030072-MS1)	Soui	rce: L10313	0-02	Prepared	& Analyz	ed: 03/21/	01			
Methyl tert-butyl ether	104	2.00	ug/l	50.0	49.4	109	60-140			
Surrogate: 1,2-Dichloroethane-d4	49.2		"	50.0	•	98.4	76-114			
Surrogate: Toluene-d8	52.3		n	50.0		105	88-110			
Matrix Spike Dup (1030072-MSD1)	Sour	rce: L10313	0-02	Ртератед	& Analyz	ed: 03/21/	01			
Methyl tert-butyl ether	97.8	2.00	ug/l	50.0	49.4	96.8	60-140	6.14	25	
Surrogate: 1,2-Dichloroethane-d4	48.3		77	50.0		96.6	76-114			
Surrogate: Toluene-d8	51.7		"	50.0		103	88-110			

6747 Sierra Court, Suite J Dublin CA, 94568

Project Manager: Deanna Harding

Project: Tosco(1)

Project Number: Tosco #5325

Reported:

03/22/01 13:42

Volatile Organic 8 Oxyganated 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
Batch 1030073 - EPA 5030B [P/T]										
Blank (1030073-BLK1)				Prepared	& Analyz	ed: 03/21/	01			
Ethanol	ND	1000	ug/l						-	
1,2-Dibromoethane	ND	2.00	Ħ							
1,2-Dichloroethane	ND	2.00	**							
Di-isopropyl ether	ND	2.00	Ħ							
Ethyl tert-butyl ether	ND	2.00	H							
Methyl tert-butyl ether	ND	2.00	#							
Tert-amyl methyl ether	ND	2.00	**							
Tert-butyl alcohol	ND	100	11							
Surrogate: 1,2-Dichloroethane-d4	54.9		"	50.0		110	76-114			
Surrogate: Toluene-d8	51.7		. #	50.0		103	88-110			
LCS (1030073-BS1)				Prepared	& Analyz	ed: 03/21/	01			
Methyl tert-butyl ether	53.9	2.00	ug/l	50.0		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	52.6		"	50.0		105	76-114			
Surrogate: Toluene-d8	51.2		"	50.0		102	88-110			
Matrix Spike (1030073-MS1)	Sou	rce: L10312	9-04	Prepared	& Analyz	ed: 03/21/	01			
Methyl tert-butyl ether	56.0	2.00	ug/l	50.0	ND	112	60-140	-		
Surrogate: 1,2-Dichloroethane-d4	53.7		,,	50.0		107	76-114			
Surrogate: Toluene-d8	51.1		"	50.0		102	88-110			
Matrix Spike Dup (1030073-MSD1)	Sou	rce: L10312	9-04	Prepared & Analyzed: 03/21/01						
Methyl tert-butyl ether	52.6	2.00	ug/l	50.0	ND	105	60-140	6.26	25	
Surrogate: 1,2-Dichloroethane-d4	56.2		n	50.0		112	76-114			
Surrogate: Toluene-d8	50.8		"	50.0		102	88-110			

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1C21019 - 200.7/ No Digest		···	····	·····						
Blank (1C21019-BLK1)				Prepared	& Analyza	ed: 03/21/0	01			
Ferrous Iron	ND	0.0100	mg/l							
LCS (1C21019-BS1)				Prepared .	& Analyze	ed: 03/21/0	01			
Ferrous Iron	1.01	0.0100	mg/l				80-120		· · · -	
Matrix Spike (1C21019-MS1)	Sou	rce: MKC0	105-02	Prepared	& Analyze	ed: 03/21/0	D 1			
Ferrous Iron	0.994	0.0100	mg/l		0.0161		80-120			
Matrix Spike Dup (1C21019-MSD1)	Sou	rce: MKC0	105-02	Prepared	& Analyze	ed: 03/21/0	01			
Ferrous Iron	1.00	0.0100	mg/l		0.0161		80-120	0.602	20	

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #5325 Project Manager: Deanna Harding

Reported:

03/22/01 13:42

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

Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	<u></u>								
			Prepared	& Analyze	ed: 03/09/0	01			
ND	0.0100	mg/l							
			Prepared	& Analyze	ed: 03/09/0	01			_
0.536	0.0100	mg/l	0.500		107	80-120			
Sou	rce: MKC0	202-02	Prepared	& Analyze	ed: 03/09/0	01			
0.579	0.0100	mg/l	0.500	0.0140	113	75-125		•	
Sou	rce: MKC0	202-02	Prepared	& Analyze	ed: 03/09/0	01			
0.582	0.0100	mg/l	0.500	0.0140	114	75-125	0.517	20	<u>-</u>
	0.536 Sou 0.579 Sou	ND 0.0100 0.536 0.0100 Source: MKC0 0.579 0.0100 Source: MKC0	ND 0.0100 mg/l	Prepared	Prepared & Analyze	Prepared & Analyzed: 03/09/0 ND	Prepared & Analyzed: 03/09/01	Result Limit Units Level Result %REC Limits RPD	Result Limit Units Level Result %REC Limits RPD Limit

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

Project Number: Tosco #5325 Project Manager: Deanna Harding Reported:

03/22/01 13:42

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 1C20011 - General Preparation									···	
Blank (1C20011-BLK1)				Prepared	& Analyze	ed: 03/09/	01			
Nitrate as NO3	ND	0.100	mg/l							
LCS (1C20011-BS1)				Prepared	& Analyze	ed: 03/09/	01			
Nitrate as NO3	9.66	0.100	mg/l	10.0		96.6	90-110			
Matrix Spike (1C20011-MS1)	Sou	ırce: L10303	2-05	Prepared	& Analyze	ed: 03/09/	01			
Nitrate as NO3	136	1.00	mg/l	100	33.9	102	80-120		<u></u>	
Matrix Spike Dup (1C20011-MSD1)	Sou	ırce: L10303	2-05	Prepared	& Analyze	ed: 03/09/	01			
Nitrate as NO3	134	1.00	mg/l	100	33.9	100	80-120	1.48	20	

Gettler-Ryan/Geostrategies(1)

6747 Sierra Court, Suite J

Project Number: Tosco #5325

Project Manager: Deanna Harding

03/22/01 13:42

Notes and Definitions

I-02 This sample was analyzed outside of the EPA recommended holding time.

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