

# GETTLER-RYAN INC.

January 27, 2000 G-R Job #180075

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

RE:

Fourth Quarter 1999 Groundwater Monitoring & Sampling Report

Tosco (Unocal) Service Station #7376

4191 First Street Pleasanton, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On December 6, 1999, field personnel monitored ten wells (MW-1, MW-2B and MW-3 through MW-10) and sampled seven wells (MW-1, MW-2B, MW-3, MW-4, MW-7, MW-8, and MW-9) at the above referenced site. Two wells (MW-6 and MW-10) were dry.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were present in one well (MW-5). Static water level data and groundwater elevations are summarized in Table 1. Product Thickness/Removal Data is summarized in Table 2. A Potentiometric Map is included as Figure 1.

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

No. 6676

Sincerely,

Deanna L. Harding

**Project Coordinator** 

Barbara Sieminski

Project Geologist, R.G. No. 6676

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

Table 2:

Product Thickness/Removal Data

Table 3:

Groundwater Analytical Results - Oxygenate Compounds

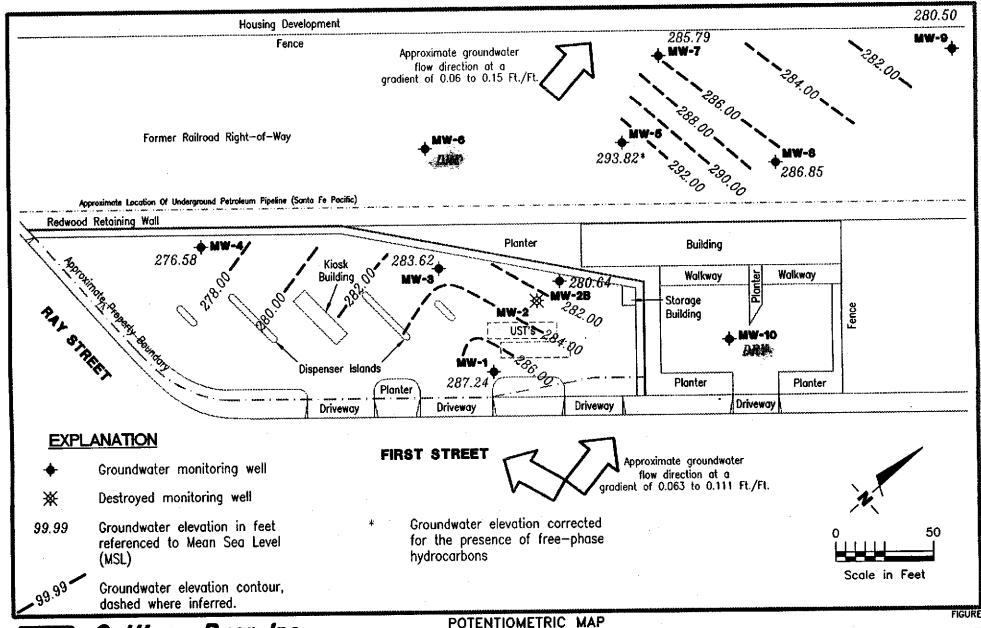
Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

7376.qml

Chain of Custody Document and Laboratory Analytical Reports





## Gettler - Ryan Inc.

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

REVIEWED BY

Tosco (Unocal) Service Station No. 7376 4191 First Street

Pleasanton, California

DATE

REVISED DATE

JOB NUMBER 180075

December 6, 1999

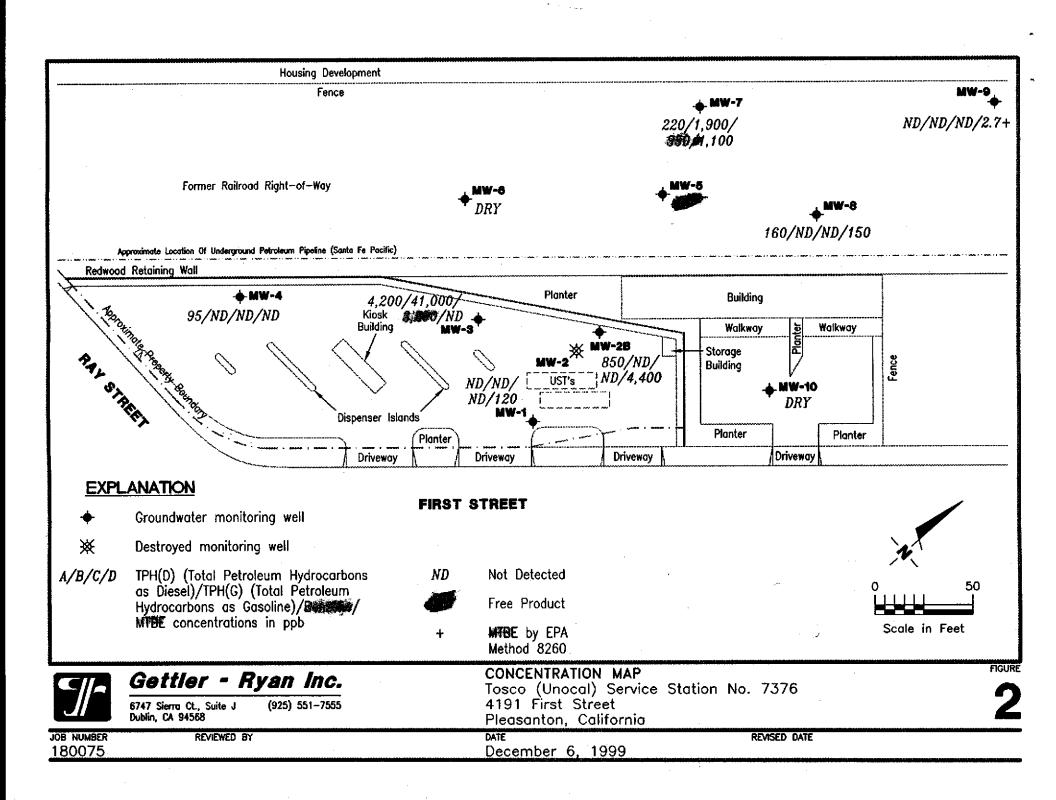


Table 1
Groundwater Monitoring Data and Analytical Results

				Product							
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	T	E	X	MTBE
TOC*		(fl.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
H. 2777 - 4	10,00,00				2.1002	<b>-</b> 03	<b>50</b>	• •	) //S	10	
MW-1	12/08/871				$2,100^2$	50 <sup>3</sup>	58	8.0	ND	10	
366.99	12/07/94	81.04	285.95	0.00		ND	ND	ND	ND	ND	
	03/01/95	80.09	286.90	0.00	120	ND	ND	1.1	ND	1.3	
	06/01/95	77.53	289.46	0.00	54 <sup>5</sup>	130	1.0	2.9	0.79	4.5	 · 6
	09/06/95	79.00	287.99	0.00	690	ND	ND	ND	ND	ND	6
	12/12/95	77.55	289.44	0.00	190 <sup>5</sup>	ND	ND	ND	ND	ND	
	03/01/96	75.09	291.90	0.00	56	ND	ND	ND	ND	ND	370
	06/15/96	75.07	291.92	0.00	ND	ND	ND	ND	ND	ND	270
	09/18/96	79.90	287.09	0.00	130 <sup>5</sup>	ND	ND	ND	ND	ND	590
	12/21/96	78.96	288.03	0.00	ND	ND	ND	ND	ND	ND	150
	03/07/97	71.49	295.50	0.00	ND	ND	ND	ND	ND	ND	220
	06/27/97	80.05	286.94	0.00	ND	ND	ND	ND	ND	ND	17
	09/29/97	80.04	286.95	0.00	ND	ND	ND	ND	ND	ND	24
	12/15/97	80.07	286.92	0.00	ND	ND	ND	ND '	ND	ND	25
	03/16/98	71.00	295.99	0.00	ND	ND	ND	0.52	ND	0.71	1 <b>9</b> 0
366.98	06/26/98	79.29	287.69	0.00	ND	59 <sup>13</sup>	0.90	ND	ND	ND	570
	08/18/98	79.93	287.05	0.00							
	09/22/98	79.99	286.99	0.00	$240^{20}$	ND	ND	ND	ND	ND	170
	12/15/98	80.02	286.96	0.00	ND	ND	ND	ND	ND	ND	63
	12/23/98	80.02	286.96	0.00							
	03/15/99	78.95	288.03	0.00	67 <sup>24</sup>	$ND^{11}$	$ND^{11}$	$ND^{11}$	$ND^{11}$	$ND^{11}$	520
	03/23/99	78.69	288.29	0.00							
	06/07/99	79.82	287.16	0.00	ND	ND	ND	ND	ND	ND	310
	09/03/99	79.74	287.24	0.00	<b>7</b> 6 <sup>19</sup>	ND	ND	ND	ND	ND	$67/55.2^{27}$
	12/06/99	79.74	287.24	0.00	ND	ND	ND	ND	ND	ND	120
					. 2	2					
MW-2	12/08/87				$620^{2}$	$1,800^3$	910	800	260	1,200	
	12/07/94	DAMAGED									
	02/07/95	DESTROYED							**		

Table 1
Groundwater Monitoring Data and Analytical Results

			Product							
Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	Т	E	<b>X</b>	MTBE
	(ft.)	(msl)	(ft.)	(ppb)	(ррь)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
03/01/95	80.80	284.25	0.00	320	ND	ND	ND	ND	ND	
										<b></b> <sup>6</sup>
										<b></b> 7
										4,300
										3,700
										5,200
										2,900
										4,300
										3,100
										3,000
										4,100
										4,400
										4,000
					$ND^{11}$	$ND^{11}$	$ND^{11}$	$ND^{11}$	21	4,600
										5,100
				$390^{25}$	$\mathrm{ND}^{11}$	$ND^{11}$				4,300/4,800 <sup>27</sup>
										- <del>-</del>
										5,100
										6,300/4,400 <sup>27</sup>
12/06/99	84.41	280.64	0.00	850 <sup>32</sup>	ND <sup>11</sup>	$ND^{11}$	ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>	4,400
12/08/87				$2,300^{2}$	24,000 <sup>3</sup>	2,600	1,300	160	660	
12/07/94	85.54	281.47	0.00		ND	ND	ND	ND	ND	
03/01/95			0.00	$140^{4}$						
										6
										7
03/01/96	75.18	291.83	0.00	1,500 <sup>5</sup>	3,400	950	3.2	1,900	290	59
	03/01/95 06/01/95 09/06/95 12/12/95 03/01/96 06/15/96 09/18/96 12/21/96 03/07/97 06/27/97 09/29/97 12/15/97 03/16/98 06/26/98 08/18/98 09/22/98 12/15/98 12/23/98 03/15/99 03/23/99 06/07/99 09/03/99 12/06/99	03/01/95 80.80 06/01/95 75.69 09/06/95 77.54 12/12/95 75.96 03/01/96 73.27 06/15/96 73.21 09/18/96 81.08 12/21/96 77.35 03/07/97 69.67 06/27/97 82.40 09/29/97 82.72 12/15/97 82.57 03/16/98 69.13 06/26/98 77.78 08/18/98 83.99 09/22/98 83.89 12/15/98 82.84 12/23/98 82.55 03/15/99 77.31 03/23/99 77.06 06/07/99 82.96 09/03/99 84.16 12/06/99 84.41	03/01/95         80.80         284.25           06/01/95         75.69         289.36           09/06/95         77.54         287.51           12/12/95         75.96         289.09           03/01/96         73.27         291.78           06/15/96         73.21         291.84           09/18/96         81.08         283.97           12/21/96         77.35         287.70           03/07/97         69.67         295.38           06/27/97         82.40         282.65           09/29/97         82.72         282.33           12/15/97         82.57         282.48           03/16/98         69.13         295.92           06/26/98         77.78         287.27           08/18/98         83.99         281.06           09/22/98         83.89         281.16           12/15/98         82.84         282.21           12/23/98         82.55         282.50           03/15/99         77.31         287.74           03/23/99         77.06         287.99           06/07/99         82.96         282.09           09/03/99         84.16         280.89 <td< td=""><td>Date         DTW (ft.)         GWE (mst)         Thickness (ft.)           03/01/95         80.80         284.25         0.00           06/01/95         75.69         289.36         0.00           09/06/95         77.54         287.51         0.00           12/12/95         75.96         289.09         0.00           03/01/96         73.27         291.78         0.00           06/15/96         73.21         291.84         0.00           09/18/96         81.08         283.97         0.00           03/07/97         69.67         295.38         Sheen           06/27/97         82.40         282.65         0.00           09/29/97         82.72         282.33         0.00           12/15/97         82.57         282.48         0.00           03/16/98         69.13         295.92         Sheen           06/26/98         77.78         287.27         0.00           08/18/98         83.99         281.06         0.00           12/15/98         82.84         282.21         0.00           12/23/98         82.55         282.50         0.00           03/23/99         77.06         287.99</td><td>Date         DTW (ft.)         GWE (mst)         Thickness (ft.)         TPH(D) (pph)           03/01/95 06/01/95 07.569 09/06/95 77.54 287.51 03/01/96 73.27 291.78 03/01/96 73.27 291.78 00/15/96 73.21 09/18/96 81.08 283.97 0.00 0420 09/18/96 81.08 283.97 0.00 0470 09/18/96 81.08 283.97 0.00 0470 03/07/97 69.67 295.38 5heen 06/27/97 82.40 282.65 0.00 06/26/98 77.78 282.48 0.00 430 0430 0430 0430 0430 0430 0430</td><td>Date         DTW         GWE (mst)         Thickness         TPH(D) (ppb)         TPH(G) (ppb)           03/01/95         80.80         284.25         0.00         320         ND           06/01/95         75.69         289.36         0.00         280         350           09/06/95         77.54         287.51         0.00         ND         ND           12/12/95         75.96         289.09         0.00         850<sup>4</sup>         1,200           03/01/96         73.27         291.78         0.00         870<sup>4</sup>         1,000           06/15/96         73.21         291.84         0.00         420         910           09/18/96         81.08         283.97         0.00         600         1,200           12/21/96         77.35         287.70         0.00         470         330<sup>8</sup>           03/07/97         69.67         295.38         Sheen         870<sup>4</sup>         190           06/27/97         82.40         282.65         0.00         680<sup>4</sup>         98           09/29/97         82.72         282.48         0.00         490         54<sup>8</sup>           03/16/98         69.13         295.92         Sheen         4,000<sup>10</sup></td><td>  Date   DTW   GWE   Thickness   TPH(D)   (ppb)   (ppb</td><td>  Date   DTW   GWE   Thickness   TPH(D)   TPH(G)   B   T    </td><td>  Date   DTW   GWE   Thickness   TPH(D)   TPH(G)   B   T   E    </td><td>  Date   DTW   GWE   Thickness   TPH(D)   TPH(G)   B   T   E   X   (R.)   (mst)   (F.)   (pph)   (pph)</td></td<>	Date         DTW (ft.)         GWE (mst)         Thickness (ft.)           03/01/95         80.80         284.25         0.00           06/01/95         75.69         289.36         0.00           09/06/95         77.54         287.51         0.00           12/12/95         75.96         289.09         0.00           03/01/96         73.27         291.78         0.00           06/15/96         73.21         291.84         0.00           09/18/96         81.08         283.97         0.00           03/07/97         69.67         295.38         Sheen           06/27/97         82.40         282.65         0.00           09/29/97         82.72         282.33         0.00           12/15/97         82.57         282.48         0.00           03/16/98         69.13         295.92         Sheen           06/26/98         77.78         287.27         0.00           08/18/98         83.99         281.06         0.00           12/15/98         82.84         282.21         0.00           12/23/98         82.55         282.50         0.00           03/23/99         77.06         287.99	Date         DTW (ft.)         GWE (mst)         Thickness (ft.)         TPH(D) (pph)           03/01/95 06/01/95 07.569 09/06/95 77.54 287.51 03/01/96 73.27 291.78 03/01/96 73.27 291.78 00/15/96 73.21 09/18/96 81.08 283.97 0.00 0420 09/18/96 81.08 283.97 0.00 0470 09/18/96 81.08 283.97 0.00 0470 03/07/97 69.67 295.38 5heen 06/27/97 82.40 282.65 0.00 06/26/98 77.78 282.48 0.00 430 0430 0430 0430 0430 0430 0430	Date         DTW         GWE (mst)         Thickness         TPH(D) (ppb)         TPH(G) (ppb)           03/01/95         80.80         284.25         0.00         320         ND           06/01/95         75.69         289.36         0.00         280         350           09/06/95         77.54         287.51         0.00         ND         ND           12/12/95         75.96         289.09         0.00         850 <sup>4</sup> 1,200           03/01/96         73.27         291.78         0.00         870 <sup>4</sup> 1,000           06/15/96         73.21         291.84         0.00         420         910           09/18/96         81.08         283.97         0.00         600         1,200           12/21/96         77.35         287.70         0.00         470         330 <sup>8</sup> 03/07/97         69.67         295.38         Sheen         870 <sup>4</sup> 190           06/27/97         82.40         282.65         0.00         680 <sup>4</sup> 98           09/29/97         82.72         282.48         0.00         490         54 <sup>8</sup> 03/16/98         69.13         295.92         Sheen         4,000 <sup>10</sup>	Date   DTW   GWE   Thickness   TPH(D)   (ppb)   (ppb	Date   DTW   GWE   Thickness   TPH(D)   TPH(G)   B   T	Date   DTW   GWE   Thickness   TPH(D)   TPH(G)   B   T   E	Date   DTW   GWE   Thickness   TPH(D)   TPH(G)   B   T   E   X   (R.)   (mst)   (F.)   (pph)   (pph)

Table 1
Groundwater Monitoring Data and Analytical Results

				Product							
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(msl)	(Ji.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ррь)	(ppb)
MW-3	06/15/96	75.13	291.88	0.00	$400^{4}$	780	190	8.8	3.8	4.0	630
(cont)	09/18/96	82.84	284.17	0.00	170	2,800	340	12	11	110	2,500
	12/21/96	79.29	287.72	0.00	644	51	1.3	ND	ND	0.53	20
	03/07/97	71.58	295.43	0.00	570 <sup>4</sup>	1,400	53	14	29	68	220
	06/27/97	83.27	283.74	0.00	ND	ND	ND	ND	ND	ND	27
	09/29/97	83.33	283.68	0.00	ND	ND	ND	ND	ND	ND	11
	12/15/97	83.35	283.66	0.00	ND	ND	ND	ND	ND	ND	19
	03/16/98	71.07	295.94	0.00	$670^{10}$	130 <sup>12</sup>	6.5	1.9	1.5	1.6	210
367.03	06/26/98	79.65	287.38	0.00	63 <sup>13</sup>	40015	15	$\mathrm{ND}^{11}$	$ND^{11}$	1.9	490
	08/18/98	83.29	283.74	0.00							
	09/22/98	83.33	283.70	0.00	$95^{20}$	ND	ND	ND	ND	ND	24
	12/15/98	83.29	283.74	0.00	ND	ND	ND	ND	ND	ND	18
	12/23/98	83.28	283.75	0.00							
	03/15/99	79.19	287.84	0.00	$3,500^{26}$	26,000	3,100	270	2,200	3,100	1,300
	03/23/99	78.92	288.11	0.00						***	
	06/07/99	83.22	283.81	0.00	ND	ND	ND	ND	0.63	ND	29
	09/03/99	83.31	283.72	0.00	$2,900^{20}$	$23,000^{30}$	770	$ND^{11}$	980	6,400	280/82.4 <sup>27</sup>
	12/06/99	83.41	283.62	0.00	4,200 <sup>20</sup>	41,000 <sup>30</sup>	3,200	3,500	1,300	8,300	ND <sup>11</sup>
MW-4											
369.03	09/18/96	73.67	295.36	0.00	200	160	14	ND	ND	1.6	ND
	12/21/96	77.69	291.34	0.00	ND	ND	ND	ND	ND	ND	ND
	03/07/97	68.04	300.99	0.00	ND	ND	1.9	0.99	ND	1.5	ND
	06/27/97	79.06	289.97	0.00	ND	ND	ND	ND	ND	ND	ND
	09/29/97	85.83	283.20	0.00	ND	ND	ND	ND	ND	ND	ND
	12/15/97	87.26	281.77	0.00	ND	ND	ND	ND	ND	ND	ND
	03/16/98	75.09	293.94	0.00	ND	ND	ND	0.69	ND	0.82	ND
368.81	06/26/98	73.81	295.00	0.00	630 <sup>16</sup>	10013	62	ND	ND	ND	ND
	08/18/98	78.75	290.06	0.00			••				
	09/22/98	83.95	284.86	0.00	$74^{20}$	ND	ND	ND	ND	ND	2.8
	12/15/98	85.41	283.40	0.00	ND	ND	ND	ND	ND	ND	ND
	12/23/98	84.95		J				- 1	. 12-	112	1 12-

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/ Date TOC*  MW-4 03/15/	(fi.) 99 78.47 99 77.37	GWE (msl) 290.34	Thickness (ft.)	TPH(D) (ppb)	TPH(G) <i>(ppb)</i>	B (ppb)	T (ppb)	E	X	MTBE
MW-4 03/15/	99 78.47 99 77.37	290.34	· · · · · · · · · · · · · · · · · · ·	(ppb)	(ppb)	(anh)	/mak's			
	99 77.37		0.00			TABAN.	γρυ)	(ppb)	(ppb)	(ppb)
	99 77.37									
			0.00	ND	ND	ND	ND	ND	ND	ND
(cont) 03/23/	99 <i>7</i> 6.60	291.44	0.00							
06/07/		292.21	0.00	ND	ND	ND	ND	ND	ND	ND
09/03/		281.58	0.00	66 <sup>19</sup>	ND	ND	ND	ND	ND	ND/ND <sup>27</sup>
12/06/	99 92.23	276.58	0.00	95 <sup>13</sup>	ND	ND	ND	ND	ND	ND
MW-5										
363.23 09/18/	96 64.20	299.03	0.00	4,700 <sup>5</sup>	36,000	6,700	410	730	6,500	4,100
12/21/	96 61.77	301.46	Sheen	4,7004	25,000	3,200	300	780	3,600	2,600
03/07/	97 56.30	306.93	Sheen	2,100 <sup>4</sup>	14,000	1,300	120	410	1,200	1,700
06/27/	97 68.88	295.03***	0.90	NOT SAMPLEI	DUE TO THE					
09/29/	9 <b>7</b> 69.47	294.02***	0.35	NOT SAMPLEI	DUE TO THE	PRESENCE (	OF FREE PROI	DUCT		
12/15/	97 64.92	298.54***	0.30	NOT SAMPLEI	DUE TO THE	PRESENCE	OF FREE PROI	DUCT	<del></del>	
03/16/	98 49.63	313.67***	0.09	NOT SAMPLEI	DUE TO THE	PRESENCE (	OF FREE PROI	DUCT		••
363.21 06/26/	98 64.13	299.08	Sheen	230,000 <sup>17</sup>	$490^{18}$	6.3	2.8	4.2	5.1	10
08/18/9	98 70.40	292.81**	0.005		<b>-</b>					
09/22/	98 69.10	294.16**	0.06	NOT SAMPLEI	DUE TO THE	PRESENCE (	OF FREE PROI	DUCT		
12/15/	98 68.84	294.50**	0.17	NOT SAMPLEI	DUE TO THE	PRESENCE (	OF FREE PROI	DUCT		
12/23/9	8 68.42	295.18**	0.50							
03/15/9	99 63.81	299.59**	0.25							
03/23/	99 63.59	299.72**	0.13							
06/07/9	99 68.25	295.59**	0.82	$4,700,000^{26}$	210,000	6,700	3,700	5,000	20,000	11,000/4,000
09/03/9	99 69.38	294.37**	0.70	NOT SAMPLEI	DUE TO THE	· ·	•			
12/06/9	9 70.02	293.82**	0.82	NOT SAMPLE						
MW-6										
363.12 09/18/9	96 79.07	284.05	0.00	ND	160	5.4	ND	ND	ND	ND
12/21/9		287.72	0.00	ND	300 <sup>8</sup>	3.4 96	1.3	ND ND	ND 1.7	21
03/07/9		295.51	0.00	190 <sup>4</sup>	1,800 <sup>8</sup>	920	1.3	ND ND	31	21 290
06/27/9		282.67	0.00	735	1,800 ND	0.73	ND	ND ND	38	290 38
09/29/9		277.10	0.00	ND	62 <sup>9</sup>	0.73 ND	ND ND	ND ND		
09/29/3	00.02	2/7.10	0.00	עואו	02	ND	ND	מא	ND	43

Table 1
Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7376

4191 First Street

				Product							
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	T	E	<b>X</b>	MTBE
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
		04.00	~=~ ~~	0.00		<b>5</b> 09		1 ID	<b>.</b>	NID.	70
MW-6	12/15/97	84.03	279.09	0.00	ND	78 <sup>9</sup>	ND	ND	ND	ND	39
(cont)	03/16/98	67.15	295.97	0.00	10010	21012	36	2.5	ND	3.0	64
363.13	06/26/98	75.71	287.42	0.00	$180^{14}$	530	300	8.3	2.8	8.7	81
	08/18/98	74.86	288.27	0.00							
	09/22/98	UNABLE TO LO									
	12/15/98	UNABLE TO LO									
	12/23/98	80.80	282.33	0.00		$120^{23}$	1.1	ND	ND	0.78	25
	01/23/99	80.68	282.45	0.00	ND				••		**
	03/15/99	75.29	287.84	0.00	71 <sup>24</sup>	62 <sup>22</sup>	1.4	ND	ND	ND	23
	03/23/99	75.03	288.10	0.00							
	06/07/99	82.27	280.86	0.00	$160^{28}$	ND	ND	ND	ND	ND	18
	09/03/99	87.49	275.64	0.00	INSUFFICIEN'	Γ WATER TO S	AMPLE				
	12/06/99	DRY		••							
MW-7											
355.97	06/26/98		·								••
	08/18/98	68.75	287.22	0.00	$1,400^{20}$	4,000	1,900	48	160	ND <sup>11</sup>	1,700
	09/22/98	66.35	289.62	0.00	$780^{20}$	3,200	1,100	ND	22	ND	1,500
	12/15/98	65.03	290.94	0.00	350 <sup>21</sup>	$1,900^{22}$	180	2.7	2.9	3.8	1,400
	12/23/98	64.82	291.15	0.00							~~
	03/15/99	60.44	295.53	0.00	$460^{26}$	2,700	1,100	ND <sup>11</sup>	30	16	1,400/970 <sup>27</sup>
	03/23/99	60.43	295.54	0.00						••	
	06/07/99	64.48	291.49	0.00	550 <sup>25</sup>	$2,600^{29}$	180	21	ND	13	1,200
	09/03/99	69.98	285.99	0.00	550 <sup>20</sup>	870 <sup>30</sup>	69	$ND^{11}$	$ND^{11}$	$ND^{11}$	$1,100/872^{27}$
	12/06/99	70.18	285.79	0.00	$220^{20}$	1,900 <sup>31</sup>	350	$ND^{11}$	$ND^{11}$	$ND^{11}$	1,100
MW-8											
362.37	06/26/98	63.00	299.37	0.00	8019	ND	6.0	ND	ND	ND	150
	08/18/98	73.38	288.99	0.00							
	09/22/98	70.89	291.48	0.00	120 <sup>20</sup>	ND	ND	ND	ND	ND	9.5
	12/15/98	70.29	292.08	0.00	ND	ND	ND	ND	ND	ND	3.0

Table 1
Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7376

4191 First Street

			76 76 76 76 76 76 76 76 76 76 76 76 76 7	Product							
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	Т	E	X	MTBE
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-8	12/23/98	70.03	292.34	0.00	·				er.a		
(cont)	03/15/99	UNABLE TO LO									
361.83	03/23/99	64.86	296.97	0.00	$60^{24}$	ND	ND	0.77	ND	0.96	190
	06/07/99	68.30	293.53	0.00	ND	ND	ND	ND	ND	ND	ND
	09/03/99	73.92	287.91	0.00	13019	ND	ND	0.57	ND	ND	170/146 <sup>27</sup>
	12/06/99	74.98	286.85	0.00	160 <sup>19</sup>	ND	ND	ND	ND	ND	150
MW-9											
354.85	11/29/99	74.50	280.35	0.00						••	
JJ 1.0J	12/06/99	74.35	280.50	0.00	ND	ND	ND	ND	ND	ND	3.0/2.7 <sup>27</sup>
	12.00,55										
MW-10											
362.62	11/29/99	DRY	~~								
	12/06/99	DRY				bon.					
Trip Blank											
TB-LB	03/16/98					ND	ND	ND	ND	ND	ND
	06/26/98	==				ND	ND	ND	ND	ND	ND
	08/18/98		••			ND	ND	ND	ND	ND	ND
	09/22/98					ND	ND	ND	ND	ND	ND
	12/15/98					ND	ND	ND	ND	ND	ND
	12/23/98					ND	ND	ND	ND	ND	ND
	03/15/99		••			ND	ND	ND	ND	ND	ND
	03/23/99					ND	ND	ND	ND	ND	ND
	06/07/99					ND	ND	ND	ND	ND	ND
	09/03/99					ND	ND	ND	ND	ND	ND
	12/06/99					ND	ND	ND	ND	ND	ND

#### Table 1

#### **Groundwater Monitoring Data and Analytical Results**

Tosco (Unocal) Service Station #7376 4191 First Street Pleasanton, California

#### **EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to March 16, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing

B = Benzene

ppb = Parts per billion

DTW = Depth to Water

T = Toluene

ND = Not Detected

(ft.) = Feet

E = Ethylbenzene

-- = Not Measured/Not Analyzed

 $GWE = Groundwater\ Elevation$ 

X = Xylenes

msl = Relative to mean sea level

MTBE = Methyl tertiary butyl ether

TPH(G) = Total Petroleum Hydrocarbons as Gasoline

- \* TOC elevations have been surveyed relative to mean sea level (msl) per City of Pleasanton Benchmark V1, a brass disk on the north curb of Ray Street, approximately 200 feet northwest of the centerline of First Street (Elevation = 367.17 feet msl). On March 22, 1999, MW-8 was re-surveyed and on November 26, 1999, MW-9 and MW-10 were surveyed, the Benchmark was a cut "+" on a concrete transformer pad on the north side of the property to the northwest (Elevation = 353.92 feet, msl).
- \*\* Groundwater elevation corrected for the presence of free product; correction factor = [(TOC-DTW)+(Product Thickness x 0.77)].
- \*\*\* Groundwater elevation corrected for the presence of free product; correction factor = [(TOC-DTW)+(Product Thickness x 0.75)].
- 1,2-Dichloroethene (1,2-DCE) was detected at a concentration of 18 ppb.
- <sup>2</sup> Reported as Total Extractable Hydrocarbons (TEH).
- Reported as Total Petroleum Hydrocarbons (TPH).
- <sup>4</sup> Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- 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.
- 8 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- Laboratory report indicates diesel and unidentified hydrocarbons >C16.
- Detection limit raised. Refer to analytical reports.
- Laboratory report indicates gasoline and unidentified hydrocarbons < C7.
- Laboratory report indicates discrete peaks.
- Laboratory report indicates diesel and unidentified hydrocarbons >C20.
- Laboratory report indicates discrete peaks and unidentified hydrocarbons < C7.
- Laboratory report indicates diesel and unidentified hydrocarbons <C15.
- Laboratory report indicates diesel and unidentified hydrocarbons <C15 and >C20.
- Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- Laboratory report indicates unidentified hydrocarbons >C16.
- Laboratory report indicates unidentified hydrocarbons C9-C24.
- Laboratory report indicates diesel and unidentified hydrocarbons <C12.
- Laboratory report indicates unidentified hydrocarbons C6-C12.

#### Table 1

#### Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7376 4191 First Street Pleasanton, California

#### EXPLANATIONS: (cont)

- <sup>23</sup> Laboratory report indicates unidentified hydrocarbons C6-C9.
- Laboratory report indicates unidentified hydrocarbons >C14.
- <sup>25</sup> Laboratory report indicates unidentified hydrocarbons >C10.
- Laboratory report indicates unidentified hydrocarbons >C9.
- <sup>27</sup> MTBE by EPA Method 8260.
- Laboratory report indicates unidentified hydrocarbons >C15.
- Laboratory report indicates gasoline and unidentified hydrocarbons >C6.
- Laboratory report indicates gasoline C6-C12.
- Laboratory report gasoline C6-C12 + unidentified hydrocarbons < C6.
- Laboratory report indicates unidentified hydrocarbons C9-C40.

## Table 2 Product Thickness/Removal Data

Tosco (Unocal) Service Station #7376 4191 First Street

Pleasanton, California

Well ID	Date	DTW (fi.)	Product Thickness (ft.)	Amount Bailed (Product + Water) gallons
MW-5	03/07/97	56.30	Sheen	
	06/27/97	68.88	0.90	
	09/29/97	69.47	0.35	
	12/15/97	64.92	0.30	A 16
	03/16/98	49.63	0.09	0.25
	06/26/98	63.00	Sheen	<del></del>
	08/18/98	70.40	0.005	
	09/22/98	69.10	0.06	
	12/15/98	68.84	0.17	
	12/23/98	68.42	0.50	
	03/15/99	63.81	0.25	0.13
	03/23/99	63.59	0.13	0.00
	06/07/99	68.25	0.82	0.94
	09/03/99	69.38	0.70	0.078
	12/06/99	70.02	0.82	0.00

#### **EXPLANATIONS:**

Product thickness/removal data prior to March 16, 1998, were compiled from reports prepared by MPDS Services, Inc.

DTW = Depth to water

(ft.) = Feet

-- = Not Measured/Not Available

Table 3
Groundwater Analytical Results - Oxygenate Compounds

#### Tosco (Unocal) Service Station #7376

4191 First Street

Well ID	Date	Ethanol	ТВА	MTBE	DIPE	ETBE	TAME
i i ch ad	Date	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
				**************************************		**************************************	2000 1000 1000 10 <del>0</del> 00 2000 2000 1000 1000 1000 1000 1000
MW-1	09/03/99	ND	ND	55.2	ND	ND	ND
MW-2B	03/15/99	ND	3,800	4,800	13	ND	ND
	09/03/99	$ND^2$	3,480	4,400	$ND^2$	$ND^2$	$ND^2$
MW-3	09/03/99	ND	ND	82.4	ND	ND	ND
MW-4	09/03/99	ND	ND	ND	ND	ND	ND
MW-5	06/07/99 09/03/99	ND <sup>2</sup> NOT SAMPLED	ND² DUE TO THE PR	4,000 <sup>1</sup> ESENCE OF FRE	ND² E PRODUCT	ND <sup>2</sup>	ND <sup>2</sup> 
<b>.</b>	02/15/00	NIP.	<b>C10</b>	070	4.2	N.F.	<b>3</b> 10
MW-7	03/15/99 09/03/99	ND ND <sup>2</sup>	610 460	970 872	4.3 4.36	ND ND²	ND ND²
MW-8	09/03/99	ND	ND	146	12.4	ND	ND
MW-9	12/06/99 <sup>3</sup>		ND	2.7	ND	ND	ND

#### Table 3

#### **Groundwater Analytical Results - Oxygenate Compounds**

Tosco (Unocal) Service Station #7376 4191 First Street Pleasanton, California

#### **EXPLANATIONS:**

#### **ANALYTICAL METHOD:**

TBA = Tertiary Butyl Alcohol

MTBE = Methyl Tertiary Butyl Ether

DIPE = Di-isopropyl Ether

ETBE = Ethyl Tertiary Butyl Ether

TAME = Tertiary Amyl Methyl Ether

ppb = Parts per billion

-- = Not Analyzed

ND = Not Detected

EPA Method 8260 for Oxygenate Compounds

- <sup>2</sup> Detection limit raised. Refer to analytical reports.
- <sup>3</sup> Laboratory report indicates 1,2-Dichloroethane (1,2-DCA) and Ethylene dibromide (EDB) were ND.

Laboratory results indicate sample contains high concentration of Hexane.

## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexidip 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/ 76 Facility# 73 Address: <u>419</u> City: <u>Plea</u>	1 Firs				Job#: Date: Sample:				
Well ID	HW	-1	Wel	l Condition:	: <u> </u>	0 K			
Well Diameter		2 <sub>in.</sub>	•	irocarbon	6		Amount Ba	4~	(Gallons)
Total Depth	86.	43 ft.		ckness:	2" = 0.17		product/wat 3" = 0.38	,	= 0.66
Depth to Water	79	.74 ft.	· ·	ctor (VF)		6* = 1.5		12" = 5.80	
Purge Equipment:	Disposa Bailer Stack Suction	ble Bailer		San	3 (case volumpling ipment:	Disp Baile Pres Grat	osable Ba	ır	3. <del>1</del> / (qai.)
Starting Time: Sampling Time: Purging Flow Ra Did well de-wat	 ate:	0.5	<u></u>		or: Descriptio	<i>l_</i> on:		Odor: <u>Fo</u>	
	Volume (gal.)	рН 7.54	$\mu$ n	ductivity thos/cm <b>y/0</b> 0	Temperate 68.7		D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:20	ı	7.40		3,45	69.2				·
11:23	3.5	3.32		-41_	69.4	<u>-</u>			
SAMPLE ID	(#) - cor	MVOA	LABOI REFRIG. Y	PRESERV.	TYPE	ON LABOR, EQUOIA	ATORY	ANAL' TPH(G)/btex/n	
HW-1	1 Auch	28		NON					
COMMENTS:						. <u> </u>		<u> </u>	
	***- **			<del></del> -		<del></del> -	<u>.                                   </u>		

9/97-fieldat.fm

Facility # 73 Address: <u>419</u>	1 First st.		Job#: <u>180075</u> Date: <u>12/6/99</u> Sampler: <u>Vartkes</u>						
City: Plea	Janton			Sampler	· oci ice,		· - · · · · · · · · · · · · · · · · · ·		
Well ID	HW-2B	We	Il Condition:	<u>o</u> k	<u></u>		, <u>.</u>		
Well Diameter		•	irocarbon	A 16.00	Amount B	<i>- 1</i>	) (Gallons)		
Total Depth	85.25 tt		ckness:	2" = 0.17			" = 0.66		
Depth to Water	84.41 A	E.	actor (VF)	6* = 1	.50	12" = 5.80			
	0.84 x	VF 0.17	=0.14 x	3 (case volume) =	Estimated Po	urge Volume: 💆	0.4 と (gal.)		
Purge (	Disposable Bailer Bailer Stack Suction Grundfos Other:			Ba Pr Gr	sposable Baile iller essure Baile ab Sample ther:	er	:		
	2:19		Water Cold	onditions: or:over Description:	<del>2 (</del>	Odor:			
	te:er?			me:		ne:	(ga)		
Time \	/olume pH (gal.) 0-25 7.20	Con μπ	iductivity nhos/cm <b>X/00</b>	Temperature  •F  68.4	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)		
2:08	0.5 7.08		1.35	68.9					
2:11 -	1. 7.03	<u> </u>	. 5 2						
				<del></del>					
		LABOI	RATORY INF						
SAMPLE ID	(#) - CONTAINER	REFRIG.	,	CYPE LABO		ANAL TPH(G)/btex/r			
MW-2B MW-2B	3 x 40 m/v2 A 1 Aucher	٧ - ح	HOI		·	TPH-1			
FIW									
			<u> </u>			<u> </u>			
COMMENTS:			<del> </del>		<del></del>				
		····					<u> </u>		

9/97-fieldet.fm

Facility# 73	1 First st.			Job# Date: Samp			?	
Well ID	MW-3	We	II Conditio	on: <u> </u>	ok		···	
Well Diameter	2in,		drocarbon	D		Amount E	_	<u>.</u>
Total Depth	94-11 n		ckness: _	7		(product/wa 3" = 0.3		(Gallons) 1" = 0.66
Depth to Water	83.41 ft.	F	olume actor (VF)	2" ≝ 0.	6" = I	.50	12" = 5.80	- 0.00
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundios Other:		Sa	X 3 (case ampling quipment	: Di Ba Pro Gr	sposable B sposable B liler essure Bail ab Sample ther:	er	<u>5.4 <sup>γ</sup> (qal.)</u> :
Purging Flow Ra	<u> </u>	 _apm.	Water Co	olor: t Descrip	otion: _	<del>.</del>	Odor: 4	
Did well de-wate	er? <u>no</u>	<u></u>	If yes;	Time: _		Volur	ne:	(gal.
Time 7	Volume pH (gal.) 7.03	<u>μπ</u>	ductivity thos/cm	_69	erature	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
2:41 _	5.5 6.85	<u>9.</u> 1 <u>9.</u>	37 39		7.1 1.0			
SAMPLE ID  MW_3	(#) - CONTAINER  3 × 40 m/v2 A	LABOF REFRIG.	RATORY II	/, TYPE		RATORY	ANAL TPH(G)/btex/i	
MW-3	1 Aucher	て	NO	V.=	~		TPH-D	
COMMENTS:								

Facility# 73	376		Job	#:	18007		
Address: <u>419</u>	1 First st.		Dat		12/6/99		
City: Plea	asanton		San	npler:	Vortke		<del></del>
Well ID	HW-4	We	Condition:	Oĥ	<u> </u>		
Well Diameter	2 in		drocarbon O	15.	Amount E		(Gallons
Fotal Depth	93.01 tt	· v		0.17	et) (product/wa 3" = 0.3	8 4"	= 0.66
Depth to Water	92.23 ft	Fa	ector (VF)	6"	= 1.50	12" = 5.80	
	0.78 x	VF 0.17	= <u>0.13</u> × 3 (cas	e volume	e) = Estimated P	urge Volume: 🙉	39 (gai.
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampling Equipme		Disposable B Bailer Pressure Bail Grab Sample Other:	er	:
Starting Time: Sampling Time:			Weather Condit	ro est	overe.	Odor: 🖊 🗢	
_	er?	gpm.	Sediment Describes:				(qa
<u> </u>	Volume pH (gal.) - 7.52 0.5 7.40	3 μπ 7	1hos/cm <b>//</b> 23	perature •F • <b>5</b> • 3	(mg/L)	ORP (mV)	Alkalinit (ppm)
		L'ABO	RATORY INFORM	IATION			
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	<del></del>	ABORATORY	ANALY	
MW-4 MW-4	3×40m/v2A 1 Aucher	-Z	HCI	SEQU		TPH(G)/btex/m	
COMMENTS:							
				·		<del></del>	9/97-ffaldat

lient/ 78 acility <u># 73</u>	560 76		Job#:	180075		
ddress 419	1 First st.		Date:	12/6/99		·
lity: Plea			Sampler:	Varthes		
Well ID	HW-5	Well Condition	on: 0 A	e		<del></del>
Vell Diameter		Hydrocarbon Thickness: _		Amount Ba	7	(Gallons)
otal Depth	72.52 ft.	Volume Factor (VF)	2" = 0.17		<b>4"</b> :	= 0.66
epth to Water	70.02 t.	<u> </u>				
	x v	F =	X 3 (case volume	e) = Estimated Pu	rge Volume:	(.lsp)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	E	ampling quipment:	Disposable Ba Bailer Pressure Baile Grab Sample Other:	ar .	:
Starting Time:						
Sampling Time:		Water C	olor:		Odor:	
Purging Flow Ra	ite:q	<del></del>				
Did well de-wat	er?	If yes;	Time:	Volum	ne:	(gal
Time	Volume pH (gal.)	Conductivity µmhos/cm	Temperatur •F	e D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
	<u> </u>					
/_						
		<del></del>		<del></del>	<del></del>	
		LABORATORY	INFORMATION			
SAMPLE IO	(#) - CONTAINER			ABORATORY	ANALY	
HW-	3/40m/v2A	- He	+ SEO	UOIA	TPH(G)/btex/m	tbe
MW-	1 Aucher	~ KO	NE		TTH-1)	
	Not Constant	A dia to	# 40.00	sol 5	a. Produ	et.
COMMENTS:	Not Sample	1 / 200	na S	truction.		
-A- N-0	PROMUCI DANC	C. American State of the Control of				

Client/ 78 Facility# 73	76		<u> </u>	Job#:		80075	<u> </u>	<del></del>		
Address: 419	1 First st.			Date:		2/6/99	6/99			
			<del></del>			arthes				
City: Plea	2 Santon			Sampi	er: <u>-</u>	OCT (CE)				
Well ID	HW-6	Wel	l Condition	:	Oh			<del></del>		
Well Diameter	2in,		lrocarbon	P		Amount B		(Gallons)		
Total Depth	88.00 ft.		kness:		7	3" = 0.38	4	" = 0.66		
Depth to Water	DRY n	Fa	ctor (VF)		6" = 1	50	12* = 5.80			
	x	VF	=>	( 3 (case v	olume) =	Estimated Pu	rge Volume: _	(qal.)		
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:			npling Jipment:	Bai Pre Gra	posable Ba ler ssure Baile lb Sample ner:	er	:		
Starting Time:			Weather (	Condition	ns:					
Sampling Time:			Water Co	lor:		<del></del>	Odor:			
, -	ate:	gom.	Sediment	Descript	tion:					
_	er?		If yes; T	ime:		Volum	ne:	(qal.)		
Time	Volume pH (gal.)		ductivity hos/cm	Temper	rature	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)		
						·		·		
<del></del>	<u> </u>									
<del></del> -			<u> </u>		<del></del>					
		LABOR	RATORY IN	EODMA"	TION					
SAMPLE ID	(#) - CONTAINER	REFRIG.		TYPE		RATORY	ANAL	YSES		
MW_	3×40m/v2A-	Υ -	HCI		SEQUOIA		TPH(G)/btex/r	ntbe		
HW-	1 Acaber		HUN	E			- <i>TF#-</i> D	·		
			<del>                                     </del>							
<del></del>	.,,	λαι	-							
COMMENTS:	well is	DXY								
			<del></del>					<u> </u>		

Facility# 73 Address: <u>419</u> City: <u>Plea</u>	1 First st.		Job Dat Sar	e: _	18007 12/6/99 Vortkes		
Well ID	HW-7	We	II Condition:		DK_		<del></del>
Well Diameter	2in,		Irocarbon	2	Amount B	- Lang	
Total Depth	76.90 ft.		ckness: <u>C</u>	(feet) : 0.17	(product/wa 3" = 0.38		(Gailons) 1" = 0.66
Depth to Water	70.18 h	Fa	ctor (VF)	6" =	1.50		
			. = <u>1.14</u> x 3 (ca	•	= Estimated Po	ırge Volume: _	3.42 <sub>(gal.)</sub>
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Samplin Equipme	nt: D B P G	isposable Bailer ailer ressure Baile rab Sample other:	er	:
Starting Time:	1:20		Weather Condi	tions: _	clok		
Sampling Time:	1:41		Water Color: _		(a	Odat :	<b>2</b> .7
	te:	qpm.	Sediment Desc				
Did well de-wate	er? <u>ne?</u>	<del></del>	If yes; Time:		Volun	ne:	<u>[gal</u>
Time \	Volume pH (gal.) 1 7.04	μπ	ductivity Ter hos/cm WOO	operature	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1:23	7.5 6.91 3.5 6.83		1.96 6	8.4			
CAMPLEID	{#} - CONTAINER	L'ABOF	RATORY INFORM		ORATORY	ANAL	YSES
SAMPLE ID	3 × 40 m/v2 A	Y	HC1	SEQUO		TPH(G)/btex/r	
MW-7	1 Aucher	~	NUNE			TPH-D	
COMMENTS:			<u> </u>				

Client/	376	·	·,	Job#:	18007	5	
	1 First st.			Date:	12/6/9	9	
City: Ple				Sampler	: Vortke		
Well ID	HW-8	We	ell Condition:		ok		
Well Diameter		-	drocarbon	P	Amount	_	(Gallons)
Total Depth	86.40 ft		olume	2" = 0.17	3" = 0.3	38	4" = 0.66
Depth to Water	74.98 A	. F	actor (VF)	-	6" = 1.50	12" = 5.80	
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	•	Sam	3 (case volui pling pment: (	Disposable E Bailer Pressure Bai Grab Sample Other:	Bailer ler	: :
Starting Time: Sampling Time:			Water Cold	r:	ddy_ or	Odor:_ <i>\rec</i>	)
	er?				Volu	me:	(gal
Time	Volume pH (gal.) 7.39	μπ	nductivity nhos/cm/V20 7.2	Temperatu 67. Y	nre D.O. (mg/L)		Alkalinity (ppm)
12:44	4 3.20		1.08	67.8	<u> </u>	<u></u>	. · _ <del></del>
n: +6	6 7.14		1.03	68.1		_	<u> </u>
		ĽARO	RATORY INF	ORMATIO	N		<u> </u>
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. 1		LABORATORY	ANAL	YSES
MW-8	3×40m/v2A	Y	HCI	SEC	AIOUL	TPH(G)/btex/	mtbe
HW- 8	1 Aucher	7.	NONE			TT++_L	
COMMENTS:							
				<del>.</del>			

Client/ 70 Facility# 73	5c0 76		Job		180075		
Address: 419	1 First st.		Dat	e:	2/6/99		
City: Plea			San	npler:	Partkes		
Well ID	HW-9	Well	Condition:	ok			
Well Diameter	2 in,		rocarbon	Б	Amount B	_	(Gallons)
Total Depth	78.20 ft		kness:	0.17	{product/wat 3" = 0.38		= 0.66
Depth to Water	74.35 tt		etor (VF)	6" = 1		12" = 5.80	
	3.85 x	vf <u>0.17</u>	- <u>0.65</u> x 3 (ca	se volume) =	Estimated Pu	irge Volume:	1.96 (gal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampling Equipme	nt: Di: Ba Pro Gr	sposable Ba iler essure Baile ab Sample her:	er	:
Starting Time: Sampling Time:	12:05 12:25 ate:		Weather Condi Water Color: _ Sediment Desc	brn	· · · · · · · · · · · · · · · · · · ·	Odor:reo	
	er?		If yes; Time:			ne:	(gal.)
Time	Volume pH	μ <u>m</u>	hos/cm <b>x/00</b>	operature	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:43 12:18	2 691		1.82 <u>6</u> 1.79 <u>6</u>	8.9			
SAMPLE ID	(#) - CONTAINER	L'ABOF REFRIG.	RATORY INFORT		RATORY	ANAL	YSES
MW-9	3×40m/v2A	Y	HCI	SEQUOIA	4	TPH(G)/btex/	ntbe
HW-9	1 Ausber	~	NONE			TPH-D	
					<u> </u>		
COMMENTS:				<u></u>		<u> </u>	
COMMENTO.							

9/97-Ifeldst.frm

Client/ / Facility# 7	1376			·	Job#	: _	18007		
Address: <u>41</u>	91 First	<u>st.</u>		·	Date	: _	12/6/9	9	<del></del>
City: Pla					Samı	oler: _	Vortke	<b></b>	
Well ID	HW-	10	Well	Conditi	on: _	<u>a</u> ,	k .		
Well Diameter	2_	in,	-	rocarbor	1 <i>4</i>	? "~~	Amount		(Gallons)
Total Depth	92.9	O ft.		kness: _ ume	2" = 0	.17		38	4" = 0.66
Depth to Wate	r DRY	ft.		tor (VF)			1.50	12* = 5.80	<u>.</u>
		X VF		=	X 3 (case	volume)	= Estimated F	Purge Volume:	(gal.)
Purge Equipment:	Disposable Bailer Stack Suction Grundfos Other:				ampling quipment	[ [	Disposable E Bailer Pressure Bai Grab Sample Other:	ler e	:
Starting Time:				Weathe	r Conditio	ons:		)	
Sampling Time	<del></del>		_					Odor:	
_	 Rate:	gpm	÷	Sedimer	nt Descrip	otion: .	<u> </u>		
<del>-</del> -	ater?			If yes;	Time: _		Volu	me:	(gal.
Time	Volume (gal.)	pH		uctivity ios/cm	Temp •I	erature	D.O. (mg/L)		Alkalinity (ppm)
								<u> </u>	
SAMPLE ID	(#) - CONTAI		ABORA		INFORMA V. TYPE		BORATORY	ANA	LYSES
NW-	3×40m/1		γ	#C	1	SEQUO	)	TPH(G)/btex	/mtbe
MW-	1 Aucher			NO	NE			TPH-1	<b>)</b>
	. 0	, _				<u> </u>	<u> </u>	<u> </u>	
COMMENTS:	well	_ / \	DK	4		<u>.</u>			<u> </u>
		<del> </del>	<u> </u>						

9/97-fleidat.frm



Torse Marketing Company 2000 Com Coryon FL, St., 400 San Ramon, Coltomia 84843 Foolity Number TOSCO (UNOCAL) SS#7376

Foolity Address 4191 First Street, Pleasauton, CA

Consultant Project Number 180075.85

Consultant Name Gettler-Ryan Inc. (G-R Inc.)

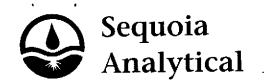
Address 6747 Sierra Court, Suite J. Dublin, CA 94568

Project Contact (Name) Deanna L. Harding

(Phone)510-551-7555 (Fax Number)510-551-7888

Contact	(Homo)	UAY ID	DEWILL	. v	
	(Name)	<del>910</del> ) 27	7-232		
	Sequola				
aboratory Relea	ee Number	$\mathcal{N}_{\mathcal{S}}$	17/4	/	
	d by (Nome)			3.0	
•	12/6/9				
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	ž	Container	₹6	Grab Composite Discrete		vation		) HE -			2003	t) CC	, n	Ŋ.			1 -	}			TB-LB ANALYSIS
Ž	ž	l g	1 I	9 E 5		1 E	or No.	1 A 80	1	8	20 J	Ę	Organica	5	_		ي طراً	3			
5 2	Sample Number	2	_ is	(a).		a a		1 E -	3	1 28	里	₹ •	δ	*	33	163	150	j			
Sample Number		Number	Motors Soli Water			Somple Press	load (Yes	TPH G=+ BTEX WANTEE (8015) (8020)	TPH Diesed (8015)	Off and Graces (5520)	400	Purgeable Aromatter (8020)	Purgeoble (8240)	Extractable Organica (8270)	4 9	100	0 4	1	}		
l &	3	Ž	₹ 🚱	\$	ļ	ξ	<u> </u>	¥ 8	£®	200	Purpecbie Holocarbons (8010)	£8	Eg	<del>[</del> [§	CACAPBZANI (ICAP or AX)	\$256	1,2.0 64 8 EDR (8260)	1			Remarke
TB-LB	OIA	1	W.	۵.		HU	4	×	<del>                                     </del>	<del> </del>				!		<u>80 0</u>		<u> </u>	<del> </del>	-├	
	074-1	4	4	<del>                                       </del>	1144				<del> </del>	ļ					<b> </b>		┼──	<u> </u>	<del> </del>	<del> </del>	
MW-1	03	<del>  </del>		Ψ		~	<b>y</b>	X	X					,	ļ	<u> </u>	<u> </u>	ļ	<u> </u>		
MW-2B		4	<b></b>	7	219p		Ψ	X									<u> </u>	<u> </u>			
MW - 3	OY	4	4	۲_	258	4_	44	X	X									<u> </u>	]		
MW-4	os	+	~	42	154	٤,	4-7	Υ	X												
4W-7	06	4	٠-	44	140	-a	4	X	X						,			f			
MW-8	071	4		ب	102	τ	4		Х								<b> </b>			<del>                                     </del>	
NW-9	08A-H	8	<b>~</b>	ţ	123/p	44.	~	X	X							X	X			<del> </del>	
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23 December, 1999

Deanna L. Harding Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin, CA 94568

RE: Tosco

Enclosed are the results of analyses for samples received by the laboratory on 07-Dec-99 14:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alan B. Kemp

Laboratory Director

Gettler Ryan, Inc. - Dublin

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

Project Number: Tosco # 7376 Project Manager: Deanna L. Harding **Reported:** 23-Dec-99 10:52

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W912147-01	Water	06-Dec-99 00:00	07-Dec-99 14:35
MW-1	W912147-02	Water	06-Dec-99 11:40	07-Dec-99 14:35
MW-2B	W912147-03	Water	06-Dec-99 14:19	07-Dec-99 14:35
MW-3	W912147-04	Water	06-Dec-99 14:58	07-Dec-99 14:35
MW-4	W912147-05	Water	06-Dec-99 11:05	07-Dec-99 14:35
MW-7	W912147-06	Water	06-Dec-99 13:41	07-Dec-99 14:35
MW-8	W912147-07	Water	06-Dec-99 13:02	07-Dec-99 14:35
<b>MW</b> -9	W912147-08	Water	06-Dec-99 12:25	07-Dec-99 14:35

Sequoia Analytical - Walnut Creek

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, Inc. - Dublin

Project: Tosco

6747 Sierra Court Suite J Dublin CA, 94568 Project Number: Tosco # 7376
Project Manager: Deanna L. Harding

Reported: 23-Dec-99 10:52

## Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
*						riepareu	Allalyzeu	Menior	Note
TB-LB (W912147-01) Water	Sampled: 06-Dec-99 00:00	Receive	:d: 07-De	:c-99 14:35					
Purgeable Hydrocarbons	ND	50	ug/l	1	9L09001	09-Dec-99	09-Dec-99	EPA	•
Benzene	ND	0.50	11		"	"	**	8015M/8020	
Toluene	ND	0.50	II	**	**	**	IF	10	
Ethylbenzene	ND	0.50	IJ		**	**	It	**	
Xylenes (total)	ND	0.50	11	n	"	n	II .	" .	
Methyl tert-butyl ether	ND	2.5	и .	**	11	**	. 0	t <del>e</del>	
Surrogate: a,a,a-Trifluorotolue	ne	100 %	70-	130	"	"	"	"	
MW-1 (W912147-02) Water	Sampled: 06-Dec-99 11:40	Receive	d: 07-De	c-99 14:35					
Purgeable Hydrocarbons	ND	50	ug/l	1	9L09001	09-Dec-99	09-Dec-99	EPA	
Benzene	ND	0.50	II	**	**	**	u	8015M/8020	
<b>Toluene</b>	ND	0.50	11	**	**	ч	u	н	
Ethylbenzene	ND	0.50	II	**	**	п	II .	н	
Xylenes (total)	ND	0.50	"	**	17	н	u	**	
Methyl tert-butyl ether	120	2.5	IJ	**	**	u	ч	n	
Surrogate: a,a,a-Trifluorotolue	ne	86.7%	70-	130	"	"	"	"	
MW-2B (W912147-03) Water	Sampled: 06-Dec-99 14:19	Receiv	ed: 07-D	ec-99 14:3:	5				
Purgeable Hydrocarbons	ND	500	ug/l	10	9L09001	09-Dec-99	09-Dec-99	EPA	
Benzene	ND	5.0	п	**	11	44	u ·	8015M/8020	
Toluene	ND	5.0	fi	**	**	"	u-	IT	
Ethylbenzene	ND	5.0	II	**	**	"	"	**	
Xylenes (total)	ND	5.0	II	77	n	**	10	fr fr	
Methyl tert-butyl ether	4400	25	ıı.	**	11	"	tr.	**	
Surrogate: a,a,a-Trifluorotolue	ne	93.3 %	70-	130	"	"	**	"	

Sequoia Analytical - Walnut Creek

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, Inc. - Dublin 6747 Sierra Court Suite J

Dublin CA, 94568

Project: Tosco

Project Number: Tosco # 7376

Project Manager: Deanna L. Harding

Reported: 23-Dec-99 10:52

# Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (W912147-04) Water	Sampled: 06-Dec-99 14:58	Receive	d: 07-De	c-99 14:35		•			P-01
Purgeable Hydrocarbons	41000	5000	ug/I	100	9L09001	09-Dec-99	09-Dec-99	EPA	<del>- , ,,, ,</del>
Benzene	3200	50	**	**	"	77	It	8015M/8020	
Toluene	3500	50	"	*	n	11	#	ņ	
Ethylbenzene	1300	50	rŧ	"	II .	**	"	"	
Xylenes (total)	8300	50	Ħ.	H	н	••	**	H	
Methyl tert-butyl ether	ND	250	11	19	н	H	71	IF.	
Surrogate: a,a,a-Trifluorotolue	ne	120 %	70-	130	"	"	"	,	*
MW-4 (W912147-05) Water	Sampled: 06-Dec-99 11:05	Received	i: 07 <b>-</b> De	c-99 14:35					
Purgeable Hydrocarbons	ND	50	ug/l	1	9L09001	09-Dec-99	09-Dec-99	EPA	
Benzene	ND	0.50	II	II .	**	**	•	8015M/8020	
Toluene	ND	0.50	11	11	**	**	ır	**	
Ethylbenzene	ND	0.50	н	n	ш	н	п	**	
Xylenes (total)	ND	0.50	11	**	"	11	II	**	
Methyl tert-butyl ether	ND	2.5	**	**	II .	n	II .	tt.	
Surrogate: a,a,a-Trifluorotolue	ne	103 %	70-	130	"	//	11	"	
MW-7 (W912147-06) Water	Sampled: 06-Dec-99 13:41	Received	I: 07-De	r-99 14:35					P-02
Purgeable Hydrocarbons	1900	1000	ug/l	20	9L10001	10-Dec-99	10-Dec-99	EPA	
Benzene	350	10	и	**	11	u	**	8015M/8020	
Toluene	ND	10	11	**	*	II .	•	н	
Ethylbenzene	ND	10	**	"	*	u	"	11	
Xylenes (total)	ND	10	**	ц	U*	19	H	+4	
Methyl tert-butyl ether	1100	50	Ħ	II .	п	**	11	tt	
Surrogate: a,a,a-Trifluorotolue	ba	117 %	70	130	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	"	"	"	

Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J

Dublin CA, 94568

Project: Tosco

Project Number: Tosco # 7376 Project Manager: Deanna L. Harding

Reported: 23-Dec-99 10:52

## Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Austra		eporting	TT54	Dilutian	Dotoh	Duonamad	A maliamed	Method	Notes
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Meniod	Notes
MW-8 (W912147-07) Water	Sampled: 06-Dec-99 13:02	Receive	d: 07-De	c-99 14:35					
Purgeable Hydrocarbons	ND	50	ug/l	1	9L09001	09-Dec-99	09-Dec-99	EPA	
Benzene	ND	0.50	n	н	11		•	8015M/8020	
Toluene	ND	0.50	n	D	11	**	•	*	
Ethylbenzene	ND	0.50	II	n	н	*	"	**	
Xylenes (total)	ND	0.50	11	II	н	TŤ	**	я	
Methyl tert-butyl ether	150	2.5	11	II .	н			**	
Surrogate: a,a,a-Trifluorotolue	ene	107 %	70	-130	n n	"	"	n	
MW-9 (W912147-08) Water	Sampled: 06-Dec-99 12:25	Receive	d: 07 <b>-</b> De	c-99 14:35					
Purgeable Hydrocarbons	ND	50	ug/l	1	9L09001	09-Dec-99	09-Dec-99	EPA	
Benzene	ND	0.50	ıt	н	u	•	*	8015M/8020	
Toluene	ND	0.50	u	**	п	**	f#	п	
Ethylbenzene	ND	0.50	п	**	e e	н	•	II .	
Xylenes (total)	ND	0.50	11	**	и	11	**	п	
Methyl tert-butyl ether	3.0	2.5	**	n	**	п	ř.	α	
Surrogate: a,a,a-Trifluorotolue	гпе	100 %	70	-130	"	"	"	"	

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Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin

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

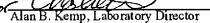
Project Number: Tosco # 7376 Project Manager: Deanna L. Harding **Reported:** 23-Dec-99 10:52

## Diesel Hydrocarbons (C9-C24) by DHS LUFT Sequoia Analytical - Walnut Creek

		•	<u> </u>			·			
Analyte	Result	eporting Limit	Units I	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W912147-02) Water	Sampled: 06-Dec-99 11:40	Received	1: 07-Dec-9:	9 14:35				•	
Diesel Range Hydrocarbons	ND	50	ug/l	1	9L09004	09-Dec-99	16-Dec-99	EPA 8015M	
Surrogate: n-Pentacosane		87.1 %	50-15	Õ	"	"	"	"	
MW-2B (W912147-03) Water	r Sampled: 06-Dec-99 14:1:	9 Receiv	ed: 07-Dec-	99 14:3	5				
Diesel Range Hydrocarbons	850	71	ug/l	1	9L09004	09-Dec-99	17-Dec-99	EPA 8015M	D-02
Surrogate: n-Pentacosane		90.3 %	50-15	0	"	# .	n	"	
MW-3 (W912147-04) Water	Sampled: 06-Dec-99 14:58	Received	i: 07-Dec-9	9 14:35					
Diesel Range Hydrocarbons	4200	50	ug/l	1	9L09004	09-Dec-99	17-Dec-99	EPA 8015M	D-14
Surrogate: n-Pentacosane		84.1 %	50-15	0	n	"	"	n	
MW-4 (W912147-05) Water	Sampled: 06-Dec-99 11:05	Received	d: <b>07-Dec-</b> 9	9 14:35					
Diesel Range Hydrocarbons	95	63	ug/l	1	9L09004	09-Dec-99	17-Dec-99	EPA 8015M	D-06
Surrogate: n-Pentacosane		81.7%	50-15	0	"	"	"	"	
MW-7 (W912147-06) Water	Sampled: 06-Dec-99 13:41	Received	d: <b>07-D</b> ec-9	9 14:35					
Diesel Range Hydrocarbons	220	50	ug/l	1	9L09004	09-Dec-99	17-Dec-99	EPA 8015M	D-14
Surrogate: n-Pentacosane		63.1 %	50-15	0	"	"	"	"	
MW-8 (W912147-07) Water	Sampled: 06-Dec-99 13:02	Received	d: 07-Dec-9	9 14:35					
Diesel Range Hydrocarbons	160	100	ug/l	1	9L09004	09-Dec-99	17-Dec-99	EPA 8015M	D-12
Surrogate: n-Pentacosane		79.6 %	50-15	o	"	"	"	"	
MW-9 (W912147-08) Water	Sampled: 06-Dec-99 12:25	Receive	d: <b>07-D</b> ec-9	9 14:35					
Diesel Range Hydrocarbons	ND	63	ug/l	ŀ	9L09004	09-Dec-99	17-Dec-99	EPA 8015M	
Surrogate: n-Pentacosane	,	79.3 %	50-15	0	"	,,,	"	n	

Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin

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

Project Number: Tosco # 7376 Project Manager: Deanna L. Harding Reported: 23-Dec-99 10:52

### Volatile Organic Compounds by EPA Method 8260A Sequoia Analytical - Walnut Creek

Analyte	R Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-9 (W912147-08) Water	Sampled: 06-Dec-99 12:25	Receive	d: 07-Dec	:-99 14:35				<del>.</del>	
tert-Butyl alcohol	ND	100	ug/l	1	9L13022	10-Dec-99	10-Dec-99	EPA 8260A	
Methyl tert-butyl ether	2.7	2.0	n	,,	"	"	11	н	
Di-isopropyl ether	ND	2.0	11	и	**	"	**	11	
Ethyl tert-butyl ether	ND	2.0	11	11	"	**	**	11	
1,2-Dichloroethane	ND	2.0	19		**	71	"	"	
tert-Amyl methyl ether	· ND	2.0	n	ti	•	**	"	11	4
Ethylene dibromide	ND	2.0	n	11	**	11	**	**	
Surrogate: Dibromofluorometh	ane	104 %	50-	150	"	"	η	n	
Surrogate: 1,2-Dichloroethane	-d4	98.0 %	50-	150	n	<i>n</i>	H	"	

Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568 Project: Tosco

Project Number: Tosco # 7376 Project Manager: Deanna L. Harding **Reported**: 23-Dec-99 10:52

## Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L09001:	Prepared 09-Dec-99	Using E	PA 5030B [	P/T}							
Blank (9L09001-BI	K1)										
urgeable Hydrocarbon	S	ND	50	ug/l							
Benzene		ND	0.50	. "							
Coluene		ND	0.50	н							
thylbenzene		ND	0,50	**							
(ylenes (total)		ND	0.50	**							
dethyl tert-butyl ether		ND	2.5	**							
Surrogate: a,a,a-Triflu	protoluene	33.1		"	30.0		110	70-130			
LCS (9L09001-BS1	)										
Benzene		19.2	0.50	ug/l	20.0		96.0	70-130			
l'oluene		19.5	0.50	**	20.0		97.5	70-130			
Ethylbenzene		19.5	0.50	**	20.0		97.5	70-130			
Kylenes (total)		60,4	0.50	n	60.0		101	70-130			
Surrogate: a,a,a-Triflu	orotoluene	29.5	<u> </u>	"	30.0		98.3	70-130			
Matrix Spike (9L09	0001-MS1)					Source: V	W912091-	04			
Benzene		18.7	0.50	ug/l	20.0	ND	93.5	70-130			
Toluene		19.0	0.50	**	20.0	ND	95.0	70-130			
Ethylbenzene		17.8	0.50	**	20.0	ND	89.0	70-130			
Yylenes (total)		60.0	0.50	14	60.0	ND	100	70-130			
Surrogate: a,a,a-Triflu	orotoluene	28.7		"	30.0		95.7	70-130			
Matrix Spike Dup	(9L09001-MSD1)			W912091-	04						
Benzene		20.7	0.50	ug/l	20.0	ND	104	70-130	10.2	20	
<b>Folue</b> ne		20.9	0.50	п	20.0	ND	104	70-130	9.52	20	
Ethylbenzene		18.5	0.50	II .	20.0	ND	92.5	70-130	3.86	20	
Xylenes (total)		65.8	0.50	tt	60.0	ND	110	70-130	9.22	20	
Surrogate: a, a, a-Triflu	orotoluene	31.6		"	30.0		105	70-130			

Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J

Dublin CA, 94568

Project: Tosco

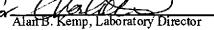
Project Number: Tosco # 7376 Project Manager: Deanna L. Harding Reported: 23-Dec-99 10:52

## Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L10001:	Prepared 10-Dec-99	Using E	CPA 5030B [	P/T]							
Blank (9L10001-BL	K1)										
Purgeable Hydrocarbons	1	ND	50	ug/l							
Benzene		ND	0.50	tt							
Toluene		ND	0.50	**							
Ethylbenzene		ND	0.50	"							
Xylenes (total)		ND	0.50	"							
Methyl tert-butyl ether		ND	2.5	*							
Surrogate: a, a, a-Trifluo	rotoluene	33.4		"	30.0		111	70-130			
LCS (9L10001-BS1)	•										
Benzene		17.8	0.50	ug/1	20.0		89.0	70-130			
Foluene .		17.9	0.50	**	20.0		89.5	70-130			
Ethylbenzene		18.1	0.50	**	20.0		90.5	70-130			
Xylenes (total)		56.1	0.50	14	60.0		93.5	70-130			
Surrogate: a,a,a-Trifluo	rotoluene	30.5		"	30.0		102	70-130			
Matrix Spike (9L10	001-MS1)					Source: \	W912201-	06			
Benzene		20.0	0.50	ug/l	20.0	ND	100	70-130			
Toluene		21.4	0.50	"	20.0	1.1	101	70-130			
Ethylbenzene		21.2	0.50	u	20.0	ND	106	70-130	•		
Xylenes (total)		64.6	0.50	н	60.0	2.0	104	70-130			
Surrogate: a,a,a-Trifluc	rotoluene	31.2	·	"	30.0	<u> </u>	104	70-130			
Matrix Spike Dup (	9L10001-MSD1)			-06							
Benzene		21.8	0.50	ug/l	20.0	ND	109	70-130	8.61	20	
Toluene		23.0	0.50	"	20.0	1.1	109	70-130	7.21	20	
Ethylbenzene		21.9	. 0.50	17	20.0	ND	109	70-130	3.25	20	
Xylenes (total)		68.4	0.50	**	60.0	2.0	111	70-130	5.71	20	
Surrogate: a,a,a-Trifluc	rotoluene	32.8		"	30.0		109	70-130		=	

Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J

Dublin CA, 94568

Project: Tosco

Project Number: Tosco # 7376 Project Manager: Deanna L. Harding Reported: 23-Dec-99 10:52

## Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L09004:	Prepared 09-Dec-99	Using E	PA 3510B								
Blank (9L09004-BI	.K1)										
Diesel Range Hydrocar	bons	ND	50	ug/l			-				
Surrogate: n-Pentacoso	THE .	30.0		н	33.3		90.1	50-150			
LCS (9L09004-BS1	)	4			•						-
Diesel Range Hydrocar	bons	533	50	ug/l	500		107	60-140			
Surrogate: n-Pentacoso	THE	32.0		п	33.3		96.1	50-150	· · · · · ·		
LCS Dup (9L09004	-BSD1)										
Diesel Range Hydrocar	bons	552	50	ug/l	500		110	60-140	3.50	50	<u> </u>
Surrogate: n-Pentacoso	ามย	31.3		и	33.3		94.0	50-150	_	-	

Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin

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

Project Number: Tosco # 7376 Project Manager: Deanna L. Harding Reported: 23-Dec-99 10:52

## Volatile Organic Compounds by EPA Method 8260A - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L13022: Prepared 10-Dec	-99 Using E	PA 5030B [	P/T]							
Blank (9L13022-BLK1)										
tert-Butyl alcohol	ND	100	ug/l							
Methyl tert-butyl ether	ND	2.0	**							
Di-isopropyl ether	ND	2.0	**							
Ethyl tert-butyl ether	ND	2.0								•
1,2-Dichloroethane	ND	2.0	**							
tert-Amyl methyl ether	ND	2.0	tt							
Ethylene dibromide	ND	2.0	**							
Surrogate: Dibromofluoromethane	30.0		"	25.0		120	50-150			
Surrogate: 1,2-Dichloroethane-d4	31.0		"	25.0		124	50-150			
LCS (9L13022-BS1)										
Methyl tert-butyl ether	25.5	2.0	ug/l	25.0		102	70-130			
Surrogate: Dibromofluoromethane	28.0		"	25.0		112	50-150			
Surrogate: 1,2-Dichloroethane-d4	27.0		"	25.0		108	50-150			
Matrix Spike (9L13022-MS1)					Source: \	W912027-	03			
Methyl tert-butyl ether	25.7	2.0	ug/l	25.0	ND	103	60-150			
Surrogate: Dibromofluoromethane	25.0	<del></del>	н	25.0		100	50-150			
Surrogate: 1,2-Dichloroethane-d4	22.0		"	25.0		88.0	50-150			
Matrix Spike Dup (9L13022-MSD1)					Source: \	W912027-	03			
Methyl tert-butyl ether	30.1	2.0	ug/l	25.0	ND	120	60-150	15.8	25	
Surrogate: Dibromofluoromethane	25.0		н	25.0		100	50-150			
Surrogate: 1,2-Dichloroethane-d4	23.0		"	25.0		92.0	50-150			

Sequoia Analytical - Walnut Creek

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Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J

Dublin CA, 94568

Project: Tosco

Project Number: Tosco # 7376

Project Manager: Deanna L. Harding

Reported:

23-Dec-99 10:52

#### **Notes and Definitions**

D-02 Chromatogram Pattern: Unidentified	Hydrocarbons C9-C40.
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D-06 Discrete peaks.

D-12 Chromatogram Pattern: Unidentified Hydrocarbons > C16

D-14 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24

P-01 Chromatogram Pattern: Gasoline C6-C12

P-02 Chromatogram Pattern: Gasoline C6-C12 + Unidentified Hydrocarbons < C6

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

Sequoia Analytical - Walnut Creek

Alan B. Kemp, Laboratory Director

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