5770 17 46

TO:

Mr. David B. De Witt

**Tosco Marketing Company** 

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

San Kamon, Camon

FROM: Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 Now Bolling

November 13, 2000

G-R #:180109

CC:

Mr. Tim Ripp

**IT Corporation** 

1921 Ringwood Avenue San Jose, California 95131

RE:

Tosco (Unocal) SS #5760

376 Lewelling Boulevard San Lorenzo, California

#### WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 9, 2000	Groundwater Monitoring and Sampling Report Second Semi-Annual 2000 - Event of September 18, 2000

#### COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by *November 22, 2000*, this report will be distributed to the following:

#### Enclosure

cc: Ms. Amy Leech, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, CA 94501

November 9, 2000 G-R Job #180109

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

RE:

Second Semi-Annual 2000 Groundwater Monitoring & Sampling Report

Tosco (Unocal) Service Station #5760

376 Lewelling Boulevard San Lorenzo, California

Dear Mr. De Witt:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On September 18, 2000, field personnel monitored seven wells (U-1 through U-5, U-8, and U-9) and sampled three wells (U-1, U-3, and U-9) at the above referenced site. Two wells (U-6 and U-7) were paved over. In addition, on October 13, 2000, field personnel monitored and sampled one well (U-1) at the above referenced site.

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

No. 5577

Sincerely,

Deanna L. Harding

**Project Coordinator** 

Stephen J. Carter

Senior Geologist, R.G. No. 5577

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

Table 1: Table 2: Groundwater Monitoring Data and Analytical Results
Groundwater Analytical Results - Oxygenate Compounds

Table 3:

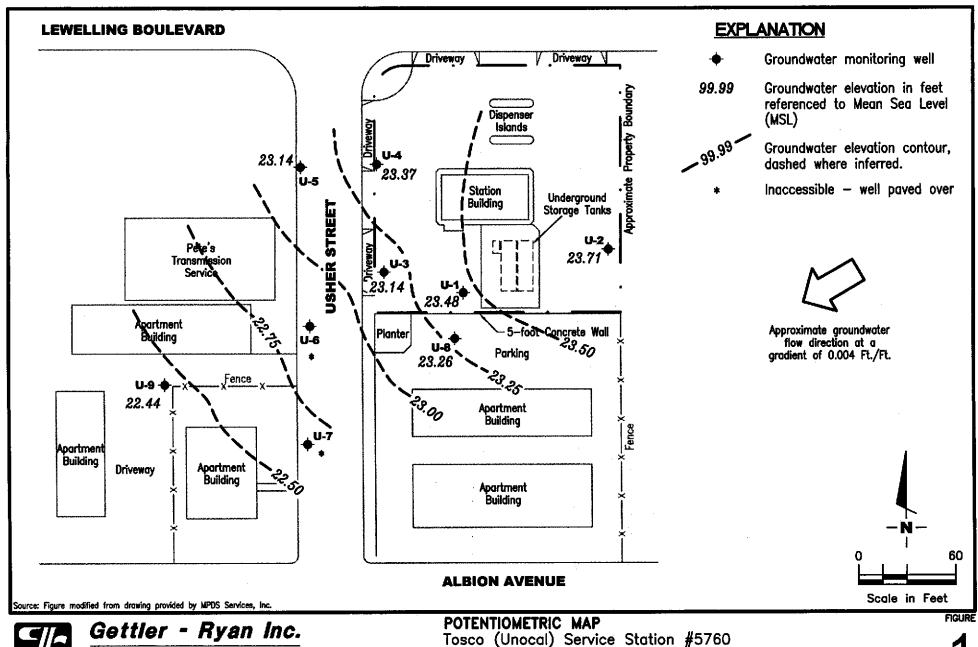
Dissolved Oxygen Concentrations

Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports





6747 Sierra Ct., Suite J Dublin, CA 94568

REVIEWED BY

(925) 551-7555

Tosco (Unocal) Service Station #5760 376 Lewelling Boulevard San Lorenzo, California

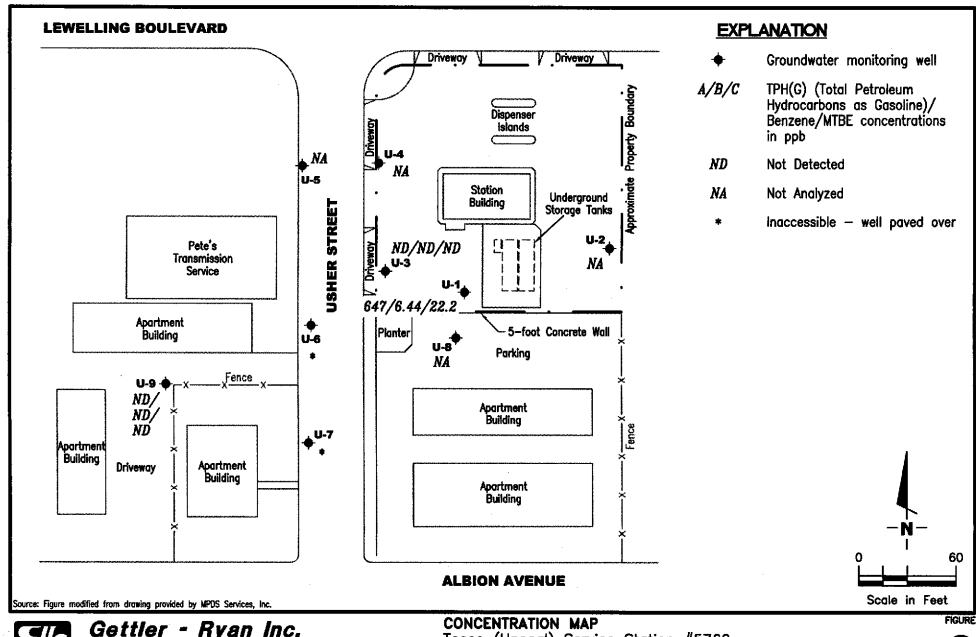
REVISED DATE

DATE

September 18, 2000

PROJECT NUMBER 180109

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Gettler - Ryan Inc.

6747 Sierro Ct., Suite J Dublin, CA 94568

(925) 551-7555

Tosco (Unocal) Service Station #5760 376 Lewelling Boulevard San Lorenzo, California

PROJECT NUMBER REVIEWED BY

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September 18, 2000

REVISED DATE

# Table 1 Groundwater Monitoring Data and Analytical Results Tosco (Unocal) Service Station #5760

Fosco (Unocal) Service Station #576 376 Lewelling Boulevard San Lorenzo, California

				Product						
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-1	02/09/88				93,000	3,600	11,000	1	20,000	
	03/20/90				36,000	2,100	5,500	1,900	9,300	
	06/05/90				46,000	2,300	5,500	2,500	11,000	
	08/24/90				27,000	1,200	1,800	1,400	5,500	
	12/05/90				NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	ODUCT		
	03/04/91				NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	ODUCT		
	06/03/91				NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	ODUCT		
	09/19/91				NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	ODUCT		
	12/04/91				NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	ODUCT		
	03/05/92				NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	ODUCT		
	04/07/92				NOT SAMPLED - I	PRODUCT SKIMN	MER INSTALLED I	N WELL		
	08/06/92			<b></b>	NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	RODUCT		
	11/20/92				NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	ODUCT		
	02/12/93				70,000	2,200	8,400	3,100	18,000	
40.51	06/04/93	16.72	23.79	0.00	35,000	1,300	5,700	900	9,200	
	09/09/93	17. <b>77</b>	22.74	0.00	67,000	2,900	18,000	6,200	32,000	
40.20	12/02/93	18.36	21.84	< 0.01	NOT SAMPLED D	UE TO THE PRES	SENCE OF FREE PR	RODUCT		
	03/09/94	17.20	23.00	0.00	45,000	930	4,100	2,000	11,000	
	06/09/94	17.42	22.78	0.00	59,000	5,200	1,300	5,200	15,000	
	09/07/94	18.17	22.03	0.00	41,000	1,600	6,200	3,100	16,000	
	12/05/94	16.67	23.53	0.00	1,300	55	20	16	330	
	03/09/95	15.82	24.38	0.00	49,000	860	3,200	1,900	10,000	1,500
	06/13/95	14.70	25.50	0.00	53,000	1,400	5,000	2,500	14,000	2,800
40.01**	09/12/95	16.77	23.24	0.00	43,000	910	2,700	1,700	9,600	1,400
40.20	12/14/95	INACCESSIBLE -	WELL CONNE	CTED TO REM	EDIATION SYSTEM	WHICH WAS NO	OT RUNNING			
	03/20/96	INACCESSIBLE -	- WELL CONNE	CTED TO REM	EDIATION SYSTEM	I WHICH WAS N	OT RUNNING		nė.	
	03/22/96	••			13,000	200	590	640	4,000	790
	09/24/96	INACCESSIBLE -	- WELL CONNE	CTED TO REM	EDIATION SYSTEM	I WHICH WAS N	OT RUNNING			
	03/27/97	15.29	24.91	0.00	1,300	8.0	ND	ND	400	ND
	09/23/97	17.20	23.00	0.00	2,000	15	ND	ND	530	ND
	03/10/98	12.68	27.52	0.00	$2,200^6$	19	4.8	$ND^7$	980	38

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5760

Tosco (Unocal) Service Station #576 376 Lewelling Boulevard San Lorenzo, California

				Product				<u></u>	<u></u>	سرپونون پ
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	X.	MTBE
TOC*		(fL)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-1	09/04/98	16.84	23.36	0.00	5,300 <sup>8</sup>	53	$ND^7$	410	620	ND <sup>7</sup>
(cont)	03/04/99	13.04	27.16	0.00	1,500	19	$ND^7$	56	110	310
()	09/13/99	17.14	23.06	0.00	5,850 <sup>8</sup>	32.7	$ND^7$	520	925	$ND^7$
	03/21/00	14.36	25.84	0.00	4,820 <sup>8</sup>	17.4	7.74	297	1,370	$ND^7$
	09/18/00	16.72	23.48	0.00	647 <sup>9</sup>	6.44	$ND^7$	22.3	6.86	22.2
	10/13/00	16.85	23.35	0.00					••	/29 <sup>10</sup>
U-2	08/23/90				ND	ND	ND	ND	ND	
	12/05/90				ND	ND	ND	ND	ND	
	03/04/91				ND	ND	0.9	ND	2.6	
	06/03/91				ND	ND	ND	ND	ND	
	09/19/91	'			ND	ND	ND	ND	ND	
	12/04/91				ND	ND	ND	ND	ND	
	03/05/92				ND	ND	0.36	ND	ND	
	04/07/92				ND	ND	ND	ND	ND	
	08/06/92				ND	ND	ND	ND	ND	
	11/20/92	••	<del></del> .		ND	ND	ND	ND	ND	
	02/12/93				ND	ND	ND	ND	ND	
41.62	06/04/93	17.59	24.03	0.00	ND	ND	ND	ND	ND	
	09/09/93	18.68	22.94	0.00	ND	ND	ND	ND	ND	
41.26	12/02/93	19.23	22.03	0.00	ND	ND	. ND	ND	ND	
	03/09/94	18.05	23.21	0.00	62	1.1	5.4	1.1	9.7	
	04/13/94	18.18	23.08	0.00	ND	ND	ND	ND	ND	
	06/09/94	18.26	23.00	0.00	ND .	ND	ND	ND	ND	
	09/07/94	19.28	21.98	0.00	ND	ND	0.63	ND	0.61	
	12/05/94	18.82	22.44	0.00	ND	ND	ND	ND	ND	
	03/09/95	16.96	24.30	0.00	ND	ND	ND	ND	ND	ND
	06/13/95	16.71	24.55	0.00	ND	ND	ND	ND	ND	ND
	09/12/95	17.80	23.46	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	18.18	23.08	0.00	NĎ	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5760

co (Unocal) Service Station #
376 Lewelling Boulevard
San Lorenzo, California

				Product						
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
	00.00.00	15.00	26.24	0.00						
U-2	03/20/96	15.02	26.24	0.00						
(cont)	09/24/96	17.90	23.36	0.00		 ND	ND	ND	ND	ND
	03/27/97	16.45	24.81	0.00	ND .					
	09/23/97	18.40	22.86	0.00					 ND	ND
	03/10/98	13.79	27.47	0.00	ND	ND	ND	ND		
	09/04/98	17.98	23.28	0.00						
	03/04/99	14.96	26.30	0.00	ND	ND	ND	ND	ND	ND
	09/13/99	18.25	23.01	0.00						
•	03/21/00	15.54	25.72	0.00	ND	ND	ND	ND	ND	ND
	09/18/00	17.55	23.71	0.00	**		••			
U-3	08/23/90				110,000	4,400	13,000	2,800	17,000	
	12/05/90				69,000	1,900	3,500	1,600	9,800	
	01/18/91				51,000	1,700	3,100	1,500	7,500	
	03/04/91				84,000	1,400	10,000	2,900	17,000	
	06/03/91		••		130,000	5,800	19,000	4,600	24,000	
	09/19/91				61,000	3,300	9,700	2,800	15,000	
	12/04/91				75,000	2,500	6,100	1,900	11,000	
	03/05/92				160,000	5,300	15,000	5,400	26,000	
	04/07/92				97,000	6,100	16,000	. 5,400	28,000	
	08/06/92				140,000	5,100	13,000	5,000	23,000	
	11/20/92				50,000	3,200	4,700	1,900	10,000	
	02/12/93		. <b></b>		80,000	3,700	9,400	3,700	18,000	
39.64	06/04/93	15.48	24.16	0.00	92,000	2,900	8,700	4,300	20,000	
27101	09/09/93	17.04	22.60	0.00	110,000	2,800	10,000	6,500	31,000	
39.26	12/02/93	17.55	21.71	0.00	110,000	3,200	7,700	5,600	26,000	
U-2.4U	03/09/94	16.35	22.91	0.00	120,000	4,500	8,300	5,600	28,000	
	06/09/94	16.60	22.66	0.00	120,000 <sup>4</sup>	3,300	6,100	5,200	26,000	
	09/07/94	17.61	21.65	0.00	100,000	2,400	4,900	4,200	21,000	
	12/05/94	17.01	22.18	0.00	140,000	3,100	5,100	4,900	21,000	
	14/03/74	17,00	22.10	0.00	140,000	3,100	5,100	4,200	21,000	<del></del>

# Table 1 Groundwater Monitoring Data and Analytical Results Tosco (Unocal) Service Station #5760

Fosco (Unocal) Service Station #570 376 Lewelling Boulevard San Lorenzo, California

				Product						
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	x	MTBE
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ррб)	(ppb)	(ppb)	(ppb)	(ppb)
	•				400.000		2 200	4.000	21.000	£4.000
U-3	03/09/95	15.20	24.06	0.00	100,000	2,300	3,300	4,800	21,000	54,000
(cont)	06/13/95	15.11	24.15	0.00	64,000	1,700	1,500	3,800	18,000	900
39.26**	09/12/95	16.11	23.15	0.00	69,000	1,700	820	4,000	19,000	29,000
	12/14/95	INACCESSIBLE -								
	03/20/96	INACCESSIBLE -	WELL CONNEC	CTED TO REMED	DIATION SYSTEM		T RUNNING			
	03/22/96				15,000	150	490	480	3,100	400
	09/24/96	INACCESSIBLE -	WELL CONNEC	CTED TO REMED	DIATION SYSTEM	WHICH WAS NO	T RUNNING			••
	03/27/97	14.77	24.49	0.00	110	ND	ND	ND	0.62	9.6
	09/23/97	16.74	22.52	0.00	ND	ND	ND	ND	ND	ND
	03/10/98	12.18	27.08	0.00	ND	ND	ND	ND	3.1	ND
	09/04/98	16.46	22.80	0.00	ND	ND	ND ·	1.2	2.3	ND
	03/04/99	13.48	25.78	0.00	ND	ND	ND	ND	ND	ND
	09/13/99	16.71	22.55	0.00	ND	ND	1.77	ND	1.06	9.08
	03/21/00	13.87	25.39	0.00	18,700 <sup>8</sup>	$ND^7$	$ND^7$	1,290	4,770	$ND^7$
	09/18/00	16.12	23.14	0.00	ND	ND	ND	ND	ND	ND
			·							
U-4	08/23/90				ND	ND	1.0	ND	1.8	
	12/05/90				ND	ND	ND	ND	ND	
	01/18/91	40			ND	ND	ND	ND	ND	••
	03/04/91				ND	ND	ND	ND	ND	
	06/03/91				ND	ND	ND	ND	ND	
	09/19/91				ND	ND	ND	ND	ND	
	12/04/91			•••	ND	ND	ND	ND	ND	
	03/05/92		· · · · · ·		ND	ND	ND	ND	ND	
	04/07/92				ND	ND	ND	ND	ND	
	08/06/92				ND	ND	ND	ND	ND	

# Table 1 Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5760 376 Lewelling Boulevard San Lorenzo, California

				Product						
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	X	MTBE
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-4	11/20/92				ND	ND	2.5	ND	ND	
(cont)	02/12/93				ND	ND	ND	ND	ND	
40.53	06/04/93	16.73	23.80	0.00	ND	ND	ND	ND	ND	
	09/09/93	16.89	23.64	0.00	ND	ND	ND	ND	ND	
40.25	12/02/93	18.46	21.79	0.00	ND	ND ·	ND	ND	2.6	
	03/09/94	17.30	22.95	0.00	ND	1.4	4.7	1.1	8.1	
	04/13/94	17.44	22.81	0.00	ND	ND	ND	ND	ND	
	06/09/94	17.53	22.72	0.00	ND	ND	ND	ND	ND	••
10.28	09/07/94	18.52	21.76	0.00	ND	ND	1.1	ND	1.0	
	12/05/94	18.08	22.20	0.00	ND	· ND	ND	ND	ND	
	03/09/95	16.16	24.12	0.00	ND	ND	ND	ND	ND	ND
10.25	06/13/95	15.95	24.30	0.00	ND	ND	ND	ND	ND	2.7
	09/12/95	17.10	23.15	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	17.43	22.82	0.00	ND	ND	ND	ND	ND	1.3
	03/20/96	14.93	25.32	0.00	**					
	09/24/96	17.19	23.06	0.00					, 	
	03/27/97	15.66	24.59	0.00	ND	ND	ND	ND	ND	ND
	09/23/97	17.69	22.56	0.00						
	03/10/98	12.99	27.26	0.00	ND	ND	ND	ND	ND	ND
	09/04/98	17.28	22.97	0.00						
	03/04/99	14.17	26.08	0.00	ND	ND	ND	ND	ND	ND
	09/13/99	17.55	22.70	0.00						
	03/21/00	14.74	25.51	0.00	ND	ND	ND	ND	ND	ND
	09/18/00	16.88	23.37	0.00				••		

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5760

Osco (Unocal) Service Station #5760 376 Lewelling Boulevard San Lorenzo, California

			Product						MTDE
DATE	DTW	GWE	Thickness	TPH(G)	В	T			MTBE
	(ft.)	(msl)	(ft.)	(ppb)	(ррь)	(ppb)	(ppb)	(ppb)	(ppb)
								) ID	
04/07/92	<del></del> .								
08/06/92									
11/20/92									
02/12/93									
06/04/93	16.05	23.56	0.00	ND					
09/09/93	16.90	22.71	0.00	ND	ND	ND			
12/02/93	17.66	21.65	0.00	ND	ND	ND	ND		<b>u-</b>
03/09/94	16.45	22.86	0.00	71	1.7	6.3	1.5	10	
04/13/94	16.64	22.67	0.00	ND	ND	ND	ND	ND	
06/09/94	16.70	22.61	0.00	ND	ND	ND	ND	ND	
09/07/94	17.73	21.58	0.00	ND	ND	0.73	ND	0.84	
		22.08	0.00	ND	ND	ND ND	ND	ND	
		23.96	0.00	ND	ND	ND	ND	ND	ND
			0.00	ND	ND	ND	ND	ND	0.87
				ND	ND	ND	ND	ND	ND
				ND	ND	ND	ND	ND	ND
						: 			<b>-</b>
					ND	ND	ND	ND	ND
							<del>-</del> -		
						ND	ND	ND	ND
							ND	ND	ND
									ND
	04/07/92 08/06/92 11/20/92 02/12/93 06/04/93 09/09/93 12/02/93 03/09/94 04/13/94	04/07/92            08/06/92            11/20/92            02/12/93            06/04/93         16.05           09/09/93         16.90           12/02/93         17.66           03/09/94         16.45           04/13/94         16.64           06/09/94         16.70           09/07/94         17.73           12/05/94         17.23           03/09/95         15.35           06/13/95         15.16           09/12/95         16.30           12/14/95         16.56           03/20/96         14.07           09/24/96         16.55           03/27/97         14.85           09/23/97         16.90           03/10/98         12.21           09/04/98         16.57           03/04/99         13.42           09/13/99         17.02           03/21/00         13.93	(ft.)         (msl)           04/07/92             08/06/92             11/20/92             02/12/93             06/04/93         16.05         23.56           09/09/93         16.90         22.71           12/02/93         17.66         21.65           03/09/94         16.45         22.86           04/13/94         16.64         22.67           06/09/94         16.70         22.61           09/07/94         17.73         21.58           12/05/94         17.23         22.08           03/09/95         15.35         23.96           06/13/95         15.16         24.15           09/12/95         16.30         23.01           12/14/95         16.56         22.75           03/20/96         14.07         25.24           09/24/96         16.55         22.76           03/27/97         14.85         24.46           09/23/97         16.90         22.41           03/04/98         16.57         22.74           03/04/99         13.42         25.89	DATE         DTW         GWE         Thickness           (f.)         (msl)         (f.)           04/07/92              08/06/92              11/20/92              06/04/93         16.05         23.56         0.00           09/09/93         16.90         22.71         0.00           12/02/93         17.66         21.65         0.00           03/09/94         16.45         22.86         0.00           04/13/94         16.64         22.67         0.00           09/07/94         17.73         21.58         0.00           09/07/94         17.23         22.08         0.00           03/09/95         15.35         23.96         0.00           03/09/95         15.35         23.96         0.00           09/12/95         16.30         23.01         0.00           09/12/95         16.30         23.01         0.00           09/12/95         16.56         22.75         0.00           03/20/96         14.07         25.24         0.00           09/24/96         16.55	DATE         DTW (ft.)         GWE (msl)         Thickness (ft.)         TPH(G) (ppb)           04/07/92            ND           08/06/92            ND           11/20/92            ND           06/04/93         16.05         23.56         0.00         ND           09/09/93         16.90         22.71         0.00         ND           03/09/94         16.45         22.86         0.00         ND           03/09/94         16.45         22.86         0.00         ND           06/09/94         16.70         22.61         0.00         ND           09/07/94         17.73         21.58         0.00         ND           03/09/95         15.35         23.96         0.00         ND           03/09/95         15.35         23.96         0.00         ND           09/12/95         16.30         23.01         0.00         ND           09/12/95         16.30         23.01         0.00         ND           03/20/96         14.07         25.24         0.00            09/24/96         1	DATE         DTW (ft.)         GWE (msl)         Thickness (ft.)         TPH(G) (ppb)         B           04/07/92            ND         ND           08/06/92            ND         ND           11/20/92            ND         ND           06/04/93         16.05         23.56         0.00         ND         ND           09/09/93         16.90         22.71         0.00         ND         ND           12/02/93         17.66         21.65         0.00         ND         ND           03/09/94         16.45         22.86         0.00         ND         ND           06/09/94         16.64         22.67         0.00         ND         ND           09/07/94         17.73         21.58         0.00         ND         ND           09/07/94         16.64         22.61         0.00         ND         ND           09/07/94         16.70         22.61         0.00         ND         ND           09/07/94         17.73         21.58         0.00         ND         ND           09/07/95         15.35 <td>  DATE   DIW   GWE   Thickness   TPH(G)   B   T    </td> <td>  DATE   DTW   GWE   Thickness   TPH(G)   B   T   E    </td> <td>  DATE   DIW   GWE   Thickness   TPH(G)   B   T   E   X   C   C   C   C   C   C   C   C   C</td>	DATE   DIW   GWE   Thickness   TPH(G)   B   T	DATE   DTW   GWE   Thickness   TPH(G)   B   T   E	DATE   DIW   GWE   Thickness   TPH(G)   B   T   E   X   C   C   C   C   C   C   C   C   C

# Table 1 Groundwater Monitoring Data and Analytical Results Tosco (Unocal) Service Station #5760

Fosco (Unocal) Service Station #576 376 Lewelling Boulevard San Lorenzo, California

				Product						
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	x	MTBE
тос*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
T1 6	0.440=100									
U-6	04/07/92	 ·			6,600	90	ND	820	1,200	
	08/06/92				9,200	160	ND	360	150	
	11/20/92	INACCESSIBLE						••	<del></del>	
	02/12/93			<del></del>	2,600	27	ND	120	51	
37.94	06/04/93	14.45	23.49	0.00	13,000	100	38	450	320	
	09/09/93	15.56	22.38	0.00	$6,300^3$	29	ND	120	34	
37.68	12/02/93	16.08	21.60	0.00	2,100	12	1.6	21	1.1	
	03/09/94	14.90	22.78	0.00	2,200	1.1	8.2	24	16	
	06/09/94	15.18	22.50	0.00	2,600 <sup>4</sup>	16	ND	29	ND	
	09/07/94	16.20	21.48	0.00	16,004	ND	ND	ND	ND	**
	12/05/94	15.60	22.08	0.00	450 <sup>5</sup>	ND	ND	ND	ND	
	03/09/95	13.74	23.94	0.00	2,500	29	ND	70	120	320
	06/13/95	13.73	23.95	0.00	1,300	ND	ND	20	46	5,400
	09/12/95	14.85	22.83	0.00	ND	ND	ND	ND	ND	6,600
	12/14/95	14.89	22.79	0.00	760	ND	ND	7.0	8.4	1,100
	03/20/96	12.41	25.27	0.00	52	1.1	0.98	ND	0.75	1,200
	09/24/96	15.06	22.62	0.00	ND	ND	ND	ND	ND	750
	03/27/97	13.48	24.20	0.00	ND	ND	ND	ND	ND	150
	09/23/97	15.36	22.32	0.00	66	0.81	ND	ND	ND	150
	03/10/98	10.90	26.78	0.00	ND	ND	ND	ND	ND	18
	09/04/98	14.85	22.83	0.00	ND	ND	ND	ND	ND	ND
	03/04/99	12.10	25.58	0.00	ND	ND	ND	ND	ND	6.5
	09/13/99	INACCESSIBLE - P							<del></del>	
	03/21/00	INACCESSIBLE - P							••	
	09/18/00	INACCESSIBLE - I								
	37) 1U/VV	Tarochoning.	. A · ED O · ER							

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5760

Tosco (Unocal) Service Station #576 376 Lewelling Boulevard San Lorenzo, California

				Product						
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	x	MTBE
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
U-7	04/07/92				ND	ND	ND	ND	ND	
	08/06/92				ND	ND	ND	ND	ND	
	11/20/92				ND	ND	ND	ND	ND	
	02/12/93				ND	ND	ND	ND	ND	
37.49	06/04/93	14.17	23.32	0.00	ND	ND	ND	ND	ND	
	09/09/93	15.23	22.26	0.00	ND	ND	ND	ND	ND	
37.11	12/02/93	15.61	21.50	0.00	ND	ND	ND	ND	ND	
	03/09/94	14.45	22.66	0.00	ND	1.4	4.4	0.96	7.5	
	04/13/94	14.63	22.48	0.00	ND	ND	ND	ND	ND	
	06/09/94	14.70	22.41	0.00	ND	ND	ND	ND	ND	
	09/07/94	15.72	21.39	0.00	ND	ND	ND	ND	ND	
	12/05/94	15.10	22.01	0.00	ND	ND	ND	ND	ND	
	03/09/95	13.36	23.75	0.00	ND	ND	ND	ND	ND	ND
•	06/13/95	13.33	23.78	0.00	ND	ND	ND	ND	ND	3.5
	09/12/95	14.40	22.71	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	14.39	22.72	0.00	ND	ND	ND	ND	ND	1.4
	03/20/96	11.96	25.15	0.00						
	09/24/96	14.59	22.52	0.00	<del></del>					
	03/27/97	13.08	24.03	0.00	ND	ND	ND	ND	ND	ND
	09/23/97	14.90	22.21	0.00	70					
	03/10/98	10.46	26.65	0.00	ND	ND	ND	ND	ND	ND
	09/04/98	14.42	22.69	0.00					<del>;•</del>	
	03/04/99	11.64	25.47	0.00	ND .	ND	ND	ND	ND	6.6
	09/13/99	INACCESSIBLE -	PAVED OVER						·	
	03/21/00	INACCESSIBLE -	PAVED OVER				<del></del>			
	09/18/00	INACCESSIBLE -	- PAVED OVEI	3					••	·

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5760

Tosco (Unocal) Service Station #5° 376 Lewelling Boulevard San Lorenzo, California

				Product		-				
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В	T	E	X	MTBE
TOC*		(fL)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
		<del></del> ,						* VF*	3103	
U-8	04/07/92	-:			ND	ND	ND	ND	ND	
	08/06/92				ND	ND	ND	ND	ND	
	02/12/93				ND	ND	ND	ND	ND	
38.94	06/04/93	15.26	23.68	0.00	ND	ND	ND	ND	ND	
	09/09/93	16.38	22.56	0.00	ND	ND	ND	ND	ND	••
38.57	12/02/93	16.80	21.77	0.00	ND	ND	ND	ND	ND .	
	03/09/94	15.62	22.95	0.00	ND	1.2	3.7	0.79	6.1	
	04/13/94	15.80	22.77	0.00	ND	ND .	0.78	ND	0.98	
	06/09/94	15.86	22.71	0.00	ND	ND	ND	ND	ND	<del></del> '
	09/07/94	16.87	21.70	0.00	ND	ND	ND	ND	ND	
	12/05/94	16.32	22.25	0.00	ND	ND	ND	ND	ND	
	03/09/95	14.56	24.01	0.00	ND	ND	ND	ND	ND	ND
	06/13/95	14.40	24.17	0.00	ND	ND	ND	ND	ND	ND
	09/12/95	15.50	23.07	0.00	ND	ND	ND	ND	ND	ND
	12/14/95	15.67	22.90	0.00	ND	ND	ND	ND	ND	ND
	03/20/96	13.25	25.32	0.00		<del></del>				
	09/24/96	15.75	22.82	0.00						
	03/27/97	14.18	24.39	0.00	ND	ND	ND	ND	ND	ND
	09/23/97	16.05	22.52	0.00						
	03/10/98	11.63	26.94	0.00	ND	ND	ND	ND	ND	ND
	09/04/98	15.81	22.76	0.00					<del></del>	
	03/04/99	12.81	25.76	0.00	ND	ND	ND	ND	ND	ND
	09/13/99	16.37	22.20	0.00						
	03/21/00	13.25	25.32	0.00	ND	ND	ND	ND	ND	ND
	09/18/00	15.31	23.26	0.00	••			••		

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5760

o (Unocal) Service Station #5
376 Lewelling Boulevard
San Lorenzo, California

				Product	america)	n	Т	E	X	MTBE
WELL ID/	DATE	DTW	GWE	Thickness	TPH(G)	В				(ppb)
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppo)
U-9		1465	22.21	0.00	$2,100^2$	ND	ND	ND	ND	
37.88	06/04/93	14.67	23.21		$1,200^2$	ND	ND	ND	ND	
	09/09/93	15.79	22.09	0.00			ND .	ND	ND	
37.31	12/02/93	15.93	21.38	0.00	ND	ND	ND ND	ND	ND	
	03/09/94	14.74	22.57	0.00	5,700 <sup>4</sup>	ND			ND	
	04/13/94	14.96	22.35	0.00	ND	ND	ND	ND		
	06/09/94	15.05	22.26	0.00	2,900 <sup>5</sup>	ND	ND	ND	ND	
	09/07/94	16.06	21.25	0.00	2,700 <sup>5</sup>	ND	ND	ND	ND	
	12/05/94	15.43	21.88	0.00	3,700 <sup>5</sup>	ND	ND	ND	ND	
	03/09/95	13.50	23.81	0.00	2,500 <sup>5</sup>	ND	ND	ND	ND	5,800
	06/13/95	13.63	23.68	0.00	ND	ND	ND	ND	ND	1,200
	09/12/95	14.73	22.58	0.00	ND	ND	ND	ND	ND	1,600
	12/14/95	14.67	22.64	0.00	ND	ND	ND	ND	ND	4,400
	03/20/96	12.27	25.04	0.00	ND	ND	ND	ND	ND	480
	09/24/96	14.92	22.39	0.00	ND	ND	ND	ND	ND	ND
	03/27/97	13.36	23.95	0.00	ND	ND	ND	ND	ND	42
	09/23/97	15.28	22.03	0.00	ND	ND	ND	ND	ND	ND
		10.86	26.45	0.00	ND	ND	ND	ND	3.1	ND
	03/10/98		22.28	0.00	ND	ND	ND	ND	ND	ND
	09/04/98	15.03		0.00	ND	ND	ND	ND	ND	ND
	03/04/99	11.95	25.36			ND	1.67	ND	1.01	7.85
	09/13/99	15.61	21.70	0.00	ND			ND	ND	ND
	03/21/00	12.38	24.93	0.00	ND	ND	ND			ND ND
	09/18/00	14.87	22,44	0.00	ND	ND	1.42	ND	1.06	MD

#### Table 1

## Groundwater Monitoring Data and Analytical Results Tosco (Unocal) Service Station #5760

Cosco (Unocal) Service Station #576 376 Lewelling Boulevard San Lorenzo, California

DATE	DTW	GWE	Thickness	ପ୍ରପ୍ରତ୍ୟ ପ୍ରତ୍ୟ ପ	00000000000000000000000000000000000000				3.47FWE
	transport from the first of the	gavena napadyananawa	THICKNESS	TPH(G)	В	T	E	X	MTBE
	(ft.)	(msl)	(fi.)	(ppb)	(ppb)	(pph)	(ppb)	(ррв)	(ppb)
3/10/98				ND	ND	ND	ND	ND	ND
0/04/98				ND	ND	ND	ND	ND	ND
3/04/99				ND	ND	ND	ND	ND	ND
				ND.	ND	ND	ND	ND	ND
				ND	ND	ND	ND	ND	ND
	•=			ND	ND	ND	ND	ND	ND
)/13/00				ND	ND	ND	ND	ND	ND
3,	/04/98 /04/99 /13/99 /21/00 <b>/18/00</b>	/04/98 /04/99 /13/99 /21/00 /18/00	/04/98 //04/99 //13/99 //18/00 //18/0	704/98	104/98 ND 104/99 ND 1/13/99 ND 1/21/00 ND 1/18/00 ND	104/98	104/98	104/98	10198

#### Table 1

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

Tosco (Unocal) Service Station #5760 376 Lewelling Boulevard San Lorenzo, California

#### **EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to March 10, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing

B = Benzene

(ppb) = Parts per billion

-- = Not Measured/Not Analyzed

DTW = Depth to Water

T = Toluene

ND = Not Detected

(ft.) = Feet

E = Ethylbenzene

GWE = Groundwater Elevation

X = Xylenes

(msl) = 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). Prior to December 2, 1993, the DTW measurements were taken from the top of well covers.
- \*\* The P.V.C. well casing was shortened in September 1995.
- Ethylbenzene and xylenes were combined prior to March 1990.
- The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of standard gasoline
- 3 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 appeared to be gasoline and non-gasoline mixture
- Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- 6 Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- Detection limit raised. Refer to analytical reports.
- 8 Laboratory report indicates gasoline C6-C12.
- Laboratory report indicates weathered gasoline C6-C12.
- MTBE by EPA Method 8260.

#### Table 2

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

Tosco (Unocal) Service Station #5760 376 Lewelling Boulevard San Lorenzo, California

		(ppb)	(ppb)	(ppb)	(ppb)	(ррв)	(ppb)	(ppb)	(ppb)	
WELL ID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	

#### **EXPLANATIONS:**

TBA = Tertiary butyl alcohol

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

EDB = Ethylene dibromide

(ppb) = Parts per billion

-- = Not Analyzed

ND = Not Detected

#### **ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

Table 3
Dissolved Oxygen Concentrations

Tosco (Unocal) Service Station #5760 376 Lewelling Boulevard San Lorenzo, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
U-1	03/27/97	2.41	2.35
U-2	03/27/97	4.36	4.49
U-3	03/27/97	3.18	3.32
U-4	03/27/97	3.32	3.26
U-5	03/27/97	3.74	3.77
U-6	03/20/96	3.85	3.89
	09/20/96	3.73	3.81
	03/27/97	4.43	4.36 4.14
	09/23/97		3.95
	03/10/98	<b></b>	3.73
U-7	03/27/97	3.29	3.38
U-8	03/27/97	3.04	3.11
U-9	03/20/96	4.02	4.00
	09/20/96	3.85	3.98
	03/27/97	3.65	3.57
	09/23/97		3.80
	03/10/98		3.62

#### **EXPLANATIONS:**

Dissolved oxygen concentrations prior to March 10, 1998, were compiled from reports prepared by MPDS Services, Inc.

mg/L = milligrams per liter

-- = Not Measured

# 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.

# TOSCO (UNOCAL) SS #5760 SAN LORENZO, CA

MONITORING & SAMPLING EVENT OF SEPTEMBER 18, 2000

ient/ cility #_57	60			1801	-	
idress: 3 <u>7</u>	6 Lewelling	Blvd	·_ Date	: 9-18-	00	
TV: Sav	Lorenzo	· 		pler: <u>Joe</u>	· · · · · · · · · · · · · · · · · · ·	
					<del></del> -	
Well ID	<u>U-1</u>	Well	Condition: _	0.K_		
ell Diameter	<u> </u>	-	rocarbon $\ell$	Amount in throduct/w		fç-l
otal Depth	29.05	1	ume 2° = 0	0.17 3° = 0.3 6° = 1.50	38 <u>4"</u> •	òò.0 =
epth to Water	1672	<b>L</b>	tor (VF)			
	12.33 x	VF <u> </u>	=4.69 × 3 (cas	e volume) = Estimated	Purge Volume:	15 lost
Purge	Disposable Bailer	•	Sampling	t: Disposable i	Railer	
quipment:	Bailer ·		Equipmen	Bailer	Camera	•
	Stack	•,		Pressure Ba	iler	
	Grundfos			Grab Sampl	e	
	Ξ			Other:		
starting Time:	<del></del>	5 P. M		clear	Odor_Mi	IJ
-		SP. M 2001	Weather Conditi Water Color: Sediment Descr If yes; Time: .	iption: 10 v C	Odor: <u>Mi</u> ume:	<u>;</u> (c
iampling Time: Purging Flow Rat Did well de-wate	/2:4 // 0 /cer?  Volume pH (gal.)	Se w mm	Weather Condition Water Color: Sediment Describing Time: if yes; Time: ductivity \( \sqrt{0} \) Ten thos/cm \( \sqrt{1} \)	iption: Neve	Odor: Mi	Alkalimi (ppm
iampling Time: Purging Flow Rate Did well de-wate	12:4 // 0 te: / c er7  Volume pH (gal)  7:47	Se w  Con  pm  Son	Weather Condition Water Color: Sediment Describing Time: ductivity (**) Ten thos/cm **	iption: Nove  Volume  To (mg/L)	Odor: Mi	; Alkalini
iampling Time: Purging Flow Rate Did well de-wate Time 12:50 12:52	12:4	Ser w  mm.  Con  pm.  S	Weather Condition Water Color: Sediment Descritives; Time: ductivity   Parallel hos/cm Y	iption: Neve	Odor: Mi	; Alkalini
iampling Time: Purging Flow Rate Did well de-wate	12:4 // 0 te: / c er7  Volume pH (gal)  7:47	Ser w  mm.  Con  pm.  S	Weather Condition Water Color: Sediment Descritives; Time: ductivity   Parallel hos/cm Y	iption: Nove  Volume  To (mg/L)	Odor: Mi	; Alkalini
iampling Time: Purging Flow Rate Did well de-wate Time 12:50 12:52	12:4	Ser w  mm.  Con  pm.  S	Weather Condition Water Color: Sediment Descritives; Time: ductivity   Parallel hos/cm Y	iption: Neve	Odor: Mi	; Alkalini
iampling Time: Purging Flow Rate Did well de-wate Time 12:50 12:52	12:4	Ser w  mm.  Con  pm.  S	Weather Condition Water Color: Sediment Descritives; Time: ductivity   Parallel hos/cm Y	iption: Neve	Odor: Mi	; Alkalini
iampling Time: Purging Flow Rate Did well de-wate  Time  12:50  12:52  12:52	12:4   / 10     / 10     / 10     / 10     / 10     / 10     / 10     / 10	Con.  ———————————————————————————————————	Weather Condition Water Color: Sediment Description If yes; Time: ductivity 1/0 Ten thos/cm Y	iption: Nove  Volume  F (mg/L)  3.6  73.6	Octor: Mi	Alkalini (ppm
SAMPLE ID	12:4	Conduction Section Sec	Weather Condition Water Color: Sediment Description If yes; Time: ductivity   0 Ten hos/cm Y	iption: Nove  Volumenture D.O.  F (mg/L)  3. C  73. C	Octor: Mi	Alkalini (ppm
iampling Time: Purging Flow Rate Did well de-wate  Time  12:50  12:52  12:52	12:4   / 10     / 10     / 10     / 10     / 10     / 10     / 10     / 10	Con.  ———————————————————————————————————	Weather Condition Water Color: Sediment Description If yes; Time: ductivity 1/0 Ten thos/cm Y	iption: Nove  Volume  F (mg/L)  3.6  73.6	Octor: Mi	Alkalini (ppm
SAMPLE ID	12:4	Conduction Section Sec	Weather Condition Water Color: Sediment Description If yes; Time: ductivity   0 Ten hos/cm Y	iption: Nove  Volumenture D.O.  F (mg/L)  3. C  73. C	Octor: Mi	Alkalini (ppm
SAMPLE ID	12:4	Conduction Section Sec	Weather Condition Water Color: Sediment Description If yes; Time: ductivity   0 Ten hos/cm Y	iption: Nove  Volumenture D.O.  F (mg/L)  3. C  73. C	Octor: Mi	Alkalini (ppm
SAMPLE ID	12:4	Conduction Section Sec	Weather Condition Water Color: Sediment Description If yes; Time: ductivity   0 Ten hos/cm Y	iption: Nove  Volumenture D.O.  F (mg/L)  3. C  73. C	Octor: Mi	Alkalini (ppm

Client/ Facility # 57	60		~~~~~	lob#:	1801	09	
Address: 37		a Blva	<b>∫</b> . [	Date:	9-18-0	90	
City: Sax		•			:Toe		
Well ID	U-2	Wei	l Condition:	_	0. K		
Well Diameter	3 <sub>in</sub>	Hyd	rocarbon	<u>a</u>	Amount B	lailed .	
Total Depth	29.88 .	Ve		2" = 0.17		8 <b>4 = 0.6</b> 6	
Depth to Water	17.55 =	Fac	c.or (VF)	······································	S = 1 <u>.5</u> 0	1.7 = 5.50	
	×	VF	= X 3	(casa volu	ne) = Estimated P	urge Volume:lcsl.)	
Purge	Disposable Bailer	•	Sampi				
Equipment:	Bailer · Stack		Equipa	nent:	Disposable 8a	siler ,	
•	Suction	-			Bailer Pressure Baile		
	Grandfos	-	•		Grab Sample	<b>:</b>	
•	Other:			Orth	ec		
***			1,	:		<b>-</b>	
Starting Time: Sampling Time:		<u></u>	Weather Con Water Color:			Odor	
<b>Purging Flow Rate</b>	: <del></del>	por_	Sediment De	scription	none		
Did well de-water	/		If yes; Time		Volum	re:(cal.)	
,	olume pH gal.)	Conc pand	incrivity (10)	<del>Сапрезии</del> -F	re D.O. (mg/L)	ORP Alicalinity (mV) (ppm)	parameter and
		- /	<del>_</del>	·		//_	
	— —	<u> </u>			— : <i>f</i>	· <del>/-</del>	ı
				· · · ·	/		
SAMPLE ID			ATORY INFO				
U-	(7) - CONTAINER	REFRIG.	PRESERV. TO		Sequoia	ANALYSES	
			TILL		- regional	TPHG, BTEX, MT8C	
					****		•
сомментя: -	M only						<del>-</del>
	, ,		<u> </u>			· ·	_
		<b>-</b> .					

Facility #_5	760		Job#:	1801	09	
· · · · · · · · · · · · · · · · · · ·	76 Lewellin	a Rivd.	•	9-18-0	90	
	in Lorenz	7	-	Toe		
CILY	COTENE		Sampler.	<u></u>		
Well ID	U-3	Well Condit	ion:(	3. K		
Well Diameter	3 <sub>in</sub>	Hydrocarbo	n Gr	' Amount B	Bailed	
Total Depth	24.80 .	Thickness:		tproduct/w		
Depth to Water	16.12			3" = 0.3 = 1.50	8 £	= 0.66
•	8.68	VF 0.38 _3.30	D X 3 (casa vokatik	) = Estimated P	urps Volume:	/0 (cel.)
Purge	Disposable Bailer	•	Sampling			
Equipment:	Bailer ∸ S <u>ta</u> ck			Disposable Bailer	ailer	•
	Suction	÷.		Pressure Baile	er	
	Grundfos			Grab Sample		
	Other:		Other	·	_	
	te:/_r	ppn. Sedime	Color: <u> </u>	nove		
Did well de-wate	er?	lf yes;	Time:	Volun	ne:	; (cal
_		Conductivity	√ 1 Camb Casanac	D.O.		
Time	Volume pH (gal.)	umhos/cm X	÷ +	(mg/L)	ORP (mV)	Alkalinity (ppm)
1:22	(g=1.) 3.5 7.76	4.37	74.2	(mg/L)		
	(g-1.) 3.5 7.76 5.5 7.51	4.87 4.51	· •=	(mg/L)		
	(g=1.) 3.5 7.76	4.87 4.51	· •=	(mg/L)		
	(g-1.) 3.5 7.76 5.5 7.51	4.87 4.51	· •=	(mg/L)		
	(g-1.) 3.5 7.76 5.5 7.51	4.87 4.51	· •=	(mg/L)		
	(g-1.) 3.5 7.76 5.5 7.51	4.37 4.51 4.46	74.2 74.1 74.4	(mg/L)		
1:22	(g-1) 3.5 7.76 5.5 7.51 10 7.46	4.37 4.5/ 4.46 LABORATORY	74.2 54.1 74.4	(mg/L)	(mV)	(fobm)
1:22 1:23 1:25	(g-1.) 3.5 7.76 5.5 7.51 10 7.46  (4)- CONTAINER	LABORATORY REFRIG. PRESE	74.2 74.4 74.4 INFORMATION RV. TYPE LA	(mg/L)	(mV)	(ppm)
1:22	(g-1) 3.5 7.76 5.5 7.51 10 7.46	4.37 4.5/ 4.46 LABORATORY	74.2 74.4 74.4 INFORMATION RV. TYPE LA	(mg/L)	(mV)	(ppm)
1:22 1:23 1:25	(g-1.) 3.5 7.76 5.5 7.51 10 7.46  (4)- CONTAINER	LABORATORY REFRIG. PRESE	74.2 74.4 74.4 INFORMATION RV. TYPE LA	(mg/L)	(mV)	(ppm)
1:22 1:23 1:25	(g-1.) 3.5 7.76 5.5 7.51 10 7.46  (4)- CONTAINER	LABORATORY REFRIG. PRESE	74.2 74.4 74.4 INFORMATION RV. TYPE LA	(mg/L)	(mV)	(ppm)
1:22 1:23 1:25 SAMPLE 10	(g-1.) 3.5 7.76 5.5 7.51 10 7.46  (4)- CONTAINER	LABORATORY REFRIG. PRESE	74.2 74.4 74.4 INFORMATION RV. TYPE LA	(mg/L)	(mV)	(ppm)
1:22 1:23 1:25	(g-1.) 3.5 7.76 5.5 7.51 10 7.46  (4)- CONTAINER	LABORATORY REFRIG. PRESE	74.2 74.4 74.4 INFORMATION RV. TYPE LA	(mg/L)	(mV)	(ppm)

60		Job#: _	1801	09
6 Lewelling	RIVA.	Date: _	9-18-0	90
•		•	·	
Lorenzo	>	Sampler: _	Joe	
<u>U-4</u>	Well Condition	on: <u> </u>	· <u>k</u>	
<u> </u>	-	6	Amount E	M
27.85 +	Volume	2" = 0.17	10roduct/wa 3* = 0.3	
	Factor (VF)	6 =		
x	VF =	X3 (case volume)	= Estimated P	turge Volume:
Disposable Bailer	· . s	ടന്നുവിദ്യ		
Bailer ·	. E	quipment: D	isposable Ba	ailer ,
Stack	•	8:	ailer	
Suction	·.			<del>-</del> -
Grundfos			-	
Other:	—·	Other: _		_
	<del></del>		11 6	
	Weather	Conditions: _	Hot.	
	Water C	oior <u>clea</u>		Odor
:	ss. Sedimer	n Description: 💂	HONC	
7	lf yes;	Time:	Volun	ne:(cal.)
				<b>3</b>
olume pH	Conductivity	Temperature	D.O.	ORP Alkalinity
gal) /	umhos/cm/	F	(mg/L)	(mV) (ppm)
./`				
<del>/</del>	- —			·
<del></del>	- <del>/                                   </del>			<i></i>
<del></del>	-/	<del></del>	<del></del>	·/
<del></del>			·	
				·
_ / _				<i>F</i>
	LABORATORY	INFORMATION		
			ORATORY	analyses
(#) - CONTAINER	REFRIG. PRESER	V. THE LAB		
(F) - CONTAINER			guoia	
	REFRIG. PRESER		quoia	TPHG, BTEX, MTBG
	REFRIG. PRESER		quoia	
	REFRIG. PRESER		quoia	
	REFRIG. PRESER		quoia	
BYEA	REFRIG. PRESER		quoia	
	REFRIG. PRESER		quoia	
	U-4  27.85 +  16.88 +  16.88 +  X  Disposable Bailer Bailer Stack Suction Grundfos Other:  Disposable Bailer	Well Condition  Thickness:  16.88 fr.  Volume Factor (VF)  X VF ==  Disposable Bailer Stack Suction Grundfos Other:  Weather Water C Sediment If yes;	Well Condition:    1	Well Condition:    C   K

Client/ Facility # <u>57</u>	160		Job#: _	1801	09
Address: <u>37</u>	6 Lewellin	g Blvd.	Date:	9-18-	00
_	a Lorenz	7	Sampler: _		
			Samplet _		
Well ID	_U-5	Well Condition	on:	). <u>k</u>	
Vell Diameter	2		<u>C</u>	* Amount E	Bailed _
otal Depth	28.45 +	Thickness: _	2° = 0,17	tproduct/w	
epth to Water	16.17 .	1		3" = 0.3 - 1.50	12" = 5.50
	>	( VF =	X 3 (casa voluma)	≃ Estimated P	urge Volume:(cel
Purge quipment:	Disposable Bailer Bailer		ampling	n: n	
quiprinaite.	Stack			Disposable B: Bailer	aller
	Suction	*,		Pressure Baile	er
•	Grundfos		•(	Grab Sample	
	Other:		Other:		<del>-</del> .
tarting Time:		Weather	Conditions: _	H_F	
ampling Time:				- 1.01	
urging flow Rate			olor:cle		Odoc
Xid well de-water			Description: _	<del></del>	······································
oc-114(6)	. —	u yes;	Time:	Vokun	ne:
Time V	olume pH	Conductivity	∕0 Temperature	D.O.	ORP Alkalinity
9	( <b>p</b> (1.)	umhydistem X	N Temperature ←	(mg/L)	(mV) (ppm)
/	•				
			<del></del>	<del></del> ,	<del></del>
	<del></del>				/ <del>'</del>
			<del></del>	<del>/-</del>	·
<del></del>			<del></del>	·- <del></del>	·
<del>-/-</del> -	<del></del>	<del></del>	<del></del>	<del>/</del>	·
<del>-/</del> -		·	• •		
SAMPLE ID	(#) - CONTAINER	LABORATORY II			
U-	3 Ven	REFRIG. PRESERV		oratory 400 ia	ANALYSES
<del>  </del>	> 40	1 701		- Juona	TPHG, BTEX, MTBE
	<u> </u>				
<del></del>				<del></del>	
<u></u>		<u> </u>			,
COMMENTS: _L	1. oula				
		<u> </u>		· · · · · · · · · · · · · · · · · · ·	
	<del></del>	•			<del></del>

Client/ Facility # 57	60		.io	.b#:	1801	09	
•		~ Plv			9-18-0		
_	6 Lewelling	•					
City: Sa.	n Lorenze	<u> </u>	Sa	impler:	Joe	·	
				<u> </u>			
Well ID	U-6	We	Il Condition:		. <u>k</u>		
Well Diameter	<u> </u>		irocarbon	ef	Amount E	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Total Depth	<u>+</u>			= 0.17	10rod(sct/wi		= 0.66
Depth to Water		13	cor (VF)	6=1	1.50	= 5.50	
	x	VF	x 3 (c	ese volume) =	Estimated P	unge Yolume: _	(cst )
Purge	Disposable Bailer	. /	Samplin	ng			
Equipment:	Bailer		Equipme		sposable/6:	ailer	
	Stack Suction	./			iiler essupe Baild	<b>4</b>	
	Grundfos				ab Sample		
•	Other:			Other: _	/	<u> </u>	
			-,	<u>:</u>	/		
Starting Time:	. <u> /</u>	<u> </u>	Weather Cond	itions:	Hot		
Sampling Time:			Water Color: .	don		Odoc	
Purging Flow Rate	:	pm	Sediment Des	-			
Did well de-water	7		If yes; Time:	•			(csL)
	olume pH (gal.)	Con	ductivity W Ic	- <u>F</u> <del>mbc:smc</del>	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
	· /						
	/					<u> </u>	
	<u> </u>					<u> </u>	
	<u> </u>				•		
	<u></u>			·			
				•			
SAMPLE ID	(#) - CONTAINER	REFRIG.	RATORY INFOR PRESERV. TYP		MATORY	ANALY	•
U- /	3YeA	V.	<del></del>	<del></del>		<del></del>	<del></del> ,
1 0-/	3154	<u> </u>	HCL		<i>tuoia</i>	TPHG, BTEX	MTBC
						,	
1—/			<del></del>		····	<u> </u>	
		<u> </u>	1			1	
COMMENTS:	Pared -8	10/			· · · · · · · · · · · · · · · · · · ·		<del></del>
	J -	· · · · · · · · · · · · · · · · · · ·		<del></del>	<del></del>	<del></del>	<u> </u>
		•					

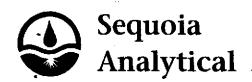
Client/ Facility #_57	760		Job#	1801	09
	16 Lewellin	g Blva	J. Date	9-18-	00
_	n Lorenz	,		oler: <u>Joe</u>	
City:	N COTENZ		Sand	oler:	
		<u> </u>			
Well ID	<u>u-7</u>	Wei	Condition:	0.k	
Well Diameter	<u>.</u>		rocarbon	- Amount I	Bailed eteri: 10-11
Total Depth	t.		2" = 0	- · · · · · · · · · · · · · · · · · · ·	
Depth to Water	t	-	=or (V7)	6 = 1.50	12" = 5.50
	×	VF	= X 3 (caso	volume) = Estimated I	Purgo Volume:
Purge	Disposable Bailer	-	Sampling		
Equipment:	Bailer		Equipment	: Disposable B	ailer
	Stack	• /		Bailer	
	Suction	•//		Pressure Bail	
	Grundfos			Grab Sample	!
	Other:	<del></del>		Other:	<del></del>
Starting Time: Sampling Time: Purging Flow Rat	/		•	clear_	/
Did well de-wate		<b>-</b> /	If yes; Time:		ne:(cal.)
	Volume pH (gal.)	Cond	incrivity   © Tempo	D.O. (mg/L)	ORP Alkalinity (mV) (ppm)
SAMPLE TO /	(#) - CONTAINER	LABOF	LA PORY INFORMA PRESERV. TYPE	NOITA LABORATORY	434413
	3YeA	X I	HCL	Sequoia	ANALYSES
	7.64	<u> </u>	TILL	- Separa	ATHE, BTEX, MTBC
<del>  (                                   </del>	·				<del> </del>
<u> </u>	ļ	<b>}</b>		<b></b>	
COMMENTS: (	Pared- or	(e (		<u> </u>	
	1.				· · · · · · · · · · · · · · · · · · ·
<del>-</del>		•			

Client/ Facility # <u>   5  </u>	760		Jot	o#: <u>180</u>	109
Address: <u>3</u>	76 Lewellin	g Blv	J. Da	te: <u>9-18-</u>	-00
_	in Losenz	,		mpler:	
Well ID	U-8	. We	Il Condition:	0. K	
Vell Diameter	2 <sub>n</sub>	. Hiye	drocarbon	Amount	Bailed
otal Depth 2	9.85 NBBU +		ckness: T	in (product/	
epth to Water	5.31 (19.11)		Cor (VF)	6 = 1.50	.38 <del>t" =</del> 0.66 12" = 5.50
	<del></del>	x vf	. ≈X3 (cæ	se volume) = Estimated	Purge Volume:(cal.)
Purge quipment:	Disposable Baile Bailer Stack Suction Grundfos Other:	· · · · · · · · · · · · · · · · · · ·	Sampling Equipmen		îler e
tarting Time: ampling Time: urging Flow Ra id well de-wate		<b></b>	Weather Condition Water Color: Sediment Describing If yes; Time:	clear none	Odoc
Time	Volume pH (gal.)	Con.	ductivity / Tom		ORP Afficiently (mV) (ppm)
<del>/</del>	<u> </u>	LAROS	ATORY MICORE		
SAMPLE ID	REMIATION - (4)	REFRIG.	VATORY INFORM PRESERV. TYPE	LABORATORY	ANALYSES
U-	BYEA	Υ	HCL	Sequoia	TPHG, BTEX, MTEC
	<u> </u>	<u> </u>			
			. <u>.</u>		
COMMENTS: _	W. only				

Client/ Facility #_5	760		Jo	ob#: _	1801	109	
Address: _3	76 Lewelli	19 Bl	vd. D	ete: _	9-18-	00	
_	un Lorenz	,	•	-	Toe		
Well 1D	U-19	_ V	/ell Condition:		·k		
Well Diameter	28.20		ydrocarbon	er-	' Amount	Bailed	
Total Depth	ALBON .		Volume 2 <sup>st</sup>	= 0.17		voter):	
Depth to Water	14.87 (1880) +	1	Factor (VF)			38 12" = 5.50	£ = 0.66
Purge Equipment:	Disposable Baile Bailer Stack Suction Grundfos Other:	7	7 = 2. <b>24</b> x 3 to Samplin Equipm	ent: (1) P	isposable Bailer ressure Bailer irab Sample	dailer der	7.5 icn
Sampling Time: Purging Flow Rate Did well de-wate		opm.	Water Color: _ Sediment Desc If yes; Time:	<u>      clea</u> pription: <u> </u>	nove		one
2:10 2:11 2:15	Volume pH (gal.)  2.5 7.66  7.56  7.56		naturativity No Tempos/cm Y	51	D.O. (mg/L)	ORP (xaV)	Alkalinity (ppm)
C41015 P			PRATORY INFOR		· · ·		
SAMPLE ID	(2) - CONTAINER  3 YeA	REFRIG.	PRESERV. TYPE		DRATORY	ANAL	
	, ,		HCL	>e-	quoia	TPAG, BTE	(,MT8C
COMMENTS: _		· · · · · · · · · · · · · · · · · · ·					

TOSC Tosco Marketing 2000 Own Conyon San Ruman, Colle	Company Company	Cone	Faoili ultant Pr ultant Na ddress_£	ojest Nur ime <u>Ge</u> 5747 S	nber ttler 1erra	UNOCAL S 376 Lewe 180109 -Ryan Inc Court, S eanna L. 0-551-75	11ing .85 . (G Suite Hard	Blvd R In J. D	SA C.)	n Lor	9456	_   L _   L .8   s	Laboratory Name Sequola Analytical Laboratory Release Number  Samples Collected by (Name) 505 AJEMIAN  Collection Date 9-18-00  Signature 500 AJEMIAN								
Sample Number	Lob Sample Number	Number of Containers	Matrix S = Sali A = Air W = Water C = Charcool	Type G == Grab C == Composite D == Discrete	Ilme	. Sample Preservation	load (Yes or No)	TPH Gat BTEX WINTEE	TPH Diesed (8015)	Oil and Grease (5520)	Puryeable Halocarbors (5010)	Purpeable Aromatica (8020)	Purgeoble Organics Spools (8240)	6	CACYPOZONI CACYPOZONI (ICVP or AX)						DO NOT BILL TB-LB ANALYSI  Remarks
TB-LB		103	W	4	1:05	HCL /	<del>  Y</del>	<del> \</del>		ļ <u>-</u>					ļ		<u> </u>			<u> </u>	
<u>U-1</u>		¥04	-	/	1:35	-	<del>                                     </del>	15	<del> </del>			-	<del>  `</del>	-	<del>                                     </del>						
U-3 U-19		11	<del> -/-</del>	<del>                                     </del>	12:30		1.	1				,									
0-18-1		"	<del> </del>	<del>-                                    </del>			<del>                                     </del>										ļ			ļ	<u> </u>
		<del>                                     </del>	<u> </u>	34	1										<u> </u>					_	
												ļ		ļ	<u> </u>	<u> </u>	-	ļ	<del> </del>	<del>                                     </del>	<del> </del>
												<u> </u>		<del> </del>	<b> </b> -	-	<del> </del>	<del>                                     </del>	<del> </del>		
									<u> </u>		<b>-</b>			<u> </u>	╀	-	<del> </del>	-	-		
let ve Se div Se div				<u> </u>	<u> </u>							ļ. <u>.</u>		<u> </u>	<u> </u>	<u> </u>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	
			ļ		ļ		ļ		-	<u> </u>	-		.	_		-	<del>                                     </del>	<u> </u>			
	<u> </u>	ļ	<u> </u>		<u> </u>	<u> </u>				<del> </del>		-		-		-	<del> </del>	-		-	
		<u>-  </u>	<u> </u>			<del></del>			+	<u> </u>			_	-		-	-	<del> </del>		-	
Ralinquished B	(Signature)		G	genization —R Inc	2.	Date/Time 3:	,	Source lecelyed	leter	y.			Organiza 9/18/ Organiza		9	te/Time //8/20 te/Time			Turni A	2 4 6	Time (Circle Choloe)  4 Hre.  8 Hre.  1 Doye
√d B	(Signature)	)	Or	ganization		Date/Time	F	tealeved (	For Lab	oralory	By (Sign	ature)			Do	t∙/Tim•	•	1			Ontracted





October 2, 2000

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

RE: Tosco(4)/L009128

Dear Deanna Harding

Enclosed are the results of analyses for sample(s) received by the laboratory on September 18, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt

Project Manager

CA ELAP Certificate Number 12360





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568 Project Number: Unocal SS#5760
Project Manager: Deanna Harding

Sampled: 9/18/00 Received: 9/18/00 Reported: 10/2/00

### **ANALYTICAL REPORT FOR L009128**

Sample Description		Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB		L009128-01	Water	9/18/00
U-1		L009128-02	Water	9/18/00
U-3	$\{x_i\}_{i=1}^n$	L009128-03	Water	9/18/00
U-9		L009128-04	Water	9/18/00





Gettler-Ryan/Geostrategies(1)
Project: Tosco(4)
Sampled: 9/18/00
6747 Sierra Court, Suite J
Project Number: Unocal SS#5760
Received: 9/18/00
Dublin, CA 94568
Project Manager: Deanna Harding
Reported: 10/2/00

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

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
TB-LB		,	L0091	7 <b>8_0</b> 1			Water	
Purgeable Hydrocarbons as Gasoline	0090145	9/29/00	9/29/00	VU-VI	50.0	ND	ug/l	
Benzene	# Ch10400	7/47/UU H	7/25/UU N		0.500	ND	n Tagy	
Toluene	н	n	н		0.500	ND	n	
Ethylbenzene		41	m		0.500	ND	, <b>H</b>	•
Xylenes (total)		а	н		0.500	ND		
		Ħ	я .		5.00	ND	m	
Methyl tert-butyl ether	#			70.0-130	5.00	90.2	%	
Surrogate: a,a,a-Trifluorotoluene	•		,	/0.0-130		90.2	70	
<u>U-1</u>			L0091	28 <u>-02</u>			Water	
Purgeable Hydrocarbons as Gasoline	0090144	9/29/00	9/29/00	<del></del>	100	647	ug/l	1
Benzene	11	Ħ	#		1.00	6.44		
Toluene	Ħ	ű	11		1.00	ND	Ħ	
Ethylbenzene		**	#		1.00	22.3	et	
Xylenes (total)	Ħ	n	tt		1.00	6.86	я	
Methyl tert-butyl ether	n	Ħ	11		10.0	22.2	Ħ	
Surrogate: a,a,a-Trifluorotoluene	n	n	"	70.0-130		113	%	
<u>U-3</u>			L0091	28_03			Water	
Purgeable Hydrocarbons as Gasoline	0090145	9/29/00	9/29/00	<u> </u>	50.0	ND	ug/l	
Benzene	# #	7/ <i>47</i> /00	7/23/00		0.500	ND	17	
Toluene	н	М	**		0.500	ND	н	
Ethylbenzene	n	н	H		0.500	ND	e	
Xylenes (total)		н	19		0.500	ND	H	
Methyl tert-butyl ether	п	4	и .		5.00	ND	77	
Surrogate: a,a,a-Trifluorotoluene	т	H	,	70.0-130	5.00	90.4	%	
-							957 - 4	
<u>U-9</u>			<u>L0091</u>	<u> 28-04</u>	en ^	3.775	<u>Water</u>	
Purgeable Hydrocarbons as Gasoline	0090145	9/29/00	9/29/00		50.0	ND	ug/l "	
Benzene	н	Ħ	ti		0.500	ND		
Toluene	Ħ	. **	Ħ		0.500	1.42	# ·	
Ethylbenzene	H	1)	н		0.500	ND	H	
Xylenes (total)	H	19	Ħ		0.500	1.06		
Methyl tert-butyl ether		П	n		5.00	ND_	н	
Surrogate: a,a,a-Trifluorotoluene	Ħ	*	н	70.0-130		86.2	%	

Sequoia Analytical - San Carlos

\*Refer to end of report for text of notes and definitions.







Gettler-Ryan/Geostrategies(1)

6747 Sierra Court, Suite J

Project Number: Unocal SS#5760

Dublin, CA 94568

Project Manager: Deanna Harding

Sampled: 9/18/00

Received: 9/18/00

Reported: 10/2/00

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

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
		···								
Batch: 0090144	Date Prepa	red: 9/29/0	<u>)0</u>		Extra	ction Method: EP.	A 5030B	[P/T]		
<u>Blank</u>	<u>0090144-BI</u>	LK1								
Purgeable Hydrocarbons as Gasoline	9/29/00			ND	ug/l	50.0				
Benzene	11			ND	н ,	0.500			•	
Toluene	11			ND	#1	0.500				
Ethylbenzene	Ħ			ND	*#	0.500				
Xylenes (total)	11 .			ND	**	0.500				
Methyl tert-butyl ether	11			ND	11	5.00				
Surrogate: a,a,a-Trifluorotoluene	п	10.0		12.2	**	70.0-130	122			
LCS	0090144-B	<u>51</u>								
Benzene	9/29/00	10.0		11.4	ug/l	70.0-130	114			
Toluene	#	10.0		11.2	#	70.0-130	112			
Ethylbenzene	**	10.0		11.0	· #	70.0-130	110			
Xylenes (total)	IT	30.0		33.4	77	70.0-130	111			
Surrogate: a,a,a-Trifluorotoluene	П	10.0		10.7	n	70.0-130	107			
LCS	0090144-B	<u>S2</u>			*					
Purgeable Hydrocarbons as Gasoline	9/29/00	250		223	ug/l	70.0-130	89.2			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.9	н	70.0-130	109			•
Matrix Spike	0090144-M	<u> </u>	<u>009121-02</u>							
Purgeable Hydrocarbons as Gasoline	9/29/00	250	ND	205	ug/l	60.0-140	82.0			
Surrogate: a,a,a-Trifluorotoluene	n	10.0		11.0	n	70.0-130	110			
Matrix Spike Dup	0090144-M	ISD1 L	009121-02							
Purgeable Hydrocarbons as Gasoline	9/29/00	250	ND	233	ug/l	60.0-140		25.0	12.8	
Surrogate: a,a,a-Trifluorotoluene	m .	10.0		10.3	n	70.0-130	103			
Batch: 0090145	Date Prepa	red: 9/29/	<u>00</u>		Extra	ction Method: EP	A 5030B	[P/T]		
<u>Blank</u>	0090145-B	LK1								
Purgeable Hydrocarbons as Gasoline	9/29/00			ND	ug/l	50.0				
Benzene	Ħ			ND	P	0.500				
Toluene	111		•	ND	n	0.500				
Ethylbenzene	W			ND	81	0.500				
Xylenes (total)	H			ND	#1	0.500				
Methyl tert-butyl ether	Ħ			ND	*	5.00				
Surrogate: a,a,a-Trifluorotoluene	н	10.0		10.4	77	70.0-130	104			
LCS	0090145-B	<u>S1</u>								
· · · · · · · · · · · · · · · · · · ·	9/29/00	10.0		8.41	ug/l	70.0-130	84.1			
Benzene							80.2			

Sequoia Analytical - San Carlos

\*Refer to end of report for text of notes and definitions.





Gettler-Ryan/Geostrategies(1)
Project: Tosco(4)
Sampled: 9/18/00
6747 Sierra Court, Suite J
Project Number: Unocal SS#5760
Received: 9/18/00
Dublin, CA 94568
Project Manager: Deanna Harding
Reported: 10/2/00

#### **Notes and Definitions**

# Note

1 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

Recov. Recovery

Relative Percent Difference

**RPD** 



1551 Industrial Road San Carlos, CA 94070-4111 (650) 232-9500 FAX (650) 232-9612 www.sequoialabs.com

Gettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 9/18/00
6747 Sierra Court, Suite J Project Number: Unocal SS#5760 Received: 9/18/00
Dublin, CA 94568 Project Manager: Deanna Harding Reported: 10/2/00

<u> </u>	Date	Spike	Sample	QC		Reporting Limit		RPD Limit	RPD 92	Notes*
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limu	70	IAORES.
LCS (continued)	0090145-B	<u>S1</u>	•							
Ethylbenzene	9/29/00	10.0		8.27	ug/l	70.0-130	82.7			
Xylenes (total)	н .	30.0		25.3	n	70.0-130	84.3	<u></u>		
Surrogate: a,a,a-Trifluorotoluene	H	10.0		9.86	#	70.0-130	98.6			
<u>LCS</u>	009 <u>0145-B</u>	S2								
Purgeable Hydrocarbons as Gasoline	9/29/00	250		227	ug/l	70.0-130				
Surrogate: a,a,a-Trifluorotoluene	n	10.0		9.07	н	70.0-130	90.7			
Matrix Spike	0090145-M	<u> 181 L</u>	009127-05							
Purgeable Hydrocarbons as Gasoline	9/29/00	250	ND	238	ug/l_	60.0-140				
Surrogate: a,a,a-Trifluorotoluene	n	10.0		10.3	#	70.0-130	103			
Matrix Spike Dup	0090145-M	<u>ISD1 L</u>	<u>009127-05</u>		_	CO O 140	94,4	25.0	0.844	
Purgeable Hydrocarbons as Gasoline	9/29/00	250	ND	236	ug/l	60.0-140		23.0	U.044	
Surrogate: a,a,a-Trifluorotoluene	H	10.0		10.2	Ħ	70.0-130	102			

# TOSCO (UNOCAL) SS #5760 SAN LORENZO, CA

MONITORING & SAMPLING EVENT OF OCTOBER 13, 2000

idress: <u>376</u>	LEWELLING	Blvd	Date:	10-13-		
ty: SAN CO	RENZO CA		Sampler	STEVE 1	BALIAN	
Well ID	<u>U-1</u>	Well Condition	on:	0·K		
ell Diameter	3"in.	Hydrocarbon		Amount B	125	(Gallons)
tal Depth	29.05 +	Thickness: _	2" = 0.17	3" = 0.38	8 4"	= 0.66
epth to Water	16.85 m	Factor (VF)		6" = 1.50	12" <del>+</del> 5.80	
Purge	12.20 x v Disposable Bailer	Š	ampling		•	of (igsl.)
uipment:	Bailer -	·· <b>·E</b> (	quipment:	Disposable Baller	<u>anes</u> -	•
	Stacion	•	€ .	Pressure Bail	er	•
•	•			Grab Sample		****
	Grundfos					
	Grundfos Other:			Other:		
tarting Time:	*	The state of the s	8.7	Other:		
arting Time: empling Time: urging Flow Rai id well de-wate	Other:	Water C	olor: nt Descriptio	Other:	Odor:	(cal.)
empling Time: urging Flow Rai id well de-wate Time	Other:	Water Comm. Sediment If yes;  Conductivity μημοσ/cm	olor: nt Descriptio	Other:  CUEA/I  n: Volumere D.O. (mg/L)	Odor:	(oal.) Alkalinity (ppm)
ampling Time: urging Flow Ran d well de-wate Time V:09	Other:	Water Conductivity	olor:  nt Descriptio  Time:  Temperat	Other:	Odor:	Alkalinity
empling Time:  urging Flow Rand Well de-wate  Time  4:09  4:13	Other:	Water Com. Sediment If yes;  Conductivity	tolor:  Time:  Temperate F C	Other:	Odor:	Alkalinity
empling Time:  urging Flow Rand Well de-wate  Time  4:09  4:13	Other:	Water Com. Sediment If yes;  Conductivity	Temperate 23 c 23	Other:	Odor:	Alkalinity
empling Time:  urging Flow Rand Well de-wate  Time  4:09  4:13	Other:	Water Com. Sediment If yes;  Conductivity	Temperate 23 c 23	Other:	Odor:	Alkalinity
empling Time: urging Flow Ran id well de-wate Time V:09 4:13	Other:	Water Com. Sediment If yes;  Conductivity	Temperate 23 c 23	Other:	Odor:	Alkalinity
ampling Time: urging Flow Rate id well de-wate  Time 4:09 4:13 4:18	Other:  14:05  14:30  te:	Water Comm. Sedimer If yes;  Conductivity	Temperate 22 c 22	Other:  CUEAA  n:  Volume  pre D.O.  (mg/L)	Odor:	Alkalinity (ppm)
ampling Time: urging Flow Rate id well de-wate  Time 4:09 4:13 4:18	Other:    14:05     14:05     14:30     te:	Water Comm. Sedimer If yes;  Conductivity	Temperate 22 c 22	Other:	Odor:  ORP (mV)  ANALY	Alkalinity (ppm)
ampling Time: urging Flow Rand well de-wate  Time  4:09  4:13	Other:  14:05  14:30  te:	Water Comm. Sedimer If yes;  Conductivity	Temperate 22 c 22	Other:  CUEA-/(  n:  Volume  D.O.  (mg/L)  ON  LABORATORY	Odor:	Alkalinity (ppm)
ampling Time: urging Flow Rate d well de-wate  Time V:09 4:13 4:18	Other:    14:05     14:05     14:30     te:	Water Comm. Sedimer If yes;  Conductivity	Temperate 22 c 22	Other:  CUEA-/(  n:  Volume  D.O.  (mg/L)  ON  LABORATORY	Odor:  ORP (mV)  ANALY	Alkalinity (ppm)
ampling Time: urging Flow Rate d well de-wate  Time 4:09 4:13 4:18	Other:    14:05     14:05     14:30     te:	Water Comm. Sedimer If yes;  Conductivity	Temperate 22 c 22	Other:  CUEA-/(  n:  Volume  D.O.  (mg/L)  ON  LABORATORY	Odor:  ORP (mV)  ANALY	Alkalinity (ppm)

9/97-Heidet.irm



Tooco Marketing Company 2008 Crow Corper PL, Src. 406 Son Rando, Calibrate 94463

Facility Number Facility Address consultant Project Number	UNOCAL SS#5760  376 Lewelling Blvd. San Lorenzo CA 180109.85	Contoot (Nome) MR. DAVID DEWITT  (Phone) (925) 277-238  Laboratory Name Sequois Analytical WOIO 3
consultant Name <u>Gettler</u>	-Ryan Inc. (G-R Inc.)	Laboratory Release Number
	Court, Suite I. Dublin, CA 94568	Samples Collected by (Name) STEVE BAUAN  Collection Date (0-(3-00
(Phone) <u>51</u>	0-551-7555 (Fox Number) 510-551-7888	Signature STEVE BAUAN TON

· ·		l		(F	hone)5	0-551-755	5_(F.ox	Number	<u>)510-</u>	-551-	<u> 7888</u>	_ s	Ignature	<u>STE</u>	# B/	10 Mm	4	201	,		
			ī											o To B	e Perfor	med			· · · · · ·		DO NOT BILL
Sample Number	Lob Sample Number	Number of Containers	Moths S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrets	Im•	. Sample Preservation	load (Yee or No)		TPH Disest (3015)	Off and Graces (5520)	Purpeable Halocarbons (8010)	Purgeable Aromatica (8020)	Purgeable Organics (8240)	Extractable Organica (8270)	Metals C4.Cr.Pb.Zn.Ni (ICAP or AA)	(5) OKYS W.					TB-LB ANALYSIS
TB-LB	DIA	l	W	G_		He	7	X													
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Relinquished By	(Signature)		Org	onization		Date/Time	Reo	loved Fo	or Labo	ratory B	y (Signa	ilure)	uc		Date 1C	136	20		(		Boys ntracted



20 October, 2000

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

RE: Unocal Sequoia Report: W010336

Enclosed are the results of analyses for samples received by the laboratory on 13-Oct-00 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charlie Westwater
Project Manager

CA ELAP Certificate #1271



404 N. Wiget Lane Walnut Creek, CA 94598 (925) 988-0600 FAX (925) 988-9673 www.sequoialabs.com

Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 5760

Project Manager: Deanna L. Harding

Reported:

20-Oct-00 15:24

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	<b>W</b> 010336-01	Water	13-Oct-00 00:00	13-Oct-00 17:55
U-1	W010336-02	Water	13-Oct-00 14:30	13-Oct-00 17:55

Sequoia Analytical - Walnut Creek

Charlie Westwater, Project Manager

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



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

Project Number: Unocal # 5760

Reported: 20-Oct-00 15:24

Dublin CA, 94568

Project Manager: Deanna L. Harding

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (W010336-01) Water	Sampled: 13-Oct-00 00:00	Receive	d: 13-Oc	t-00 17:55				<u> </u>	• "
Purgeable Hydrocarbons	ND	50	ug/l	1	0J18003	18-Oct-00	18-Oct-00	EPA 8015M/8020	
Benzene	ND	0.50	11	*	H ·	n	**	11	
Toluene	, ND	0.50	n	77	"		Ħ	11	
Ethylbenzene	ND	0.50		11	n 🧎	<b>H</b>		T*	
Xylenes (total)	ND	0.50	**	Ħ	11	<b>11</b>		n	
Methyl tert-butyl ether	ND	2.5	u	"	*	#	*	п	
Surrogate: a,a,a-Trifluorotolue	ne	95.3 %	70	-130	"	"	H	*	





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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 5760 Project Manager: Deanna L. Harding **Reported:** 20-Oct-00 15:24

# Volatile Organic Compounds by EPA Method 8260B

## Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W010336-02) Water	Sampled: 13-Oct-00 14:30	Received:	13-Oct-00 1	7:55				·	
Ethanol	ND	500	ug/l	1	0J19027	19-Oct-00	19-Oct-00	EPA 8260B	
tert-Butyl alcohol	ND	50	Ħ	н	n		#		•
Methyl tert-butyl ether	29	2.0	n	**	п	*	п		
Di-isopropyl ether	ND	2.0			*	**	· H	**	
Ethyl tert-butyl ether	ND	2.0		*	**	41	Ħ	<b>.</b>	
tert-Amyl methyl ether	ND	2.0	*	• •	. 11	Ħ	н	ŧi	
1,2-Dichloroethane	ND	2.0	**	**	11	1)	•	**	
Ethylene dibromide	ND	2.0	.11	Ħ	n	и .	*	11	
Surrogate: Dibromofluoron	nethane	102 %	50-1	50	"	#	#	H	
Surrogate: 1,2-Dichloroeth		98.0 %	50-1	50	"	"	"	"	



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

**Dublin CA**, 94568

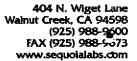
Project: Unocal

Project Number: Unocal # 5760 Project Manager: Deanna L. Harding Reported: 20-Oct-00 15:24

# 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 0J18003 - EPA 5030B [P/T]										
Blank (0J18003-BLK1)			,	Prepared	& Analyz	ed: 18-Oc	t-00			
Purgeable Hydrocarbons	ND	50	ug/l			·				
Benzene	ND	0.50					•			
Toluene	ND	0.50								
Ethylbenzene	ND	0.50	ŧŧ							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND .	2.5	17							
Surrogate: a, a, a-Trifluorotoluene	30.2		" "	30.0		101	70-130			•
LCS (0J18003-BS1)				Prepared	& Analyz	ed: 18-Oc	t-00			
Benzene	18.3	0.50	ug/l	20.0		91.5	70-130			
l'oluene	18.7	0.50	**	20.0		93.5	70-130			
Ethylbenzene	19.0	0.50	**	20.0		95.0	70-130			
Xylenes (total)	54.8	0.50	**	60.0	-	91.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	27.3	<del>-</del>		30.0		91.0	70-130			
Matrix Spike (0J18003-MS1)	Sc	urce: W0101	28-02	Prepared	& Analy2	ed: 18-Oc	t-00	_		
Benzene	18.7	0.50	ug/l	20.0	ND	93.5	70-130			
Toluene	19.0	0.50	н	20.0	ND	95.0	70-130			
Ethylbenzene ·	19.4	0.50	#	20.0	ND	97.0	70-130			
Xylenes (total)	56.1	0.50	,,	60.0	ND	93.5	70-130			
Surrogate: a,a,a-Trifluorotoluene	27.3		. #	30.0		91.0	70-130			
Matrix Spike Dup (0J18003-MSD1)	Se	ource: W0101	128-02	Prepared	& Analyz	zed: 18-Oc	:t-00			•
Benzene	19.4	0.50	ug/l	20.0	ND	97.0	70-130	3.67	20	•
Toluene	19.9	0.50	¥t	20.0	ND	99.5	70-130	4.63	20	
Ethylbenzene	19.8	0.50	·n	20.0	ND	99.0	70-130	2.04	20	
Xylenes (total)	56.0	0.50		60.0	ND	93.3	70-130	0.178	20	
Surrogate: a,a,a-Triftuorotoluene	28.0	<del></del>	"	30.0		93.3	70-130	<del>-</del>		

€3>





Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 5760.

Project Manager: Deanna L. Harding

Reported:

20-Oct-00 15:24

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0J19027 - EPA 5030B [P/T]										
Blank (0J19027-BLK1)				Prepared	& Analyz	ed: 19-Oc	t-00			
Ethanol	ND	500	ug/l	-		-				
tert-Butyl alcohol	ND	50	₩ .							
Methyl tert-butyl ether	ND	2.0	•							
Di-isopropyl ether	ND	2.0	#							
Ethyl tert-butyl ether	ND	2.0	и							
tert-Amyl methyl ether	ND	2.0	n							
1,2-Dichloroethane	ND	2,0	II .				-			
Ethylene dibromide	ND	2.0								
Surrogate: Dibromofluoromethane	51.0	<del></del>	<i>"</i>	50.0		102	50-150			
Surrogate: 1,2-Dichloroethane-d4	50.0		"	50.0		100	50-150			
LCS (0J19027-BS1)		÷		Prepared	& Analyz	ed: 19-Oc	t-00			
Methyl tert-butyl ether	43.9	2.0	ug/l	50.0		87.8	70-130			
Surrogate: Dibromofluoromethane	49.0		π	50.0		98.0	50-150			
Surrogate: 1,2-Dichloroethane-d4	48.0		"	50.0		96.0	50-150		-	
Matrix Spike (0J19027-MS1)	S	ource: W0102	225-02	Prepared	& Analyz	ed: 19-Oc	t-00		-	
Methyl tert-butyl ether	45.9	2.0	ug/l	50.0	ND	91.8	60-150		•	
Surrogate: Dibromofluoromethane	49.0		"	50.0		98.0	50-150			
Surrogate: 1,2-Dichloroethane-d4	48.0		"	50.0		96.0	50-150			
Matrix Spike Dup (0J19027-MSD1)	S	ource: W0102	225-02	Prepared & Analyzed: 19-Oct-00						
Methyl tert-butyl ether	51.4	2.0	ug/l	50.0	ND	103	60-150	11.3	25	
Surrogate: Dibromoftuoromethane	49.0		"	50.0		98.0	50-150			
Surrogate: 1,2-Dichloroethane-d4	48.0		"	50.0		96.0	50-150			



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Project Number: Unocal # 5760

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#### **Notes and Definitions**

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