April 27, 2000 G-R Job #180061

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

RE:

First Quarter 2000 Groundwater Monitoring & Sampling Report

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue Oakland, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On March 13, 2000, field personnel monitored and sampled six wells (U-1 through U-6) 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 any 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 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 is also attached.

Sincerely,

Deanna L. Harding Project Coordinator

Stephen J. Carter

Senior Geologist, R.G. No.5577

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Figure 1: Potentiometric Map Figure 2: Concentration Map

Table 1: Groundwater Monitoring Data and Analytical Results

Table 2: Groundwater Analytical Results
Table 3: Dissolved Oxygen Concentrations

Attachments: Standard Operating Procedure - Groundwater Sampling

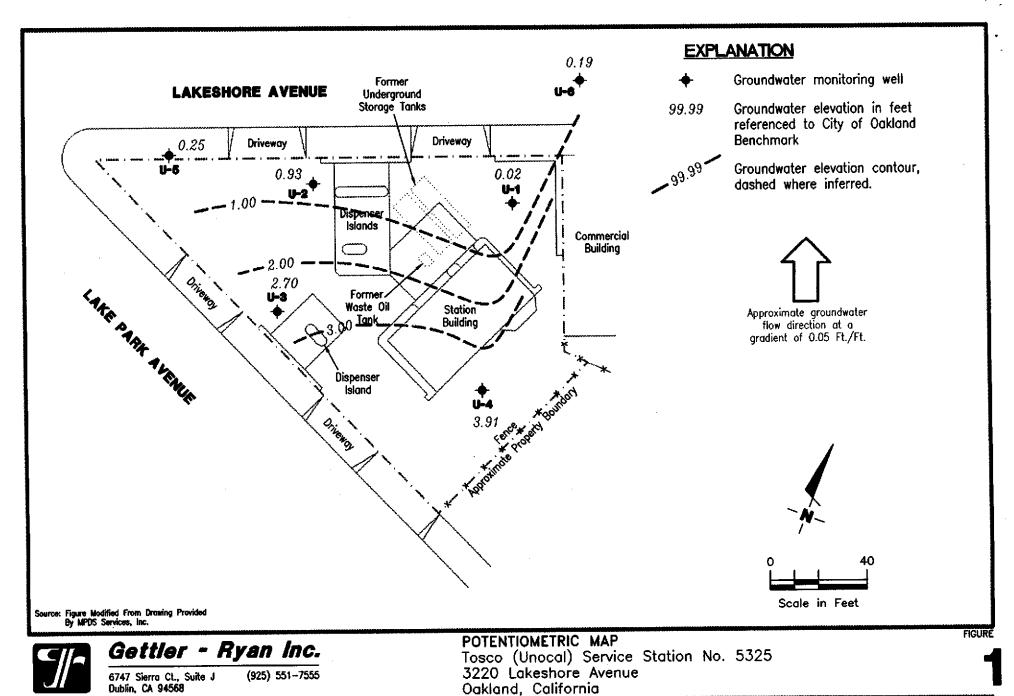
Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

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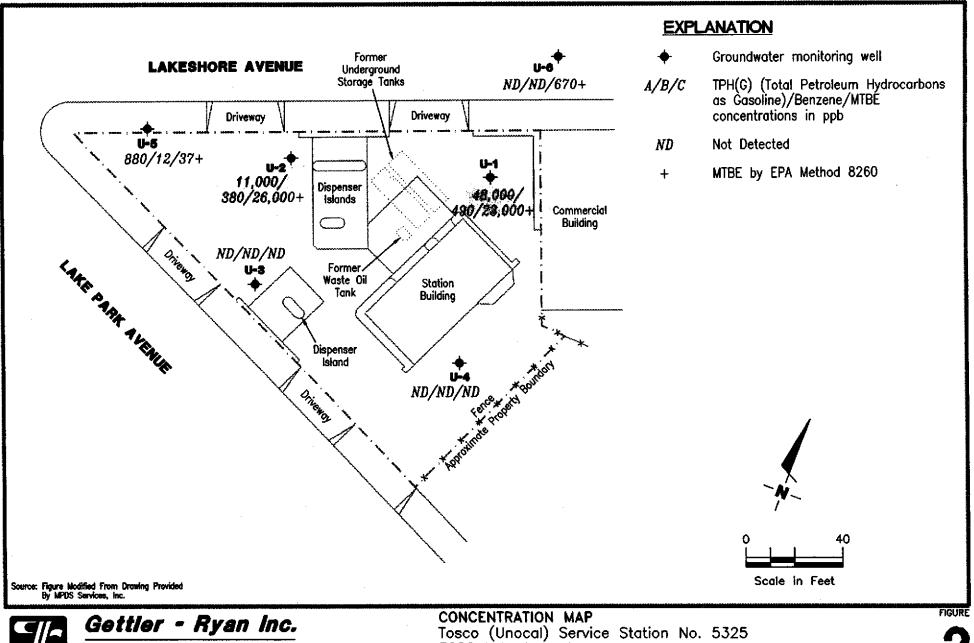


JOB NUMBER 180061 REVIEWED BY

DATE

March 13, 2000

REVISED DATE



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

3220 Lakeshore Avenue

Oakland, California

JOB NUMBER REVIEWED BY 180061

DATE March 13, 2000 REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results

					Oakianu, Cam					
Well ID/	Date	DTW	GWE	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
TOC*		(ft.)	(ft.)	<u> ()/-/                                  </u>	(PPV)					
					690	38	75	8.6	130	
U-1	08/10/90				250	22	16	4.2	17	
	01/07/91				160	13	8.6	1.0	15	
	04/01/91			-	140	21	4.3	0.36	17	
	07/03/91				ND	ND	ND	ND	ND	
	10/09/91				250	ND	ND	ND	ND	
	02/12/92				230	1.2	ND	ND	ND	
	05/05/92				1,000	80	1.4	6.7	41	
	06/11/92			 	400 <sup>1</sup>	1.0	ND	ND	0.6	
	08/20/92				34,000	1,400	5,500	910	7,300	
	02/22/93				8,700	600	240	650	3,300	
	05/07/93				4,900 <sup>2</sup>	79	ND	832	270	
	08/08/93			0.00	690 <sup>3</sup>	ND	ND	ND	ND	••
5.32	11/16/93	8.61	-3.29	0.00	6,800 <sup>4</sup>	ND	ND	ND	ND	
	02/16/94	8.54	-3.22	0.00	200	ND	ND	5.9	21	
8.46	06/22/94	8.39	0.07	0.00	$6,100^3$	ND	ND	ND	ND	
	09/22/94	8.66	-0.20	0.00	50,000	2,500	9,700	2,400	17,000	
	12/24/94	8.04	0.42	0.00	NOT SAMPLED	DIJE TO THE PI	RESENCE OF FRE	EE PRODUCT		a-
	03/25/95	7.72	1.02**	0.37	NOT SAMPLED	DUE TO THE P	RESENCE OF FRE	EE PRODUCT		
	06/21/95	9.30	-0.69**	0.20	NOT SAMPLED	DUE TO THE P	RESENCE OF FRE	EE PRODUCT		
	09/19/95	9.29	-0.53**	0.40	NOT SAMPLED	DUE TO THE P	RESENCE OF FRE	EE PRODUCT		
	12/19/95	8.98	-0.50**	0.00	27,000	ND	2,300	1,400	11,000	4,900
	03/18/96	8.25	0.21	< 0.00	120,000	540	4,300	2,600	26,000	ND
	06/27/96	7.92	0.54	0.01	NOT SAMPLED		RESENCE OF FRI	•		
	09/26/96	9.10	-0.62**	0.02	NOT SAMPLED	DUE TO THE P	RESENCE OF FRI	EE PRODUCT		
	12/09/96	6.88	1.60**		NOT SAMPLED	DUE TO THE P	RESENCE OF FRI	EE PRODUCT		
	03/14/97	9.02	-0.15**	0.55	NOT SAMPLED	DUE TO THE P	RESENCE OF FRI	EE PRODUCT		
	06/30/97	8.41	0.07**	0.02	NOT SAMPLED	DUE TO THE P	RESENCE OF FRI	EE PRODUCT		
	09/19/97	8.56	-0.08**	0.02	NOT SAMPLED	DUE TO THE P	RESENCE OF FRE	FF PRODUCT		<u></u>
	12/12/97	8.58	-0.11**	0.01			RESENCE OF FR			
	03/03/98	8.23	0.26**	0.04		ND <sup>7</sup>	RESENCE OF FRO	1,800	13,000	$ND^7$
	06/15/98	8.37	0.09	Sheen	52,000	ND <sup>7</sup>		13,000	83,000	4,800
	09/30/98	8.94	-0.48	Sheen	$1,000,000^8$	ND.	2,600	13,000	65,000	7,000

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/ TOC*	Date	DTW (ft.)	GWE (fl.)	Product Thickness (fl.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE <i>(ppb)</i>
	10/00/00	0.57	-0.11	<0.01	1,100,000 <sup>9</sup>	ND <sup>7</sup>	1,600	8,600	71,000	5,700
U-1	12/28/98	8.57		Sheen	130,000	470	1,100	2,000	28,000	5,700
(cont)	03/22/99	8.18	0.28	0.00	40,000	230	640	590	13,000	3,500/2,100 <sup>10</sup>
	06/09/99	9.37	-0.91		55,000 <sup>11</sup>	230	202	745	14,300	6,890/6,690 <sup>10</sup>
	09/08/99	9.53	-1.07	0.00	41,200 <sup>13</sup>	89.3	ND <sup>7</sup>	385	6,930	15,800/14,700 <sup>12</sup>
	12/07/99 <b>03/13/00</b>	9.67 <b>8.44</b>	-1.21 0.02	0.00 <b>0.00</b>	48,000 <sup>11</sup>	490	610	2,400	10,000	22,000/23,000 <sup>10</sup>
U-2	08/10/90				780	27	46	15	130	
U-Z	01/07/91			<b></b>	1,900	67	5.8	58	69	••
	04/01/91				1,700	250	89	34	190	
	07/03/91				2,100	150	25	3.1	290	
	10/09/91				230	7.1	ND	ND	11	
	02/12/92				410	1.9	ND	0.36	0.4	
	05/05/92				1,600	120	52	6.2	290	
	06/11/92			**	620	17	2.1	ND	37	
	08/20/92			••	700	28	6.5	1.3	4.6	
	02/22/93		95		3,400	2,400	2,100	1,200	5,800	
	05/07/93				17,000	1,800	660	1,700	4,000	
	08/08/93				5,600 <sup>2</sup>	420	ND	410	670	
4.53	11/16/93	8.17	-3.64	0.00	510 <sup>3</sup>	ND	ND	ND	ND	
4.55	02/16/94	7.73	-3.20	0.00	<b>98</b> 0⁴	49	13	2.7	40	
7.62	06/22/94	7.60	0.02	0.00	31,000	2,200	62	1,500	3,500	
7.02	09/22/94	7.93	-0.31	0.00	8,500 <sup>3</sup>	29	ND	ND	ND	
	12/24/94	7.27	0.35	0.00	32,000	1,500	890	1,300	5,000	
	03/25/95	7.01	0.61	0.00	170,000	1,900	21,000	4,800	33,000	
	06/21/95	6.98	0.64	0.00	16,000	2,100	ND	1,800	1,700	
	09/19/95	7.70	-0.08	0.00	3,000	610	ND	78	240	5
	12/19/95	7.30	0.32	0.00	1,600	140	55	52	270	6
	03/18/96	6.45	1.17	0.00	12,000	2,200	ND	1,200	2,200	22,000
	06/27/96	7.41	0.21	0.00	28,000	3,400	ND	2,800	3,100	3,000
	09/26/96	7.90	-0.28	0.00	5,900	750	ND	ND	ND	18,000

Table 1
Groundwater Monitoring Data and Analytical Results

(BOSO FOR COMPRINCION SACRE)			Product			<u> </u>		<b>E</b> 7	<b>4.9731939</b> 7
Date	DTW	GWE	Thickness	TPH(G)	В	T	E	X	MTBE
	(ft.)	(fi.)	(fl.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
10/00/07	6.36	0.96	0.00	13 000	5 100	290	980	370	2,700
								16,000	16,000
				•	•			-	20,000
				•					19,000
									16,000
									25,000
				•					7,900/7,800 <sup>10</sup>
								-	16,400/15,300 <sup>10</sup>
				43,300					14,900/15,600
				4,840					22,000/26,000 <sup>10</sup>
03/13/00	6.69	0.93	0.00	11,000	380	100	1432	2,100	22,000/20,000
08/10/90				ND	ND	ND	ND	ND	
01/07/91				ND	ND				
04/01/91				ND	1.0	2.9			
				ND	ND	ND	ND		
				ND	ND	ND	ND	ND	
		<b></b> .		ND	ND	ND	ND	ND	
	_	<b></b> ·		ND	ND	ND	ND	ND	
				ND	ND	ND	ND	ND	
		<b></b>		ND	ND	ND	ND	ND	
	••				ND	ND	ND	ND	
					ND	ND	ND	ND	
							0.7	4.1	
								ND	
									••
	12/09/96 03/14/97 06/30/97 09/19/97 12/12/97 03/03/98 06/15/98 09/30/98 12/28/98 03/22/99 06/09/99 09/08/99 12/07/99 03/13/00	12/09/96 6.76 03/14/97 7.12 06/30/97 6.19 09/19/97 7.31 12/12/97 6.75 03/03/98 6.36 06/15/98 6.51 09/30/98 7.17 12/28/98 7.06 03/22/99 6.82 06/09/99 7.51 09/08/99 8.16 12/07/99 8.31 03/13/00 6.69  08/10/90 01/07/91 04/01/91 07/03/91 07/03/91 07/03/91 07/03/91 04/01/92 06/11/92 08/20/92 06/11/92 08/20/92 05/505/92 06/11/92 08/20/92 05/07/93 05/07/93 08/08/93 11/16/93 11.82 02/16/94 11.62	(fi.)         (fi.)           12/09/96         6.76         0.86           03/14/97         7.12         0.52**           06/30/97         6.19         1.43           09/19/97         7.31         0.31           12/12/97         6.75         0.88***           03/03/98         6.36         1.26           06/15/98         6.51         1.11           09/30/98         7.17         0.45           12/28/98         7.06         0.56           03/22/99         6.82         0.80           06/09/99         7.51         0.11           09/08/99         8.16         -0.54           12/07/99         8.31         -0.69           03/13/00         6.69         0.93     Os/10/91	(fi.)         (fi.)         (fi.)           12/09/96         6.76         0.86         0.00           03/14/97         7.12         0.52**         0.03           06/30/97         6.19         1.43         <0.01	12/09/96   6.76   0.86   0.00   13,000	(fi.)	12/09/96		12/09/96

**Table 1**Groundwater Monitoring Data and Analytical Results

				Product						
Well ID/	Date	DTW	GWE	Thickness	TPH(G)	В	T	E	X	MTBE
TOC*		(fl.)	(ft.)	(ft.)	(ppb)	(ppb)	(ppb)	(ррв)	(ppb)	(ppb)
U-3	12/24/94	11.28	-0.30	0.00	ND	ND	ND	ND	ND	•-
	03/25/95	10.96	0.02	0.00	ND	ND	ND	ND	ND	
(cont)	03/23/93	10.96	-0.39	0.00	ND	ND	ND	ND	ND	
	06/21/95 09/19/95	11.55	-0.39 -0.57	0.00	ND	ND	ND	ND	ND	5
	09/19/95 12/19/95	11.33	-0.37 -0.47	0.00	ND ND	ND	ND ND	ND	ND	
	03/18/96	11.43	-0.47 -0.12	0.00	ND ND	ND	ND	ND	ND	
	03/18/96	11.16	-0.12 -0.18	0.00	440	49	50	51	140	50
	09/26/96	11.16	-0.18	0.00	ND	ND	ND	ND	ND	ND
	12/09/96	10.12	0.86	0.00	ND	ND	ND	ND	ND	29
	03/14/97	10.12	0.11	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	11.08	-0.10	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	11.05	-0.07	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	10.58	0.40	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	9.84	1.14	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	10.56	0.42	0.00	ND	ND	ND	ND	ND.	ND
	09/30/98	11.12	-0.14	0.00	ND	ND	ND	ND	ND	ND,
	12/28/98	10.96	0.02	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	9.46	1.52	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	11.01	-0.03	0.00	ND	ND	ND	ND	ND	ND
	09/08/99	11.31	-0.33	0.00	ND	ND	ND	ND	ND	ND
	12/07/99	11.26	-0.28	0.00	ND	ND	ND	ND	ND	ND
	03/13/00	8.28	2.70	0.00	ND	ND	ND	ND	ND	ND
<b>T</b> T 4										
U-4	0.000.00	10.55	0.00	0.00	3.173	* 11**	NIF.	NID.	ND	
11.15	06/22/94	10.16	0.99	0.00	ND	ND	ND	ND ND	ND 1.4	
	09/22/94	10.79	0.36	0.00	ND	0.78	1.3 ND	ND ND	1.4 ND	
	12/24/94	9.81	1.34	0.00	ND	ND	ND			
	03/25/95	9.51	1.64	0.00	ND	ND ND	ND	ND	ND ND	
	06/21/95	9.54	1.61	0.00	ND	ND	ND	ND	ND	
	09/19/95	10.17	0.98	0.00	ND	ND	ND	ND	ND	
	12/19/95	9.98	1.17	0.00	ND	ND	ND	ND	ND	

Table 1
Groundwater Monitoring Data and Analytical Results

				Product	mbile(V	7	97	E	х	MTBE
Well ID/	Date	DTW	GWE	Thickness	TPH(G)	В	T	grigo, ger saarraasis kassaasyn syn aan aasaa o	nii 20 de de Carago antigo de la companio del companio de la companio de la companio de la companio del companio de la companio del la companio del la companio de la companio del la companio del la companio de la companio de la companio de la companio de la companio del la comp	(ppb)
OC*		(ft.)	(ft.)	(ft.)	<u>(ppb)</u>	(ррь)	(ppb)	(ppb)	<u>(ppb)</u>	<i>дрро)</i>
J <b>-4</b>	03/18/96	9.66	1.49	0.00	ND	ND	ND	ND	ND	
cont)	06/27/96	9.74	1.41	0.00	ND	ND	ND	ND	ND	ND
cont)	09/26/96	10.14	1.01	0.00	ND	ND	ND	ND	ND	ND
	12/09/96	8.67	2.48	0.00	ND	ND	ND	ND	ND	33
	03/14/97	9.35	1.80	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	9.89	1.26	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	9.96	1.19	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	8.56	2.59	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	7.85	3.30	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	9.08	2.07	0.00	ND	ND	ND	ND	ND	ND
	09/30/98	9.75	1.40	0.00	ND	ND	ND	ND	ND	ND
	12/28/98	9.75	1.56	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	8.34	2.81	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	9.39	1.76	0.00	ND	ND	ND	ND	ND	ND
	09/08/99	9.90	1.25	0.00	ND	ND	ND	ND	ND	ND
	12/07/99	10.05	1.10	0.00	ND	ND	ND	ND	ND	ND
	03/13/00	7.24	3.91	0.00	ND	ND	ND	ND	ND	ND
	03/13/00	7.24	3.91	0.00	112	. 1.2				
U-5			•							÷
6.98	06/22/94	6.83	0.15	0.00	210	7.1	13	4.5	26	
	09/22/94	6.90	0.08	0.00	170	8.4	10	8.5	18	
	12/24/94	6.43	0.55	0.00	8,700	560	70	670	430	
	03/25/95	6.35	0.63	0.00	44,000	390	960	1,500	7,600	
	06/21/95	7.11	-0.13	0.00	400	2.3	ND	9.1	3.5	
	09/19/95	6.99	-0.01	0.00	850	14	7.1	13	66	5
	12/19/95	7.17	-0.19	0.00	ND	ND	ND	ND	ND	
	03/18/96	6.65	0.33	0.00	100	0.67	0.5	0.51	5.4	
	06/27/96	6.49	0.49	0.00	16,000	280	150	1,400	4,600	530
	09/26/96	7.13	-0.15	0.00	ND	ND	0.57	ND	0.96	ND
	12/09/96	5.90	1.08	0.00	1,300	29	46	ND	140	97
	03/14/97	6.99	-0.01	0.00	ND	ND	ND	ND	ND	14

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	Product Thickness (ft.)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
TOC*		(ft.)	(fi.)		(ppv)	( <b>PP</b> **)				
71 5	06/30/97	7.08	-0.10	0.00	4,200	74	51	180	980	270
U-5	09/19/97	6.78	0.20	0.00	6,300	160	13	370	1000	480
(cont)	12/12/97	6.94	0.04	0.00	60	1.3	ND	1.6	2.1	47
	03/03/98	6.50	0.48	0.00	1,700	29	$\mathrm{ND}^7$	150	190	330
	06/15/98	6.85	0.13	0.00	1,500	32	$ND^7$	91	83	330
	09/30/98	7.31	-0.33	0.00	1,700	44	$ND^7$	39	150	60
	12/28/98	7.25	-0.27	0.00	1,400	59	$ND^7$	13	27	150
	03/22/99	6.86	0.12	0.00	780	8.9	ND	0.76	4.5	350
	06/09/99	7.28	-0.30	0.00	1,000	ND <sup>7</sup>	$\mathtt{ND}^7$	10	35	280/350 <sup>10</sup>
	09/08/99	7.52	-0.54	0.00	2,62011	26.2	$ND^7$	32.2	157	280/23912
	12/07/99	7.67	-0.69	0.00	94911	9.26	$ND^7$	11.2	22.7	235/301 <sup>12</sup>
	03/13/00	6.73	0.25	0.00	880 <sup>14</sup>	12	1.0	5.6	8.7	46/37 <sup>10</sup>
U-6										
U-6			- 00	0.00	ND	ND	ND	ND	ND	
7.14	06/22/94	7.14	0.00	0.00 0.00	130	1.3	0.8	ND	0.73	
	09/22/94	7.34	-0.20	0.00	6,900	500	59	600	380	
	12/24/94	6.67	0.47	0.00	47,000	450	1,300	1,700	8,200	
	03/25/95	6.29	0.85 <b>-</b> 0.46	0.00	47,000 ND	ND	ND	ND	ND	
	06/21/95	7.60	-0.46 -0.56	0.00	ND ND	ND	ND	ND	ND	5
	09/19/95	7.70	-0.56 -0.61	0.00	210	2.5	1.0	2.9	17	
	12/19/95	7.75 6.86	0.28	0.00	ND	ND	ND	ND	ND	
	03/18/96 06/27/96	6.52	0.28	0.00	ND	ND	ND	ND	ND	510
	06/27/96 09/26/96	7.62	-0.48	0.00	ND	ND	ND	ND	ND	1,400
	12/09/96	7.62 5.88	1.26	0.00	1,200	29	48	6.4	140	58
	03/14/97	7.30	-0.16	0.00	ND	ND	ND	ND	ND	1,500
	05/14/97	7.35 7.35	-0.10	0.00	ND	ND	ND	ND	ND	990
	09/19/97	7.35 7.25	-0.11	0.00	ND	ND	ND	ND	ND	1,400
	12/12/97	7.23 7.29	-0.11 -0.15	0.00	ND -		ND	ND	ND	680
	03/03/98	7.00	0.14	0.00	ND	ND	ND	ND	ND	1,600
	03/03/98 -	7.00 7.18	-0.04	0.00	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	1,000

Table 1
Groundwater Monitoring Data and Analytical Results

Well ID/	Date	DTW	GWE	Product Thickness	TPH(G)	В	Т	E	X	MTBE
TOC*		(ft.)	(ft.)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
				0.00	MD	ND	ND	ND	ND	1,200
U-6	09/30/98	7.90	-0.76	0.00	ND	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	730
(cont)	12/28/98	7.79	-0.65	0.00	ND <sup>7</sup>		ND ND	ND	ND	1,800
	03/22/99	7.47	-0.33	0.00	ND	ND	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	1,000/850 <sup>10</sup>
	06/09/99	7.73	-0.59	0.00	$ND^7$	ND <sup>7</sup>		ND	ND	851/1,040 <sup>10</sup>
	09/08/99	7.95	-0.81	0.00	ND	ND	ND		ND ND	1,140/1,150 <sup>12</sup>
	12/07/99	8.10	-0.96	0.00	ND	ND	ND	ND		560/670 <sup>10</sup>
	03/13/00	6.95	0.19	0.00	ND	ND	ND	ND	ND	300/070
Trip Blank								ND	ND	ND
TB-LB	03/03/98				ND	ND	ND	ND		ND
	06/15/98				ND	ND	ND	ND	ND	
	09/30/98				ND	ND	1.7	ND	2.2	ND
	12/28/98				ND	ND	0.71	ND	0.72	9.5
	03/22/99				ND	ND	ND	ND	ND	ND
	06/09/99				ND	ND	ND	ND	ND	ND
	09/08/99	••		. <b></b>	ND	ND	ND	ND	ND	ND
	12/07/99				ND	ND	0.762	ND	ND	ND
	03/13/00				ND	ND	ND	ND	ND	ND

#### Table 1

### Groundwater Monitoring Data and Analytical Results

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

#### **EXPLANATIONS:**

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

TOC = Top of Casing

B = Benzene

ppb = Parts per billion

DTW = Depth to Water

T = Toluene

ppm = Parts per million

(ft.) = Feet

E = Ethylbenzene

ND = Not Detected

GWE = Groundwater Elevation

X = Xylenes

-- = Not Measured/Not Analyzed

TPH(G) = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tertiary butyl ether

\* TOC elevations are surveyed relative to City of Oakland Benchmark, at the northeasterly corner of Weller and Cheney Avenue (Elevation = 9.055 feet, city datum; add 3.00' to U.S.G.S. datum). Prior to November 16, 1993, the DTW measurements were taken from the well cover.

- \*\* Groundwater elevation corrected due to the presence of free product; correction factor = [(TOC-DTW)+(Product Thickness x 0.75)].
- The positive result for gasoline does not appear to have a typical gasoline pattern.
- The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
- Laboratory report indicates the hydrocarbons detected did not appear to be gasoline
- Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
- Detection limit raised. Refer to analytical reports.
- 8 Laboratory report indicates unidentified hydrocarbons C6-C12.
- <sup>9</sup> Laboratory report indicates gasoline and unidentified hydrocarbons >C8.
- 10 MTBE by EPA Method 8260.
- 11 Laboratory report indicates gasoline C6-C12.
- 12 MTBE by EPA Method 8260 analyzed past the recommended holding time.
- Laboratory report indicates weathered gasoline C6-C12.
- Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons < C6.

Table 2
Groundwater Analytical Results

			Oakland, California		
Well ID	Date	Iron <i>(ppm)</i>	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential mV <sup>2</sup>
U-1	06/15/98	39	ND	ND	382 <sup>2</sup>
0-1	09/30/98	17	ND	ND	$366^{2}$
	12/28/98	4.3	6.3	28	$298^{2}$
	03/22/99	4.9	ND	3.5	$320^{3}$
		1.2	ND	ND	$260^{3}$
	06/09/99	1.80	ND <sup>1</sup>	ND <sup>1</sup>	85 <sup>3</sup>
	09/08/99	5.70	ND <sup>1</sup>	17.0	404 <sup>3</sup>
	12/07/99 03/13/00	8.0	0.18	ND	<sup>2</sup> 117/262 <sup>3</sup>
			2.55	ND.	$369^{2}$
U-2	03/03/98	25	ND	ND	
	06/15/98	42	ND	ND	341 <sup>2</sup>
	09/30/98	25	ND	ND	354 <sup>2</sup>
	12/28/98	28	ND	ND	276 <sup>2</sup>
	03/22/99	0.68	ND	2.3	3203
	06/09/99	0.50	ND	ND	290 <sup>3</sup>
	09/08/99	1.90	ND <sup>1</sup>	ND¹	235 <sup>3</sup>
	12/07/99	0.250	$ND^1$	ND <sup>1</sup>	389 <sup>3</sup>
	03/13/00	4.3	0.31	ND	<sup>2</sup> 121/184 <sup>3</sup>
U-3	06/30/97	1.4	21	0.86	190 <sup>3</sup>
<b>U-3</b>	09/19/97	0.57	19	ND	75 <sup>3</sup>
5 11	12/12/97	1.9	23	0.85	$390^{3}$
12°	03/03/98	0.013	36	ND	358 <sup>2</sup>
	06/15/98	0.16	33	ND	$318^{2}$
	09/30/98	0.040	31	ND	$295^{2}$
	12/28/98	ND	29	ND	281 <sup>2</sup>
	03/22/99	0.015	30	0.14	$310^{3}$
	06/09/99	ND	26	1.2	350 <sup>3</sup>
	09/08/99	ND	32.9	$ND^1$	41 <b>7</b> <sup>3</sup>
	12/07/99	0.0520	27.9	ND <sup>1</sup>	43 <b>7</b> <sup>3</sup>
	03/13/00	0.15	33	ND	<sup>2</sup> 226/307 <sup>3</sup>
	0.610.00	0.12	35	0.52	200³
U-4	06/30/97	0.13		ND	45 <sup>3</sup>
ş.t	09/19/97	0.35	30	0.73	380 <sup>3</sup>
1 6 (1	12/12/97	0.68	31		284 <sup>2</sup>
( * °	03/03/98	0.018	3.2	ND ND	$256^{2}$
	06/15/98	0.14	33	ND ND	276 <sup>2</sup>
	09/30/98	0.049	31	ND ND	280 <sup>2</sup>
	12/28/98	0.36	31		$320^{3}$
	03/22/99	ND	. 30	0.14 0.91	$340^{3}$
	06/09/99	ND	35 24	ND <sup>t</sup>	340 391 <sup>3</sup>
	09/08/99	ND	24	ND <sup>1</sup>	478 <sup>3</sup>
	12/07/99	ND	27.7		<sup>2</sup> 219/244 <sup>3</sup>
	03/13/00	0.021	33	ND	217/244

Table 2
Groundwater Analytical Results

#### Page (Image) Carries Station #522

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

		Iron	Nitrate as NO3	Phosphate as PO4	Redox Potential
Well ID	Date	(ppm)	(ppm)	(ppm)	mV²
U-5	06/30/97	16	ND	ND	160 <sup>3</sup>
	09/19/97	0.22	ND	ND	63 <sup>3</sup>
	12/12/97	6.7	ND	ND	$400^{3}$
	03/03/98	18	3.1	ND	345 <sup>2</sup>
	06/15/98	17	ND	ND	333 <sup>2</sup>
	09/30/98	17	ND	ND	$318^2$
	12/28/98	17	6.6	ND	305 <sup>2</sup>
	03/22/99	0.12	ND	2.4	$340^{3}$
	06/09/99	0.23	ND	ND	$320^{3}$
	09/08/99	2.10	$ND^1$	$ND^1$	$335^{3}$
	12/07/99	0.310	$ND^1$	ND <sup>1</sup>	$408^{3}$
	03/13/00	0.33	0.16	ND	<sup>2</sup> 111/264 <sup>3</sup>
<b>T</b>	0.6/20/07	90	0.00	ND	190³
U-6	06/30/97	88	0.80		ND <sup>3</sup>
	09/19/97	2.9	1.80	ND	380 <sup>3</sup>
	12/12/97	51	ND	ND	$327^{2}$
	03/03/98	60	3.5	ND	315 <sup>2</sup>
	06/15/98	590	4.8	ND ND	313 345 <sup>2</sup>
	09/30/98	33	ND		297 <sup>2</sup>
	12/28/98	83	7.2	ND	$330^{3}$
	03/22/99	2.1	ND	0.98	$320^{3}$
	06/09/99	0.47	0.20	ND	
	09/08/99	0.140	5.59	ND <sup>1</sup>	305 <sup>3</sup>
	12/07/99	0.260	ND <sup>1</sup>	ND <sup>1</sup>	443 <sup>3</sup>
	03/13/00	0.79	0.26	ND	<sup>2</sup> 68/222 <sup>3</sup>

#### **EXPLANATIONS:**

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

ppm = Parts per million

ND = Not Detected

mV = millivolts

Detection limit raised. Refer to analytical reports.

<sup>&</sup>lt;sup>2</sup> Field measurement.

Analyzed by laboratory.

## Table 3

## Dissolved Oxygen Concentrations

	Oakland, Califo	ormia
Well ID	Date	Before Purge (mg/L)
U-1	12/07/99	1.36
	03/13/00	1.44 
U-2	12/07/99	2.28
	03/13/00	2.68
U-3	06/30/97	4.1
	09/19/97	4.2
The same of the sa	12/12/97	2.97
	03/03/98	2.63
	06/15/98	2.93
	09/30/98	3.11
	12/28/98	3.59
•	03/22/99	4.02
	06/09/99	3.70
	09/08/99	3.96
	12/07/99	4.21
	03/13/00	(4.82)
U-4	06/30/97	5.4
	09/19/97	5.1
	12/12/97	3.11
	03/03/98	2.94
	06/15/98	3.08
	09/30/98	4.05
	12/28/98	4.57
	03/22/99	4.26
	06/09/99	3.61
	09/08/99	3.75
	12/07/99	4.03
	03/13/00	4.33
U-5	06/30/97	3.4
0-3	09/19/97	0.6
	12/12/97	1.75
	03/03/98	2.36
	06/15/98	2.55
	09/30/98	1.93
	12/28/98	1.64
	03/22/99	1.99
	06/09/99	2.10
	09/08/99	2.21
	12/07/99	2.66
	03/13/00	3.04

#### Table 3

### **Dissolved Oxygen Concentrations**

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

Well ID	Date	Before Purge (mg/L)
U-6	06/30/97	0.30
	09/19/97	0.60
	12/12/97	2.70
	03/03/98	2.18
	06/15/98	2.48
	09/30/98	3.06
	12/28/98	3.42
	03/22/99	3.88
	06/09/99	3.29
	09/08/99	3.12
	12/07/99	3.44
	03/13/00	2.81

#### **EXPLANATIONS:**

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

mg/L = milligrams per liter

## STANDARD OPERATING PROCEDURE -GROUNDWATER SAMPLING

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

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using 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/ Facility <u>#_533</u>	25		Job#:	18	0061		
	20 Lakeshore	Ave.	Date:	3-	13-00		
City: Oakla			Sample	er:	Joe		
City:OaFia	4.6						<del></del>
Well ID	<u>U-1</u>	Well Condition	on: _O	<u>. k</u> .	<del></del>		
Well Diameter	3 in.	Hydrocarbor Thickness:	A		Amount Ba		(Gallons)
Total Depth	19.70 R.	Volume	2" = 0.1		3" = 0.38	4" : 12" = 5.80	= 0.66
Depth to Water	8.44 1	Factor (VF)		6 = 1.5 			
	11.26 x v=	0.38 = 4.25	) K 3 (case v	olume) = E	Estimated Pu	ge Volume:	<u>3 (gal.)</u>
Purge	Disposable Bailer		ampling	Dier	oosable Ba	ilee	•
Equipment:	Bailer Stack	t	quipment:	Bail			
	Stack Suction				ssure Baile	r	
	Grundfos				b Sample		
	Other:	<u>.</u>		Oth	er:		
	\$ ! 50 4 ' 206 te:	M Water Sedime	Color: ent Descrip	<u> </u>	1046_	Odor:u_	
Did well de-wat	er?				voidii	ne:	
1100 -	Volume pH (gal.) 6.75  8 6.78  13 6.79	Conductivity  µmhos/cm/  1.66  1.46	16 <sup>20°</sup> Tempe - 69. - 69. - 69.	4 4	D.O. (mg/L) /·44	ORP (mV) 117	Alkalinity (ppm)
							<u> </u>
		LABORATORY	INFORMA ERV. TYPE /	TION	RATORY	ANAL	YSES
SAMPLE ID	(1) 00:11:11:11		ICL	SEQUOIA		TPH(G)/btex/ri	
<u>U-1</u>	3 VO A		<u> </u>	11		Iron	
	1 plastic					Witcate,	phosphale
	<del> </del>			<del>                                     </del>	<del></del>	Redox	
<u></u>	1 / / 2			<u></u>		(	
COMMENTS:	No FF	244	cki mm				<u> </u>
	<u> </u>			<u> </u>		<u> </u>	

Client/ Facility # 53	25		Job#:	1800	061	<del></del>
	20 Lakeshe	ce Ave.	Date:	3- 13	-00	
			Samo	oler: <u>Jo</u>	· e	
City: <u>Oakla</u>	144			- <del></del>		
Well ID	U-2	Weil Condi	tion: _(	9. k.		
Well Diameter	3 in.	Hydrocarbo Thickness:	_		ount Bailed duct/water):	(Gallons)
Total Depth	19.62 1	Volume	2* = 0.	17 3	r = 0.38	4" = 0.66
Depth to Water	6.69 tt.	Factor (VF)		6 = 1.50	12" = 5.80	
	12.93 ×	VF 6,38 = 9.9	∬x3 (case	volume) = Estir	nated Purge Volume:	15 (gal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampling Equipment	Bailer Pressu Grab S	able Bailer re Bailer ample	•
	2' 3' te:	Redim	Color:	clean	Odor: Volume:	<del> </del>
	Volume pH (gal) 7.11 10 7.07		A leagh Lemb	erature 	D.O. ORP (mg/L) (mV)	Alkalinity (ppm)
		LABORATOR	Y INFORM	ATION		
SAMPLE ID	(#) - CONTAINER		ERV. TYPE	<del></del>	DRY ANA TPH(G)/btex	LYSES
U-2	3 V C A		1CL .	SEQUOIA	Irou	
	1 plastic			- "		phosphale
			<u> </u>		Redo	
<u></u>	<u> </u>				(	<u></u>
COMMENTS:						

Client/ Facility <u># 53</u>	· 25		Job#:	18	0061		
•	20 Lakesho	co Avo	e Date:	3-	13-00		
			Samn	ler:	Joe		
City: Oakla	).v.d						
Well ID	<u>U-3</u>	Well (	Condition:	0.k.			
Well Diameter	3 in.	-	ocarbon iness:		Amount Ba	uiled en: <u>O</u>	(Gallons)
Total Depth	19,40 m	Volu		17		4"	= 0.66
Depth to Water	8.28 ft.						
	11.12 xv	≠ <u>0.38</u>	=4.23 x 3 (case	volume) = 1	Estimated Pu	rge Volume:	13 (qai.)
Purge Equipment:	Disposable Bailer Bailer		Sampling Equipment	: Dis	oosable Ba	iler	
Edabine	Stack			Bail	er ssure Baile	F	
	Suction Grundfos				ssure dane b Sample	•	
	Other:			Oti	er:		
<u> </u>							
Starting Time:			Weather Condition				<i>il</i> 4
	1:46		vvater color Sediment Descrip				
	ate:	<del></del>	Sealment Description 1 of the seal of the				
Did well de-wat	er?	<del></del>	tt Aez' tauer =				
Time	Volume pH	Cond	uctivity   60 Temp	ctstate	D.O.	ORP	Alkalinity
<b></b> —	(gal.) _ Cd	<i>t</i> anh	10 70	F	(mg/L) 4.82	(mV) 226	(ppm)
1,30	4 7.31		67 69	4			
1'32-	13 7-40		.62 69	1.6			
				<del></del>		. · <del></del>	
		LA80R	ATORY INFORM	ATION			
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE		RATORY	ANAL	
U- >	340 A	Y	HCL	SECTION		TPH(G)/btex/s	mtbe
	1 plastic			"		TION	ماداه اماماه
				<del></del>		Nitrate, Redox	Munitarie
		L.,,	<u> </u>			( ICENO X	
COMMENTS:							
	<u> </u>			· <u> </u>			

Client/ Facility <u># 53</u>	25		Job#	: <u>1</u>	80061		
•	20 Lakeshe	ce Av	e Date	: _3	- 13-00		
				nier	Joe		
City: Oakla	3 nd	·	Sam	biei			
Well ID	U-4	Well	Condition:	Oik			
Well Diameter	4 in.	-	ocarbon cness:	lfeet)	Amount Ba	<i>A</i>	(Gallons)
Total Depth	20.15 ft.	Volu	me 2" = 0	0.17	3" = 0.38 1.50		= 0.66
Depth to Water	7.24 ft.	Pace	or (VF)				
	12.91 x	vf <u>0.66</u>	=8.52 x 3 (case	: volume) =	= Estimated Pu	rge Volume:	26 (gal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampling Equipmen	it: İsi Ba Pr Gi	sposable Ba ailer ressure Baile rab Sample ther:	- er	
	12:2 1'.v ate: 2 er?	OP.M	Weather Condit Water Color: Sediment Descr If yes; Time:	ription: _	Ache	Odor: N	
Time	Volume pH (gal.)  8 7.80  16 7.39  26 7.47	Cond umh	luctivity   6 <sup>2)</sup> Tem	peranuc	D.O.	ORP	Alkalinity (ppm)
SAMPLE ID	(#) - CONTAINER	LABOR REFRIG.	ATORY INFORM	TATION LAB	ORATORY	ANAL	YSES
U- A	3ve A	Y	HCL	SEQUO	lA.	TPH(G)/btex/r	ntbe
<u> </u>	1 plastic	11		1	,	Tron	
						d Witcate,	
					<u> </u>	Redox	
						`	
COMMENTS:							
		<u></u>				<u> </u>	
			_				

			Job#:				
ient/ icility <u># 533</u>	25		••••	180	006		<u> </u>
	20 Lakeshor	e Ave.	Date:	3- 1	3-00		······································
			Samol	er:	Toe		
ty: <u>Oakla</u>	- Land		Surie.				
<u> </u>				<u></u>			
Well 1D	<u>U-5</u>	Well Condit	ion: <u>O</u>	<u>, k </u>			
ell Diameter	4 in.	Hydrocarbo	n _		mount Ba		ما
en Diameter		Thickness:	<b>~</b> ~		roduct/wat		(Gatlor
otal Depth	20.05 ft.	Volume	2" = 0.1	7 6 = 1.50	3" = 0.38	12" = 5.80	
epth to Water	6.73 ft.	Factor (VF)					
<b>Opt. 10</b>			-4				07
	13,32 x v	F 8.66 = 8.7	X 3 (case v	olume) = E	stimated Pu	rge Volume:	[ [qa
_	Disposable Bailer		Sampling				
Purge quipment:	Bailer		Equipment:		osable Ba	iller	
4-6	Stack			Baile	er sure Baile		
				Pres	Sille Dalle	21	
	Suction			· · ·	Sure balle Sample	: <b>r</b>	
	Grundfos			Grat			
_	Grundfos Other:	Weath	ner Conditio	Grat Other	Sample er:	 	
Sampling Time: Purging Flow Ra	Grundfos Other:	Weath  Run Water  Sedim	Color:	Grat Other ns:	Sample er:	Odor:	yes
Sampling Time: Purging Flow Ra	Grundfos Other:	Weath  Run Water  Sedim	Color:	Grat Other ns:	Sample er:	Odor:	yes
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:00 ate: 2	Weath  Run Water  mm. Sedim  If yes	Color: ent Descrip ; Time:	Grat Other ns: <u>C</u> rtion:	Sample er:	Odor:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 4:0 4:0 5:0 5:0 5:0 6:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7	Weath  Weath  Water  Sedim  If yes  Conductivit  umbos/cm	Color: ent Descrip ; Time: y   6 <sup>2</sup> Temp	Grat	Sample er:	Odor:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:0 3:0  ete: 2: Volume pH (gal.) 7.27	Weath  Pun Water  Sedin  If yes  Conductivit  umbos/cm	Color: nent Descrip ; Time: y   6 <sup>2</sup> Tempor	Grate	Sample er:	Odor: ne:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7	Weath  Property Water  Sedim  If yes  Conductivity  pmhos/cm  2.14	Color: ent Descrip ; Time: y   6 <sup>2</sup> Tempor Y	Grate Control of the	Sample er:	Odor: ne:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:0 3:0  ete: 2: Volume pH (gal.) 7.27	Weath  Property Water  Sedim  If yes  Conductivity  pmhos/cm  2.14	Color: nent Descrip ; Time: y   6 <sup>2</sup> Tempor	Grate Control of the	Sample er:	Odor: ne:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7	Weath  Property Water  Sedim  If yes  Conductivity  pmhos/cm  2.14	Color: ent Descrip ; Time: y   6 <sup>2</sup> Tempor Y	Grate Control of the	Sample er:	Odor: ne:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7	Weath  Property Water  Sedim  If yes  Conductivity  pmhos/cm  2.14	Color: ent Descrip ; Time: y   6 <sup>2</sup> Tempor Y	Grate Control of the	Sample er:	Odor: ne:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7	Weath  Run Water  Sedim  If yes  Conductivit  µmhos/cm  3,17  3,19	Color:	Grate Others: Cleaning otion: 2	Sample er:	Odor: ne:	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat  Time  2:45  2:47	Grundfos Other:  2:3 2:09 ate: 26 ver?  Volume pH (gal.) 7.27 18 7.30 7.25	Weath  Pun Water  Sedim  If yes  Conductivity  µmhos/cm  2.14  3.17  3.19	Color:	Grate Other os:	Sample er:	Odor: ORP (mV) _///	yr S Alkalin
Sampling Time: Purging Flow Ra Did well de-wat  Time  2:45  2:47  2:50-	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 3:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7	Conductivity pubos/cm 3,17 3,19	Color:	Grate Other os:	D.O. (mg/L)	Odor: ORP (mV	Alkalin (ppr
Sampling Time: Purging Flow Ra Did well de-wat  Time  2:45  2:47	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 3:0 7:0 7:27 7:27 7:25 7:25 7:25	Conductivity punhos/cm 3,17 3,19	Color:	Grate Others:	D.O. (mg/L)	Odor:	Alkalin (ppr
Sampling Time: Purging Flow Ra Did well de-wat  Time  2:45  2:47  2:50-	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 3:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7:0 7	Conductivity pubos/cm 3,17 3,19	Color:	Grate Other ons:	D.O. (mg/L)	Odor:	Alkalin (ppr
Time  2:45  2:47  2:50-	Grundfos Other:  2:3 2:0 3:0 3:0 3:0 3:0 7:0 7:27 7:27 7:25 7:25 7:25	Conductivity punhos/cm 3,17 3,19	Color:	Grate Other ons:	D.O. (mg/L)	Odor:	Alkalin (ppr

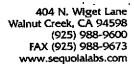
Client/ Facility <u># 53</u>	25		Job#	#: <u>18</u>	30061	· · · · · · · · · · · · · · · · · · ·	<del></del>
	20 Lakesh	oce Ave	Date	: _3-	13-00		
				pler:			
City: Oakl	344 <u></u>			pici:			
Well ID	U-6	Well Co	ondition: _	O.k.			
Well Diameter	2_in.		_		Amount B	_	
Total Depth	23.80 tc	Volum	c 2°=(	0.17		3 4	(Gallons) = 0.66
Depth to Water	. 6.95 ft.	Factor	(VF)	6 = 12	50	12" = 5.80	
	16.85 ×	vf 0.17 =	<u>2.8.</u> 7x3(case	: volume) =	Estimated Pt	urge Volume: _	9 (gal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampling Equipmen	Bail Pre: Gra	posable Balle er ssure Balle b Sample her:	er	-
	te:	SP.m. Wa	eather Conditionater Color: diment Descrives; Time: _	<u> </u>	ac Love	Odor: <u>n</u> e	, u e
Did well de-wate	er?	IT Y	/es; 11me: _		Volui:		
2:07	Volume pH (gal.) 7.43 6 7.40 9 7.40	5.36 4.87	$\frac{77}{7}$	5.5	D.O. (mg/L) 2.81	ORP (mV) 	Alkalinity (ppm)
SAMPLE ID	(#) - CONTAINER	REFRIG. P	ORY INFORM RESERV. TYPE ,	LABOR	<del> </del>	ANAL	
U-6	3ve A	Y	HCL .	SEQUOIA	<u> </u>	TPH(G)/btex/n	
	1 plastic	11		<b>"</b>		Mitcate,	
						Redox	1
COMMENTS:					· · · · · · · · · · · · · · · · · · ·		



竖

Consultant Project Number————————————————————————————————————	(Phone) (925) 277-5325  Laboratory Name Sequoia Analytical  Laboratory Release Number (NOO3327)  Samples Collected by (Name) SOE ASEMIAN  Collection Date 3-13-00  Signature Source
(Phone)310-331-7333 (Pax Adminus)222	Angleses To Be Performed DO NOT BILL

	Bases Medicaling Co		٨.	idrese_fi	747_S1	erra	Court. S	ulte	In Dublin, CA 94568   Samples Collected by (Name)													
	2000 Gare Caryon F San Flarence, Collect		P	roject Co	nlast (Ha	me) De	anna L. )-551-755	<u>Hargi</u>	ng	510-	551-7	7888		gnature.	8	<u>-22</u>	سم	<u> </u>				
	•				(ዖክ	one)510	)-551-732	(Fox	Kumper	7.0						Perfor	ned					DO NOT BILL
_						.			ļ <u>.                                    </u>				_	Vidite				9+0	7			TB-LB ANALYSIS
		١	Ç	Alr Charsool	2 2	}	و	• •	E a			ę.	atic	뵬	Organica	]	2	4050	, ma	• •		CONFIRM ANY
		Ě	Containers	11	Grab Composite Discrete	ļ	ge .	<b>€</b>	BTEX WANTEE (8020)		80	Holocorbon	Aromatica	Organica	ő	23	I	nd	Potential	}		MTBE HIT
		<b>₹</b>	3	<b>≺</b> υ	111	}	<u> </u>		E	3	8	4.	<u> </u>	\$ c	13 G	7 2	*	1 te				84 8260.
	ž	Sample Number	ď	# Se = 1	ဖပစ		- 4 -	زرمه	19H Can +	1PH Diesed (8015)	Oil and Grasse (5520)	Purpooble (B010)	Purgeoble (8020)	Purpeoble (8240)	Extractable (8270)	Metals CA.Cr.Pb.Zn.Ni (ICAP or JA)	برره	N. teate, phosphoto	Redox			Remarka
	Sample Kumber	ŝ	* Armb*	Matrix S = Soll W = Water	<u>*</u>	ᄩ	Sample	. <u>\$</u>	FE	<u> </u>	8"	42	4	4	a - 	100	12	>	2			Please filter
<u> </u>		010	v's A	w	<u>(j.</u>		HCC	Y	1							] 	-	/	· /			from plain
!_		01A 02A-D	1		,	4:20	1	<b>*</b>	7			ļ		<del> </del>	<del> </del>	<del> </del> -	<del> </del>	-			1	plastic and
<i>س</i>	<u>U-1</u>	· · · · · · · · · · · · · · · · · · ·			-	3138	,	/	1/		<u> </u>	<u> </u>		<u> </u>		<del> </del>	-	1	-	<b> </b>	<u> </u>	preserve for
<u>ب</u> 	U-2	03	<del>                                     </del>	+ -	-	1:46	1	1	/			<u> </u>		<del> </del>		<del> </del>	1	-	<del>  -   -   -   -   -   -   -   -   -   -</del>		<del> </del>	Ferrous Iron
네_	U-3	04	+-	<del>                                     </del>	1	1:00	/	1	1			<u> </u>	<u> </u>		-	<del> </del> -	<b>├</b>	-	1		<del>                                     </del>	analysis.
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	Religion SEO 31400						501	horology	By (Sh	nature			n	ole/IIm	• ,_	7	•		Contracted			
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6 April, 2000

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

RE: Unocal Sequoia Report: W003327

Enclosed are the results of analyses for samples received by the laboratory on 13-Mar-00 19:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alan B. Kemp Laboratory Director

CA ELAP Certificate #1271



404 N. Wiget Lane Walnut Creek, CA 94598 (925) 988-9600 FAX (925) 988-9673 www.sequoialabs.com

Gettler Ryan, Inc. - Dublin

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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported: 06-Apr-00 13:33

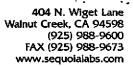
#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix ·	Date Sampled	Date Received
TB-LB	W003327-01	Water	14-Mar-00 00:00	13-Mar-00 19:00
U-1	W003327-02	Water	14-Mar-00 16:20	13-Mar-00 19:00
U-2	W003327-03	Water	14-Mar-00 15:38	13-Mar-00 19:00
U-3	W003327-04	Water	14-Mar-00 13:46	13-Mar-00 19:00
U-4	W003327-05	Water	14-Mar-00 13:00	13-Mar-00 19:00
U-5	W003327-06	Water	14-Mar-00 15:05	13-Mar-00 19:00
U-6	W003327-07	Water	14-Mar-00 14:25	13-Mar-00 19:00

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.

Alan B. Kemp, Laboratory Director





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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported:

06-Apr-00 13:33

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (W003327-01) Water	Sampled: 14-Mar-00 00:00	Receiv	ed: 13-M	[ar-00 19:0	0				
Purgeable Hydrocarbons	ND	50	ug/l	1	0C23001	23-Mar-00	23-Mar-00	EPA 8015M/8020	, <u></u>
Benzene	ND	0.50			"	"	II.	н	
Toluene	ND	0.50	"	"	•	n	II .	и	
Ethylbenzene	ND	0.50	**	*	11	H	и	11	
Xylenes (total)	ND	0.50	**	11	н	н	**	н	
Methyl tert-butyl ether	ND	2.5	**	**	**	n	n ·	"	
Surrogate: a,a,a-Trifluorotoluer	ne	103 %	70-	130	"	#	*	"	
U-1 (W003327-02) Water Sa	mpled: 14-Mar-00 16:20 R	eceived:	13-Mar-	00 19:00					P-01
Purgeable Hydrocarbons	48000	10000	ug/i	200	0C25002	25-Mar-00	25-Mar-00	EPA 8015M/8020	_ <del>-</del>
Benzene	490	100	н	19	*	"	**	11	
Toluene	610	100	н .	. "	H	. 19	**	H	
Ethylbenzene	2400	100	11	*	n	77	n	Ħ	
Xylenes (total)	10000	100	**		"	*	н	и	
Methyl tert-butyl ether	22000	500	**	π	11	11	II	41	
Surrogate: a,a,a-Trifluorotoluer	ne	93.7%	70-	130	"	"	п	"	
U-2 (W003327-03) Water Sa	mpled: 14-Mar-00 15:38 R	eceived:	13-Mar-	00 19:00					P-01
Purgeable Hydrocarbons	11000	10000	ug/l	200	0C24001	24-Mar-00	24-Mar-00	EPA 8015M/8020	
Benzene	380	100	n	n	11	Ħ	#	"	
Toluene	160	100	**		**	Ħ	π		
Ethylbenzene	ND	100	н	H	17	11	**	u	
Xylenes (total)	2100	100	н	17	**	Н		н	
Methyl tert-butyl ether	22000	500	**	н	π	. #	*	н	
Surrogate: a,a,a-Trifluorotoluer	ne	91.0 %	70-	130	n	"		п	



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

Project Number: Unocal # 5325

Project Manager: Deanna L. Harding

Reported: 06-Apr-00 13:33

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-3 (W003327-04) Water	Sampled: 14-Mar-00 13:46	Received:	13-Mar-	00 19:00					
Purgeable Hydrocarbons	ND	50	ug/l	1	0C24001	24-Mar-00	24-Mar-00	EPA 8015M/8020	
Benzene	ND	0.50	"	"	11	IP .	11	11	
Toluene	ИD	0.50	*	Ħ	11		II	п	
Ethylbenzene	ND	0.50	н	**	п	и	н	H	
Xylenes (total)	ND	0.50	"	**	"	**	11	H	
Methyl tert-butyl ether	ND	2.5	11	н	n	**	**	-	
Surrogate: a,a,a-Trifluoroto	oluene	104 %	70-	-130	"	"	"	"	
U-4 (W003327-05) Water	Sampled: 14-Mar-00 13:00	Received:	13-Mar-	00 19:00					
Purgeable Hydrocarbons	ND	50	ug/l	1	0C24001	24-Mar-00	24-Mar-00	EPA 8015M/8020	
Benzene	ND	0.50	14	. п	16		H	11	
Toluene	ND	0.50	"	H	**	11	**	n	
Ethylbenzene	ND	0.50	**		*1	11	"	Ħ	
Xylenes (total)	ND	0.50	#	*	н	**	**	"	
Methyl tert-butyl ether	ND	2.5		**	11		Ħ		
Surrogate: a,a,a-Trifluorote	oluene	107 %	70	-130	17	"	n	"	
J . , J	Sampled: 14-Mar-00 15:05	Received:	13-Mar	-00 19:00		•			P-02
Purgeable Hydrocarbons	880	50	ug/l	1	0C26001	26-Mar-00	26-Mar-00	EPA 8015M/8020	
Benzene	12	0.50		**	"	**	"	11	
Toluene	1.0	0.50	н	11	μ		**	11	
Ethylbenzene	5.6	0.50	н	Ħ	n	17	u	H	
Xylenes (total)	8.7	0.50	**	u	**	11	***	"	
Methyl tert-butyl ether	46	2.5	17	*	п	. #	II .	н	
Surrogate: a,a,a-Trifluorot	oluene	312 %	70	-130	n	"	"	"	S-04





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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported:

06-Apr-00 13:33

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-6 (W003327-07) Water	Sampled: 14-Mar-00 14:25	Received:	13-Mar-(	00 19:00				·	
Purgeable Hydrocarbons	ND	50	ug/l	1	0C26001	26-Mar-00	26-Mar-00	EPA 8015M/8020	
Benzene	ND	0.50	11	W	**	**	*1	n	
Toluene	ND	0.50		n	н	н	**	п	
Ethylbenzene	ND	0.50	u	**	**	**	*1	n n	
Xylenes (total)	ND	0.50	•	n	"		*1	*	
Methyl tert-butyl ether	560	2.5	u		u	**	*1	**	
Surrogate: a,a,a-Trifluorotoi	luene	110 %	70-	130	#	"	H	"	





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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported: 06-Apr-00 13:33

## MTBE Confirmation by EPA Method 8260A

### Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water	Sampled: 14	4-Mar-00 16:20	Received:	13-Mar-0	0 19:00					
Methyl tert-butyl ether	,	23000	1000	ug/l	500	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	
Surrogate: Dibromofluoron	nethane	··· <del>-</del> ··	84.0 %	50-1	50	"	"	"	"	
Surrogate: 1,2-Dichloroeth	ane-d4		78.0 %	50-1	50	"	"	"	#	
U-2 (W003327-03) Water	Sampled: 14	4-Mar-00 15:38	Received:	13-Mar-00	0 19:00					
Methyl tert-butyl ether		26000	1000	ug/l	500	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	
Surrogate: Dibromofluoron	nethane		86.0 %	50-1	50	"	"	"	"	
Surrogate: 1,2-Dichloroeth	ane-d4		76.0 %	50-1	50	n	"	"	m	
U-5 (W003327-06) Water	Sampled: 14	4-Mar-00 15:05	Received:	13-Mar-0	0 19:00					
Methyl tert-butyl ether		37	2.0	ug/l	1	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	· <u>-</u> -
Surrogate: Dibromofluoron	nethane		88.0 %	50-1	50	п	μ	#	"	
Surrogate: 1,2-Dichloroeth	ane-d4		86.0 %	50-1	50	<b>"</b>	"	#	*	
U-6 (W003327-07) Water	Sampled: 1	4-Mar-00 14:25	Received:	13-Mar-0	0 19:00					
Methyl tert-butyl ether		670	10	ug/l	5	0C28024	28-Mar-00	28-Mar-00	EPA 8260A	
Surrogate: Dibromofluoron	nethane		84.0 %	50-1	50	#	IT	"	ff f	
Surrogate: 1,2-Dichloroeth	ane-d4		78.0 %	50-1	50	"	rr	n	"	
	-									

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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported:

06-Apr-00 13:33

## Total Metals by EPA 6000/7000 Series Methods

#### Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water	Sampled: 14-Mar-00 16:20	Received:	13-Mar-	00 19:00					
Ferrous Iron	8.0	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
Ù-2 (W003327-03) Water	Sampled: 14-Mar-00 15:38	Received:	13-Mar-	00 19:00					
Ferrous Iron	4.3	0.010	mg/l	I	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-3 (W003327-04) Water	Sampled: 14-Mar-00 13:46	Received:	13-Mar-	00 19:00					
Ferrous Iron	0.15	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-4 (W003327-05) Water	Sampled: 14-Mar-00 13:00	Received:	13-Mar-	00 19:00					
Ferrous Iron	0.021	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	
U-5 (W003327-06) Water	Sampled: 14-Mar-00 15:05	Received:	13-Mar-	00 19:00					
Ferrous Iron	0.33	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	· -
U-6 (W003327-07) Water	Sampled: 14-Mar-00 14:25	Received:	13-Mar-	00 19:00					
Ferrous Iron	0.79	0.010	mg/l	1	0C27021	26-Mar-00	27-Mar-00	EPA 6010A	

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

Dublin CA, 94568

Project: Unocal

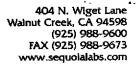
Project Number: Unocal # 5325 Project Manager: Deanna L. Harding **Reported:** 06-Apr-00 13:33

## Anions by EPA Method 300.0

## Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water	Sampled: 14-Mar-00 16:20	Received:	13-Mar	-00 19:00					
Nitrate as NO3	0.18	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500		,,	"	"	**	ų	
U-2 (W003327-03) Water	Sampled: 14-Mar-00 15:38	Received:	13-Mar	-00 19:00			<u> </u>		
Nitrate as NO3	0.31	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	"	Ħ	tt	.,	H	h	
U-3 (W003327-04) Water	Sampled: 14-Mar-00 13:46	Received:	13-Mar	-00 19:00				<u> </u>	
Nitrate as NO3	33	0.50	mg/l	5	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	H	1	Ħ	#1	**	"	
U-4 (W003327-05) Water	Sampled: 14-Mar-00 13:00	Received:	13-Mar	-00 19:00					
Nitrate as NO3	33	0.50	mg/l	. 5	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	**	1	"	,	"	H	
U-5 (W003327-06) Water	Sampled: 14-Mar-00 15:05	Received:	13-Ma	-00 19:00			· .		
Nitrate as NO3	0.16	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	**	н	II	н	41	"	
U-6 (W003327-07) Water	Sampled: 14-Mar-00 14:25	Received:	13-Mai	r-00 19:00					
Nitrate as NO3	0.26	0.10	mg/l	1	0C15018	15-Mar-00	15-Mar-00	EPA 300.0	
Phosphate	ND	0.500	n	"	11	11	"	"	

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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported:

06-Apr-00 13:33

### Subcontracted Analyses Sequoia Analytical - Morgan Hill

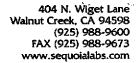
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
U-1 (W003327-02) Water	Sampled: 14-Mar-00 16:20	Received:	13-Mar	-00 19:00					
Oxidation/Reduction Pote	ntial 262	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-2 (W003327-03) Water	Sampled: 14-Mar-00 15:38	Received:	13-Mar	-00 19:00					
Oxidation/Reduction Pote	ntial 184	10.0	mν	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-3 (W003327-04) Water	Sampled: 14-Mar-00 13:46	Received:	13-Mar	-00 19:00					
Oxidation/Reduction Pote	ntial 307	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-4 (W003327-05) Water	Sampled: 14-Mar-00 13:00	Received:	13-Mar	-00 19:00					
Oxidation/Reduction Pote	ntial 244	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	•
U-5 (W003327-06) Water	Sampled: 14-Mar-00 15:05	Received:	13-Mar	-00 19:00					
Oxidation/Reduction Pote	ntial 264	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	
U-6 (W003327-07) Water	Sampled: 14-Mar-00 14:25	Received:	: 13-Mar	-00 19:00					
Oxidation/Reduction Pote	ntial 222	10.0	mv	1	0C16015	16-Mar-00	16-Mar-00	ASTM D149876	

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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported: 06-Apr-00 13:33

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C23001 - EPA 5030B [P/T]					-			·		
Blank (0C23001-BLK1)				Prepared	& Analyz	ed: 23-Ma	r-00			
Purgeable Hydrocarbons	• ND	50	ug/l				···			
Benzene	ND	0.50	Ħ							
Toluene	ND	0.50	*1							
Ethylbenzene	ND	0.50	н							
Xylenes (total)	ND	0.50	н							
Methyl tert-butyl ether	ND	2.5	n							
Surrogate: a, a, a-Trifluorotoluene	31.2		H.	30.0		104	70-130			
LCS (0C23001-BS1)				Prepared	& Analyz	ed: 23-Ma	т-00			
Benzene	16.0	0.50	ug/l	20.0		80.0	70-130	-		
Toluene	16.6	0.50	11	20.0		83.0	70-130			
Ethylbenzene	17.3	0.50		20.0		86.5	70-130			
Xylenes (total)	55.7	0.50		60.0		92.8	70-130			
Surrogate: a, a, a-Trifluorotoluene	27.6	•	"	30.0	•	92.0	70-130			
Matrix Spike (0C23001-MS1)	Sc	urce: W0033	47-05	Prepared	& Analyz	ed: 23-Ma	r-00			
Benzene	16.1	0.50	ug/l	20.0	ND	80.5	70-130			
Toluene	16.7	0.50	n	20.0	ND	83.5	70-130			
Ethylbenzene	15.6	0.50		20.0	ND	78.0	70-130			
Xylenes (total)	54.6	0.50	91	60.0	ND	91.0	70-130			•
Surrogate: a, a, a-Trifluorotoluene	26.3		"	30.0		87.7	70-130			
Matrix Spike Dup (0C23001-MSD1)	Sc	ource: W0033	47-05	Prepared	& Analyz	ed: 23-Ma	r-00			
Benzene	16.3	0.50	ug/l	20.0	ND	81.5	70-130	1.23	20	
Toluene	16.9	0.50	н	20.0	ND	84.5	70-130	1.19	20	
Ethylbenzene	17.3	0.50	н	20.0	ND	86.5	70-130	10.3	20	
Xylenes (total)	54.9	0.50	н	60.0	ND	91.5	70-130	0.548	20	
Surrogate: a,a,a-Trifluorotoluene	26.6		f	30.0		88.7	70-130			





Project: Unocal

6747 Sierra Court Suite J Dublin CA, 94568 Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported: 06-Apr-00 13:33

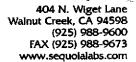
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C24001 - EPA 5030B [P/T]	<u>.</u>					· · · · · · · · · · · · · · · · · · ·	<del></del>	.=		
Blank (0C24001-BLK1)		_		Prepared	& Analyze	ed: 24-Ma	ır-00			
Purgeable Hydrocarbons	ND	50	ug/l			<u>.</u>				
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50								
Xylenes (total)	ND	0.50	**							
Methyl tert-butyl ether	ND	2.5								
Surrogate: a,a,a-Trifluorotoluene	31.4		"	30.0		105	70-130			
LCS (0C24001-BS1)				Prepared	& Analyze	ed: 24-Ma	r-00			
Велгеле	17.0	0.50	ug/l	20.0		85.0	70-130			
Toluene	17.6	0.50	17	20.0		88.0	70-130			
Ethylbenzene	17.4	0.50	**	20.0		87.0	70-130			
Xylenes (total)	57.8	0.50	п	60.0		96.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	26.9	<u>-</u> .	"	30.0		89.7	70-130			
Matrix Spike (0C24001-MS1)	So	urce: W0033	33-01	Prepared	& Analyze	ed: 24-Ma	r-00			
Benzene	14.9	0.50	ug/l	20.0	ND	74.5	70-130			
Toluene	15.4	0.50		20.0	ND	77.0	70-130			
Ethylbenzene	14.6	0.50		20.0	ND	73.0	70-130			
Xylenes (total)	49.8	0.50		60.0	ND	83.0	70-130			
Surrogate: a, a, a-Trifluorotoluene	25.8		"	30.0		86.0	70-130			
Matrix Spike Dup (0C24001-MSD1)	Sc	ource: W0033	33-01	Prepared	& Analyze	ed: 24-Ma	r-00			
Benzene	15.5	0.50	ug/l	20.0	ND	77.5	70-130	3.95	20	
Toluene	17.5	0.50	**	20.0	ND	87.5	70-130	12.8	20	
Ethylbenzene	16.2	0.50	*	20.0	ND	81.0	70-130	10.4	20	
Xylenes (total)	51.7	0.50	w	60.0	ND	86.2	70-130	3.74	20	
Surrogate: a,a,a-Trifluorotoluene	26.4		"	30.0		88.0	70-130			



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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding **Reported:** 06-Apr-00 13:33

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C25002 - EPA 5030B [P/T]										
Blank (0C25002-BLK1)				Prepared	& Analyz	ed: 25-Ma	r-00			
Purgeable Hydrocarbons	ND	50	ug/l		=					
Benzene	. ND	0.50	"							
Toluene	ND	0.50	#		•					
Ethylbenzene	ND	0.50	11							
Xylenes (total)	ND	0.50	n							
Methyl tert-butyl ether	ND	2.5	II .							
Surrogate: a, a, a-Trifluorotoluene	30.6		"	30.0		102	70-130			
LCS (0C25002-BS1)				Prepared	& Analyz	ed: 25-Ma	r-00			
Benzene	18.4	0.50	ug/l	20.0		92.0	70-130	<u> </u>		
Toluene	19.0	0.50	W	20.0		95.0	70-130			
Ethylbenzene	18.8	0.50		20.0		94.0	70-130			
Xylenes (total)	54.7	0.50	"	60.0		91.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	27.8		#	30.0	• • • •	92.7	70-130		···	
Matrix Spike (0C25002-MS1)	So	ource: W0034	73-11	Prepared	& Analyz	ed: 25-Ma	r-00			
Benzene	24.2	0.50	ug/l	20.0	6.1	90.5	70-130		:	
Toluene	19.2	0.50	•	20.0	ND	96.0	70-130			
Ethylbenzene	20.3	0,50	•	20.0	1.5	94.0	70-130			
Xylenes (total)	55.5	0.50	•	60.0	1.1	90.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	29.3		"	30.0		97.7	70-130		· · · · · · · · · · · · · · · · · · ·	
Matrix Spike Dup (0C25002-MSD1)	Sc	ource: W0034	73-11	Prepared	& Analyz	ed: 25-Ma	r-00			-
Benzene	23.1	0.50	ug/l	20.0	6.1	85.0	70-130	4.65	20	
Toluene	18.6	0.50	Ħ	20.0	ND	93.0	70-130	3.17	20	
Ethylbenzene	19.8	0.50	Ħ	20.0	1.5	91.5	70-130	2.49	20	
Xylenes (total)	54.0	0.50	"	60.0	1.1	88.2	70-130	2.74	20	
Surrogate: a,a,a-Trifluorotoluene	28.1		"	30.0		93.7	70-130			



Project: Unocal

6747 Sierra Court Suite J Dublin CA, 94568 Project Number: Unocal # 5325 Project Manager: Deanna L. Harding **Reported:** 06-Apr-00 13:33

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C26001 - EPA 5030B [P/T]								•		
Blank (0C26001-BLK1)				Prepared	& Analyzo	ed: 26-Ma	r-00			
Purgeable Hydrocarbons	ND	50	ug/l			-				
Benzene	ND	0.50	H							
Toluene	ND	0.50	**							
Ethylbenzene	ND	0.50	*							
Xylenes (total)	ND	0.50	77							•
Methyl tert-butyl ether	ND	2.5	77							
Surrogate: a,a,a-Trifluorotoluene	32.6		H	30.0		109	70-130			
LCS (0C26001-BS1)				Prepared	& Analyz	ed: 26-Ma	r-00			
Benzene	18.0	0.50	ug/l	20.0		90.0	70-130			
Foluene	18.7	0.50	*	20.0		93.5	70-130			
Ethylbenzene	21.3	0.50	*1	20.0		106	70-130			
Xylenes (total)	60.3	0.50	77	60.0		100	70-130			
Surrogate: a.a.a-Triftuorotoluene	27.1		н	30.0		90.3	70-130			
Matrix Spike (0C26001-MS1)	Sc	ource: W0034	74-11	Prepared	& Analyz	ed: 26-Ma	r-00			
Benzene	18.5	0.50	ug/l	20.0	ND	92.5	70-130			
Toluene .	19.0	0.50	11	20.0	ND	95.0	70-130			
Ethylbenzene	21.7	0.50		20.0	ND	109	70-130			
Xylenes (total)	61.8	0.50	11	60.0	ND	103	70-130			
Surrogate: a,a,a-Trifluorotoluene	26.3		"	30.0		87.7	70-130			· · · · · · · · · · · · · · · · · · ·
Matrix Spike Dup (0C26001-MSD1)	So	ource: W0034	74-11	Prepared	& Analyz	ed: 26-Ma	r-00			
Benzene	18.1	0.50	ug/l	20.0	ND	90.5	70-130	2.19	20	
<b>Toluene</b>	18.6	0,50	41	20.0	ND	93.0	70-130	2.13	20	
Ethylbenzene	21.0	0.50	11	20.0	ND	105	70-130	3.28	20	
Kylenes (total)	59.7	0.50	11	60.0	ND	99.5	70-130	3.46	20	
Surrogate: a,a,a-Triftuorotoluene	26.5		"	30.0		88.3	70-130			



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Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J Dublin CA, 94568

Surrogate: 1,2-Dichloroethane-d4

Project: Unocal

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding **Reported:** 06-Apr-00 13:33

## MTBE Confirmation 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 0C28024 - EPA 5030B [P/T]								•		
Blank (0C28024-BLK1)				Prepared:	: 28-Mar-0	0 Analyz	d: 29-Ma	r-00		
Methyl tert-butyl ether	ND	2.0	ug/i						•	
Surrogate: Dibromofluoromethane	51.0		"	50.0		102	50-150			
Surrogate: 1,2-Dichloroethane-d4	45.0		#	50,0		90.0	50-150			

LCS (0C28024-BS1)				Prepared: 28-	Mar-00 Analyzed: 29-Mar-00
Methyl tert-butyl ether	46.0	2.0	ug/l	50.0	92.0 70-130

Surrogate: Dibromosluoromethane	46.0	n	50.0	92.0	50-150
Surrogate: 1,2-Dichloroethane-d4	41.0	"	50.0	82.0	50-150

45.0

LCS Dup (0C28024-BSD1)				Prepared & Ar	alyzed: 29-M	ar-00			
Methyl tert-butyl ether	51.5	2.0	ug/l	50.0	103	70-130	11.3	25	
Surrogate: Dibromofluoromethane	52.0		"	50.0	104	50-150			

50.0

90.0

50-150



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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding Reported: 06-Apr-00 13:33

## Total Metals by EPA 6000/7000 Series Methods - Quality Control

### Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C27021 - 200.7		<del></del>								
Blank (0C27021-BLK1)				Prepared	26-Mar-0	0 Analyz	ed: 27-Ma	r <b>-</b> 00		
Ferrous Iron	ND	0.010	mg/l	···						
LCS (0C27021-BS1)				Prepared	26-Mar-(	00 Analyz	ed: 27-Ma	r-00		
Ferrous Iron	0.860	. 0.010	mg/l	1.00		86.0	80-120	-		·
LCS Dup (0C27021-BSD1)				Prepared	: 26-Mar-0	00 Analyz	ed: 27-Ma	r-00		
Ferrous Iron	0.850	0,010	mg/l	1,00	-	85.0	80-120	1.17	20	
Matrix Spike (0C27021-MS1)	So	urce: W0032	80-01	Prepared	: 26-Mar-(	00 Analyz	ed: 27-Ma	r-00		
Ferrous Iron	0.910	0.010	mg/l	1.00	ND	91.0	80-120			
Matrix Spike Dup (0C27021-MSD1)	Sc	urce: W0032	80-01	Prepared	: 26-Mar-(	00 Analyz	ed: 27-Ma	r-00		
Ferrous Iron	1.00	0.010	mg/l	1.00	ND	100	80-120	9.42	20	





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

Project Number: Unocal # 5325 Project Manager: Deanna L. Harding **Reported:** 06-Apr-00 13:33

## Anions by EPA Method 300.0 - Quality Control

## Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C15018 - General Preparation										
Blank (0C15018-BLK2)		•		Prepared & Analyzed: 15-Mar-00						
Nitrate as NO3	ND	0.10	mg/l	·						
Phosphate	ND	0.500	**							
LCS (0C15018-BS2)				Prepared	Prepared & Analyzed: 15-Mar-00					
Nitrate as NO3	10.8	0,10	mg/l	10.0		108	80-120			
Phosphate	20.4	0.500	**	20.0		102	80-120			
Matrix Spike (0C15018-MS2)	So	urce: W0033	327-02	Prepared & Analyzed: 15-Mar-00						
Nitrate as NO3	11.3	0.20	mg/l	10.0	0.18	111	75-125			
Phosphate	15.2	1.00	11	20.0	ND	76.0	75-125			
Matrix Spike Dup (0C15018-MSD2)	Sc	Source: W003327-02		Prepared & Analyzed: 15-Mar-00						
Nitrate as NO3	11.2	0,20	mg/l	10.0	0.18	110	75-125	0.889	20	
Phosphate	15.2	1.00		20.0	ND	76.0	75-125	0	20	



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

Project Number: Unocal # 5325

Project Manager: Deanna L. Harding

Reported:

06-Apr-00 13:33

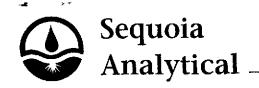
## Subcontracted Analyses - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Result	%REC	%REC Limits	RPD	Limit	Notes	
						•					

Batch 0C16015 - General Preparation

Duplicate (0C16015-DUP1)	Source: W003327-07		7-07	Prepared & Analyzed: 16-Mar-00			
Oxidation/Reduction Potential	241	10.0	mv	222	8.21	20	



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Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 5325

Project Manager: Deanna L. Harding

**Reported:** 06-Apr-00 13:33

#### **Notes and Definitions**

P-01 Chromatogram Pattern: Gasoline C6-C12

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

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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