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DEVELOPMENT SERVICES OF

December 28, 1999 G-R #:280036

TO:

Mr. Robert A. Boust

Unocal Corporation

2121 N. California Blvd., Suite 250 Walnut Creek, California 94596

CC:

Mr. Greg Gurss

Gettler-Ryan Inc.

Rancho Cordova, California

FROM:

Deanna L. Harding

Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568

RE: Former Unocal SS #2512

1300 Davis Street

San Leandro, California

WE HAVE ENCLOSED THE FOLLOWING:

_	COPIES	DATED	DESCRIPTION
	1	December 20, 1999	Groundwater Monitoring and Sampling Report Fourth Quarter 1999 - Event of October 25, 1999

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 January 10, 2000, this report will be distributed to the following:

Enclosure

cc:

Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, CA 94501 City of San Leandro, Development Services, 835 E. 14th Street, San Leandro, CA 94577

December 20, 1999 G-R Job #280036

Mr. Robert A. Boust Unocal - DBG/AMG 2121 North California Boulevard, Suite 250 Walnut Creek, California 94596

RE: Fourth Quarter 1999 Groundwater Monitoring & Sampling Report

Former Unocal Service Station #2512

1300 Davis Street

San Leandro, California

Dear Mr. Boust:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On October 25, 1999, field personnel monitored and sampled four wells (MW-3, MW-7, MW-8, and MW-9) 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. 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, 2 and 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely.

Deanna L. Harding Project Coordinator

Stephen J. Carter

Senior Geologist, R.G. No. 5577

Figure 1: Figure 2:

Potentiometric Map Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

Table 2:

Groundwater Analytical Results

Table 3:

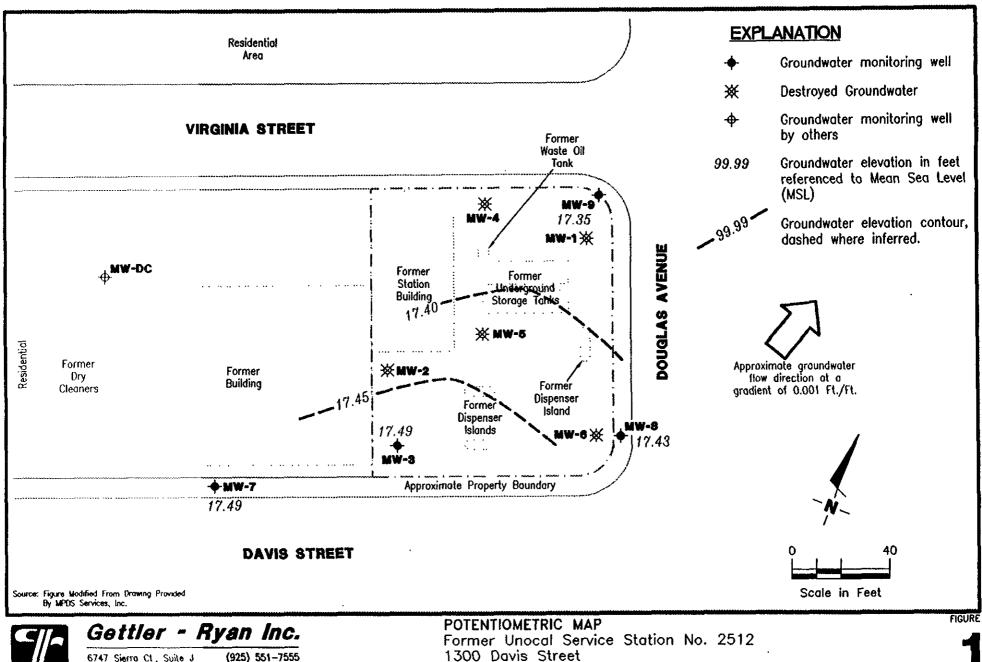
Groundwater Analytical Results - Oxygenate Compounds Standard Operating Procedure - Groundwater Sampling

Attachments:

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

No. 5577





Dublin, CA 94568

San Leandro, California

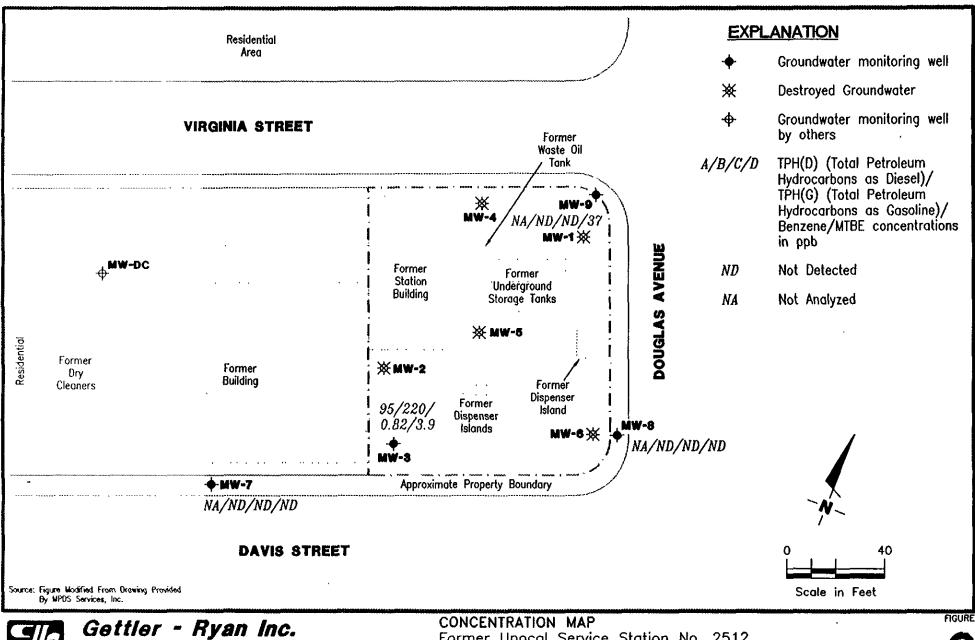
DATE

REVISED DATE

JOB NUMBER 280036

REVIEWED BY

October 25, 1999





6747 Sierra Ct., Suite J Dublin, CA 94568

(925) 551-7555

Former Unocal Service Station No. 2512 1300 Davis Street San Leandro, California

REVISED DATE

JOB NUMBER 280036

REVIEWED BY

DATE October 25, 1999

Former Unocal Service Station #2512

1300 Davis Street

Well ID/ FOC* MW-1	04/25/89 08/10/89 11/21/89 02/23/90 05/10/90 08/09/90 11/06/90	DTW (ft.)	GWE (msl)	Thickness (ft.)	TPH(D) (ppb) 100 ND	TPH(G) (ppb) ND	(ppb) 0.31	T <i>(ppb)</i>	E (ppb)	X (ppb)	MTBE <i>(ppb)</i>	TOG (ppm)
	08/10/89 11/21/89 02/23/90 05/10/90 08/09/90 11/06/90	: : 			100	ND		(ppb)	(ppb)	(ppb)	(ppb)	(ррт)
MW-1	08/10/89 11/21/89 02/23/90 05/10/90 08/09/90 11/06/90	; 	 	77			0.31					
	08/10/89 11/21/89 02/23/90 05/10/90 08/09/90 11/06/90	; 	 	77				ND	ND	ND		
	11/21/89 02/23/90 05/10/90 08/09/90 11/06/90	 			IVID	ND	ND	ND	ND	ND ND		
	02/23/90 05/10/90 08/09/90 11/06/90	 	••	~ -	ND	ND	ND ND	ND ND	ND ND			ND
	05/10/90 08/09/90 11/06/90				ND ND	ND .	ND ND			ND		8.9
	08/09/90 11/06/90				ND	ND . ND		ND	ND	ND		ND
	11/06/90				ND	ND	ND	ND	ND	ND		ND
		7.5			ND		ND	ND	ND	ND		ND
	02/04/91					ND	ND	ND	ND	ND		ND
	05/24/91				ND	ND	ND	0.31	ND	0.62		ND
	08/15/91	***				ND	ND	ND	ND	ND		ND
100-00	09/18/91	17.00	90.10									
00 00	10/15/91	17.88	82.12	0.00								
		18.17	81.83	0.00								~-
23.60	11/19/91	17.48	82.52	0.00								
12 69	02/27/92	15.36	17.33	0.00								
	03/27/92	15.53	17.16	0.00								
	04/27/92	15.68	17.01	0.00								
	05/26/92	15.90	16.79	0.00								
	06/23/92	16.25	16.44	0.00						~~		
	07/24/92	16.54	16.15	0.00								
	10/30/92	16.58	16.11	0.00		 ,						
	06/09/94	15.22		0.00		580 ¹	ND	ND	ND	ND		
	09/08/94	15.81		0.00		160^{2}	ND	1.6	ND	3.1		
	01/25/95	DE STROYED								••		
1W-2	04/25/89	**		7-8	ND	32	0.35	ND	ND	ND		
	08/10/89	~~			ND	ND	ND	0.39	ND	ND		ND
	11/21/89				ND	48	ND	0.51	ND	ND		1.6
	02/23/90		==		ND	44	ND	ND	ND	ND		ND
	05/10/90				ND	43	ND	1	ND	ND		ND
	08/09/90				ND	ND	ND	ND	ND	ND		
	11/06/90				ND ND	ND	ND					ND
	02/04/91				ND ND			0.42	ND	1.4		ND
	05/24/91					ND	ND	0.38	ND	0.87		ND
	03/24/91					ND	1.5	ND	ND	ND		ND
00-32	08/13/91	 18.48	81.84	0.00		ND 	ND 	ND 	ND 	ND 		ND

Former Unocal Service Station #2512

1300 Davis Street

			77	Product		iro, Californ	···				<u></u>	
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	T	E	X	MTBE	TOG
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
											7.7	
MW-2	10/15/91	18.75	81.57	0.00								
(cont)	11/19/91	18.01	82.31	0.00		220	2.5	8.4	2.4	14		
33 04	02/27/92	15.40	17.64	0.00		330	12	12	10	93		
	03/27/92	15.61	17.43	0.00								
	04/27/92	15.96	17.08	0.00								
	05/26/92	16.30	16.74	0.00		2,900	8.8	9.3	54	36		
	06/23/92	16.76	16.28	0.00								
	07/24/92	16.66	12	0.00								
	10/30/92	17.38	12	0.00		1,200 ¹	ND	ND	ND	ND		
	06/09/94	15.48		0.00		$1,900^2$	6.7	ND	66	ND		
	09/08/94	16.22		0.00		$3,000^{1}$	ND	ND	ND	17		
	01/25/95	DESTROYED			**			'				
MW-3	04/25/89				5,700	56	ND	ND	0.31	0.49		
	08/10/89	**			860	3,200	73	140	35	240		ND
	11/21/89				110	1,900	ND	ND	ND	ND		3.8
	02/23/90				350	ND	0.32	ND	ND	ND		1.3
	05/10/90				850	6,200	94	460	160	540		2.8
	08/09/90				500	1,900	56	140	140	31		ND
	11/06/90				940	16,000	820	1,500	2,200	770	~~	ND
	02/04/91				NOT SAMPI	LED DUE TO	A TRACE	OF FREE P				
	05/24/91				2,000	23,000	940	3,400	590	2,600		ND
	08/15/91				NOT SAMPI	LED DUE TO	A TRACE	OF FREE P	RODUCT			
100-03	09/04/91	17.97	82.08***	0.03				~~				
	09/18/91	18.38	81.73***	0.10								
	10/02/91	18.50	81.65***	0.16								
	10/15/91	18.59	81.62***	0.24								
	11/05/91	17.75	82.49***	0.27								
	11/19/91	17.87	82.36***		NOT SAMPI	LED DUE TO	THE PRES	SENCE OF F	REE PRODU			
32 73	02/27/92	14.98	17.82**			LED DUE TO						
	03/12/92	14.94	17.79	0.00								••
	03/27/92	15.12	17.61	0.00		7*						₩.=
	04/13/92	15.17	17.56	0.00								
	04/27/92	15.58	17.17**	0.02					**			
	05/11/92	15.84	16.92**	0.04		~*						

Former Unocal Service Station #2512

1300 Davis Street

				Product					····			··
Well ID/ TOC*	Date	DTW (ft.)	GWE	Thickness	TPH(D)	TPH(G)	В	T	E	X	MTBE	TOG
100		(11,)	(msl)	(ft.)	(ррь)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
MW-3	05/26/92	16.06	16.76**	0.12	2,400,000	1,300,000	5,100	66,000	20,000	160,000	**	880
(cont)	06/09/92	16.29	16.46**	0.03	2,400,000		J,100		20,000	•		
(4)	06/23/92	16.52	16,26**	0.06								
	07/06/92	16.60	16.24**	0.14								
	07/24/92	INACCESSIBLE	10,27									
	10/30/92	17.08	12	0.07	NOT SAME	LED DUE TO	THE DOES		 	 ********		
	06/09/94	14.74		0.00	17,000 ³	69,000	1,300	7,100	1,900			
	09/08/94	15.54		Sheen		U9,000 LED DUE TO				11,000		
32.02	10/05/95	14.86	17.16	0.00	TOT SAME.	 LED DOE IC	INE PRES	SENCE OF F				7-
	10/21/95	14.98	17.10	0.00	5,900 ³	50,000	250	4,200	1,700	19.000	5	
	01/24/96	13.15	18.87	0.00	$5,300^3$	100,000	950	3,300	2,500	18,000	6	
	04/23/96	13.11	18.91	0.00	$4,900^3$	50,000	430	3,300 1,700	2,500 1,600	16,000		
	07/25/96	14.40	17.62	0.00	$2,400^4$	17,000	430 170	1,700 ND	650	7,600	ND	
	10/25/96	15.33	16.69	0.00	$3,700^4$	26,000	420	1,100	1,800	3,300	240	
	01/28/97	11.55	20.47	0.00	$3,700$ $3,900^3$	32,000	230	1,000		6,400	340	
	04/16/97	12.05	19.97	0.00	$3,900$ $3,100^3$	12,000	76		1,000	4,500	ND	
	07/21/97	15.17	16.85	0.00	$2,400^3$	10,000	76 82	ND	330	1,600	ND	W-E
	10/20/97	15.41	16.61	Sheen	$2,400$ $2,900^4$	12,000		28	430	1,400	76	
	01/21/98 ¹⁰	11.59	20.43	0.00	$3,700^7$	· ·	200	540	1,400	4,600	210	
	$04/17/98^{10}$	12.46	19.56	0.00		25,000	170	640	1,200	4,800	ND ⁸	
	07/14/98 ¹⁰	13.43	18.59	0.00	3,400 1,100 ¹¹	25,000	980	1,400 ND ⁸	5,800	ND ₈	ND ⁸	
	10/12/98 ¹⁰	14.60	17.42	0.00	420^{13}	6,200	76	ND ⁸	550	810	ND ⁸	
	01/19/99 ¹⁰	12.97	19.05	0.00	870 ¹⁵	1,600 27,000 ¹⁴	28 18	ND^8	28	81	ND^8	
	04/07/99	12.36	19.66	0.00	ND		10	ND ⁸	48	69		
	07/12/99	14.41	17.61	0.00	160 ¹⁷	1,700 78			28	72	⁸ ND/4.7 ¹⁶	ND
	10/25/99	14.53	17.01 17.49	0.00	95 ¹⁸		0.68	ND	ND	2.4	ND	
	10/25/99	14.55	17.49	0.00	95	220	0.82	ND	0.77	6.8	3.9	
N 6117 - 4	00/20 20											
MW-4	08/29/89				120	ND	ND	ND	ND	ND		ND
	11/21/89				ND	ND	ND	ND	ND	ND		ND
	02/23/90				ND	ND	ND	ND	ND	ND		ПИ
	05/10/90				88	54	ND	2	ND	0.37		ND
	08/09/90				ND	ND	ND	ND	ND	ND		ND
	11/06/90				ND	ND	ND	0.36	ND	0.98		ND
	02/04/91				ND	ND	ND	0.72	ND	1.1		ND

Former Unocal Service Station #2512 1300 Davis Street

				Product								
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	T	E	X	MTBE	TOG
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(pph)	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
MW-4	05/24/91		~~		ND	ND	0.64	ND	ND	ND		ND
(cont)	08/15/91				ND	ND	ND	ND	ND	ND		ND
99-66	09/18/91	17.67	81.99	0.00	1417		ND		ND 			
, , , , , ,	10/15/91	17.95	81.71	0.00			~~					
	11/19/91	17.25	82.41	0.00	ND	ND	ND	ND	ND	ND		
32-38	02/27/92	14.96	17.42	0.00	ND	43	ND ND	ND 1	0.37	2.5		
., 2 ., (1)	03/27/92	15.01	17.37	0.00	ND							
	03/27/92	15.37	17.01	0.00								
	05/26/92	15.62	16.76	0.00	 NES	100	0.50	0.00	NID .			
	06/23/92	16.02			ND	120	0.59	0.82	ND ·	1.9		
	00/23/92		16.36	0.00								
		16.10		0.00								
	10/30/92	INACCESSIBLE				mool						
	06/09/94	15.08		0.00	ND	780 ¹	ND	ND	ND	ND		
	09/08/94	15.72		0.00	ND	300 ^t	ND	ND	ND	ND		
	01/25/95	DESTROYED			~=							
MW-5	08/29/89				100	ND	ND	0.94	0.3	ND		ND
	11/21/89	#-		7.7	70	ND	ND	ND	ND	ND		ND
	02/23/90				ND	ND	ND	ND	ND	ND		ND
	05/10/90	7.			83	ND	ND	ND	ND	0.31		ND ND
	08/09/90				ND	ND	ND	ND	ND	ND		ND
	11/06/90				ND	ND	ND ND	ND ND	ND ND	ND ND		ND ND
	02/04/91				ND	ND ND	ND	0.35	ND ND	ND ND		
	05/24/91				ND	ND ND	ND ND	0.33 ND	ND ND	ND ND		ND
100-32	09/18/91	18.30	82.02	0.00		ND 	ND					ND
سدل ۱۱۸۸	10/15/91	18.59	81.73	0.00				~~			••	
	11/19/91	17.87	81.73	0.00			** PA					
33 02	02/27/92											
13 (14		15.50	17.52	0.00								
	03/27,92	15.68	17.34	0,00								
	04/27/92	15.96	17.06	0.00								
	05/26/92	16.22	16.80	0.00								
	06/23/92	16.63	16.39	0.00								
	07/24/92	16.73	12	0.00								
	10/30/92	INACCESSIBLE		00.0			***					

Former Unocal Service Station #2512 1300 Davis Street

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOG (ppm)
MW-5	06/09/94	INACCESSIBLE										
(cont)	09/08/94	INACCESSIBLE				***						
	01/25/95	DESTROYED										
MW-6	08/29/89				ND	ND	ND	ND	ND	ND		ND
	11/21/89				ND	ND	ND	ND	ND	ND		ND
	02/23/90				ND	ND	ND	ND	ND	ND		ND
	05/10/90				ND	ND	ND	1,2	ND	ND	***	ND
	08/09/90				ND	ND	ND	ND	ND	ND		ND
	11/06/90				ND	ND	1.6	0.35	ND	ND		ND
	02/04/91				ND	ND	ND	ND	ND	ND		· ND
	05/24/91					ND	ND	ND	ND	ND		ND
	08/15/91					ND	ND	ND	ND	ND		ND
100-50	09/18/91	18.34	82.16	0.00								
	10/15/91	18.65	81.85	0.00								
	11/19/91	17.94	82.56	0.00		ND	ND	ND	ND	ND		
33-19	02/27/92	15.70	17.49	0.00		ND	3.2	ND	ND	3.8		
	03/27/92	15.56	17.63	0.00								
	04/27/92	16.07	17.12	0.00	- -				**			
	05/26/92	16.34	16.85	0.00		ND	ND	ND	ND	0.65		
	06/23/92	16.70	16.49	0.00	~ **							
	07/24/92	17.00	16.19	0.00					~~			
	10/30/92	17.07	16.12	0.00		ND	ND	ND	ND	ND		
	06/09/94	INACCESSIBLE										
	09/08/94	INACCESSIBLE						~~				
	01/25/95	DF STROYED		 •					P.4			
MW-7												
32 09	02/27/92	15.12	16.97	0.00		38	ND	0.97	0.69	4		**
	03/27/92	14.26	17.83	0.00								
	04/27/92	14.86	17.23	0.00								
	05/26/92	15.30	16.79	0.00	-	ND	ND	ND	ND	0.6		
	06/23/92	15.80	16.29	0.00					••			
	07/24/92	16.26	15.83	0.00								

Former Unocal Service Station #2512

1300 Davis Street

				Product		,						
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	${f T}$	E	X	MTBE	TOG
TOC*		(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
MW-7	10/30/92	16.31	15 70	0.00		NIP.						
	06/09/94		15.78	0.00		ND	ND	ND	ND	ND		
(cont)	09/08/94	14.43		0.00		610 ¹	ND	ND	ND	ND		
21.71		15.32		0.00		ND	ND	1.3	ND	1.6		
31 71	10/21/95	14.74	16.97	0.00		ND	ND	ND	ND	ND		
	01/24/96	12.50	19.21	0.00		ND	ND	ND	ND	ND		·
	04/23/96	12.48	19.23	0.00	~=	220	ND	0.62	0.88	5.4	ND	
	07/25/96	14.30	17.41	0.00		ND	ND	ND	ND	ND	ND	
	10/25/96	15.13	16.58	0.00		ND	ND	ND	ND	ND	ND	
	01/28/97	10.41	21.30	0.00		ND	ND	ND	ND	ND	ND	
	04/16/97	12.12	19.59	0.00		ND	ND	ND	ND	ND	ND	
	07/21/97	15.01	16.70	0.00		ND	ND	ND	ND	ND	ND	
	10/20/97	15.18	16.53	0.00		ND	ND	ND	ND	ND	ND	
	01/21/98	10.46	21.25	0.00		ND	ND	ND	ND	ND	ND	
	04/17/98	11.57	20.14	0.00	m-44	ND	ND	ND	ND	ND	ND	
	07/14/98	13.10	18.61	0.00		ND	ND	ND	ND	ND	ND	
	10/12/98	14.22	17.49	0.00		ND	ND	ND	ND	ND	ND	
	01/19/99	12.12	19.59	0.00		ND	ND	ND	ND	ND	ND	
	()4/()7)99	11.47	20.24	0.00		ND	ND	ND	ND	ND	ND/ND ¹⁶	
	07/12/99	14.17	17.54	0.00		ND	ND	ND	ND	ND	ND	
	10/25/99	14.22	17.49	0.00		ND	ND	ND	ND	ND	ND	
MW-8				•								
32 73	10/05/95	15.56	1 7 .17	0.00								
	10/21/95	15.65	17.08	0.00		ND	ND	ND	 ND			
	01/24/96	14.51	18.22	0.00		ND				ND		
	04/23/96	15.70	17.03	0.00			ND	ND	ND	ND		
	07/25/96	15.10	17.63	0.00		ND ND	ND	ND	ND	ND	ND	
	10/25/96	15.10	17.03	0.00		ND	ND	ND	ND	ND	ND	
	01/28/97	13.86			~-	ND	ND	ND	ND	ND	ND	
			18.87	0.00		ND	ND .	ND	ND	ND	ND	
	04/16/97	12.74	19.99	0.00		ND	ND	ND	ND	ND	ND.	
	07/21/97	15.71	17.02	0.00		ND	ND	ND	ND	ND	ND	
	10/20/97	15.98	16.75	0.00		ND	ND	ND	ND	ND	ND	
	01/21/98	14.20	18.53	0.00		ND	ND	ND	ND	ND	ND	
	04/17/98	14.40	18.33	0.00		ND	ND	ND	ND	ND	ND	
	07/14/98	14.85	17.88	0.00		ND	ND	ND	ND	ND	ND	

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				Product								·
Well ID/	Date	DTW	GWE	Thickness	TPH(D)	TPH(G)	В	T	E	X	MTBE	TOG
TOC*	····	(ft.)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
MW-8	10/13/00	15.06	16.00	0.00								
	10/12/98	15.86	16.87	0.00		ND	ND	ND	ND	ND	ND	
(cont)	01/19/99	14.69	18.04	0.00		ND	ND	ND	ND	ND	ND	
	04/07/99	13.88	18.85	0.00		ND	ND	ND	ND	ND	ND/ND ¹⁶	
	07/12/99	15.21	17.52	0.00		ND	ND	ND	ND	ND	ND	
	10/25/99	15.30	17.43	0.00	41	ND	ND	ND	ND	ND	ND	
MW-9												
32-33	10/05/95	15.27	17.06	0.00								
	10/21/95	15.59	16.74	0.00		ND	ND	ND	ND	ND	s	
	01/24/96	14.28	18.05	0.00		ND	ND	ND	ND	ND	6	
	04/23/96	14.60	17.73	0.00		ND	ND	ND	ND	ND	ND	
	07/25/96	15.05	17.28	0.00		ND	ND	ND	ND	ND	ND	
	10/25/96	15.66	16.67	0.00		ND	ND	ND	ND	ND	180	
	01/28/97	13.76	18.57	0.00		ND	ND	ND	ND	ND	75	
	04/16/97	12.66	19.67	0.00		ND	ND	ND	ND	ND	ND	
	07/21/97	15.44	16.89	0.00		ND	ND	ND	ND	ND	ND	
	10/20/97	15.67	16.66	0.00		ND	ND	ND	ND	ND	100	
	01/21/98	13,97	18.36	0.00		ND	ND	ND	ND	ND	140	
	04/17/98	14.38	17.95	0.00		56 ⁹	ND	ND	ND	ND	18	
	07/14/98	14.87	17.46	0.00		ND	ND	ND	ND	ND	6.6	
	10/12/98	15.19	17.14	0.00		ND	ND	ND	ND	ND	16	
	01/19/99	14.54	17.79	0.00		ND	ND	ND	ND	ND	30	
	04/07/99	13.62	18.71	0.00		ND	ND	ND	ND	ND	6.9/6.4 ¹⁶	••
	07/12/99	15.03	17.30	0.00		ND	ND	ND	ND	ND	3.8	
	10/25/99	14.98	17.35	0.00		ND	ND	ND	ND	ND	37	
							- 1.2		. (**)	,,,,	5,	
Trip Blank												
IB-LB	01/21/98					ND ,	ND	ND	ND	ND	ND	
	04/17/98			`		ND	ND	ND	ND	ND	ND	
	07/14/98					ND	ND	ND	ND	ND	ND	
	10/12/98					ND	ND	ND	ND	ND	ND	

Former Unocal Service Station #2512

1300 Davis Street

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D) (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOG (ppm)
IB-LB	01/19/99			75		ND	ND	ND	ND	ND	ND	د ب
(cont)	04/07/99	- -				ND	ND	ND	ND	ND	ND	
	07/12/99					ND	ND	ND	ND	ND	ND	
	10/25/99		==		**	ND	ND	ND	ND	ND	ND	

Table 1

Groundwater Monitoring Data and Analytical Results

Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

EXPLANATIONS:

Groundwater monitoring data and laboratory results prior to January 21, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC - Top of Casing elevation	TPH(G) = Total Petroleum Hydrocarbons as Gasoline	TOG = Total Oil & Grease
DΓW = Depth to Water	B = Benzene	MTBE = Methyl tertiary butyl ether
(ft) = Feet	T = Toluene	ppb = Parts per billion
GWF = Groundwater Elevation	E = Ethylbenzene	ppm = Parts per million
msl = Relative to mean sea level	X = Xylenes	ND = Not Detected
TPH(D) = Total Petroleum Hydrocarbons as Diesel		= Not Measured/Not Analyzed

- * TOC elevations are relative to msl, per East Bay MUD Benchmark DAVIS FREE #2 San Leandro 1952 (Elevation = 32.02 feet msl). Prior to October 5, 1993, the DTW measurements were taken from top of well covers. Prior to February 27, 1992, the DTW measurements were surveyed assuming well cover MW-1 100 feet as datum.
- ** Groundwater elevation corrected due to presence of free product; correction factor [(TOC-DTW)+(Product Thickness x 0.75)].
- *** Groundwater elevation corrected due to presence of free product; correction factor [(TOC-DTW)+(Product Thickness x 0.77)].
- 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 report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- I aboratory has potentially identified the presence of MTBE at reportable levels in the 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. Free product was detected in well MW-3, however, a water sample was collected and analyzed to determine if the product was predominantly hydrocarbon based.
- Laboratory report indicates unidentified hydrocarbons C9-C24.
- 8 Detection limit raised—Refer to analytical reports.
- Laboratory report indicates unidentified hydrocarbons C6-C12.
- Purged additional 100 gallons from well after sampling.
- Laboratory report indicates unidentified hydrocarbons < C14.
- 12 Christy box for this well was damaged during tank removal and soil excavation at the site; therefore, GWE could not be accurately determined.
- 13 Laboratory report indicates a non diesel mix < C17.
- Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- Laboratory report indicates unidentified hydrocarbons < C20.
- 16 MTBE by EPA Method 8260.
- Laboratory report indicates discrete peaks.
- Laboratory report indicates unidentified hydrocarbons < C16.

Table 2 Groundwater Analytical Results

Former Unocal Service Station #2512 1300 Davis Street San Leandro, California

Well ID	Date	PCE	1,1-DCA	1.1.1 7004	Chloro-	1.1 DCB	1.2 DCB	Tr.CITE
	Date	(ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	methane (ppb)	1,1-DCE (ppb)	1,2-DCB (ppb)	TCE (ppb)
MW-1	04/25/ 89	3.3	ND	ND	ND	ND	ND	0.55
	11/06/90	4.8	ND	ND	ND	ND	ND	ND
	05/24/ 91	4.6	ND	ND	ND	ND	ND	ND
	06/09/ 94	1.0	ND	ND	ND	ND	ND	ND
	09/08/ 94	1.2	ND	ND	ND	ND	ND	ND
	01/25/ 95	DESTROYED						
NIW-2	04/25/ 89	0.68	ND	ND	ND	ND	ND	ND
	11/06/ 90	ND	ND	ND	ND	ND	ND	ND
	05/24/ 91	ND	ND	ND	ND	ND	ND	ND
	08/15/ 91	ND	ND	ND	ND	ND	ND	ND
	11/19/ 91	ND	ND	ND	ND	ND	ND	ND
	02/27/ 92	ND	ND	ND	ND	ND	ND	ND
	05/26/ 92	ND	ND	ND	ND	ND	ND	ND
	10/30/ 92	ND	ND	ND	ND	ND	ND	ND
	06/09/ 94	ND	ND	ND	ND	ND	ND	ND
	09/08/ 94	ND	ND	ND	ND	ND	ND	ND
	01/25/ 95	DESTROYED						
MW-3	04/25/ 89	1.0	ND	ND	ND	ND	ND	ND
	11/06/ 90	ND	ND	ND	ND	ND	ND	ND
	05/24/ 91	ND	ND	ND	ND	ND	ND	ND
	08/15/ 91	NOT SAMPLED D	OUE TO THE PR	ESENCE OF FREE	E PRODUCT			
	11/19/ 91	NOT SAMPLED D	OUE TO THE PR	ESENCE OF FREE	PRODUCT	==		
	02/27/ 92	NOT SAMPLED D	OUE TO THE PR	ESENCE OF FREE	E PRODUCT			
	05/26/ 92	ND	ND	ND	ND	ND	ND	ND
	10/30/ 92	NOT SAMPLED D						••
	06/09/ 94	ND	ND	ND	ND	ND	ND	ND
	09/08/ 94	NOT SAMPLED D						
	10/21/ 95	ND	ND	ND	ND	ND	ND	ND
	01/24/ 96	ND	ND	ND	ND	ND	ND	ND
	04/23/ 96	ND	ND	ND	ND	ND	ND	ND
	07/25/ 96	ND	ND	ND	ND	ND	ND	ND

Table 2
Groundwater Analytical Results

Former Unocal Service Station #2512 1300 Davis Street

					Chloro-			
Well ID	Date	PCE	1,1-DCA	1,1,1-TCA	methane	1,1-DCE	1,2-DCB	TCE
	·	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
. 4317. 3	10/25/05	2170	175	3100		275	***	\
MW-3	10/25/ 96	ND	ND	ND	ND	ND	ND	ND
(cont)	01/28/ 97	ND	ND	ND	ND	ND	ND	ND
	04/16/ 97	ND	ND	ND	ND	ND	ND	ND
	07/21 /97	ND	ND	ND	ND	ND	ND	ND
	10/20/ 97	ND	ND	ND	ND	ND	ND	ND
	01/21/ 98	ND	ND	ND	ND	ND	ND	ND
	04/1 7/98	ND	ND	ND	ND	ND	ND	ND
	07/14/ 98	0.55	ND	ND	ND	ND	ND	ND
	10/12 /98	0.51	ND	ND	ND	ND	ND	ND
	01/19/ 99	ND	ND	ND	ND	ND	ND	ND
	04/07/ 99	0.54	ND	ND	ND	ND	ND	ND
	07/12/ 99	ND	ND	ND	ND	ND	ND	ND
	10/25/ 99 5	ND	ND	ND	ND	ND	ND	ND
1W-4								
MW-4	11/06/ 90	2.9	ND	ND	ND	ND	ND	ND
	05/24/ 91	4.1	2.5	3.9	ND	ND	ND	ND
	08/15/ 91	3.6	ND	ND	ND	ND	ND	ND
	11/19/ 91	3.4	ND	ND	ND	ND	ND	ND
	()2/27/ 92	3.5	6	ND	ND	ND	ND	ND
	05/26/ 92	2.4	13	3.5	ND	0.83	ND	ND
	10/30/ 92	INACCESSIBLE						
	06/09/ 94	2.8	8.8	0.83	ND	0.51	ND	0.70
	09/08/ 94¹	1.8	ND	ND	ND	ND	ND	0.60
	01/25/ 95	DESTROYED						
MW-5	11/06/ 90	0.7	ND	ND	ND	ND	ND	NID
11 17 -3					ND			ND
	05/24/ 91	0.89	ND	ND	ND	ND	ND	ND
	06/09/ 94	INACCESSIBLE						
	09/08/ 94	INACCESSIBLE					~-	
	01/25/ 95	DESTROYED					·	

Table 2 **Groundwater Analytical Results**

Former Unocal Service Station #2512

				1300 Davis San Leandro, C			
Well ID	Date	PCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	Chloro- methane (ppb)	1,1-DCE (ppb)	1,2-DCB (ppb)
MW-6	11/06/ 90	1.2	ND	ND	ND	ND	ND

					Chloro-		•	
Well ID	Date	PCE	1,1-DCA	1,1,1-TCA	methane	1,1-DCE	1,2-DCB	TCE
		(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-6	11/06/ 90	1.2	ND	ND	ND	ND	ND	ND
	05/24/ 91	0.88	ND	ND	5.6	ND	ND	ND
	08/15/ 91	1.2	ND	ND	ND	ND	ND	ND
	11/19/ 91	1.3	ND	ND	ND	ND	ND	ND
	02/27/ 92	1.5	ND	ND	ND	ND	1.6	ND
	05/26/ 92	1.1	ND	ND	ND	ND	1.7	ND
	10/30/ 92	1.2	ND	ND	ND	ND	ND	ND
	06/09/ 94	INACCESSIBLE		 .				
	09/08/ 94	INACCESSIBLE						
	01/25/ 95	DESTROYED						
MW-7	02/27/ 92	2.4	ND	ND	ND	ND	ND	ND
	05/26/ 92	2.2	ND	ND	ND	ND	ND	ND
	10/30/ 92	2.2	ND	ND	ND	ND	ND	ND
	06/09/ 94	0.67	ND	ND	ND	ND	ND	ND
	09/08/ 94	0.76	ND	ND	ND	ND	ND	ND
	10/21/ 95	ND	ND	ND	ND	ND	ND	ND
	01/24/ 96	1.2	ND	ND	ND	ND	ND	ND
	04/23/ 96	0.84	ND	ND	ND	ND	ND	ND
	07/25/ 96	1.7	ND .	ND	ND	ND	ND	ND
	10/25/ 96²	1.2	ND	ND	ND	ND	ND	ND
	01/28/ 97	1.4	ND	ND	ND	ND	ND	ND
	04/19/ 97	0.75	ND	ND	ND	ND	ND	ND
	07/21/ 97	1.5	ND	ND	ND	ND	ND	ND
	10/20/ 97	1.5	ND	ND	ND	ND	ND	ND
	01/21/ 98	1.2	ND	ND	ND	ND	ND	ND
	04/17/ 98	0.76	ND	ND	ND	ND	ND	ND
	07/14/ 98	1.4	ND	ND	ND	ND	ND	ND
	10/12/ 98	1.4	NĐ	ND	ND	ND	ND	ND
	01/19/ 99	1.3	ND	ND	ND	ND	ND	ŃD
	04/07/ 99³	1.6	ND	ND	ND	ND	ND	ND
	07/12/ 99	1.1	ND	ND	ND	ND	ND	ND
	10/25/ 99	3.1^{6}	ND	ND	ND	ND	ND	ND

Table 2
Groundwater Analytical Results

Former Unocal Service Station #2512 1300 Davis Street

		Chloro-									
Well ID	Date	PCE	1,1-DCA	1,1,1-TCA	methane	1,1-DCE	1,2-DCB	TCE			
		(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)			
MW-8	10/21 /95	ND	ND	ND	ND	ND	ND	ND			
	01/24 /96	0.74	ND	ND	ND	ND	ND	ND			
	04/23 /96	1.1	ND	ND	ND	ND	ND	ND			
	07/25/ 96	1.1	ND	ND	ND	ND	ND	ND			
	10/25/ 96	0.90	ND	ND	ND	ND	ND	ND			
	01/28/ 97	0.96	ND	ND	ND	ND	ND	ND			
	04/16 /97	0.51	ND	ND	ND	ND	ND	ND			
	07/21/ 97	ND	ND	ND	ND	ND	ND	ND			
	10/20/ 97	1.1	ND	ND	ND	ND	ND	ND			
	01/21/ 98	0.77	ND	ND	ND	ND	ND	ND			
	04/17/ 98	ND	ND	ND	ND	ND	ND	ND			
	()7/14/ 98	1.3	ND	ND	ND	ND	ND	ND			
	10/12/98	1.5	ND	ND	ND	ND	ND	ND			
	01/19/ 99	0.71	ND	ND	ND	ND	ND	ND			
	04/07/ 99 4	1.0	ND	ND	ND	ND	ND	ND			
	07/12/ 99	0.66	ND	ND	ND	ND	ND	ND			
	10/25/ 99 ⁷	1.56	ND	ND	ND	ND	ND	ND			
MW-9	10/21/ 95	17	1.0	ND	ND	ND	ND	ND			
	01/24/ 96	17	2.2	ND	ND	ND	ND	0.64			
	04/23/ 96	71	ND	ND	ND	ND	ND	ND			
	07/25/ 96	1.0	ND	ND	ND	ND	ND	ND			
	10/25/ 96	80	ND	ND	ND	ND	ND	ND			
	01/28/ 97	39	ND	ND	ND	ND	ND	ND			
	04/16/ 97	0.51	ND	ND	ND	ND	ND	ND			
	07/21/ 97	7.5	ND	ND	ND	ND	ND	ND			
	10/20/ 97	47	ND	ND	ND	ND	ND	ND			

Table 2 Groundwater Analytical Results

Former Unocal Service Station #2512 1300 Davis Street

					Chioro-			
Well ID	Date	PCE	1,1-DCA	1,1,1-TCA	methane	1,1-DCE	1,2-DCB	TCE
		(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
4W-9	01/21/ 98	22	0.73	ND	ND	ND	ND	0.50
cont)	04/17/ 98	120	ND	ND	ND	ND	ND	ND
	07/14/ 98	110	ND	ND	ND	ND	ND	0.72
	10/12/ 98	46	ND	ND	ND	ND	ND	ND
	01/19/ 99	38	0.72	ND	ND	ND	ND	0.54
	04/07/ 99	41	ND	ND	ND	ND	ND	0.64
	07/12/ 99	26	ND	ND	ND	ND	ND	ND
	10/25/ 99 8	23 ⁶	ND	ND	ND	ND	ND	ND

Table 2

Groundwater Analytical Results

Former Unocal Service Station #2512 1300 Davis Street San Leandro, California

EXPLANATIONS;

Groundwater analytical results prior to January 21, 1998, were compiled from reports prepared by MPDS Services, Inc.

PCE = Tetrachloroethene

1.1 DCA = 1.1-Dichloroethane

1.1.1-TCA = 1.1.1 Frichloroethane

1.1-DCE = 1.1-Dichloroethene

1.2-DCB = 1.2-Dichlorobenzene

TCE = Trichloroethene

ppb = Parts per billion

-- = Not Analyzed

ND = Not Detected

1,2-Dichlorothane (1,2-DCA) was detected at a concentration of 4.8 ppb.

- ² Chloroform was detected at a concentration of 1.7 ppb.
- 3 Chloroform was detected at a concentration of 0.68 ppb.
- Chloroform was detected at a concentration of 0.53 ppb.
- Laboratory report indicates Methylene chloride, which is a suspected laboratory contaminant, was detected at a concentration of 9.6 ppb.
- 1 aboratory report indicates reanalysis by an alternate column or method has confirmed the identification and/or concentration of this result.
- Laboratory report indicates Methylene chloride, which is a suspected laboratory contaminant, was detected at a concentration of 8.2 ppb.
- 1 aboratory report indicates Methylene chloride, which is a suspected laboratory contaminant, was detected at a concentration of 7.8 ppb.

All EPA Method 8010 constituents were ND, except as indicated.

Table 3
Groundwater Analytical Results - Oxygenate Compounds

Former Unocal Service Station #2512 1300 Davis Street San Leandro, California

Well ID	Date	Ethanol <i>(ppb)</i>	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
MW-3	04/07/99	ND	ND	4.7	ND	ND	ND	ND	ND
MW-7	04/07/99	ND	ND	ND	ND	ND	ND	ND	ND
MW-8	04/07/99	ND	ND	ND	ND	ND	ND	ND	ND
MW-9	04/07/99	ND	ND	6.4	ND	ND	ND	ND	ND

EXPLANATIONS:

TBA = Tertiary Butyl Alcohol

MTBE = Methyl Tertiary Butyl Ether

DIPE = Di-isopropyl Fther

ETBE = Ethyl Tertiary Butyl Ether

TAME = Fertiary Amyl Methyl Ether

EDB = 1,2-Dibromoethane

1,2-DCA = 1,2-Dichloroethane

ppb = Parts per billion ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

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 flexi-dip 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, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured 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 Unocal Corporation, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

WELL MONITURING/SAMPLING FIELD DATA SHEET

Client/ Facility <u># 2</u> 5	512		Job	#: _	28003	5	
•	o Daviss	Ļ .	Dat	e:	10-25-	99	
	_	<u>'-</u>		_	 	7	
City: <u>Sav</u>	Leandlo		San	ipier: _	Joe		
	MW-3	Wet	l Condition:		k.		
Well ID	<u> </u>	***	. Condition				
Well Diameter	2 in.		rocarbon kness:	- lfoe	Amount B		- (Gallons)
Total Depth	33.20 ft.			0.17			= 0.66
Depth to Water	14.53 ft	En.	ctor (VF)		: 1.50	12" = 5.80	
Purge	× Disposable Bailer		= <u>3.17</u> x 3 (ca	I			10 (gal.)
Equipment:	Bailer		Equipme		Disp <u>osabl</u> e Ba	iller	
	Stack Suction				Bailer Pressure Baile	Эг	
	Grundfos			(Grab Sample		
	Other:			(Other:		
		P.M	Weather Condi Water Color: _ Sediment Desc	<u> </u>	lear	Odor: ye	
	er?		If yes; Time:		-		
	folume pH	Con	ductivity , 50 Ten	perature	. D.O.	ORP	Alkalinity
1:55	(gal.) 3.5 7.42	μm - 3	hos/cm-x 7	, F , ユ	(mg/L)	(mV)	(bbw)
1:57	7 9.20		.01	1.6			
2:0-	10 7.27	4	<u>.05</u> 7	1.9			
					_		. <u> </u>
							
	<u></u>	···					
			RATORY INFORM	,	700 A TODY	ANAL	Veec
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	SEQU	BORATORY	TPH(G)/btex/	
Mu'-3	310H	Y //	HCL		<u> </u>	TOHO	
	1 Amb.	- //	HCL			32010	
	2 V 0 A						
	!	1	1	 -	-	<u></u>	
COMMENTS: _							<u> </u>

9/97-fieldat.fm

AAEEE MOME OHMAGIOMMAEHMA

FIELD DATA SHEET

Client/ Facility <u># 25</u>	512	<u>.</u>	Jo	b#:	28003	6	
Address: 130		1.	Da	te:	10-25	-99	
	Leandro			_	Joe		
City.							
Well ID	mw-7	W€	ell Condition:	0.	<u>د</u> ٠		
Weil Diameter	2 ir		drocarbon	 (famt)	Amount B		(Gallons)
Total Depth	29.70 H		olume 2°	= 0.17	3" = 0.38	3 4	* = 0.66
Depth to Water	14.22 H	F	ector (VF)	6=	1.50	12° = 5.80	
	15.48	vf <u>0.17</u>	= <u>2.63</u> x 3 (c	ase volume} =	= Estimated Pt	irge Volume: _	<u> 8 (gal.)</u>
Purge Equipment:	Disposable Baile Bailer Stack Suction Grundfos Other:		Samplin Equipme	ent: Di Ba Pr G	ispos <u>abl</u> e Ba ailer ressure Baile rab Sample ther:	er	
Starting Time:	11:4	-o	Weather Cond	itions:	clea		
_	/2:		Water Color: _				ی در و
	te:		Sediment Desc	cription: _	vene_		
Did well de-wate	r?		If yes; Time:		Volun	ne:	(gal.
	Folume pH (gal.) 2.5 7.58 7.49	$-\frac{4\pi}{9}$	iductivity, N Technos/cm/c 7	mperature •F 2. / 2. 3		ORP (mV)	Alkalinity (ppm)
SAMPLE ID	(#) - CONTAINER	LABOI REFRIG.	RATORY INFOR	,	DRATORY	ANAL	YSES
ww-7	3vc+	Y	HCL	· SEQUOI	A	TPH(G)/btex/r	ntbe
	2 V c A	, ,	11	//		8010	
						1	
		1				<u> </u>	
COMMENTS: _	· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·	 -	<u> </u>
					 		

MATER INDIANA OUNAGIOMINE FINA

FIELD DATA SHEET

Client/ Facility # 25	512			Job#:	28003	6	
•	o Daviss	1 .		Date:	10-25	-99	
City: Sav				Sampler:	Joe		
Well ID	mw-8	. We	ell Condition:	_0	· k·		
Well Diameter	2 in	-	drocarbon	B .	Amount E		
Total Depth	29.90 #		olume		<u>feet) (product/w</u> 3* = 0.3		(Gallons) = 0.66
Depth to Water	15.30 A	l to			7 = 1.50		
	14.6 ×	VF <u>0.17</u>	_ = <u>2.48</u> x s	3 (case volun	ne) = Estimated P	urge Volume: _	7. 5 (gal.)
Purge Equipment:	Disposable Baile Bailer Stack Suction Grundfos Other:		Samı Equi	oling oment:	Disposable B Bailer Pressure Bail Grab Sample Other:	er	٠
Sampling Time: Purging Flow Rat		3 f. m1	Water Color Sediment D	r: escription	<u>clea</u> Clear :	Odor: <u>va</u>	···· <u>·</u>
Did well de-wate	er?		If yes; Tin	ne:	Volur	ne:	(.isp)
	7.35 7.35	μα <u>Σ</u>	iductivity, Nathons/cm/s			ORP (mV)	Alkalinity (ppm)
		1.120	PATODY INC	ODSSATIO	A4		
SAMPLE 10	(#) - CONTAINER	REFRIG.	RATORY INF		ABORATORY	ANAL	YSES
mw-3	310x	Y	HCL	· SEC	IUOIA	TPH(G)/btex/n	ntbe
	2001-	1 1	11		1 (3010	
		<u> </u>					
COMMENTS: _							

FIELD DATA SHEET

Client/					
Facility #25	512		Job	#: <u>280</u>	036
Address: 13c	o Davis s	<u>.+</u>	Dat	e: <u>10-</u>	25-99
City: Sav	Leandro			npler: <u>Jo</u>	·—·—
Well ID	MW-9	101	ell Condition:	n.k.	
Well ID		- **	en Condidon.		
Well Diameter	2_ is		/drocarbon lickness:		unt Bailed
Total Depth	<u> 30.00 f</u>		folume 2° =		uct/water): [Gallons]
Depth to Water	14.98 +	l 1	Factor (VF)		
	15.02	(VF <u>0-1 i</u>	2 = 2.56 x 3 (cas	se volume) = Estima	ated Purge Volume: 8 (gai.)
Purge Equipment:	Disposable Baile Bailer Stack Suction Grundfos Other:		Sampling Equipme	nt: Dispos <u>al</u> Bailer Pressure Grab Sa	
Sampling Time:		08.m	Water Color: _	Clear	ear Odor: unne
Did well de-wate	r?		If yes; Time:	\	Volume:
Time V	olume pH (gal.) 2.5 7.50 5 7.40 8 7.36	μτ 	1.06 72	•F (m)	O. ORP Alkalinity (g/L) (mV) (ppm)
		LA80	RATORY INFORM	IATION	
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	·	Y ANALYSES
mw'-9	31ct	Y	HCL:	SEQUOIA	TPH(G)/btex/mtbe
	2 V 0/7	, , ,	HCC	//	5010
			 		
L		1	1		
COMMENTS: _					



☐ 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600

U 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600

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Consultant Company.	Gettler-Rya	u Juc				Project I	lame:	For	r Me	r U.	nocal	557	7 2	512	
Address 6747				_		UNOCA	L. Proje	ect Ma	nager:	M	ir. B	ob B	2005	<u> </u>	
City: Dublin	State:	CA	-	Zip Code: ⁰	14568	AFE #:						7105			
Telephone: (SIO)	551-7555	-	FAX #:			Site #, C	ity, St	ate:	130	00 1	Davis	5+	. Sa	u Leandro	
Report To: Deaune	Harding	Sample	r: 30	e		QC Data	a: 🔾 L	.evel C) (Stand	lard) 🕻	Level (<u> </u>	Level B	Level /	;
Turnaround <u>知</u> 10 V Time: 山 2 W	Work Days 🚨 5 V York Days 🔲 1 V	Vork Day Vork Day	s 🗓 3 W 🗓 2-8	ork Days Hours		Orinking V Vaste Wa	ter	196/	/ /		Analyse	s Reques	ted		•
CODE: D Misc. U		فللمناك فالانتيان ووجع				Other	(c+)	80/	RXD	/ /	/ /		/ /	/	 1
Client Sample I.D.	Date/ Time Sam pled	Matrix Desc.	# of Cont.	Cont. Type	Laborato Sample	ry #	kt st	80/K			/./	/ /		Comme	nts
1 TB-LB	10 25-99	w	1	VOA	OIA	1								Pleasedont	bill
2. Mw-3	11 212 P. m	/	SVOA	VOF	OZA-F	= /	V	7						TB.LB anal	4225.
3. MW-7	1/ 12:00 P.W	1	5 VOA	VOA	03A-E	= /	1								
4 MW-8	11 12:53.00	1	5404	VOA	04A-E	= /	/	ļ	<u> </u>						
5 MW. 9	11 139,00	/	SVOA	VOA	OSA-E	= /	/			<u> </u>					
6.							<u> </u>	ļ	 	<u> </u>					
7			ļ							<u> </u>				<u> </u>	
8.			 				 	-	 	-			- 		
9						_			 	 			+	<u></u>	
10		<u> </u>	<u> </u>				<u> </u>	<u> </u>		<u>. </u>	<u> </u>			<u>. </u>	
Relinquished By.	The Con	1 2 4	Date	:10.25.99	Time: 73%	" Rec	eived l	Зу:	/ المار	1		Date:	10/25/	A Time: 3 るぐ	
Relinquished By:		<u>ر</u>		10/210/9		Rec	eived l			7	2	Date:	(8-2E	Time: 1218	
Relinguished By:	\mathcal{A}		Date	15-26	Time:	Rec	eived l	By Lab	: <i>Ge</i>	w	en:	10/2 Date:	6/99	/5 : S	0
Were Samples Receiv	ved in Good Cond	ition? 🗆 Y	∕es 🖸 No	Sa	mples on lce	e? □ Yes	□ No	Met	hod of	Shipm	ent		··	Page of	
2) Was the repo	on receipt of report lyses requested o nt issued within the	n the Cha	ed turnar	ound time?	YesON	lo If no, v	vhat w	as the	turnar	ound ti	me?	-			
Approved by:				Signature:				Com	ipany:				·	Date:	~ · .



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

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding **Reported**: 23-Nov-99 18:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W910532-01	Water	27-Oct-99 08:52	26-Oct-99 15:50
MW-3	W910532-02	Water	25-Oct-99 14:12	26-Oct-99 15:50
MW-7	W910532-03	Water	25-Oct-99 12:00	26-Oct-99 15:50
MW-8	W910532-04	Water	25-Oct-99 12:53	26-Oct-99 15:50
MW-9	W910532-05	Water	25-Oct-99 13:30	26-Oct-99 15:50

Julianny Fegley, Project Manager J



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

Dublin CA, 94568

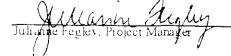
Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

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

Analyte	R Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
						Trepateu	Alialyzeu	Meniod	Notes
TB-LB (W910532-01) Water	Sampled: 27-Oct-99 08:52	Receive	d: 26-O	ct-99 15:50					
Purgeable Hydrocarbons	ND	50	ug/l	1	9K05001	05-Nov-99	05-Nov-99	EPA	
Benzene	ND	0.50	n	**	**	"	**	8015M/8020	
Toluene	ND	0.50	19	"	Ħ	H	**		
Ethylbenzene	ND	0.50	#	II.	**	et e	"	н	
Xylenes (total)	ND	0.50	ч	n	n	4)	"	tf	
Methyl tert-butyl ether	ND	2.5	п	**	**	*	41	**	
Surrogate: a,a,a-Trifluorotolue	ne	93.3 %	70	-130	"	"	"	"	· <u>·</u> ·
MW-3 (W910532-02) Water	Sampled: 25-Oct-99 14:12	Received	i: 26-Oc	t-99 15:50					
Purgeable Hydrocarbons	220	50	ug/l	1	9K05001	05-Nov-99	05-Nov-99	EPA	
Benzene	0.82	0.50	n	11	**	**		8015M/8020	
Toluene	ND	0.50	U	••	ŧi.	ır		ii .	
Ethylbenzene	0.77	0.50	H	н	**	n	"	••	
Xylenes (total)	6.8	0.50	11			*		н	
Methyl tert-butyl ether	3.9	2.5	tt	11	11	II .	**	O	
Surrogate: a,a,a-Trifluorotolue	ne	93.3 %	70	-130	"	"	,,	"	
MW-7 (W910532-03) Water	Sampled: 25-Oct-99 12:00	Received	l: 26-Oc	t-99 15:50					
Purgeable Hydrocarbons	ND	50	ug/l	1	9K05001	05-Nov-99	05-Nov-99	EPA	
Benzene	ND	0.50	"	и	n		"	8015M/8020	
Toluene	ND	0.50	Ħ	**	**	11	••	n	
Ethylbenzene	, ND	0.50	11	ij	**	"	"		
Xylenes (total)	ND	0 50	ff	11	19	**	**	"	
Methyl tert-butyl ether	ND	2.5	"	••	••	11	**	11	
Surrogate: a,a,a-Trifluorotolue	ne	86.7%	70-	-130	"	"	"	"	

Sequota Analytical - Walnut Creek



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

Gettler Ryan, Inc. - Dublin

Project: Unocal

6747 Sierra Court Suite J Dublin CA, 94568 Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

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

Sequoia Analytical - Walnut Creek

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-8 (W910532-04) Water	Sampled: 25-Oct-99 12:53	Receive	d: 26-Oc	t-99 15:50					
Purgeable Hydrocarbons	ND	50	ug/l	1	9K05001	05-Nov-99	05-Nov-99	EPA	
Benzene	ND	0.50	n	n	11	**	п	8015M/8020	
Toluene	ND	0.50	11	11		•	**	tt	
Ethylbenzene	ND	0.50	n	**	"	17	**	11	
Xylenes (total)	ND	0.50	11	••	п	n	H	**	
Methyl tert-butyl ether	ND	2.5	rı	*	**	•	19	**	
Surrogate: a,a,a-Trifluorotolue	ne	83.3 %	70-	-130	u	"	"	<i>y</i>	VF-11-
MW-9 (W910532-05) Water	Sampled: 25-Oct-99 13:30	Received	d: 26-Oc	t-99 15:50					
Purgeable Hydrocarbons	ND	50	ug/l	1	9K05001	05-Nov-99	05-Nov-99	EPA	
Benzene	ND	0.50	11	11	n	11	"	8015M/8020	
Toluene	. ND	0.50	**	**	n n	tr.	.,	**	
Ethylbenzene	ND .	0.50	22	**	**		"	n n	
Xylenes (total)	ND	0.50	It	11	n .	**	n	n	
Methyl tert-butyl ether	37	2.5	n	79	н	*	u		
Surrogate: a,a,a-Trifluorotolue	me	80.0 %	70-	-130	"	"	,	u u	

Julianne Fegles, Project Manger



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

Gettler Ryan, Inc. - Dublin

Project: Unocal

6747 Sierra Court Suite J Dublin CA, 94568 Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Diesel Hydrocarbons (C9-C24) by DHS LUFT

Sequoia Analytical - Walnut Creek

	R	eporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (W910532-02) Water	Sampled: 25-Oct-99 14:12	Received	1: 26-Oct	-99 15:50					
Diesel Range Hydrocarbons	95	63	ug/l	1	9K03015	03-Nov-99	10-Nov-99	EPA 8015M	D-11
Surrogate: n-Pentacosane		69.7%	50-	150	"	"	"	"	

Sequota 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.

Julianne Pegles, Project Managy



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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Volatile Organic Compounds by EPA Method 8010B

Sequoia Analytical - Walnut Creek

Analyte	R Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (W910532-02) Water	Sampled: 25-Oct-99 14:12	Receive	d: 26-Oc	-99 15:50					
Bromodichloromethane	ND	0.50	ug/l	1	9K05014	05-Nov-99	05-Nov-99	EPA 8010B	
Bromoform	ND	0.50	н		**	и	"	н	
Bromomethane	ND	1.0	11	11	***	ø	н	**	
Carbon tetrachloride	ND	0.50	17	**	"	*	n	10	
Chlorobenzene	ND	0.50	11	**		rt	IF	11	
Chloroethane	ND	1.0	**	**	н	11	**	71	
Chloroform	ND	0.50	"	н	D	••		н	
Chloromethane	ND	1.0	II.	11	**	**	**	10	
Dibromochloromethane	ND	0.50	и	**	"	и	п	11	
1,3-Dichlorobenzene	ND	0.50	25	**	*	**	**	**	
1.4-Dichlorobenzene	ND	0.50	IT	п	n.	**	"	н	
1,2-Dichlorobenzene	ND	0.50	n	11	**	d	n	(r	
1.1-Dichloroethane	ND	0.50	11	,,		11	n n	11	
1.2-Dichloroethane	ND	0.50	**	n		**	11	••	
1.1-Dichloroethene	ND	0.50	u	IJ	"	it.	*	n ,	
cis-1,2-Dichloroethene	ND	0.50	II	**	**	H	н	11	
trans-1,2-Dichloroethene	ND	0.50	19	**	**	**	11	11	
1.2-Dichloropropane	ND	0.50	H	п	"	er	"	97	
cis-1,3-Dichloropropene	ND	0.50	11	n.		ŧr	**	tt	
trans-1,3-Dichloropropene	ND	0.50	17	4	**	11	II	11	
Methylene chloride	9.6	5.0	11	H		и	11	11	O-01
1.1,2,2-Tetrachloroethane	ND	0.50	u	,,	**		**	**	
Tetrachloroethene	ND	0.50	H	**	••	**	**	н	
1.1.1-Trichloroethane	ND	0.50	н	**	**	n n	41	**	
1.1.2-Trichloroethane	ND	0.50	71	Ħ	11	11	11	11	
Trichloroethene	ND	0.50	10	п	(r	**	"	"	
Trichlorofluoromethane	ND	0.50	IJ	11	11	**	••	ir.	
Vinyl chloride	ND	1.0	n	11	**	н	"	n	
Surrogate: Dibromodifluorome	thane	93.0 %	50-	150	#	"	"	"	
Surrogate: 4-Bromofluorobenz	ene	51.0 %	· 50-	150	"	"	"	"	

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.

Juliante Fegley Project Manage



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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Volatile Organic Compounds by EPA Method 8010B

Sequoia Analytical - Walnut Creek

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (W910532-03) Water	Sampled: 25-Oct-99 12:00	Received	l: 26-Oct	-99 15:50					
Bromodichloromethane	ND .	0.50	ug/l	1	9K05014	05-Nov-99	05-Nov-99	EPA 8010B	
Bromoform	ND	0.50	ly .	Ħ		H	Ħ	19	
Bromomethane	ND	1.0	11	IP	"	11	n	11	
Carbon tetrachloride	ND	0.50	**	"	*		•	**	
Chlorobenzene	ND	0.50	п	11	"		r	н	
Chloroethane	ND	1.0	U	**	п	11	r	11	
Chloroform	ND	0.50	u	r	н	**	1)	н	
Chloromethane	ND	1.0	**			41	**		
Dibromochloromethane	ND	0.50	Ħ	U	**	"	19	tt	
1,3-Dichlorobenzene	ND	0.50	U	**	**		17	**	
1.4-Dichlorobenzene	ND	0.50	II .	*	11	17	11	11	
1.2-Dichlorobenzene	ND	0.50	11	u	**	n		n	
1.1-Dichloroethane	ND	0.50	**	n	**	*	**	n	
1.2-Dichloroethane	ND	0.50	11	11			ı)	и	
1.1-Dichloroethene	ND	0.50	п	**	U	и		"	
cis-1.2-Dichloroethene	ND	0.50	н	"		••	1.		
trans-1.2-Dichloroethene	ND	0.50	14	n		**	u	D .	
1.2-Dichloropropane	ND	0.50	n	if	n n	£ŧ.	ii.	if	
cis-1.3-Dichloropropene	ND	0.50	u	**	••	"	**	"	
trans-1,3-Dichloropropene	ND	0.50	11		**	**	н	r	•
Methylene chloride	ND	5.0	tf	14	11	**	II	ır	
1.1.2.2-Tetrachloroethane	ND	0.50	n	"	н	u	11	11	
Tetrachloroethene	3.1	0.50	"	"	,,	"	**	**	O-05
1.1.1-Trichloroethane	ND	0.50	Ħ	н	**	11	•	, "	
1.1.2-Trichloroethane	ND	0.50	n .	**	н	"		11	
Trichloroethene	ND	0.50		**	n	•	**	11	
Trichlorofluoromethane	ND	0.50	n	н	11	n	11	11	
Vinyl chloride	ND	1.0	11	н	,,		**	"	
Surrogate: Dibromodifluoromet	hane	78.0 %	50-	150		"	**	n	
Surrogate: 4-Bromofluorobenze	ne	77.0 %	50-	150	"	"	"	"	

Sequoia Analytical - Walnut Creek

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Julianne Fegley, Project Manager



Gettler Ryan, Inc. - Dublin

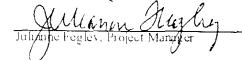
6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Volatile Organic Compounds by EPA Method 8010B Sequoia Analytical - Walnut Creek

Analyte	R Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-8 (W910532-04) Water	Sampled: 25-Oct-99 12:53	Received	d: 26-Oct	-99 15:50					
Bromodichloromethane	ND	0.50	ug/l	1	9K05014	05-Nov-99	05-Nov-99	EPA 8010B	
Bromoform	ND	0.50	n	11	11	H		**	
Bromomethane	ND	1.0	11	11	**	**	ŧ		
Carbon tetrachloride	ND	0.50	II	**	"	II .	н	H	
Chlorobenzene	ND	0.50	11	"	**	н	II .	11	
Chloroethane	ND	1.0	"	tt	*	**	U	31	
Chloroform	ND	0.50	**	11	н	**	**	**	
Chloromethane	ИD	1.0	II	**	**	"	,,	H	
Dibromochloromethane	ND	0.50	11	11	**	II	w	**	
1,3-Dichlorobenzene	ND	0.50	"	n	**	н	n	#	
1,4-Dichlorobenzene	ND	0.50	n	**	u u	**		**	
1.2-Dichlorobenzene	ND	0.50	II	а	17	п	*	**	
1.1-Dichloroethane	ND	0.50	11	u u	u	"	**	μ	
1.2-Dichloroethane	ND	0.50	**	п		••	"	11	
1.1-Dichloroethene	ND	0.50	u	н	11	R	**	#	
cis-1,2-Dichloroethene	ND	0.50	11	1+	**	n	*	ď	
trans-1.2-Dichloroethene	ND	0.50	**	11		*	0	ıı.	
1.2-Dichloropropane	ND	0.50	u		**	**	n	11	
cis-1,3-Dichloropropene	ND	0.50	п		**	"	**	**	
trans-1,3-Dichloropropene	ND	0.50	**	11		**		it.	
Methylene chloride	8.2	5.0	ır	**	14	**	h	ıi.	O-01
1.1.2.2-Tetrachloroethane	ND	0.50	11	**	**	"		u	-
Tetrachloroethene	1.5	0.50	"	q	**	**	**	99	O-05
1,1,1-Trichloroethane	ND	0.50	tt	11		**	н	ri.	2 00
1.1,2-Trichloroethane	ND	0.50	ır	•	.,	•	н	**	
Trichloroethene	ND	0.50	ır		**	**	n	50	
Trichlorofluoromethane	ND	0.50	11	n	••	"	••	.,	
Vinyl chloride	ND	1.0	11	**	**	"	n	*	
Surrogate: Dibromodifluorometh	nane	77.0 %	50-	150	"	"	,,	,,	
Surrogate: 4-Bromofluorobenzei	ne	53.0%	50-	150	"	"	,,	"	

Sequoia Analytical - Walnut Creek







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

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Volatile Organic Compounds by EPA Method 8010B

Sequoia Analytical - Walnut Creek

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-9 (W910532-05) Water	Sampled: 25-Oct-99 13:30	Received	1: 26-Oc	t-99 15:50					
Bromodichloromethane	ND	0.50	ug/l	1	9K05014	05-Nov-99	05-Nov-99	EPA 8010B	
Bromoform	ND	0.50	п	#	41	n	rt	••	
Bromomethane	ND	1.0	tt	"	"	"	#	**	
Carbon tetrachloride	NĐ	0.50	П	"	tr	n	11	11	
Chlorobenzene	ND	0.50	II	n	**	Ħ	"	41	
Chloroethane	ND	1.0	11	tt	**	***	**	11	
Chloroform	ND	0.50	11	n	11	**	tt	**	
Chloromethane	ND	1.0	fi	"	tt	H	н	tr	
Dibromochloromethane	ND	0.50	п	**	*	11	11	H	
1,3-Dichlorobenzene	ND	0.50	17	н	q	11	**	11	
1.4-Dichlorobenzene	ND	0.50	tt	11	**	"	"	**	
1.2-Dichlorobenzene	ND	0.50	n	**	**	*	ıı .	**	
1.1-Dichloroethane	ND	0.50	п	**		u	71	41	
1.2-Dichloroethane	ND	0.50	U	*1	"	•	**	**	
1.1-Dichloroethene	ND	0.50	17	"	**	**	ıı .	u	
cis-1,2-Dichloroethene	ND	0.50	17	19		ű	"	#1	
truns-1,2-Dichloroethene	ND	0.50	ti	**	"	н	n	"	
1.2-Dichloropropane	ND	0.50	U	н	н		II .	, «	
cis-1,3-Dichloropropene	ND	0.50	11	н	**	D	**	**	
trans-1,3-Dichloropropene	ND	0.50	ч	11	**	n	••	н	
Methylene chloride	7.8	5.0	u	*	n	•	*	**	O-01
1.1.2.2-Tetrachloroethane	ND	0.50	D	u	**	"	**	**	
Tetrachloroethene	23	0.50	77	**	**	.,	**	n	0-05
1.1.1-Trichloroethane	ND	0.50	ti	*	"	11	10	**	
1.1.2-Trichloroethane	ND	0.50	п	**	n	73	19	**	
Trichloroethene	ND	0.50	В	**	n	**	n	ч	
Trichlorofluoromethane	ND	0.50	**	11	11	n		tt	
Vinyl chloride	ND	1.0	st	11	77	n .	11	H	
Surrogate: Dibromodifluorome	thane	59.0 %	50-	150	"	"	"	"	
Surrogate: 4-Bromofluorobenz	ene	62.0 %	50-	-150	"	"	"	#	

Sequoia Analytical - Walnut Creek

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Julyane Fegley, Project Manager



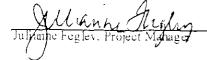
Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

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

Amalesto		Damila	Reporting	TT	Spike	Source	0/7770	%REC	DDD	RPD	
Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9K05001:	Prepared 05-Nov-99	Using 1	EPA 5030B	[P/T]							
Blank (9K05001-BI	.K1)				-						
Purgeable Hydrocarbon	<u> </u>	ND	50	ug/I		·					
Benzene		ND	0.50	1)							
Toluene		ND	0.50	**							
Einylbenzene		ND	0.50	"							
Xylenes (total)		ND	0.50	**							
Methyl tert-butyl ether		ND	2.5	er .							
Surrogate: a,a,a-Trifluo	rotoluene	26.0		"	30.0		86.7	70-130			-
LCS (9K05001-BS1)										
Benzene	· · · · · · · · · · · · · · · · · · ·	19.6	0.50	ug/l	20.0		98.0	70-130	****		
Toluene		18.0	0.50	11	20.0		90.0	70-130			
Ethylbenzene		20.5	0.50	**	20.0		103	70-130			
Xylenes (total)		65.7	0.50	**	60.0		109	70-130			
Surrogate: a,a,a-Trifluo	rotoluene	27 3		"	30.0	-	91.0	70-130			·
Matrix Spike (9K05	001-MS1)					Source: V	W910532-	03			
Benzene		20.2	0.50	ug/l	20.0	ND	101	70-130		·	
Toluene		18.6	0.50	11	20.0	ND	93.0	70-130			
Ethylbenzene		21.2	0.50	19	20.0	ND	106	70-130			
Xylenes (total)		66.6	0.50	"	60.0	ND	111	70-130			
Surrogate: a.a.a-Trifluo	rotoluene	25.6		"	30.0		85.3	70-130			_
Matrix Spike Dup (!	K05001-MSD1)					Source: V	V910532-	03			
Benzene		20.4	0.50	นg/[20 0	ND	102	70-130	0.985	20	
Toluene		18.8	0.50	fi .	20.0	ND	94.0	70-130	1.07	20	
Ethylhenzene		21.1	0.50	11	20 0	ND	106	70-130	0.473	20	
Vylenes (total)		67.8	0.50	**	60.0	ND	113	70-130	1.79	20	
Surrogate a.a.a-Trifluo	rotoluene	26.1		"	30.0		87.0	70-130		<u> </u>	

Sequoia Analytical - Walnut Creek





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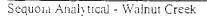
Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9K03015: Prepared 03-Nov	-99 Using I	EPA 3510B								
Blank (9K03015-BLK1)										
Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	24.0		"	33.3		72.1	50-150			
LCS (9K03015-BS1)		•								
Diesel Range Hydrocarbons	368	50	ug/l	500		73.6	60-140		. , .	
Surrogate: n-Pentacosane	23.0	,	23	33.3		69.1	50-150			
LCS Dup (9K03015-BSD1)										
Diesel Range Hydrocarbons	422	50	ug/l	500		84,4	60-140	13.7	50	
Surrogate: n-Pentacosane	24.0		"	33.3		72 1	50-150			







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

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

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Volatile Organic Compounds by EPA Method 8010B - Quality Control Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9K05014: P	repared 05-Nov-99	Using I	EPA 5030B	P/T]		······					
Blank (9K05014-BLK1)		·						· · · · · · · · · · · · · · · · · · ·		
Bromodichloromethane		ND	0.50	ug/l							
Bromoform		ND	0.50	"							
Bromomethane		ND	1.0	**							
Carhon tetrachloride		ND	0.50	"							
Chlorobenzene		ND	0.50	**							
Chloroethane		ND	1.0	**							
Chloroform		ND	0.50	"							
Chloromethane		ND	1.0	rt .							
Dibromochloromethane		ND	0.50	"							
1.3-Dichlorobenzene		ND	0 50	**							
1.4-Dichlorobenzene		ND	0.50							,	
.2-Dichlorobenzene		ND	0.50	•							
1.1-Dichloroethane		ND	0.50	**							
1.2-Dichloroethane		ND	0.50	**							
,1-Dichloroethene		ND	0.50	н							
sis-1,2-Dichloroethene		ND	0.50	н							
rans-1,2-Dichloroethene		ND	0.50	•							
,2-Dichloropropane		ND	0.50	U							
cis-1,3-Dichloropropene		ND	0 50	*							
rans-1.3-Dichloropropene		ND	0.50	"							
Methylene chloride		7 90	5.0	н							
.1,2,2-Tetrachloroethane		ND	0.50	**							
l'etrachloroethene		ND	0.50	n							
,1.1-Trichloroethane		ND	0.50	**							
.1.2-Trichloroethane		ND	0.50	i							
Trichloroethene		ND	0.50	•							
richlorofluoromethane		ND	0.50	н							
Zinst chtoride		CI/	1.0								
surrogate Pubromodifluoro	nethane	5 ~0			- 10 a		5=1)	50-150	-		
Surrogate 4-Bromofluorobe	ncene	5 20			100		5y ()	50-150			

Sequoia Analytical - Walnut Creek





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

Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Volatile Organic Compounds by EPA Method 8010B - Quality Control Sequoia Analytical - Walnut Creek

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9K05014: P	repared 09-Nov-99	Using I	EPA 5030B	P/T]				· · ·			
Blank (9K05014-BLK3	3)										
Bromodichloromethane	·	ND	0.50	ug/l	<u>. </u>						
Bromoform		ND	0.50	n							
Bromomethane		ND	1.0	11							
Carbon tetrachloride		ND	0.50	ø							
Chlorobenzene		ND	0.50	н							
Chioroethane		ND	1.0	n							
Chloroform		ND	0.50	ıı							
Chloromethane		ND	1.0	19							
Dibromochloromethane		ND	0.50								
1.3-Dichlorobenzene		ND	0.50	**							
.4-Dichlorobenzene		ND	0.50	11							
1.2-Dichlorobenzene		ND	0.50	**							
1.1-Dichloroethane		ND	0.50	н							
.2-Dichloroethane		ND	0.50	**							
.1-Dichloroethene		ND	0.50	ır							
ris-1.2-Dichloroethene		ND	0.50	"							
rans-1,2-Dichloroethene		ND	0.50	ıı.							
1,2-Dichloropropane		ND	0.50	#							•
is-1,3-Dichloropropene		ND	0.50	0							
rans-1,3-Dichloropropene		ND	0.50	**							
Methylene chloride		8.10	5.0	u							
1,1,2,2-Tetrachloroethane		ND	0.50	,							
l'etrachloroethene		ND	0.50	н							
1.1.1-Trichloroethane		ND	0.50	11							
.1.2-Trichloroethane		ND	0.50	17							
richloroethene		ND	0.50	11							
richlorofluoromethane		ND	0.50	**							
Cinvi ahilomda		\1)	ט 1								
√ 10.7 3		\.)	v ***								
Starozate Inbromodifluore	methane	130			11/1)		130	50-750			
surrogate 4-Bromofluorobi	erzene	11.0		"	10.0		110	50-150			

Sequoia Analytical - Walnut Creek

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Julianne regley. Project Manage



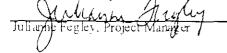
Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568 Project: Unocal

Project Number: Unocal # 2512 Project Manager: Deanna L. Harding Reported: 23-Nov-99 18:07

Volatile Organic Compounds by EPA Method 8010B - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9K05014: Prepared 10-Nov-99	Using I	EPA 5030B	[P/T]					_		
Blank (9K05014-BLK4)			_							
Ethylene dibromide	ND	0.50	ug/l		., .					
1,2-Dichloroethane	ИД	0.50	#1							
Surrogate: Dibromodifluoromethane	13.0		"	10.0		130	50-150			
Surrogate: 4-Bromofluorobenzene	12.0		"	10.0		120	50-150			
LCS (9K05014-BS1)										
Chlorobenzene	17.0	0.50	ug/l	20.0		85.0	70-130			
1,1-Dichloroethene	24.0	0.50	•	20.0		120	65-135			
Trichloroethene	24 0	0.50	u	20.0		120	70-130			
Surrogate: Dibromodifluoromethane	8.50		"	10.0		85.0	50-150			
Surrogate: 4-Bromofluorobenzene	7 80		"	10.0		78.0	5 0-15 0			
LCS (9K05014-BS3)										
Chlorobenzene	I6.0	0.50	ug/l	20.0		80.0	70-130			
1,1-Dichloroethene	20.0	0.50	u	20.0		100	65-135			
Trichloroethene	21.0	0.50	**	20.0		105	70-130			
Surrogate: Dibromodifluoromethane	7.20		"	10.0		72.0	50-150			
Surrogate: 4-Bromofluorobenzene	13.0		"	10.0		130	50-150			
LCS (9K05014-BS4)										
Chlorobenzene	17.0	0.50	ug/l	20.0		85.0	70-130	~~		
1.1-Dichloroethene	20.0	0.50	"	20.0		100	65-135			
Trichloroethene	22.0	0.50	"	20.0		110	70-130			
Surrogate: Dibromodifluoromethane	13.0		"	10.0		130	50-150			
Surrogate: 4-Bromofluorobenzene	15.0		"	10.0		150	50-150			
Matrix Spike (9K05014-MS1)					Source: \	W910532-	-02			
Chlorobenzene	16.0	0.50	ug/l	20.0	ND	80.0	60-140		-	
I.1-Dichloroethene	26 0	0.50		20.0	ND	130	60-140			
r chioroctnone	23.0	1.50		20.6	ND	115	6(-)4(
Surrogate Dibromodiffaoromethane	5 60		,,	100	-	56.0	50-150	·		
Surrogate 4-Bromofluoroberzene	630		*	10 0		63 0	50-150			

Sequoia Analytical - Walnut Creek



Gettler Ryan, Inc. - Dublin

6747 Sierra Court Suite J · Dublin CA, 94568

Project: Unocal

Project Number: Unocal # 2512
Project Manager: Deanna L. Harding

Reported: 23-Nov-99 18:07

RPD

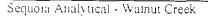
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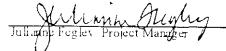
Volatile Organic Compounds by EPA Method 8010B - Quality Control Sequoia Analytical - Walnut Creek

Spike

Reporting

Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9K05014:	Prepared 05-Nov-99	Using EP	A 5030B	[P/T]							
Matrix Spike Dup (9K05014-MSD1)				· · ·	Source: \	W910532-	02			
Chlorobenzene		17.0	0.50	ug/l	20.0	ND	85.0	60-140	6.06	25	
1,1-Dichloroethene		22.0	0.50	H	20.0	ND	110	60-140	16.7	25	
Trichloroethene		23.0	0.50	н	20.0	ND	115	60-140	0	25	
Surrogate: Dibromodifi	luoromethane	7.20		"	10.0		72.0	50-150			
Surrogate. 4-Bromoflue	orober=ene	6 40		"	10.0		64.0	50-150			







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Project: Unocal
Project Number: Unocal # 2512
Project Manager: Deanna L. Harding

Reported: 23-Nov-99 18:07

Notes and Definitions

D-11	Chromatogram Pattern: Unidentified Hydrocarbons < C16
O-01	Methylene Chloride is a suspected laboratory contaminant. Please refer to the Method Blank.
O-05	Reanalysis by an alternate column or method has confirmed the identification and/or concentration of this result.
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

