



GETTLER-RYAN Inc.

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DEVELOPMENT SERVICES
FIRE DEPARTMENT
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TO: Mr. Robert A. Boust
Unocal Corporation
2121 N. California Blvd., Suite 250
Walnut Creek, California 94596

DATE: April 10, 1998
G-R #: 280036

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	March 31, 1998	Groundwater Monitoring and Sampling Report First Quarter 1998 - January 21, 1998.

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 ~~April 24, 1998~~, this report will be distributed to the following:

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

Enclosure

agency/2512rab.qmt



GETTLER-RYAN INC.

March 31, 1998
G-R Job #280036

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

RE: First Quarter 1998 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 January 21, 1998, field personnel monitored and sampled four wells (MW-3, MW-7, MW-8 and MW-9) at the above referenced site.

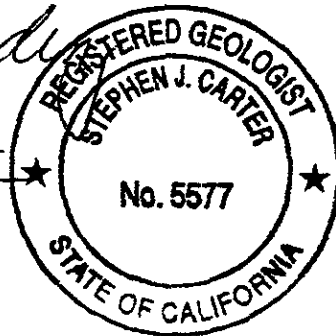
Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. A Potentiometric Map is included as Figure 1.

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 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

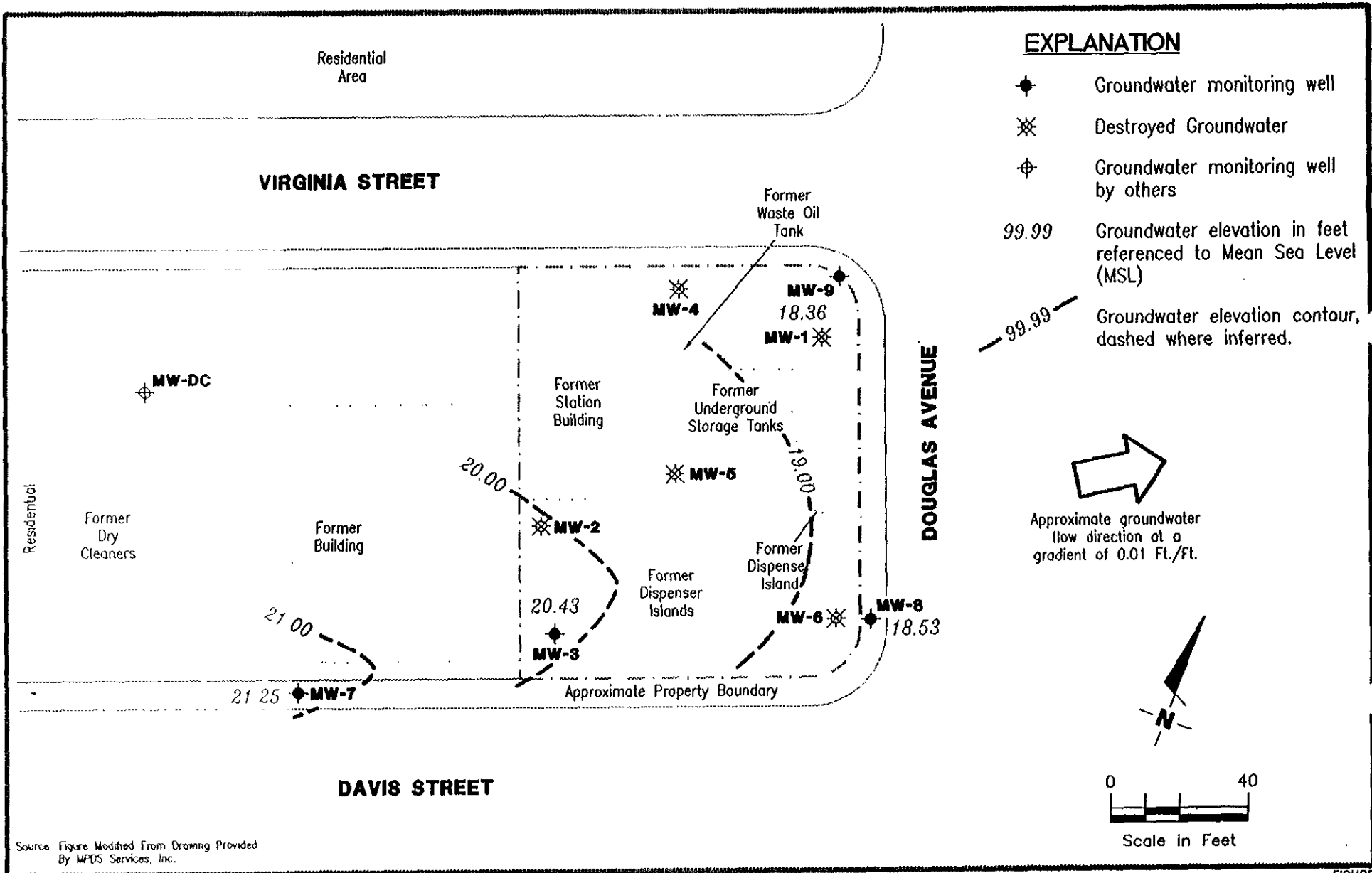
Deanna L. Harding
Project Manager

Stephen J. Carter
Senior Geologist, R.G. No. 5577



- Figure 1: Potentiometric Map
- Figure 2: Concentration Map
- Table 1: Groundwater Monitoring Data and Analytical Results
- Table 2: Groundwater Analytical Results
- Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

2512.qml



Source: Figure Modified From Drawing Provided By MPDS Services, Inc.



Gettler - Ryan Inc.

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Dublin, CA 94568

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

FIGURE

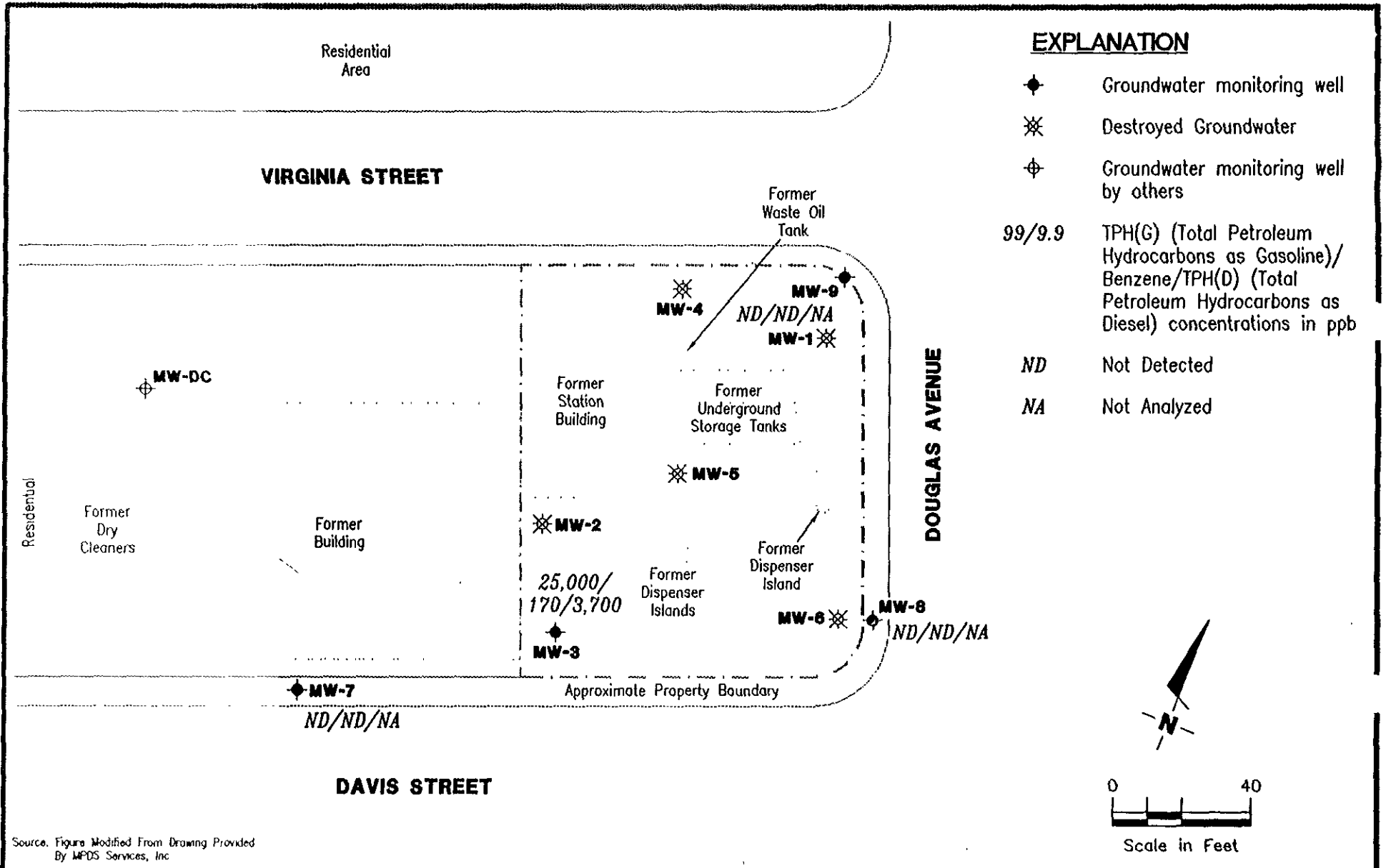
1

JOB NUMBER
280036

REVIEWED BY

DATE
January 21, 1998

REVISED DATE



EXPLANATION

- ◆ Groundwater monitoring well
- ⊗ Destroyed Groundwater
- ⊕ Groundwater monitoring well by others
- 99/9.9 TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/ Benzene/TPH(D) (Total Petroleum Hydrocarbons as Diesel) concentrations in ppb
- ND Not Detected
- NA Not Analyzed

Source: Figure Modified From Drawing Provided By MPDS Services, Inc



Gettler - Ryan Inc.

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Dublin, CA 94568

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

FIGURE
2

JOB NUMBER
280036

REVIEWED BY

DATE
January 21, 1998

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	ppb							
					TPH(D)	TPH(G)	B	T	E	X	MTBE	TOG
MW-1	04/25/89				100	ND	0.31	ND	ND	ND	--	--
	08/10/89				ND	ND	ND	ND	ND	ND	--	ND
	11/21/89				ND	ND	ND	ND	ND	ND	--	8.9
	02/23/90				ND	ND	ND	ND	ND	ND	--	ND
	05/10/90				ND	ND	ND	ND	ND	ND	--	ND
	08/09/90				ND	ND	ND	ND	ND	ND	--	ND
	11/06/90				ND	ND	ND	ND	ND	ND	--	ND
	02/04/91				ND	ND	ND	0.31	ND	0.62	--	ND
	05/24/91				--	ND	ND	ND	ND	ND	--	ND
	08/15/91				--	--	--	--	--	--	--	--
	11/19/91				--	--	--	--	--	--	--	--
	02/27/92				--	--	--	--	--	--	--	--
	05/26/92				--	--	--	--	--	--	--	--
	10/30/92				--	--	--	--	--	--	--	--
	06/09/94				--	580 ¹	ND	ND	ND	ND	--	--
	09/08/94				--	160 ²	ND	1.6	ND	3.1	--	--
	01/25/95		WELL WAS DESTROYED		--	--	--	--	--	--	--	--
MW-2	04/25/89				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	--	ND
	11/06/90				ND	ND	ND	0.42	ND	1.4	--	ND
	02/04/91				ND	ND	ND	0.38	ND	0.87	--	ND
	05/24/91				--	ND	1.5	ND	ND	ND	--	ND
	08/15/91				--	ND	ND	ND	ND	ND	--	ND
	11/19/91				--	220	2.5	8.4	2.4	14	--	--
	02/27/92				--	330	12	12	10	93	--	--
	05/26/92				--	2,900	8.8	9.3	54	36	--	--
	10/30/92				--	1,200 ¹	ND	ND	ND	ND	--	--
06/09/94				--	1,900 ²	6.7	ND	66	ND	--	--	

Table 1
Groundwater Monitoring Data and Analytical Results
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	←-----ppb-----→								
					TPH(D)	TPH(G)	B	T	E	X	MTBE	TOG	
MW-2	09/08/94				--	3,000 ¹	ND	ND	ND	17	--	--	
(cont)	01/25/95	WELL WAS 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 SAMPLED DUE TO A TRACE OF FREE PRODUCT						--	--	--
	05/24/91				2,000	23,000	940	3,400	590	2,600	--	ND	
	08/15/91				NOT SAMPLED DUE TO A TRACE OF FREE PRODUCT						--	--	--
	11/19/91				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--	--	--
	02/27/92				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--	--	--
	5/26/92				2,400,000	1,300,000	5,100	66,000	20,000	160,000	--	880	
	10/30/92				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--	--	--
	06/09/94				17,000 ³	69,000	1,300	7,100	1,900	11,000	--	--	
	09/08/94				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						--	--	--
	10/21/95				5,900 ³	50,000	250	4,200	1,700	18,000	-- ⁵	--	
	01/24/96				5,300 ³	100,000	950	3,300	2,500	16,000	-- ⁶	--	
	04/23/96				4,900 ³	50,000	430	1,700	1,600	7,600	ND	--	
	07/25/96				2,400 ⁴	17,000	170	ND	650	3,300	240	--	
32.02	10/25/96	15.33	16.69	0.00	3,700 ⁴	26,000	420	1,100	1,800	6,400	340	--	
	01/28/97	11.55	20.47	0.00	3,900 ³	32,000	230	1,000	1,000	4,500	ND	--	
	04/16/97	12.05	19.97	0.00	3,100 ³	12,000	76	ND	330	1,600	ND	--	
	07/21/97	15.17	16.85	0.00	2,400 ³	10,000	82	28	430	1,400	76	--	
	10/20/97	15.41	16.61	Sheen	2,900 ⁴	12,000	200	540	1,400	4,600	210	--	
	01/21/98	11.59	20.43	0.00	3,700 ⁷	25,000	170	640	1,200	4,800	ND ⁸	--	
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	--	ND	

Table 1
Groundwater Monitoring Data and Analytical Results
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D)	TPH(G)	B	T	E	X	MTBE	TOG
MW-4	05/10/90				88	54	ND	2	ND	0.37	--	ND
(cont)	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
	05/24/91				ND	ND	0.64	ND	ND	ND	--	ND
	08/15/91				ND	ND	ND	ND	ND	ND	--	ND
	11/19/91				ND	ND	ND	ND	ND	ND	--	--
	02/27/92				ND	43	ND	1	0.37	2.5	--	--
	05/26/92				ND	120	0.59	0.82	ND	1.9	--	--
	10/30/92	INACCESSIBLE	--	--	--	--	--	--	--	--	--	--
	06/09/94				ND	780 ¹	ND	ND	ND	ND	--	--
	09/08/94				ND	300 ¹	ND	ND	ND	ND	--	--
	01/25/95	WELL WAS DESTROYED		--	--	--	--	--	--	--	--	--
MW-5	08/29/89				100	ND	ND	0.94	0.3	ND	--	ND
	11/21/89				70	ND	ND	ND	ND	ND	--	ND
	02/23/90				ND	ND	ND	ND	ND	ND	--	ND
	05/10/90				83	ND	ND	ND	ND	0.31	--	ND
	08/09/90				ND	ND	ND	ND	ND	ND	--	ND
	11/06/90				ND	ND	ND	ND	ND	ND	--	ND
	02/04/91				ND	ND	ND	0.35	ND	ND	--	ND
	05/24/91				ND	ND	ND	ND	ND	ND	--	ND
	11/19/91				--	--	--	--	--	--	--	--
	02/27/92				--	--	--	--	--	--	--	--
	05/26/92				--	--	--	--	--	--	--	--
	10/30/92				--	--	--	--	--	--	--	--
	06/09/94	INACCESSIBLE	--	--	--	--	--	--	--	--	--	--
	09/08/94	INACCESSIBLE	--	--	--	--	--	--	--	--	--	--
	01/25/95	WELL WAS 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

Table 1
Groundwater Monitoring Data and Analytical Results
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	TPH(D)	TPH(G)	B	T	E	X	MTBE	TOG
MW-6	05/10/90				ND	ND	ND	1.2	ND	ND	--	ND
(cont)	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
	11/19/91				--	ND	ND	ND	ND	ND	--	--
	02/27/92				--	ND	3.2	ND	ND	3.8	--	--
	05/26/92				--	ND	ND	ND	ND	0.65	--	--
	10/30/92				--	ND	ND	ND	ND	ND	--	--
	06/09/94	INACCESSIBLE	--	--	--	--	--	--	--	--	--	--
	09/08/94	INACCESSIBLE	--	--	--	--	--	--	--	--	--	--
	01/25/95	WELL WAS DESTROYED	--	--	--	--	--	--	--	--	--	--
MW-7	02/27/92				--	38	ND	0.97	0.69	4	--	--
	05/26/92				--	ND	ND	ND	ND	0.6	--	--
	10/30/92				--	ND	ND	ND	ND	ND	--	--
	06/09/94				--	610	ND	ND	ND	ND	--	--
	09/08/94				--	ND	ND	1.3	ND	1.6	--	--
	10/21/95				--	ND	ND	ND	ND	ND	--	--
	01/24/96				--	ND	ND	ND	ND	ND	--	--
	04/23/96				--	220	ND	0.62	0.88	5.4	ND	--
	07/25/96				--	ND	ND	ND	ND	ND	ND	--
31 71	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	--
MW-8	10/21/95				--	ND	ND	ND	ND	ND	--	--
	01/24/96				--	ND	ND	ND	ND	ND	--	--
	04/23/96				--	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

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	Product Thickness (ft.)	←-----ppb-----→								
					TPH(D)	TPH(G)	B	T	E	X	MTBE	TOG	
MW-8													
(cont)	07/25/96				--	ND	ND	ND	ND	ND	ND	ND	--
32.73	10/25/96	15.96	16.77	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
	01/28/97	13.86	18.87	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
	04/16/97	12.74	19.99	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
	07/21/97	15.71	17.02	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
	10/20/97	15.98	16.75	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
	01/21/98	14.20	18.53	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
MW-9	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	--
32.33	10/25/96	15.66	16.67	0.00	--	ND	ND	ND	ND	ND	ND	180	--
	01/28/97	13.76	18.57	0.00	--	ND	ND	ND	ND	ND	ND	75	--
	04/16/97	12.66	19.67	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
	07/21/97	15.44	16.89	0.00	--	ND	ND	ND	ND	ND	ND	ND	--
	10/20/97	15.67	16.66	0.00	--	ND	ND	ND	ND	ND	ND	100	--
	01/21/98	13.97	18.36	0.00	--	ND	ND	ND	ND	ND	ND	140	--
Trip Blank													
TB-LB	01/21/98	--	--	--	--	ND	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

DTW = Depth to Water

(ft.) = Feet

GWE = Groundwater Elevation

msl = Relative to mean sea level

TPH(D) = Total Petroleum Hydrocarbons as Diesel

TPH(G) = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

TOG = Total Oil & Grease

MTBE = Methyl tertiary butyl ether

ppb = Parts per billion

ND = Not Detected

-- = Not Measured/Not Analyzed

* The TOC elevations are relative to msl, per East Bay MUD Benchmark DAVIS FREE #2 - San Leandro 1952 (Elevation = 32.02 feet msl).

¹ Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.

² Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

³ Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

⁴ Laboratory report indicates the hydrocarbons detected did not appear to be diesel.

⁵ Laboratory has potentially identified the presence of MTBE at reportable levels in the sample collected from this well.

⁶ Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppm in the sample collected from this well. Free product was detected in well MW3; however, a water sample was collected and analyzed to determine if the product was predominantly hydrocarbon based.

⁷ Laboratory report indicates unidentified hydrocarbons C9-C24.

⁸ Detection limit raised Refer to analytical results.

Depth to water and groundwater elevation history will be updated in future reports.

Table 2
Groundwater Analytical Results
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Well ID	Date	Tetrachloro-ethene	1,1-DCA	1,1,1-TCA	Chloro-methane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	Trichloro-ethene
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	WELL WAS DESTROYED			--	--	--	--
MW-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	WELL WAS 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 DUE TO THE PRESENCE OF FREE PRODUCT				--	--	--
	11/19/91	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--	--
	02/27/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--	--
	05/26/92	ND	ND	ND	ND	ND	ND	ND
	10/30/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--	--
	06/09/94	ND	ND	ND	ND	ND	ND	ND
	09/08/94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--	--
	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
San Leandro, California

Well ID	Date	Tetrachloro-ethene	1,1-DCA	1,1,1-TCA	Chloro-methane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	Trichloro-ethene
MW-3 (cont)	10/25/96	ND	ND	ND	ND	ND	ND	ND
	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
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
	02/27/92	3.5	6	ND	ND	ND	ND	ND
	05/26/92	2.4	13	3.5	ND	0.83	ND	ND
	10/30/92	WELL WAS INACCESSIBLE		--	--	--	--	--
	06/09/94	2.8	8.8	0.83	ND	0.51	ND	0.70
	09/08/94 ¹	1.8	ND	ND	ND	ND	ND	0.60
01/25/95	WELL WAS DESTROYED		--	--	--	--	--	
MW-5	11/06/90	0.7	ND	ND	ND	ND	ND	ND
	05/24/91	0.89	ND	ND	ND	ND	ND	ND
	06/09/94	WELL WAS INACCESSIBLE		--	--	--	--	--
	09/08/94	WELL WAS INACCESSIBLE		--	--	--	--	--
	01/25/95	WELL WAS DESTROYED		--	--	--	--	--
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	WELL WAS INACCESSIBLE		--	--	--	--	--	

Table 2
Groundwater Analytical Results
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Well ID	Date	Tetrachloro-ethene	1,1-DCA	1,1,1-TCA	Chloro-methane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	Trichloro-ethene
MW-6	09/08/94	WELL WAS INACCESSIBLE		--	--	--	--	--
(cont)	01/25/95	WELL WAS 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
	10/25/96 ²	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
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
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

Table 2
Groundwater Analytical Results
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Well ID	Date	Tetrachloroethene	1,1-DCA	1,1,1-TCA	Chloro-methane	1,1-Dichloroethene	1,2-Dichlorobenzene	Trichloroethene
MW-9	04/23/96	71	ND	ND	ND	ND	ND	ND
(cont)	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
	01/21/98	22	0.73	ND	ND	ND	ND	0.50

Trip Blank

TB-LB 1/21/98

EXPLANATIONS:

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

All EPA Method 8010 constituents were ND, except for those indicated.

1,1 DCA = 1,1-Dichloroethane

1,1,1-TCA = 1,1,1-Trichloroethane

-- = Not Analyzed

ND = Not Detected

¹ 1,2-Dichloroethane was detected at a concentration of 4.8 ppb.

² Chloroform was detected at a concentration of 1.7 ppb.

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 or equivalent. 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.

As requested by Unocal, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Unocal
 Facility # 2512
 Address: 1300 Davis st
 City: San Leandro

Job#: 280036
 Date: 1/21/98
 Sampler: Valther

Well ID MW-3
 Well Diameter 2 in.
 Total Depth 33.13 ft.
 Depth to Water 11.59 ft.

Well Condition: 04

Hydrocarbon Thickness: ∅ in. Amount Bailed (product/water): ∅ (gal.)

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

21.54 X VF 0.17 = 3.66 X 3 (case volume) = Estimated Purge Volume: 10.98 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 11:45
 Sampling Time: 12:05
 Purging Flow Rate: 2 gpm.
 Did well de-water? No

Weather Conditions: fine
 Water Color: clear Odor: γ
 Sediment Description: _____
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}/100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:48</u>	<u>4</u>	<u>7.29</u>	<u>5.49</u>	<u>71.5</u>			
<u>11:51</u>	<u>8</u>	<u>7.07</u>	<u>5.64</u>	<u>70.3</u>			
<u>11:54</u>	<u>11</u>	<u>6.94</u>	<u>5.73</u>	<u>70.0</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>5</u>	<u>Y</u>	<u>HCl</u>	<u>Sequoia</u>	<u>TPHG/BTEX/MTBE</u> <u>TPHD / 8010</u>

COMMENTS: Purged additional 100 gal. from MW-3 - after sampling.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Unocal
 Facility # 2512
 Address: 1300 Daris St.
 City: San Leandro

Job#: 280036
 Date: 1/21/98
 Sampler: Wetly

Well ID MW-7
 Well Diameter 2 in.
 Total Depth 29.93 ft.
 Depth to Water 10.46 ft.

Well Condition: OK
 Hydrocarbon Thickness: Ø in. Amount Bailed (product/water): Ø (gal.)

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

$19.47 \times \text{VF } 0.17 = 3.31 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 9.93 \text{ (gal.)}$

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
 Other: _____

Starting Time: 9:52
 Sampling Time: 10:10
 Purging Flow Rate: 2 gpm.
 Did well de-water? NO

Weather Conditions: Nice
 Water Color: clear Odor: no
 Sediment Description: _____
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:55</u>	<u>3.5</u>	<u>7.89</u>	<u>6.73</u>	<u>67.3</u>	_____	_____	_____
<u>9:58</u>	<u>7</u>	<u>7.65</u>	<u>6.91</u>	<u>68.1</u>	_____	_____	_____
<u>10:01</u>	<u>10</u>	<u>7.57</u>	<u>7.02</u>	<u>68.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>4</u>	<u>Y</u>	<u>HCl</u>	<u>S29444a</u>	<u>TPH6/BTEX/MTBE</u>
_____	_____	_____	_____	_____	<u>8010</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility # Unocal 2512

Job#: 280036

Address: 1300 Paris st.

Date: 1/21/98

City: San Leandro

Sampler: Vertek

Well ID MW-8

Well Condition: OK

Well Diameter 2 in.

Hydrocarbon Thickness: φ in. Amount Bailed (product/water): φ (gal.)

Total Depth 29.80 ft.

Depth to Water 14.20 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

15.60 x VF 0.17 = 2.65 x 3 (case volume) = Estimated Purge Volume: 7.96 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 10:28

Weather Conditions: Nic

Sampling Time: 10:50

Water Color: Clear Odor: NO

Purging Flow Rate: 2 gpm.

Sediment Description: _____

Did well de-water? NO

If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}/60$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:31</u>	<u>2.5</u>	<u>7.79</u>	<u>7.25</u>	<u>69.7</u>	_____	_____	_____
<u>10:34</u>	<u>5</u>	<u>7.58</u>	<u>7.30</u>	<u>69.3</u>	_____	_____	_____
<u>10:37</u>	<u>8</u>	<u>7.50</u>	<u>7.41</u>	<u>69.1</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>4</u>	<u>Y</u>	<u>HCl</u>	<u>Sequoia</u>	<u>TAH/BTEX/MTBE</u>
_____	_____	_____	_____	_____	<u>2010</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Unocal
 Facility # 2512
 Address: 1300 Davis St.
 City: San Leandro

Job#: 280036
 Date: 1/21/98
 Sampler: Vartken

Well ID MW-9
 Well Diameter 2 in.
 Total Depth 29.95 ft.
 Depth to Water 13.97 ft.

Well Condition: OK
 Hydrocarbon Thickness: ∅ in. Amount Bailed (product/water): ∅ (gal.)

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

15.98 X VF 0.17 = 2.72 X 3 (case volume) = Estimated Purge Volume: 8.15 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 11:10
 Sampling Time: 11:28
 Purging Flow Rate: 2 gpm.
 Did well de-water? NO

Weather Conditions: Nice
 Water Color: clear Odor: NO
 Sediment Description: _____
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 100$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:13</u>	<u>3</u>	<u>7.95</u>	<u>7.10</u>	<u>70.8</u>			
<u>11:15</u>	<u>6</u>	<u>7.70</u>	<u>7.23</u>	<u>70.2</u>			
<u>11:18</u>	<u>9</u>	<u>7.59</u>	<u>7.27</u>	<u>69.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>4</u>	<u>Y</u>	<u>HCl</u>	<u>sequoia</u>	<u>TPHG/BTEX/MTBE</u>
					<u>8010</u>

COMMENTS: _____

Consultant Company: **GETTLER-RYAN INC.** Project Name: **Former UNOCAL # 2512**
 Address: **6747 SIERRA COURT, SUITE J** UNOCAL Project Manager: **MR. BOB BOUST**
 City: **DUBLIN** State: **CA** Zip Code: **94568** AFE #:
 Telephone: **510-551-7555** FAX #: **510-551-7899** Site #, City, State: **1300 Davis Street, San Leandro**
 Report To: **DEANNA HARDING** Sampler: **Vartkes Tashjian** QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days Drinking Water
 Time: 2 Work Days 1 Work Day 2-8 Hours Waste Water
 CODE: Misc. Detect. Eval. Remed. Demol. Closure Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested 98011361										Comments		
1. T.B.			1	VOA	1	X	X	X										
2. MW-3	1/21/98 12:05 PM		5	4 VOA 1 Amber	2	X	X	X										
3. MW-7	1/21/98 10:10 AM		4	4 VOA	3	X		X										
4. MW-8	1/21/98 10:50 AM		4	4 VOA	4	X		X										
5. MW-9	1/21/98 11:28 AM		4	4 VOA	5	X		X										
6.																		
7.																		
8.																		
9.																		
10.																		

Relinquished By: <i>Northy Paulet</i>	Date: <i>1/21/98</i>	Time: <i>1:30 PM</i>	Received By: <i>D. Harding</i>	Date: <i>1/21/98</i>	Time: <i>2:27</i>
Relinquished By: <i>D. Harden</i>	Date: <i>1/21/98</i>	Time: <i>3:00</i>	Received By: <i>Steve Pa</i>	Date: <i>1/21/98</i>	Time: <i>3:00</i>
Relinquished By: <i>Steve Pa</i>	Date: <i>1/21/98</i>	Time: <i>17:34</i>	Received By Lab: <i>Juni Down</i>	Date: <i>1/21/98</i>	Time: <i>17:34</i>

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page of

To be completed upon receipt of report:
 1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____
 Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: TB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B61-01	Sampled: 01/22/98 Received: 01/21/98 Analyzed: 02/03/98 Reported: 02/11/98
Attention: Deanna Harding		

QC Batch Number: GC020398BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	86

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9801B61-02	Sampled: 01/21/98 Received: 01/21/98 Extracted: 01/22/98 Analyzed: 01/23/98 Reported: 02/11/98
--	--	--

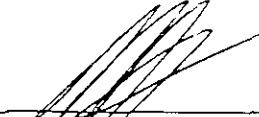
QC Batch Number: GC012298OHBPEXA
Instrument ID: GCHP19B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern: Unidentified HC	200	3700 C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	73

Analytes reported as N D were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B61-02	Sampled: 01/21/98 Received: 01/21/98 Analyzed: 02/05/98 Reported: 02/11/98
---	--	---

QC Batch Number: GC020598BTEX06A
Instrument ID: GCHP6

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	25000
Methyl t-Butyl Ether	250	N.D.
Benzene	50	170
Toluene	50	640
Ethyl Benzene	50	1200
Xylenes (Total)	50	4800
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	93

Analytes reported as N D were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9801B61-02	Sampled: 01/21/98 Received: 01/21/98 Analyzed: 01/27/98 Reported: 02/11/98
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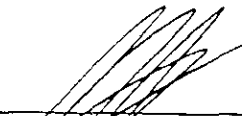
QC Batch Number: GC012698801009A
Instrument ID: GCHP09

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
Surrogates	Control Limits %	% Recovery
1-Chloro-2-fluorobenzene	70 130	94

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: MW-7 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B61-03	Sampled: 01/21/98 Received: 01/21/98 Analyzed: 02/02/98 Reported: 02/11/98
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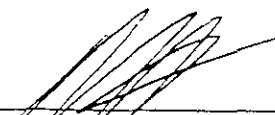
QC Batch Number: GC020298BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	88

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: MW-7 Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9801B61-03	Sampled: 01/21/98 Received: 01/21/98 Analyzed: 01/27/98 Reported: 02/11/98
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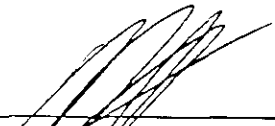
QC Batch Number: GC012698801009A
Instrument ID: GCHP09

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	1.2
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
Surrogates	Control Limits %	% Recovery
1-Chloro-2-fluorobenzene	70 130	101

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: MW-8 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B61-04	Sampled: 01/21/98 Received: 01/21/98 Analyzed: 02/02/98 Reported: 02/11/98
Attention: Deanna Harding		

QC Batch Number: GC020298BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	95

Analytes reported as N D were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Unocal San Leandro, #2512
Sample Descript: MW-8
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9801B61-04

Sampled: 01/21/98
Received: 01/21/98

Analyzed: 01/27/98
Reported: 02/11/98

QC Batch Number: GC012698801009A
Instrument ID: GCHP09

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	0.77
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
Surrogates	Control Limits %	% Recovery
1-Chloro-2-fluorobenzene	70 130	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568	Client Proj. ID: Unocal San Leandro, #2512 Sample Descript: MW-9 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B61-05	Sampled: 01/21/98 Received: 01/21/98 Analyzed: 02/02/98 Reported: 02/11/98
Attention: Deanna Harding		

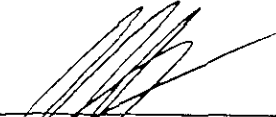
QC Batch Number: GC020298BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	140
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Proj. ID: Unocal San Leandro, #2512
Sample Descript: MW-9
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9801B61-05

Sampled: 01/21/98
Received: 01/21/98
Analyzed: 01/27/98
Reported: 02/11/98

QC Batch Number: GC012698801009A
Instrument ID: GCHP09

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	0.73
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	22
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	0.50
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
Surrogates	Control Limits %	% Recovery
1-Chloro-2-fluorobenzene	70 130	92

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Gettler Ryan/Geostrategies 6747 Sierra Court Suite J Dublin, CA 94568 Attention: Deanna Harding	Client Proj. ID: Unocal San Leandro, #2512 Lab Proj. ID: 9801B61	Received: 01/21/98 Reported: 02/11/98
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LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 17 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPGBMW: Sample #2 was run within the fourteen day holding time. However, at a 5x dilution the results were above the calibration range. The sample was re-run past the fourteen day hold time at a 100x dilution with the results within the calibration range.

pH analysis:
The voas had a pH = 1

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager





Sequoia Analytical

80 Chesapeake Drive Redwood City, CA 94066 (650) 364-9600 FAX (650) 364-9233
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Gettler Ryan/Geostrategies Client Project ID: Unocal San Leandro, #2512
 6747 Sierra Court, Ste J Matrix: Liquid
 Dublin, CA 94568
 Attention: Deanna Harding Work Order #: 9801B61 -01 Reported: Feb 11, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC020398BTEX21A	GC020398BTEX21A	GC020398BTEX21A	GC020398BTEX21A	GC020398BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	9801A5204	9801A5204	9801A5204	9801A5204	9801A5204
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/3/98	2/3/98	2/3/98	2/3/98	2/3/98
Analyzed Date:	2/3/98	2/3/98	2/3/98	2/3/98	2/3/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.9	8.9	9.0	27	53
MS % Recovery:	89	89	90	90	88
Dup. Result:	8.0	8.0	8.1	24	49
MSD % Recov.:	80	80	81	80	82
RPD:	11	11	11	12	7.8
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK020398	BLK020398	BLK020398	BLK020398	BLK020398
Prepared Date:	2/3/98	2/3/98	2/3/98	2/3/98	2/3/98
Analyzed Date:	2/3/98	2/3/98	2/3/98	2/3/98	2/3/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.3	8.3	8.5	25	50
LCS % Recov.:	83	83	85	83	83

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9801B61.GET <1>

Strategies Client Project ID: Unocal San Leandro, #2512
 e J Matrix: Liquid
 arding Work Order #: 9801B61-02 Reported: Feb 11, 1998

Feb 11, 1998

QUALITY CONTROL DATA REPORT

Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
GC020598BTEX06A	GC020598BTEX06A	GC020598BTEX06A	GC020598BTEX06A	GC020598BTEX06A
EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Gas
GC020298BTEX06A
EPA 8015M
EPA 5030

J. Minkel 9801D2510 N.D. 2/5/98 2/5/98 GCHP6 10 µg/L	J. Minkel 9801D2510 N.D. 2/5/98 2/5/98 GCHP6 10 µg/L	J. Minkel 9801D2510 N.D. 2/5/98 2/5/98 GCHP6 10 µg/L	J. Minkel 9801D2510 N.D. 2/5/98 2/5/98 GCHP6 30 µg/L	J. Minkel 9801D2510 N.D. 2/5/98 2/5/98 GCHP6 60 µg/L
6.4	9.2	12	36	54
64	92	120	120	90
9.8	9.8	10	30	48
98	98	100	100	80
42	6.3	18	18	12
0-25	0-25	0-25	0-25	0-25

J. Minkel 9801B5811 N.D. 2/2/98 2/2/98 GCHP6 60 µg/L
41
68
43
72
4.8
0-25

BLK020598	BLK020598	BLK020598	BLK020598	BLK020598
2/5/98	2/5/98	2/5/98	2/5/98	2/5/98
2/5/98	2/5/98	2/5/98	2/5/98	2/5/98
GCHP6	GCHP6	GCHP6	GCHP6	GCHP6
10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
10	10	11	31	51
100	100	110	103	85

BLK020298
2/2/98
2/2/98
GCHP6
60 µg/L
46
77

60-140	60-140	60-140	60-140	60-140
70-130	70-130	70-130	70-130	70-130

60-140
70-130

Please Note
 The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

ng the same reagents,
 : an aliquot of sample
 nalytical procedure. If
 limits due to matrix

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference



Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal San Leandro, #2512
Matrix: Liquid

Work Order #: 9801B61-02-05

Reported: Feb 11, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-Benzene
QC Batch#:	GC012698801009A	GC012698801009A	GC012698801009A
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	EPA 5030	EPA 5030	EPA 5030

Analyst:	E. Cunanan	E. Cunanan	E. Cunanan
MS/MSD #:	9801B8501	9801B8501	9801B8501
Sample Conc.:	N.D.	2.1	N.D.
Prepared Date:	1/26/98	1/26/98	1/26/98
Analyzed Date:	1/26/98	1/26/98	1/26/98
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L

Result:	25	25	25
MS % Recovery:	100	92	100

Dup. Result:	25	26	27
MSD % Recov.:	100	96	108

RPD:	0.0	3.9	7.7
RPD Limit:	0-25	0-25	0-25

LCS #:	BLK012798	BLK012798	BLK012798
Prepared Date:	1/27/98	1/27/98	1/27/98
Analyzed Date:	1/27/98	1/27/98	1/27/98
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
LCS Result:	21	20	22
LCS % Recov.:	84	80	88

MS/MSD	60-140	60-140	60-140
LCS	65-135	70-130	70-130
Control Limits			

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



**Sequoia
Analytical**

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FAX (510) 988-9673
FAX (916) 921-0100

Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal San Leandro, #2512
Matrix: Liquid

Work Order #: 9801B61-02

Reported: Feb 11, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC0122980HBPEXA
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3510

Analyst: G. Fish
MS/MSD #: 9801B2202
Sample Conc.: N.D.
Prepared Date: 1/22/98
Analyzed Date: 1/22/98
Instrument I.D.#: GCHP19
Conc. Spiked: 1000 µg/L

Result: -*
MS % Recovery: 0.0

Dup. Result: 800
MSD % Recov.: 80

RPD: -*
RPD Limit: 0-50

*Due to extraction problem MS had no recovery

LCS #: BLK012298

Prepared Date: 1/22/98
Analyzed Date: 1/22/98
Instrument I.D.#: GCHP19
Conc. Spiked: 1000 µg/L

LCS Result: 830
LCS % Recov.: 83

MS/MSD	50-150
LCS	60-140
Control Limits	

Please Note.

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9801B61 GET <5>

