## Ultramar

ERAMINATEOTION

99 Aralecapy 209 585-5685 Credit

209-583-5685 Credit 209-583-3330 Administrative 209-583-3302 Information Services 209-583-3358 Accounting

**Ultramar, Inc.** P.O. Box 466 525 W. Third Street Hanford, CA 93232-0466 (209) 582-0241

April 27, 1999

Mr. Scott Seery Senior Hazardous Materials Specialist Alameda County Health Care Services Agency, Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Oakland, CA 94502-6577

SUBJECT: First Quarter 1999 Ground Water Monitoring Report

Former Beacon Station No. 574

22315 Redwood Road, Castro Valley, California

Dear Mr. Seery:

Enclosed is a copy of the First Quarter 1999 Ground Water Monitoring Report, prepared by El Dorado Environmental Inc., for the above-referenced Ultramar facility. Also enclosed is a copy of the Quarterly Status Report describing the work performed this quarter and the work anticipated to be conducted in the next quarter.

If you have questions regarding this project, please contact me at (559) 583-3231.

Sincerely,

ULTRAMAR INC.

Joseph A. Aldridge, RG Senior Project Manager

Retail Environmental Services

Enclosures:

First Quarter 1999 Ground Water Monitoring Report

Quarterly Status Report

cc w/encl.:

Mr. Rich Hiett, CRWQCB-San Francisco Bay Region



## Ultramar

Ultramar, Inc. P.O. Box 466 525 W. Third Street Hanford, CA 93232-0466 (209) 582-0241

Telecopy: 209-585-5685 Credit 209-583-3330 Administrative 209-583-3302 Information Services 209-583-3358 Accounting



DATE REPORT SUBMITTED: April 27, 1999

QUARTER ENDING: March 31, 1999

FORMER SERVICE STATION NO.: 574

ADDRESS: 22315 Redwood Road, Castro Valley, CA

COUNTY: Alameda

ULTRAMAR CONTACT: Joseph A. Aldridge

TEL. NO: 559-583-3231

### BACKGROUND:

On May 5, 1987, five underground storage tanks (two gasoline, two diesel and one waste oil) were excavated and removed from the site. Soil samples were collected from beneath the tanks and analyzed for hydrocarbon constituents. Based on preliminary analytical data related to the collected soil samples, it was determined that elevated levels of gasoline and diesel were present in the soil beneath the former fuel tanks. Soil was over-excavated from beneath the former fuel tanks. Soil samples were collected after the over-excavation and confirmed that the addition excavation was successful.

During March 1991, three groundwater monitoring wells were installed on-site. Laboratory analysis of soil samples obtained from the borings for the installation of the monitoring wells indicated that the soil near the soil/water interface exhibited gasoline range hydrocarbons.

Quarterly monitoring was initiated during the fourth quarter 1991.

Installed five groundwater monitoring wells in May of 1993. With the installation of these new wells the extent of impacted groundwater was fully defined.

Conducted a soil gas survey/performance test, aquifer pump test, and air-sparging test during the first quarter of 1994.

Submitted a PAR/RAP during the fourth quarter 1994.

A Risk-Based Corrective Action (RBCA) assessment was prepared and submitted to the County in December 1996. Correspondence prepared by the County in May 1997, and July 1998, requested further RBCA analyses.

Monitoring Wells MW-7 and MW-8 were abandoned in September 1998, as required by the Alameda County Department of Public Works.



Quarterly Status Report - First Quarter 1999 Former Service Station #574 Castro Valley, California

Page 2

## **SUMMARY OF THIS QUARTER'S ACTIVITIES:**

Performed quarterly groundwater monitoring on February 17, 1999. A Supplement to Risk-Based Corrective Action Tier 1 and Tier 2 Analyses was completed in March 1999.

## **RESULT OF QUARTERLY MONITORING:**

Benzene was not detected in samples collected from the two off-site monitoring wells. MTBE was detected in one of the samples collected from the two off-site monitoring wells. Concentrations of these and other petroleum hydrocarbon constituents remain stable.

## PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

**ACTIVITY** 

**ESTIMATED COMPLETION DATE** 

Quarterly groundwater monitoring

June 1999

## El Dorado Environmental, Inc.

2221 Goldorado Trail, El Dorado, California 95623

(916) 626-3898 Fax (916) 626-3899

April 23, 1999

Mr. Joe Aldridge Senior Project Manager Ultramar Inc. 525 West Third Street Hanford, California 93230

Subject:

First Quarter 1999 Ground Water Monitoring Report

Former Beacon Station #574

22315 Redwood Road, Castro Valley, California

Dear Mr. Aldridge:

El Dorado Environmental, Inc. (EDE) has prepared this report to document the results of quarterly ground water monitoring conducted on February 17, 1999, at the subject site (Figure 1). The monitoring, conducted by Doulos Environmental (Doulos), included measurements of depth to ground water, subjective analysis for the presence or absence of free product, ground water purging and collection of ground water samples. Doulos reports that all field activities were conducted in accordance with the Ultramar Field Procedures described in Attachment A.

## **GROUND WATER ELEVATIONS**

Prior to purging, Doulos collected depth to ground water measurements. Copies of Doulos' field data sheets are contained in Attachment B. Ground water elevation data collected since March 1992 are summarized in Table 1. Historical ground water elevation data are contained in Attachment C. On the basis of the current measurements, ground water flows toward the southwest (Figure 2) at a gradient of approximately 0.01 foot per foot. Ground water elevations increased an average of 1.16 feet compared to the last monitoring event.

## GROUND WATER SAMPLING AND ANALYSES

Ground water samples were collected from five monitoring wells (by agreement with Alameda County, ground water samples were collected only from monitoring wells MW-1 through MW-3 and MW-5 and MW-6). All samples were analyzed for concentrations of:

- TPH, as gasoline, by modified EPA Method 8015.
- BTEX by EPA Method 602.
- MTBE by EPA Method 602.

Analytical results collected since March 1992 are summarized in Table 2. Historical analytical data are contained in Attachment D. Figure 3 illustrates the inferred distribution of dissolved benzene in ground water based on the current data. The laboratory report and chain-of-custody form for the current sampling event are included in Attachment E. Benzene was not detected in ground water samples collected from monitoring wells MW-5 and MW-6. Benzene was reported at detectable concentrations in ground water samples collected from monitoring wells MW-1, MW-2, and MW-3.

A copy of this quarterly monitoring report should be forwarded to:

Mr. Scott Seery Alameda County Health Agency, Division of Hazardous Materials Department of Environmental Health 80 Swan Way, Room 350 Oakland, California 94621

Mr. Rich Hiett
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

The interpretations and/or conclusions that may be contained within this report represent our professional opinions. These opinions are based on currently available information. Other than this, no warranty is implied or intended. This report has been prepared solely for the use of Ultramar Inc. Any reliance on this report by third parties will be at such parties' sole risk.

If you have any questions or comments, please contact us at (530) 626-3898.

Regards,

EL DORADO ENVIRONMENTAL, INC.

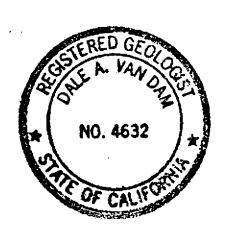
Dale A. van Dam, R.G.

Del and

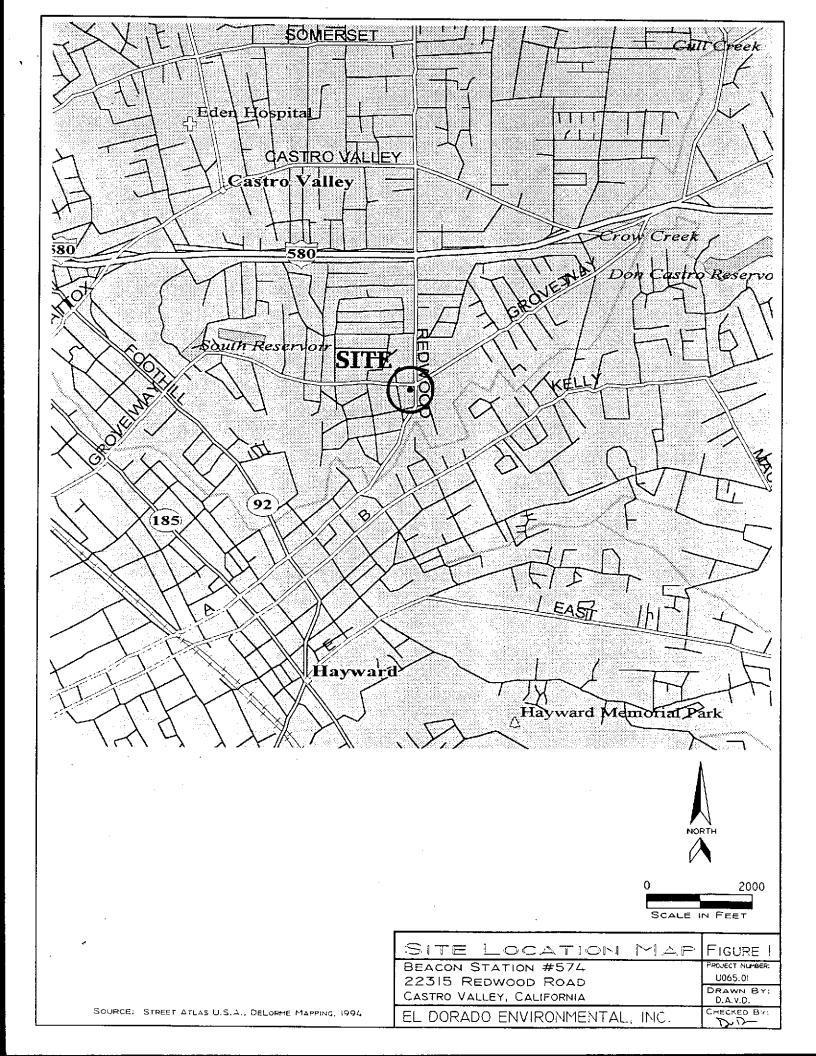
Hydrogeologist

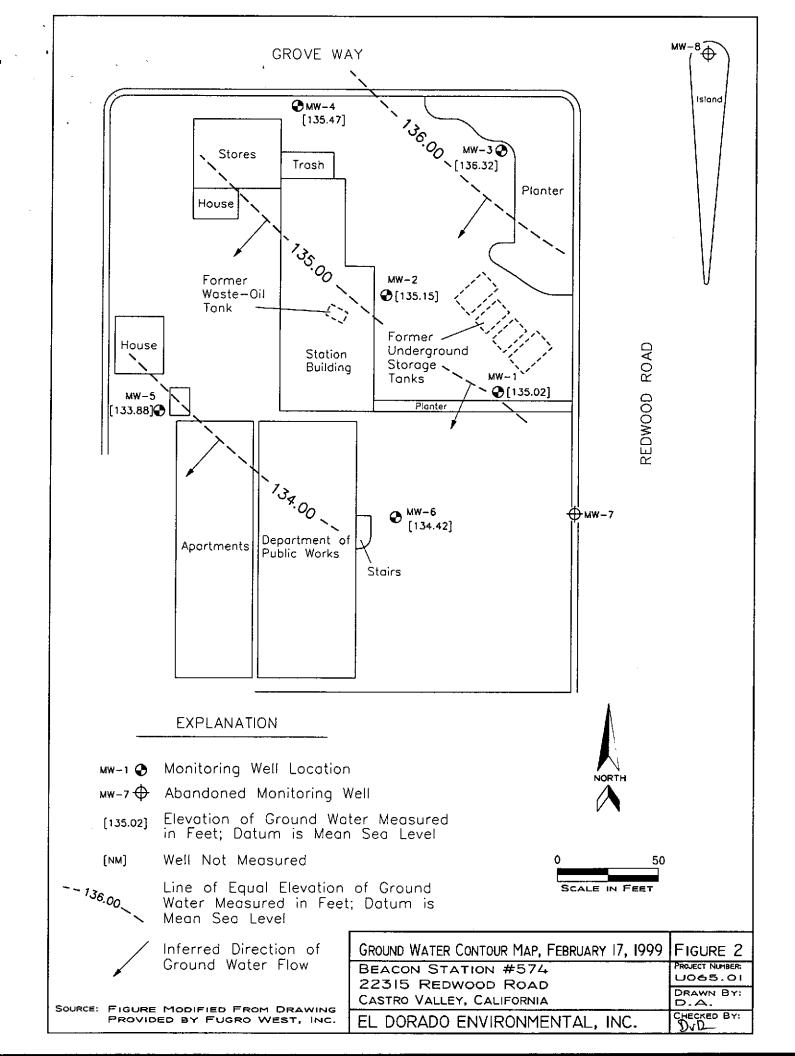
DAvD/davd

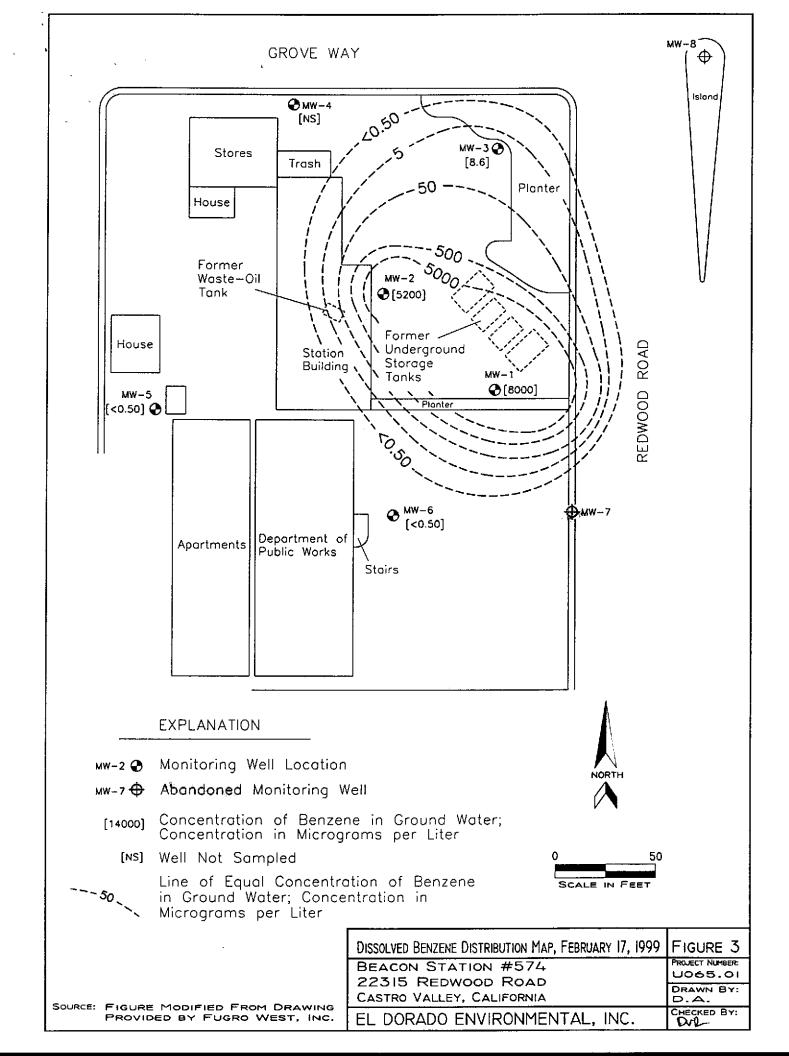
Attachments



FIGURES:	FIGURE 1 SITE LOCATION MAP
	FIGURE 2 GROUND WATER CONTOUR MAP FEBRUARY 17, 1999
	FIGURE 3 DISSOLVED BENZENE DISTRIBUTION MAP FEBRUARY 17, 1999
TABLES:	TABLE 1 GROUND WATER ELEVATION DATA
	TABLE 2 GROUND WATER ANALYTICAL RESULTS
ATTACHMENTS:	A
	B DOULOS ENVIRONMENTAL FIELD DATA SHEETS
	C HISTORICAL GROUND WATER ELEVATION DATA
	D HISTORICAL GROUND WATER ANALYTICAL DATA
	E LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM







(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>1</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-I	03/27/92	156.55	22.43	134.12		
•	06/04/92	150.55	23.40	133.15		
	09/23/92		24.07	132.48		
	11/12/92		24.16	132.39	29.33	
	02/02/93		21.87	134.68	29.80	
	05/07/93		22.58	133.97	29.84	
	05/18/93		22.66	133.89		
	08/11/93	•	23.41	133.14	29.81	
	11/05/93		24.09	132.46	29.81	
	03/01/94		22.76	133.79	29.85	
	06/02/94		23.24	133.31	29.85	
	09/09/94		23.93	132.62	29.86	
	12/20/94		22.94	133.61	29.85	
	03/08/95		22.20	134.35	29.71	
	06/14/95		22.65	133.90	29.70	
	09/26/95		23.44	133.11	29.71	
	12/27/95		23.04	133.51	29.72	
	08/26/96		21.39	f35.16	29.71	
	06/05/96		22.43	134.12	29.73	
	09/16/96		24.42	132,13	29.74	
	12/02/96		23,14	133.41	29.75	
	03/10/97		22.30	134.25	29.76	
	06/12/97		22.97	133.58	29.76	
	09/29/97		23.35	133.20	29.78	
	12/01/97		22.73	133.82	29.79	
	02/19/98		20.56	185,99	29.78	
	05/28/98		21.78	134.77	29.76	
	08/31/98		22.64	133.91	29.78	
	12/08/98		22.87	133.68	29.76	
	02/17/99		21.53	135.02	29.75	

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level. Measurement from top of casing to bottom of well.

Well Depth

Well abandoned.

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>1</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-2	03/27/92	155.17	20.82	134,35		
	06/04/92	100,17	21.81	133.36		
	09/23/92		22.45	132.72		
	11/12/92		22.60	132.57	29.71	
	02/02/93		20.28	134.89	29.73	
	05/07/93		20.97	134.20	29.73	
	05/18/93		21.06	134.11		
	08/11/93		21.85	133.32	29.70	
	11/05/93		22.32	132.85	29.70	i
	03/01/94		21.19	133.98	29.68	ļ
	06/02/94		21,59	133.58	29.69	
	09/09/94		22,33	132.84	29.66	
	12/20/94	•	21.37	133.80	29.65	
	03/08/95		20.60	134.57	29.52	
	06/14/95		21.04	134.13	29.54	
	09/26/95		21.84	133.33	29.53	
	12/27/95		21.44	133.73	29.56	
	03/26/96		19.81	135.36	29.56	
	06/05/96		20.83	134.34	29.59	
	09/16/96		21.93	133.24	29.58	
	12/02/96		21.54	133.63	29.58	
	03/10/97		20.71	134.46	29.58	
	06/12/97		21.41	133.76	29.52	i
	09/29/97		21.26	133.91	29.51	
	12/01/97	ļ	20.97	134.20	29.50	
	03/19/98		18.98	136.19	29.51	
	05/28/98		20.22	134.95	29.50	
	08/31/98	1	21.09	134.08	29.51	
	12/08/98		21.31	133.86	29.50	
	02/17/99		20.02	135.15	29.51	

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing.

2 Weil Depth 3

Elevation referenced to mean sea level.

Measurement from top of casing to bottom of well.

Well abandoned.

(Measurements in feet)

	<del>                                     </del>	<u> </u>		1	1	<del></del>
Monitoring	Date	Reference Elevation	Depth to	Ground Water	Well	_
Well	Date	(top of casing)	Ground Water <sup>1</sup>	Elevation <sup>1</sup>	Depth	Comments
MW-3	03/27/92	157.13	21.46	135.67		
	06/04/92		22.34	134.79		
	09/23/92		22.84	134.29		
	11/12/92		23.04	134.09	29.55	ĺ
i	02/02/93		21.03	136.10	29.45	
	05/07/93	•	21.59	135.54	29.53	
	05/18/93 08/11/93		21.73	135.40	20.41	
	11/05/93	;	22.31 22.85	134.82 134.28	29.41 29.41	
	03/01/94	i	21.97	135.16	29.55	
	06/02/94		22.29	134.84	29.56	
	09/09/94		22.91	134.22	29.56	
	12/20/94		22.11	135.02	29.54	
1	03/08/95		21.40	135.73	29.38	
	06/14/95		21.80	135.33	29.36	
	09/26/95		22.38	134.75	29.37	
	12/27/95		22.07	135.06	29.37	
	03/26/96		20.73	136.40	29.38	
-	06/05/96		21.54	135.59	29.40	
i	09/16/96 12/02/96		22.37	134.76	29.43	
	03/10/97		22.35 21.44	134.78	29.45	
ł	06/12/97		21.44 21.97	135.69 135.16	29.47 29.45	
	09/29/97	i	22.30	134.83	29.45	
	12/01/97		21.78	135.35	29.46	
	03/19/98	l	19.88	137.25	29.46	
	05/28/98	ĺ	20.91	136.22	29.47	
	08/31/98		21.61	135.52	29.47	
	12/08/98		21.83	135.30	29.47	
	02/17/99		20.81	136.32	29.45	
MW-4	05/18/93	151.96	17.55	134.41		
	08/11/93		17.50	134.46	28.43	
	11/05/93	•	15.84	136.12	28.43	
	03/01/94	1	17.35	134.61	28.11	
	06/02/94 09/09/94	ŀ	17.68	134.28	28.12	
	12/20/94		18.19 17.52	133.77 134.44	28.13 28.10	
	03/08/95		16.82	135.14	27.97	
	06/14/95	İ	17,22	134.74	27.97	
	09/26/95		17.79	134.17	27.91	
	12/27/95		17.47	134.49	27.89	
1	03/26/96	ĺ	16.32	135.64	27.89	
	06/05/96		17.10	134.86	27.88	
<u> </u>	09/16/96	1	17.85	134.11	27.89	
	12/02/96		17.59	134.37	27.88	
	03/10/9 <b>7</b> 06/12/97		16.79	135.17	27.89	1
	09/29/97		17.49 18.33	134.47 133.63	27.90	
	12/01/97	ĺ	17.36	134.60	27.91 27.90	
	03/19/98		15.90	136.06	27.91	
] <b> </b>	05/28/98		16.34	135.62	27.90	
	08/31/98		16.83	135.13	27.90	
	12/08/98		17.37	134.59	27.91	
	02/17/99		16.49	135.47	27.98	

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level. Measurement from top of casing to bottom of well. Well abandoned.

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>t</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-5	05/18/93	148.68	15.72	132.96		
111115	08/11/93	140.00	16,42	132.26	25.43	
ļ	11/05/93		16.92	131.76	25.43	
	03/01/94		15.54	133.14	25.00	
	06/02/94		16.19	132.49	25.00	
	09/09/94		16.87	131.81	25.00	İ
	12/20/94		15.84	132.84	25.01	
	03/08/95	,	15.11	133.57	24.85	
	06/14/95		15.69	132,99	24.86	
	09/26/95		16.46	132.22	24.81	,
	12/27/95		15.91	132.77	24.80	
	03/26/96		14.31	134.37	24.81	
	06/05/96		15.43	133.25	24.75	1
ĺ	09/16/96		16.52	132.16	24.74	
	12/02/96		16.05	132.63	24.76	
	03/10/97	i	14.80	133.88	24,74	ļ
	06/12/97		15.95	132.78	24.75	
	09/29/97	İ	16.33	132.35	24.76	
	12/01/97		15.48	133.20	24.78	
	03/19/98		13.16	135.52	24.77	
	05/28/98		14.04	134.64	24.78	
	08/31/98		14.81	133.87	24.79	
İ	12/08/98		15.75	132.93	24.76	
	02/17/99		14.80	133.88	24.78	
MW-6	05/18/93	153.96	20.80	133.16		
ļ	08/11/93		21.64	132.32	31.15	
1	11/05/93		22.11	131.85	31.15	
	03/01/94		20.80	133.16	29.96	
	06/02/94	1	21.37	132.59	29.98	•
	09/09/94		22.05	131.91	29.96	
	12/20/94	:	21.06	132.90	29.89	
	03/08/95	f	20.29	133.67	29.67	
ļ	06/14/95		20.81	133.15	29.65	
ľ	09/26/95	ļ	21.62	132.34	29.66	
	12/27/95 03/26/96		21.12	132.84	29.63	
	06/05/96		19.50	134.46	29.60	
ľ	09/16/96		20.56 21.70	133.40 132.26	29.63 29.65	<u> </u>
	12/02/96		21.70	132.26	29.66 29.66	
1	03/10/97	ł	20.16	133.80	29.64	
	06/12/97	ĺ	21.16	132.80	29.64 29.62	
1	09/29/97		21.10	132.45	29.62	
İ	12/01/97	j	20.89	132.43	29.61	
	03/19/98		18.71	135.25	29.60	
	05/28/98		19.99	133.23	29.62	
	08/31/98		20.81	133.15	29.63	
	12/08/98		21.00	132.96	29.64	
	02/17/99		19.54	134.42	29.63	

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level.

Measurement from top of casing to bottom of well.

Well abandoned.

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Ground Water <sup>i</sup>	Ground Water Elevation <sup>2</sup>	Well Depth	Comments
MW-7	05/18/93	156.09	22.64	133,45		
	08/11/93		23.25	132.84	30.75	
	11/05/93		23.93	132.16	30.75	
	03/01/94	}	22.72	133.37	30.73	
	06/02/94		23.22	132.87	30.12	
<u> </u>	09/09/94		23.90	132.19	30.12	
	12/20/94		22.98	133.11	30.10	
N	03/08/95		22.14	133.95	29.91	
	06/14/95		22.61	133.48	29.91	
	09/26/95		23.43	132.66	29.90	ł
<b>,</b>	12/27/95		23.01	133.08	29.90	
i	03/26/96		21.32	134.77	29.87	!
	06/05/96		22.37	133.72	29.91	
	09/16/96		23.51	132.58	29.90	
	12/02/96		23.08	133.01	29.91	
	03/10/97		21.94	134.15	29.90	
	06/12/97		. 22.96	133.13	29.88	
	09/29/97		23.35	132.74	29.87	
į į	12/01/97		22.68	133.41	29.88	
	03/19/98		20.52	135.57	29.88	
	05/28/98		21.76	134.33	29.88	
	08/31/98		22.66	133.43	29.86	
	12/08/983					
MW-8	05/18/93	158.04	21.55	136,49		
	08/11/93		22.43	135.61	34.82	
	11/05/93		23.00	135.04	34.82	
	03/01/94		22.05	135.99	34.04	
l	06/02/94		22.29	135.75	34.04	
]	09/09/94		22.99	135.05	34.04	
	12/20/94		22,14	135.90	33.98	
,	03/08/95	İ	21.25	136.79	34.48	
	06/14/95		21.70	136.34	34.49	
	09/26/95		22.29	135.75	34.40	
	12/27/95	1	21.96	136.08	34.43	
	03/26/96	]	20.48	137.56	34.42	
	06/05/96	1	21.50	136.54	34.41	
	09/16/96		22.38	135.66	34.43	
]	12/02/96		22.39	135.65	34.42	
1	03/10/97		20.89	137.16	34.43	
	06/12/97	1	21.80	136.24	34.42	
•	09/29/97		22.81	135.23	34.40	
	12/01/97	İ	21.70	136.34	34.41	
ĺ	03/19/98		19.35	138.69	34.42	
	05/28/98		20.52	137.52	34.41	
i	08/31/98		21.40	136.64	34.40	İ
	12/08/983					

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level.

Measurement from top of casing to bottom of well.

Well abandoned.

(Measurements in feet)

	T	<del>                                     </del>		<del> </del>	<del>,</del>	
	ł	Reference				
Monitoring	İ	Elevation	Depth to	Ground Water	Well	
Well	Date	(top of casing)1	Ground Water <sup>1</sup>	Elevation <sup>2</sup>	Depth	Comments
				1		
MW-7	05/18/93	156.09	22.64	133.45		
	08/11/93	}	23.25	132.84	30.75	
1	11/05/93		23.93	132.16	30.75	
	03/01/94		22.72	133.37	30.11	
	06/02/94		23.22	132.87	30.12	
	09/09/94		23.90	132.19	30.12	
	12/20/94		22.98	133.11	30.10	
	03/08/95		22.14	133.95	29.91	
ļļ	06/14/95		22.61	133.48	29.91	i
	09/26/95		23.43	132.66	29. <del>9</del> 0	]
Jł	12/27/95		23,01	133.08	29.90	İ
1	03/26/96		21.32	134.77	29.87	
<b>]</b>	06/05/96		22.37	133.72	29.91	
1	09/16/96		23.51	132.58	29.90	
	12/02/96		23.08	133.01	29.91	İ
	03/10/97		21.94	134.15	29.90	]
i	06/12/97		22.96	133.13	29.88	ĺ
	09/29/97		23.35	132,74	29.87	
	12/01/97		22.68	133.41	29.88	ļ
:	03/19/98		20.52	135.57	29.88	
	05/28/98		21.76	134.33	29.88	
	08/31/98 12/08/98³		22.66	133.43	29.86	
	12/06/98		<del></del>			· · · · · · · · · · · · · · · · · · ·
MW-8	05/18/93	158.04	21.55	136.49	***	
	08/11/93	:	22.43	135.61	34.82	
	11/05/93		23.00	135.04	34.82	
	03/01/94		22.05	135.99	34.04	
	06/02/94	Ì	22.29	135.75	34.04	
	09/09/94		22.99	135.05	34.04	
	12/20/94	İ	22.14	135.90	33.98	
	03/08/95	İ	21.25	136.79	34.48	
]	06/14/95		21.70	136.34	34.49	
	09/26/95	l	22.29	135.75	34.40	ł
į į	12/27/95	į	21.96	136.08	34.43	
I	03/26/96		20.48	137.56	34.42	
	06/05/96	į	21.50	136.54	34.41	
	09/16/96	i	22.38	135.66	34.43	
[	12/02/96		22.39	135.65	34.42	
İ	03/10/97	İ	20.89	137.16	34.43	İ
i	06/12/97		21.80	136.24	34.42	
	09/29/97		22.81	135.23	34.40	
	12/01/97	}	21.70	136.34	34.41	
	03/19/98		19.35	138.69	34.42	i
	05/28/98		20.52	137.52	34.41	
	08/31/98	ļ	21.40	136.64	34.40	ļ
	12/08/983	<u> </u>				

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level.

Measurement from top of casing to bottom of well.

Well abandoned.

## TABLE 2 GROUND WATER ANALYTICAL RESULTS **BEACON STATION #574** 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Pe	etroleum Hydr	ocarbons		Алоп	natic Volatile Or	ganics	
· · · · · · · · · · · · · · · · · · ·		Gasoline	Diesel	Motor Oil	MTBE <sup>1</sup>	Benzene	Toluene	Ethyl- benzene	Total Xylene
MW-I	03/27/92	5,600	<50	<50		760	900	230	1,100
	06/04/92	2,600	<800	NA NA	!	270	57	230	440
	09/23/92	3,400	NA	NA		480	430	110	550
	11/12/92	2,700	NA	NA		5.8	<5.0	140	340
	02/02/93	8,500	NA	NA		760	770	250	1,200
	05/07/93	7,700	NA	NA	1	970	630	280	1,500
	08/11/93	11,000	NA	NA		1,400	1,000	260	1,600
	11/05/93	36,000	NA	NA		6,200	4,700	1,400	7,100
i	03/01/94	3,800	NA	NA		580	490	110	620
	06/02/94	8,900	NA	NA		1,900	1,200	420	2,100
1	09/09/94	4,300	NA .	NA		740	290	200	630
	12/20/94	3,900	NA	NA		550	260	150	510
	03/08/95	8,100	NA	NA		1,100	540	250	1,100
	06/14/95	NS	NS	NS		NS	NS	NS	NS NS
1	09/26/95	8,600	NA	NA		2,100	550	420	1,300
i	12/27/95	NS	NS	NS		NS	NS	NS	NS NS
	03/26/96	21,000	NA	NA		7,000	2,700	540	7,000
	06/05/96	NS	NS	NS		NS	NS	NS	NS
	09/16/96	13,000	NA	NA	1,400	3,200	770	4-0	2,900
- 1	12/02/96	NS	NS	NS	NS	NS	NS	NŠ	NS
.	03/10/97	30,000	NA	NA	1,100	7,300	1,900	850	7,100
ľ	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
ļ	09/29/97	25,000	NA	NA	840	5,500	920	920	4,000
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS NS
,	03/19/98	90,000	NA	NA	<1,500	15,000	7,000	3.300	20,000
1	05/28/98	NS	NS	NS	ŃS	NS	NS	NS	NS NS
ŀ	08/31/98	50,000	NA	NA	890	9,900	1,500	2,100	9,400
	12/08/98	NS	NS	NS	NS	N\$	NS	NS	NS
	02/17/99	30,000	NA	NA	720	8.000	1,100	2.200	10,000

NOTES:

Below indicated detection limit.

NS NA 1 2

Not sampled.
Not analyzed.
Product is not typical gasoline.
Well abandoned.

### TABLE 2 GROUND WATER ANALYTICAL RESULTS **BEACON STATION #574**

## 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Pe	troleum Hydr	ocarbons		Aron	natic Volatile Or	ganics	
		Gasoline	Diesel	Motor Oil	MTBE <sup>1</sup>	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-2	03/27/92	18,000	<50	<50		2,400	2,300	8-0	3,300
	06/04/92	14,000	<5,000	NA	1	1,900	1,700	580	2,300
i	09/23/92	22,000	NA	NA	]	2.100	1,500	700	2,300
	11/12/92	29,000	NA	NA	1	2,400	860	540	3,500
	02/02/93	24,000	NA	NA		2,700	1,900	590	2,600
1	05/07/93	19,000	NA	NA		1,800	1,300	460	2,600
	08/11/93	23,000	NA	NA NA		2,300	1,500	550	2,300
	11/05/93	30,000	NA	NA		3,100	2,900	800	3,700
	03/01/94	13,000	NA	NA		1,500	490	350	1,000
	06/02/94	12,000	NA	NA		2,000	790	400	1,300
	09/09/94	13,000	NA	NA		1,800	660	440	1,000
	12/20/94	16,000	NA	NA		2,300	1,000	650	1,900
1	03/08/95	16,000	NA	NA		2,200	1,000	550	2,100
	06/14/95	NS	NS	NS		NS	NS	NS	NS NS
	09/26/95	18,000	NA	NA		2,500	1,000	770	2,700
	12/27/95	NS	NS	NS		NS	NS	l NS	NS NS
	03/26/96	33,000	NA	NA		4,200	2,600	1,000	5,000
l	06/05/96	NS	NS	NS		NS	NS NS	NS	NS NS
	09/16/96	19,000	NA	NA	940	2,600	490	500	2,000
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS NS
J	03/10/97	23,000	NA	NA	1,400	3,700	870	650	3,000
1	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS NS
1	09/29/97	30,000	NA	NA	1,400	4.900	880	940	3,800
ľ	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/19/98	72,000	NA	NA	<1,500	14,000	9,500	2.300	14,900
[	05/28/98	NS	NS	NS	ŃS	NS	NS	NS	NS
1	08/31/98	29,000	NA	NA	890	4,900	1,600	960	3,900
	12/08/98	NS	NS	NS	NS	NŞ	NS	NS	NS NS
	02/17/99	26,000	NA	_ NA	640	5.200	930	1,200	4.400

NOTES:

Below indicated detection limit,

NS NA 1 2

Not sampled.
 Not analyzed.
 Product is not typical gasoline.
 Well abandoned.

## TABLE 2 GROUND WATER ANALYTICAL RESULTS **BEACON STATION #574**

## 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total P	etroleum Hyd	rocarbons		Аго	matic Volatile O	rganics	
		Gasoline	Diesel	Motor Oil	MTBE <sup>1</sup>	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-3	03/27/92 06/04/92 09/23/92 11/12/92 02/02/93 05/07/93 08/11/93 11/05/93 03/01/94 06/02/94 09/09/94 12/20/94 03/08/95 06/14/95 09/26/95 12/27/95 03/26/96 06/05/96 09/16/96 12/02/96 03/10/97 06/12/97 09/29/97 12/01/97 03/19/98 05/28/98 08/31/98 12/08/98	160 120 220 230 86 140 490 820 410 440 620 770 300 NS 130 NS 170 NS 44 NS 740 NS <50 NS 320 NS	<50 <50 NA NA NA NA NA NA NA NA NA NA NA NA NA	<50 NA NA NA NA NA NA NA NA NA NA NA NA NA	<5.0 NS <5.0 NS <5.0 NS <5.0 NS <5.0 NS	9.2 7.5 8.3 12 2.4 2.6 15 45 7.4 13 12 24 6.1 NS 4.8 NS <0.50 NS 10 NS 2.3 NS 61 NS 6.7 NS	4.8 2.7 4.3 5.5 0.71 1.2 8.1 24 2.7 4.9 4.8 11 0.97 NS 1.6 NS <0.50 NS 2.9 NS <0.50 NS 9.8 NS <0.50 NS 9.8 NS <1.0	10 05 62 77 27 39 14 34 56 14 56 14 56 14 8 8 8 8 8 8 8 8 8 8 8 8 8	23 15 19 19 6.2 8.4 37 93 10 31 20 36 7.5 NS 9.4 NS <0.50 NS 15 .NS 2.6 NS 61 NS <0.50 NS
MW-4	02/17/99 05/18/93 08/11/93 11/05/93 03/01/94 06/02/94 09/09/94 12/20/94 03/08/95 06/14/95 09/26/95 12/27/95 03/26/96 06/05/96 09/16/96 12/02/96 03/10/97 06/12/97 09/29/97 12/01/97 03/19/98 05/28/98 08/31/98 12/08/98 02/17/99	310  <50 <50 <50 <50 <50 <50 NS NS NS NS NS NS NS NS NS NS NS NS NS	NA NA NA NA NA NA NA NS NS NS NS NS NS NS NS NS NS NS NS NS	NA NA NA NA NA NA NA NS NS NS NS NS NS NS NS NS NS NS NS NS	<5.0 NS NS NS NS NS NS NS NS NS NS NS NS NS	8.6  <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 NS NS NS NS NS NS NS NS NS NS NS NS NS	NS 1.8 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 NS NS NS NS NS NS NS NS NS NS NS NS NS	NS 13	NS 14  <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 NS NS NS NS NS NS NS NS NS NS NS NS NS N

NOTES:

Below indicated detection limit.

NS = Not sampled.
NA = Not analyzed.
1 = Product is not typical gasoline.
2 = Well abandoned.

## TABLE 2 GROUND WATER ANALYTICAL RESULTS **BEACON STATION #574** 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total F	etroleum Hyd	rocarbons		Aro	matic Volatile Or	rganics	<u> </u>
		Gasoline	Diesel	Motor Oil	мтве'	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-5	05/18/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	08/11/93	<50	NA	NA.	1	<0.5	<0.5	<0.5	<0.5
İ	11/05/93	<50	NA	NA	]	<0.5	<0.5	<0.5	<0.5
	03/01/94	<50	NA	NA		< 0.5	< 0.5	<0.5	<0.5
,	06/02/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/09/94	<50	NA	NA NA	ľ	<0.5	<0.5	<ñ, <b>5</b>	<0.5
	12/20/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/08/95	<50	NA	NA		< 0.5	< 0.5	<0.5	<0.5
	06/14/95	<50	NA	NA	ļ	<0.5	<0.5	<0.5	<0.5
1	09/26/95	<50	NA	NA		< 0.50	<0.50	<0.50	< 0.50
	12/27/95	<50	NA	NA		<0.50	<0.50	<0.50	< 0.50
1	03/26/96 06/05/96	<50	NA	NA	ĺ	<0.50	<0.50	<0.50	<0.50
ļ	09/16/96	<50	NA	NA	15	<0.50	<0.50	<0.50	< 0.50
	12/02/96	<50	NA	NA	20	<0.50	<0.50	<0.50	< 0.50
i	03/10/97	<50	NA	NA	12	<0.50	<0.50	< 0.50	<0.50
ļ	06/12/97	<50	NA	NA.	7.0	<0.50	<0.50	<0.50	<0.50
	09/29/97	<50	NA.	NA	7.2	<0.50	< 0.50	<0.50	< 0.50
į	12/01/97	<50	NA	NA	< 5.0	<0.50	<0.50	<0.50	< 0.50
	03/19/98	<50	NA	NA NA	<5.0	<0.50	< 0.50	<0.50	<0.50
]	05/28/98	<50 <50	NA	NA	<5.0	<0.50	< 0.50	<0.50	<0.50
İ	08/31/98	<50 <50	NA NA	NA	<5.0	<0.50	<0.50	<0.50	<0.50
	12/08/98	<50	NA NA	NA NA	< 0.50	<0.50	<0.50	<0.50	< 0.50
	02/17/99	<50	NA NA	NA NA	<5.0	<0.50	<0.50	<0.50	< 0.50
	02,11723	<u> </u>	NA.	NA NA	<5.0	<0.50	<0.50	<0.50	<0.50
MW-6	05/18/93	170	NA	NA		<0.5	<0.5	<0.5	<0.5
1	08/11/93	78	NA	NA		<0.5	<0.5	<0.5	<0.5
	11/05/93	170	NA	NA		<0.5	<0.5	<0.5	0.65
	03/01/94	210	NA	NA		<0.5	<0.5	<0.5	<0.5
İ	06/02/94	190	NA	NA		<0.5	<0.5	<0.5	<0.5
Į	09/09/94	140	NA .	NA		<0.5	<0.5	<0.5	<0.5
	12/20/94	210	NA	NA		<0.5	<0.5	<11.5	<0.5
	03/08/95	180*	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/14/95	220*	NA	NA		<0.5	<0.5	<0.5	< 0.5
	09/26/95	110*	NA	NA		< 0.50	< 0.50	<0.50	<0.50
1	12/27/95	130*	NA	NA		< 0.50	< 0.50	<0.50	< 0.50
İ	03/26/96	100*	NA	NA		< 0.50	< 0.50	<0.50	< 0.50
ŀ	06/05/96	100*	NA	NA	430	< 0.50	<0.50	<0.50	< 0.50
ļ	09/16/96	170	NA	NA .	430	< 0.50	<0.50	<0.50	< 0.50
	12/02/96	160	NA	NA	160	< 0.50	< 0.50	<0.50	<0.50
ļ	03/10/97	140	NA	NA	390	< 0.50	< 0.50	< 0.50	<0.50
	06/12/97	<50	NA	NA [	330	< 0.50	< 0.50	<0.50	< 0.50
	09/29/97	<50	NA	NA	130	< 0.50	< 0.50	<0.50	< 0.50
	12/01/97	<50	NA	NA	200	< 0.50	< 0.50	<0.50	< 0.50
į.	03/19/98	<50	NA	NA	240	<0.50	< 0.50	< 0.50	< 0.50
ļ	05/28/98	<50	NA	NA	290	< 0.50	< 0.50	< 0.50	< 0.50
•	08/31/98	<50	NA	NA	290	< 0.50	<0.50	<0.50	< 0.50
}	12/08/98	<50	NA	NA	230	< 0.50	<0.50	<0.50	< 0.50
		<50	NA NA	NA NA	200	< 0.50	< 0.50	<0.50	< 0.50

NOTES:

= Below indicated detection limit. Not sampled.
Not analyzed.
Product is not typical gasoline.
Well abandoned.

NS NA 1 2

## TABLE 2 GROUND WATER ANALYTICAL RESULTS **BEACON STATION #574** 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total P	etroleum Hydi	rocarbons		Aro	matic Volatile Or	ganics	
		Gasoline	Diesel	Motor Oil	мтве'	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-7	05/18/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
İ	08/11/93	<50	NA	NA	ļ	< 0.5	< 0.5	<0.5	<0.5
	11/05/93	<50	NA	NA		< 0.5	<0.5	<0.5	<0.5
	03/01/94	60	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/02/94 09/09/94	<50	NA	NA	ļ	<0.5	<0.5	<0.5	<0.5
ŀ	12/20/94	<50 <50	NA	NA	İ	<0.5	<0.5	<0.5	< 0.5
i	03/08/95	<50	NA NA	NA NA	•	<0.5	<0.5	<0.5	<0.5
	06/14/95	<50	NA NA	NA NA	i	<0.5	<0.5	<0.5	<0.5
į	09/26/95	<50	NA NA	NA NA	]	<0.5	<0.5	<0.5	<0.5
ĺ	12/27/95	<50	NA	NA NA	Ī	<0.50 <0.50	<0.50	<0.50	<0.50
- 1	03/26/96	<50	NA.	NA .	i	<0.50	<0.50	<0.50	<0.50
ļ	06/05/96	<50	NA	NA.	20	<0.50	<0.50 <0.50	<0.50	<0.50
]	09/16/96	<50	NA	NA .	26	<0.50	<0.50	<0.50 <0.50	<0.50
1	12/02/96	140	NA	NA	140	<0.50	<0.50	<0.50	< 0.50
ŀ	03/10/97	<50	NA.	NA	29	<0.50	<0.50	<0.50	<0.50 <0.50
ļ	06/12/97	<50	NA	NA	28	<0.50	<0.50	<0.50	<0.50
	09/29/97	<50	NA	NA	27	< 0.50	< 0.50	<0.50	<0.50
	12/01/97	<50	NA	NA.	29	<0.50	<0.50	<0.50	<0.50
	03/19/98	<50	NA .	NA	6.0	< 0.50	< 0.50	<0.50	<0.50
	05/28/98	<50	NA	NA	25	<0.50	< 0.50	<0.50	<0.50
	08/31/98 12/08/98 <sup>2</sup>	<50	NA	NA	20	<0.50	<0.50	<0.50	<0.50
MW-8	05/18/93	<50	NA	NA		-0.5			<del></del>
	08/11/93	<50	NA NA	NA NA		<0.5 <0.5	<0.5	<0.5	<0.5
İ	11/05/93	<50	NA	NA		<0.5	<0.5 <0.5	<0.5	<0.5
i	03/01/94	<50	NA	NA		<0.5 <0.5	<0.5	<0.5 <0.5	<0.5
- 1	06/02/94	<50	NA	NA		<0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
	09/09/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA	NA	ĺ	<0.5	<0.5	<0.5	<0.5
	03/08/95	NS	NS	NS		NS	NS	NS	NS
1	06/14/95	NS	NS	NS		NS	NS	NS	NS
	09/26/95	NS	NS	NS		NS	NS	NS	NS
	12/27/95	NS	NS	NS	i	NS	NS	NS	NS
	03/26/96	NS	NS	NS	ļ	NS	NS	NS	NS
	06/05/96 09/16/96	NS ~50	NS	NS	_ [	NS	NS	NS	NS
ĺ	12/02/96	<50 NS	NA NS	NA	<5.0	<0.50	< 0.50	<0.50	< 0.50
	03/10/97	NS NS	NS NS	NS NS	NS	NS	NS	NS	NS
	06/12/97	NS NS	NS NS	NS NS	NS NS	NS NS	NS	NS	NS
1	09/29/97	NS NS	NS NS	NS NS	NS NS	NS Ne	NS	NS	NS
1	12/01/97	NS	NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS
[	03/19/98	NS	NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS
ſ	05/28/98	NS	NS	NS I	NS NS	NS	NS NS	NS NS	NS
	08/31/98	NS	NS	NS	NS	NS	NS NS	NS NS	NS NC
	12/08/982	-		}	.,5	113	149	1/2	NS

NOTES:

Below indicated detection limit.
 Not sampled.
 Not analyzed.

NS

Product is not typical gasoline. Well abandoned.

# ATTACHMENT A ULTRAMAR FIELD PROCEDURES

#### ATTACHMENT A - ULTRAMAR FIELD PROCEDURES

The following section describes procedures used by field personnel in the performance of ground water sampling at Ultramar Inc. sites.

### Ground Water Level and Total Depth Determination

A water level indicator is lowered down the well and a measurement of the depth to water from an established reference point on the casing is taken. The indicator probe is used to sound the bottom of the well and a measurement of the total depth of the well is taken. Both the water level and total depth measurements are taken to the nearest 0.01-foot.

#### Visual Analysis of Ground Water

Prior to purging and sampling ground water monitoring wells, a water sample is collected from each well for subjective analysis. The visual analysis involves gently lowering a clean, disposable, polyethylene bailer to approximately one-half the bailer length past the water table interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating product or the appearance of a petroleum product sheen. If measurable free product is noted in the bailer, a water/product interface probe is used to determine the thickness of the free product to the nearest 0.01-foot. The thickness of free product is determined by subtracting the depth to product from the depth to water.

#### Monitoring Well Purging and Sampling

Monitoring wells are purged by removing approximately four casing volumes of water from the well using a clean disposable bailer or electrical submersible purge pump. Purge volumes are calculated prior to purging. During purging, the temperature, pH, and electric conductivity of the purge water are monitored. The well is considered to be sufficiently purged when: The four casing volumes have been removed; the temperature, pH, and conductivity values have stabilized to within 10% of the initial readings; and the ground water being removed is relatively free of suspended solids. After purging, ground water levels are allowed to stabilize to within 80% of the initial water level reading. A water sample is then collected from each well with a clean, disposable polyethylene bailer. If the well is bailed or pumped dry prior to removing the minimum volume of water, the ground water is allowed to recharge. If the well has recharged to within 80% of the initial depth to water reading within two hours, the well will continue to be purged until the minimum volume of water has been removed. If the well has not recharged to at least 80% of the initial depth to water reading within two hours, the well is considered to contain formational water and a ground water sample is collected. Ground water removed from the well is stored in 55-gallon drums at the site and labeled pending disposal.

In wells where free product is detected, the wells will be bailed to remove the free product. An estimate of the volume of product and water well be recorded. If the free product thickness is reduced to the point where a measurable thickness is no longer present in the well, a ground water sample will be collected. If free product persists throughout the purging process, a final free product thickness measurement will be taken and a ground water sample will not be collected.

Ground water samples are stored in 40-milliliter vials so that air passage through the sample is minimized (to prevent volatilization of the sample). The vial is tilted and filled slowly until an upward convex meniscus forms over the mouth of the vial. The Teflon™ side of the septum (in cap) is then placed against the meniscus, and the cap is screwed on tightly. The sample is then inverted and the bottle is tapped lightly to check for air bubbles. If an air bubble is present in the vial, the cap is removed and more sample is transferred from the bailer. The vial is then resealed and rechecked for air bubbles. The sample is then appropriately labeled and stored on ice from the time of collection through the time of delivery to the laboratory. The Chain-of-Custody form is completed to ensure sample integrity. Ground water samples are transported to a state-certified laboratory and analyzed within the U.S. Environmental Protection Agency-specified hold times for the specified analytes.

# ATTACHMENT B DOULOS ENVIRONMENTAL FIELD DATA SHEETS

## DOULOS ENVIRONMENTAL COMPANY GROUNDWATER/LIQUID LEVEL DATA (measurements in feet)

Project Address:

Beacon #574, 22315 Redwood Rd.

Date: 2-17-99

Castro Valley, CA

Project No.: <u>94-574-01</u>

Recorded by:

<u> Hal Hansen</u>

Well No	Time	Well Elev. TOC		Measured Total Depth	Gr. Water Elevation	Depth to Product	Product Thickness	Comments
MW-1	9:30		21.53	11.75				Petraleur odor no sha
MW-2	9:22		20.02	29.51				SHEEN
MW-3	1:19		20.21	29.45				Petroleum odor no Mean
MW-4	9:32		16-49	724.78 -				no odor no shem
MW-5	9:10		14.80	29.63				no odor no show
mw-6	9:14		19,54	127.98	<u> </u>			no odor no show no odor no show no odor no shew
								·
						,		
, , ,							·	

Notes:

	Client:_	Ultramar		S	ampling Date	: 2-17-99	,
	Site:_	Beacon #5	74		Project N	o.: <u>94-574-01</u>	
	_	22315 Red	wood Road	We	ll Designati	on: <u>MW-/</u>	
	_	Castro Va					
Is the Is top Is well well of 12" BK General Purgin	cup of the restand of case of well conditions ampled well well of the restand of	raffic conding water ing cut lesealed and lesing repersormed case and repersormed case repersormed cas	trol devic in well b vel? locked? iser (in i 12 12 CN 11head ass 2" PVC b 4" PVC b posal bail 2" \( \sqrt{2} \)	nches): " UV 3 embly: E sable bai ailer ailer er: 4"	Teflon ba  6"  1.47	If no, see If no, see 8" BK Other  Submersible Dedicated ba Centrifugal iler:	elow TOC remarks remarks Poor pump iler pump
Depth	to wate	r: <u>21.53</u> 10:59	•		e: /2:/0	<u></u>	
<del></del> -	Time	Temp.	<u> </u>	pH	Turbidit	y Volume	7
	11:03	58.9	1760	5-17		/	1
	11:00	58.4	1710	5.10	-	1	1
	11:11	58.0	1640	490		3	1
	1/:14	57.1	1610	4.85		Ÿ.	
							7
s	ample a	ppearance:	_ (	eur	Lock:	celphin	 <u>~</u>
2" Lo 4" Lo	ocking ( ocking ( ocking (	laced: (Ch Cap: Cap:	Lock	at apply) : #3753: Oolphin:	7,	tion of replace /32 Allenhead: 9/16 Bolt: Lenhead (DWP):	
 Signati	ure: _	Usa	194				

	Client:_	Ultramar		s	ampling D	ate: 2	-17-9	9
	Site:_	Beacon #5	74		Projec	t No.:_	94-57 <u>4-</u> 01	·
		22315 Red	wood Road	We	ll Design	ation:_	MW- 2	
	_							
		<u>Castro Va</u>	···			<del> </del>	<u> </u>	
Is the Is top Is well to Well of 12" BK	ere stan o of cas ll cap s cof wel cover ty	raffic con ding water ing cut le ealed and l casing r pe: 8" UV 12" DWP_ tion of we	in well b vel? locked? iser (in i 12 12" CN	ox? nches): " UV	NO C NO NO NO NO NO NO NO NO NO NO NO NO NO N	Ab FED I	ove TOC to the second s	remarks remarks
Purgin	Purging Equipment:2" disposable bailerSubmersible pump2" PVC bailerDedicated bailer4" PVC bailerCentrifugal pump							
s	ampled	with: Dis	posal baile	er: <u>×</u>	Teflon	bailer	<u></u>	
	Well	Diameter:	2"	4" ×	6"	8"_		
Initia Time: Depth Depth	Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.  Initial Measurement Time: 9:22 Depth of well: 29.51 Depth to water: 10.02  Start purge: 10:38  Sampling time: 1:52							
	Time	Temp.	E.C.	Нq	Turbi	dity	Volume	
	10:40	58-4	2310	6.10			)	
	10:46	591	2290				2	
	10:50	60.1	2110	5.90			3	
	10:51	60.4	2080	5.60			<i>Y</i>	
					·			
S	ample ap	ppearance:		lour	Lock:	poli	Mhron	_ <u>~</u>
2" Le 4" Le 6" Le	Equipment replaced: (Check all that apply) Note condition of replaced item  2" Locking Cap: Lock #3753: 7/32 Allenhead: 9/16 Bolt: 9/16 Bolt: Pinned Allenhead (DWP):							
Rema	rks: _							***************************************
Signati	ure: _	Mal	M-					

Signature:

Client:_	Ultramar		s	ampling Date:_	2-17-9	19
Site:_	Beacon #5	74		Project No.	:_94-574-01_	_
	22315 Red	wood Road	Wei	ll Designation	:MW3	<del></del>
	Castro Va			-		
						· · · · · · · · ·
Is setup of the setup of the setup of case is well cap so the setup of well well cover type 12" BK	ling water ing cut leveled and it casing ripe: 8" UV	in well be vel? locked? iser (in in in in in in in in in in in in in i	nches):	NO TES NO	If no, see If no, see If no, see  8" BK_	remarks
Purging Equip		2" PVC bi	ailer		Submersible p dedicated bai entrifugal p	ler
Sampled v	vith: Disp	posal bail	er: <u> </u>	Teflon bail	er:	
Well I	Diameter:	2"	4"	6"8		
Purge Vol. Mul Initial Measur Time: 4:/9 Depth of well Depth to water Start purge: _/	19.45 20.87	Rec Time: // Depth to	harge Mea:	1.47 <u>surement</u> Calcul 1.60 Ac		
Time	Temp.	E.C.	Нф	Turbidity	Volume	
10:20	60.4	1980	5.21			
10:23	59-8	1910	517		2	
10:26	60 Y	1894	5.10		3	
10:30	66-7	1990	4.99		4	
Sample ap	pearance:	_ (l	ear	Lock:	deple	nin_
Equipment repl 2" Locking ( 4" Locking ( 6" Locking (	Cap: Cap:	_ Loc	at apply) k #3753: Dolphin:	7/3 	on of replace 2 Allenhead: 9/16 Bolt: nhead (DWP):	
Remarks:	A 1	0 11	-			

(	Client:_	Ultramar		s	ampling Date: _2	-17-99			
	Site:_	Beacon #5	74		Project No.:_	94-574-01			
	-	22315 Red	wood Road	We	ll Designation:_	MW- 5			
	<u>-</u>	Castro Va	lley, CA						
12" BK Genera	cover ty	pe: 8" UV 12" DWP tion of we ment:	12" CNI 11head asso	I3 embly: E	NO TES I NO TES I 12" EMCO	omersible pump			
	2" PVC bailerDedicated bailer								
Sampled with: Disposal bailer: Teflon bailer:									
	Well Diameter: 2" 4" 6" 8"								
Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.  Initial Measurement Time: 9:10 Depth of well: 19.63 Depth to water: 19.80  Start purge: 9:38  Sampling time: 9.51									
	Time	Temp.	E.C.	рН	Turbidity	Volume			
	9:40	59.1	1590	7.29		1			
	9:41	59.4	1510	7.21		2			
	9:42	58-7	1460	7.18		3			
	9:42	58-6	1390	7.16		4			
s	ample ap	ppearance:	<u>lle</u>	<u> </u>	Lock:	lithin			
2" Lo	ent rep ocking ( ocking ( ocking (	Cap:		at apply) :#3753: oolphin:	7/32 <i>.</i>	of replaced item Allenhead: 9/16 Bolt: ead (DWP):			
Remai	rks:								
Signati	ure:	7 Qu	194						

	:lient:_	Ultramar		Sa	ampling D	ate: <u>2</u>	-17-0	19
	Site:_	Beacon #5	74		Projec	t No.:_	9 <b>4-</b> 574 <b>-</b> 01	<u>L</u>
		22315 Red	wood Road	We:	ll Desigr	ation:_	MW- 6	
		Castro Va						
Is the Is top Is well Height Well control BK Genera	re stander of case and capes of well cover ty	raffic conding water ing cut letel and letel and letel casing reference by the second control of the second control co	in well be vel? locked? iser (in in 12 12" CN llhead asse	ox? nches): "UV	NO (NO (NO (IO))  12" E CONI_ COEllent	MCOOtho	ove TOC defino, see fino, see Building Building Building Fair	e remarks e remarks Poor
-	g Equip	with: Dis	2" dispos 2" PVC ba 4" PVC ba	ailer	*	Ded Cen	mersible icated ba trifugal :	ailer
		Diameter:					<u> </u>	
Initia Time:_ Depth Depth	1 Measu 9:/4 of well to wate	ltiplier: rement : <u>17.98</u> r: <u>19.54</u>	Recl Time: /6 Depth to	0.65 harge Meas 2:10 water:	20.18	Calculate Actu	ed purge:	5.3
	Time	Temp.	E.C.	рН	Turbi	dity	Volume	
	10:01	57.8	1610	7-60	-		1	
	10:02		1560	7-51			2	
	10:03	59.4	1520	7.44			3	
	10:04	58.1	1511	7.40			4	
S	ample ap	opearance:	Clea	nr_	Lock:	<u> Iæl</u>	Ulrin	
2" Le 4" Le	ocking ( ocking (	laced: (Ch Cap: Cap:	_ Lock	at apply) c #3753: Oolphin:		7/32 2	of repla Allenhead 9/16 Bolt aad (DWP)	:
Remai	rks: _							
Signati	ure: _	N	aloff.					

## ATTACHMENT C HISTORICAL GROUND WATER ELEVATION DATA

TABLE 2
WATER LEVEL DATA
(measurements in feet)

Well (	Date	Reference Elevation (top of casing)	Depth to Ground Water	Giorind Water Elevation
MW-1	04-01-91 03-27-92	156.55	22.37	134.18
	05-27-92		22.43 23.40	134,12 133,15
	09-23-92		24.07	132,48
	11-12-92		24.16	132.39
	02-02-93	<u>.</u>	21.87	134.68
	05-18-93		22.66	133,89
MW-2	04-01-91	155.17	20,82	134.25
	03-27-92		20.82	134.35
Į	06-04-92		21.81	133.36
į	09-23-92		22.45	132.72
	11-12-92 02-02-93		22.60 20.28	132.57
ļ	05-18-93		21.06	134.89 134.11
MW-3				
M144.2	04-01-91 03-27-92	157,13	21.55	135.58
. }	06-04-92		21.46 22.34	135.67
	09-23-92		22.84	134.79 134.29
	11-12-92		23.03	134.09
	02-02-93		21.03	136.10
	05-18-93		21.73	135,40
MW-4	05-18 <del>-9</del> 3	151.96	17.55	134.41
MW-5	05-18-93	148.68	15.72	132.96
MW-6	05-18-93	153.96	20.80	133,16
MW-7	05-18-93	156.09	22.64	133.45
MW-8	05-18-93	158.04	21.55	136,49

# ATTACHMENT D HISTORICAL GROUND WATER ANALYTICAL DATA

TABLE 3
GROUND WATER ANALYTICAL RESULTS
(concentrations in parts per billion)

Monitoring		Total 74	Total Paroleum Hydrocarbons		Aromalis Valettis Digapics				
Monitoring Well	Date Collected	"Cesolino	DEE	Motoron	Benzona -	Toluene'.	EMylbenzent	Total Xylenes	
MW-1	04-01-91	4,100	<100		140	570	76	460	
	03-27-92	5,600	<50	<50	760	900	230	1,100	
	06-04-92	2.600	<100	-	270	57	230	440	
	09-23-92	3,400	-	-	480	430	110	550	
	11-12-92	2,700		-	5.8	<5.0	140	340	
	02-02-93	8,500		•	760	770	250	1,200	
	05-07-93	7,700	•	•	970	630	280	1,500	
MW-2	04-01-91	10,000	<100	-	650	640	150	960	
	03-27-92	18,000	<50	<50	2,400	2,300	870	3,300	
	06-04-92	14,000	<5,000		1,900	.1,700	580	2,300	
	09-23-92	22,000	•	-	2,100	1,500	760	2,900	
	11-12-92	29,000	-	-	2,400	860	540	3,500	
	02-02-93	24,000	-	•	2,700	1,900	590	2,600	
	05-07-93	19,000	•	•	1,800	1,300	460	2,600	
MW-3	04-01-91	3,100	<100	•	41	91	37	420	
	03-27-92	160	<50	<50	9.2	4.8	10	73	
	06-04-92	120	<50	-	7.5	2.7	0.5	15	
•	09-23-92	220	•	-	8.3	4.3	6.2	19	
	11-12-92	230	•	•	12	5.5	7.7	19	
	02-02-93	86	•	•	2.4	0.71	2.7	6.2	
	05-07-93	. 140	-	• •	2.6	1.2	3.9	8.4	
MW-4	05-18-93	<50	•	•	< 0.50	< 0.50	<0.50	< 0.50	
w-3	05-18-93	<50	•	-	< 0.50	<0.50	< 0.50	<0.50	
MW-6	05-18-93	170	•	•	. <0.50	< 0.50	<0.50	< 0.50	
MW-7	05-18-93	<50	•	•	< 0.50	< 0.50	< 0.50	<0.50	
B-WN.	05-18-93	<50	•		< 0.50	< 0.50	< 0.50	<0.50	

Note: Dash (-) indicates that the sample was not analyzed for this constituent.

## ATTACHMENT E

## LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM



Date: 03/10/99

Dale van Dam El Dorado Environmental 2221 Goldorado Trail El Dorado, CA 95623

Subject: 5 Water Samples Project Name: Beacon 574 Project Number: 94-574-01

Dear Mr. van Dam,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Date: 03/10/99

Project Name: Beacon 574 Project Number: 94-574-01

Sample: MW-1

Matrix: Water

Sample Date :02/17/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	8000	25	ug/L	EPA 8020	03/01/99
Toluene	1100	5.0	ug/L	EPA 8020	02/27/99
Ethylbenzene	2200	5.0	ug/L	EPA 8020	02/27/99
Total Xylenes	10000	5.0	ug/L	EPA 8020	02/27/99
Methyl-t-butyl ether	720	50	ug/L	EPA 8020	02/27/99
TPH as Gasoline	30000	500	ug/L	M EPA 8015	02/27/99
aaa-Trifluorotoluene (8020 Surrogate)	120		% Recovery	EPA 8020	02/27/99
aaa-Trifluorotoluene (Gasoline Surrogate)	89.9		% Recovery	M EPA 8015	02/27/99

Sample: MW-2

Matrix: Water

Sample Date :02/17/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	5200	10	ug/L	EPA 8020	02/27/99
Toluene	930	10	ug/L	EPA 8020	02/27/99
Ethylbenzene	1200	10	ug/L	EPA 8020	02/27/99
Total Xylenes	4400	10	ug/L	EPA 8020	02/27/99
Methyl-t-butyl ether	640	100	ug/L	EPA 8020	02/27/99
TPH as Gasoline	26000	1000	ug/L	M EPA 8015	02/27/99
aaa-Trifluorotoluene (8020 Surrogate)	106		% Recovery	EPA 8020	02/27/99
aaa-Trifluorotoluene (Gasoline Surrogate)	95.7		% Recovery	M EPA 8015	02/27/99

Approved By: Joe Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Date: 03/10/99

Project Name : Beacon 574
Project Number : 94-574-01

Sample: MW-3

Matrix: Water

Sample Date :02/17/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	8.6	0.50	ug/L	EPA 8020	02/27/99
Toluene	1.8	0.50	ug/L	EPA 8020	02/27/99
Ethylbenzene	13	0.50	ug/L	EPA 8020	02/27/99
Total Xylenes	14	0.50	ug/L	EPA 8020	02/27/99
Methyl-t-butyl ether	< 5.0	5.0	ug/L	EPA 8020	02/27/99
TPH as Gasoline	310	50	ug/L	M EPA 8015	02/27/99
aaa-Trifluorotoluene (8020 Surrogate)	95.2		% Recovery	EPA 8020	02/27/99
aaa-Trifluorotoluene (Gasoline Surrogate)	86.8		% Recovery	M EPA 8015	02/27/99

Sample: MW-5

Matrix: Water

Sample Date :02/17/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Toluene	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Total Xylenes	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Methyl-t-butyl ether	< 5.0	5.0	ug/L	EPA 8020	02/27/99
TPH as Gasoline	< 50	50	ug/L	M EPA 8015	02/27/99
aaa-Trifluorotoluene (8020 Surrogate)	96.5		% Recovery	EPA 8020	02/27/99
aaa-Trifluorotoluene (Gasoline Surrogate)	82.2		% Recovery	M EPA 8015	02/27/99

Approved By: Joel Kiff

720 Olive Drive, Suite D. Davis, CA 95616 530-297-4800



Date: 03/10/99

Project Name : Beacon 574

Project Number: 94-574-01

Sample: MW-6

Matrix: Water

Sample Date :02/17/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Toluene	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Total Xylenes	< 0.50	0.50	ug/L	EPA 8020	02/27/99
Methyl-t-butyl ether	200	5.0	ug/L	EPA 8020	02/27/99
TPH as Gasoline	< 50	50	ug/L	M EPA 8015	02/27/99
aaa-Trifluorotoluene (8020 Surrogate)	99.1		% Recovery	EPA 8020	02/27/99
aaa-Trifluorotoluene (Gasoline Surrogate)	81.0		% Recovery	M EPA 8015	02/27/99

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



## **Ultramar Inc.**CHAIN OF CUSTODY REPORT

**BEACON** 

13403 Beacon Station No. Sampler (Print Name) Form No. Date **ANALYSES** Hal Hansen Sampler (Signature) of 574 Project No. 94.574.01 Project Location Standard of Containers BTEX TPH (gasoline) TPH (diesel) Custro Valley Sample No./Identification Date Time Lab No. REMARKS 2-17-99 MW-/ 1210 -0/ MW-2 1152 -021139 -03 951 -04 MW-6 -05 1011 Relinquished by: (Signature/Affiliation) Date Time Received by: (Signature/Affiliation) Date Time Relinquished by: (Signature/Affiliation) 1806 Date Time . Received by: (Signature/Affiliation) Date Time Relinquished by: (Signature/Affiliation) Time Date Received by: (Signature/Affiliation) Date Time 1806 Report To: Bill to: ULTRAMAR INC. Dale ban Dam 525 West Third Street Hanford, CA 93230 Attention: <u>foe</u> aldridge

WHITE: Return to Client with Report

YELLOW: Laboratory Copy

PINK: Originator Copy

32-8003 1/90