Ultramar

Ultramar Inc.

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

Telecopy: 209-584-6113 Credit & Wholesale 209-583-3330 Administrative 209-583-3302 Information Services 209-583-3358 Accounting

February 6, 1995

Mr. Scott O. Seery, CHMM Senior Hazardous Materials Specialist Alameda County Health Care Services 80 Swan Way, Room 200 Oakland, CA 94621

SUBJECT: FORMER BEACON STATION NO. 574, 22315 REDWOOD ROAD, CASTRO VALLEY,

Dear Mr. Seery:

Enclosed is a copy of the Fourth Quarter 1994 Groundwater Monitoring Report for the above-referenced Ultramar facility prepared by Fugro West, Inc. Also included with the report 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.

Please do not hesitate to call if you have any questions about this project at (209) 583-5571.

Sincerely,

ULTRAMAR INC.

Kenneth R. Earnest

Environmental Specialist II

Marketing Environmental Department

Enclosure:

Fourth Quarter 1994 Groundwater Monitoring Report

Quarterly Status Report

cc w/encl:

Mr. Rich Hiett, San Francisco Bay Region, RWQCB

Mr. Peter J. Pugnale, Shell Oil Company



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ENVIRONMENTAL PROJECT **OUARTERLY STATUS REPORT**

DATE REPORT SUBMITTED: February 6, 1995

QUARTER ENDING: December 31, 1994

FORMER SERVICE STATION NO.: 574

ADDRESS: 22315 Redwood Road, Castro Valley, CA

COUNTY: Alameda

ULTRAMAR CONTACT: Kenneth R. Earnest

TEL. NO: 209-583-5571

BACKGROUND:

On May 5, 1987, five underground storage tanks (two gasoline, two diesel and one waste oil) were excavated and removed from Soil samples were collected from beneath the tanks the site. hydrocarbon constituents. Based on for analyzed 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 Soil was overexcavated from beneath the former fuel tanks. Soil samples were collected after the over-excavation tanks. and confirmed that the addition excavation was successful.

During March 1991, three ground-water monitoring wells were Laboratory analysis of soil samples installed on-site. from the borings for the installation of the obtained 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 new groundwater monitoring wells in May of With the installation of these new wells the site is 1993. fully defined.

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

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed fourth quarter monitoring on December 20, 1994.

Submitted PAR/RAP during the fourth quarter 1994.





Page 2 Former Station #574 Castro Valley, CA

RESULT OF QUARTERLY MONITORING:

Results indicate that since the previous sampling event benzene concentrations in MW-1 have decreased and increased in MW-2 and MW-3. BTEX and TPH-gasoline concentrations in MW-4, MW-5, MW-6, MW-7 and MW-8 have remained not detected since installation, except TPH-gasoline concentrations in MW-6.

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY

ESTIMATED COMPLETION DATE

First quarter monitoring

February 1995





1050 Melody Lane, Suite 160 Roseville, California 95678 Tel: (916) 782-2110 FAX: (916) 786-7830



February 1, 1995

ENVIRONMENTAL HEALTH SERVICES
NORTH COUNTY

Mr. Kenneth Earnest
Environmental Specialist
Ultramar Inc.
525 West Third Street
Hanford, California 93232-0466

Subject:

Fourth Quarter 1994 Groundwater Monitoring Report

Beacon Station #574

22315 Redwood Road, Castro Valley, California

Dear Mr. Earnest:

This report documents the results of quarterly groundwater monitoring conducted on December 20, 1994 at the subject site (Figure 1). The monitoring, conducted by Doulos Environmental, included measurements of depth to groundwater, subjective analysis for free product, groundwater purging and collection of groundwater samples. All field activities pertaining to events in this report were conducted according to the Ultramar Field Procedures included in the Attachments.

GROUNDWATER ELEVATIONS

Prior to purging, Doulos Environmental personnel collected depth to groundwater measurements. Groundwater level data from March 1992 to date are summarized in Table 1. Historic groundwater levels are presented as an Attachment. On the basis of the current measurements, groundwater flows to the southwest (Figure 2) at a gradient of <0.01 ft/ft. Groundwater levels have increased an average of 0.90 feet compared to the last monitoring event.



GROUNDWATER SAMPLING AND ANALYSES

Groundwater samples were collected from eight wells. All samples were analyzed for concentrations of:

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

Analytical results from March 1992 to date are summarized in Table 2. Historic analytical data are presented as an Attachment. Figure 3 is a distribution map of benzene in groundwater based on the current data. The laboratory report and chain-of-custody form for the current sampling event are attached. Benzene concentrations remain nondetectable in wells MW-4, MW-5, MW-6, MW-7, and MW-8. Concentrations decreased in well MW-1 and increased in wells MW-2 and MW-3 compared to prior sampling.

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

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

Mr. Rich Hiett
San Francisco Bay Regional Water Quality Control Board
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 shall be at such parties' sole risk. This report was prepared under the review and supervision of the professional geologist, registered with the State of California, whose signature appears below.

If you have any questions or comments, please contact us at (916) 782-2110.

No. 5853

Exp. 11/30/95

Sincerely,

FUGRO WEST, INC.

Sheila R. Richgels

Report Coordinator

Owen M. Kittred Registered Geologis

CRG No. 5853

Date

SRR/OMK/srr

Attachments

FIGURE 1 SITE LOCATION MAP

FIGURE 2 POTENTIOMETRIC SURFACE MAP
(DECEMBER 20, 1994)

FIGURE 3 DISTRIBUTION MAP OF BENZENE
IN GROUNDWATER (DECEMBER 20, 1994)

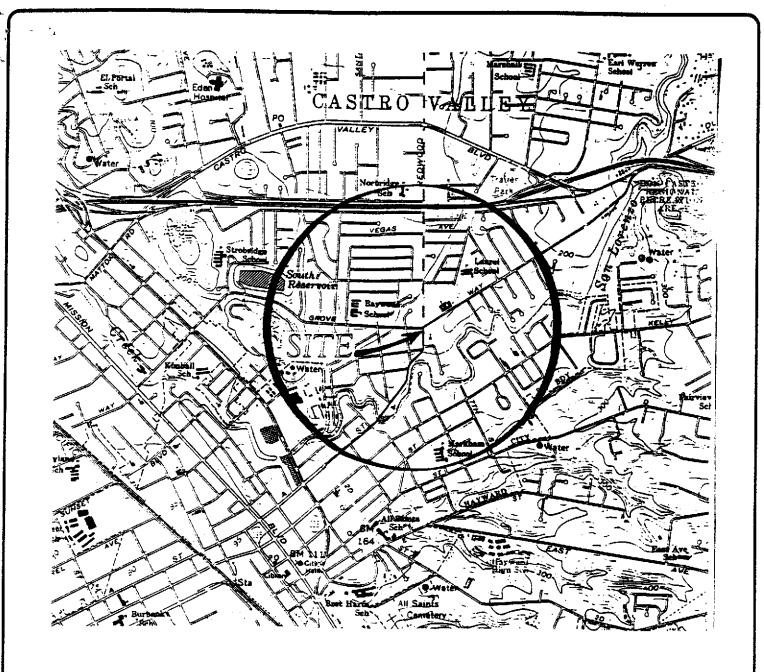
TABLES: TABLE 1 WATER LEVEL DATA
TABLE 2 ANALYTICAL RESULTS: GROUNDWATER

ATTACHMENTS: ULTRAMAR FIELD PROCEDURES

LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM

HISTORICAL DATA

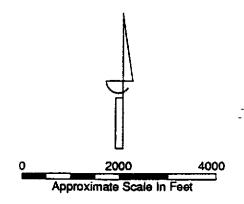
DOULOS ENVIRONMENTAL FIELD DATA SHEETS





GENERAL NOTES:

BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC HAYWARD, CA



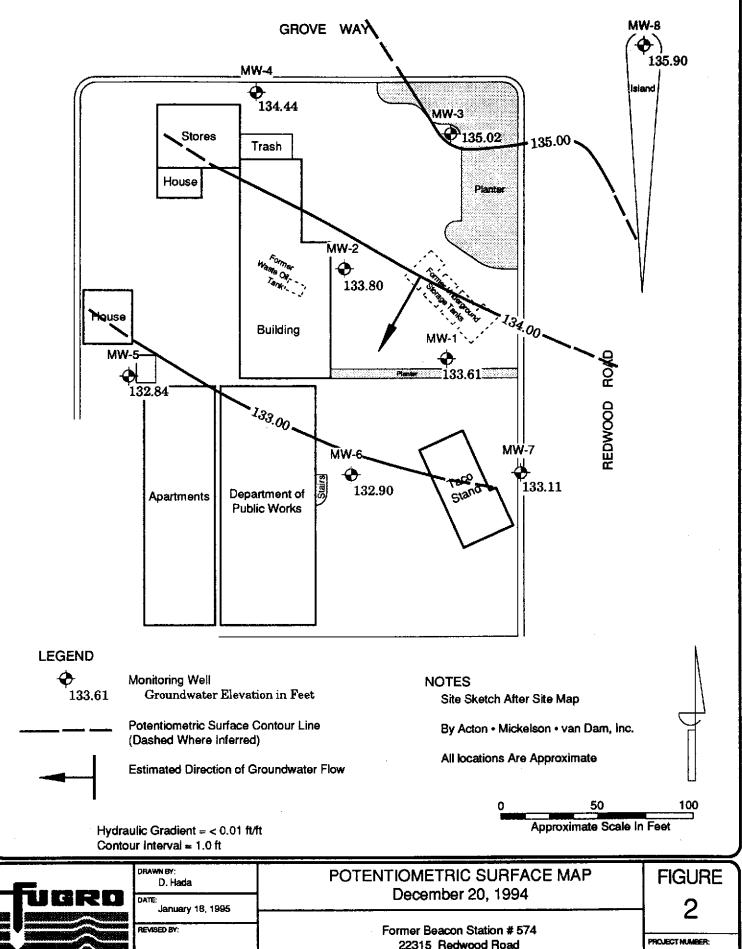
FIGURE

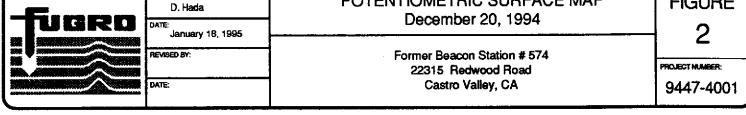
PROJECT NUMBER:

91-212



DRAWN BY: J. Paradis	SITE LOCATION MAP
DATE: May 23, 1994	
REVISED BY:	Beacon Station #574 22315 Redwood Road
CATE	Castro Vailey, CA





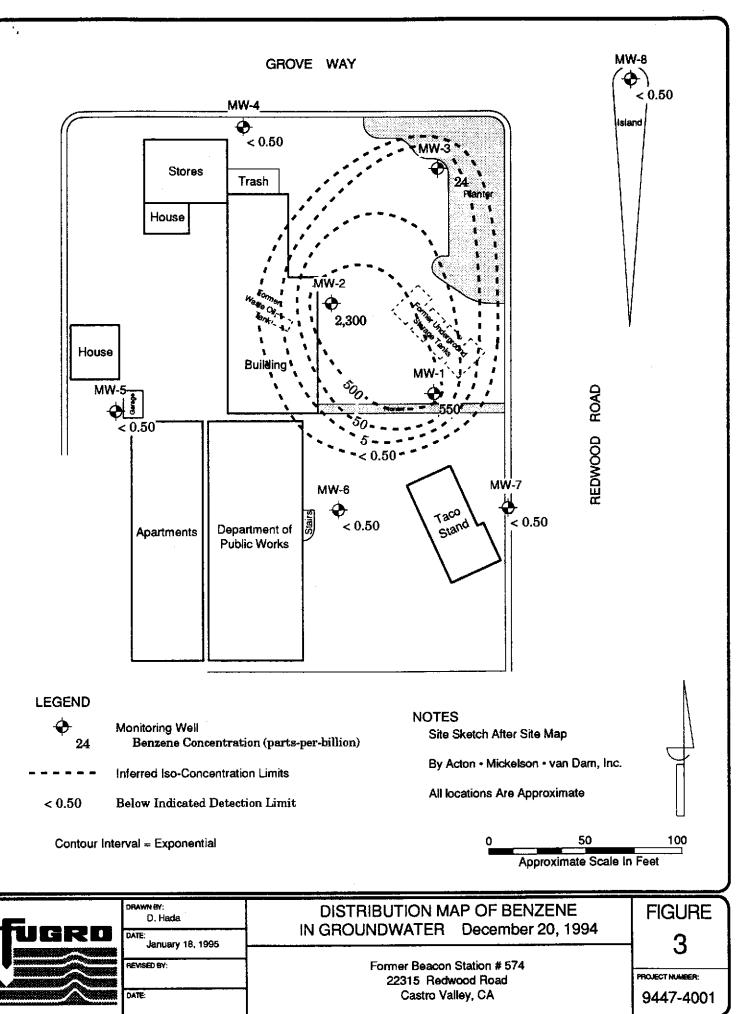


TABLE 1 WATER LEVEL DATA **BEACON STATION #574**

22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Groundwater ^t	Groundwater Elevation ¹	Well Depth	Comments
MW-1	03/27/92	156.55	22.43	134,12	446	
	06/04/92		23.40	133.15		
:	09/23/92		24.07	132.48		
	11/12/92		24.16	132.39	29.33	1
	02/02/93		21.87	134.68	29.80	
ł	05/07/93		22.58	133.97	29.84	
į.	05/18/93		22.66	133.89		
l)	08/11/93		23.41	133.14	29.81	
	11/05/93		24.09	132.46	29.81	i
il ·	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	
MW-2	03/27/92	155.17	20.82	134.35		
ł	06/04/92		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	•••	
1	08/11/93		21.85	133.32	29. 7 0	
1	11/05/93		22.32	132.85	29.70	
	03/01/94		21.19	133.98	29.68	
	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	
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	
	02/02/93		21.03	136.10	29.45	
	05/07/93		21.59	135.54	29.53	
	05/18/93		21.73	135.40		
 	08/11/93		22.31	134.82	29.41	
	11/05/93		22.85	134.28	29.41	
	03/01/94		21.97	135.16	29.55	
]	06/02/94		22.29	134.84	29.56	
	09/09/94 12/20/94		22.91 22.11	134.22 135.02	29.56 29.54	
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		17.35	134.61	28.11	
	06/02/94		17.68	134.28	28.12	
	09/09/94		18.19	133.77	28.13	
L	12/20/94		17.52	134.44	28.10	L,

NOTES:

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

Well Depth

Elevation referenced to mean sea level.

Measurement from top of casing to bottom of well.

Not measured.

Fugro 94-574/December 1994

TABLE 1 WATER LEVEL DATA **BEACON STATION #574** 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Groundwater ¹	Groundwater Elevation ²	Well Depth	Comments
MW-5	05/18/93 08/11/93	148.68	15.72 16.42	132.96 132.26	 25.43	
	11/05/93		16.92	131.76	25.43	
	03/01/94		15.54	133.14	25.00	
1	06/02/94		16.19	132.49	25.00	
1	09/09/94		16.87	131.81	25.00	
	12/20/94		15.84	132.84	25.01	
MW-6	05/18/93	153.96	20,80	133.16		
	08/11/93		21.64	132.32	31.15	
	11/05/93		22.11	131.85	31.15	
	03/01/94		20.80	133.16	29.96	
	06/02/94		21.37	132.59	29.98	
l	09/09/94		22.05	131.91	29.96	
	12/20/94		21.06	132.90	29.89	
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	30.11	
	06/02/94		23.22	132.87	30.12	
j	09/09/94		23.90	132.19	30.12	
	12/20/94		22.98	133.11	30.10	
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	13 5 .99	34.04	
	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	

NOTES:

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

Well Depth

=

Elevation referenced to mean sea level. Measurement from top of casing to bottom of well.

Fugro

Not measured.

94-574/December 1994

TABLE 2 ANALYTICAL RESULTS: GROUNDWATER BEACON STATION #574 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(All results in parts-per-billion)

Monitoring Well	Date Collected	Total	Petroleum Hydro	carbons	Aromatic Volatile Organics			
		Gasoline	Diesel	Motor Oil	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-1	03/27/92	5,600	<50	<50	760	900	230	1,100
	06/04/92	2,600	<800	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	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
	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
	09/09/94	4,300	NA	NA.	740	290	200	630
	12/20/94	3,900	NA	NA	550	260	150	510
MW-2	03/27/92	18,000	<50	<50	2,400	2,300	870	3,300
	06/04/92	14,000	<5,000	NA	1,900	1,700	580	2,300
l	09/23/92	22,000	NA	NA	2,100	1,500	760	2,900
	11/12/92	29,000	NA	NA	2,400	860	540	3,500
	02/02/93	24,000	NA	NA	2,700	1,900	590	2,600
	05/07/93	19,000	NA	NA	1,800	1,300	460	2,600
1	08/11/93	23,000	NA	NA	2,300	1,500	550	2,300
	11/05/93	30,000	NA	NA	3,100	2,900	860	3,700
	03/01/94	13,000	NA	NA	1,500	490	350	1,000
1	06/02/94	12,000	NA	NA	2,000	790	460	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
MW-3	03/27/92	160	<50	<50	9.2	4.8	10	23
	06/04/92	120	<50	NA	7.5	2.7	0.5	15
	09/23/92	220	NA.	NA	8.3	4.3	6.2	19
	11/12/92	230	NA	NA	12	5.5	7.7	19
	02/02/93	86	NA	NA	2.4	0.71	2.7	6.2
	05/07/93	140	NA	NA	2.6	1.2	3.9	8.4
	08/11/93	490	NA	NA	15	8.1	14	37
	11/05/93	820	NA	NA	45	24	34	93
	03/01/94	410	NA	NA	7.4	2.7	5.6	10
į	06/02/94	440	NA	NA	13	4.9	14	31
l	09/09/94	620	NA	NA	12	4.8	9.7	20
	12/20/94	770	NA	NA	24	11	16	36
MW-4	05/18/93	<50	N A	NA	<0.5	<0.5	<0.5	<0.5
ļ	08/11/93	<50	NA.	NA	<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	<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	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA.	NA	<0.5	<0.5	<0.5	<0.5

NOTES:

Below indicated detection limit.

NS = Not sampled.
NA = Not analyzed.

Fugro

94-574/December 1994

TABLE 2

ANALYTICAL RESULTS: GROUNDWATER

BEACON STATION #574

22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA

(All results in parts-per-billion)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons		Aromatic Volatile Organics				
		Gasoline	Diesel	Motor Oil	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.	<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	<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	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA	NA	<0.5	<0.5	<0.5	<0.5
MW-6	05/18/93	170	NA	NA	<0.5	<0.5	<0.5	<0.5
	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
	06/02/94	190	NA	NA	<0.5	<0.5	< 0.5	< 0.5
	09/09/94	140	NA	NA	<0.5	<0.5	<0.5	<0.5
	12/20/94	210	NA	NA	<0.5	<0.5	<0.5	<0.5
MW-7	05/18/93	<50	NA	NA	<0.5	<0.5	<0.5	<0.5
1	08/11/93	<50	NA	NA	<0.5	<0.5	<0.5	<0.5
1	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	<50	NA	NA	<0.5	<0.5	<0.5	<0.5
i	09/09/94	<50	NA	NA.	<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA	NA.	<0.5	<0.5	<0.5	<0.5
MW-8	05/18/93	<50	NA	NA	<0.5	<0.5	<0.5	<0.5
ļ	08/11/93	<50	NA	NA	<0.5	<0.5	<0.5	<0.5
Į.	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	< 0.5	<0.5	<0.5	<0.5
j	12/20/94	<50	NA	NA	<0.5	<0.5	<0.5	<0.5

NOTES: < =

Below indicated detection limit.

NS = Not sampled. NA = Not analyzed.

Fugro

94-574/December 1994

ULTRAMAR FIELD PROCEDURES

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

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 are monitored. The well is sufficiently purged when: the four casing volumes have been removed; the temperature, pH, and conductivity 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 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 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 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 will 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 bailing, a final free product thickness measurement will be taken and a ground water sample will not be collected.

Samples are stored in 40-milliliter vials so that air passage through the sample is minimized (to prevent volatilizing the sample). The vial is titted 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. A Chain-of-Custody form is completed to ensure sample integrity. Ground water samples are transported to a state-certified laboratory and analyzed within the EPA-specified holding times for the requested analyses.

TABLE 2
WATER LEVEL DATA
(measurements in feet)

Well	Date A	Reference: Elevation (top of casing)	Ground Water	Ground Water Elevation
MW-1	04-01-91 03-27-92	156.55	22.37 22.43	134.18 134.12
	06-04-92		23.40	133.15
	09-23-92 11-12-92]	24.07	132.48
	02-02-93		24.16	132,39
	05-18-93		21.87 22.66	134.68 133.89
MW-2	04-01-91	155.17	20.82	
	03-27-92	100.17	20.82	134.25 134.35
ĺ	06-04-92		21.81	133.36
İ	09-23-92		22.45	132.72
ļ	11-12-92		22.60	132.57
	02-02-93 05-18-93		20.28	134.89
	03-16-93		21.06	134.11
MW-3	04-01-91	157.13	21.55	135.58
	03-27-92		21.46	135.67
	06-04-92 09-23-92		22.34	134.79
	11-12-92		22.84	134.29
1	02-02-93	1	23.03	134.09
	05-18-93		21.03	136.10
MW-4	05-18-93	101.00	21.73	135,40
169.5		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 -9 3	156.09	22.64	133,45
MW-8	05-18-93	158.04	21.55	136,49

TABLE 3

GROUND WATER ANALYTICAL RESULTS
(concentrations in parts per billion)

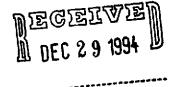
Monkoring				Arematte Volatile Organice				
Well -	Collected	1 100, 110, 18	in in	14.010.44			er wand	Total
The state of the state of		Caroline	Diese	Motor Oil	Berzzne	************	Ethylbenzens	. Xylen
MW-1	04-01-91	4,100	<100		140	570	76	460
	03-27-92	5,600	< 50	<50	760	900	230	1,100
	06-04-92	2,600	<800		270	57	230	440
	09-23-92	3,400		_	480	430	110	550
	11-12-92	2,700	_	- 1	5.8	<5.0	140	340
	02-02-93	8,500			760	770	250	1,200
	05-07-93	7,700			970	630	280	1,200
MW-2	04-01-91	10,000	<100		650	640	150	
ľ	03-27-92	18,000	<50	<5D	2.400	2,300		960
ļ	06-04-92	14,000	<5,000		1,900	1.700	870 580	3,300
1	09-23-92	22,000		_ [2,100	1,700	760	2,300
Ì	11-12-92	29,000		. 1	2,400	860	540	2,900 3,500
1	02-02-93	24,000		.	2,700	1,900	590	2,600
	05-07-93	19,000	<u> </u>		1,800	1,300	460	2,600
MW-3	04-01-91	3,100	<100		41	91	37	420
l	03-27-92	160	<50	<50	9.2	4.8	10	
ļ	06-04-92	120	<50	- 1	7.5	2.7	0.5	23 15
Ī	09-23-92	220		. [8.3	4.3	6.2	19
ļ	11-12-92	230	.	-	12	5.5	7.7	19
j	02-02-93	86		. !	2.4	0.71	2.7	6.2
	05-07-93	140		<u>.</u>	2.6	1.2	3.9	B.4
MW-4	05-18-93	<50		•	< 0.50	< 0.50	<0.50	<0.5
MW-5	05-18-93	<50		•	< 0.50	<0.50	<0.50	<0.5
MW-6	05-18-93	170		• .	<0.50	<0.50	< 0.50	< 0.5
MW-7	05-18-93	<50	-	•	< 0.50	< 0.50	<0.50	<0.5
MW-8	05-18-93	<50			< 0.50	< 0.50	< 0.50	<0.5

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



December 28, 1994 Sample Log 10826

Sheila Richgels Fugro West, Inc.- Roseville 1050 Melody Lane, Suite 160 Roseville, CA 95678



Subject: Analytical Results for 8 Water Samples

Identified as: Project # 94-574-01 (Beacon 574)

Received: 12/21/94

Dear Ms. Richgels:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on December 28, 1994 and describes procedures used to analyze the samples.

Sample(s) were received in 40-milliliter glass vials sealed with TFE lined septae and plastic screw-caps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

Sample(s) were analyzed using the following method(s):

"BTEX" (EPA Method 602/Purge-and-Trap)
"TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)

Please refer to the following table(s) for summarized analytical results and contact us at 916-753-9500 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:

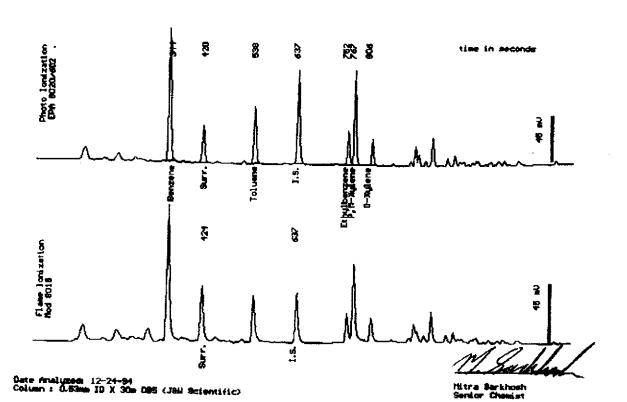
Mitra Sarkhosh Senior Chemist LABORATORY

Sample Log 10826 10426-1

Sample: MW-1

From : Project # 94-574-01 (Beacon 574)
Sampled : 12/20/94
Dilution : 1:10 QC Batch : QC Batch : 6136U

Parameter	(MRL) 189/4	Measured Value we/L
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	(5.0) (5.0) (5.0) (5.0) (500)	550 2 60 150 510 3900
Surrogate Recovery	92 %	





Sample Log 10826

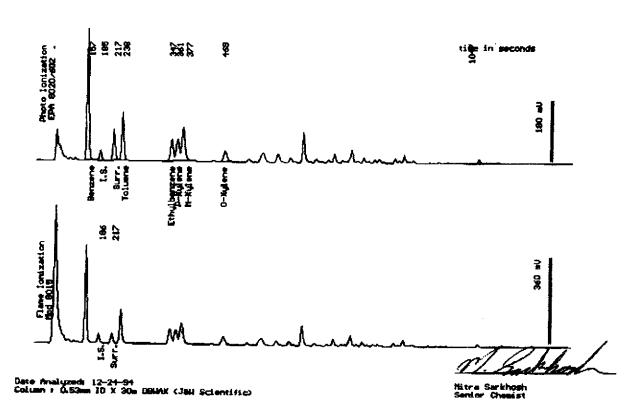
Sample: NW-2

From : Project # 94-574-01 (Beacon 574)

Sampled: 12/20/94

Dilution: 1:10 QC Batch: 4109T

Parameter	(MRL) ug/L	Measured Value 65/L
Benzene	(5.0)	2300
Toluene	(5.0)	1000
Ethylbenzene	(5.0)	650
Total Xylenes	(5.0)	1900
TPH as Gasoline	(500)	16000
Surrogate Recovery	105 %	



LABORATION

Sample Log 10826

10826-3

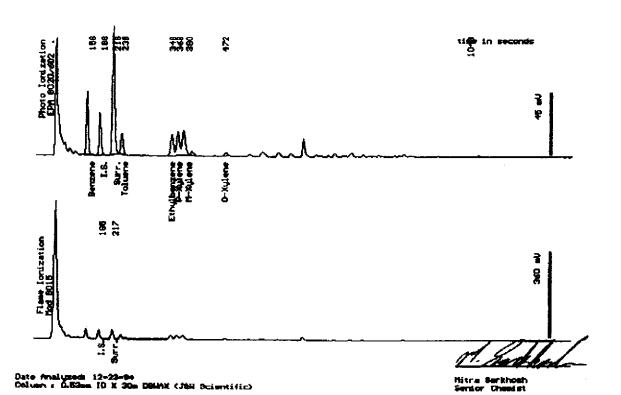
Sample: MW-3

From : Project # 94-574-01 (Beacon 574)

Sampled: 12/20/94

Dilution: 1:1 QC Batch: 4109T

Parameter	(MRL) wg/L	Measured Value 1972
Benzene	(.50)	24
Toluene	(.50)	11
Ethylbenzene	(.50)	16
Total Xylenes	(.50)	36
TPH as Gasoline	(50)	770
Surrogate Recovery	<i>t</i>	104 %





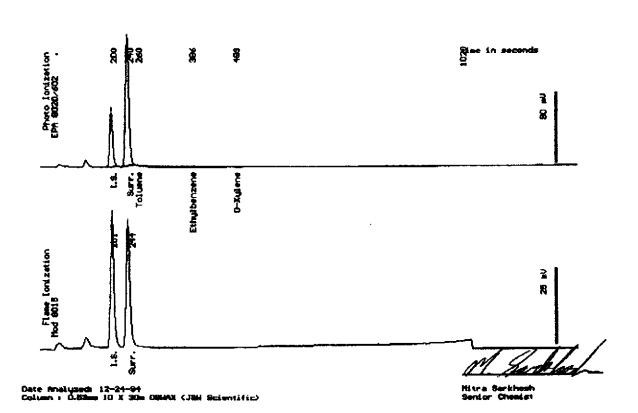
Sample Log 10826 10826-4

Sample: NW-4

From : Project # 94-574-01 (Beacon 574)
Sampled : 12/20/94
Dilution : 1:1 QC Batch :

QC Batch : 2110V

Parameter	(MRL) wg/L	Measured Value 49/1
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery	7	104 %



Sample Log 10826

10626-5

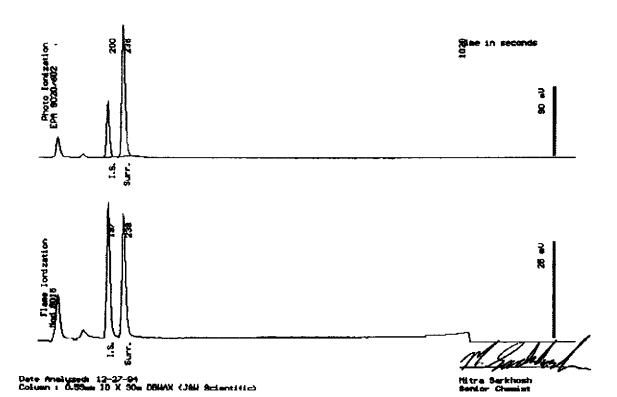
Sample: MW-5

From : Project # 94-574-01 (Beacon 574)

Sampled: 12/20/94

QC Batch : 2110Z Dilution: 1:1

Parameter	(MRL) we/L	Measured Value wg/L
		·
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery	103 %	



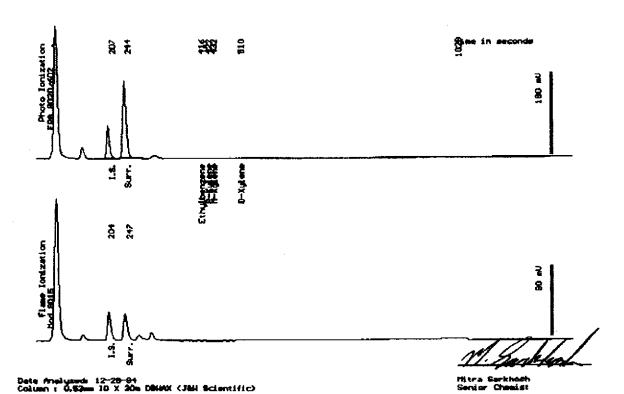


Sample Log 10826 10426-4

Sample: NW-6

From : Project # 94-574-01 (Beacon 574)
Sampled : 12/20/94
Dilution : 1:1 QC Batch : QC Batch : 2111B

Parameter	(MRL) -9/L	Measured Value 🛶/.
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	210
Surrogate Recovery	,	105 %





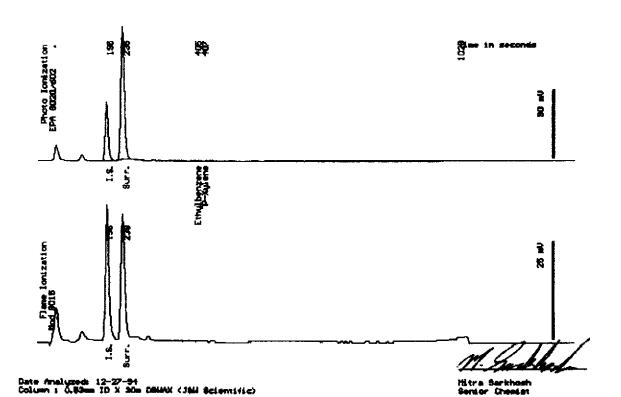
Sample Log 10826 10426-7

Sample: MW-7

From : Project # 94-574-01 (Beacon 574)
Sampled : 12/20/94
Dilution : 1:1 QC Batch :

QC Batch : 2110Z

Parameter	(MRL) wg/L	Measured Value wa/L				
Benzene	(.50)	<.50				
Toluene	(.50)	<.50				
Ethylbenzene	(.50)	<.50				
Total Xylenes	(.50)	<.50				
TPH as Gasoline	(50)	<50				
Surrogate Recovery	,	103 %				



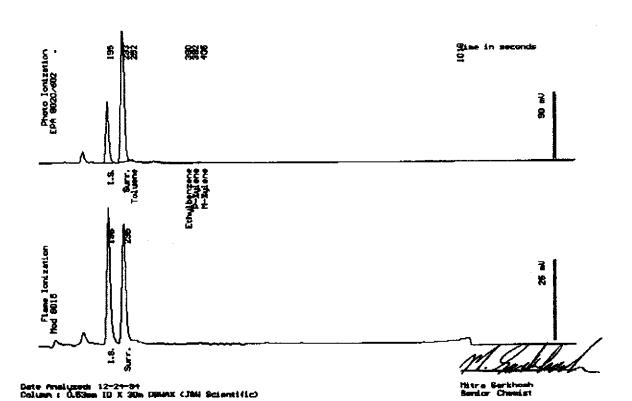


Sample Log 10826 10626-8

Sample: MW-8

QC Batch : 2110V

Parameter	(MRL) wg/L	Measured Value سر/د
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery	i	104 %



Ultramar Inc.CHAIN OF CUSTODY REPORT

Beacon Station No.	Sampler (Print I			1	4 6 5 4	u vecë		Date 12-21-94	Form No.
574 Project No. 22315 REDWOOD RO	EDGAI	R OLI	UEKA		AN	LYSES	+		
Project Na. 22315 REDWOOD Ro	Sampler (Signa	ure ()					6	STANDA	KU
CASTRO VALLEY, CA	AT I	771		1 2			Containers	TA	+
	Affiliation*			Š	(diesel)		É	,	
94-574-01	V	0VL05	FIOO	× 3			O		
Sample No Adentification	Date	Time	Lab No.		Ē		2	REMARK	(S
M W-1	12-20-94	2:43		M			3		
Mw-2	Ì	2:00					\coprod		
MW-3		1:15			Ц				
mw-4		12:28			Ц				
MW-5		11:15					11		
M W-6		11:35							
M W-7		11:53	1						- Kenny
N W-8	/	12:14		1/			1	1	
Relinquished by: (Signature/Affiliation)	Date		ect by: (Styratus	B/Aft	iano		#		Date Time
199 Doutor of	60) NA	400	DAYY	A	_	(de	1		2001100
Reinquiches by: (Supreparte Athliation)	Date	Time Receiv	ed by Asignatu	6/AT	hatio				Date / Time
Relimentation to (Signatural Attitude tief)	Dete		ed by: (Signatu	revAfi	liatio				Date Time
		 	M	1)		l	Ve	55	2/2/h 1040
REPORTO: FAX RESULTS	TO 5H	EILA Bill to:	ULTRAMA						-
MICHEELS (916)-			525 West T Hanlord, C.	SE e A	30	Kenn	re	th Ear	nest
KICHELLS CAID	102 12	' '	Attention: _						
WHITE: Return to Client with Report	YELLOW: Lab	oratory Copy	PINK: Origi	nator	Copy	,			72-9863 t-86

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

Project Address:

Beacon #574, 22315 Redwood Rd

Date: 12-20-94

Castro Valley, CA Project No.: 94-574-01

Recorded by:

Hal Hansen

Well No	Time	Well Elev. TOC	Depth to Gr. Water	Measured Total Depth	Gr. Water Elevation	Depth to Product	Product Thickness		Comm	ents	
MW-1	10:58		22.94	29.85				PETR	OLEUM	OPOR	NO SHEEN
mw-2	10:53		21.37	29.65				11		l)	11 11
mw-3	10:50		22-11	29.54				Ŋ		11	11 11
MW-4	। ७ ः५५		17. 52	28.10				NO	ODOR	NO	SHEEN
mw-5	10:25	1	15.84	25.01				11	l(ft	
MW-6	10:30	3	21.06	29.89				1(lŧ		1 (C
mw-7	10:34	.'	22.98	30.10				11	1(_	10 /1
mw-8	10:39		22.14	33.98				lt	1(N H
								·			

Notes:

Client:_	Ultramar		s	ampling Date:	12-20-94	
Site:_	Beacon #5	74		Project No.:	94-574-01	
	22315 Red	wood Road	We	ll Designation:	MW- 8	
		lley. CA				
12" BK 1	ding water ing cut level aled and i casing r pe: 8" UV L2" DWP	in well b vel? locked? iser (in i X 12 12" CN	ox? nches): "UV3	no (TES)	time: hour bove TOC Below To If no, see remar If no, see remar 8" BK her Fair Poor	s OC ks ks
Purging Equipm	nent:	2" dispo 2" PVC b 4" PVC b	sable bai ailer ailer	lerSu De Ce	bmersible pump dicated bailer ntrifugal pump	
Sampled w	vith: Disp	posal bail	er: <u>X</u>	Teflon baile	r:	
				6" 8".	· · · · · · · · · · · · · · · · · · ·	
Purge Vol. Mul Initial Measur Time: 10: 39 Depth of well: Depth to water Start purge:	33.98 22.14	Recl Time: /2 Depth to	narge Meas): 10 water:	1.47 2 surement 23.39 Calculate 23.39 Actu	.61 gal/ft. ted purge: 7.6 ual purge: 7.6	7
Time	Temp.	E.C.	рН	Turbidity	Volume	
12:02	65-4	11 93	7.57		1	
	65.6	1181	7.43		2	
I I	65.6	1170	7.21		3	
12:07	65.5	1161	7.10		4	
·						
Sample ap	pearance:	cloud	dy	Lock:	lphin	_
Equipment repl 2" Locking C 4" Locking C 6" Locking C	ap:	Lock	#3753:	7/32	n of replaced ite Allenhead: 9/16 Bolt: nead (DWP):	_
Signature:	A	purfuf of				-

C	Client: <u>Ultramar</u>				ampling	Date: 15	2-20-9	4
	Site:_	Beacon #5	74		Proje	ct No.:_	94-574-01	_
		22315 Red	wood Road	Wel	ll Desig	nation:_	MW- /	
		Castro Va	lley, CA					
Is top Is wel Height Well c 12" BK	of cas l cap so of well over ty	ing cut levealed and income and i	trol device in well be vel? locked? iser (in in 12 12" CNI	nches): "UV36	NO NO 12" E 5" CNI	MCOOth	f no, see f no, see _ 8" BK_ er	remarks remarks
_	g Equip		2" dispos 2" PVC ba 4" PVC ba	ailer ailer	-	Ded Cen	mersible p icated bai trifugal p	oump ler oump
S	ampled v	with: Disp	posal baile	er: <u>X</u>	Teflo	n bailer	-	
	Well I	Diameter:	2"	4"	6"	_ 8"		
Initia Time: Depth Depth	l Measur (0:52) of well to water	tiplier: rement 29.85 r: 22.94 2:06	Recl Time: 2 Depth to	0.65 harge Meas 40 water: 2	3.81	Calculate Actu	61 gal/f ed purge:_ al purge:_	t. 18.0 gal 18.0 gal
	Time	Temp.	E.C.	рН	Turb:	idity	Volume	
	2:13	65.8	1157	6.99			1	
	2:17	66.1	1138	6.97			2	
	2:19	65.9	1130	6,85			و	PUMP DRY
	2:27	65.7	1121	6.81			4	
S	ample ap	opearance:	Plea	2_	Lock:	Do	Johin	
2" L 4" L	ocking (ocking (ocking (laced: (Ch Cap: Cap:	neck all th Lock-I Lock-I	at apply) (#3753: Dolphin:		7/32 2	of replace Allenhead: 9/16 Bolt: ead (DWP):	
Signat	ure: _	#1	ruff					

Client: <u>Ultramar</u>	Sampling Date: 12-20-94					
Site: Beacon #574 Project No.: 94-574-01						
22315 Redwood Road	Well Designation: MW- 2					
Castro Valley, CA						
Is setup of traffic control devices r Is there standing water in well box? Is top of casing cut level? Is well cap sealed and locked? Height of well casing riser (in inche Well cover type: 8" UV 12" UN 12" UN 12" CNI General condition of wellhead assemble	NO VES If no, see remarks NO VES If no, see remarks					
Purging Equipment:2" disposabl2" PVC baile4" PVC baile	rDedicated bailer rCentrifugal pump					
Sampled with: Disposal bailer:_						
Well Diameter: 2" 4"	X 6" 8"					
Purge Vol. Multiplier: 0.16 0 Initial Measurement Time: 10:53 Depth of well: 99.65 Depth to water: 21.37 Depth to water: 21.37	1.47 2.61 gal/ft. Measurement Calculated purge: 21.5 gaf er: 22.61 Actual purge: 21.5 gaf					
Start purge: 1:20 Samplin	g time: 2:00					
Time Temp. E.C.	OH Turbidity Volume					
1:23 65.8 1267 7.	03 1					
1:27 65. 9 12 45 6.	18 — 2					
1:29 65. 6 12 31 6.	85 — 3 PUMP DRY					
1:35 65-7 1224 6.	81 4 11 11					
Sample appearance: <u>Clear</u>	Lock: <u>3753</u>					
Equipment replaced: (Check all that a 2" Locking Cap: Lock #3 4" Locking Cap: Lock-Dolp 6" Locking Cap: Lock-Dolp	753: 7/32 Allenhead:					
Remarks:						

C	Client: <u>Ultramar</u>				ampling Date:	12-20-94
	Site:_	Beacon #5	74		Project No.:_	94-574-01
		22315 Red	vood Road	We	ll Designation:_	<u>mw- 3</u>
		Castro Va				
Is setuls the Is top Is well the Is Well con 12" BK Genera	up of the re stand of cas selected of well over type to conditions of the conditions	raffic containg water ing cut leveled and leveled and leveled are repeated as a second contact with the results of the results are results as a second contact and results are results as a second contact are results as a se	trol device in well bovel? locked? iser (in in 12 12" CNI	es requirences: " UV X I 3 embly: E	ed? NO YES to NO YES AND YES AND YES IN NO YES IN THE NOTE OF T	ime: hours bove TOC Relow TOC f no, see remarks f no, see remarks 8" BK Ber Fair Poor
Purgin	g Equipr	ment:	2" dispos 2" PVC ba 4" PVC ba	sable bai ailer ailer	lerSub Ded X_Cer	mersible pump icated bailer trifugal pump
- 5					Teflon bailer	
Initia Time: Depth Depth	l Measur 0:50 of well: to water	: 29.54 r: 22.11	Recl Time: 1: Depth to	narge Mea 10 water:	1.47 2. <u>surement</u> Calculat 23.31 Actu	ed purge: 19.3 and purge: 19.3
Start	<u></u>	T	T	1	· · · · · · · · · · · · · · · · · · ·	T **-1:
	ļ		E.C.		Turbidity	Volume
		· · · · · · · · · · · · · · · · · · ·	1157			+
	· · · · · ·	64. 7	1131	7.48		<u>a</u>
	12:41	64.6	1128	7.21		3
	12:45	64.5	1121	7.12		4
S	ample an	ppearance:	clea	- -	Lock: Dol	phin
Equipme 2" Le	ent replocking (ocking (ocking (neck all th Lock	at apply)	Note condition	n of replaced item Allenhead: 9/16 Bolt:
Signat	ure: _	-A4	1	• · · · · · · · · · · · · · · · · · · ·		

C	lient:_	Ultramar		Sa	impling Date:		
	Site:_	Beacon #57	4		Project No.:_	94-574-01	
		22315 Redw	ood Road	Wel	l Designation:_	MW- 4	
	- 	Castro Val					
Is the	re stand of casi	ling water ing cut lev	in well bo vel?	ox?	ed? NO YES to NO YES AND NO YES I NO YES I 12" EMCO_ 5" CNI Oth Ccellent	f no, see rem	arks
					erSub Ded Cen		i I
S					Teflon bailer		
	Well I	Diameter:	2" <u>X</u>	4"	6" 8"		
<u>Initia</u> Time:_ Depth	l Measu ा0:५५ of well:	tiplier: rement 28 10 r: 17 5 \$	0.16 Recl Time: [Depth to	0.65 narge Meas 2:25 water:	1.47 2. surement Calculat 9.03 Actu	61 gal/ft. ed purge: 6.6 al purge: 6.6	<u> </u>
Start	purge:_	12:18	Samp	pling time	: 12:28		
	Time	Temp.	E.C.	рH	Turbidity	Volume	
	12:19	64.8	1391	7.43		1	
	12:20	65.1	13 73	7.39		2	
	12:21	64.9	1369	7.24		3	
	19:23	64.9	1367	7.16		4	
S	ample a	opearance:	_ clo	udy	Lock: Del	phin	
2" L 4" L	ocking (laced: (Ch Cap: Cap: Cap:	Loc	nat apply) k #3753: Dolphin:	7/32	Allenhead: 9/16 Bolt:	
Rema		h	furfif (1)				
Signat	ure: _		-1-1-19.				

C	Client:_	Ultramar			Sampling	Date:	2-20-	94	
	Site:_	Beacon #5	74		Proje	ct No.:_	94-574-01		
		22315 Red	wood Road	We	ll Desig	nation:_	mw- 5		
		<u>Castro Va</u>	lley, CA						
Is the Is top Is well Height Well o	ere stan of cas l cap s of wel	raffic conding water ing cut le ealed and l casing ree: 8" UV 12" DWPtion of we	in well b vel? locked? iser (in i	nches):	NO NO NO 12" F	YES AL	oove TOC B f no, see f no, see	elow TOC remarks remarks	
	Purging Equipment:2" disposable bailerSubmersible pump2" PVC bailerDedicated bailerX Centrifugal pumpSampled with: Disposal bailer:X Teflon bailer:								
S	ampled	with: Dis	posal bail	er:_X	Teflo	n bailer	:		
	Well	Diameter:	2"	4"	6"	_ 8"_			
Initia Time: Depth Depth	l Measu (0:25 of well to wate	ltiplier: rement : 25.01 r: 15.84	Rec Time: Depth to	water: /	surement 6.12	Calculat Actu	61 gal/1 ed purge:_ al purge:_	5.7 g	
	Time	Temp.	E.C.	рН	Turbi	dity	Volume	7	
	11:06	67.2	691	7.61			1	1	
	11:07	67.4	683	7.54			2	1	
	11:08	67.3	678	7.48			3		
	11:09	67.1	6 70	7.40			4	1	
]	
Sa	ample ap	ppearance:	_clo	udy	Lock:		lphin.		
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):									
Reman		A	garles H						

Client: <u>Ultramar</u>		Samp	ling Date:_	12-20	- 94		
Site: Beacon #574		1	Project No.:	<u>94-574-0</u>	1		
22315 Redwood F	load	Well I	Designation:	<u>mw- 6</u>	• •		
Castro Valley,							
Is setup of traffic control of Is there standing water in we Is top of casing cut level? Is well cap sealed and locked Height of well casing riser (Well cover type: 8" UV X 12" BK 12" DWP 12 General condition of wellhead	ell box? in inches 12" UV_ " CNI): _ _ 36" (NO YES NO	Above TOC If no, second in the	Below TOC e remarks e remarks		
Purging Equipment:2" disposable bailerSubmersible pump2" PVC bailerDedicated bailerX_Centrifugal pump							
Sampled with: Disposal	bailer:	<u>X1</u>	eflon baile	r:			
Well Diameter: 2" \times	_ 4"_	6	5" 8"				
Purge Vol. Multiplier: 0.16 Initial Measurement Time: 10:30 Depth of well: 29.89 Depth to water: 21.06 Start purge: 11:22	Recharge: 11:30 h to water	Measure	1.47 2 ement Calcula O3 Act	.61 gal, ted purge: ual purge:	1ft. 5.7 5.7		
Time Temp. E.			Turbidity	Volume			
		····	Turbidity	AOTOME	-		
11:23 65.0 139							
11:24 64.8 139		***		2	_		
11 25 64.4 138				3	_		
11:26 64.1 13	81 7.3	88		4			
Sample appearance:	londes		ock: De	Inhim			
Equipment replaced: (Check all that apply) Note condition of replaced item 2" Locking Cap: Lock #3753: 7/32 Allenhead: 4" Locking Cap: Lock-Dolphin: 9/16 Bolt: 6" Locking Cap: Pinned Allenhead (DWP):							
Remarks: Signature:	<u></u>						

Client: <u>Ultramar</u>					ampling Date:	12-20	- 94	
Site: Beacon #574					Project No.: 94-574-01			
22315 Redwood Road					ll Designatio	on: <u>ww-</u> 7		
		Castro Va	lley, CA				·	
Is set Is the Is top Is wel Height Well c 12" BK Genera	up of t re stan of cas l cap s of wel over ty	raffic con ding water ing cut le ealed and l casing r pe: 8" UV 12" DWP tion of we	trol devic in well b vel? locked? iser (in i 12" CN llhead ass	es requir ox? nches): " UV3 embly: E	ed? NO YES NO YES NO YES 12" EMCO_ 6" CNI	time:Above TOC I If no, see If no, see 8" BK Other	_ hours Below Too remarks remarks	
Purgin	g Equip	ment:	2" dispo 2" PVC b 4" PVC b	sable bai ailer ailer	ler	Submersible Dedicated ba Centrifugal	משנומ	
			_		Teflon bai	•		
Time: Depth O	1 Measu: 10:34 of well to wate:	rement : 30.10 r: 12.98	Time: / Depth to	harge Mea : 50 water: 2	1.47 surement Calcu 23.14 A	2.61 gal/ lated purge: ctual purge:	4.6 g 4.6 g	
	Time	Temp.	E.C.	рН	Turbidity	Volume	7	
	11:42	64.9	1180	7.73		ı		
	11:43		1156	7.60		2		
	11:44	64.3	1131	7.54		3	7	
	11:45	64.2	1126	7.41		4		
Sa	ample ap	ppearance:	clou	dy	Lock:	olphin		
2" Lo 4" Lo	ocking (laced: (Ch Cap: Cap:	Lock	at apply) k #3753: Dolphin:		ion of replace 32 Allenhead: 9/16 Bolt: enhead (DWP):		
Remai	cks: _							
		MA.	SHI					