Received 10/27/95

Ultramar

ENVIRONMENTAL PROTECTION

95 APR 24 PM 3:17

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

April 18, 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, CALIFORNIA

Dear Mr. Seery:

Enclosed is a copy of the First Quarter 1995 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: First Quarter 1995 Groundwater Monitoring Report
Quarterly Status Report

cc w/encl: Mr. Rich Hiett, San Francisco Bay Region, RWQCB
Mr. Peter J. Pugnale, Shell Oil Company

Ultramar

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ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: April 18, 1995
QUARTER ENDING: March 31, 1995

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 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 overexcavated 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 ground-water 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 new groundwater monitoring wells in May of 1993. With the installation of these new wells the site is fully defined.

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

Submitted PAR/RAP during the fourth quarter 1994.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed first quarter monitoring on March 8, 1995.

RESULT OF QUARTERLY MONITORING:

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

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY	ESTIMATED COMPLETION DATE
Second quarter monitoring	June 1995

Reviewed 10/27/95 CBeech

FUGRO WEST, INC.

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

April 11, 1995

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

Subject: **First Quarter 1995 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 March 8, 1995 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 0.77 feet compared to the last monitoring event.

GROUNDWATER SAMPLING AND ANALYSES

Groundwater samples were collected from six 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-5, MW-6, and MW-7. Concentrations decreased in wells MW-2 and MW-3; and increased in well MW-1 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.

Sincerely,

FUGRO WEST, INC.

Sheila R. Richgels
Report Coordinator

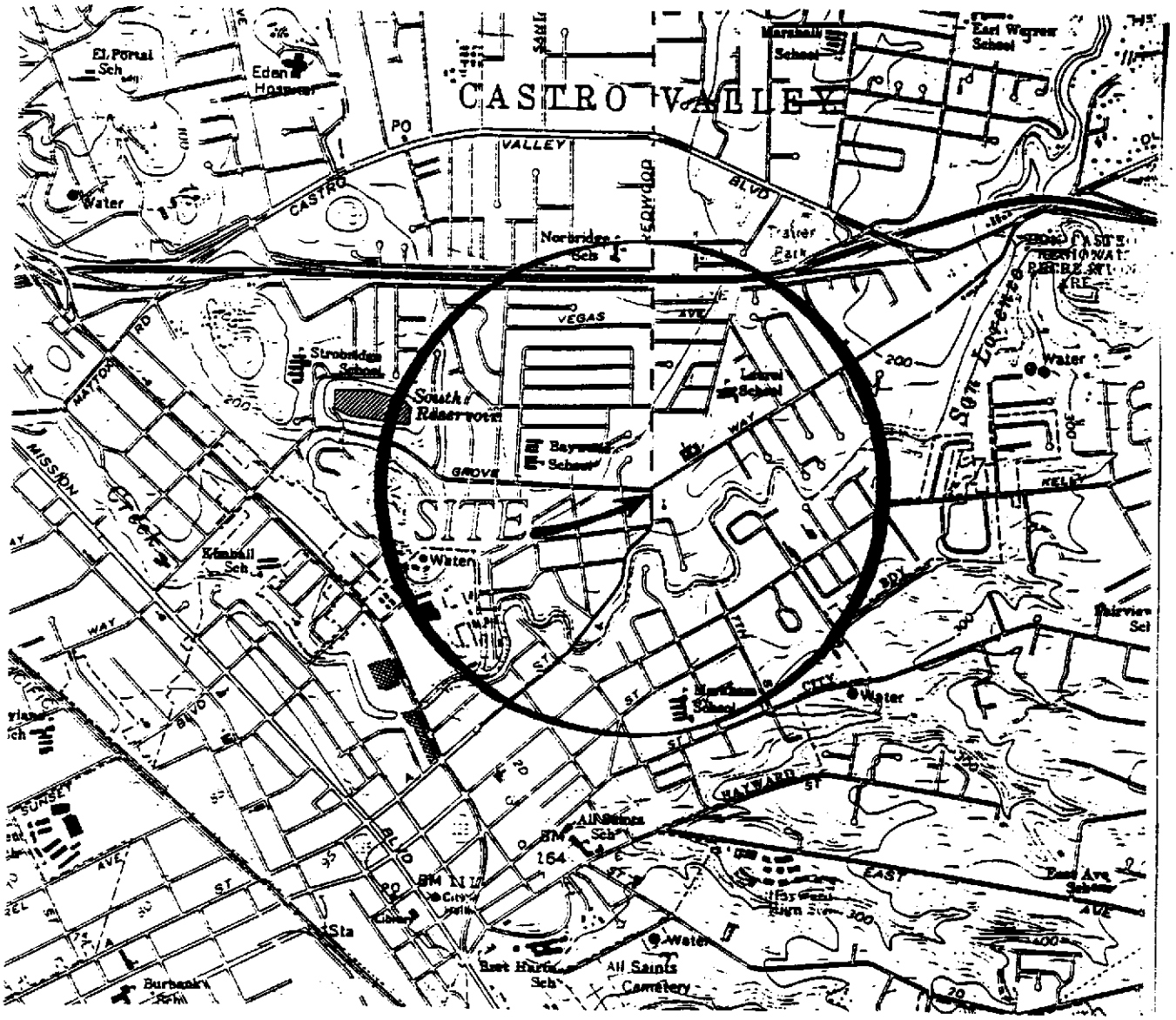
Owen M. Kittredge
Registered Geologist
CRG No. 5853

REGISTERED GEOLOGIST
OWEN M. KITTREDGE
No. 5853
Exp. 11/30/95
STATE OF CALIFORNIA

4/11/95
Date

SRR/OMK/srr

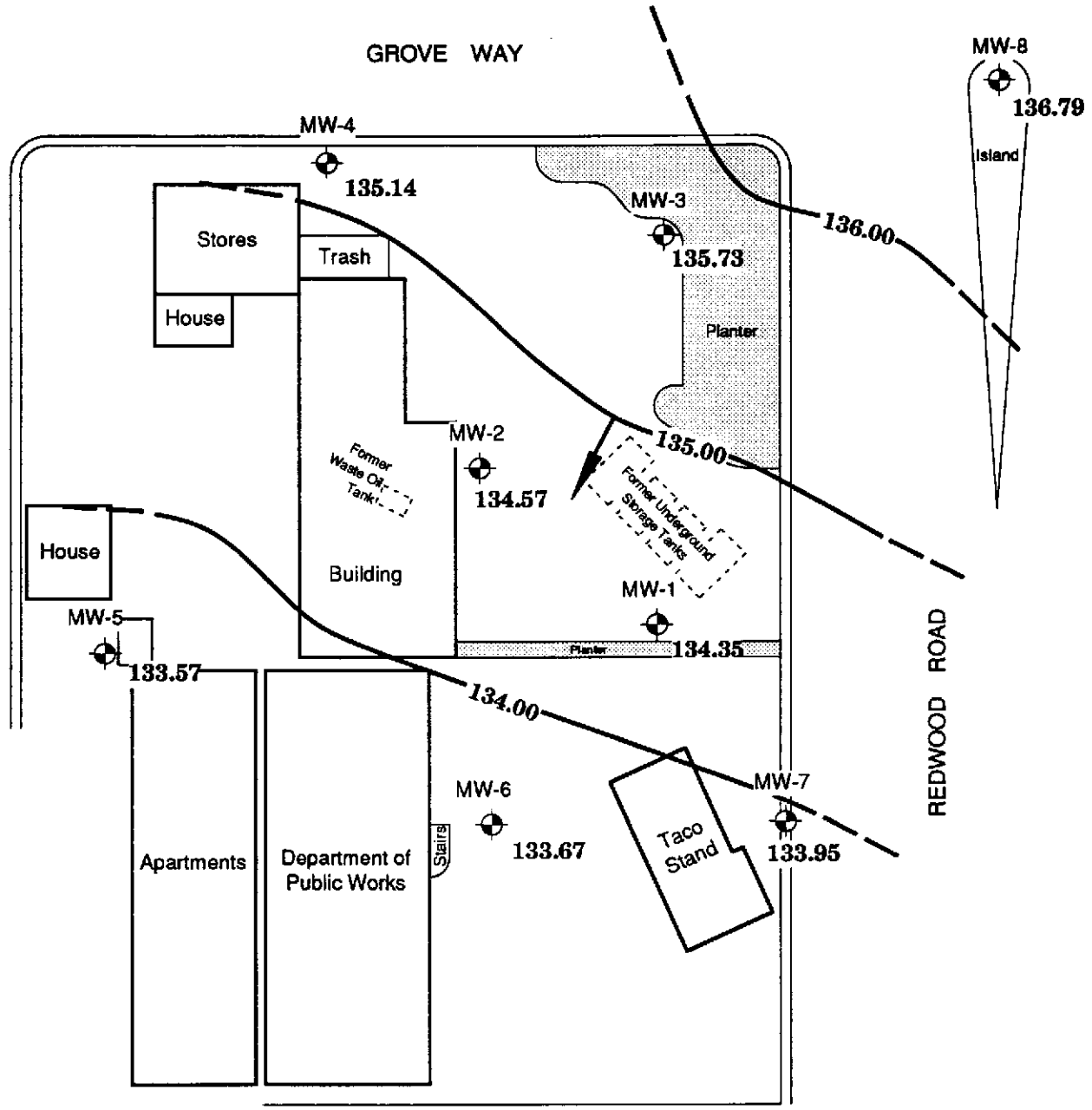
Attachments



GENERAL NOTES:

BASE MAP FROM USGS
7.5 MINUTE TOPOGRAPHIC
HAYWARD, CA

FUGRO	DRAWN BY: J. Paradis DATE: May 23, 1994 REVISED BY: DATE:	SITE LOCATION MAP Beacon Station #574 22315 Redwood Road Castro Valley, CA	FIGURE 1 PROJECT NUMBER: 9546-0021



LEGEND

134.35 Monitoring Well
Groundwater Elevation in Feet

Potentiometric Surface Contour Line
(Dashed Where Inferred)

Estimated Direction of Groundwater Flow

NOTES

Site Sketch After Site Map

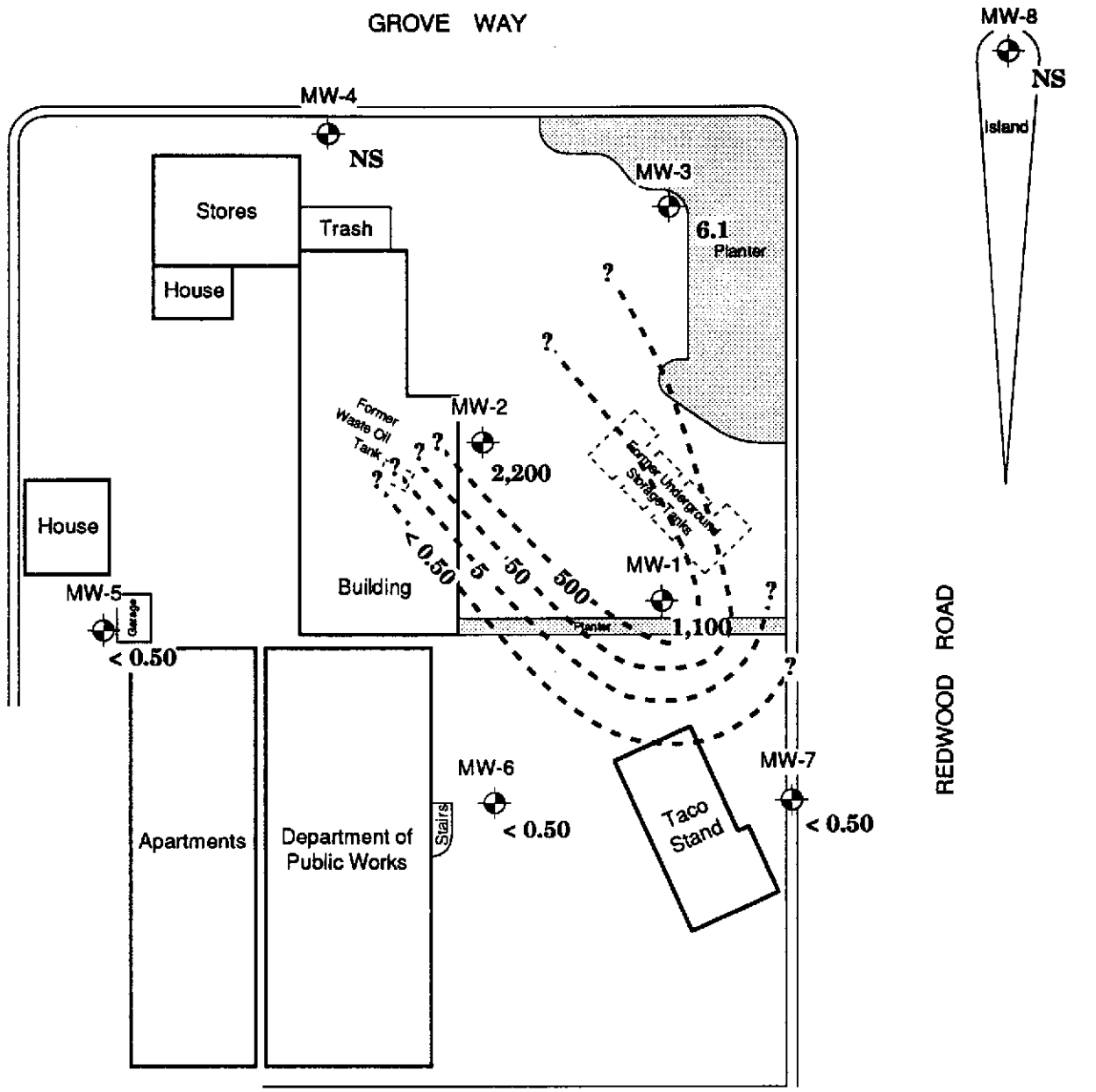
By Acton • Mickelson • van Dam, Inc.

All locations Are Approximate

0 50 100
Approximate Scale In Feet

Hydraulic Gradient = < 0.01 ft/ft
Contour Interval = 1.0 ft

FUGRO	DRAWN BY: D. Hada DATE: March 24, 1995 REVISED BY: DATE:	POTENTIOMETRIC SURFACE MAP March 8, 1995 Former Beacon Station # 574 22315 Redwood Road Castro Valley, CA	FIGURE 2 PROJECT NUMBER: 9546-0021



LEGEND

⊕	Monitoring Well
6.1	Benzene Concentration (parts-per-billion)
- - - - - -	Inferred Iso-Concentration Limits
< 0.50	Below Indicated Detection Limit
NS	Not Sampled

Contour Interval = Exponential

NOTES

Site Sketch After Site Map

By Acton • Mickelson • van Dam, Inc.

All locations Are Approximate

0 50 100

Approximate Scale In Feet

FUGRO

DRAWN BY: D. Hada	DISTRIBUTION MAP OF BENZENE IN GROUNDWATER March 8, 1995
DATE: March 24, 1995	
REVISED BY:	Former Beacon Station # 574 22315 Redwood Road Castro Valley, CA
DATE:	

FIGURE 3

PROJECT NUMBER: 9546-0021

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-1	03/27/92	156.55	22.43	134.12	---	
	06/04/92		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	
MW-2	03/27/92	155.17	20.82	134.35	---	
	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	---	
	08/11/93		21.85	133.32	29.70	
	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	
	03/08/95		20.60	134.57	29.52	
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		22.91	134.22	29.56	
	12/20/94		22.11	135.02	29.54	
	03/08/95		21.40	135.73	29.38	

NOTES: 1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.
--- = Not measured.

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-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	
	12/20/94		17.52	134.44	28.10	
	03/08/95		16.82	135.14	27.97	
MW-5	05/18/93	148.68	15.72	132.96	---	
	08/11/93		16.42	132.26	25.43	
	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	
	12/20/94		15.84	132.84	25.01	
	03/08/95		15.11	133.57	24.85	
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	
	09/09/94		22.05	131.91	29.96	
	12/20/94		21.06	132.90	29.89	
	03/08/95		20.29	133.67	29.67	
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	
	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	
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		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		21.25	136.79	34.48	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.
--- = Not measured.

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-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
	03/08/95	8,100	NA	NA	1,100	540	250	1,100
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
	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
	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
	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
	03/08/95	16,000	NA	NA	2,200	1,000	550	2,100
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
	06/02/94	440	NA	NA	13	4.9	14	31
	09/09/94	620	NA	NA	12	4.8	9.7	20
	12/20/94	770	NA	NA	24	11	16	36
	03/08/95	300	NA	NA	6.1	0.97	4.8	7.5
MW-4	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
	03/08/95	NS	NS	NS	NS	NS	NS	NS

NOTES: < = Below indicated detection limit.
NS = Not sampled.
NA = Not analyzed.
* = Product is not typical gasoline.

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
	03/08/95	<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
	03/08/95	180*	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
	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	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
	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
	03/08/95	<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
	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
	03/08/95	NS	NS	NS	NS	NS	NS	NS

NOTES: < = Below indicated detection limit.
NS = Not sampled.
NA = Not analyzed.
* = Product is not typical gasoline.

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 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. 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.

#574

TABLE 2

WATER LEVEL DATA
(measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Ground Water	Ground Water Elevation
MW-1	04-01-91	156.55	22.37	134.18
	03-27-92		22.43	134.12
	06-04-92		23.40	133.15
	09-23-92		24.07	132.48
	11-12-92		24.16	132.39
	02-02-93		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
	06-04-92		21.81	133.36
	09-23-92		22.45	132.72
	11-12-92		22.60	132.57
	02-02-93		20.28	134.89
	05-18-93		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		22.34	134.79
	09-23-92		22.84	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	05-18-93	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

TABLE 3

GROUND WATER ANALYTICAL RESULTS
(concentrations in parts per billion)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons			Aromatic Volatile Organics			
		Gasoline	Diesel	Motor Oil	Benzene	Toluene	Ethylbenzene	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	<800	-	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	23
	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
MW-5	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
MW-8	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50

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

WEST LABORATORY

March 16, 1995
Sample Log 11449

RECEIVED
MAR 16 1995

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

Subject: Analytical Results for 6 Water Samples
Identified as: BEACON 574 (Proj. # 94-574-01)
Received: 03/09/95

Dear Ms. Richgels:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on March 16, 1995 and describes procedures used to analyze the samples.

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:

Joel Kiff
Senior Chemist

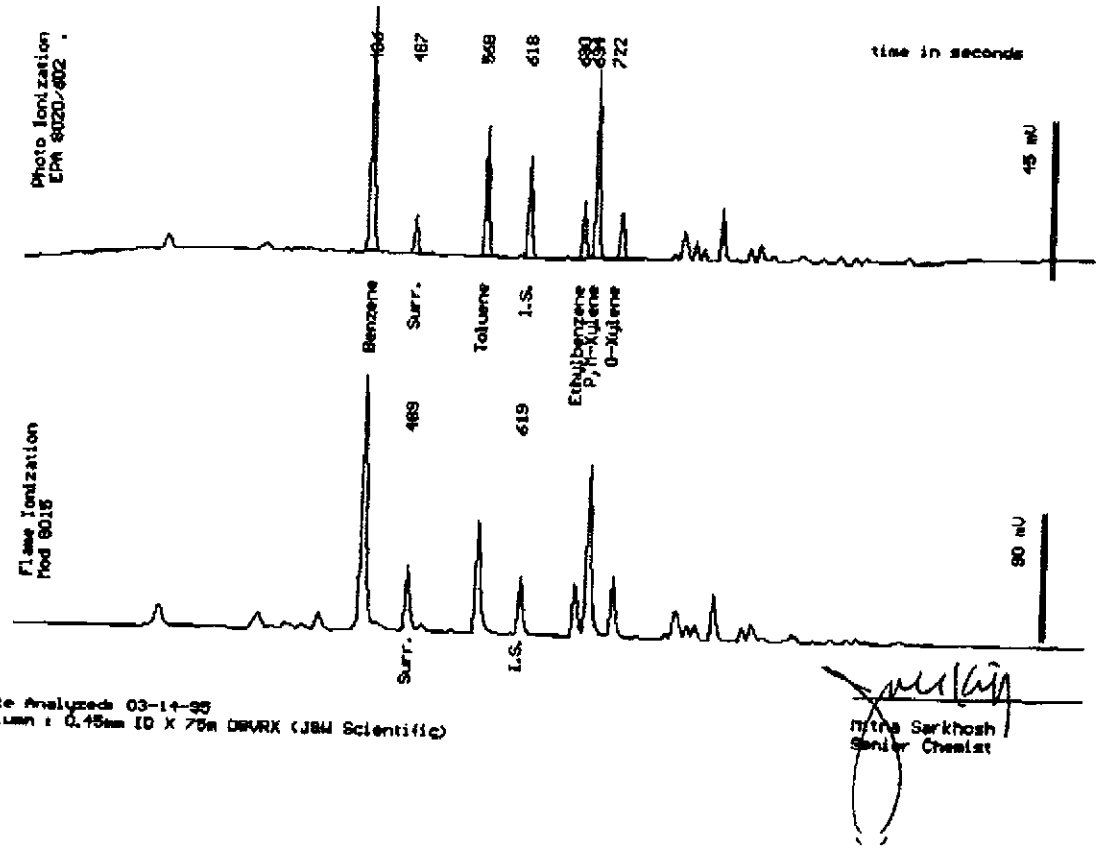
WEST LABORATORY

Sample Log 11449
11449-08

Sample: MM-1

From : BEACON 574 (Proj. # 94-574-01)
Sampled : 03/08/95
Dilution : 1:10 QC Batch : 6142Y
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	1100
Toluene	(5.0)	540
Ethylbenzene	(5.0)	250
Total Xylenes	(5.0)	1100
TPH as Gasoline	(500)	8100
Surrogate Recovery		99 %



Date Analyzed 03-14-95
Column : 0.45mm ID X 75m DBWAX (J&W Scientific)

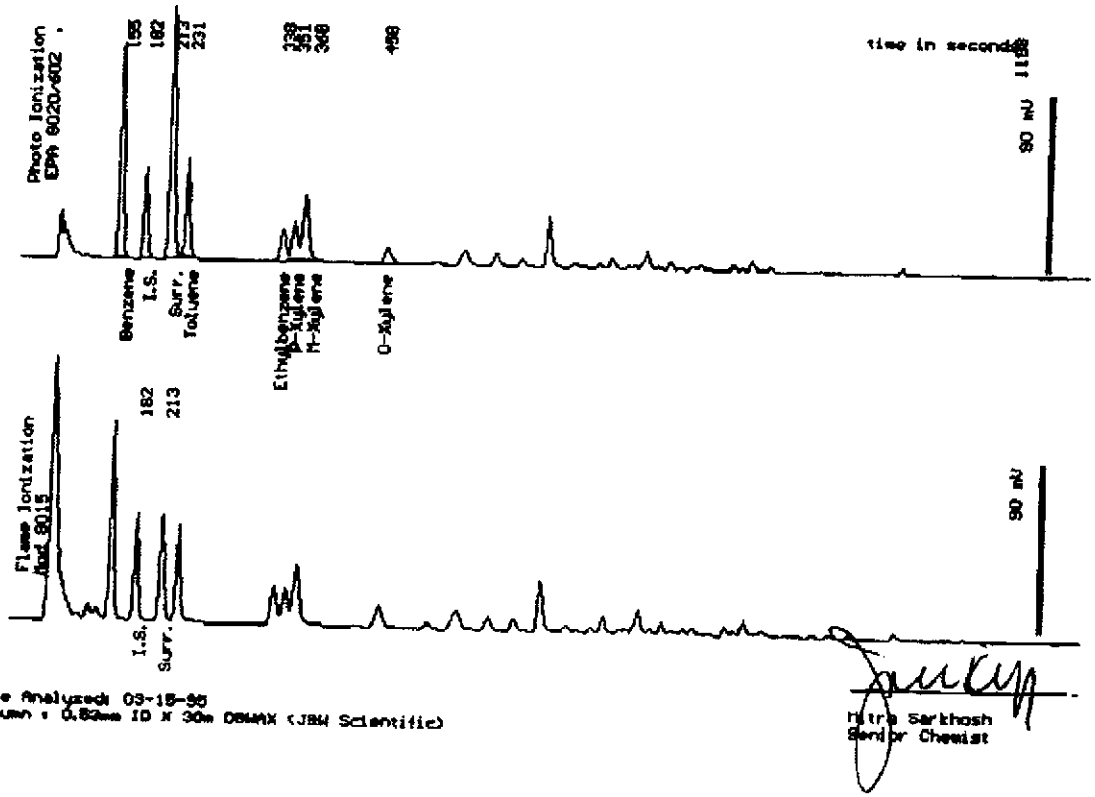
Nitha Sarkhosh
Senior Chemist

Sample Log 11449
11449-07

Sample: MW-2

From : BEACON 574 (Proj. # 94-574-01)
Sampled : 03/08/95
Dilution : 1:50 QC Batch : 4116F
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(25)	2200
Toluene	(25)	1000
Ethylbenzene	(25)	550
Total Xylenes	(25)	2100
TPH as Gasoline	(2500)	16000
Surrogate Recovery		86 %



Date Analyzed: 03-15-95
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Nitra Sarkhosh
Senior Chemist

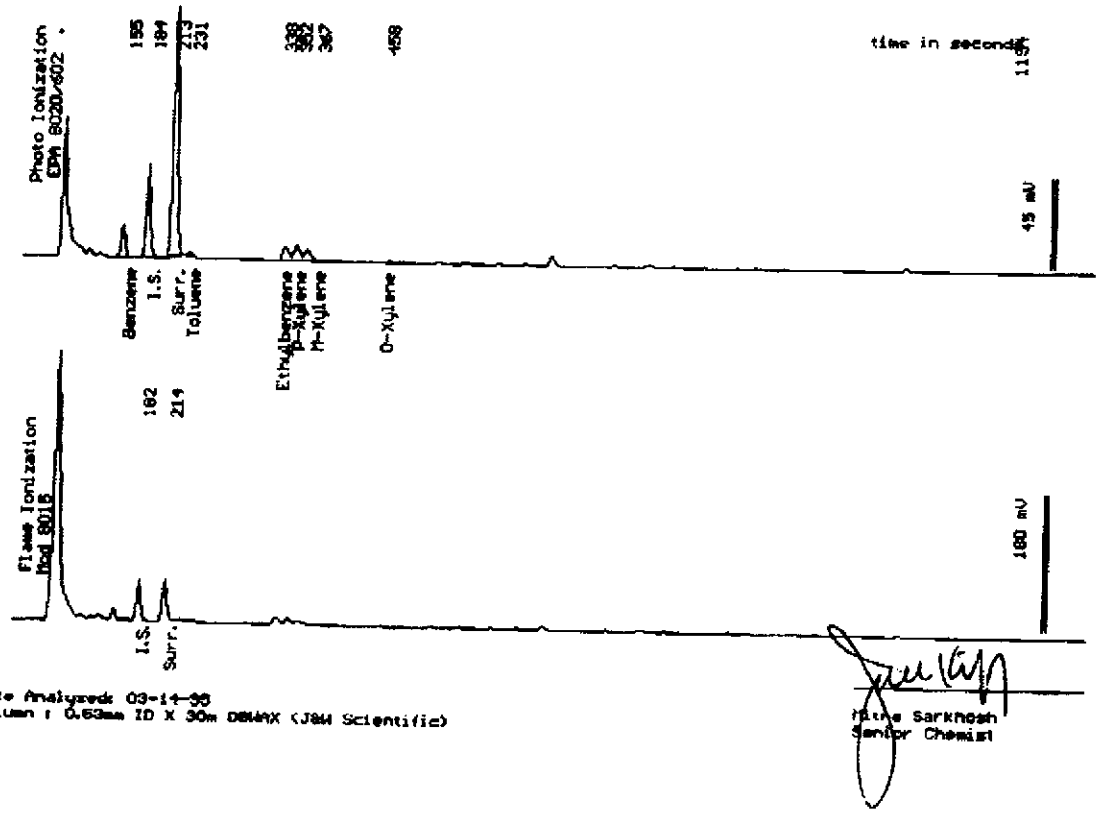
WEST LABORATORY

Sample Log 11449
11449-06

Sample: MW-3

From : BEACON 574 (Proj. # 94-574-01)
Sampled : 03/08/95
Dilution : 1:1 QC Batch : 4116A
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	6.1
Toluene	(.50)	.97
Ethylbenzene	(.50)	4.8
Total Xylenes	(.50)	7.5
TPH as Gasoline	(50)	300
Surrogate Recovery		85 %



Date Analyzed: 03-14-95
Column : 0.53mm ID X 30m DB624X (J&W Scientific)

Nitin Sarkhosh
Senior Chemist

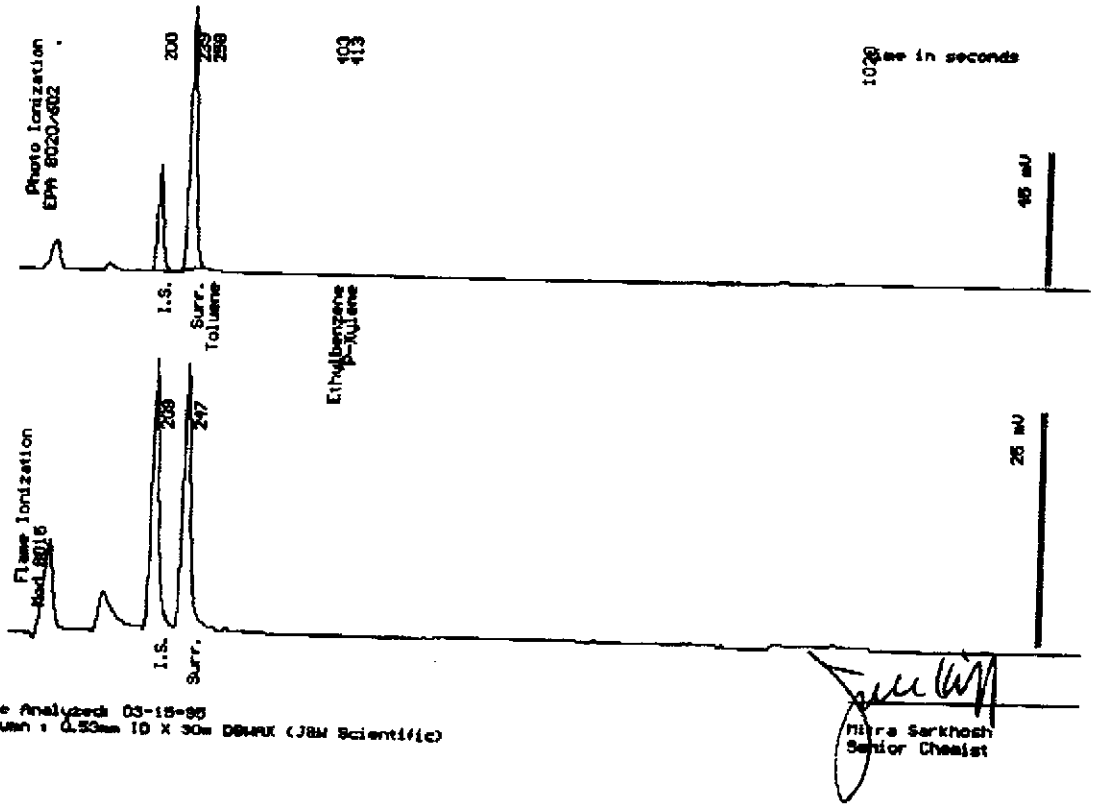
Sample Log 11449
11449-01

Sample: MW-5

From : BEACON 574 (Proj. # 94-574-01)
Sampled : 03/08/95
Dilution : 1:1
Matrix : Water

QC Batch : 2116D

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		101 %



Date Analyzed 03-15-95
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

WEST LABORATORY

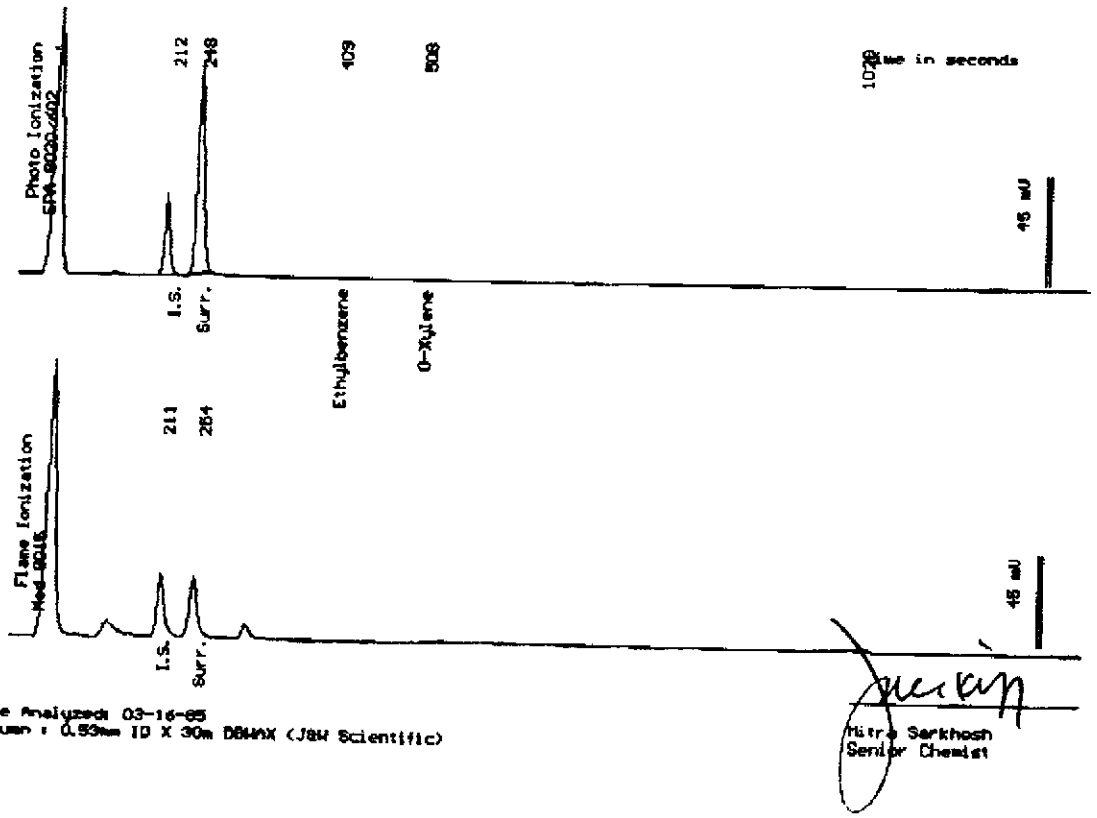
Sample Log 11449
11449-02

Sample: **MW-6**

From : BEACON 574 (Proj. # 94-574-01)
Sampled : 03/08/95
Dilution : 1:1 QC Batch : 2116G
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	180 *
Surrogate Recovery		102 %

* Product is not typical gasoline.



Date Analyzed: 03-16-95
Column : 0.53mm ID X 30m DB-WAX (J&W Scientific)

Mitra Serkhosh
Senior Chemist

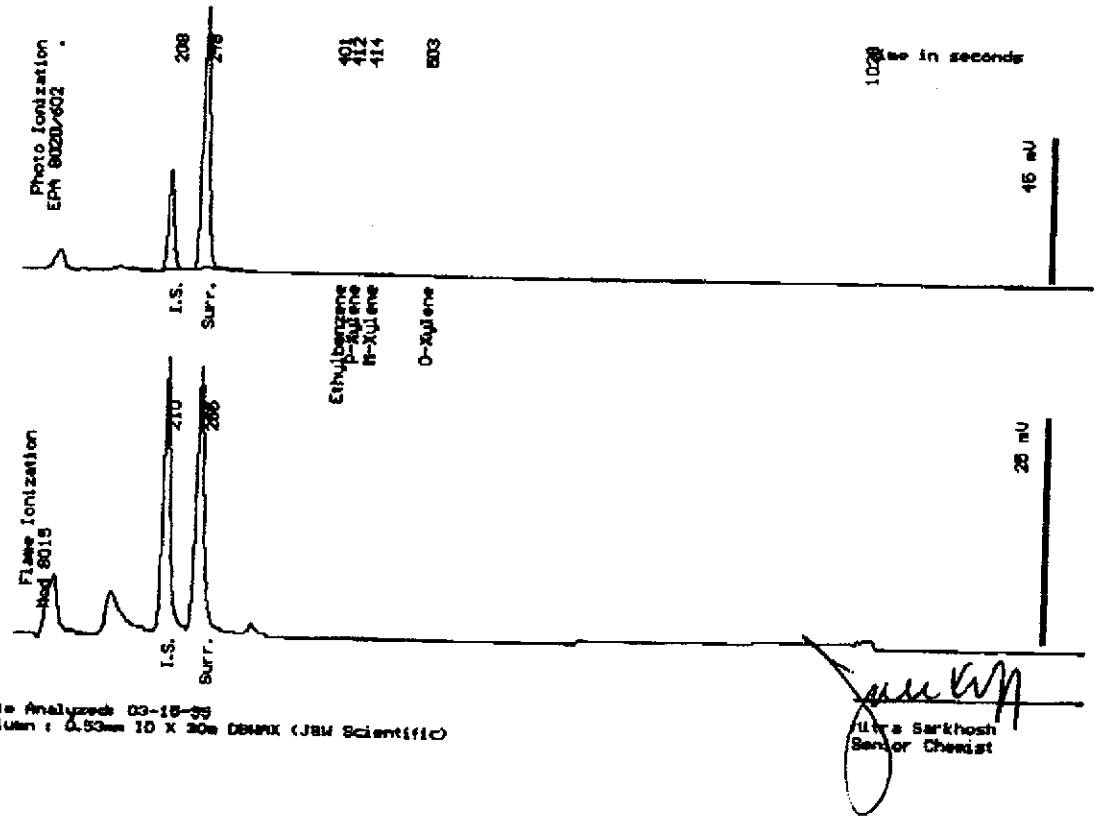
LABORATORY

Sample Log 11449
11449-03

Sample: MW-7

From : BEACON 574 (Proj. # 94-574-01)
Sampled : 03/08/95
Dilution : 1:1 QC Batch : 2116F
Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		100 %



Date Analyzed 03-15-95
Column : 0.53mm ID X 30m DB624X (J&W Scientific)

Yusra Sarkhosh
Senior Chemist

Ultramar Inc.

CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. BEACON 574

Project No. 94-574-01

Project Location: Castro Valley

Sampler (Print Name): Hal Hansen

Sampler (Signature): Hal Hansen

Affiliation: Doulos Environmental

Date: 3-8-95

Form No. 1 of 1

Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (Gasoline)	TPH (Diesel)						No. of Containers	REMARKS
MW-5	3-8-95	432	11449-01	X	X							3	Standard TAT
MW-6		447	11449-02										
MW-7		455	11449-03										
~~MW-8~~			~~11449-04~~										
~~MW-4~~			~~11449-05~~										
MW-3	3-8-95	525	11449-06	X	X							3	
MW-2		555	11449-07										
MW-1		640	11449-08										

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Hal Hansen Doulos Env.	3-9-95	11:20	Troy S. [illegible] WEST	3-9-95	11:20
Troy S. [illegible] / WEST	3-9-95	13:10			
			John Cole	03/09/95	13:10

Report To: Sheila Richgels
Fugro West, Inc.
1050 Melody Lane, Suite 160
Roseville, CA 95678

Bill To: Ultramar
525 W. 3rd Street
Hanford, CA 93230
Attention: Kenneth Earnest

03/09/95 13:10
0°C
JK

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

Project Address: Beacon #574, 22315 Redwood Rd. Date: 3-8-95

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	Comments
MW-1	446	156.55	22.20	29.71	134.35			Petroleum odor no sheen
MW-2	403	155.17	20.60	29.52	134.57			Petroleum odor no sheen
MW-3	409	157.13	21.40	29.38	135.73			petroleum odor no sheen
MW-4	354	151.96	16.82	27.97	135.14			no odor no sheen
MW-5	345	148.68	15.11	24.85	133.57			no odor no sheen
MW-6	349	153.96	20.29	29.67	133.67			no odor no sheen
MW-7	359	156.09	22.14	29.91	133.95			no odor no sheen
MW-8	405	158.04	21.25	34.48	136.79			no odor no sheen

Notes:

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3-8-95

Site: Beacon #574 Project No.: 94-574-01

22315 Redwood Road Well Designation: MW-1

Castro Valley, CA

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in well box? NO (YES) Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" UV_____ 12" UV X 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposal bailer: X Teflon bailer: _____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 416
Depth of well: 29.71
Depth to water: 22.20

Recharge Measurement
Time: 631
Depth to water: 23.68

Calculated purge: 19.5 gal
Actual purge: 19.5 gal

Start purge: 540 Sampling time: 640

Time	Temp.	E.C.	pH	Turbidity	Volume
543	67.4	1281	710	———	1
546	66.4	1167	704	———	2
551	66.8	1160	702	———	3
600	66.4	1159	703	———	4

Sample appearance: clear Lock: dolphin

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: John Hamer

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3-8-95

Site: Beacon #574 Project No.: 94-574-01

22315 Redwood Road Well Designation: MW-2

Castro Valley, CA

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in well box? NO (YES) Above TOC (Below TOC)
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 1
Well cover type: 8" UV_____ 12" UV X 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposal bailer: X Teflon bailer: _____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement: Time: 1413 Depth of well: 29.52 Depth to water: 20.60

Recharge Measurement: Time: 554 Depth to water: 22.15

Calculated purge: 23.2 gal Actual purge: 23.2 gal

Start purge: 511 Sampling time: 555

Time	Temp.	E.C.	pH	Turbidity	Volume
521	67.4	1298	7.41	—	1
524	66.3	1294	7.33	—	2
529	66.8	1282	7.33	—	3
535	66.2	1295	7.32	—	4

Sample appearance: clear Lock: #3753

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: Karl Danson

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3-8-95

Site: Beacon #574 Project No.: 94-574-01

22315 Redwood Road Well Designation: MW-3

Castro Valley, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? (NO) YES If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" UV_____ 12" UV X 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposal bailer: X Teflon bailer:_____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 409
Depth of well: 29.38
Depth to water: 21.40

Recharge Measurement
Time: 523
Depth to water: 22.80

Calculated purge: 20.1 gal
Actual purge: 26.7 gal

Start purge: 500 Sampling time: 525

Time	Temp.	E.C.	pH	Turbidity	Volume
503	67.4	1399	7.34	—	1
506	66.8	1207	7.38	—	2
509	66.9	1302	7.30	—	3
512	66.8	1292	732	—	4

Sample appearance: clear Lock: Dolphin

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: Hal Hansen

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3-8-95

Site: Beacon #574 Project No.: 94-574-01

22315 Redwood Road Well Designation: MW- 5

Castro Valley, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" UV X 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposal bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement: Time: 845 Depth of well: 24.85 Depth to water: 15.11

Recharge Measurement: Time: 431 Depth to water: 18.94

Calculated purge: 6.2 gal Actual purge: 6.5 1

Start purge: 420 Sampling time: 432

Time	Temp.	E.C.	pH	Turbidity	Volume
421	67.2	641	791	———	1
422	66.4	721	780	———	2
423	66.8	706	781	———	3
423	66.1	700	782	———	4

Sample appearance: clear Lock: dolphin

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: Karl Hasso

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3-8-95

Site: Beacon #574 Project No.: 94-574-01

22315 Redwood Road Well Designation: MW- 6

Castro Valley, CA

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 12
Well cover type: 8" UV X 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposal bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 949
Depth of well: 29.67
Depth to water: 20.29

Recharge Measurement
Time: 446
Depth to water: 21.97

Calculated purge: 6 gal
Actual purge: 6 ½

Start purge: 437 Sampling time: 447

Time	Temp.	E.C.	pH	Turbidity	Volume
438	67.2	1167	753	~	1
439	66.9	1064	749	—	2
449	66.6	1054	748	—	3
440	66.4	1045	743	~	4

Sample appearance: clear Lock: Satisfactory

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: Hal Larson

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3-8-95

Site: Beacon #574 Project No.: 94-574-01

22315 Redwood Road Well Designation: MW-7

Castro Valley, CA

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in well box? NO (YES) Above TOC ~~Below TOC~~
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 10
Well cover type: 8" UV X 12" UV _____ 12" EMCO _____ 8" BK _____
12" BK _____ 12" DWP _____ 12" CNI _____ 36" CNI _____ Other _____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposal bailer: X Teflon bailer: _____

Well Diameter: 2" X 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 359
Depth of well: 29.91
Depth to water: 22.14

Recharge Measurement
Time: 454
Depth to water: 23.52

Calculated purge: 5 gal
Actual purge: 5 1/

Start purge: 450 Sampling time: 455

Time	Temp.	E.C.	pH	Turbidity	Volume
451	71.6	1124	7.81	—	1
452	70.2	1110	7.74	—	2
452	70.3	1104	7.73	—	3
453	70.2	1099	7.72	—	4

Sample appearance: clear Lock: dolphin

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: Robert Lanza