# **Ultramar**

\_\_\_\_\_

Telecopy:

209-584-6113 Credit & Wholesale 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

February 9, 1993

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 Fourth Quarter 1992 Groundwater Monitoring Report for the above-referenced Ultramar facility prepared by Aegis Environmental, 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 I

Marketing Environmental Department

Enclosure:

Fourth Quarter 1992 Groundwater Monitoring Report

Quarterly Status Report

cc w/encl:

Mr. Rich Hiett, San Francisco Bay Region, RWQCB





### Ultramar

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

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#### **ENVIRONMENTAL PROJECT** QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: February 9, 1993

QUARTER ENDING: December 31, 1992

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 analyzed for hydrocarbon constituents. 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.

#### <u>SUMMARY OF THIS QUARTER'S ACTIVITIES:</u>

Performed fourth quarter monitoring on November 12, 1992.

#### RESULT OF QUARTERLY MONITORING:

Results indicate that since the previous sampling exemt. benzene and TPH-g concentrations in MN-1 have decreased MM-2 and MW-3 TPH-g and benzene concentrations have increased.



### PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

#### **ACTIVITY**

#### **ESTIMATED COMPLETION DATE**

First quarter monitoring

February 1993

Install five ground-water monitoring wells

March 1993



#### AEGIS ENVIRONMENTAL, INC.

1050 Melody Lane, Suite 160, Roseville, CA 95678

916 • 782-2110 / 916 • 969-2110 / FAX 916 • 786-7830

February 2, 1993

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

Subject:

Fourth Quarter 1992 Groundwater Monitoring Report

Beacon Station #574

22315 Redwood Road, Castro Valley, California

Dear Mr. Earnest:

Aegis Environmental, Inc. (Aegis), is pleased to provide Ultramar Inc., this report documenting the results of quarterly groundwater monitoring, conducted on November 12, 1992, at the subject site (Figure 1). The monitoring included measurements of depth to water in and total depths of three wells (MW-1 through MW-3) located on site (Figure 2). Groundwater samples were collected from all three wells.

#### **GROUNDWATER ELEVATIONS**

Aegis personnel collected measurements of the depth to groundwater in all three wells prior to purging and sampling on November 12, 1992. Current groundwater level data, and prior 1992 data only, are summarized in Table 1. Previous groundwater level data are included in Attachment 3. All measurements of depth to groundwater were made to the nearest 0.01 foot from the referenced wellhead (top-of-casing) elevations and conducted according to the Aegis standard operating procedures (SOP) included in Attachment 1. On the basis of the November 12, 1992, measurements, groundwater is estimated to flow to the southwest (Figure 2) at an average gradient of approximately 0.02 ft/ft. In general, groundwater levels have decreased slightly compared to the previous quarter.

92-779A.RPT

#### **GROUNDWATER SAMPLING AND ANALYSES**

Aegis personnel collected groundwater samples from the three wells on November 12, 1992. The samples were collected according to the Aegis SOP included in Attachment 1, and submitted under chain-of-custody to WEST Labs, a state-certified analytical laboratory. All samples were analyzed for concentrations of: a) total petroleum hydrocarbons, as gasoline, by modified EPA Method 8015; and b) benzene, toluene, ethylbenzene, and total xylenes by EPA Method 602. Current analytical results, and prior 1992 analytical results only, are summarized in Table 2. Figure 3 is a distribution map of benzene in groundwater based on the data summarized in Table 2. The analytical laboratory reports and chain-of-custody form are included as Attachment 2. Previous analytical results are included in Attachment 4. Benzene concentrations increased in well MW-2 and MW-3 compared to the previous quarter.

Aegis recommends a copy of this quarterly monitoring report 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

This report has been prepared for the sole use of Ultramar Inc. Any reliance on this report by third parties shall be at such parties' own risk. The work described herein was performed under the direct supervision of the professional geologist, registered with the State of California, whose signature appears below. If you have any questions or comments, please do not hesitate to call us at (916) 782-2110.

No. 5211

Sincerely,

**AEGIS ENVIRONMENTAL, INC.** 

Sheila R. Richgels

Field Services Coordinator

Sugh I.

Douglas I. Sheeks Senior Geologist CRG No. 5211

Date

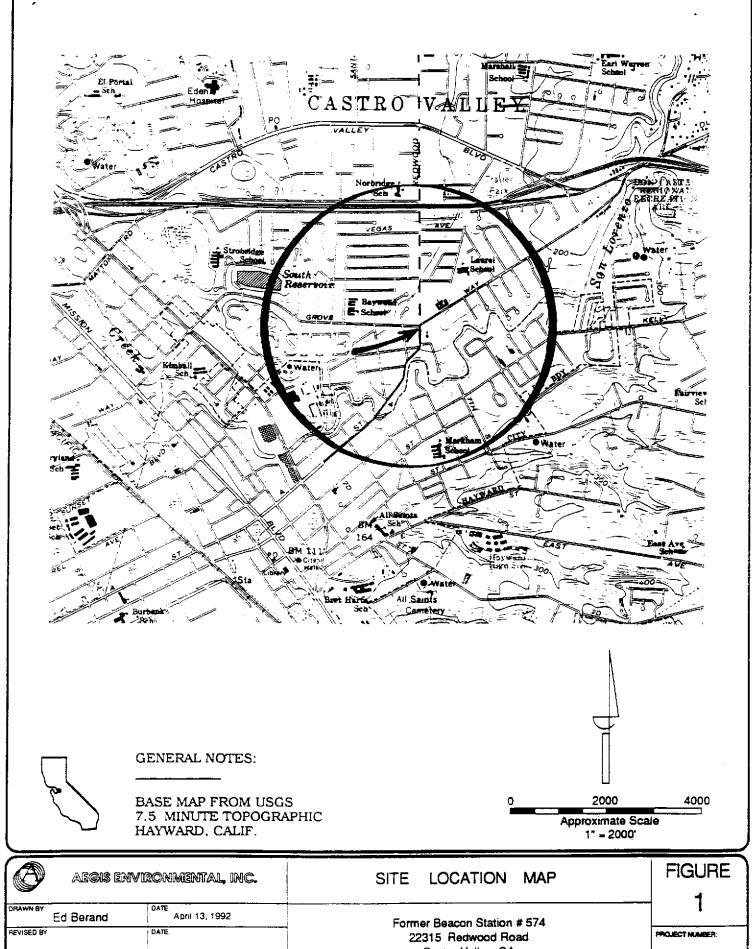
SRR/DIS/law

**Attachments** 

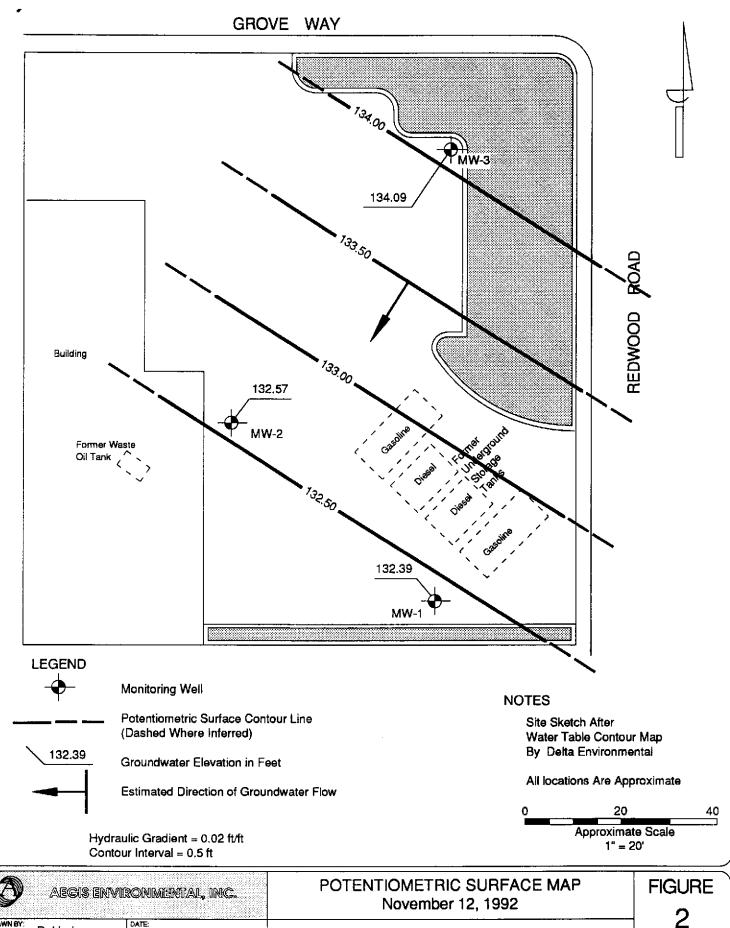
FIGURES:	FIGURE 1 SITE LOCATION MAP
	FIGURE 2 POTENTIOMETRIC SURFACE MAP (NOVEMBER 12, 1992)
	FIGURE 3 DISTRIBUTION MAP OF BENZENE IN GROUNDWATER (NOVEMBER 12, 1992)
TABLES:	TABLE 1 WATER LEVEL DATA
	TABLE 2 ANALYTICAL RESULTS: GROUNDWATER
ATTACHMENTS:	ATTACHMENT 1 STANDARD OPERATING PROCEDURES
	ATTACHMENT 2 LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORM
	ATTACHMENT 3 HISTORICAL WATER LEVEL DATA
	ATTACHMENT 4 HISTORICAL ANALYTICAL DATA
	ATTACHMENT 5 FIELD DATA SHEETS

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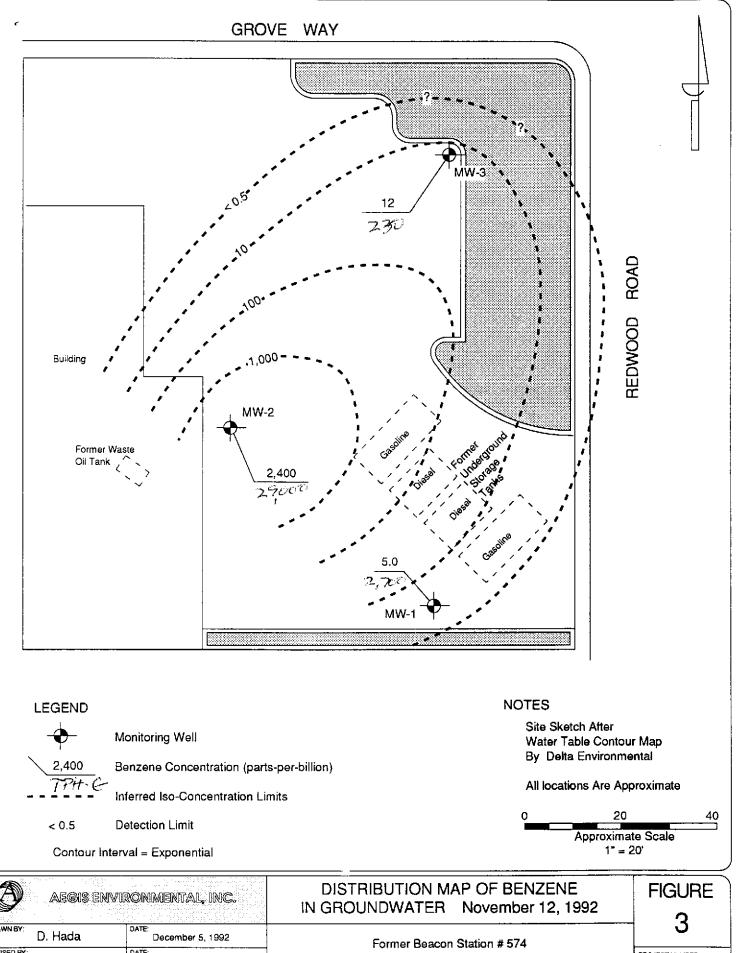
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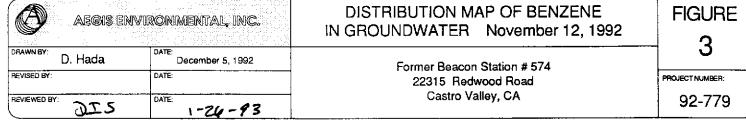


Former Pennen Station # 574	7
22315 Redwood Road	PROJECT NUMBER:
Castro Valley, CA	10-91212



		IRONMENTAL, INC.	POTENTIOMETRIC SURFACE MAP November 12, 1992	FIGURE
DRAWN BY:	D. Hada	December 5, 1992	Former Beacon Station # 574	
REVISED BY:		DATE:	22315 Redwood Road	
REVIEWED BY	DI22	DATE: 12-7-92	Castro Valley, CA	92-779





# 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) <sup>1</sup>	Depth to Groundwater <sup>1</sup>	Groundwater Elevation <sup>2</sup>	Well Depth
MW-1	03/27/92 06/04/92 09/23/92 11/12/92	156.55	22.43 23.40 24.07 24.16	134.12 133.15 132.48 132.39	29.33
MW-2	03/27/92 06/04/92 09/23/92 11/12/92	155.17	20.82 21.81 22.45 22.60	134.35 133.36 132.72 132.57	29.71
MW-3	03/27/92 06/04/92 09/23/92 11/12/92	157.13	21.46 22.34 22.84 23.04	135.67 134.79 134.29 134.09	29.55

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

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 ydrocarbon	8	Ar		omatic 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	]	270	57	230	440	
	09/23/92	3,400			480	430	110	<b>550</b>	
	11/12/92	2,700	***		5.8	<5.0	140	340	
MW-2	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	
MW-3	03/27/92	160	<50	< <b>50</b>	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	
i	11/12/92	230			12	5.5	7.7	19	

NOTES: < = Below indicated detection limit.

--- = Not analyzed.

# ATTACHMENT 1 STANDARD OPERATING PROCEDURES

# AEGIS ENVIRONMENTAL, INC. STANDARD OPERATING PROCEDURES RE: SAMPLE IDENTIFICATION AND CHAIN-OF-CUSTODY PROCEDURES SOP-4

Sample identification and chain-of-custody procedures ensure sample integrity, and document sample possession from the time of collection to its ultimate disposal. Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, sampling methodology, name(s) of on-site personnel and any other pertinent field observations also recorded on the field excavation or boring log.

Chain-of-custody forms are used to record possession of the sample from time of collection to its arrival at the laboratory. During shipment, the person with custody of the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. The sample-control officer at the laboratory will verify sample integrity, correct preservation, confirm collection in the proper container(s), and ensure adequate volume for analysis.

If these conditions are met, the samples will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally-required log book maintained in the laboratory. The sample description, date received, client's name, and any other relevant information will also be recorded.

#### AEGIS ENVIRONMENTAL, INC. STANDARD OPERATING PROCEDURES

RE: LABORATORY ANALYTICAL QUALITY ASSURANCE AND CONTROL

SOP-5

In addition to routine instrument calibration, replicates, spikes, blanks, spiked blanks, and certified reference materials are routinely analyzed at method-specific frequencies to monitor precision and bias. Additional components of the laboratory Quality Assurance/Quality Control program include:

- 1. Participation in state and federal laboratory accreditation/certification programs;
- Participation in both U.S. EPA Performance Evaluation studies (WS and WP studies) and inter-laboratory performance evaluation programs;
- 3. Standard operating procedures describing routine and periodic instrument maintenance;
- 4. "Out-of-Control"/Corrective Action documentation procedures; and,
- 5. Multi-level review of raw data and client reports.

### AEGIS ENVIRONMENTAL, INC. STANDARD OPERATING PROCEDURE RE: GROUNDWATER PURGING AND SAMPLING

SOP-7

Prior to water sampling, each well is purged by evacuating a minimum of three wetted well-casing volumes of groundwater. When required, purging will continue until either the discharge water temperature, conductivity, or pH stabilize, a maximum of ten well-bore volumes of groundwater have been recovered, or the well is bailed dry. When practical, the groundwater sample should be collected when the water level in the well recovers to at least 80 percent of its static level.

The sampling equipment consists of either a "Teflon" bailer, PVC bailer, or stainless steel bladder pump with a "Teflon" bladder. If the sampling system is dedicated to the well, then the bailer is usually "Teflon," but the bladder pump is PVC with a polypropylene bladder. In general and depending on the intended laboratory analysis, 40-milliliter glass, volatile organic analysis (VOA) vials, with "Teflon" septa, are used as sample containers.

The groundwater sample is decanted into each VOA vial in such a manner that there is no meniscus at the top of the vial. A cap is quickly secured to the top of the vial. The vial is then inverted and gently tapped to see if air bubbles are present. If none are present, the vial is labeled and refrigerated for delivery, under strict chain-of-custody, to the analytical laboratory. Label information should include a unique sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name.

For quality control purposes, a duplicate water sample is collected from each well. This sample is put on hold at the laboratory. When required, a trip blank is prepared at the laboratory and placed in the transport cooler. It is labeled similar to the well samples, remains in the cooler during transport, and is analyzed by the laboratory along with the groundwater samples. In addition, a field blank may be prepared in the field when sampling equipment is not dedicated. The field blank is prepared after a pump or bailer has been either steam cleaned or properly washed, prior to use in the next well, and is analyzed along with the other samples. The field blank analysis demonstrates the effectiveness of the in-field cleaning procedures to prevent cross-contamination.

To minimize the potential for cross-contamination between wells, all well development and water sampling equipment not dedicated to a well is either steam cleaned or properly washed between use. As a second precautionary measure, wells are sampled in order of least to highest concentrations as established by available previous analytical data.

In the event the water samples cannot be submitted to the analytical laboratory on the same day they are collected (e.g., due to weekends or holidays), the samples are temporarily stored until the first opportunity for submittal either on ice in a cooler, such as when in the field, or in a refrigerator at Aegis' office.

#### **ATTACHMENT 2**

# LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORM



RECEIVED

UEC 1 5 1992

Ans'd.CF/SRR

December 10, 1992

To: Sheila Richgels

Aegis Environmental

Re: WEST Sample Log 5402

A labeling error occurred on the samples for Beacon 574, sampling date 11/12/92.

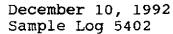
The sample identified as MW3 was assigned the lab identification for MW1. The sample identified as MW3 was assigned the lab identification for MW2. The sample identified as MW2 was assigned the lab identification for MW3.

The following revised copy of WEST Sample Log 5402 is being forwarded to you.

Sorry for the inconvience.

Leslie A. Biddle

Sample Control Officer





Sheila Richgels Aegis Environmental Consultants, Inc. 1050 Melody Lane, Suite 160 Roseville, CA 95678

Subject: Analytical Results for 3 Water Samples

Identified as: Project # 92-779 (Beacon 574)

Received: 11/18/92

Dear Ms. Richgels:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on December10, 1992 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 916-757-4650 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:

senior Chemist



Sample: MW1

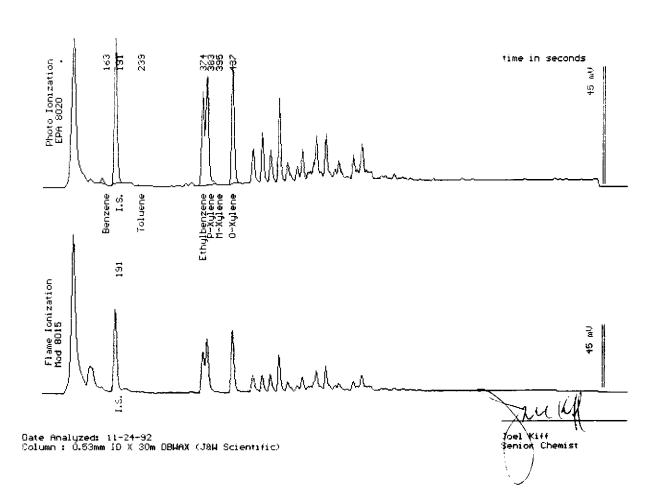
From : Project # 92-779 (Beacon 574)

Sampled : 11/12/92

Dilution: 1:10 QC Batch: 4066g

Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/L
Benzene Toluene Ethylbenzene Total Xylenes	(5.0) (5.0) (5.0) (5.0)	5.8 <5.0 140 340
TPH as Gasoline	(500)	2700





L) £

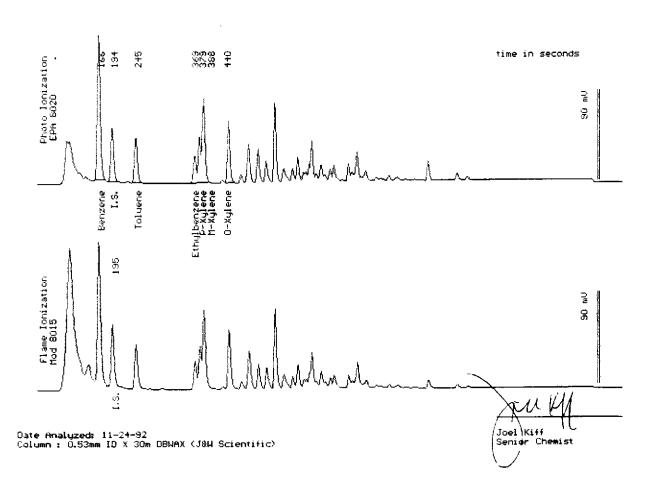
Sample: MW2

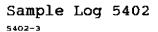
From : Project # 92-779 (Beacon 574)

Sampled : 11/12/92 Dilution : 1:50 QC Batch: 4066g

Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/t
Benzene	(25)	2400
Toluene	(25)	860
Ethylbenzene	(25)	540
Total Xylenes	(25)	3500
TPH as Gasoline	(2500)	29000







Sample: MW3

From : Project # 92-779 (Beacon 574)

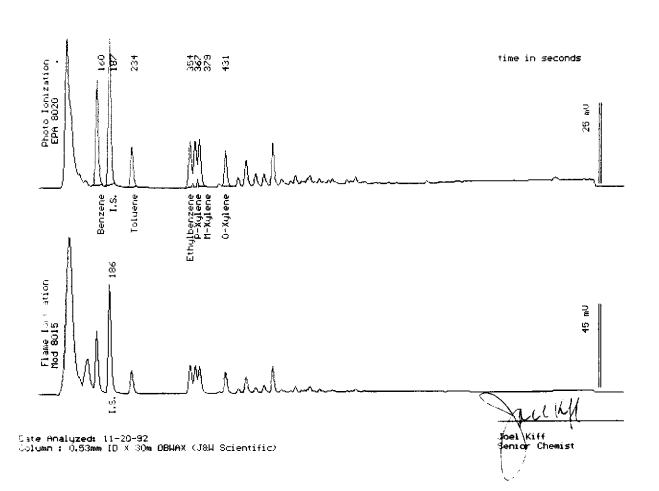
Sampled : 11/12/92

Dilution: 1:1

QC Batch: 4066bb

Matrix : Water

Parameter	(MDL) ug/L	Measured Value ug/L
Benzene Toluene Ethylbenzene Total Xylenes	(.50) (.50) (.50) (.50)	12 5.5 7.7 19
TPH as Gasoline	(50)	230



# ATTACHMENT 3 HISTORICAL WATER LEVEL DATA

TABLE 1
WATER LEVEL DATA - FORMER BEACON STATION

# FORMER BEACON STATION #574 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA (Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) <sup>1</sup>	Depth to Groundwater <sup>1</sup>	Groundwater Elevation <sup>2</sup>
MW-1	03/26/91 04/01/91 11/22/91 03/27/92 06/04/92 09/23/92	156.55	22.43 22.37 24.09 22.43 23.40 24.07	134.12 134.18 132.46 134.12 133.15 132.48
MW-2	03/26/91 04/01/91 11/22/91 03/27/92 06/04/92 09/23/92	155.17	20.91 20.82 22.54 20.82 21.81 22.45	134.26 134.35 132.63 134.35 133.36 132.72
MW-3	03/26/91 04/01/91 11/22/91 03/27/92 06/04/92 09/23/92	157.13	21.62 21.55 23.98 21.46 22.34 22.84	135.51 135.58 133.15 135.67 134.79 134.29

NOTES:

2

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

= Elevation referenced to mean sea level and obtained from previous consultant.

# ATTACHMENT 4 HISTORICAL ANALYTICAL DATA

TABLE 2 ANALYTICAL RESULTS: GROUNDWATER

#### **FORMER BEACON STATION #574** 22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA (All results in parts-per-billion)

Sample ID	Date Collected	Total Petroleum Hydrocarbons		Α	Aromatic Volatile Organics			
		Gasoline	Diesel	Motor Oil	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-1	04/01/91	4,100	<100		340	570	76	460
	11/22/91	5,300	<50	<50	4.9	1,600	370	2,300
	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
MW-2	04/01/91	10,000	<100		650	640	150	960
	11/22/91	11,000	<50	<50	51	1,900	770	3,200
	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
MW-3	04/01/91	3,100	<100		41	91	37	420
	11/22/91	470	<50	<50	10	6.3	11	1
	03/27/92	160	<50	<50	9.2	4.8	10	36
	06/04/92	120	<50		7.5	2.7	0.5	23 15
	09/23/92	220			8.3	4.3	6.2	19

NOTES: Below the indicated detection limits labeled in the analytical laboratory results report. =

Not analyzed.

# ATTACHMENT 5 FIELD DATA SHEETS

#### AEGIS ENVIRONMENTAL, INC. GROUNDWATER/LIQUID LEVEL DATA

(measurements in feet)

Project Address:	Beacon - 22315 Redwood, Castro Vily - 574	Date:	11.12.02
Recorded by:	MILE NISNEY	Project No.:	92-779

Well No.	Time	Measured Total Depth	Depth to Gr. Water	Depth to Product	Product Thickness	Comments (TOC/TOB) (product skimmer in well)
MW-1	6:52	29.33	2416	NIA	x2/n	
MW-2	6:55	29.71	22.150	<u> </u>		
MW-3	6:43	27.55	23 OH		V	
,						
				•		
Mater		<u>l</u>	I	<del>                                     </del>	_1.	

Notes:



## AEGIS ENVIRONMENTAL, INC.

### SAMPLING INFORMATION SHEET

			<del> </del>				
Client: Resco. Site: 22315	<i>)</i>		_	Project No: I Designation:	:_ <i>92-77</i> 5	7	
Site: <u> </u>	Malwood 7	<u> </u>	_ Well	Designation:	: mw/		
Purging Equipment:		2" PVC bail 4" PVC bail		Submersible pump Dedicated bailer			
Sampled with Well rech		iler or other: % recovery.					
Well Diameter: Purge Vol. Multiplier:	2" 0.163	3" 0.367	4" <u> </u>	6"	8" <u> </u>	gal/ft.	
Depth of well: Depth to water:	Depth of well: 29.85 Calculated purge: 16.24  Depth to water: 29.16  Actual purge: Heal						
Start purge: 7:04	Sa	mpling time:	710	Sai	mpling Date	: <u>//-/233_</u>	
Time	Temp.	E.C.	pΗ	Turbidity	Volume	]	
7:06	00	1 4 G.	A			-	
						1	
						1	
QC samples collected a		appearance:	- Electric	( N	l ock:	<b>.</b> 27.52	
	4				LUCK.		
Remarks:							
ignature	k. h	) samer		Review 7	X		



## AEGIS ENVIRONMENTAL, INC.

## SAMPLING INFORMATION SHEET

Client Site	Client: - Classon Followed Followed				Project No: 62.779 Well Designation: 10.00				
		2" PVC bailer 4" PVC bailer		!X	Submersible pump Dedicated bailer				
	Sampled with Well recha		iler or other: % recovery.						
Well Diameter: 2"		කුලි වැ			6" 1.47 ulated purge:		gal/ft.		
	pth to water:				Actual purge:				
Start purge:	7.13	Sar Temp.	E.C.	7:23 pH	Sar Turbidity	mpling Date Volume	: <u>//-/ 7- 75                                  </u>		
	7:/5	1),	/ H	gal					
							] -		
	<u></u>	Sample a	appearance:	"Flack			J		
QC sampl	les collected at	this well:		·		Lock:	<u> 57.53</u>		
Remarks:									
iignature <sub>-</sub>	mike	<u> 1 Jame</u>	<del></del>		Review _	Sh			



## aegis environmental, inc.

# SAMPLING INFORMATION SHEET

Client: Focused Red			_ _ Wel	Project No: 92.779 Well Designation: mw3				
Purging Equ	uipment: _ -		2" PVC bail 4" PVC bail			Submersible pump Dedicated bailer		
	Sampled with Well rech		iler or other: % recovery.				_	
Well Diameter: 2"								
L De	Depth of well: _ epth to water: _	29 BS 28 OF		Calc	ulated purge: Actual purge:	190,1	<u>-</u> -	
Start purge	: <u>650</u>	Sar	mpling time:	<u>6:58</u>	Saı	mpling Date	: //-/37-	
	Time	Temp.	E.C.	pH	Turbidity	Volume		
		Sample a	ppearance:	Som It				
QC samp	oles collected at	this well:				Lock:	3753	
Remarks:								
ignature	miken	Jennel	<del>}</del>		Review _	PK.		