



1050 Melody Lane, Suite 160, Roseville, California 95678

(916) 782 2110 Fax (916) 786 7830

RECEIVED BY
HAZARDOUS MATERIALS OFFICE

OCT 15 1993

HAYWARD FIRE DEPARTMENT

September 22, 1993

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

Subject: **Second Quarter 1993 Groundwater Monitoring Report**
Beacon Station #546
29705 Mission Boulevard, Hayward, California

Dear Mr. Fox:

Aegis Environmental, Inc. (Aegis), is pleased to provide Ultramar Inc. this report documenting the results of quarterly groundwater monitoring, conducted on May 10, 1993, at the subject site (Figure 1). The monitoring included measurements of depth to water, subjective analysis of free product, and collection of groundwater samples.

GROUNDWATER ELEVATIONS

Prior to purging the wells, Aegis personnel collected measurements of depth to groundwater. Groundwater level data from April 1992 to date are summarized in Table 1. Previous groundwater level data are included in Attachment 3. All measurements of depths to groundwater were conducted according to the Aegis standard operating procedures (SOP) included in Attachment 1. On the basis of the current measurements, groundwater flows to the west (Figure 2) at a gradient of <0.01 ft/ft. Groundwater levels have increased an average of 1.3 feet compared to the last monitoring event.

GROUNDWATER SAMPLING AND ANALYSES

Aegis personnel collected groundwater samples from the six wells. The samples were collected and handled according to the Aegis SOP included in Attachment 1. All samples were analyzed for concentrations of:

- Total petroleum hydrocarbons, as gasoline, by EPA Methods 5030/8015;
- Benzene, toluene, ethylbenzene, and total xylenes by EPA Methods 5030/602.

Analytical results from April 1992 to date are summarized in Table 2. Previous analytical results are included in Attachment 4. The laboratory report and chain-of-custody form are included as Attachment 2. Benzene concentrations decreased in well MW-8 compared to the last sampling event. All other wells sampled indicated an increase in benzene concentrations.

Aegis recommends that a copy of this quarterly monitoring report be forwarded to the following parties:

Mr. Scott Hugenberger
San Francisco Bay Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

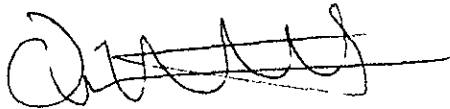
Mr. Hugh Murphy
Hayward Fire Department
22300 Foothill Boulevard
Hayward, California 94541

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 review and supervision of the professional geologist, registered with the State of California, whose signature appears below.

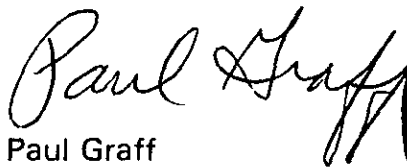
If you have any questions or comments, please call us at (916) 782-2110.

Sincerely,

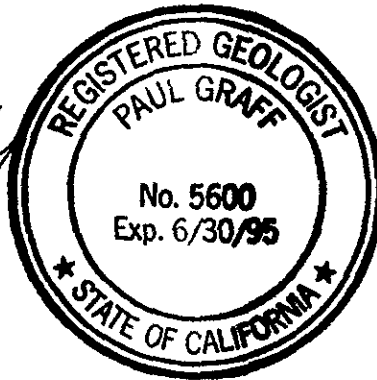
AEGIS ENVIRONMENTAL, INC.



Owen Kittredge
Project Geologist



Paul Graff
Senior Geologist
CRG No. 5600



9/24/93
Date

OMK/PKG/srr

Attachments

FIGURES:

FIGURE 1 SITE VICINITY MAP

FIGURE 2 POTENTIOMETRIC MAP (MAY 10, 1993)

FIGURE 3 DISTRIBUTION MAP OF BENZENE
IN GROUNDWATER (MAY 10, 1993)

TABLES:

TABLE 1 LIQUID LEVEL DATA

TABLE 2 ANALYTICAL RESULTS: GROUNDWATER

ATTACHMENTS:

ATTACHMENT 1 STANDARD OPERATING PROCEDURES

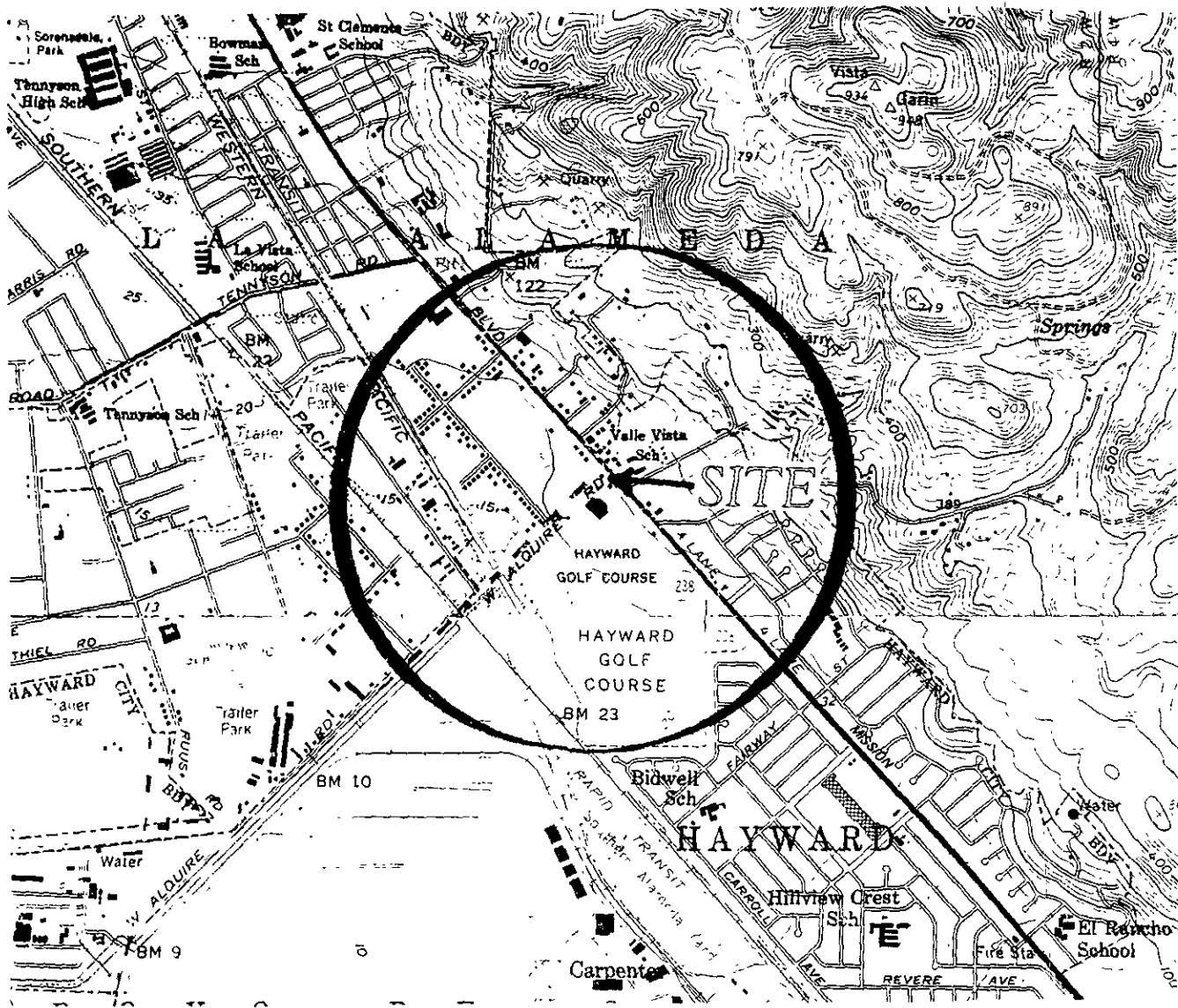
ATTACHMENT 2 LABORATORY REPORT AND
CHAIN-OF-CUSTODY FORM

ATTACHMENT 3 HISTORICAL WATER LEVEL DATA

ATTACHMENT 4 HISTORICAL ANALYTICAL DATA

ATTACHMENT 5 FIELD DATA SHEETS

FIGURES

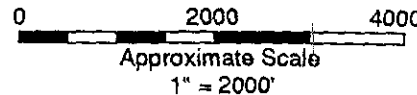
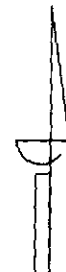



GENERAL NOTES:

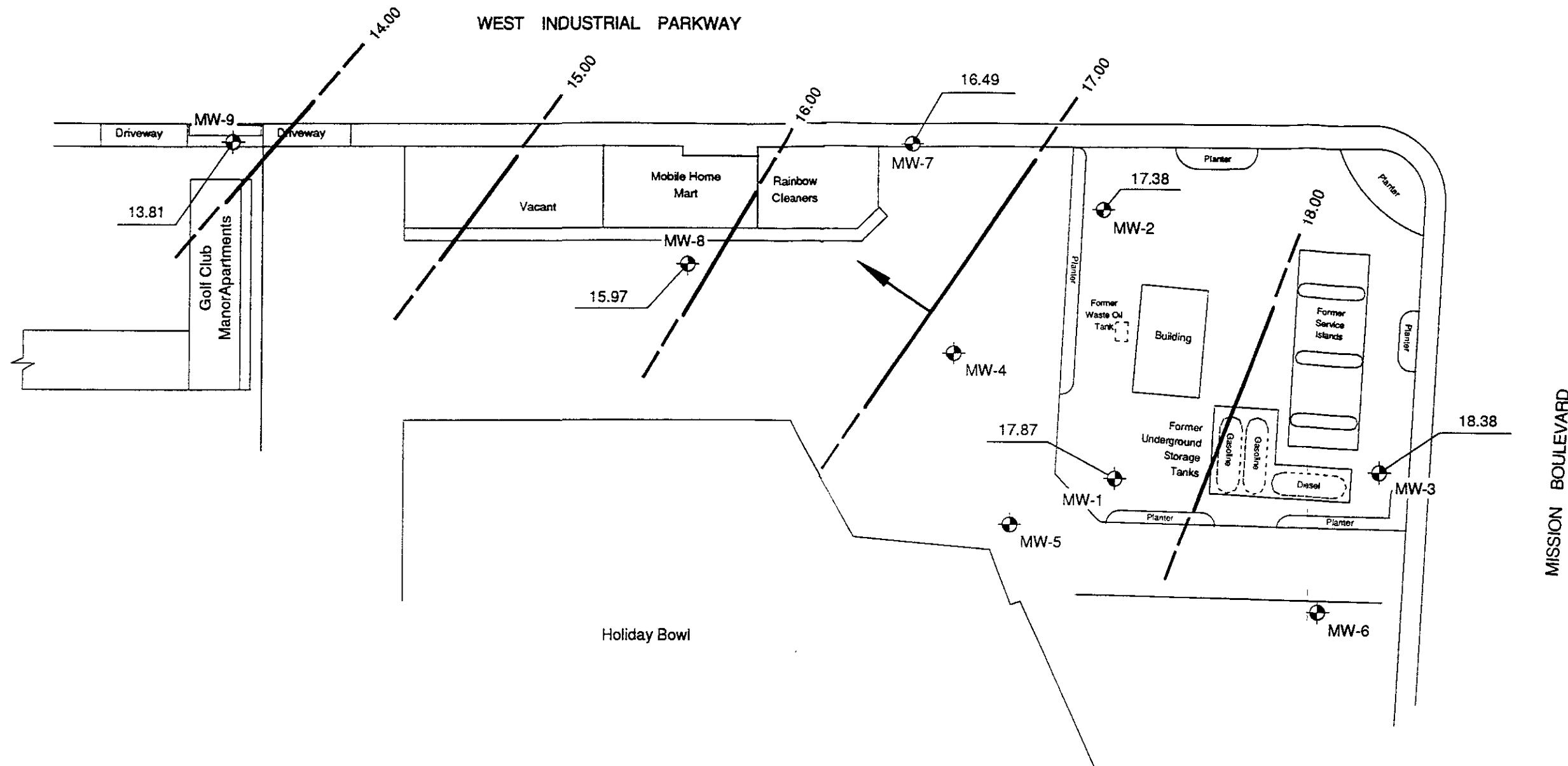
BASE MAP FROM USGS
7.5 MINUTE TOPOGRAPHIC
HAYWARD & NEWARK, CA.
1959, PHOTOREVISED 1980.




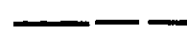
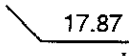
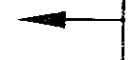
WEST ALQUIRE ROAD HAS BEEN
CHANGED TO
WEST INDUSTRIAL PARKWAY



 AEGIS ENVIRONMENTAL, INC.		SITE LOCATION MAP		FIGURE 1	
DRAWN BY: Ed Bernard	DATE: September 29, 1992	Beacon Station # 546 29705 Mission Boulevard Hayward, CA		PROJECT NUMBER: 10-92067	
REVISED BY: Ed Bernard	DATE: February 11, 1993				
REVIEWED BY:	DATE:				



LEGEND

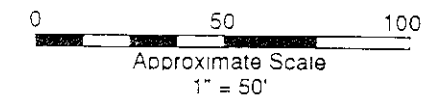
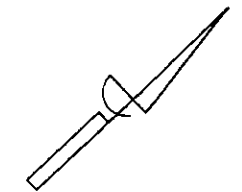
-  Monitoring Well
-  Potentiometric Surface Contour Line (Dashed Where Inferred)
-  Groundwater Elevation in Feet
-  Estimated Direction of Groundwater Flow


Average Hydraulic Gradient = < 0.01 ft/ft
 Contour Interval = 1 ft

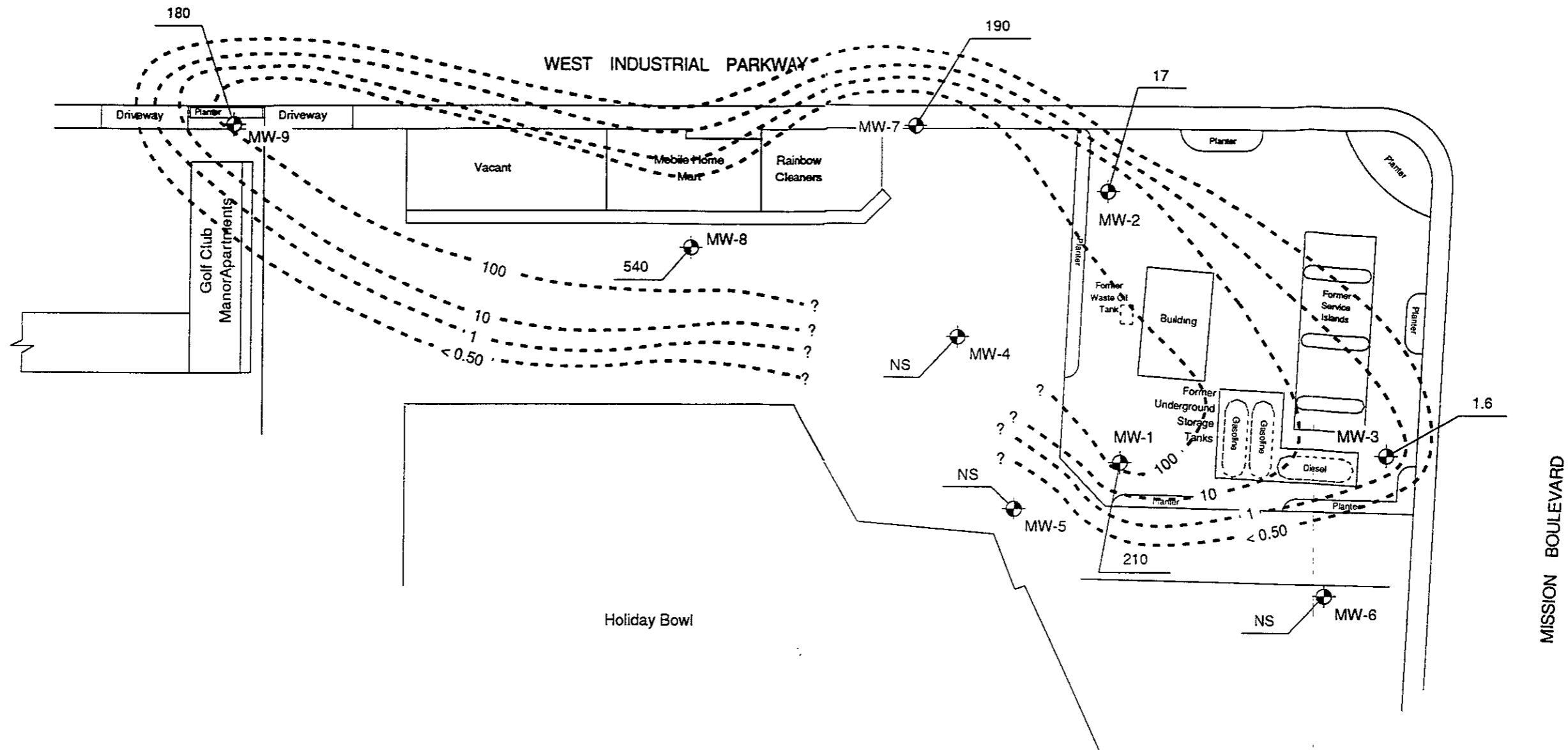
NOTES

Site Sketch After
 Site Map By Ultramar
 August 5, 1992


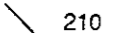


All locations Are Approximate



	ENVIRONMENTAL, INC.		POTENTIOMETRIC SURFACE MAP May 10, 1993	FIGURE 2	
	DRAWN BY	DATE	J. Hada May 26, 1993	Beacon Station # 546 29705 Mission Boulevard Hayward, CA	PROJECT NUMBER 92-773
	REVISED BY	DATE			
REVIEWED BY	DATE				



LEGEND

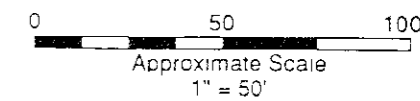
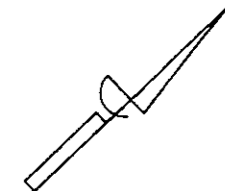
-  Monitoring Well
-  210 Benzene Concentration (parts-per-billion)
-  Inferred Iso-Concentration Limits
-  NS Not Sampled


Contour Interval = Exponential

NOTES

Site Sketch After
Site Map By Ultramar
August 5, 1992

All locations Are Approximate



		DISTRIBUTION MAP OF BENZENE IN GROUNDWATER May 10, 1993		FIGURE 3
DRAWN BY D. Hoda	DATE May 26, 1993	Beacon Station # 546 29705 Mission Boulevard Hayward, CA		
REVISIONS		PROJECT NUMBER 92-773		

TABLES

TABLE 1

LIQUID LEVEL DATA

BEACON STATION #546
29705 MISSION BOULEVARD, HAYWARD, 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	04/15/92	37.46	22.10	15.36	---	---
	07/07/92		23.40	14.06	---	---
	09/23/92		24.61	12.85	---	---
	11/12/92		24.87	12.59	---	---
	02/03/93		21.23	16.23	38.08	Heavy sheen
	05/10/93		19.59	17.87	37.95	---
	---		---	---	---	---
MW-2	04/15/93	35.95	20.88	15.07	---	---
	07/07/92		21.95	14.00	---	---
	09/23/92		23.15	12.80	---	---
	11/12/92		23.43	12.52	---	---
	02/03/93		19.93	16.02	38.90	---
	05/10/93		18.57	17.38	38.98	---
	---		---	---	---	---
MW-3	04/15/92	40.28	24.59	15.69	---	---
	07/07/92		25.90	14.38	---	---
	09/23/92		27.09	13.19	---	---
	11/12/92		27.43	12.85	33.94	---
	02/03/93		23.67	16.61	37.86	---
	05/10/93		21.90	18.38	37.82	---
	---		---	---	---	---
MW-4	04/15/92 **	34.94	---	---	---	---
MW-5	04/15/92 **	36.37	---	---	---	---
MW-6	04/15/92 **	37.43	---	---	---	---
MW-7	04/15/92	30.50	16.00	14.50	---	---
	07/07/92		17.10	13.40	---	---
	09/23/92		18.21	12.29	---	---
	11/12/92		18.37	12.13	33.94	---
	02/03/93		15.20	15.30	34.02	---
	05/10/93		14.01	16.49	34.05	---
	---		---	---	---	---

TABLE 1

LIQUID LEVEL DATA

BEACON STATION #546
 29705 MISSION BOULEVARD, HAYWARD, CALIFORNIA
 (Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Groundwater ¹	Groundwater Elevation ²	Well Depth	Comments
MW-8	04/15/92	28.48	14.30	14.18	---	
	07/07/92		15.60	12.88	---	
	09/23/92		16.66	11.82	---	
	11/12/92		16.86	11.62	39.20	
	02/03/93		13.49	14.99	39.19	
	05/10/93		12.51	15.97	39.21	
MW-9	02/03/93	21.99	8.95	13.04	23.52	
	05/10/93		8.18	13.81	23.52	

- NOTES: ¹ = Measurement and reference elevation taken from notch/mark on top north side of well casing.
² = Elevation referenced to mean sea level.
 --- = Not measured/not observed.
 ** = No measurements collected since prior to April 1992.
 Well Depth = Measurement from top of casing to bottom of well.

TABLE 2

ANALYTICAL RESULTS: GROUNDWATER

BEACON STATION #546
29705 MISSION BOULEVARD, HAYWARD, CALIFORNIA
(All results in parts-per-billion)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics			
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-1	04/15/92	8,900	710	11	150	440
	07/07/92	<50	<0.5	<0.5	<0.5	<0.5
	09/23/92	<50	<0.5	<0.5	<0.5	<0.5
	11/12/92	---	---	---	---	---
	02/03/93	950	72	<0.5	0.6	6.6
	05/10/93	1,000	210	2.9	42	67
MW-2	04/15/92	1,200	21	4.8	56	26
	07/07/92	<50	<0.5	<0.5	<0.5	<0.5
	09/23/92	<50	<0.5	<0.5	<0.5	<0.5
	11/12/92	<50	<0.5	<0.5	1.7	0.9
	02/03/93	310	2.9	0.8	15	6.0
	05/10/93	190	17	<0.5	23	5.2
MW-3	04/15/92	69	2.8	<0.5	<0.5	<0.5
	07/07/92	<50	<0.5	<0.5	<0.5	<0.5
	09/23/92	<50	<0.5	<0.5	<0.5	<0.5
	11/12/92	<50	<0.5	<0.5	<0.5	<0.5
	02/03/93	<50	1.0	1.3	0.6	2.7
	05/10/93	53	1.6	<0.5	2.0	<1.5
MW-4	04/15/92 **	NS	NS	NS	NS	NS
MW-5	04/15/92 **	NS	NS	NS	NS	NS
MW-6	04/15/92 **	NS	NS	NS	NS	NS
MW-7	04/15/92	1,600	21	1.2	2.0	1.2
	07/07/92	320	<0.5	<0.5	<0.5	<0.5
	09/23/92	90	<0.5	<0.5	<0.5	<0.5
	11/12/92	<50	<0.5	<0.5	<0.5	<0.5
	02/03/93	<50	<0.5	<0.5	<0.5	<0.5
	05/10/93	1,800	190	3.2	45	<1.5

TABLE 2

ANALYTICAL RESULTS: GROUNDWATER

BEACON STATION #546
 29705 MISSION BOULEVARD, HAYWARD, CALIFORNIA
 (All results in parts-per-billion)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics			
MW-8	04/15/92	40,000	1,900	34	1,200	1,800
	07/07/92	19,000	560	14	32	630
	09/23/92	4,200	370	<5.0	<5.0	150
	11/12/92	5,100	75	<2.5	<2.5	110
	02/03/93	29,000	800	1.1	660	720
	05/10/93	8,900	540	9.9	770	550
MW-9	02/03/92	28,000	64	9.6	70	510
	05/10/93	5,000	180	12	88	110

NOTES: < = Below indicated detection limit.
 NS = Not sampled.
 ** = No samples collected since prior to April 1992.

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;
2. 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.

AEGIS ENVIRONMENTAL, INC.
STANDARD OPERATING PROCEDURE
RE: MEASURING LIQUID LEVELS USING WATER LEVEL OR INTERFACE PROBE
SOP-12

Field equipment used for liquid-level gauging typically includes the measuring probe (water-level or interface) and product bailer(s). The field kit also includes cleaning supplies (buckets, TSP, spray bottles, and deionized water) to be used in cleaning the equipment between wells.

Prior to measurement, the probe tip is lowered into the well until it touches bottom. Using the previously established top-of-casing or top-of-box (i.e., wellhead vault) point, the probe cord (or halyard) is marked and a measuring tape (graduated in hundredths of a foot) is used to determine the distance between the probe end and the marking on the cord. This measurement is then recorded on the liquid-level data sheet as the "Measured Total Depth" of the well.

When necessary in using the interface probe to measure liquid levels, the probe is first electrically grounded to either the metal stove pipe or another metal object nearby. When no ground is available, reproducible measurements can be obtained by clipping the ground lead to the handle of the interface probe case.

The probe tip is then lowered into the well and submerged in the groundwater. An oscillating (beeping) tone indicates the probe is in water. The probe is slowly raised until either the oscillating tone ceases or becomes a steady tone. In either case, this is the depth-to-water (DTW) indicator and the DTW measurement is made accordingly. The steady tone indicates floating hydrocarbons. In this case, the probe is slowly raised until the steady tone ceases. This is the depth-to-product (DTP) indicator and the DTP measurement is made accordingly.

The process of lowering and raising the probe must be repeated several times to ensure accurate measurements. The DTW and DTP measurements are recorded on the liquid-level data sheet. When floating product is indicated by the probe's response, a product bailer is lowered partially through the product-water interface to confirm the product on the water surface, and as further indication of product thickness, particularly in cases where the product layer is quite thin. This measurement is recorded on the data sheet as "product thickness."

In order to avoid cross-contamination of wells during the liquid-level measurement process, wells are measured in the order of "clean" to "dirty" (where such information is available). In addition, all measurement equipment is cleaned with TSP or similar solution and thoroughly rinsed with deionized water before use, between measurements in respective wells, and at the completion of the day's use.

ATTACHMENT 2

**LABORATORY REPORTS AND
CHAIN-OF-CUSTODY FORM**



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

92-773

RECEIVED

MAY 20 1993

ULTRAMAR INC
Attn: TERRY FOX

Project 92-773
Reported 05/15/93 (F/S/K)

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
88576- 1	mw-1	05/10/93	05/15/93 Water
88576- 2	mw-2	05/10/93	05/15/93 Water
88576- 3	mw-3	05/10/93	05/15/93 Water
88576- 4	mw-7	05/10/93	05/15/93 Water
88576- 5	mw-8	05/10/93	05/15/93 Water
88576- 6	mw-9	05/10/93	05/15/93 Water

RESULTS OF ANALYSIS

Laboratory Number: 88576- 1 88576- 2 88576- 3 88576- 4 88576- 5

Gasoline:	1000	190	53	1800	8900
Benzene:	210	17	1.6	190	540
Toluene:	2.9	ND<0.5	ND<0.5	3.2	9.9
Ethyl Benzene:	42	23	2.0	45	770
Xylenes:	67	5.2	ND<1.5	ND<1.5	550
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 88576- 6

Gasoline:	5000
Benzene:	180
Toluene:	12
Ethyl Benzene:	88
Xylenes:	110
Concentration:	ug/L



C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 88576

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE -----	MS/MSD RECOVERY -----	RPD ---	CONTROL LIMIT -----
Gasoline:	96/94	2%	70-130
Benzene:	91/92	1%	70-130
Toluene:	99/102	3%	70-130
Ethyl Benzene:	106/109	3%	70-130
Xylenes:	107/110	3%	70-130

Richard Srna, Ph.D.

Delomina v. Panquity (for)
Laboratory Director



~~XXXXXXXXXX~~
~~XXXXXXXXXX~~

800 10

Ultramar Inc.
CHAIN OF CUSTODY REPORT (415) 821-7123

SUPERIOR PRECISION

BEACON

Beacon Station No. 546		Sampler (Print Name) Steve Osborn		ANALYSES				Date 5-10	Form No. / of																									
Project No. 92-773		Sampler (Signature) 		<table border="1"> <tr><td>BTEX</td><td>TPH (gasoline)</td><td>TPH (diesel)</td><td></td><td></td><td></td><td></td><td></td><td rowspan="3">No. of Containers</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>				BTEX	TPH (gasoline)	TPH (diesel)						No. of Containers																	.5 PPB DETECTION LIMIT FOR 8020	
BTEX	TPH (gasoline)	TPH (diesel)										No. of Containers																						
Project Location HAYWARD, CA		Affiliation AEGIS ENVIRONMENTAL		Sample No./Identification		Date	Time	Lab No.	REMARKS																									
MW-1		785		7-10-93		4:38																												
MW-2				K		4:05																												
MW-3						3:34																												
MW-7						1:59																												
MW-8-15-2						2:40																												
MW-9						1:15																												
FRANKLIN		5/10/93																																
Relinquished by: (Signature/Affiliation) 		Date	Time	Received by: (Signature/Affiliation) 				Date	Time																									
		5/11	3:01	HANO DELIVERY				5/11	3:24																									
Relinquished by: (Signature/Affiliation)		Date	Time	Received by: (Signature/Affiliation)				Date	Time																									
		5/11	6:40P					5/11/93	6:40																									
Report To: SHEILA RICHGELS 1050 MELODY LN. #160 ROSEVILLE, CA. 95678		(916) 782-2110 FAX 786-7830		Bill to: ULTRAMAR INC. 525 West Third Street Hanford, CA 93230 Attention: TERRY FOX																														

WHITE: Return to Client with Report

YELLOW: Laboratory Copy

PINK: Originator Copy

ATTACHMENT 3
HISTORICAL WATER LEVEL DATA

TABLE 1

WATER LEVEL DATA

**FORMER BEACON STATION #546
29705 MISSION BOULEVARD, HAYWARD, CALIFORNIA
(Measurements in feet)**

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Groundwater ¹	Groundwater Elevation ²
MW-1	06/28/90	37.46	23.77	13.69
	04/15/92		22.10	15.36
	07/07/92		23.40	14.06
	09/23/92*		24.61	12.85
MW-2	06/28/90	35.95	22.41	13.54
	04/15/92		20.88	15.07
	07/07/92		21.95	14.00
	09/23/92*		23.15	12.80
MW-3	06/28/90	40.28	26.29	13.99
	04/15/92		24.59	15.69
	07/07/92		25.90	14.38
	09/23/92*		27.09	13.19
MW-4	06/28/90	34.94	21.67	13.27
	04/15/92		NA	NA
	07/07/92		NA	NA
	09/23/92*		NA	NA
MW-5	06/28/90	36.37	22.87	13.50
	04/15/92		NA	NA
	07/07/92		NA	NA
	09/23/92*		NA	NA

- NOTES:
- ¹ = Measurement and reference elevation taken from notch/mark on top north side of well casing.
 - ² = Elevation referenced to (mean sea level or arbitrary benchmark).
 - * = Data collected prior to 09/23/92 are from a previous consultant.
 - NA = Not accessible.

TABLE 1 (CONTINUED)

WATER LEVEL DATA

**FORMER BEACON STATION #546
29705 MISSION BOULEVARD, HAYWARD, CALIFORNIA
(Measurements in feet)**

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Groundwater ¹	Groundwater Elevation ²
MW-6	06/28/90	37.43	23.52	13.91
	04/15/92		NA	NA
	07/07/92		NA	NA
	09/23/92*		NA	NA
MW-7	06/28/90	30.50	17.60	12.90
	04/15/92		16.00	14.50
	07/07/92		17.10	13.40
	09/23/92*		18.21	12.29
MW-8	06/28/90	28.48	15.57	12.91
	04/15/92		14.30	14.18
	07/07/92		15.60	12.88
	09/23/92*		16.66	11.82

- NOTES:
- ¹ = Measurement and reference elevation taken from notch/mark on top north side of well casing.
 - ² = Elevation referenced to (mean sea level or arbitrary benchmark).
 - * = Data collected prior to 09/23/92 are from a previous consultant.
 - NA = Not accessible.

ATTACHMENT 4
HISTORICAL ANALYTICAL DATA

TABLE 2

ANALYTICAL RESULTS: GROUNDWATER

**FORMER BEACON STATION #546
29705 MISSION BOULEVARD, HAYWARD, CALIFORNIA
(All results in parts-per-billion)**

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics			
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-1	06/28/90	1,700	160	64	69	260
	04/15/92	8,900	710	11	150	440
	07/07/92	<50	<0.5	<0.5	<0.5	<0.5
	09/23/92*	<50	<0.5	<0.5	<0.5	<0.5
MW-2	06/28/90	900	110	4.8	72	68
	04/15/92	1,200	21	<0.5	56	26
	07/07/92	<50	<0.5	<0.5	<0.5	<0.5
	09/23/92*	<50	<50	<0.5	<0.5	<0.5
MW-3	06/28/90	<50	<0.5	<0.5	<0.5	<0.5
	04/15/92	69	1.8	<0.5	<0.5	<0.5
	07/07/92	<50	<0.5	<0.5	<0.5	<0.5
	09/23/92*	<50	<0.5	<0.5	<0.5	<0.5
MW-4	06/28/90	4,600	600	410	110	460
	04/15/92	---	---	---	---	---
	07/07/92	---	---	---	---	---
	09/23/92*	---	---	---	---	---

NOTES: --- = Not analyzed.
 < = Below the indicated detection limits as labeled in the laboratory analytical results.
 * = Analytical results prior to 09/23/92 are from a previous consultant.

TABLE 2 (CONTINUED)

ANALYTICAL RESULTS: GROUNDWATER

**FORMER BEACON STATION #546
29705 MISSION BOULEVARD, HAYWARD, CALIFORNIA
(All results in parts-per-billion)**

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics			
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-5	06/28/90	12,000	2,900	240	630	930
	04/15/92	---	---	---	---	---
	07/07/92	---	---	---	---	---
	09/23/92*	---	---	---	---	---
MW-6	06/28/90	<50	<0.5	<0.5	<0.5	<0.5
	04/15/92	---	---	---	---	---
	07/07/92	---	---	---	---	---
	09/23/92*	---	---	---	---	---
MW-7	06/28/90	960	23	<0.5	90	<0.5
	04/15/92	1,600	21	1.2	2.0	1.2
	07/07/92	320	<0.5	<0.5	<0.5	<0.5
	09/23/92*	90	<0.5	<0.5	<0.5	<0.5
MW-8	06/28/90	20,000	800	190	0.6	380
	04/15/92	40,000	1,900	34	1,200	1,800
	07/07/92	19,000	560	14	32	630
	09/23/92*	4,200	370	<5.0	<5.0	150

NOTES: --- = Not analyzed.
 < = Below the indicated detection limits as labeled in the laboratory analytical results.
 * = Analytical results prior to 09/23/92 are from a previous consultant.

ATTACHMENT 5
FIELD DATA SHEETS

AEGIS ENVIRONMENTAL, INC.
GROUNDWATER/LIQUID LEVEL DATA
(measurements in feet)

Project Address:

29705 Mission Blvd, Hayward (# 546)

Date: 5-10-93

Recorded by:

Steve Osborn

Project No.:

92-773

Well No.	Time	Well Elev. TOC	Measured Total Depth	Depth to Gr. Water	Depth to Product	Product Thickness	Comments (TOC/TOB) (product skimmer in well)
MW-1	3:17	37.46	37.95	19.59			
MW-2	3:12	35.95	38.98	18.57			
MW-3	2:59	40.28	37.82	21.90			
MW-7	1:26	30.50	34.05	14.01			
MW-8	2:08	28.48	39.21	12.51			
MW-9	12:43		23.52	8.18			

Notes:

Weather condition - sunny + warm
one drum on site + approximately 80' of 1" PVC pipe on site.



Client: BEACON #546
Site: 29705 MISSION BLVD.
HAYWARD, CA.

Project No: 92-773
Well Designation: MW-1

Purging Equipment: 2" Disposable bailer
 2" PVC bailer Submersible pump
 4" PVC bailer Dedicated bailer

Sampled with disposal bailer or other: _____
Well recharged to 80% recovery.

Well Diameter: 2" _____ 3" _____ 4" 6" _____ 8" _____
Purge Vol. Multiplier: 0.163 0.367 0.653 1.47 2.61 gal/ft.

Depth of well: 37.95 Calculated purge: 48 gal
3.17 Depth to water: 19.59 Actual purge: 43

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 4:17 Sampling time: 7:38 Sampling Date: 5-10

Time	Temp.	E.C.	pH	Turbidity	Volume
4:17	74.7	1.31	7.95		16
4:23	73.6	1.23	7.70		16
4:29	72.0	1.23	7.70		16

Sample appearance: Some clear

QC samples collected at this well: ND

Lock: 375-3

Equipment replaced: (Check all that apply)

2" Locking Cap _____
4" Locking Cap _____

Lock #2357 _____
Lock #3753 _____

Remarks: Well box dry, gasket ok, no rise TOC
even with grout, cap broken.

Signature

Review



Client: BEACON #546
Site: 29705 MISSION BLVD.
HAYWARD, CA.

Project No: 92-773
Well Designation: MW-2

Purging Equipment: 2" Disposable bailer
 2" PVC bailer Submersible pump
 4" PVC bailer Dedicated bailer

Sampled with disposal bailer or other: _____
Well recharged to 80% recovery.

Well Diameter: 2" 3" 4" 6" 8"
Purge Vol. Multiplier: 0.163 0.367 0.653 1.47 2.61 gal/ft.

3:12 Depth of well: 38.98 Calculated purge: 53 gal
Depth to water: 18.57 Actual purge: 53 gal

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 348 Sampling time: 406 Sampling Date: 5-10

Time	Temp.	E.C.	pH	Turbidity	Volume
348pm	68.5	1.10	8.17		18
352pm	68.5	1.12	7.89		18
358pm	73.3	1.20	7.79		17

Sample appearance: Slut Clear

QC samples collected at this well: No

Lock: 3753

Equipment replaced: (Check all that apply)

2" Locking Cap _____
4" Locking Cap _____

Lock #2357 _____
Lock #3753 _____

Remarks: Well box dry, Gasket ok, 1" Riser, locking cap
broke, one bolt missing from lid.

Signature

Review



Client: BEACON #546
Site: 29705 MISSION BLVD.
HAYWARD, CA.

Project No: 92-773
Well Designation: MW-3

Purging Equipment: 2" Disposable bailer
 2" PVC bailer
 4" PVC bailer
 Submersible pump
 Dedicated bailer

Sampled with disposal bailer or other: _____
Well recharged to 80% recovery.

Well Diameter: 2" 3" 4" 6" 8"
Purge Vol. Multiplier: 0.163 0.367 0.653 1.47 2.61 gal/ft.

Depth of well: 37.82
2:59 Depth to water: 21.90
Calculated purge: 41 gal
Actual purge: 41 gal

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 3:15 Sampling time: 3:34 Sampling Date: 5-10

Time	Temp.	E.C.	pH	Turbidity	Volume
3:15	77.9	1.67	7.99		14
3:21	76.9	1.37	7.61		14
3:26	72.3	1.30	7.74		13

Sample appearance: cloudy

QC samples collected at this well: No

Lock: 3753
~~2357~~

Equipment replaced: (Check all that apply)

2" Locking Cap _____
4" Locking Cap _____

Lock #2357 _____
Lock #3753 _____

Remarks: Well box dry, basket ok, 1" riser cap broke but
did not have any to replace with, stains going down casing.

Signature

COJ

Review

[Signature]



Client: BEACON #546
Site: 29705 MISSION BLVD.
HAYWARD, CA.

Project No: 92-773
Well Designation: MW-7

Purging Equipment: 2" Disposable bailer
 2" PVC bailer Submersible pump
 4" PVC bailer Dedicated bailer

Sampled with disposal bailer or other: _____
Well recharged to 80% recovery.

Well Diameter: 2" _____ 3" _____ 4" 6" _____ 8" _____
Purge Vol. Multiplier: 0.163 0.367 0.653 1.47 2.61 gal/ft.

1:26 Depth of well: 34.05 Calculated purge: 52 gal
Depth to water: 14.01 Actual purge: 52

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 1:41 Sampling time: 1:59 Sampling Date: 5-10

Time	Temp.	E.C.	pH	Turbidity	Volume
1:41	76.9	1.37	8.01		17
1:45	72.9	1.66	7.76		17
1:51	70.0	1.53	7.56		18

Sample appearance: sem cloudy

QC samples collected at this well: No

Lock: 3753

Equipment replaced: (Check all that apply)

2" Locking Cap _____
4" Locking Cap _____

Lock #2357 _____
Lock #3753 _____

Remarks: Well box dry, gasket ok, 2" River Gun gone.
need special allen key to get into box

Signature _____

Review _____



Client: BEACON #546
Site: 29705 MISSION BLVD.
HAYWARD, CA.

Project No: 92-773
Well Designation: MW-8

Purging Equipment: 2" Disposable bailer
 2" PVC bailer Submersible pump
 4" PVC bailer Dedicated bailer

Sampled with disposal bailer or other: _____
Well recharged to 80% recovery.

Well Diameter: 2" 3" 4" 6" 8"
Purge Vol. Multiplier: 0.163 0.367 0.653 1.47 2.61 gal/ft.

Depth of well: 39.21 Calculated purge: 69 gal
Depth to water: 12.51 2:08 Actual purge: 69 gal

Meter Calibration

Date: 5-10-93
Time: 2:05 PM

Initial reading
Adjusted reading

Temp.	E.C.	pH	Turbidity

Start purge: 2:17 PM Sampling time: 2:40 Sampling Date: 5-10

Time	Temp.	E.C.	pH	Turbidity	Volume
2:18 PM	82.4	1.71	8.17		23
2:22 PM	76.5	1.57	7.96		23
2:26 PM	74.5	1.57	7.49		23

Sample appearance: Semi cloudy

QC samples collected at this well: No

Lock: 3753

Equipment replaced: (Check all that apply)

2" Locking Cap
4" Locking Cap

Lock #2357
Lock #3753

Remarks: Well box dry / casing cracked 2 in
One bolt missing from lid

Signature C.D.J.

Review [Signature]



Client: BEACON #546
Site: 29705 MISSION BLVD.
HAYWARD, CA.

Project No: 92-773
Well Designation: MW-9

Purging Equipment: 2" Disposable bailer
 2" PVC bailer Submersible pump
 4" PVC bailer Dedicated bailer

Sampled with disposal bailer or other: _____
Well recharged to 80% recovery.

Well Diameter: 2" 3" _____ 4" _____ 6" _____ 8" _____
Purge Vol. Multiplier: 0.163 0.367 0.653 1.47 2.61 gal/ft.

Depth of well: 23.52 Calculated purge: 10 gal
12:48 Depth to water: 6.18 Actual purge: 10 gal

Meter Calibration

Date 5-10
Time 12:51

Initial reading
Adjusted reading

Temp.	E.C.	pH	Turbidity
77.6	.00	7.07	
78.2	.00	7.01	

Start purge: ~~102~~ Sampling time: 1.15 Sampling Date: 5-10

Time	Temp.	E.C.	pH	Turbidity	Volume
1:02 pm	80.7	1.91	7.05		4
1:07 pm	78.0	1.64	7.18		3
1:11 pm	75.9	1.68	7.37		3

Sample appearance: cloudy

QC samples collected at this well: No

Lock: Dolphin

Equipment replaced: (Check all that apply)

2" Locking Cap _____ Lock #2357 _____
4" Locking Cap _____ Lock #3753 _____

Remarks: Well box dry, basket ok, 4' riser, well in sidewalk

Signature

Review