

# Ultramar

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

Telecopy 209-584-6113 Credit & Wholesale  
209-583-3330 Administrative  
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RECEIVED BY  
HAZARDOUS MATERIALS OFFICE  
JUN 09 1993  
HAYWARD FIRE DEPARTMENT

June 4, 1993

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

**SUBJECT: FORMER BEACON STATION NO. 546, 29705 MISSION BOULEVARD,  
HAYWARD, CALIFORNIA**

Dear Mr. Murphy:

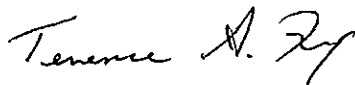
Enclosed is a copy of the report on the quarterly ground-water monitoring for the first quarter 1993 for above-referenced Ultramar facility. Also included is a copy of the Quarterly Status Report which describes the work completed this quarter and the work anticipated to be completed next quarter.

Recently Ultramar's consultant completed a ground-water pump test. A temporary permit was obtained to discharge the recovered water to the sanitary sewer. The report documenting the pump test is being prepared and will be forwarded to when the final report is received by Ultramar.

Please call if you have any question regarding this project.

Sincerely,

**ULTRAMAR INC.**



Terrence A. Fox  
Senior Project Manager  
Marketing Environmental Department

Enclosures

cc w/encls: Mr. Vijay B. Patel, San Francisco Region, RWQCB



A Member of the Ultramar Group of Companies

**BEACON**  
#1 Quality and Service

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## ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: June 4, 1993  
QUARTER ENDING: March 31, 1993

SERVICE STATION NO.: 546  
ADDRESS: 29705 Mission Boulevard, Hayward, CA  
COUNTY: Alameda

ULTRAMAR CONTACT: Terrence A. Fox

TEL. NO: 209-583-5545

### BACKGROUND:

In March 1987, five borings were drilled around the underground storage tanks. Hydrocarbons were detected in the soil and ground water beneath the site. In April 1988, three underground fuel storage tanks and one waste oil tank were removed. Hydrocarbons were detected beneath the fuel storage tanks. In June and July 1988, three monitoring wells (MW-1 through MW-3) were installed. Results indicated that petroleum hydrocarbons were present in the ground water beneath the site. In June 1989 and February 1990, a total of five additional wells (MW-4 through MW-8) were installed. Varying concentrations have been detected in all the wells through time.

In January 1993, installed one additional downgradient well (MW-9).

### SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on February 3, 1993.

### RESULT OF QUARTERLY MONITORING:

Monitoring data indicates that benzene concentration increased in MW-2 from not detected to 2.9 ppb, in MW-3 from not detected to 1.0 ppb, and in MW-8 from 75 ppb to 800 ppb. The benzene concentration remained not detected in MW-7. The benzene concentration in MW-1, which was not sampled last quarter, was 72 ppb and in MW-9 was 64 which was a decrease since the initial sampling in January 1993.

Wells MW-4, MW-5, and MW-6 were not sampled because Ultramar has been denied access to the Holiday Bowl property.



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**BEACON**  
#1 Quality and Service

**PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:**

<b><u>ACTIVITY</u></b>	<b><u>ESTIMATED COMPLETION DATE</u></b>
Continue quarterly ground-water sampling.	
Perform ground-water pump test	April 30, 1993
Submit report of pump test	June 30, 1993



## AEGIS ENVIRONMENTAL, INC.

1050 Melody Lane, Suite 160, Roseville, CA 95678



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

May 11, 1993

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

Subject: **First 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 February 3, 1993, at the subject site (Figure 1). The monitoring included measurements of depth to liquids, subjective analysis of floating liquid hydrocarbons (FLH), and collection of groundwater samples.

### **GROUNDWATER ELEVATIONS**

Prior to purging wells, Aegis personnel collected measurements of depth to liquids on February 3, 1993. 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 depths to liquids 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 February 3, 1993 measurements, groundwater is estimated to flow generally to the west (Figure 2) at an average gradient of approximately 0.02 ft/ft. This direction is substantially different than that reported in previous quarters. Monitoring well MW-2 was not incorporated into the contour map due to the possibility of influence from the adjacent planter irrigation. In general, groundwater levels have increased at an average of 3.5 feet compared to the November 1992 event.

92-773B.RPT

GEOLOGISTS • ENGINEERS • GROUNDWATER SCIENTISTS

## **GROUNDWATER SAMPLING AND ANALYSES**

Aegis personnel collected groundwater samples from the six wells on February 3, 1993. The samples were collected according to the Aegis SOP included in Attachment 1, and submitted under chain-of-custody to Resna Labs, a state-certified analytical laboratory. All samples were analyzed for concentrations of: a) total petroleum hydrocarbons, as gasoline, by GC-FID/EPA Methods 5030/8015; and b) benzene, toluene, ethylbenzene, and total xylenes by GC-FID/EPA Methods 5030/602. 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 remained nondetect in well MW-7, but have increased in the other wells compared to the November 1992 event.

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 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.

Sincerely,

**AEGIS ENVIRONMENTAL, INC.**



Tom Landwehr  
Senior Geologist



Clarke H. Owen  
Principal Geologist  
CRG No. 4987



5-11-93

Date

TEL/DIS/law

Attachments

**FIGURES:**

FIGURE 1 ..... SITE VICINITY MAP

FIGURE 2 ..... POTENTIOMETRIC MAP (FEBRUARY 3, 1993)

FIGURE 3 ..... DISTRIBUTION MAP OF BENZENE  
IN GROUNDWATER (FEBRUARY 3, 1993)

**TABLES:**

TABLE 1 ..... LIQUID LEVEL DATA

TABLE 2 ..... ANALYTICAL RESULTS: GROUNDWATER

**ATTACHMENTS:**

ATTACHMENT 1 ..... STANDARD OPERATING PROCEDURES

ATTACHMENT 2 ..... LABORATORY REPORTS AND  
CHAIN-OF-CUSTODY FORM

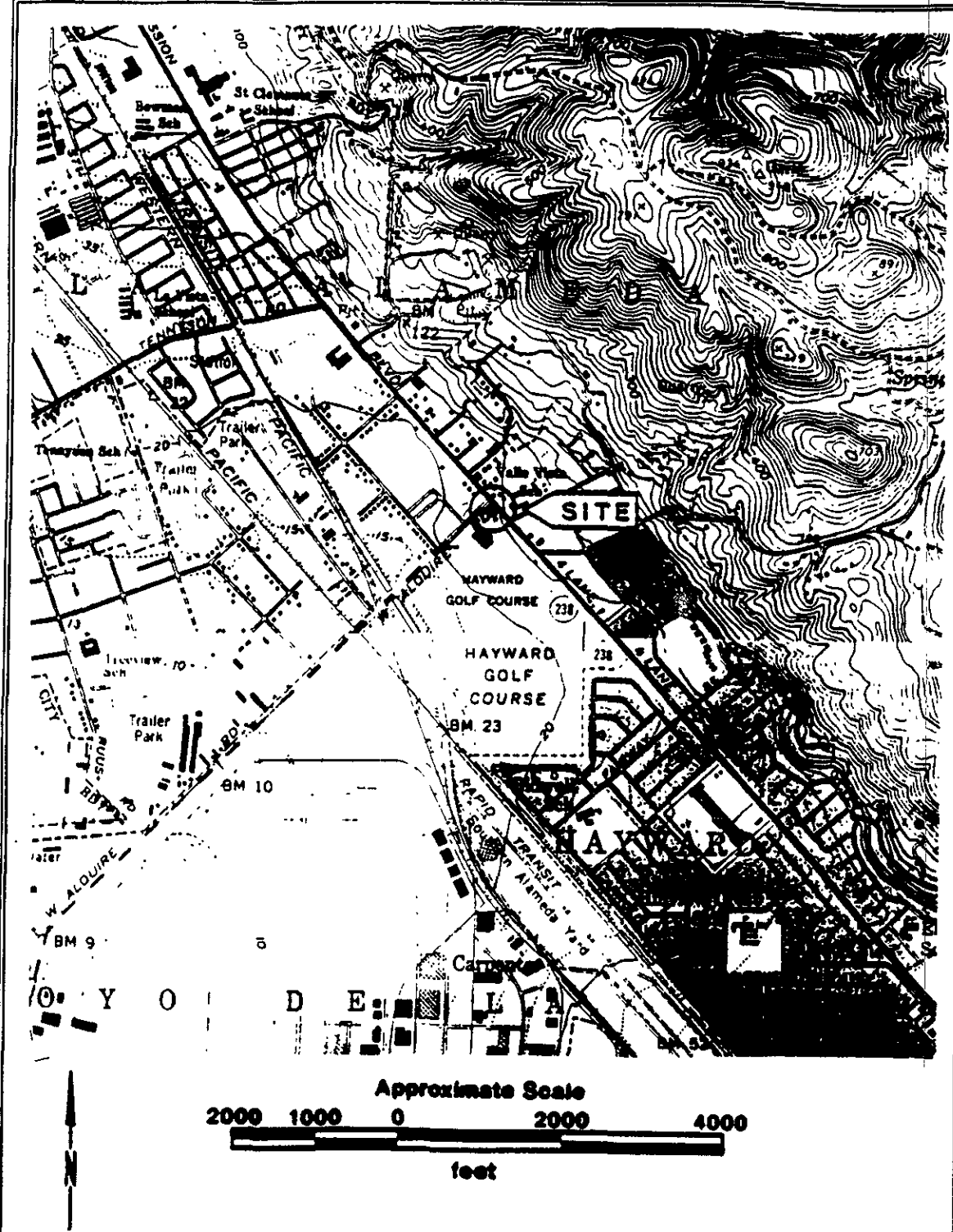
ATTACHMENT 3 ..... HISTORICAL WATER LEVEL DATA

ATTACHMENT 4 ..... HISTORICAL ANALYTICAL DATA

ATTACHMENT 5 ..... FIELD DATA SHEETS

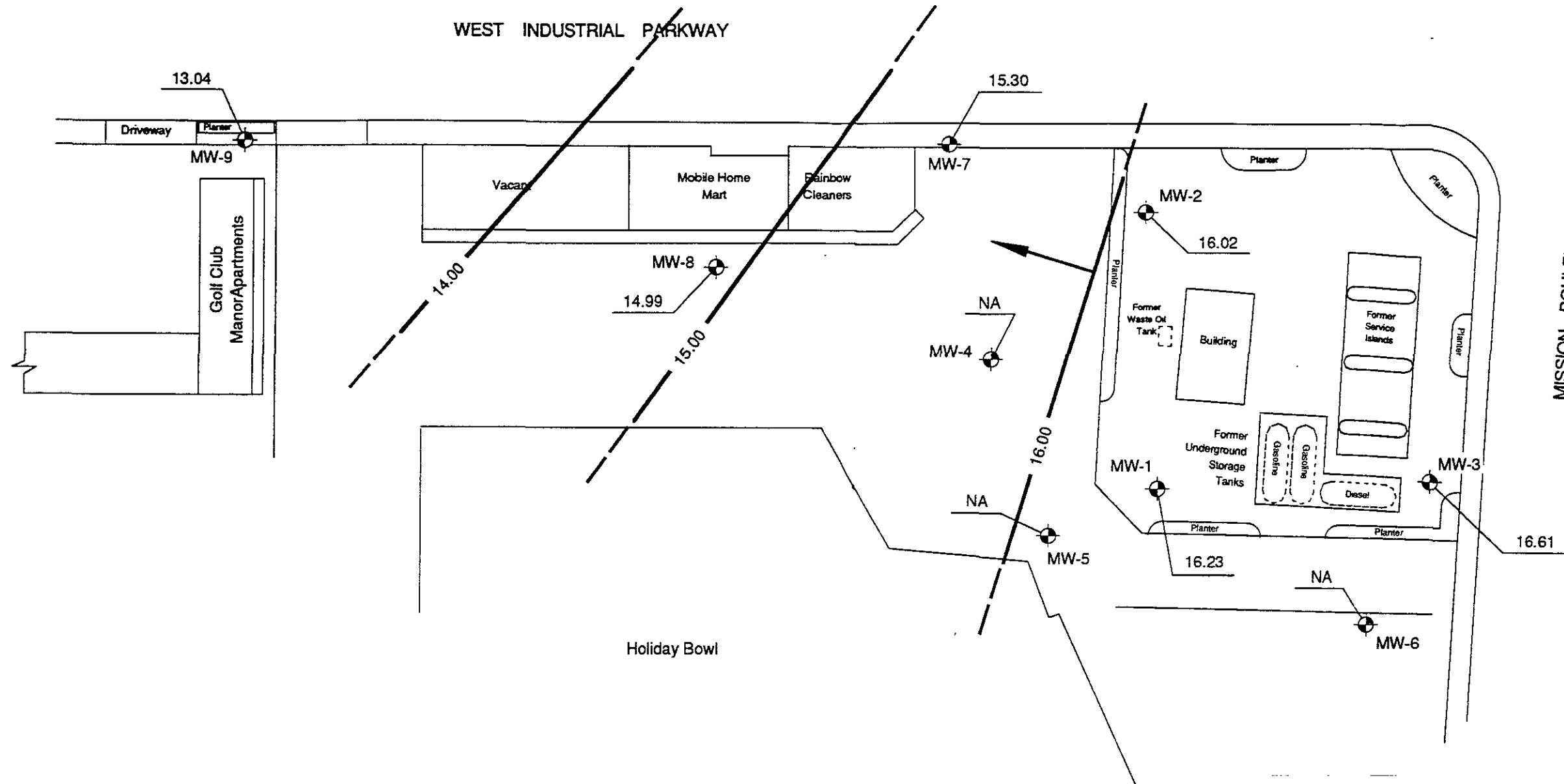
**FIGURES**





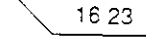



**SITE VICINITY MAP**  
 Former Beacon Station No. 546  
 29705 Mission Boulevard  
 Hayward, California

8/5/92  
 Figure  
 1



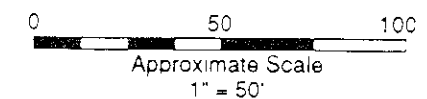
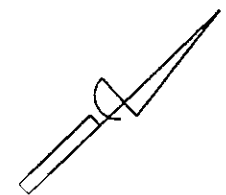
**LEGEND**


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

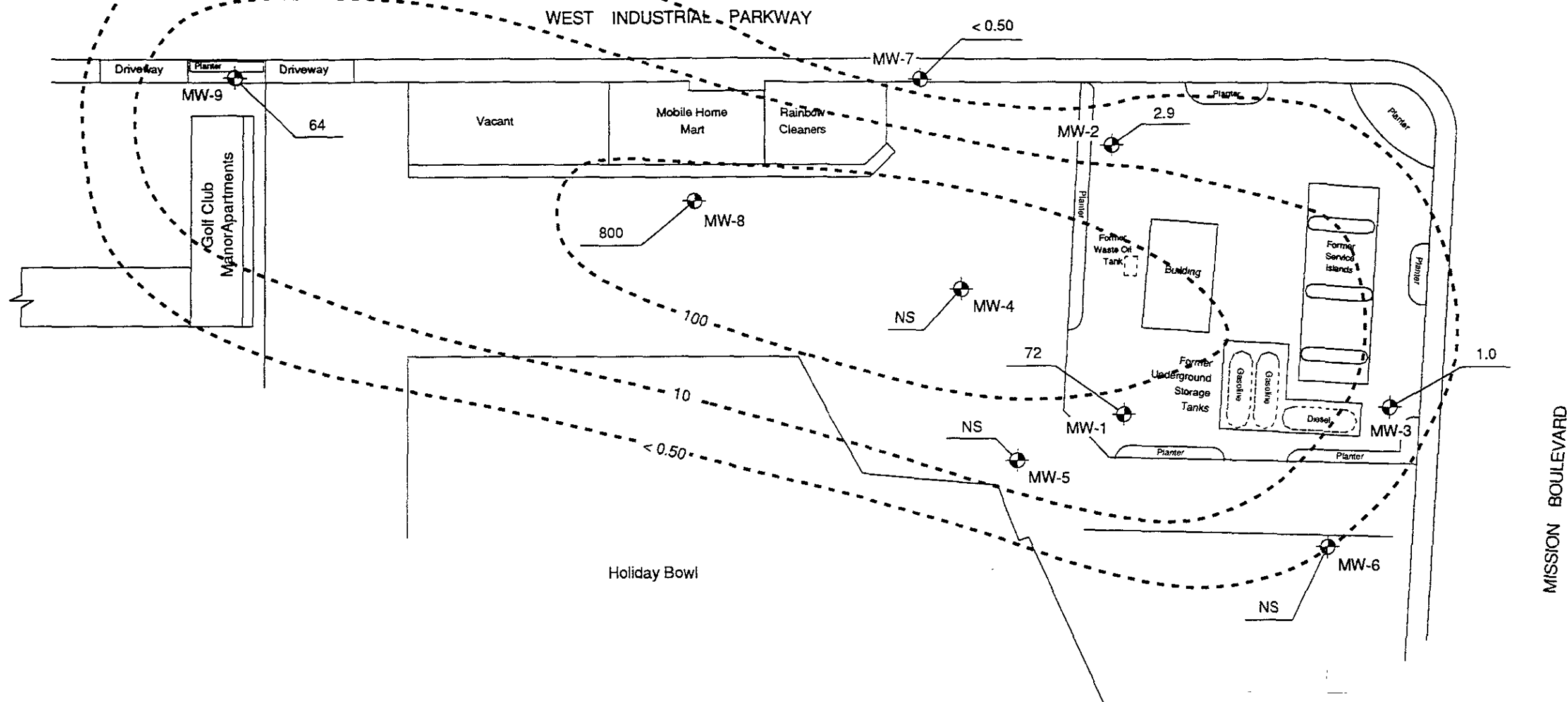
Hydraulic Gradient = 0.015 ft/ft  
 Contour Interval = 1.0 ft

**NOTES**


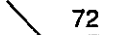
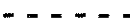


Site Sketch After  
 Site Map By Ultramar  
 August 5, 1992  
 All locations Are Approximate



		<b>POTENTIOMETRIC SURFACE MAP</b> February 3, 1993		<b>FIGURE</b> 2
		Beacon Station # 546 29705 Mission Boulevard Hayward, CA		
DRAWN BY D. Hada	DATE March 2, 1993	REVISOR [Signature]	DATE [Signature]	



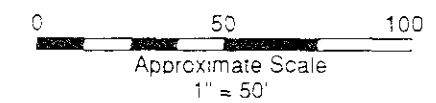
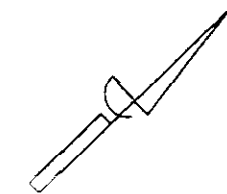
**LEGEND**


-  Monitoring Well
-  72 Benzene Concentration (parts-per-billion)
-  Interred Iso-Concentration Limits
-  <math>< 0.5</math> Below indicated Detection Limit
-  NS Not Sampled

Contour Interval = Exponential

**NOTES**

Site Sketch Atter  
 Site Map By Ultramar  
 August 5, 1992  
 All locations Are Approximate



 <b>AEGIS ENVIRONMENTAL, INC.</b>	
DRAWN BY: D. Hada	DATE: March 1, 1993
REVISED BY:	DATE:
REVIEWED BY:	DATE:

**DISTRIBUTION MAP OF BENZENE  
 IN GROUNDWATER February 3, 1993**

Beacon Station # 546  
 29705 Mission Boulevard  
 Hayward, CA

**FIGURE  
 3**  
 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) <sup>1</sup>	Depth to Groundwater <sup>1</sup>	Groundwater Elevation <sup>2</sup>	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	---	Heavy sheen
	02/03/93		21.23	16.23	38.08	---
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	---
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	---
MW-4	04/15/92	34.94	---	---	---	---
	07/07/92		---	---	---	---
	09/23/92		---	---	---	---
	11/12/92		---	---	39.20	---
	02/03/93		---	---	---	---

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

TABLE 1 (CONTINUED)

LIQUID LEVEL DATA

BEACON STATION #546  
 29705 MISSION BOULEVARD, HAYWARD, 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	Comments
MW-5	04/15/92	36.37	---	---	---	---
	07/07/92		---	---	---	---
	09/23/92		---	---	---	---
	11/12/92		---	---	---	---
	02/03/93		---	---	---	---
MW-6	04/15/92	37.43	---	---	---	---
	07/07/92		---	---	---	---
	09/23/92		---	---	---	---
	11/12/92		---	---	---	---
	02/03/93		---	---	---	---
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	---
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	---
MW-9	02/03/93	21.99	8.95	13.04	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.  
 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
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
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
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
MW-4	04/15/92	---	---	---	---	---
	07/07/92	---	---	---	---	---
	09/23/92	---	---	---	---	---
	11/12/92	---	---	---	---	---
	02/03/93	---	---	---	---	---

NOTES: < = Below indicated detection limit.  
 --- = Not analyzed.

TABLE 2 (CONTINUED)

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
MW-5	04/15/92	---	---	---	---	---
	07/07/92	---	---	---	---	---
	09/23/92	---	---	---	---	---
	11/12/92	---	---	---	---	---
	02/03/93	---	---	---	---	---
MW-6	04/15/92	---	---	---	---	---
	07/07/92	---	---	---	---	---
	09/23/92	---	---	---	---	---
	11/12/92	---	---	---	---	---
	02/03/93	---	---	---	---	---
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
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
MW-9	02/03/92	28,000	64	9.6	70	510

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;
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), light filter(s), 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 "depth to water" (DTW).

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. After grounding the probe, the top of the well casing is fitted with a light filter to insure that sunlight does not interfere with the operation of the probe's optical mechanism.

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 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 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**



FEB 19 1993

Ans'd. *CF/SRP*

**ANALYSIS REPORT**

1020lab.frm

Attention: Ms. Sheila Richgels  
 Aegis Environmental  
 1050 Melody Lane, Suite 160  
 Roseville, CA 95678  
 Project: 12110.0L, Project 92-773  
 Station 546, Hayward

Date Sampled: 02-03-93  
 Date Received: 02-05-93  
 BTEX Analyzed: 02/5,8/93  
 TPHg Analyzed: 02/5,8/93  
 TPHd Analyzed: NR  
 Matrix: Water

	Benzene ppb	Toluene ppb	Ethyl- benzene ppb	Total Xylenes ppb	TPHg ppb	TPHd ppb
Detection Limit:	0.5	0.5	0.5	0.5	50	50

**SAMPLE**  
 Laboratory Identification

MW-1 W1302070	72	ND	0.6	6.6	950	NR
MW-2 W1302071	2.9	0.8	15	6.0	310	NR
MW-3 W1302072	1.0	1.3	0.6	2.7	ND	NR
MW-7 W1302073	ND	ND	ND	ND	ND	NR
MW-8 W1302074	800	1.1	660	720	29000	NR

ppb = parts per billion = ug/L = micrograms per liter.  
 ND = Not detected. Compound(s) may be present at concentrations below the detection limit.  
 NR = Analysis not requested.

**ANALYTICAL PROCEDURES**

**BTEX**- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.

**TPHg**-Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015, which utilizes a GC equipped with an FID.

**TPHd**-Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

*MTague*

February 12, 1993

Laboratory Representative

Date Reported



**ANALYSIS REPORT**

Attention: Ms. Sheila Richgels  
Aegis Environmental  
1050 Melody Lane, Suite 160  
Roseville, CA 95678  
Project: 12110.0L, Project 92-773  
Station 546, Hayward

Date Sampled: 02-03-93  
Date Received: 02-05-93  
BTEX Analyzed: 02/5,8/93  
TPHg Analyzed: 02/5,8/93  
TPHd Analyzed: NR  
Matrix: Water

1020lab.frm

	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd
	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit:	0.5	0.5	0.5	0.5	50	50

**SAMPLE**  
Laboratory Identification

MW-9 W1302075	64	9.6	70	510	28000	NR
------------------	----	-----	----	-----	-------	----

ppb = parts per billion = ug/L = micrograms per liter.

ND = Not detected. Compound(s) may be present at concentrations below the detection limit.

NR = Analysis not requested.

**ANALYTICAL PROCEDURES**

**BTEX**-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.

**TPHg**--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015, which utilizes a GC equipped with an FID.

**TPHd**--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

*MTague*

February 12, 1993

Laboratory Representative

Date Reported

**RESNA ENVIRONMENTAL LABORATORY IS CERTIFIED BY THE STATE OF CALIFORNIA  
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY**  
(Certification No. 1211)

42501 Albrae Street • Fremont, CA 94538 • Phone: (510) 623-0775 • (800) 247-5223 • FAX: (510) 651-8754



RESNA  
(510) 651-1906

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

95962

**BEACON**

Beacon Station No. 546		Sampler (Print Name) MIKE WESNEY			ANALYSES				Date 2-7-93	Form No. / of /
Project No. 92-773		Sampler (Signature) <i>Mike Wesney</i>			BTEX	TPH (gasoline)	TPH (diesel)	No. of Containers	PLEASE USE TRI-REGIONAL DETECTION LIMITS	
Project Location 29705 MISSION BLV. HAYWARD, CA.		Affiliation AEGIS ENVIRONMENTAL							REMARKS	
Sample No./Identification	Date	Time	Lab No.							
MW-1	2-3-93	7:13		X	X		2		W130207D	
MW-2		6:59							71	
MW-3		7:40							72	
MW-7		6:44							73	
MW-8		6:33							74	
MW-9	↓	6:29		X	X		↓		75	
Relinquished by: (Signature/Affiliation) <i>Mike Wesney</i>		Date 2/4/93	Time 4:30	Received by: (Signature/Affiliation) <i>Prime 707</i>		Date 2/4		Time 4:32 P		
Relinquished by: (Signature/Affiliation) <i>707 Robert</i>		Date	Time	Received by: (Signature/Affiliation) <i>PR M/L</i>		Date 2/3		Time 0740		
Relinquished by: (Signature/Affiliation) <i>PRM</i>		Date 2/3/93	Time 0907	Received by: (Signature/Affiliation) <i>INTAGNE</i>		Date 2/5/93		Time 930		
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: <u>TERRY FOX</u>						

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) <sup>1</sup>	Depth to Groundwater <sup>1</sup>	Groundwater Elevation <sup>2</sup>
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) <sup>1</sup>	Depth to Groundwater <sup>1</sup>	Groundwater Elevation <sup>2</sup>
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:
- <sup>1</sup> = Measurement and reference elevation taken from notch/mark on top north side of well casing.
  - <sup>2</sup> = 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	Ethylbenzene
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	Ethylbenzene	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.







Client: BEACON #546  
Site: 29705 MISSION BLVD

Project No: 92-773  
Well Designation: MW1

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: 38.08  
Depth to water: 21.23  
Calculated purge: 45 gal  
Actual purge: 45 gal

Start purge: 6:42 Sampling time: 7:13 Sampling Date: 2-5-72

Time	Temp.	E.C.	pH	Turbidity	Volume
6:54	61.4	2.21ms	7.43		41
6:56	61.9	2.19ms	7.41		43
6:59	62.3	2.17ms	7.44		45

Sample appearance: Clear

QC samples collected at this well: \_\_\_\_\_ Lock: 3753

Remarks: Hand Dug Well Very Strong Gas odor and Heavy Sulfur

Signature Mike Weaney Review [Signature]



Client: BEACON #546  
Site: 29705 MISSION BLVD

Project No: 92-773  
Well Designation: MW2

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: 38.90 Calculated purge: 50 gal  
Depth to water: 17.99 Actual purge: 50 gal

Start purge: 6:34 Sampling time: 6:59 Sampling Date: 2-3-93

Time	Temp.	E.C.	pH	Turbidity	Volume
6:49	60.0	1.18ms	6.06		46
6:50	61.2	1.19ms	6.49		48
6:52	61.6	1.19ms	6.51		50

Sample appearance: clear

QC samples collected at this well: \_\_\_\_\_

Lock: 3753

Remarks: Hand Drilled 2gal w/Disp Bailer

Signature

Mike Kearney

Review

[Signature]





Client: BEACON  
Site: 29705 Mission Blvd

Project No: 92-773  
Well Designation: mw7

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: 34.02  
Depth to water: 15.20  
Calculated purge: 50 gal  
Actual purge: 50 gal

Start purge: 6:25 Sampling time: 6:44 Sampling Date: 2-3-92

Time	Temp.	E.C.	pH	Turbidity	Volume
6:25	61.9	1.87ms	6.71		46.
6:37	62.4	1.85ms	6.76		48
6:39	62.9	1.90ms	6.75		50

Sample appearance: clear

QC samples collected at this well: \_\_\_\_\_

Lock: 3753

Remarks: Hand Bailed well

Signature Mike J. Kearney Review [Signature]



AEGIS ENVIRONMENTAL, INC.

## SAMPLING INFORMATION SHEET

Client: BEACON  
 Site: 29705 MISSION Blvd

Project No: 92-773  
 Well Designation: MW 8

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: 39.19  
 Depth to water: 15.47

Calculated purge: 60 gal  
 Actual purge: 60 gal

Start purge: 6:06Sampling time: 6:33Sampling Date: 3-23-93

Time	Temp.	E.C.	pH	Turbidity	Volume
6:25	62.2	1.17ms	6.69		62
6:26	63.3	1.17ms	6.72		64
6:28	63.7	1.15ms	6.76		66

Sample appearance: clear

QC samples collected at this well: \_\_\_\_\_

Lock: 3753Remarks: Hand Bailed 2 gal w/ Disp Bailer

Signature

Mike Kearney

Review

Na / CALCULATED  
67 GAL



Client: BEACON  
Site: 29705 Mission Blvd

Project No: 92-773  
Well Designation: MW9

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: ~~6.0~~ 23.52 Calculated purge: 10 gal  
Depth to water: 3.95 Actual purge: 10 gal

Start purge: 6:11 Sampling time: 6:29 Sampling Date: 2-3-95

Time	Temp.	E.C.	pH	Turbidity	Volume
6:18	62.6	1.14ms	6.53		6
6:20	63.0	1.14ms	6.57		8
6:22	63.3	1.10ms	6.61		10

Sample appearance: Semi-Cloudy

QC samples collected at this well: \_\_\_\_\_ Lock: 3753

Remarks: Hand Bailed Well while Purging 8. with Disp. Bailor

Signature Mike Kearney Review [Signature]