

Ultramar

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

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

October 26, 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 ground-water monitoring report for the third quarter 1993 for the above-referenced Ultramar facility. Also enclosed is a copy of the Quarterly Status Report which describes the work completed this quarter and the work anticipated to be completed next quarter.

Please call if you have any question regarding this project.

Sincerely,

ULTRAMAR INC.

Terrence A. Fox
Terrence A. Fox
Senior Project Manager
Marketing Environmental Department

Enclosures

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



A Member of the Ultramar Group of Companies

BEACON
#1 Quality and Service

Ultramar

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ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: October 26, 1993
QUARTER ENDING: September 30, 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).

In April 1993, a ground-water pump test was performed. Results indicate the well yields 5 gpm and has a downgradient capture radius of 7.4 feet.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on August 18, 1993.

RESULT OF QUARTERLY MONITORING:

Monitoring data indicates that benzene concentration increased in MW-1 from 210 ppb to 220 ppb, in MW-2 from 17 ppb to 53 ppb, in MW-8 from 540 ppb to 790 ppb, and in MW-9 from 180 ppb to 290 ppb. The benzene concentration decreased in MW-3 from 1.6 ppb to 1.0 ppb and in MW-7 from 190 ppb to 53 ppb.



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

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

<u>ACTIVITY</u>	<u>ESTIMATED COMPLETION DATE</u>
Continue quarterly ground-water sampling.	



1050 Melody Lane, Suite 160, Roseville, California 95678

(916) 782 2110 Fax (916) 786 7830

October 20, 1993

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

Subject: **Third 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 August 18, 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. All field activities pertaining to events in this report were conducted according to Aegis' Standard Operating Procedures included in Attachment 1.

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. On the basis of the current measurements, groundwater flows to the west (Figure 2) at a gradient of 0.02 ft/ft. Well MW-9 was not used to determine groundwater flow direction and gradient, because the data was judged to be anomalous. The reason for this anomaly is not known at this time. Groundwater levels have decreased an average of 1.33 feet compared to the last monitoring event.

GROUNDWATER SAMPLING AND ANALYSES

Aegis personnel collected groundwater samples from the six wells. 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 for the current event are included as Attachment 2. Benzene concentrations decreased in wells MW-3 and MW-7; and increased in wells MW-1, MW-2, MW-8, and MW-9 compared to the last sampling 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

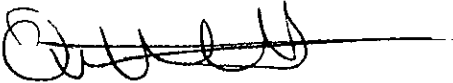
Mr. Hugh Murphy
Hayward Fire Department
22300 Foothill Boulevard
Hayward, California 94541

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

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

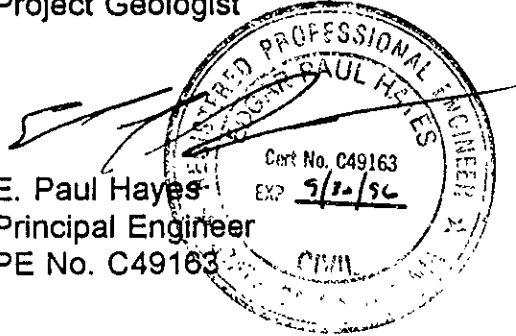
Sincerely,

AEGIS ENVIRONMENTAL, INC.



Owen Kittredge
Project Geologist

E. Paul Hayes
Principal Engineer
PE No. C49163



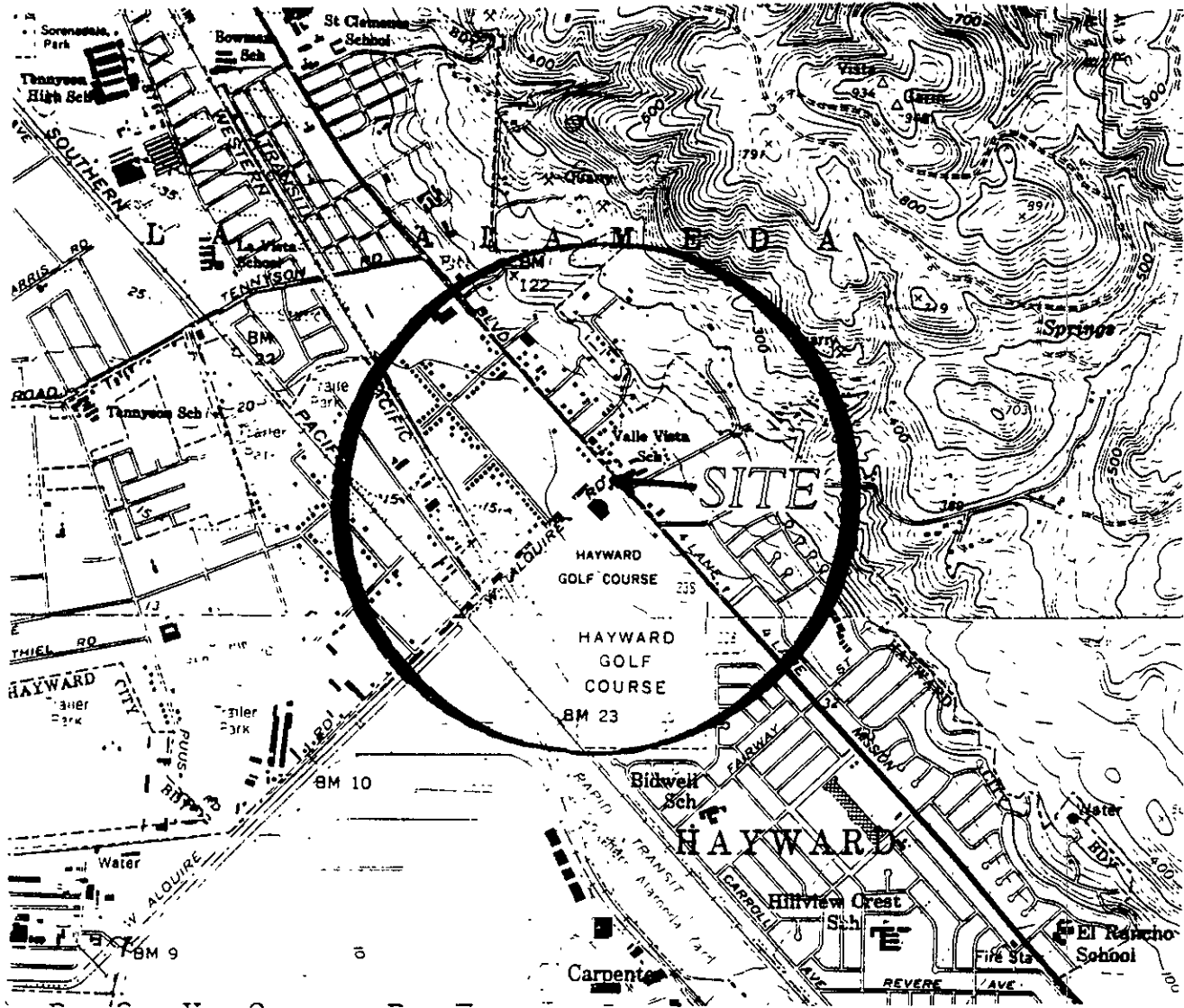
10/20/93

Date

OMK/EPH/srr

Attachments

FIGURES

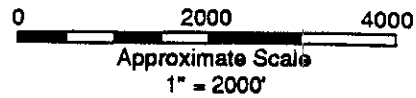



GENERAL NOTES:

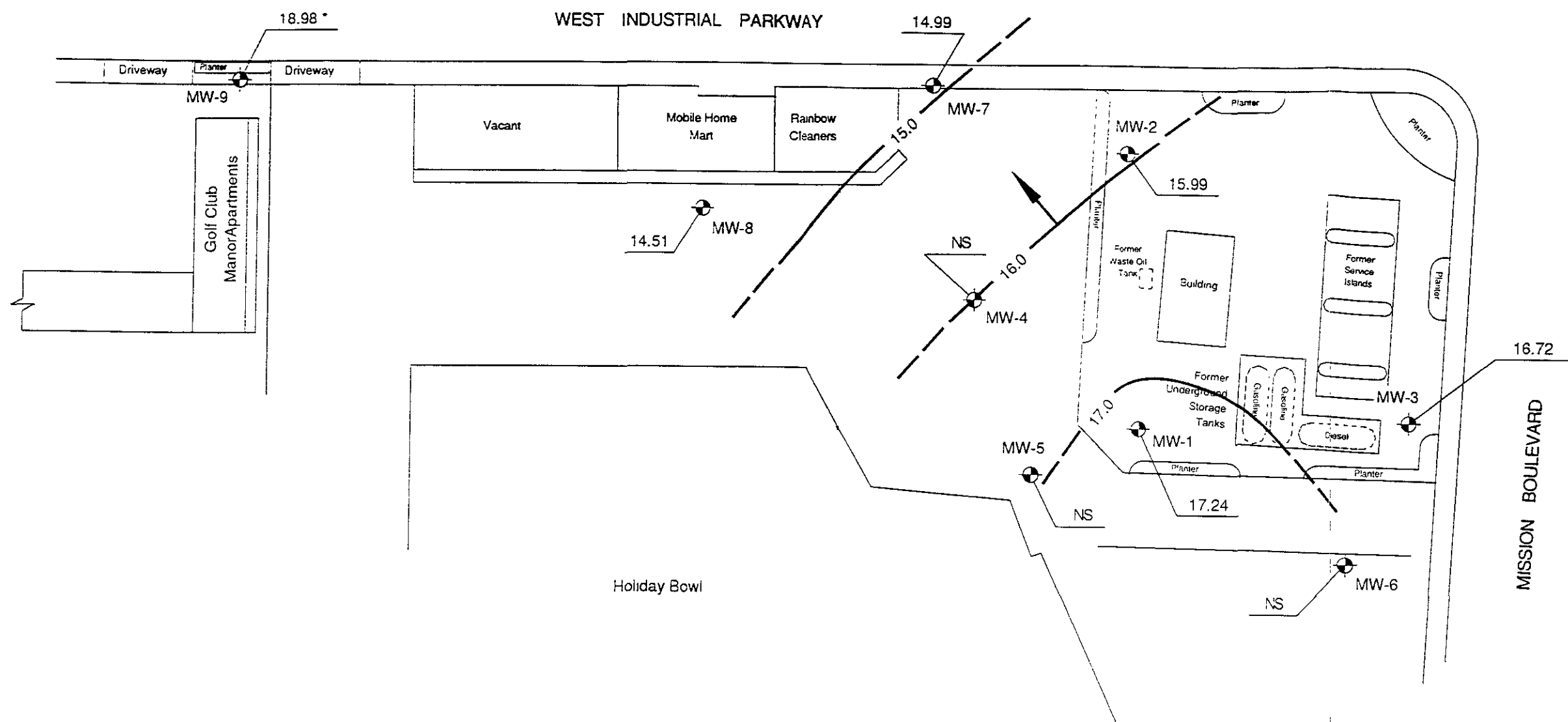
BASE MAP FROM USGS
7.5 MINUTE TOPOGRAPHIC
HAYWARD & NEWARK, CA.
1959. PHOTOREVISED 1980.





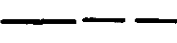
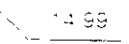

WEST ALQUIRE ROAD HAS BEEN
CHANGED TO
WEST INDUSTRIAL PARKWAY



 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

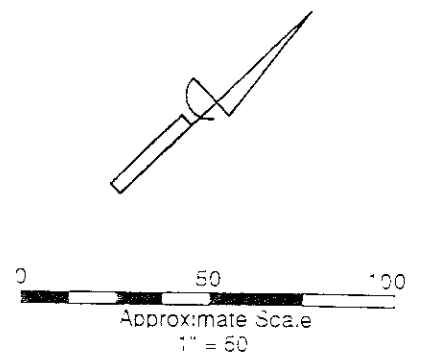
-  Monitoring Well
-  Anomalous Data, Not Used For Contouring
-  Potentiometric Surface Contour Line (Dashed Where Inferred)
-  Groundwater Elevation in Feet
-  Estimated Direction of Groundwater Flow


Hydraulic Gradient = 0.02 ft/ft
 50-foot interval = 1.0"

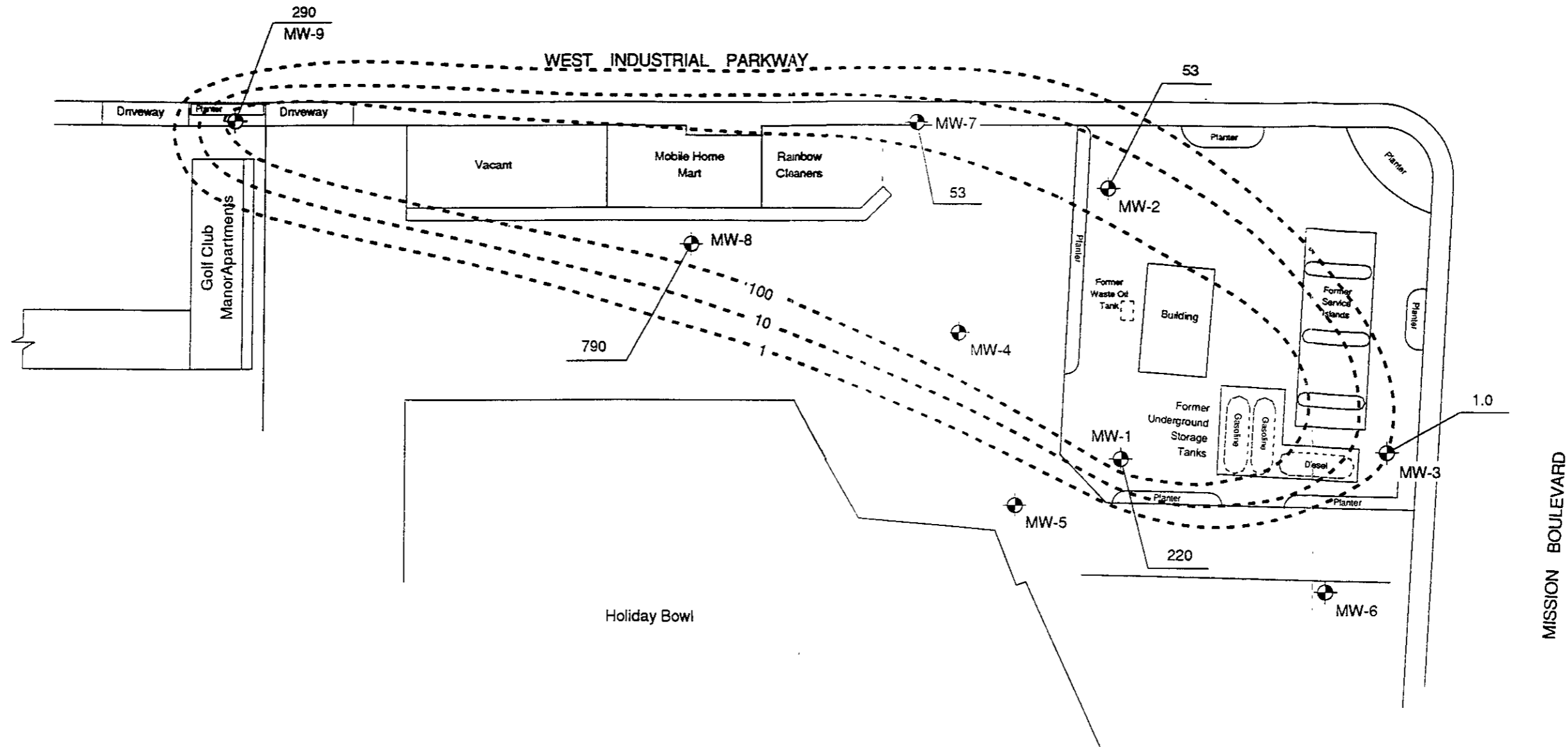
NOTES

Site Sketch After
 Site Map By Ultramar
 August 5, 1992


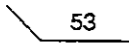

All locations Are Approximate



	POTENTIOMETRIC SURFACE MAP August 18, 1993		FIGURE 2	
	DRAWN BY J. Hada	CHECKED BY [Blank]		Beacon Station # 546 29705 Mission Boulevard Hayward, CA
	REVISIONS BY [Blank]	PROJECT NUMBER 92-773		



LEGEND

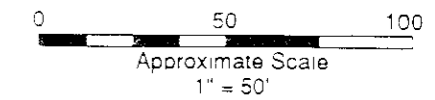
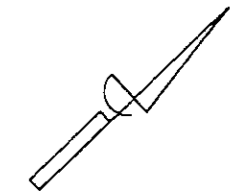
-  Monitoring Well
-  53 Benzene Concentration (parts-per-billion)
-  Inferred Iso-Concentration Limits

NOTES

Site Sketch After
Site Map By Ultramar
August 5, 1992

All locations Are Approximate

Contour Interval = Exponential



<p style="text-align: center;">DISTRIBUTION MAP OF BENZENE IN GROUNDWATER August 18, 1993</p> <p>DATE: September 25, 1993</p> <p>DATE: _____</p> <p>DATE: _____</p>	<p>FIGURE 3</p> <p>Beacon Station # 546 29705 Mission Boulevard Hayward, CA</p> <p>PROJECT NUMBER 92-773</p>
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TABLES

TABLE 1
WATER 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	—	Heavy sheen
	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	
	05/10/93		19.59	17.87	37.95	
	08/18/93		20.22	17.24	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	
	08/18/93		19.96	15.99	39.00	
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	
	08/18/93		23.56	16.72	37.80	
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	
	08/18/93		15.51	14.99	34.01	

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 1

WATER 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	
	08/18/93		13.97	14.51	39.25	
MW-9	02/03/93	21.99	8.95	13.04	23.52	
	05/10/93		8.18	13.81	23.52	
	08/18/93		9.50	18.98	23.17	

- 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
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
	08/18/93	1,600	220	<5.0	110	150
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
	08/18/93	820	53	<1.3	71	16
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
	08/18/93	<50	1.0	<0.5	1.5	<0.5
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

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

TABLE 2

ANALYTICAL RESULTS: GROUNDWATER

BEACON STATION #546
29706 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-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
	08/18/93	1,600	53	<2.5	<2.5	37
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
	08/18/93	10,000	790	<25	1,100	720
MW-9	02/03/92	28,000	64	9.6	70	510
	05/10/93	5,000	180	12	88	110
	08/18/93	4,900	290	<2.5	210	180

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

ATTACHMENT 1
STANDARD OPERATING PROCEDURES

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.

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.

GROUNDWATER PURGING AND SAMPLING

SOP-7

Prior to water sampling, each well is purged by evacuating a minimum of three 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.

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 REPORT AND
CHAIN-OF-CUSTODY FORM**



92-773

August 27, 1993
Sample Log 7214

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

CF/ERR
.....

Subject: Analytical Results for 6 Water Samples
Identified as: Project # 92-773 (Beacon #546)
Received: 08/20/93

Dear Ms. Richgels:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on August 27, 1993 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:

Joel Kiff
Senior Chemist



Sample: MW-1

From : Project # 92-773 (Beacon #546)

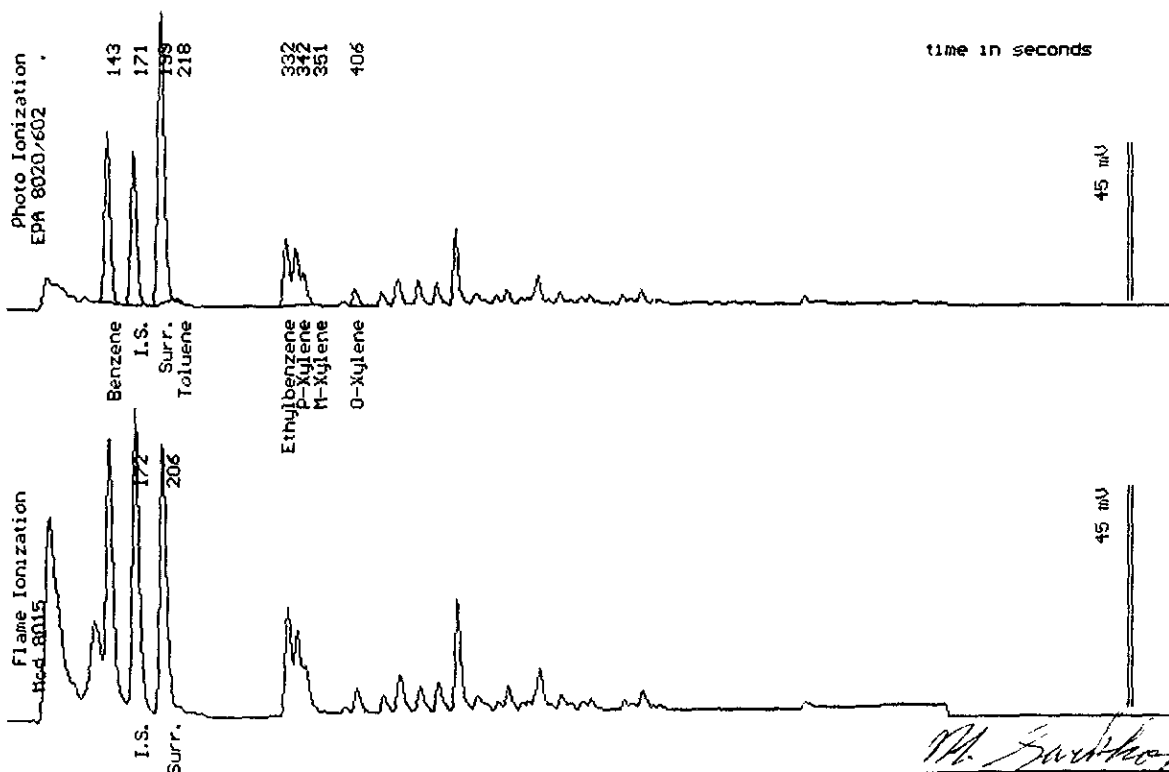
Sampled : 08/18/93

Dilution : 1:10

QC Batch : 2012c

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	220
Toluene	(5.0)	<5.0
Ethylbenzene	(5.0)	110
Total Xylenes	(5.0)	150
TPH as Gasoline	(500)	1600
Surrogate Recovery		91 %



Date Analyzed: 08-25-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample: MW-2

From : Project # 92-773 (Beacon #546)

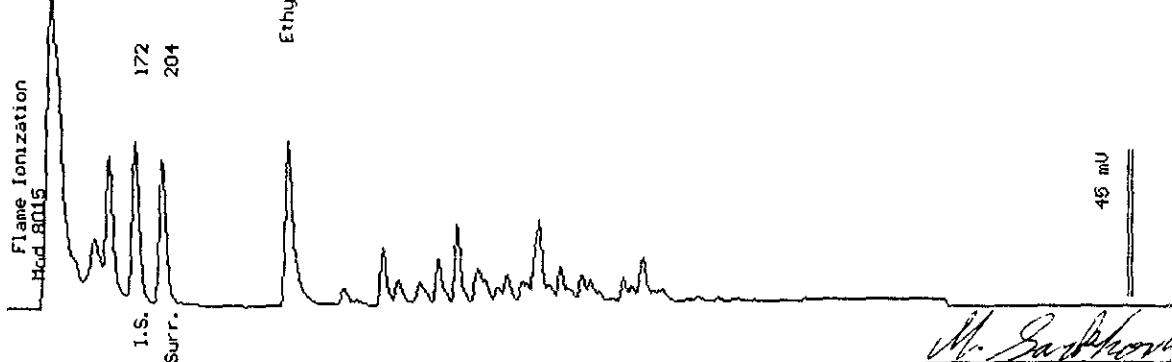
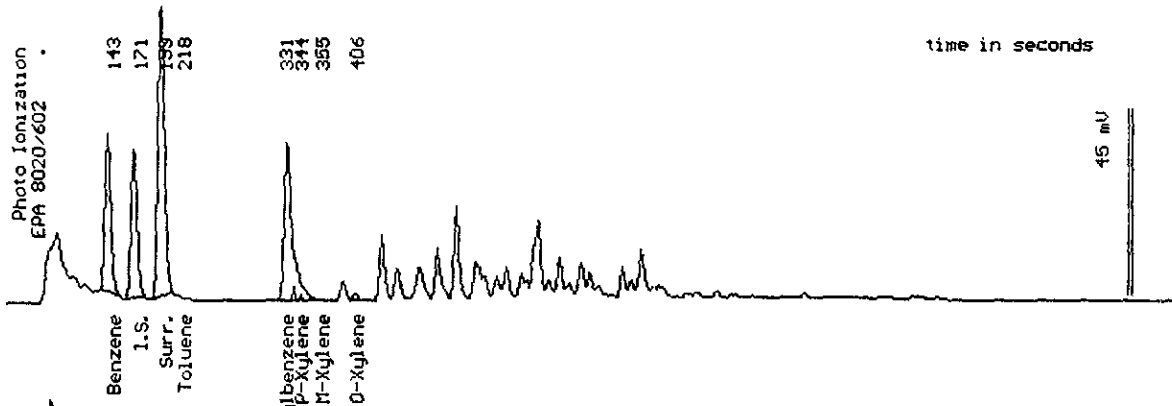
Sampled : 08/18/93

Dilution : 1:3

QC Batch : 2012c

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(1.3)	53
Toluene	(1.3)	<1.3
Ethylbenzene	(1.3)	71
Total Xylenes	(1.3)	16
TPH as Gasoline	(130)	820
Surrogate Recovery		91 %



Date Analyzed: 08-25-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample: MW-3

From : Project # 92-773 (Beacon #546)

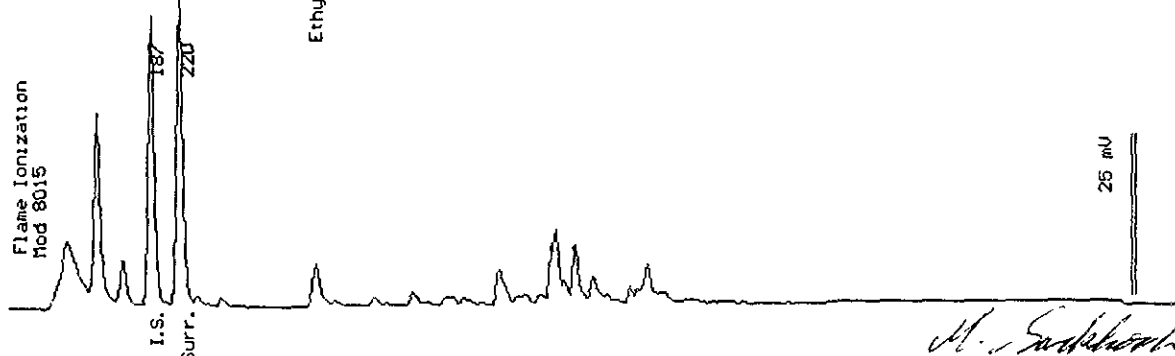
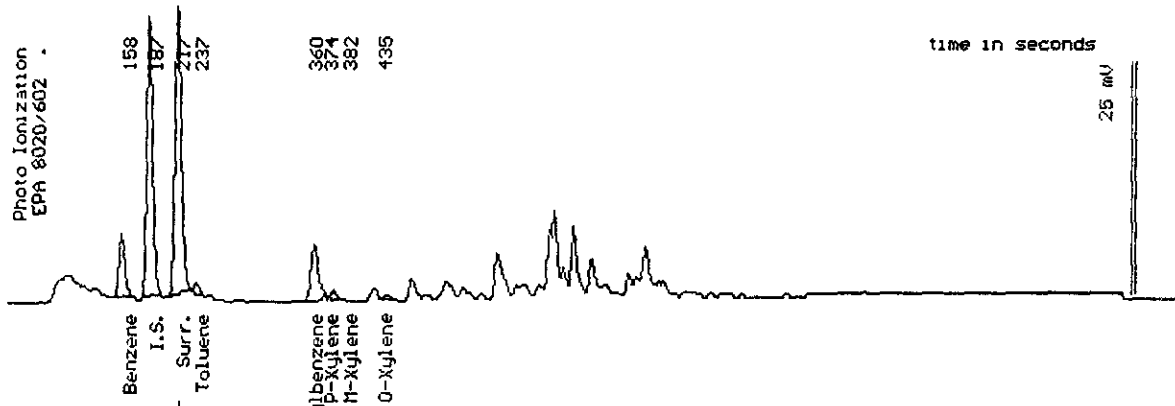
Sampled : 08/18/93

Dilution : 1:1

QC Batch : 4030d

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	1.0
Toluene	(.50)	<.50
Ethylbenzene	(.50)	1.5
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		107 %



Date Analyzed: 08-25-93
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample: MW-7

From : Project # 92-773 (Beacon #546)

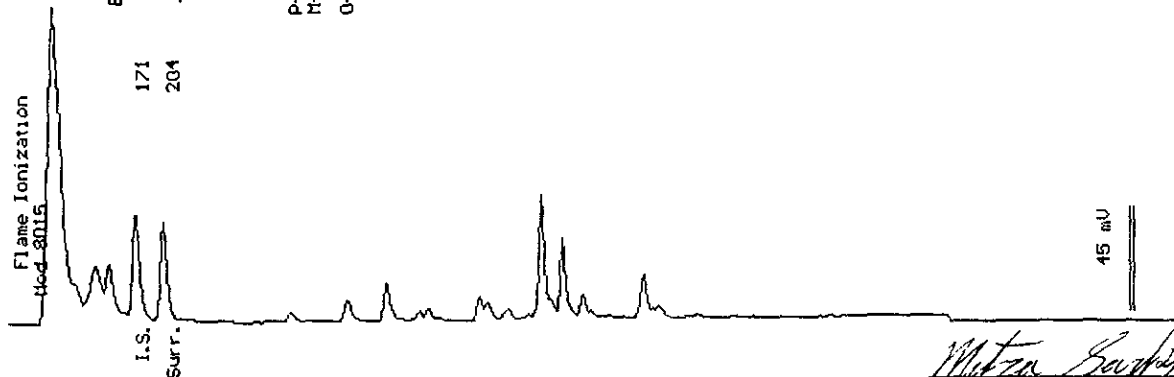
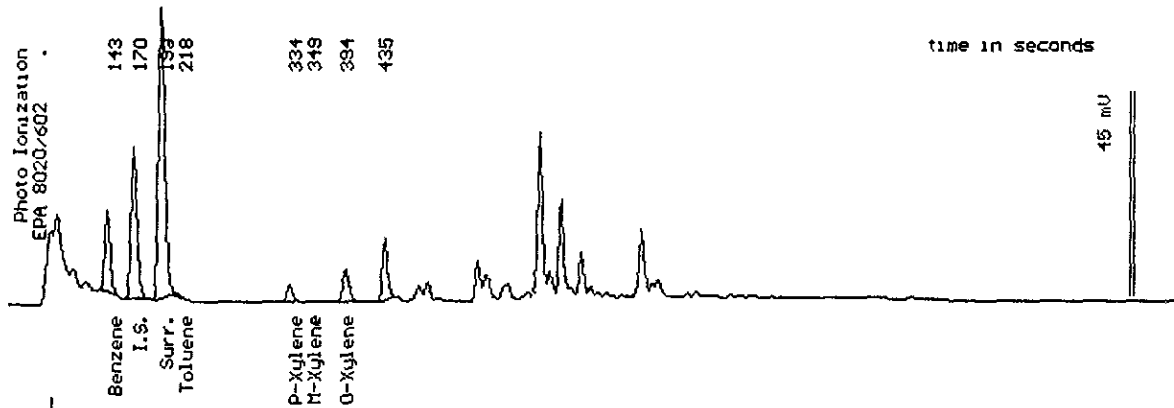
Sampled : 08/18/93

Dilution : 1:5

QC Batch : 2012B

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(2.5)	53
Toluene	(2.5)	<2.5
Ethylbenzene	(2.5)	<2.5
Total Xylenes	(2.5)	37
TPH as Gasoline	(250)	1600
Surrogate Recovery		92 %



Date Analyzed: 08-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Joel Kiff
Senior Chemist



Sample: MW-8

From : Project # 92-773 (Beacon #546)

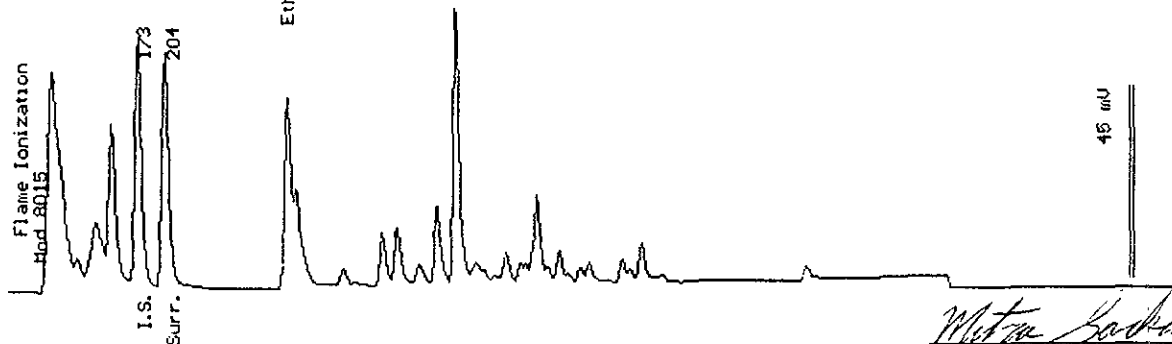
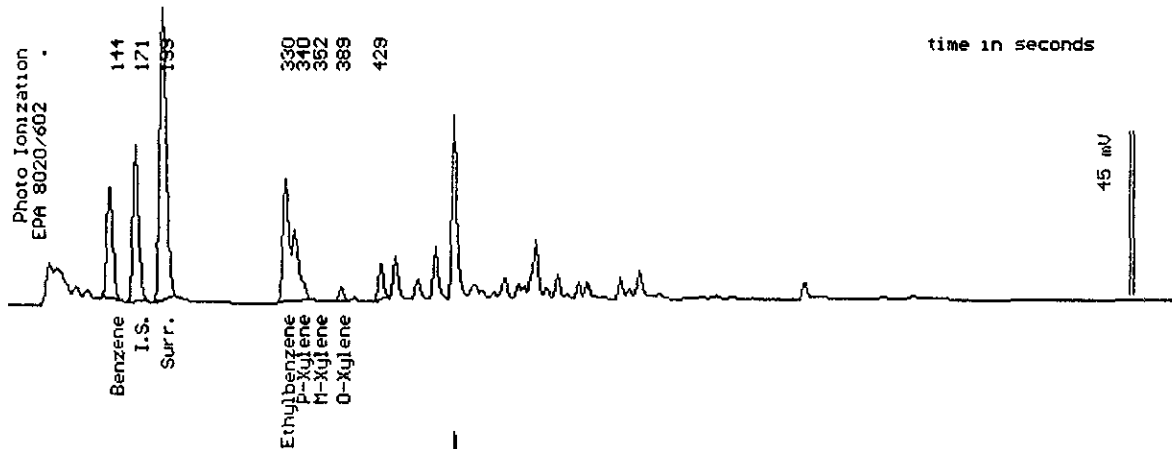
Sampled : 08/18/93

Dilution : 1:50

QC Batch : 2012B

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(25)	790
Toluene	(25)	<25
Ethylbenzene	(25)	1100
Total Xylenes	(25)	720
TPH as Gasoline	(2500)	10000
Surrogate Recovery		92 %



Date Analyzed: 08-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Joel Kiff
Senior Chemist



Sample: MW-9

From : Project # 92-773 (Beacon #546)

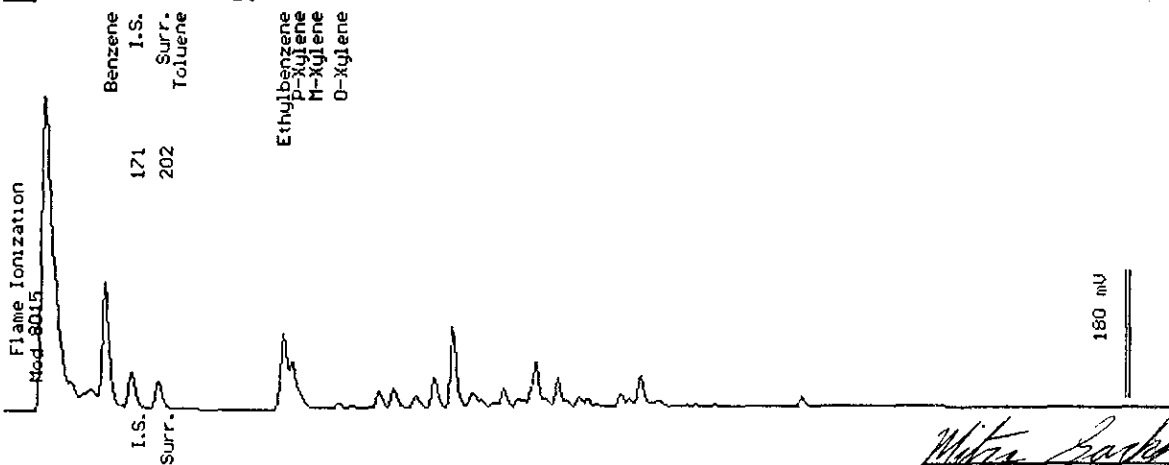
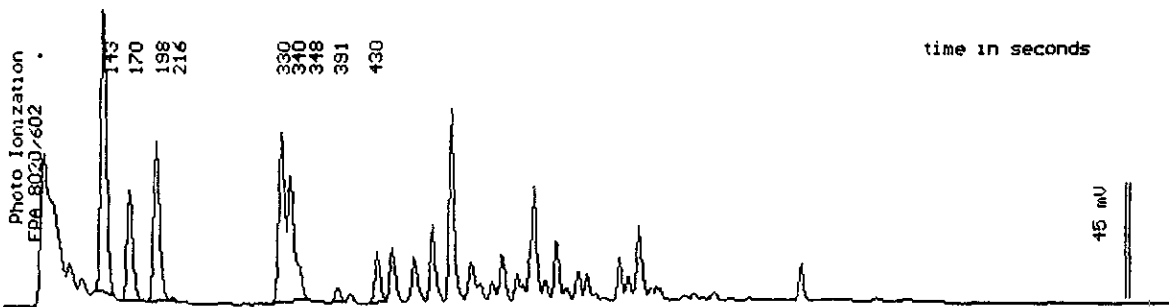
Sampled : 08/18/93

Dilution : 1:5

QC Batch : 2012B

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(2.5)	290
Toluene	(2.5)	<2.5
Ethylbenzene	(2.5)	210
Total Xylenes	(2.5)	180
TPH as Gasoline	(250)	4900
Surrogate Recovery		65 %



Joel Kiff

Joel Kiff
Senior Chemist

Date Analyzed: 08-25-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)



(916) 782-2110
(916) 786-7830

Ultramar Inc. CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. 546		Sampler (Print Name) TERRY FOX			ANALYSES				Date 2/18/93	Form No. of 1																									
Project No. 92-773		Sampler (Signature) TERRY FOX			<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 3</td></tr> <tr><td>X</td><td>X</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 3	X	X															STANDARD T.A.T	
BTEX	TPH (gasoline)	TPH (diesel)										No. of Containers 3																							
X	X																																		
Project Location HAYWARD CA		Affiliation HEGIS ENVIRON.			REMARKS																														
Sample No./Identification	Date	Time	Lab No.																																
MW-1	2/10	11:00																																	
MW-2		11:15																																	
MW-3		11:45																																	
MW-7		11:00																																	
MW-8		11:55																																	
MW-9	1/11	7:59																																	
Relinquished by: (Signature/Affiliation) T. Sil / Hegan		Date 2/18/93	Time 11:00	Received by: (Signature/Affiliation) Terry Fox / Ultramar				Date 2/18/93	Time 11:00																										
Relinquished by: (Signature/Affiliation) Meyers to Hagan		Date 2/18/93	Time 11:00	Received by: (Signature/Affiliation) Terry Fox / Ultramar				Date	Time																										
Relinquished by: (Signature/Affiliation) J		Date	Time	Received by: (Signature/Affiliation) Terry Fox / Ultramar				Date	Time 7:40																										
Report To: SHEILA RICHGELS (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
GROUND-WATER ELEVATION DATA**

Well No.	Relative Casing Elevation	DTW	CWE	CHANGE FROM LAST QUARTER
APRIL 15, 1992				
MW-1	37.46	22.10	15.36	+ 1.67
MW-2	35.95	20.88	15.07	+ 1.53
MW-3	40.28	24.59	15.69	+ 1.70
MW-4	34.94	NA	---	---
MW-5	36.37	NA	---	---
MW-6	37.43	NA	---	---
MW-7	30.50	16.00	14.50	+ 1.60
MW-8	28.48	14.30	14.18	+ 1.57
JULY 7, 1992				
MW-1	37.46	23.40	14.06	- 1.30
MW-2	35.95	21.95	14.00	- 1.07
MW-3	40.28	25.90	14.38	- 1.31
MW-4	34.94	NA	---	---
MW-5	36.37	NA	---	---
MW-6	37.43	NA	---	---
MW-7	30.50	17.10	13.40	- 1.10
MW-8	28.48	15.60	12.88	- 1.30

Elevation of top of casing measured in feet relative to arbitrary datum (100 ft); Depth-to-water measured in feet below top of casing
DTW = Depth-to-water
CWE = Calculated water elevations
NM = Not Accessible

ATTACHMENT 4
HISTORICAL ANALYTICAL DATA

**TABLE 2
ANALYTICAL RESULTS ON GROUND WATER SAMPLES**

Well No.	Date	B	T	E	X	TPH-g
WELL MW-1	4/15/92	710	11	150	440	8900
	7/7/92	<0.5	<0.5	<0.5	<0.5	<50
WELL MW-2	4/15/92	21	<0.5	56	26	1200
	7/7/92	<0.5	<0.5	<0.5	<0.5	<50
WELL MW-3	4/15/92	1.8	< 0.5	< 0.5	< 0.5	69
	7/7/92	<0.5	<0.5	<0.5	<0.5	<50
WELL MW-4	4/15/92	NA				
	7/7/92	NA				
WELL MW-5	4/15/92	NA				
	7/7/92	NA				
WELL MW-6	4/15/92	NA				
	7/7/92	NA				
WELL MW-7	4/15/92	21	1.2	2.0	1.2	1600
	7/7/92	<0.5	<0.5	<0.5	<0.5	320
WELL MW-8	4/15/92	1900	34	1200	1800	40000
	7/7/92	560	14	32	630	19000

All results shown in parts per billion (ppb)
 TPHg = Total petroleum hydrocarbons as gasoline
 B,T,E,X = Benzene, Toluene, Ethylbenzene, and Total Xylenes
 < = Less than detection limit shown
 NA = Not Analyzed

ATTACHMENT 5
FIELD DATA SHEETS

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

Project Address:

29705 Mission Blvd, Hayward (# 546)

Date:

8/18/93

Recorded by:

B M

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	11:30	37.46	37.95	20.22			
MW-2	10:20	35.95	39.00	19.96			
MW-3	08:39	40.28	37.80	23.56			
MW-7	10:30	30.50	34.01	15.51			
MW-8	12:20	28.48	39.25	13.97			
MW-9	08:52		23.17	9.50			

Notes:



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

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

Purging Equipment: 3x 2" Disposable bailer
2" PVC bailer
4" PVC bailer
Submersible pump
Dedicated bailer

Sampled with disposal bailer: Teflon Bailor:

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

Initial Measurement Time: 11:30 Recharge Measurement Time: _____
Depth of well: 37.95' Depth to water: _____ Calculated purge: 46
Depth to water: 20.22 Actual purge: 46

Meter Calibration

Date	Time	Initial reading	Adjusted reading	Temp.	E.C.	pH	Turbidity

Start purge: 11:39 Sampling time: 12:10 Sampling Date: 8-18-93

Time	Temp.	E.C.	pH	Turbidity	Volume
<u>11:45</u>	<u>69.7</u>	<u>1.32ms</u>	<u>8.37</u>		<u>16</u>
<u>11:52</u>	<u>69.3</u>	<u>1.36ms</u>	<u>8.62</u>		<u>15</u>
<u>11:59</u>	<u>69.1</u>	<u>1.36ms</u>	<u>7.09</u>		<u>15</u>

Sample appearance: cloudy
QC samples collected at this well: _____ Lock: 0909

Equipment replaced: (Check all that apply) Note condition of replaced item.
2" Locking Cap: Lock #2357:
4" Locking Cap: Lock #~~2753~~: 0909

Remarks: Well Bx dry, NO Riser Bolted Lid -
Replace cap and lock #0909 Bx in good
condition. Handbail @

Signature: [Signature] Review: [Signature]



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

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

Purging Equipment: 3x 2" Disposable bailer
2" PVC bailer
4" PVC bailer
Submersible pump
Dedicated bailer

Sampled with disposal bailer: Teflon Bailor:

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

Initial Measurement
Time: 10:20
Depth of well: 39.00
Depth to water: 19.96
19.04 Recharge Measurement
Time: _____
Depth to water: _____
Calculated purge: 49
Actual purge: 49

Meter Calibration

Date	Time	Initial reading	Adjusted reading	Temp.	E.C.	pH	Turbidity
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

Start purge: 10:28 Sampling time: 11:15 Sampling Date: 8-18-13

Time	Temp.	E.C.	pH	Turbidity	Volume
<u>1040</u>	<u>70.5</u>	<u>7.57 uS</u>	<u>8.96</u>		<u>17</u>
<u>1053</u>	<u>70.8</u>	<u>1.16 uS</u>	<u>7.69</u>		<u>16</u>
<u>1106</u>	<u>69.5</u>	<u>7.72 uS</u>	<u>8.39</u>		<u>16</u>

Sample appearance: cloudy

QC samples collected at this well: _____

Lock: 3753

Equipment replaced: (Check all that apply) Note condition of replaced item.

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

Remarks: Well Bx dry, 1" Riser Bolted lid
Bx in good condition, NEW CAP
Handbail (C)

Signature: [Signature] Review: [Signature]



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

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

Purging Equipment: 3x 2" Disposable bailer
2" PVC bailer
4" PVC bailer
Submersible pump
Dedicated bailer

Sampled with disposal bailer: Teflon Bailor:

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

Initial Measurement

Recharge Measurement

Time: 10:30
Depth of well: 34.01
Depth to water: 15.51

Time: _____
Depth to water: _____
Calculated purge: 48
Actual purge: 48

Meter Calibration

Date _____
Time _____
Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 10:34 Sampling time: 11:20 Sampling Date: 8.18.93

Time	Temp.	E.C.	pH	Turbidity	Volume
1042	71.8	1.47 ms	8.59		16
1057	70.1	1.49 ms	8.02		16
11:09	69.9	1.45 ms	7.70		16

Sample appearance: cloudy

QC samples collected at this well: _____

Lock: 3753

Equipment replaced: (Check all that apply) Note condition of replaced item.

2" Locking Cap:
1" Locking Cap:

Lock #2357:
Lock #3753:

Remarks: Well Bx dry, 1" Riser, Bolted lid,
Bx in good condition Handbail (2)

Signature [Signature]

Review [Signature]



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: Teflon Bailer:

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

Initial Measurement

Recharge Measurement

Time: 12:20
Depth of well: 39.25
Depth to water: 13.97

Time: _____
Depth to water: _____

Calculated purge: 66
Actual purge: 66

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 12:21 Sampling time: 12:55 Sampling Date: 8-18-93

Time	Temp.	E.C.	pH	Turbidity	Volume
12:27	74.1	118ms	7.86		21
12:34	74.1	1.25ms	7.18		21
12:40	76.9	1.19ms	7.88		21

Sample appearance: CLEAR

QC samples collected at this well: _____

Lock: 3753

Equipment replaced: (Check all that apply) Note condition of replaced item.

2" Locking Cap: _____
1" Locking Cap: _____

Lock #2357: _____
Lock #3753: _____

Remarks: Well Bx dry, 8" Riser Bolted lid,
Bx in good condition.

Signature: TS

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: Teflon Bailor:

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

Initial Measurement

Recharge Measurement

Time: 8:52
Depth of well: 2317
Depth to water: 950

Time: _____
Depth to water: _____

Calculated purge: 8
Actual purge: 8

Meter Calibration

Date _____ Initial reading _____
Time _____ Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 9:21 Sampling time: 9:59 Sampling Date: 8-18-93

Time	Temp.	E.C.	pH	Turbidity	Volume
09:27	72.5	1.47ms	7.75		3
09:39	71.8	1.46ms	8.13		3
9:49	72.3	1.41.ms	8.58		2

Sample appearance: Cloudy

QC samples collected at this well: NO

Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item.

2" Locking Cap:
1" Locking Cap:

Lock #2357:
Lock #3753:

Remarks: Well Bx day, 2" Rise, Bolted Lid, Bx in good condition

Handbail

Signature: AS

Review: [Signature]