

Ultramar

HAZARDOUS MATERIALS OFFICE

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

JAN 12 1994

HAYWARD FIRE DEPARTMENT

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

January 6, 1994

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**

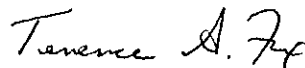
Dear Mr. Murphy:

Enclosed is a copy of the ground-water monitoring report for the fourth 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
Senior Project Manager
Marketing Environmental Department

Enclosures

cc w/encls: Mr. Vijay B. Patel, San Francisco Region, RWQCB
Mr. Dale van Dam, AMV



A Member of the Ultramar Group of Companies

BEACON
#1 Quality and Service

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

<u>ACTIVITY</u>	<u>ESTIMATED COMPLETION DATE</u>
Continue quarterly ground-water sampling.	
Submit a workplan for additional downgradient definition.	March 15, 1993



1050 Melody Lane, Suite 160, Roseville, California 95678

PHONE (916) 782 2110 Fax (916) 786 7830
HAZARDOUS MATERIALS OFFICE

JAN 12 1994

HAYWARD FIRE DEPARTMENT

December 27, 1993

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

Subject: **Fourth 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 November 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 the Attachments.

GROUNDWATER ELEVATIONS

Prior to purging, 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 attached. On the basis of the current measurements, groundwater flows to the west (Figure 2) at a gradient of <math><0.01\text{ ft/ft}</math>. Groundwater levels have decreased an average of 1.3 feet compared to the last monitoring event.

GROUNDWATER SAMPLING AND ANALYSES

Aegis personnel collected groundwater samples from all nine 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 attached. The laboratory report and chain-of-custody form for the current event are included in the Attachments. Benzene concentrations decreased in wells MW-1, MW-2, MW-3, MW-7, and MW-8; and increased in well 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

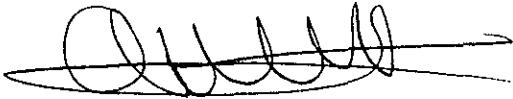
Mr. Hugh Murphy
Hayward Fire Department
22300 Foothill Boulevard
Hayward, California 94541

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,

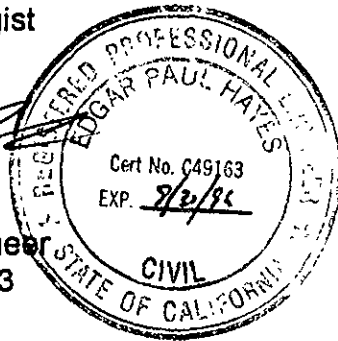
AEGIS ENVIRONMENTAL, INC.



Owen Kittredge
Project Geologist



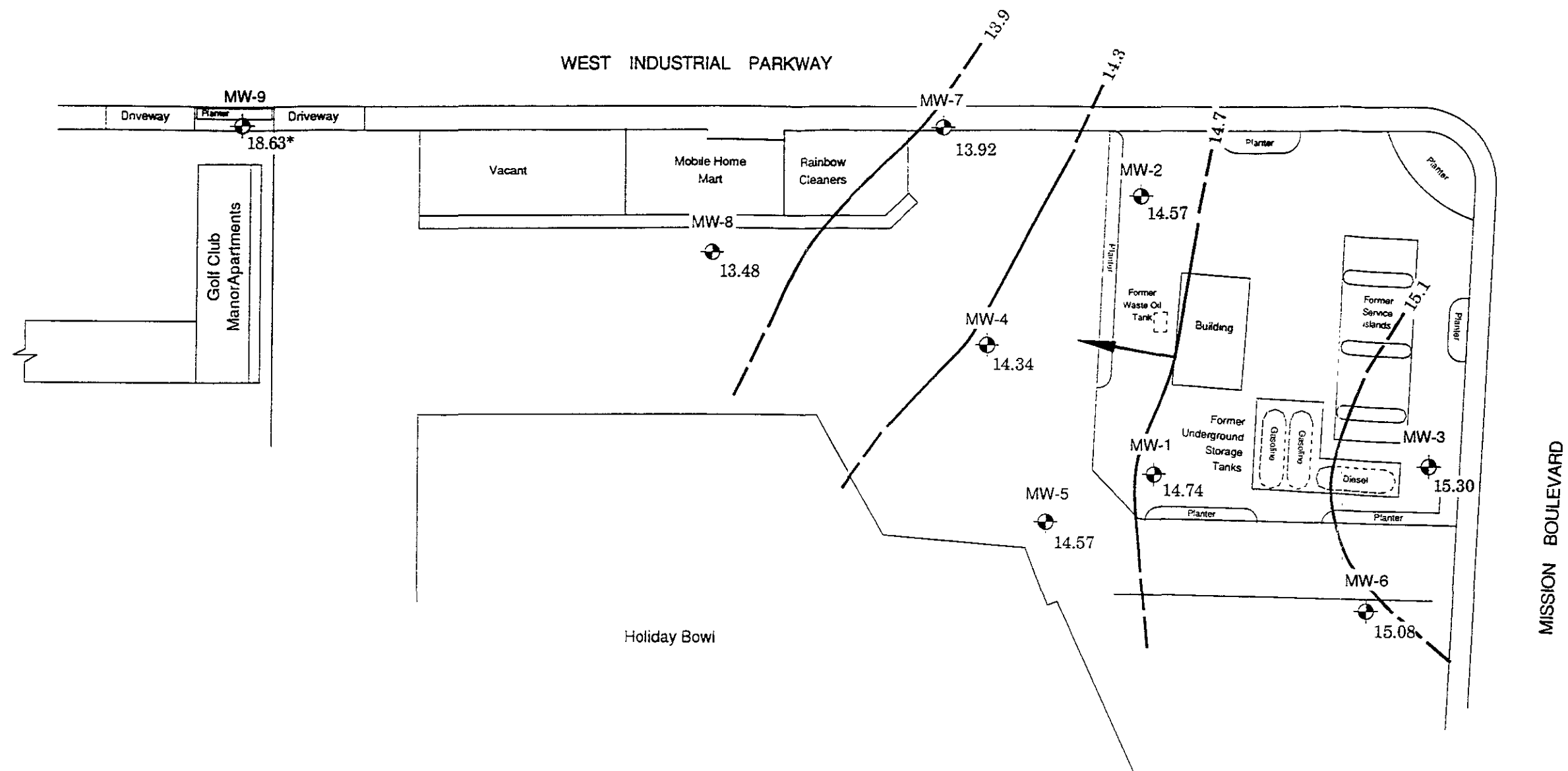
E. Paul Hayes
Principal Engineer
PE No. C49163








12/28/93
Date

OMK/EPH/srr

Attachments



LEGEND

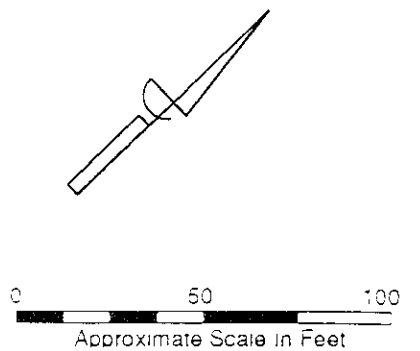
-  Monitoring Well
-  14.74 Groundwater Elevation in Feet
-  * Considered Anomalous, Not Used For Contouring
-  Potentiometric Surface Contour Line (Dashed Where Inferred)
-  Estimated Direction of Groundwater Flow

Hydraulic Gradient = < 0.01 ft/ft
 Contour Interval = 0.4 ft

NOTES

Site Sketch After
 Site Map By Ultramar
 August 5, 1992

 All locations Are Approximate



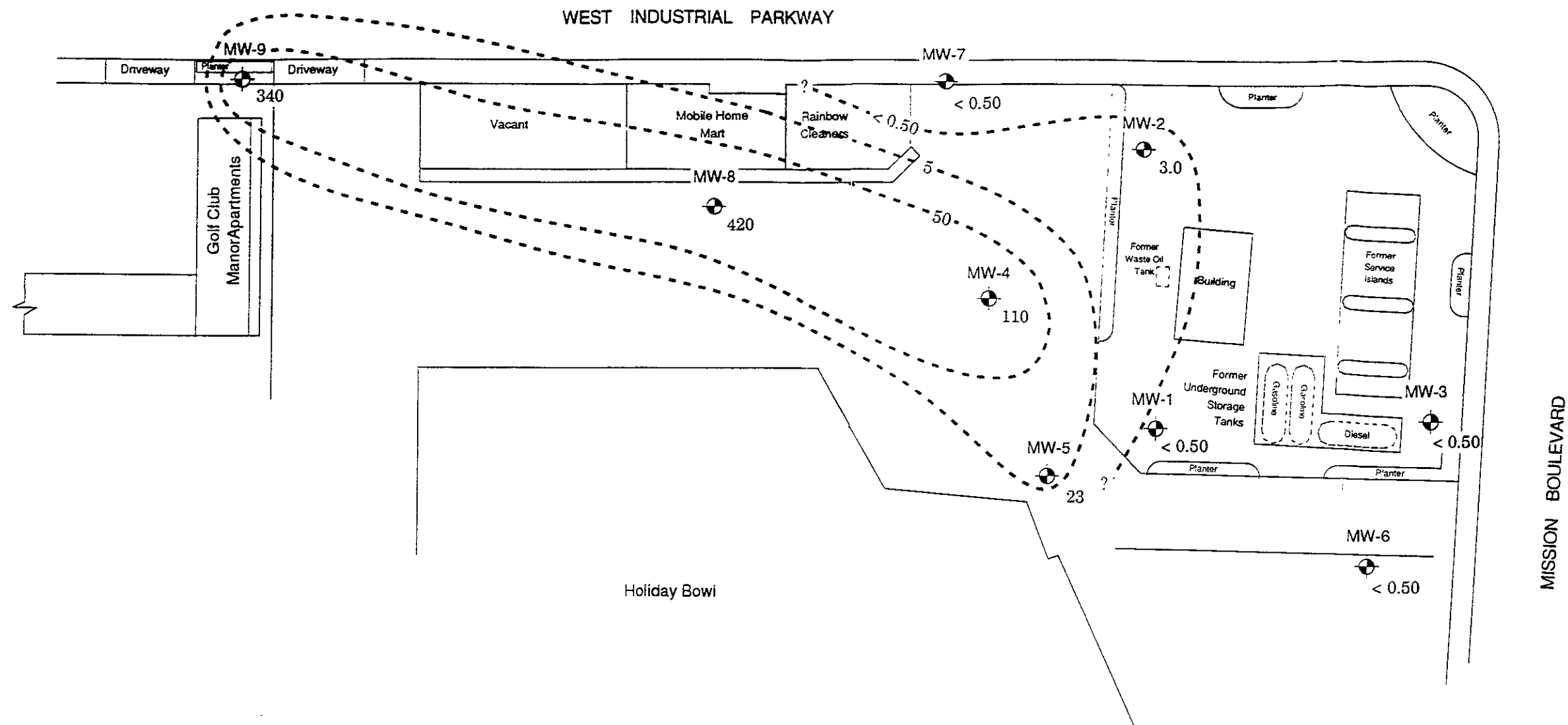
MEGIS
 ENVIRONMENTAL INC.

Drawn by: H30a	DATE: December 2, 1993
Checked by:	DATE:
Reviewed by:	DATE:



POTENTIOMETRIC SURFACE MAP
 November 18, 1993

Beacon Station # 546
 29705 Mission Boulevard
 Hayward, CA

FIGURE
2
 PROJECT NUMBER
 92-773



LEGEND

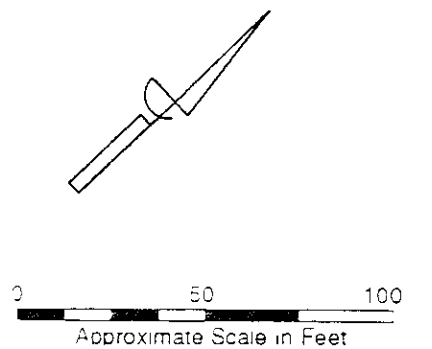
-  Monitoring Well
- 3.0 Benzene Concentration (parts-per-billion)
-  Inferred Iso-Concentration Limits
- < 0.50 Below Indicated Detection Limit

NOTES

Site Sketch After
Site Map By Ultramar
August 5, 1992

All locations Are Approximate

Contour Interval = Exponential



Author	DATE
Reviewer	DATE

DISTRIBUTION MAP OF BENZENE
IN GROUNDWATER November 18, 1993

Beacon Station # 546
29705 Mission Boulevard
Hayward, CA

FIGURE

3

PROJECT NUMBER

92-773

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	
	11/18/93		22.72	14.74	37.93	
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	
	11/18/93		21.38	14.57	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	
	11/18/93		24.98	15.30	37.81	
MW-4	04/15/92 **	34.94	---	---	---	
	11/18/93		20.60	14.34	39.02	
MW-5	04/15/92 **	36.37	---	---	---	
	11/18/93		21.80	14.57	34.52	
MW-6	04/15/92 **	37.43	---	---	---	
	11/18/93		22.35	15.08	39.17	

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 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-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	
	11/18/93		16.58	13.92	34.01	
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	
	11/18/93		15.00	13.48	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	
	11/18/93		9.85	18.63	23.16	

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-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
	11/18/93	730	<0.5	<0.5	<0.5	7.4
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
	11/18/93	8,700	420	<5.0	690	290
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
	11/18/93	8,800	340	6.0	240	200

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

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 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.

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 measurement of DTP is recorded. A corrected groundwater elevation for floating hydrocarbons can be calculated by using the following formula:

Corrected groundwater elevation - CDTW = DTW - (SP.G x LHT).

CDTW = Corrected depth to water.

DTW = Measured depth to water.

SP.G = Specific gravity: unweathered gasoline = 0.75; diesel = 0.80

LHT = Measured liquid hydrocarbon thickness.

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.



November 30, 1993
Sample Log 7942

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

Subject: Analytical Results for 9 Water Samples
Identified as: Project # 92-773 (Beacon 546)
Received: 11/19/93

Dear Ms. Richgels:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on November 30, 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:



Stewart Podolsky
Senior Chemist



Sample Log 7942

7942-1

Sample: MW-1

From : Project # 92-773 (Beacon 546)

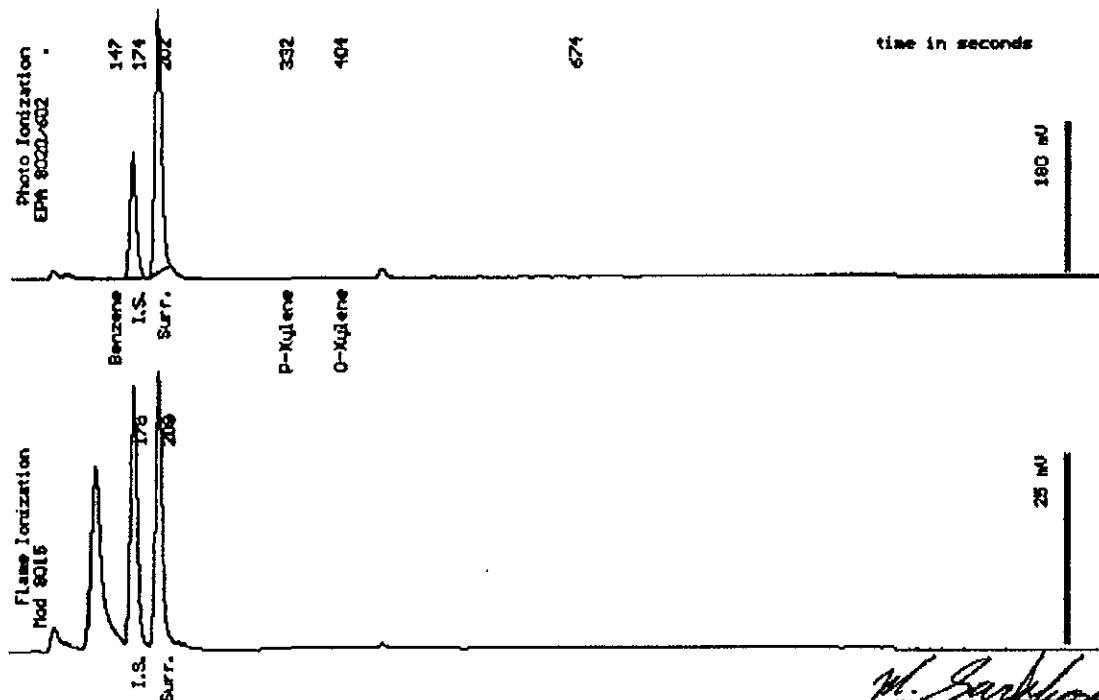
Sampled : 11/18/93

Dilution : 1:1

QC Batch : 2035a

Matrix : Water

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	51
Surrogate Recovery		96 %



Date Analyzed: 11-23-93
Column : 0.63mm ID X 90m DB6 (J&H Scientific)

M. Sarkhoosh
Mitra Sarkhoosh
Senior Chemist



Sample Log 7942

7942-2

Sample: MW-2

From : Project # 92-773 (Beacon 546)

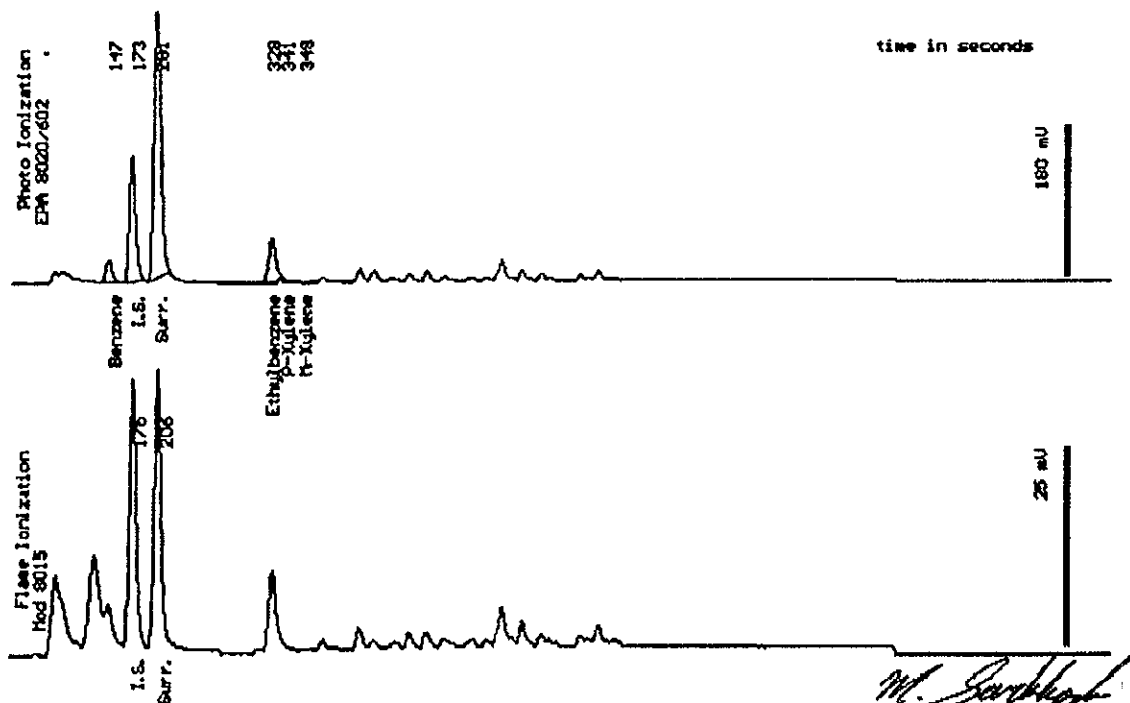
Sampled : 11/18/93

Dilution : 1:1

QC Batch : 2035a

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	3.0
Toluene	(.50)	<.50
Ethylbenzene	(.50)	9.3
Total Xylenes	(.50)	.73
TPH as Gasoline	(50)	89
Surrogate Recovery		99 %



Date Analyzed: 11-23-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

M. Sarkosh
Senior Chemist



Sample Log 7942
7942-3

Sample: MW-3

From : Project # 92-773 (Beacon 546)

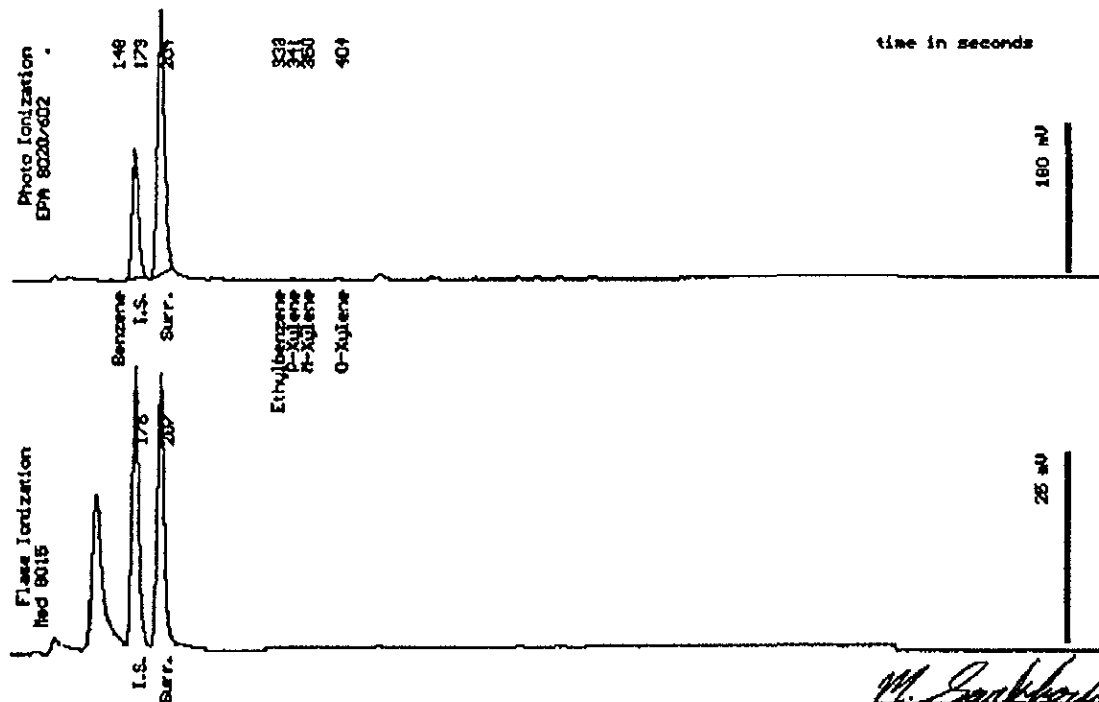
Sampled : 11/18/93

Dilution : 1:1

QC Batch : 2035a

Matrix : Water

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		100 %



Date Analyzed: 11-29-93
Column : 0.53mm ID X 30m DB6 (J&H Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample Log 7942

7942-4

Sample: MW-4

From : Project # 92-773 (Beacon 546)

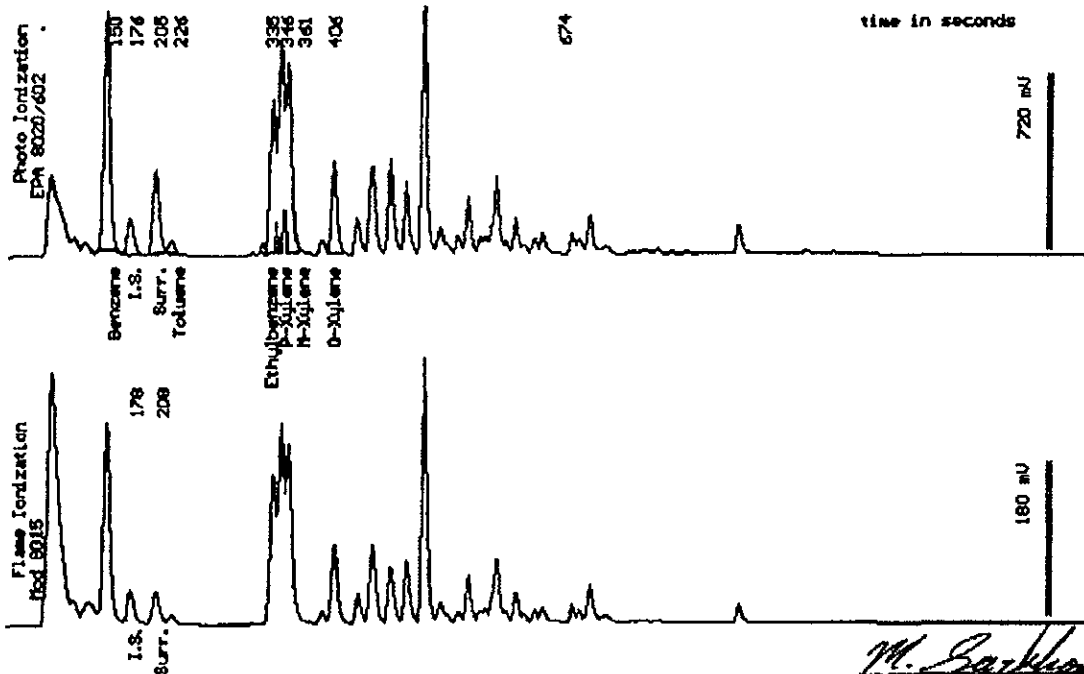
Sampled : 11/18/93

Dilution : 1:1

QC Batch : 2035a

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	110
Toluene	(.50)	6.4
Ethylbenzene	(.50)	88
Total Xylenes	(.50)	240
TPH as Gasoline	(50)	1500
Surrogate Recovery		100 %



Date Analyzed: 11-23-93
Column: 0.53mm ID X 30m DB6 (J&H Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample Log 7942
7942-5

Sample: MW-5

From : Project # 92-773 (Beacon 546)

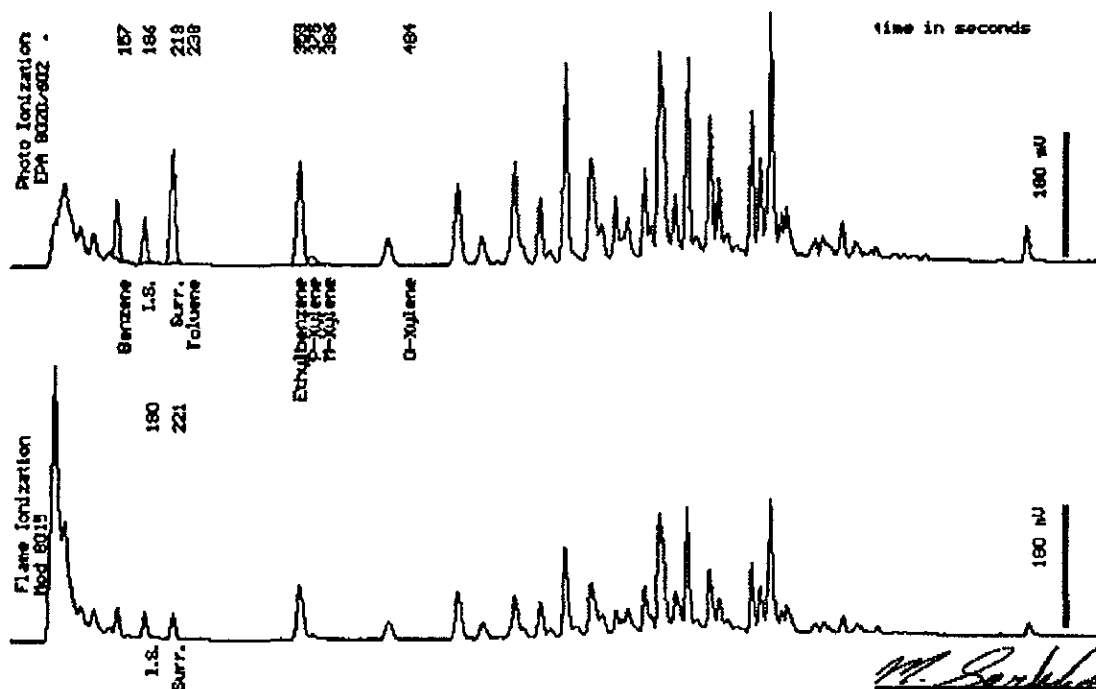
Sampled : 11/18/93

Dilution : 1:1

QC Batch : 4051e

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	23
Toluene	(.50)	<.50
Ethylbenzene	(.50)	72
Total Xylenes	(.50)	6.1
TPH as Gasoline	(50)	2800
Surrogate Recovery		102 %



Date Analyzed: 11-29-93
Column: 0.63mm ID X 90m DBWAX (J&W Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample Log 7942

7942-6

Sample: MW-6

From : Project # 92-773 (Beacon 546)

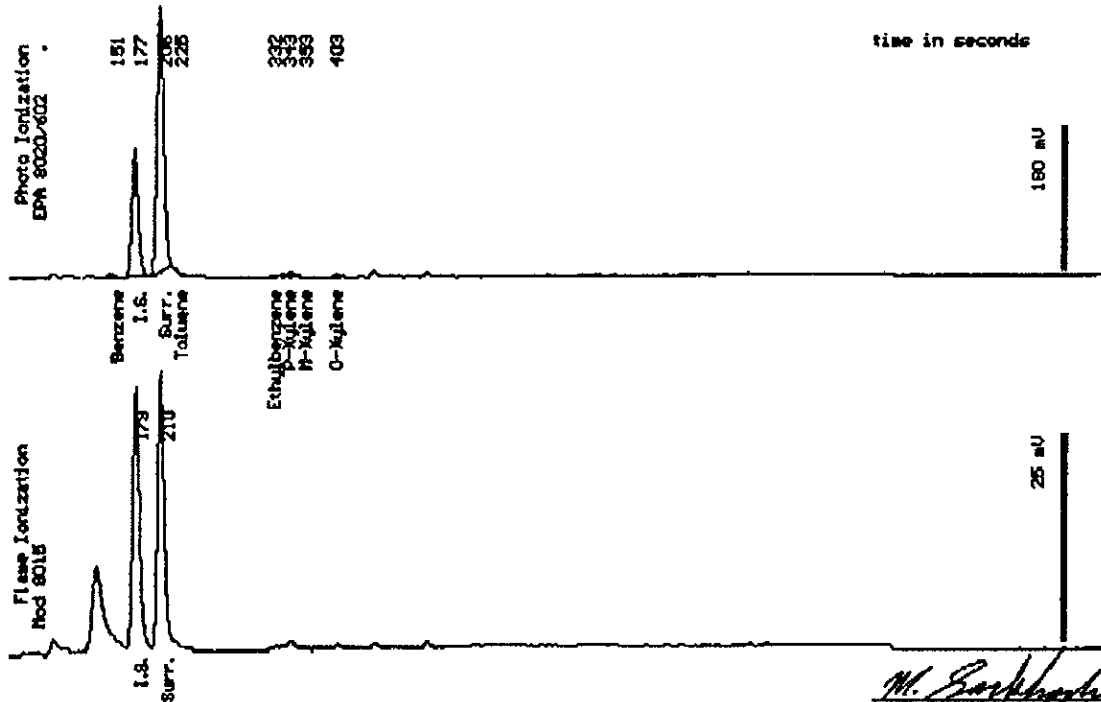
Sampled : 11/18/93

Dilution : 1:1

QC Batch : 2035b

Matrix : Water

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	1.5
TPH as Gasoline	(50)	<50
Surrogate Recovery		97 %



Date Analyzed: 11-24-93
Column : 0.83mm ID X 30m DBMXX (J&W Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample: MW-7

From : Project # 92-773 (Beacon 546)

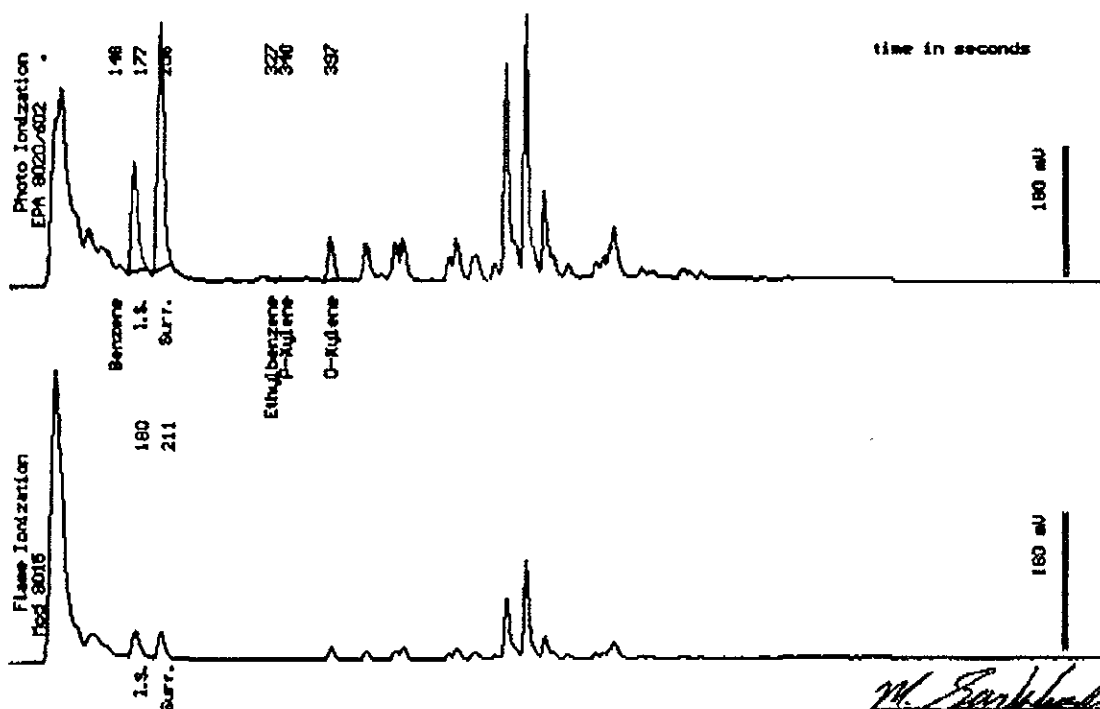
Sampled : 11/18/93

Dilution : 1:1

QC Batch : 2035b

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	7.4
TPH as Gasoline	(50)	730
Surrogate Recovery		95 %



Date Analyzed: 11-24-93
Column: 0.53mm ID X 90m DBMEX (J&H Scientific)

M. Sarkhosh
Senior Chemist



Sample Log 7942
7942-8

Sample: MW-8

From : Project # 92-773 (Beacon 546)

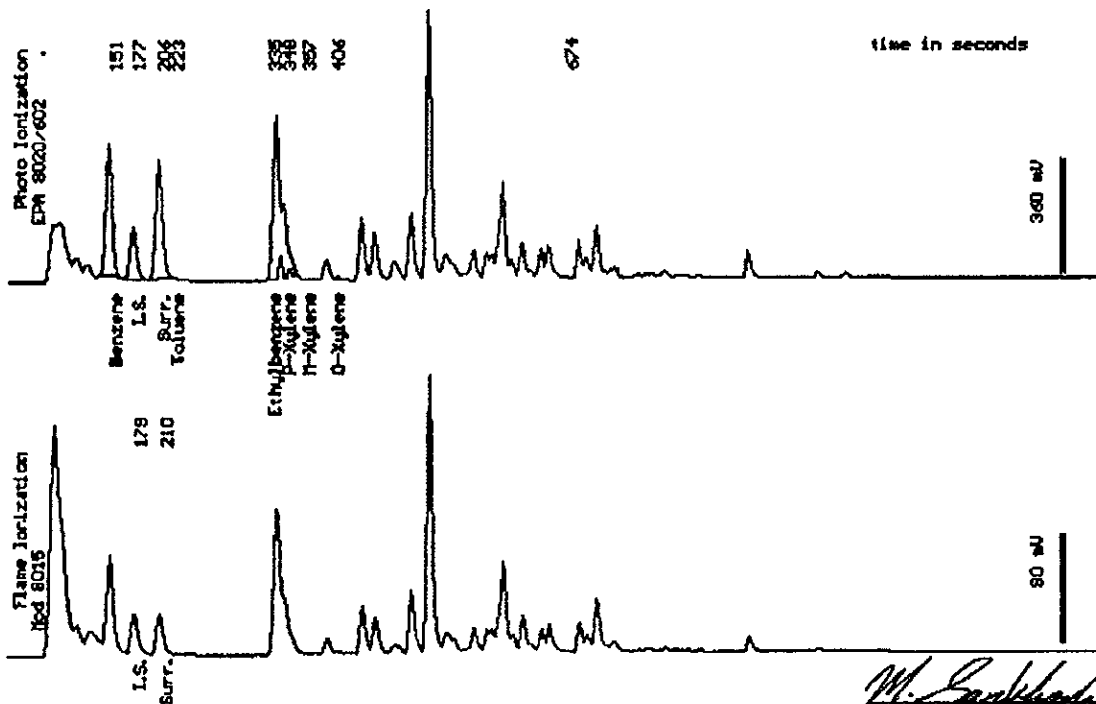
Sampled : 11/18/93

Dilution : 1:10

QC Batch : 2035a

Matrix : Water

Parameter	(MRL) $\mu\text{g}/\text{L}$	Measured Value $\mu\text{g}/\text{L}$
Benzene	(5.0)	420
Toluene	(5.0)	<5.0
Ethylbenzene	(5.0)	690
Total Xylenes	(5.0)	290
TPH as Gasoline	(500)	8700
Surrogate Recovery		98 %



Date Analyzed: 11-23-93
Column: 1/8" ID X 30m DB5 (J&W Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



Sample Log 7942

7942-9

Sample: MW-9

From : Project # 92-773 (Beacon 546)

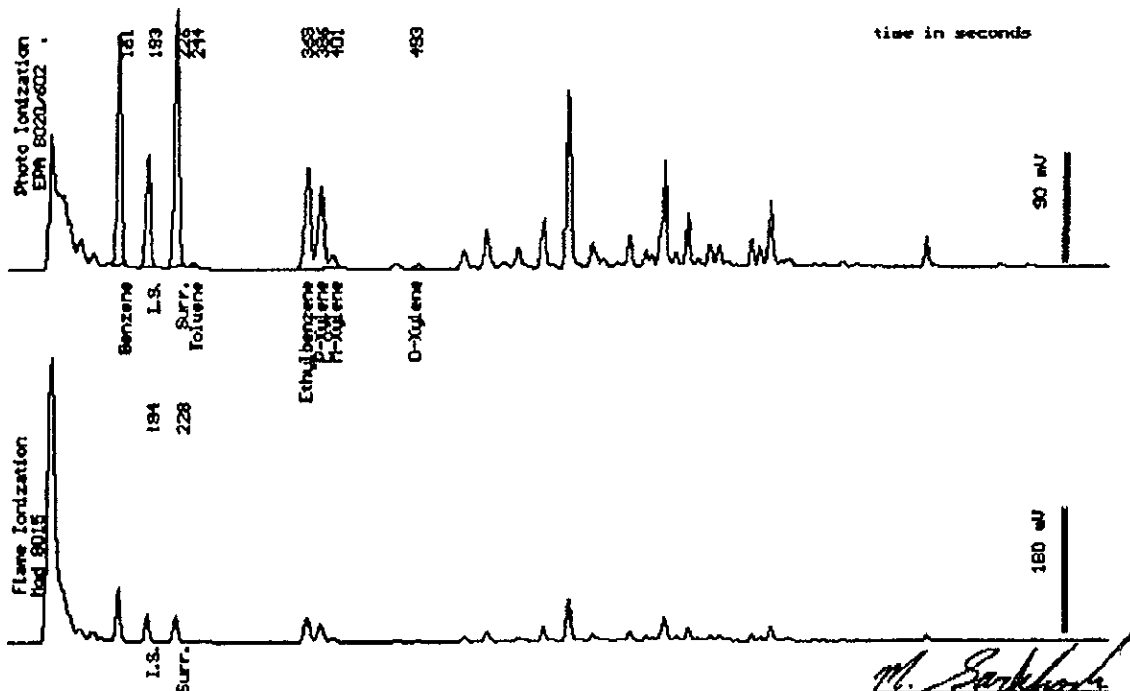
Sampled : 11/18/93

Dilution : 1:10

QC Batch : 4050e

Matrix : Water

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(5.0)	340
Toluene	(5.0)	6.0
Ethylbenzene	(5.0)	240
Total Xylenes	(5.0)	200
TPH as Gasoline	(500)	8800
Surrogate Recovery		77 %



Date Analyzed: 11-23-93
Column : 0.83mm ID X 30m DBMNX (J&H Scientific)

M. Sarkhosh
Mitra Sarkhosh
Senior Chemist



WEST
(916) 753-9500

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. 546		Sampler (Print Name) BEU. McDOWNS		ANALYSES				Date 11/18/93	Form No. / of Z	
Project No. 92-773		Sampler (Signature) <i>Bill McDonald</i>		BTEX TPH (gasoline) TPH (diesel)				No. of Containers STANDARD T.A.T		
Project Location HAYWARD CA.		Affiliation AEGIS ENVIRON.								
Sample No./Identification	Date	Time	Lab No.							
MW-1	11/18/93	07:45		XX				3		
MW-2		06:38						3		
MW-3		06:20						3		
MW-4		09:20						3		
MW-5		09:40						3		
MW-6		09:58						3		
MW-7		07:50						3		
MW-8		10:35						3		
Relinquished by: (Signature/Affiliation) <i>Bill McDonald / AEGIS</i>		Date 11/19/93	Time 10:35	Received by: (Signature/Affiliation) <i>Jerry A. Ingram (WEST)</i>				Date 11/19/93	Time 10:35	
Relinquished by: (Signature/Affiliation) <i>Jerry A. Ingram (WEST)</i>		Date 11/19/93	Time 13:05	Received by: (Signature/Affiliation)				Date	Time	
Relinquished by: (Signature/Affiliation)		Date	Time	Received by: (Signature/Affiliation) <i>Terry Fox (WEST)</i>				Date 11/19/93	Time 13:05	
Report To: FAX RESULTS TO SHEILA RICHGELS 1050 MELODY LN. #160 ROSEVILLE CA. 95678				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

32-6003 1/98



WEST
(916) 753-9500

Ultramar Inc.
CHAIN OF CUSTODY REPORT

BEACON

Beacon Station No. 546		Sampler (Print Name) BILL McDONALD			ANALYSES			Date 11/18/93	Form No. 2 of 2
Project No. 92-773		Sampler (Signature) <i>Bill McDonald</i>			BTEX TPH (gasoline) TPH (diesel)			No. of Containers 3	
Project Location HAYWARD CA.		Affiliation AEGIS							
Sample No./Identification		Date	Time	Lab No.	REMARKS				
MW-9		11/18/93	08:40						
EQUIP BLANK		↓	05:30		HOLD THIS SAMPLE UNTIL AUTHORIZED BY SHEILA R.				
Relinquished by: (Signature/Affiliation)		Date	Time	Received by: (Signature/Affiliation)			Date	Time	
<i>Bill McDonald / AEGIS</i>		11/19/93	10:35	<i>Joyce A. Jagan / WEST</i>			11/19/93	10:35	
Relinquished by: (Signature/Affiliation)		Date	Time	Received by: (Signature/Affiliation)			Date	Time	
<i>Joyce A. Jagan / WEST</i>		11/19/93	13:05	<i>[Signature]</i>					
Relinquished by: (Signature/Affiliation)		Date	Time	Received by: (Signature/Affiliation)			Date	Time	
<i>[Signature]</i>				<i>[Signature]</i>			11/19/93	13:05	
Report To: FAX RESULTS TO SHEILA RICHGELS (916) 782-1277				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

**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

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

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

Project Address:

29705 Mission Blvd, Hayward (# 546)

Date:

11/18/93

Recorded by:

BM & TS

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	06:35	37.48	37.93	22.72			
MW-2	05:40	35.95	39.00	21.38			
MW-3	05:35	40.28	37.81	24.98			
MW-4	08:50	30.50	39.02	20.60			
MW-5	09:26	28.48	34.52	21.90			
MW-6	09:45		39.17	22.35			
MW-7	06:45		34.01	16.58			
MW-8	10:05		39.25	15.00			
MW-9	08:15		23.16	9.85			

Notes:



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

Project No: 92-773
Well Designation: MW-1 H.B

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES
Is Top of Casing cut level? : NO YES
Is well cap sealed and locked? : NO YES
Height of Well Casing Riser (in inches) : 0
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Purging Equipment: 2 2" Disposable bailer Submersible pump
 2" PVC bailer Dedicated bailer
 4" PVC 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 Time: 06:38 15.21 Recharge Measurement Time: 07:40 25.76
Depth of well: 37.93 Depth to water: 23.97 Calculated purge: 39
Depth to water: 22.72 Actual purge: 79

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

Start purge: 06:40 Sampling time: 07:45 Sampling Date: 11/10/93

Time	Temp. °C	E.C.	pH	Turbidity	Volume
<u>06:52</u>	<u>27.1</u>	<u>796⁰⁵</u>	<u>6.05</u>		<u>13</u>
<u>07:15</u>	<u>28.2</u>	<u>805</u>	<u>6.75</u>		<u>13</u>
<u>07:36</u>	<u>27.4</u>	<u>801</u>	<u>6.23</u>		<u>13</u>

Sample appearance: SEM^I-C LOAK

QC samples collected at this well: _____ Lock: 3753

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

2" Locking Cap: Lock #2357: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: _____

D.I. WATER = 1 GALS.

Signature BM Review [Signature]



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

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

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES
Is Top of Casing cut level? : NO YES
Is well cap sealed and locked? : NO YES
Height of Well Casing Riser (in inches) : 1
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Setup & Takedown time: _____ hours
(Above TOC Below TOC)
(If NO please explain in remarks)
(If NO please explain in remarks)

Purging Equipment: 2 ~~1/2~~ X 2" Disposable bailer _____ Submersible pump
_____ 2" PVC bailer _____ Dedicated bailer
_____ 4" PVC 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: 05:35 12.83 Recharge Measurement Time: 06:18 27.54
Depth of well: 37.81 Depth to water: 26.75 Calculated purge: 33
Depth to water: 24.98 Actual purge: 33

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 05:40 Sampling time: 06:20 Sampling Date: 11/18/97

Time	Temp. °C	E.C.	pH	Turbidity	Volume
05:49	25.8	799 uS	5.89		11
06:00	26.2	808 uS	5.79		11
06:10	26.8	803 uS	5.90		11

Sample appearance: SOME 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: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: _____

D.I. WATER = 1 GALS.

Signature Bm Review [Signature]



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

Project No: 92-773
Well Designation: MW-4

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES
Is Top of Casing cut level? : NO YES
Is well cap sealed and locked? : NO YES
Height of Well Casing Riser (in inches) : 96
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Setup & Takedown time: _____ hours
(Above TOC Below TOC)
(If NO please explain in remarks)
(If NO please explain in remarks)

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump
_____ 2" PVC bailer _____ Dedicated bailer
_____ 4" PVC 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: 08:50 Recharge Measurement Time: 09:17 Calculated purge: 48
Depth of well: 39.02 Depth to water: 22.17 Actual purge: 48
Depth to water: 20.60

Meter Calibration

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

Start purge: 08:59 Sampling time: 09:20 Sampling Date: 11/18/93

Time	Temp. °C	E.C.	pH	Turbidity	Volume
09:04	27.5	793 ^{us}	5.93		16
09:09	28.7	770	5.98		16
09:14	28.4	770	5.99		16

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: Lock #2357: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: _____

D.I. WATER = 5 GALS.

Signature RM Review [Signature]



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

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

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES (Above TOC Below TOC)
Is Top of Casing cut level? : NO YES (If NO please explain in remarks)
Is well cap sealed and locked? : NO YES (If NO please explain in remarks)
Height of Well Casing Riser (in inches) : 2
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump
_____ 2" PVC bailer _____ Dedicated bailer
_____ 4" PVC 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 Time: 09:26 Depth of well: 34.52 Depth to water: 21.80
Recharge Measurement Time: 09:36 Depth to water: 23.12 Calculated purge: 8
Actual purge: 8

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity

Start purge: 09:28 Sampling time: 09:40 Sampling Date: 11/18/93

Time	Temp. ^{oC}	E.C.	pH	Turbidity	Volume
09:30	29.9	777 ^{us}	6.10		3
09:31	30.1	793 ^{us}	6.11		3
09:32	30.0	786	6.12		2

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: Lock #2357: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: NAS ODR

D.I. WATER = 5 GALS.

Signature AM Review [Signature]



Client: BEACON #546
Site: 29705 MISSION BLD.
HAYWARD CA.

Project No: 92-773
Well Designation: MW-6

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES
Is Top of Casing cut level? : NO YES
Is well cap sealed and locked? : NO YES
Height of Well Casing Riser (in inches) : 10
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump
_____ 2" PVC bailer _____ Dedicated bailer
_____ 4" PVC 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: 09:45 Recharge Measurement 25.71
Depth of well: 39.8 Depth to water: 23.40 Calculated purge: 10
Depth to water: 22.35 Actual purge: 10

Meter Calibration

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

Start purge: 09:47 Sampling time: 09:58 Sampling Date: 11/10/93

Time	Temp. ^{0C}	E.C.	pH	Turbidity	Volume
09:49	29.6	807	5.99		4
09:50	29.2	795	6.04		3
09:51	29.2	788	6.06		3

Sample appearance: SEMI-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: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: ~~SHARP~~ SHARP ANGLE

D.I. WATER = 5 GALS.

Signature D.M. Review [Signature]



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

Project No: 92-773
Well Designation: MW-7 H.O.

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES
Is Top of Casing cut level? : NO YES
Is well cap sealed and locked? : NO YES
Height of Well Casing Riser (in inches) : _____
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Setup & Takedown time: _____ hours
(Above TOC Below TOC)
(If NO please explain in remarks)
(If NO please explain in remarks)

Purging Equipment: 2 2" Disposable bailer _____ Submersible pump
_____ 2" PVC bailer _____ Dedicated bailer
_____ 4" PVC 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: 06:45
Depth of well: 34.01
Depth to water: 16.58

17.43 Recharge Measurement 20.06

Time: 07:45 Calculated purge: 45
Depth to water: 18.28 Actual purge: 45

Meter Calibration

Date _____
Time _____

Initial reading _____
Adjusted reading _____

Temp.	E.C.	pH	Turbidity
_____	_____	_____	_____
_____	_____	_____	_____

Start purge: 06:50 Sampling time: 07:50 Sampling Date: 11/18/97

Time	Temp. ^{0C}	E.C.	pH	Turbidity	Volume
07:04	26.7	821us	6.04		15
07:20	28.1	839	6.75		15
07:38	27.2	828	6.21		15

Sample appearance: DBMI - CLEAR

QC samples collected at this well: _____ Lock: 3753

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

2" Locking Cap: Lock #2357: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: HAS ODOR

D.I. WATER = 1 GALS.

Signature Bm

Review OR



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

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

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES
Is Top of Casing cut level? : NO YES
Is well cap sealed and locked? : NO YES
Height of Well Casing Riser (in inches) : 10
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Purging Equipment: _____ 2" Disposable bailer _____ X Submersible pump
_____ 2" PVC bailer _____ Dedicated bailer
_____ 4" PVC 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 Time: 10:05 Recharge Measurement Time: 10:33 Calculated purge: 63
Depth of well: 39.25 Depth to water: 17.93 Actual purge: 63
Depth to water: 15.00

Meter Calibration

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

Start purge: 10:07 Sampling time: 10:35 Sampling Date: 11/18/92

Time	Temp. ^{°C}	E.C.	pH	Turbidity	Volume
<u>10:14</u>	<u>32.5</u>	<u>509^{us}</u>	<u>6.13</u>		<u>21</u>
<u>10:21</u>	<u>31.1</u>	<u>718^{us}</u>	<u>6.03</u>		<u>21</u>
<u>10:28</u>	<u>30.5</u>	<u>621</u>	<u>6.09</u>		<u>21</u>

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: Lock #2357: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: _____

D.I. WATER = 6 GALS.

Signature BMM Review [Signature]



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

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

Is setup of traffic control devices required? : NO YES
Is there standing water in well box? : NO YES
Is Top of Casing cut level? : NO YES
Is well cap sealed and locked? : NO YES
Height of Well Casing Riser (in inches) : 3
General condition of Wellhead assembly : Excellent Good Fair Poor (Explain in remarks)

Setup & Takedown time: 1/2 hours
(Above TOC Below TOC)
(If NO please explain in remarks)
(If NO please explain in remarks)

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump
_____ 2" PVC bailer _____ Dedicated bailer
_____ 4" PVC 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: 08:15 13.31 Recharge Measurement Time: 08:38 12.51
Depth of well: 23.16 Depth to water: 10.31 Calculated purge: 8
Depth to water: 9.85 Actual purge: 8

Meter Calibration

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

Start purge: 08:25 Sampling time: 08:40 Sampling Date: 11/10/93

Time	Temp.	E.C.	pH	Turbidity	Volume
<u>08:26</u>	<u>26.6</u>	<u>84205</u>	<u>5.31</u>		<u>3</u>
<u>08:28</u>	<u>27.8</u>	<u>804</u>	<u>5.61</u>		<u>3</u>
<u>08:29</u>	<u>27.9</u>	<u>847</u>	<u>5.73</u>		<u>2</u>

Sample appearance: cloudy

QC samples collected at this well: _____ Lock: DOLPHIN

Equipment replaced: (Check all that apply) Note condition of replaced item.
2" Locking Cap: Lock #2357: Lock #0909:
4" Locking Cap: Lock #3753: Lock-Dolphin:

Remarks: _____

D.I. WATER = 14 GALS.

Signature Bm Review [Signature]