



October 12, 1992

Tom Peacock
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

92 OCT 14 PM 12:55
STID 3719

Re: Shell Service Station
WIC #204-5508-3301
6039 College Avenue
Oakland, California
WA Job #81-618-201

618

Dear Mr. Peacock

This letter describes recently completed and anticipated activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 265.d. Included below are descriptions and results of activities performed in the third quarter 1992 and proposed work for the fourth quarter 1992.

Third Quarter 1992 Activities:

- EMCON Associates (EMCON) of San Jose, California measured depths to ground water in the five site wells and collected ground water samples from four of the five site wells. MW-4 contained 0.09ft of floating hydrocarbons and was not sampled. However, 520ml of floating hydrocarbons were removed from well MW-4 by a hydrocarbon skimmer system and an additional 80ml of floating hydrocarbons were manually skimmed from the well using bailers. EMCON's report describing these activities and analytic results for ground water is included as Attachment A.
- Weiss Associates (WA) used EMCON's ground water elevation calculations to prepare a ground water elevation contour map (Figure 2).
- On September 14, 1992 WA submitted a workplan for a subsurface investigation designed to assess the extent of hydrocarbons in soil and ground water southwest and crossgradient of the site.

AND AGAIN ON October 12, 1992

Tom Peacock
October 12, 1992

Anticipated Fourth Quarter 1992 Activities:

WA will submit a report presenting the results of fourth quarter 1992 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.

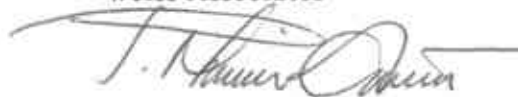
To further assess the extent of hydrocarbons in soil and ground water southwest of the site, WA will:

- Drill two soil borings in the street west of the site and collect soil samples (Figure 2).
- Convert the boring furthest from the site into a ground water monitoring well.
- Develop the wells and collect ground water samples, and report the results.
- Drill three soil borings on the property south of the site in location to be confirmed by the Alameda County Department of Health Services and convert one of the borings to a ground water monitoring well.

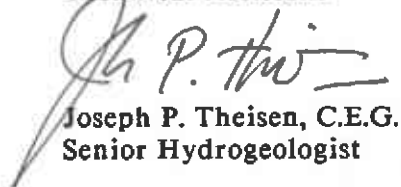
Please call if you have any questions.



Sincerely,
Weiss Associates



J. Michael Asport
Technical Assistant



Joseph P. Theisen, C.E.G.
Senior Hydrogeologist

JMA/JPT:jma

E:\ALL\SHELL\600\618QMSE2.WP

Attachments: Figures
Tables
A - EMCON's Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, CA 94520
Tom Callaghan, San Francisco Bay Regional Water Quality Control Board, 2101 Webster Street, Oakland, CA 94612

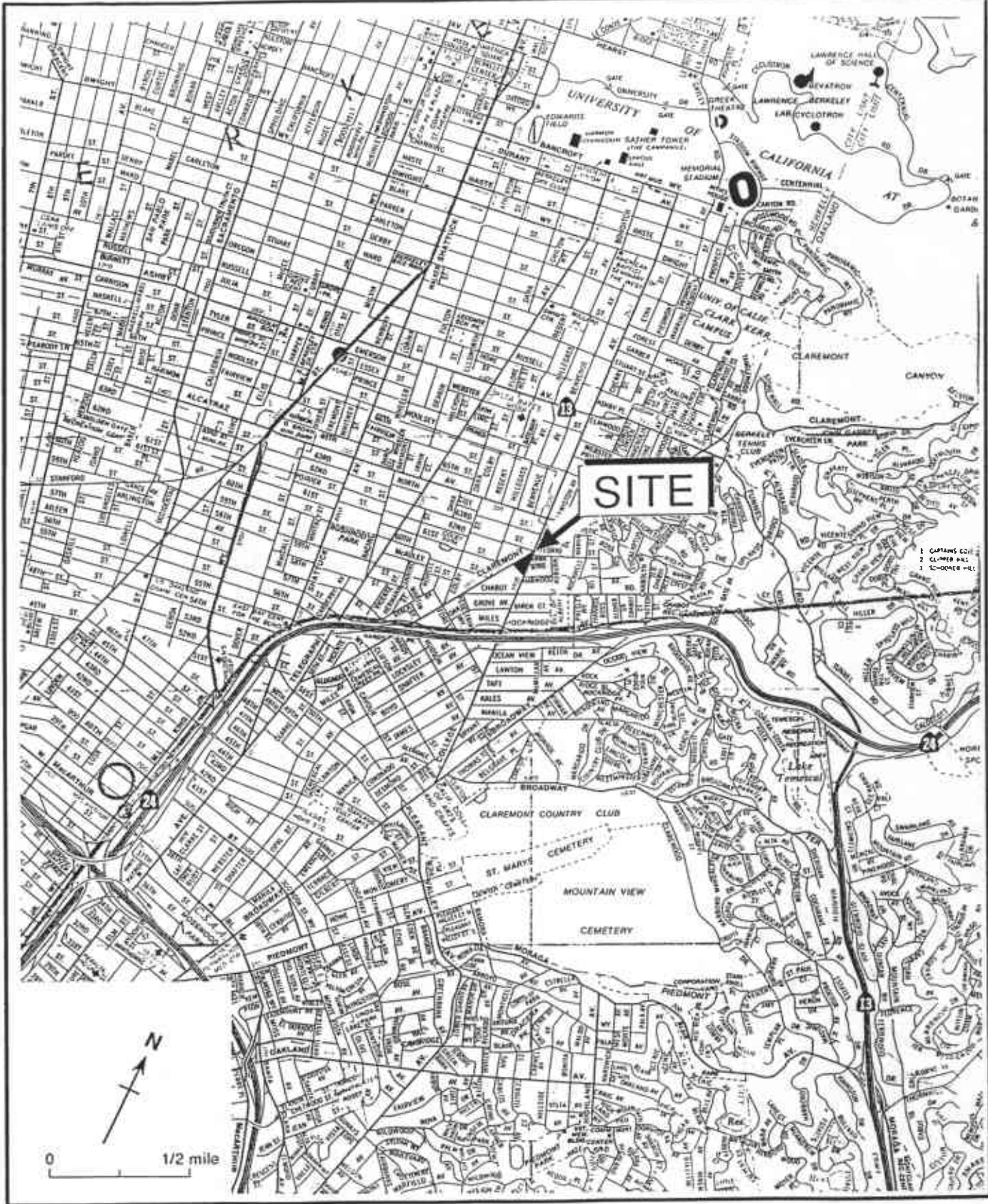


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

EXPLANATION	
⊙ MW-1	Monitoring well
△	Proposed monitoring well
▲	Proposed soil boring
26.33	Ground water elevation, ft above mean sea level
-26.50	Ground water elevation contour, ft above mean sea level, approximately located, dashed where inferred
→	Inferred ground water flow direction

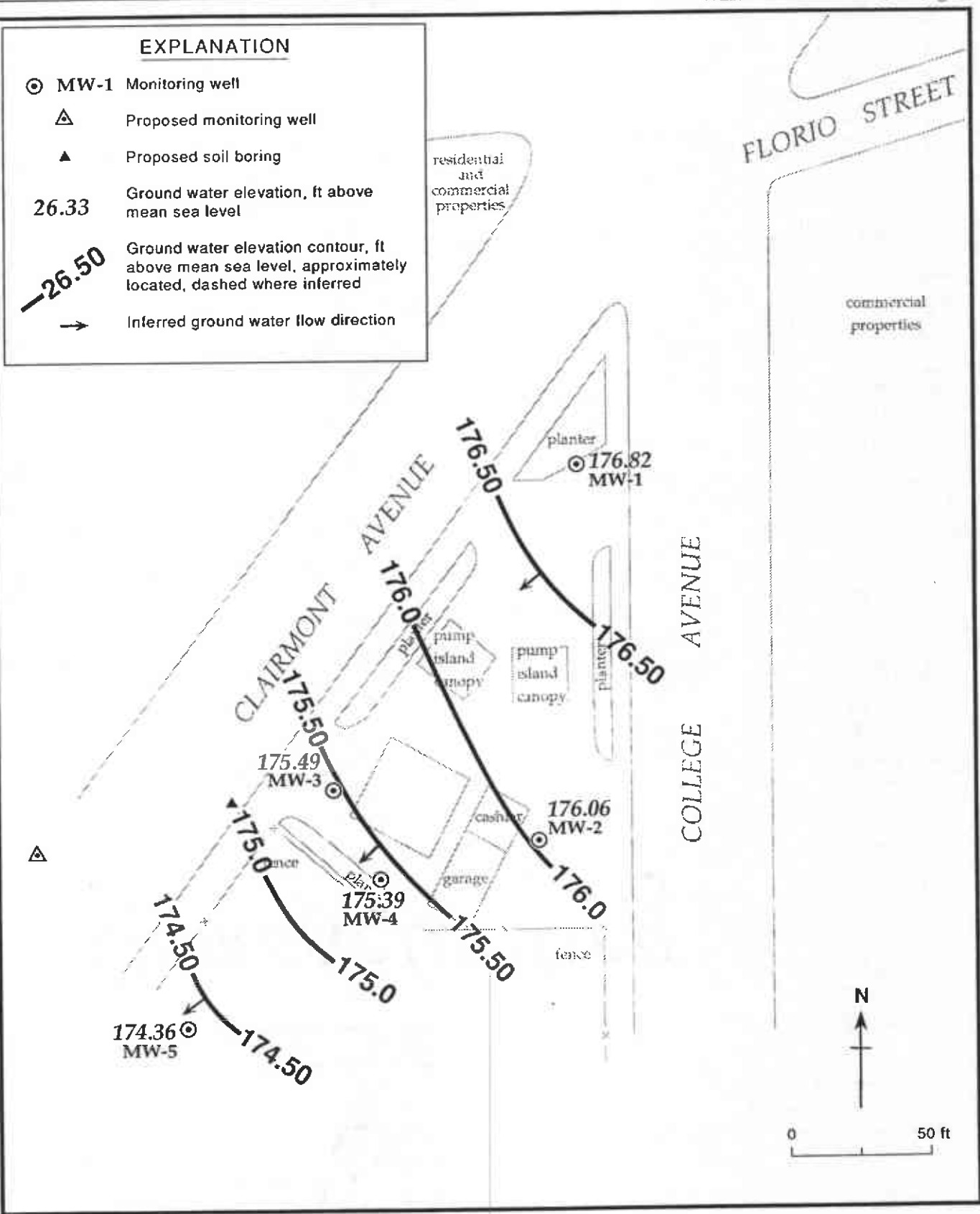


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours August 19, 1992 - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

ATTACHMENT A
GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



EMCON
ASSOCIATES

Consultants in Wastes
Management and
Environmental Control

September 18, 1992
Project: G67-39.01
WIC#: 204-5508-3301

Mr. David Elias
Weiss Associates
5500 Shellmound Street
Emeryville, California 94608-2411

Re: Third quarter 1992 ground-water monitoring report, Shell Oil
Company, 6039 College Avenue, Oakland, California

Dear Mr. Elias:

This letter presents the results of the third quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 6039 College Avenue, Oakland, California (figure 1). Third quarter monitoring was conducted on August 19, 1992. The site is monitored quarterly.

GROUND-WATER LEVEL SURVEY

A water-level survey preceded the purging and sampling of the monitoring wells. The wells included in the survey are identified in figure 2 (supplied by Weiss Associates). During the survey, wells MW-1 through MW-5 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. Floating product, 0.09 foot thick, was observed in well MW-4. The skimmer in well MW-4 contained 520 milliliters (mls) of product. An additional 80 mls of product were recovered from the well. Total depth was measured to the nearest 0.1 foot. Results of the third quarter water-level survey, and available data from four previous surveys, are summarized in table 1.

SAMPLING AND ANALYSIS

Ground-water samples were collected from wells MW-1, MW-2, MW-3, and MW-5 on August 19, 1992. Well MW-4 contained floating product and was not sampled during third quarter monitoring. Prior to sample collection, the wells were purged with polyvinyl chloride bailers. During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Well MW-1 was evacuated to dryness before three casings were removed. The well was allowed to recharge for up to 24 hours. Samples were collected after the well had recharged to a sufficient level. Field measurements from third

G673901C.DOC



quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained in 55-gallon drums. The drums were identified with Shell-approved labels and secured for on-site storage.

Ground-water samples were collected with a Teflon® bailer, labeled, placed on ice, and transported to Anametrix Inc. for analysis. Shell chain-of-custody documents accompanied all samples to the laboratory.

All equipment that was placed down a well or that came in contact with ground water was steam cleaned with deionized water prior to use at each well.

Quality control samples for third quarter monitoring included a trip blank (TB), a field blank (FB), and a duplicate well sample (MW-3D) collected from well MW-3. Please note that because of a clerical error, samples TB and FB from August 19, 1992, are called TB-1 and FB-1 on the chain-of-custody form and certified analytical report. All water samples collected during third quarter monitoring were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional ground-water samples collected from wells MW-1, MW-3, and MW-5, and duplicate sample MW-3D, were analyzed for total petroleum hydrocarbons as diesel (TPH-d). Additional ground-water samples collected from well MW-3, and duplicate sample MW-3D, were analyzed for total petroleum hydrocarbons as motor oil (TPH-mo).

ANALYTICAL RESULTS

Analytical results for the third quarter 1992 monitoring event, and available results from four previous monitoring events, are summarized in table 2. The original certified analytical report and final chain-of-custody document are attached.

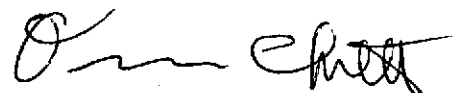
If you have any questions, please call.

Very truly yours,

EMCON Associates



David Larsen
Environmental Sampling Coordinator



Orrin Childs
Environmental Sampling Supervisor

Mr. David Elias
September 18, 1992
Page 3

Project G67-39.01
WIC# 204-5508-3301

DL/OC:dl

Attachments: Table 1 - Monitoring well field measurement data
Table 2 - Summary of analytical results
Figure 1 - Site location map
Figure 2 - Monitoring well locations
Certified analytical report
Chain-of-custody document

Table 1
Monitoring Well Field Measurement Data
Third Quarter 1992

Shell Station: 6039 College Avenue
Oakland, California
WIC #: 204-5508-3301

Date: 09/17/92
Project Number: G67-39.01

Well Designation	Water Level Field Date	TOC Elevation (ft-PSD)	Depth to Water (feet)	Ground-water Elevation (ft-PSD)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
MW-1	06/03/91	195.89	17.82	178.07	NR	NR	06/03/91	NR	NR	NR	NR
MW-1	08/30/91	195.89	19.87	176.02	NR	NR	08/30/91	NR	NR	NR	NR
MW-1	03/18/92	195.89	13.55	182.34	24.5	ND	03/18/92	6.79	795	65.2	>200
MW-1	05/28/92	195.89	17.08	178.81	24.5	ND	05/28/92	6.60	555	67.9	>200
MW-1	08/19/92	195.89	19.07	176.82	24.4	ND	08/19/92	6.93	542	68.1	>200
MW-2	06/03/91	194.27	17.00	177.27	NR	NR	06/03/91	NR	NR	NR	NR
MW-2	08/30/91	194.27	18.95	175.32	NR	NR	08/30/91	NR	NR	NR	NR
MW-2	03/18/92	194.27	12.91	181.36	24.4	ND	03/18/92	6.39	554	65.5	184.2
MW-2	05/28/92	194.27	16.25	178.02	24.5	ND	05/28/92	6.35	556	64.0	>200
MW-2	08/19/92	194.27	18.21	176.06	24.3	ND	08/19/92	6.22	504	65.9	>200
MW-3	06/03/91	192.52	15.84	176.68	NR	NR	06/03/91	NR	NR	NR	NR
MW-3	08/30/91	192.52	17.79	174.73	NR	NR	08/30/91	NR	NR	NR	NR
MW-3	03/18/92	192.52	12.03	180.49	23.8	ND	03/18/92	6.54	712	64.1	>200
MW-3	05/28/92	192.52	15.16	177.36	24.8	ND	05/28/92	6.42	667	68.5	>200
MW-3	08/19/92	192.52	17.03	175.49	24.8	ND	08/19/92	7.20	531	67.2	>200
MW-4	06/03/91	193.37	16.77	176.60	NR	NR	06/03/91	NR	NR	NR	NR
MW-4	08/30/91	193.37	18.71	174.66	NR	NR	08/30/91	NR	NR	NR	NR
MW-4	03/18/92	193.37	13.15	180.41**	NR	0.24	03/18/92	FP	FP	FP	FP
MW-4	05/28/92	193.37	16.22	177.25**	24.5	0.12	05/28/92	FP	FP	FP	FP
MW-4	08/19/92	193.37	18.05	175.39**	28.5	0.09	08/19/92	FP	FP	FP	FP

TOC = top of casing

ft-PSD = elevation in feet, relative to project site datum

std. units = standard pH units

micromhos/cm = micromhos per centimeter

degrees F = degrees Fahrenheit

NTU = nephelometric turbidity units

NR = Not reported; data not available

ND = None detected

** = groundwater elevation corrected to include 80 percent of the floating product thickness measured in the well

FP = Floating product; well contained floating product and was not sampled

Table 1
Monitoring Well Field Measurement Data
Third Quarter 1992

Shell Station: 6039 College Avenue
Oakland, California
WIC #: 204-5508-3301

Date: 09/17/92
Project Number: G67-39.01

Well Designation	Water Level Field Date	TOC Elevation (ft-PSD)	Depth to Water (feet)	Ground-water Elevation (ft-PSD)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
MW-5	08/30/91	190.35	16.74	173.61	NR	NR	08/30/91	NR	NR	NR	NR
MW-5	03/18/92	190.35	11.28	179.07	28.5	ND	03/18/92	6.45	535	66.0	>200
MW-5	05/28/92	190.35	IW	IW	IW	IW	05/28/92	IW	IW	IW	IW
MW-5	08/19/92	190.35	15.99	174.36	28.4	ND	08/19/92	6.57	591	66.4	>200

TOC = top of casing
 ft-PSD = elevation in feet, relative to project site datum
 std. units = standard pH units
 micromhos/cm = micromhos per centimeter
 degrees F = degrees Fahrenheit
 NTU = nephelometric turbidity units
 NR = Not reported; data not available
 ND = None detected
 IW = Inaccessible well; well was inaccessible and was not sampled

Table 2
 Summary of Analytical Results
 Third Quarter 1992
 milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 8039 College Avenue
 Oakland, California
 WIC #: 204-5508-3301

Date: 09/17/92
 Project Number: G67-39.01

Sample Designation	Water Sample Field Date	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-d	TPH-mo
		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MW-1	06/03/91	ND	ND	ND	ND	ND	ND	ND
MW-1	08/30/91	ND	ND	ND	ND	ND	0.52	ND
MW-1	03/18/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003	<0.05	NA
MW-1	05/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA
MW-1	08/19/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA
MW-2	06/03/91	ND	ND	ND	ND	ND	ND	ND
MW-2	08/30/91	ND	ND	ND	ND	ND	ND	ND
MW-2	03/18/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA
MW-2	05/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-2	08/19/92	<0.05	<0.0005	0.0020	0.0012	0.0019	NA	NA
MW-3	06/03/91	1.7	0.26	0.013	0.098	0.024	0.69 ^A	ND
MW-3	08/30/91	0.87	0.044	0.0061	0.01	0.0029	0.37 ⁺	0.5
MW-3	03/18/92	6.1	0.82	0.028	0.22	0.038	1.9	20.
MW-3	05/28/92	2.3	0.20	0.009	0.071	0.017	1.1 ^B	4.8
MW-3	08/19/92	5.7 ^B	0.071	0.077	0.052	0.13	1.0 ^A	1.8
MW-30	08/19/92	2.1	0.091	0.052	0.053	0.084	0.8 ^B	1.8

TPH-g = total petroleum hydrocarbons as gasoline
 TPH-d = total petroleum hydrocarbons as diesel
 TPH-mo = total petroleum hydrocarbons as motor oil
 ND = None detected
 NA = Not analyzed

^A = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly kerosene
⁺ = Results include compounds apparently due to gasoline as well as those due to diesel
^B = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline
^B = Concentration reported as gasoline is primarily due to the presence of a heavier petroleum product, possibly kerosene
^B = Concentration reported as diesel is due to the presence of heavier and lighter petroleum products, possibly motor oil and kerosene

Table 2
 Summary of Analytical Results
 Third Quarter 1992
 milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 6039 College Avenue
 Oakland, California
 WIC #: 204-5508-3301

Date: 09/17/92
 Project Number: G67-39.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)	TPH-d (mg/l)	TPH-mo (mg/l)
MW-4	06/03/91	0.67 g	0.24	0.0023	0.0016	0.0023	1.1+	ND
MW-4	08/30/91	0.57	0.064	0.0018	0.0009	0.0009	0.28+	2.0
MW-4	03/18/92	FP	FP	FP	FP	FP	FP	FP
MW-4	05/28/92	FP	FP	FP	FP	FP	FP	FP
MW-4	08/19/92	FP	FP	FP	FP	FP	FP	FP
MW-5	08/30/91	ND	ND	ND	ND	ND	0.08+	ND
MW-5	03/18/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003	<0.05	NA
MW-5	05/28/92	IW	IW	IW	IW	IW	IW	IW
MW-5	08/19/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA
FB	08/19/92	<0.05#	<0.0005#	<0.0005#	<0.0005#	<0.0005#	NA	NA
TB	06/03/91	ND	ND	ND	ND	ND	NA	NA
TB	08/30/91	ND	ND	ND	ND	ND	NA	NA
TB	03/18/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003	<0.05	NA
TB	05/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
TB	08/19/92	<0.05#	<0.0005#	<0.0005#	<0.0005#	<0.0005#	NA	NA

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-mo = total petroleum hydrocarbons as motor oil

g = Compounds detected within the gasoline range are not characteristic of the standard gasoline chromatographic pattern

+ = Results include compounds apparently due to gasoline as well as those due to diesel

ND = None detected

FP = Floating product; well contained floating product and was not sampled

NA = Not analyzed

IW = Inaccessible well; well was inaccessible and was not sampled

= Samples TB and FB are called TB-1 and FB-1 on the chain-of-custody form and certified analytical report

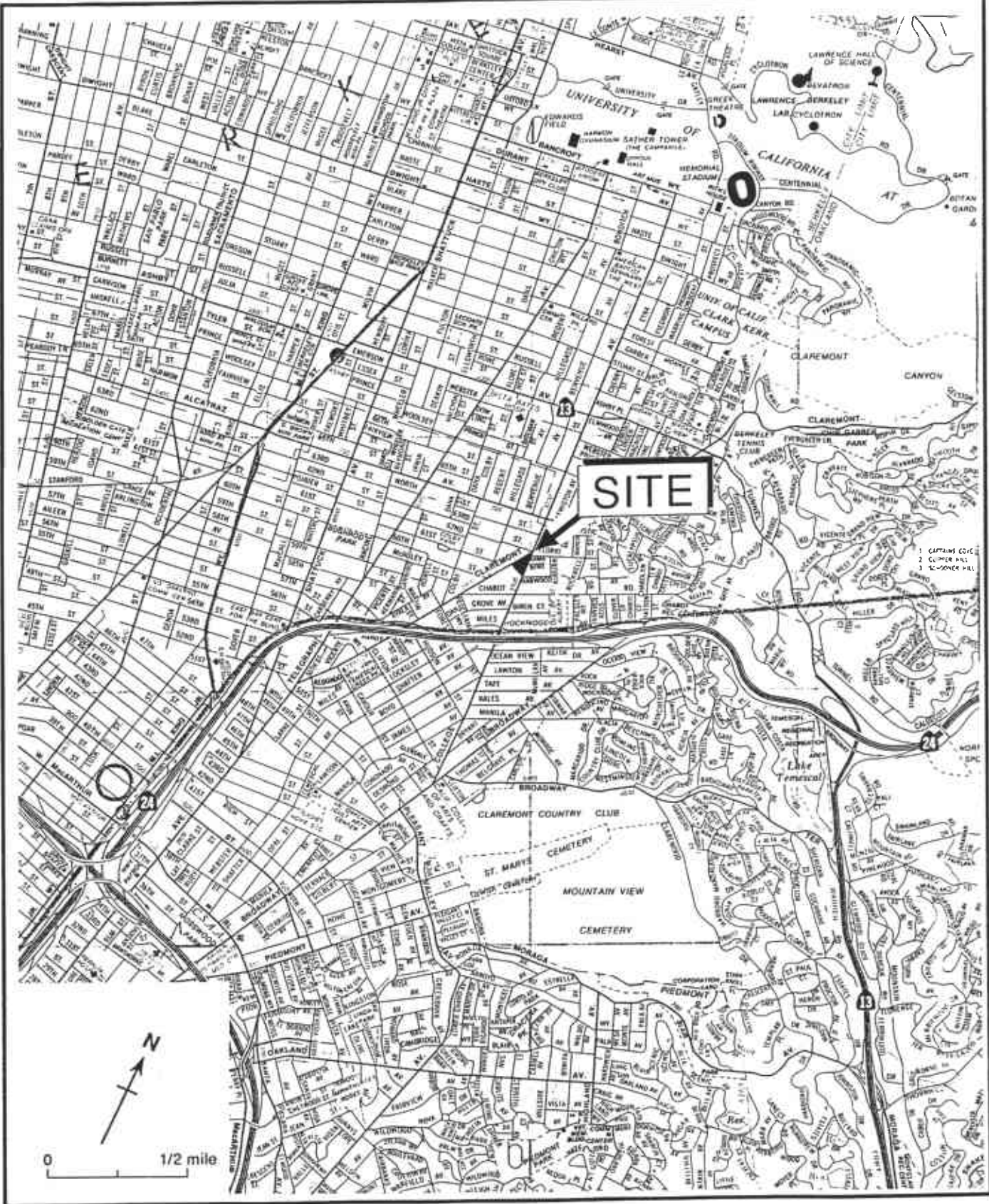


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

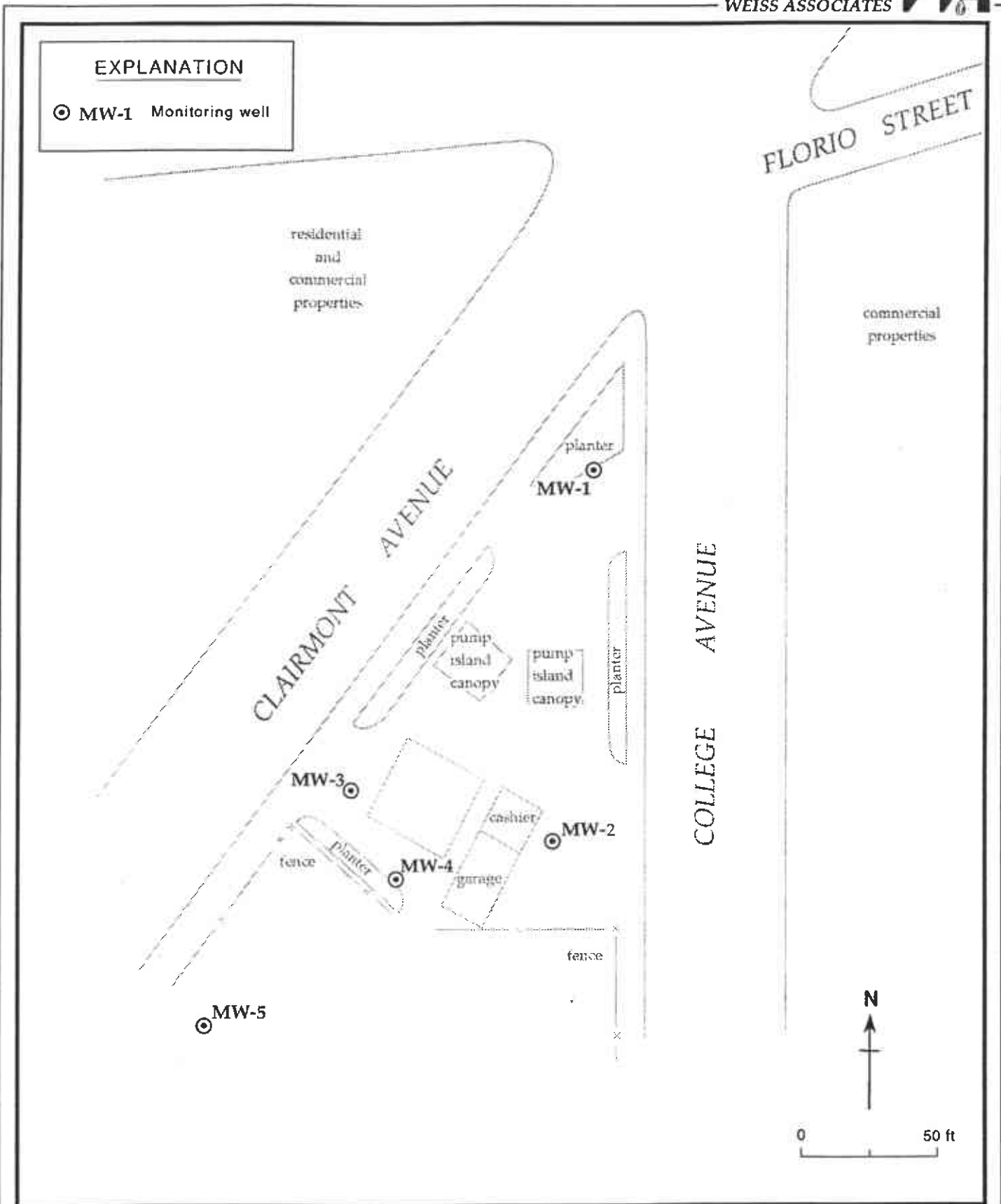


Figure 2. Monitoring Well Locations - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

ANAMETRIX INC

Environmental & Analytical Chemistry
 1981 Concourse Drive, Suite E, San Jose, CA 95131
 (408) 432-8192 • Fax (408) 432-8198

**REPORT**

MR. DAVID LARSEN
 EMCON ASSOCIATES
 1938 JUNCTION AVE.
 SAN JOSE, CA 95131

Workorder # : 9208233
 Date Received : 08/20/92
 Project ID : 204-5508-3301
 Purchase Order: MOH-B813

The following samples were received at Anamatrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9208233- 1	MW-2
9208233- 2	MW-3D
9208233- 3	TB-1
9208233- 4	FB-1
9208233- 5	MW-5
9208233- 6	MW-1
9208233- 7	MW-3

This report consists of 9 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anamatrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anamatrix.

Sarah Schoen, Ph.D.
 Laboratory Director

9-10-92
 Date

EMCON ASSOCIATES

SEP 10 1992

RECEIVED

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. DAVID LARSEN
EMCON ASSOCIATES
1938 JUNCTION AVE.
SAN JOSE, CA 95131

Workorder # : 9208233
Date Received : 08/20/92
Project ID : 204-5508-3301
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9208233- 2	MW-3D	WATER	08/19/92	TPHd
9208233- 5	MW-5	WATER	08/19/92	TPHd
9208233- 6	MW-1	WATER	08/19/92	TPHd
9208233- 7	MW-3	WATER	08/19/92	TPHd
9208233- 1	MW-2	WATER	08/19/92	TPHg/BTEX
9208233- 2	MW-3D	WATER	08/19/92	TPHg/BTEX
9208233- 3	TB-1	WATER	08/19/92	TPHg/BTEX
9208233- 4	FB-1	WATER	08/19/92	TPHg/BTEX
9208233- 5	MW-5	WATER	08/19/92	TPHg/BTEX
9208233- 6	MW-1	WATER	08/19/92	TPHg/BTEX
9208233- 7	MW-3	WATER	08/19/92	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. DAVID LARSEN
EMCON ASSOCIATES
1938 JUNCTION AVE.
SAN JOSE, CA 95131

Workorder # : 9208233
Date Received : 08/20/92
Project ID : 204-5508-3301
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for sample MW-3 is primarily due to the presence of a heavier petroleum product, possibly kerosene.
- The concentration reported as diesel for sample MW-3 is primarily due to the presence of a lighter petroleum product, possibly kerosene.
- The concentration reported as diesel for sample MW-3D is due to the presence of combination of a heavier petroleum product, possibly motor oil, and a lighter petroleum product, possibly kerosene.

Cheryl Balmer 9/4/92
Department Supervisor Date

Reggie Dawson 9/4/92
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9208233
Matrix : WATER
Date Sampled : 08/19/92

Project Number : 204-5508-3301
Date Released : 09/04/92

Reporting Limit	Sample I.D.# MW-2	Sample I.D.# MW-3D	Sample I.D.# TB-1	Sample I.D.# FB-1	Sample I.D.# MW-5	
(mg/L)	-01	-02	-03	-04	-05	
Benzene	0.0005	ND	0.091	ND	ND	ND
Toluene	0.0005	0.0020	0.052	ND	ND	ND
Ethylbenzene	0.0005	0.0012	0.053	ND	ND	ND
Total Xylenes	0.0005	0.0019	0.084	ND	ND	ND
TPH as Gasoline	0.050	ND	2.1	ND	ND	ND
% Surrogate Recovery	92%	83%	88%	95%	98%	
Instrument I.D.	HP4	HP4	HP4	HP4	HP4	
Date Analyzed	08/25/92	08/24/92	08/24/92	08/24/92	08/24/92	
RLMF	1	5	1	1	1	

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Shor 9/9/92
Analyst Date

Cheryl Bulmer 9/9/92
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9208233
Matrix : WATER
Date Sampled : 08/19/92

Project Number : 204-5508-3301
Date Released : 09/04/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# MW-1	Sample I.D.# MW-3	Sample I.D.# BG2404E2	Sample I.D.# BG2502E2
Benzene	0.0005	ND	0.071	ND	ND
Toluene	0.0005	ND	0.077	ND	ND
Ethylbenzene	0.0005	ND	0.052	ND	ND
Total Xylenes	0.0005	ND	0.13	ND	ND
TPH as Gasoline	0.050	ND	5.7	ND	ND
% Surrogate Recovery		100%	124%	101%	89%
Instrument I.D.		HP4	HP4	HP4	HP4
Date Analyzed		08/24/92	08/24/92	08/24/92	08/25/92
RLMF		1	5	1	1

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Ci Fan 4 Sept 92
Analyst Date

Cheryl Balmer 9/4/92
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9208233
 Matrix : WATER
 Date Sampled : 08/19/92
 Date Extracted: 08/24/92

Project Number : 204-5508-3301
 Date Released : 09/04/92
 Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9208233-02	MW-3D	08/26/92	0.050	0.9
9208233-05	MW-5	08/26/92	0.050	ND
9208233-06	MW-1	08/26/92	0.050	ND
9208233-07	MW-3	08/26/92	0.050	1.0
DWBL082492	METHOD BLANK	08/26/92	0.050	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 0.050 mg/L.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Stor 9/10/92
 Analyst Date

Cheryl Baerman 9/10/92
 Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
ANAMETRIX, INC. (408) 432-8192

Anamatrix W.O.: 9208233
 Matrix : WATER
 Date Sampled : 08/19/92
 Date Extracted: 08/24/92

Project Number : 204-5508-3301
 Date Released : 09/04/92
 Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9208233-02	MW-3D	08/26/92	0.050	1.8
9208233-07	MW-3	08/26/92	0.050	1.8
DWBL082492	METHOD BLANK	08/26/92	0.050	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 0.050 mg/L.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as motor oil is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Shor 9/10/92
 Analyst Date

Cheryl Balmer 9/10/92
 Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
 EPA METHOD 5030 WITH GC/FID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-5508-3301
 Matrix : WATER
 Date Sampled : 08/19/92
 Date Analyzed : 08/24/92

Anamatrix I.D. : 9208233-06
 Analyst : CF.
 Supervisor : CB
 Date Released : 09/04/92

COMPOUND	SPIKE AMT. (mg/L)	MS (mg/L)	%REC MS	MD (mg/L)	%REC MD	RPD	%REC LIMITS
BENZENE	0.040	0.034	86%	0.034	86%	0%	49-159
TOLUENE	0.040	0.034	86%	0.035	86%	0%	53-156
ETHYLBENZENE	0.040	0.035	86%	0.035	86%	0%	54-151
M+P-XYLENES	0.027	0.023	84%	0.023	84%	0%	56-157
O-XYLENE	0.013	0.012	86%	0.012	86%	0%	56-157
p-BFB			110%		112%		53-147

* Quality control established by Anamatrix, Inc.

BTEX LABORATORY CONTROL SAMPLE REPORT
 EPA METHOD 5030 WITH GC/PID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE	Anamatrix I.D.: LCSW0824
Matrix : WATER	Analyst : <i>CF</i>
Date Sampled : N/A	Supervisor : <i>LD</i>
Date Analyzed : 08/24/92	Date Released : 09/04/92
	Instrument ID : HP4

COMPOUND	SPIKE AMT. (mg/L)	LCS (mg/L)	REC LCS	%REC LIMITS
Benzene	0.040	0.037	93%	49-159
Toluene	0.040	0.037	94%	53-156
Ethylbenzene	0.040	0.038	94%	54-151
M+P-Xylenes	0.027	0.025	93%	56-157
O-Xylene	0.013	0.013	94%	58-154
P-BFB			105%	53-147

* Limits established by Anamatrix, Inc.

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
 EPA METHOD 3510 WITH GC/FID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
 Matrix : WATER
 Date Sampled : N/A
 Date Extracted: 08/24/92
 Date Analyzed : 08/26/92

Anamatrix I.D. : LCSW0824
 Analyst : CF.
 Supervisor : *CS*
 Date Released : 09/04/92
 Instrument I.D.: HP23

COMPOUND	SPIKE AMT (mg/L)	LCS REC (mg/L)	% REC LCS	LCS D REC (mg/L)	% REC LCS D	RPD	% REC LIMITS
DIESEL	1.25	0.95	76%	0.86	69%	-10%	63-130

*Quality control established by Anamatrix, Inc.



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No.: 8195

Date: _____
Page 1 of 1

Site Address: 6039 College Ave
Oakland, CA

Analysis Required

LAB: Anamatrix

WIC#: 204-5508-3301

Shell Engineer: Dan Kirk Phone No. _____
Fax #: (510) 675-6168

Consultant Name & Address: 1938 Junction Avenue
EMCON Associates San Jose, CA 95131

Consultant Contact: David Larsen Phone No. _____
Fax #: (408) 453-2269

Comments: 3-VOAS(HCl) for gas, BTEX
2-Liter Glass (Stz) for diesel,
and/or motor oil

Sampled By: _____
Printed Name: _____

Sample ID	Date	Soil	Water	Air	No. of conts.
① MW-2	8-19-92		X		3
② MW-3D					5
③ TB-1					3
④ FB-1					3
⑤ MW-5					5
⑥ MW-1					5
⑦ MW-3					5
MW-4					5

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	
X	X				
X	X	X			
X	X	X			
X	X	X			
X	X	X			
X	X	X		X	
X	X	X		X	

TPH as Motor Oil

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	5461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	5441	48 hours <input type="checkbox"/>
Soil for disposal <input type="checkbox"/>	5442	15 days <input checked="" type="checkbox"/> (Normal)
Water for disposal <input type="checkbox"/>	5443	Other <input type="checkbox"/>
Air Sample- Sys O&M <input type="checkbox"/>	5452	
Water Sample - Sys O&M <input type="checkbox"/>	5453	
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.

Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
40 ml	HCl	No		

Relinquished By (signature): [Signature]
Printed name: IAN GRAHAM

Date: 8-26-92
Time: 0733
Received (signature): [Signature]
Printed name: KATHY PFAFFLE

Date: 8-20-92
Time: 0733
Received (signature): _____
Printed name: _____

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS