Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: 510-547-5420

November 2, 1992

Reviewed 1/13/93 Re

Richard Hiett
Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

Re: Shell Service Station
WIC #204-5508-5801
630 High Street
Oakland, California
WA Job #81-602-201

Dear Mr. Hiett

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 and collected ground water samples from the ten site wells. EMCON's report describing these activities and presenting analytic results for ground water is included as Attachment A.

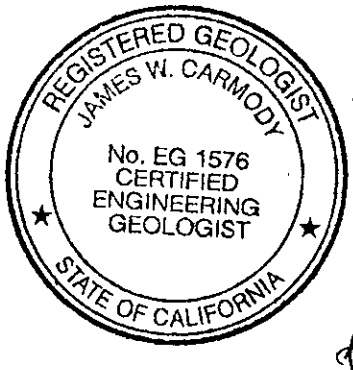
- Weiss Associates (WA) used EMCON's ground water elevation calculations to prepare a ground water elevation contour map (Figure 2).

Anticipated Fourth Quarter 1992 Activities:

WA will submit a report presenting the results of the 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.

Please call if you have any questions.



Sincerely,
Weiss Associates

J. Michael Asport
Technical Assistant

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

JMA/JPT:jma

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

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, CA 94520
Britt Johnson, Alameda County Department of Environmental Health, 80 Swan Way, Room 200, Oakland, CA 94621

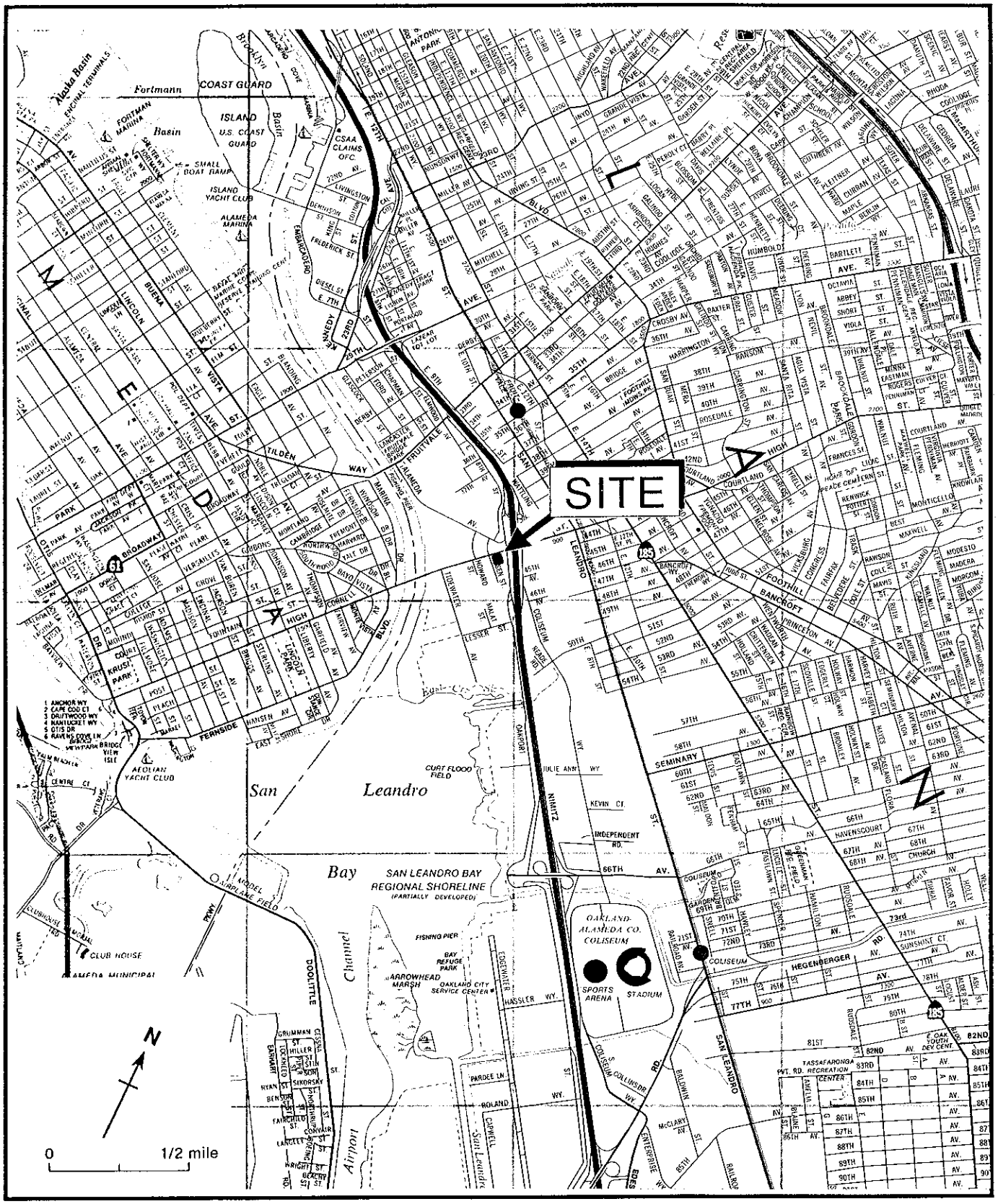

Figure 1. Site Location Map - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

2/28/92

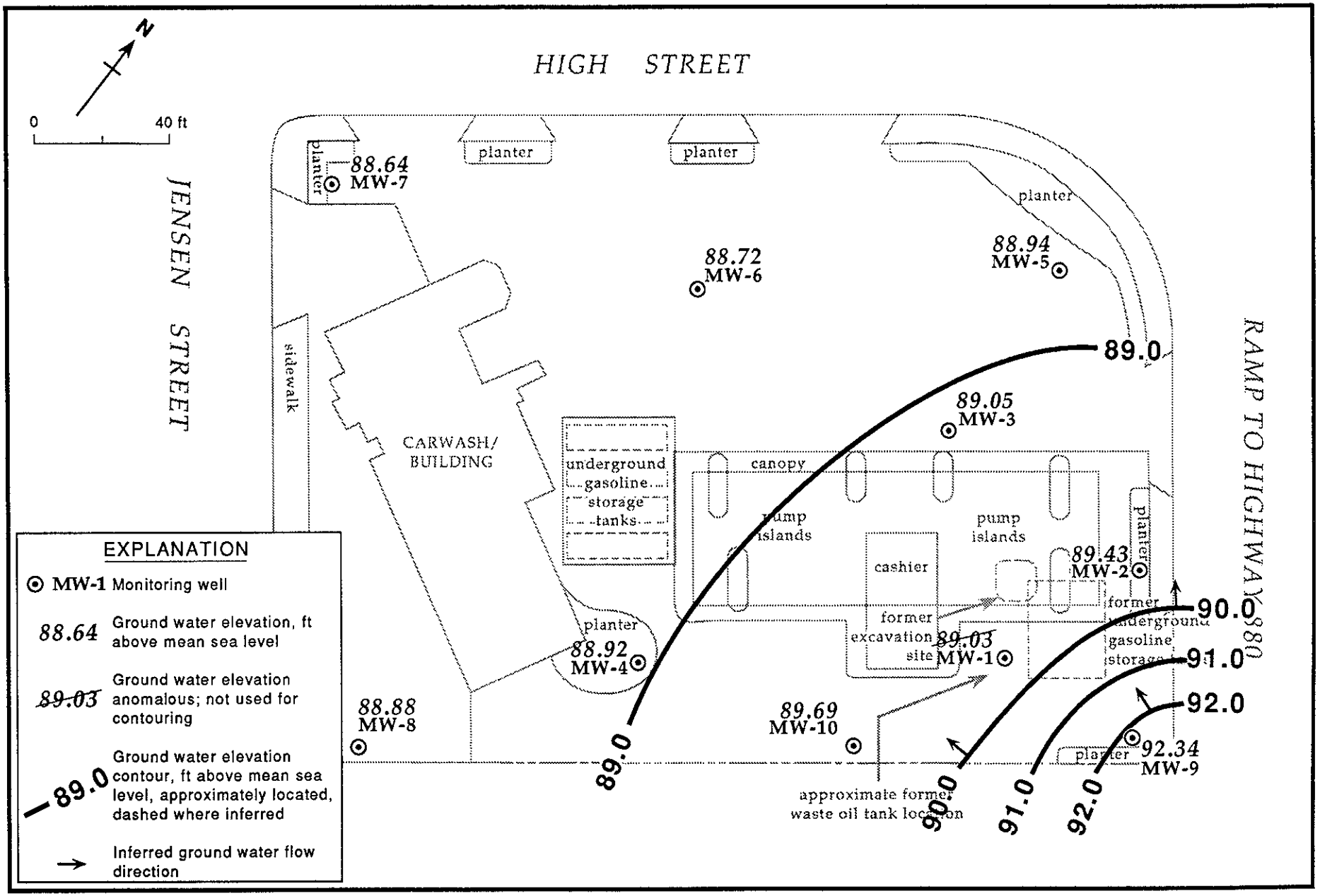

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - August 20, 1992 - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

10/30/92

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT

EMCON ASSOCIATES
Consultants in Wastes Management and Environmental Control

September 29, 1992
Project: G67-51.01
WIC#: 204-5508-5801

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

Re: Third quarter 1992 ground-water monitoring report, Shell Oil Company, 630 High Street, 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 630 High Street, Oakland, California (figure 1). Third quarter monitoring was conducted on August 20, 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-10 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. No floating product was observed in the wells. 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 through MW-10 on August 20, 1992. 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 the removal of three casing volumes. 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 quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring

1938 Junction Avenue, San Jose, California 95131-2102, (408) 453-0719, Fax (408) 453-0452

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 (MW-22), a field blank (FB), and a duplicate well sample (MW-9D) collected from well MW-9. 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, MW-4, MW-5, MW-6, and MW-10 were analyzed for total petroleum hydrocarbons as diesel (TPH-d).

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

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: 630 High Street
Oakland, California
WIC #: 204-5508-5801

Date: 09/28/92
Project Number: G67-51.01

Well Designation	Water Level Field Date	TOC Elevation (ft-PSD)	Depth to Water (feet)	Groundwater 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	07/22/91	99.35	10.53	88.82	NR	ND	07/23/91	NR	NR	NR	NR
MW-1	02/21/92	99.35	8.31	91.04	13.8	ND	02/24/92	6.90	2170	68.4	>200
MW-1	05/22/92	99.35	10.02	89.33	13.5	ND	05/22/92	6.87	1988	70.5	>200
MW-1	07/07/92	99.35	10.06$	89.29	NR	NR	07/07/92	NA	NA	NA	NA
MW-1	08/20/92	99.35	10.32	89.03	13.5	ND	08/20/92	7.12	2930	69.8	>200
MW-2	07/22/91	101.15	12.14	89.01	NR	ND	07/23/91	NR	NR	NR	NR
MW-2	02/21/92	101.15	10.08	91.07	19.2	ND	02/23/92	7.52	1306	61.8	>200
MW-2	05/22/92	101.15	11.52	89.63	18.9	ND	05/22/92	6.98	1144	66.2	>200
MW-2	07/07/92	101.15	11.50$	89.65	NR	NR	07/07/92	NA	NA	NA	NA
MW-2	08/20/92	101.15	11.72	89.43	19.1	ND	08/20/92	6.73	1080	72.9	>200
MW-3	07/22/91	99.49	10.66	88.83	NR	ND	07/23/91	NR	NR	NR	NR
MW-3	02/21/92	99.49	8.97	90.52	17.3	ND	02/24/92	6.89	1587	65.5	>200
MW-3	05/22/92	99.49	9.32	90.17	16.9	ND	05/22/92	7.23	1508	67.3	>200
MW-3	07/07/92	99.49	10.22$	89.27	NR	NR	07/07/92	NA	NA	NA	NA
MW-3	08/20/92	99.49	10.44	89.05	16.9	ND	08/20/92	7.05	1577	70.3	>200
MW-4	07/22/91	99.24	10.34	88.90	NR	ND	07/23/91	NR	NR	NR	NR
MW-4	02/21/92	99.24	7.60	91.64	18.3	ND	02/24/92	6.90	1311	65.2	>200
MW-4	05/22/92	99.24	9.90	89.34	18.0	ND	05/22/92	7.11	1683	67.0	>200
MW-4	07/07/92	99.24	10.02$	89.22	NR	NR	07/07/92	NA	NA	NA	NA
MW-4	08/20/92	99.24	10.32	88.92	17.9	ND	08/20/92	6.92	1707	69.9	>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
$ = Data collected by Weiss Associates
NA = Not analyzed

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Monitoring Well Field Measurement Data
Third Quarter 1992

Shell Station: 630 High Street
Oakland, California
WIC #: 204-5508-5801

Date: 09/28/92
Project Number: G67-51.01

Well Designation	Water Level Field Date	TOC Elevation (ft-PSD)	Depth to Water (feet)	Groundwater 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	07/22/91	100.08	11.43	88.65	NR	ND	07/23/91	NR	NR	NR	NR
MW-5	02/21/92	100.08	9.24	90.84	17.8	ND	02/23/92	6.71	1066	68.8	>200
MW-5	05/22/92	100.08	10.97	89.11	17.4	ND	05/22/92	6.94	1107	66.9	>200
MW-5	07/07/92	100.08	10.98$	89.10	NR	NR	07/07/92	NA	NA	NA	NA
MW-5	08/20/92	100.08	11.14	88.94	17.8	ND	08/20/92	7.24	1210	70.4	180.5
MW-6	07/22/91	98.56	10.10	88.46	NR	ND	07/23/91	NR	NR	NR	NR
MW-6	02/21/92	98.56	7.15	91.41	19.4	ND	02/23/92	6.97	1356	67.2	>200
MW-6	05/22/92	98.56	9.55	89.01	19.4	ND	05/22/92	6.94	1257	67.2	>200
MW-6	07/07/92	98.56	9.53$	89.03	NR	NR	07/07/92	NA	NA	NA	NA
MW-6	08/20/92	98.56	9.84	88.72	19.4	ND	08/20/92	6.28	1426	71.3	>200
MW-7	07/22/91	97.53	9.13	88.40	NR	ND	07/23/91	NR	NR	NR	NR
MW-7	02/21/92	97.53	6.87	90.66	19.3	ND	02/23/92	7.69	1170	66.0	>200
MW-7	05/22/92	97.53	8.08	89.45	19.3	ND	05/22/92	7.60	1287	66.7	>200
MW-7	07/07/92	97.53	8.82$	88.71	NR	NR	07/07/92	NA	NA	NA	NA
MW-7	08/20/92	97.53	8.89	88.64	19.5	ND	08/20/92	6.96	1389	68.9	143.6
MW-8	07/22/91	97.13	8.36	88.77	NR	ND	07/23/91	NR	NR	NR	NR
MW-8	02/21/92	97.13	6.54	90.59	20.6	ND	02/23/92	7.06	1309	60.5	>200
MW-8	05/22/92	97.13	7.68	89.45	20.6	ND	05/22/92	7.65	1525	67.0	>200
MW-8	07/07/92	97.13	8.16$	88.97	NR	NR	07/07/92	NA	NA	NA	NA
MW-8	08/20/92	97.13	8.25	88.88	20.6	ND	08/20/92	6.91	1715	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
$ = Data collected by Weiss Associates
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Table 1
Monitoring Well Field Measurement Data
Third Quarter 1992

Shell Station: 630 High Street
Oakland, California
WIC #: 204-5508-5801

Date: 09/28/92
Project Number: G67-51.01

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-9	07/22/91	99.72	8.48	91.24	NR	ND	07/23/91	NR	NR	NR	NR
MW-9	02/21/92	99.72	6.91	92.81	11.5	ND	02/23/92	8.09	606	61.1	>200
MW-9	05/22/92	99.72	8.64	91.08	11.5	ND	05/22/92	7.75	618	69.4	128
MW-9	07/07/92	99.72	7.55$	92.17	NR	NR	07/07/92	NA	NA	NA	NA
MW-9	08/20/92	99.72	7.38	92.34	11.5	ND	08/20/92	6.88	597	74.5	79.5
MW-10	07/22/91	98.99	9.94	89.05	NR	ND	07/23/91	NR	NR	NR	NR
MW-10	02/21/92	98.99	9.11	89.88	12.5	ND	02/23/92	7.89	2040	63.0	>200
MW-10	05/22/92	98.99	9.14	89.85	12.6	ND	05/22/92	7.68	1946	68.1	>200
MW-10	07/07/92	98.99	9.87$	89.12	NR	NR	07/07/92	NA	NA	NA	NA
MW-10	08/20/92	98.99	9.30	89.69	12.5	ND	08/20/92	6.99	2070	74.1	180.1

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
$ = Data collected by Weiss Associates
NA = Not analyzed

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

Shell Station: 630 High Street
Oakland, California
WIC #: 204-5508-5801

Date: 09/28/92
Project Number: G67-51.01

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-1	07/23/91	11.0	0.31	0.036	0.29	0.28	3.8	<0.5
MW-1	02/24/92	7.3	0.20	0.036	0.34	0.27	8.9*	0.8
MW-1	05/22/92	7.6	0.14	<0.05	0.30	0.14	18.*^	NA
MW-1	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-1	08/20/92	9.1	0.53	0.34	0.86	0.54	5.2*	NA
MW-2	07/23/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.5
MW-2	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-2	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-2	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-2	08/20/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-3	07/23/91	2.0	0.051	<0.0005	<0.0005	<0.0005	0.31	<0.5
MW-3	02/24/92	2.8	0.015	0.0028	<0.0025	0.012	0.64@	NA
MW-3	05/22/92	3.7	0.027	0.011	0.020	0.11	0.22*^	NA
MW-3	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-3	08/20/92	13.	0.072	0.085	0.071	0.14	0.34*	NA
MW-4	07/23/91	4.3	0.12	<0.0005	<0.0005	0.001	1.2	<0.5
MW-4	02/24/92	2.0	0.031	0.0063	0.0035	0.0066	8.3*	NA
MW-4	05/22/92	3.6	0.055	0.005	0.003	0.010	3.4*^	NA
MW-4	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-4	08/20/92	3.1	0.10	0.045	0.014	0.045	3.4	NA

TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
TPH-mo = total petroleum hydrocarbons as motor oil
* = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene
^ = Concentration reported as diesel is primarily due to a heavier petroleum product, possibly motor oil or aged diesel fuel
NA = Not analyzed
@ = Compounds detected within the diesel range are not charcteristic of the standard diesel chromatographic pattern

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

Shell Station: 630 High Street
Oakland, California
WIC #: 204-5508-5801

Date: 09/28/92
Project Number: G67-51.01

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-5	07/23/91	1.7	0.023	<0.0005	6.7	10.	0.30	<0.5
MW-5	02/23/92	0.24	0.0010	<0.0005	<0.0005	0.0010	0.18#	<0.5
MW-5	05/22/92	6.2	0.006	0.095	0.056	0.099	7.1*^	NA
MW-5	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-5	08/20/92	7.4	0.056	0.095	0.091	0.15	0.12*	NA
MW-6	07/23/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	1.2	<0.5
MW-6	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.06a	NA
MW-6	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.65^	NA
MW-6	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-6	08/20/92	0.14+	<0.0005	<0.0005	<0.0005	<0.0005	0.51^	NA
MW-7	07/23/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.5
MW-7	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-7	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-7	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-7	08/20/92	<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
= Compounds detected and calculated as diesel appear to be the less volatile consitutents of gasoline
* = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene
NA = Not analyzed
a = Compounds detected within the diesel range are not charcteristic of the standard diesel chromatographic pattern
^ = Concentration reported as diesel is primarily due to a heavier petroleum product, possibly motor oil or aged diesel fuel
+ = Concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline

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

Shell Station: 630 High Street
Oakland, California
WIC #: 204-5508-5801

Date: 09/28/92
Project Number: G67-51.01

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-8	07/23/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	0.6
MW-8	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-8	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-8	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-8	08/20/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-9	07/23/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	0.8
MW-9	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-9	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-9	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-9	08/20/92	<0.05	<0.0005	<0.0005	<0.0005	0.0008	NA	NA
MW-9D	08/20/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-10	07/23/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	0.9
MW-10	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.12@	NA
MW-10	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.31^	NA
MW-10	07/07/92	NA	NA	NA	NA	NA	NA	NA
MW-10	08/20/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.46^	NA
MW-22	02/24/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-22	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-22	08/20/92	<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
NA = Not analyzed
@ = Compounds detected within the diesel range are not charcteristic of the standard diesel chromatographic pattern
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Table 2
Summary of Analytical Results
Third Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 630 High Street
Oakland, California
WIC #: 204-5508-5801

Date: 09/28/92
Project Number: G67-51.01

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)
FB	08/20/92	<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
NA = Not analyzed

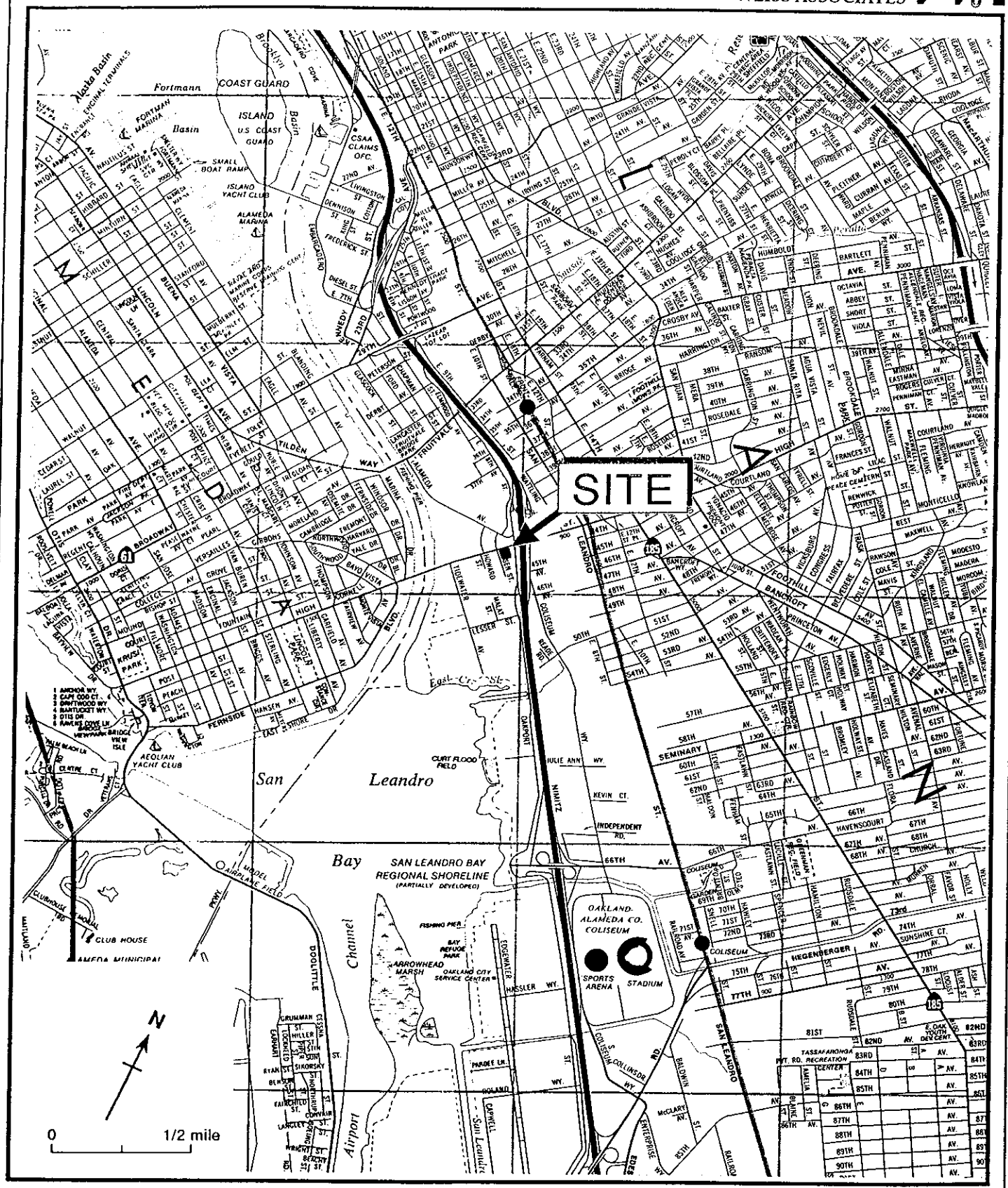

Figure 1. Site Location Map - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

2/28/92

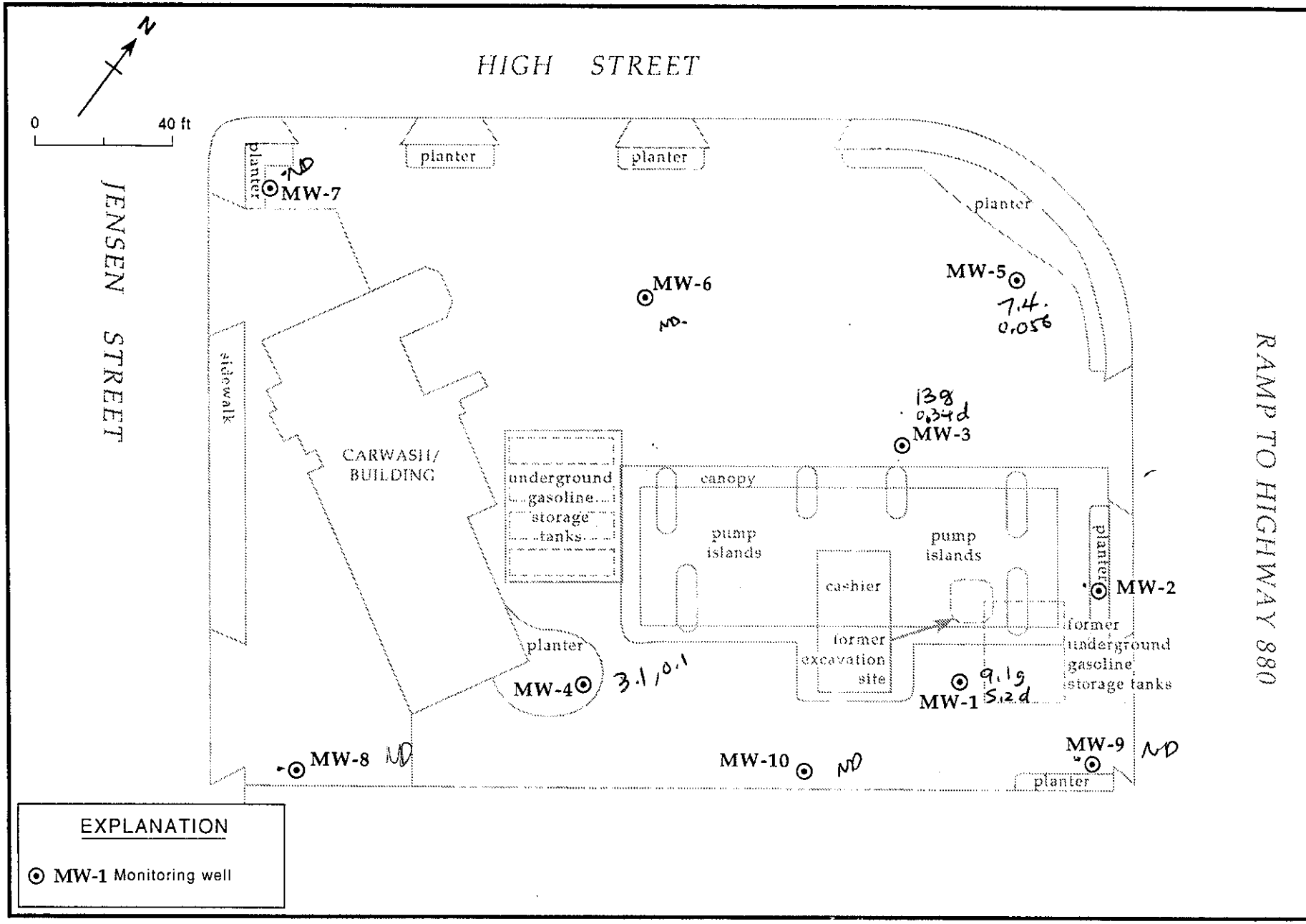

Figure 2. Monitoring Well Locations - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

5/19/92

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 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 # : 9208258
Date Received : 08/20/92
Project ID : 204-5508-5801
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9208258- 1	MW-2
9208258- 2	MW-7
9208258- 3	MW-8
9208258- 4	MW-9
9208258- 5	MW-9D
9208258- 6	MW-22
9208258- 7	FB
9208258- 8	MW-10
9208258- 9	MW-6
9208258-10	MW-3
9208258-11	MW-4
9208258-12	MW-1
9208258-13	MW-5

This report consists of 10 pages not including the cover letter, and is organized in sections according to the specific Anametrix 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 Anametrix 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.

Anametrix 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 Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

9-16-92
Date

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

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

Workorder # : 9208258
Date Received : 08/20/92
Project ID : 204-5508-5801
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9208258- 8	MW-10	WATER	08/20/92	TPHd
9208258- 9	MW-6	WATER	08/20/92	TPHd
9208258-10	MW-3	WATER	08/20/92	TPHd
9208258-11	MW-4	WATER	08/20/92	TPHd
9208258-12	MW-1	WATER	08/20/92	TPHd
9208258-13	MW-5	WATER	08/20/92	TPHd
9208258- 1	MW-2	WATER	08/20/92	TPHg/BTEX
9208258- 2	MW-7	WATER	08/20/92	TPHg/BTEX
9208258- 3	MW-8	WATER	08/20/92	TPHg/BTEX
9208258- 4	MW-9	WATER	08/20/92	TPHg/BTEX
9208258- 5	MW-9D	WATER	08/20/92	TPHg/BTEX
9208258- 6	MW-22	WATER	08/20/92	TPHg/BTEX
9208258- 7	FB	WATER	08/20/92	TPHg/BTEX
9208258- 8	MW-10	WATER	08/20/92	TPHg/BTEX
9208258- 9	MW-6	WATER	08/20/92	TPHg/BTEX
9208258-10	MW-3	WATER	08/20/92	TPHg/BTEX
9208258-11	MW-4	WATER	08/20/92	TPHg/BTEX
9208258-12	MW-1	WATER	08/20/92	TPHg/BTEX
9208258-13	MW-5	WATER	08/20/92	TPHg/BTEX

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

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

Workorder # : 9208258
Date Received : 08/20/92
Project ID : 204-5508-5801
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for sample MW-6 is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline.
- The concentrations reported as diesel for samples MW-3, MW-1 and MW-5 are primarily due to the presence of a lighter petroleum product, possibly gasoline.
- The concentrations reported as diesel for samples MW-10 and MW-6 are primarily due to the presence of a heavier petroleum product, possibly motor oil.

Cheryl Baeman 9/9/92
Department Supervisor Date

Dana Shea 9/9/92
Chemist Date

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

Anametrix W.O.: 9208258
Matrix : WATER
Date Sampled : 08/20/92

Project Number : 204-5508-5801
Date Released : 09/08/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# MW-2 -01	Sample I.D.# MW-7 -02	Sample I.D.# MW-8 -03	Sample I.D.# MW-9 -04	Sample I.D.# MW-9D -05
Benzene	0.0005	ND	ND	ND	ND	ND
Toluene	0.0005	ND	ND	ND	ND	ND
Ethylbenzene	0.0005	ND	ND	ND	ND	ND
Total Xylenes	0.0005	ND	ND	ND	0.0008	ND
TPH as Gasoline	0.050	ND	ND	ND	ND	ND
% Surrogate Recovery		100%	107%	111%	100%	107%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		08/26/92	08/26/92	08/26/92	08/26/92	08/26/92
RLMF		1	1	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.

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

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

Analyst 9/9/92 Date

Supervisor 9/9/92 Date

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

Anametrix W.O.: 9208258
Matrix : WATER
Date Sampled : 08/20/92

Project Number : 204-5508-5801
Date Released : 09/08/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# MW-22 -06	Sample I.D.# FB -07	Sample I.D.# MW-10 -08	Sample I.D.# MW-6 -09	Sample I.D.# MW-3 -10
Benzene	0.0005	ND	ND	ND	ND	0.072
Toluene	0.0005	ND	ND	ND	ND	0.085
Ethylbenzene	0.0005	ND	ND	ND	ND	0.071
Total Xylenes	0.0005	ND	ND	ND	ND	0.14
TPH as Gasoline	0.050	ND	ND	ND	0.14	13
% Surrogate Recovery		111%	114%	82%	96%	140%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		08/26/92	08/26/92	08/26/92	08/26/92	08/27/92
RLMF		1	1	1	1	10

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.

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

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

Peggie Dawson 9/16/92
Analyst Date

Cheryl Bolmer 9/16/92
Supervisor Date

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

Anametrix W.O.: 9208258
Matrix : WATER
Date Sampled : 08/20/92

Project Number : 204-5508-5801
Date Released : 09/08/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# MW-4 -11	Sample I.D.# MW-1 -12	Sample I.D.# MW-5 -13	Sample I.D.# BG2601E2 BLANK	Sample I.D.# BG2701E2 BLANK
Benzene	0.0005	0.10	0.53	0.056	ND	ND
Toluene	0.0005	0.045	0.34	0.095	ND	ND
Ethylbenzene	0.0005	0.014	0.86	0.091	ND	ND
Total Xylenes	0.0005	0.045	0.54	0.15	ND	ND
TPH as Gasoline	0.050	3.1	9.1	7.4	ND	ND
% Surrogate Recovery		83%	92%	105%	128%	100%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		08/28/92	08/29/92	08/26/92	08/26/92	08/27/92
RLMF		10	100	10	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.

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

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

Reggie Davison 9/10/92
Analyst Date

Cheryl Baenen 9/10/92
Supervisor Date

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

Anametrix W.O.: 9208258
Matrix : WATER
Date Sampled : N/A

Project Number : 204-5508-5801
Date Released : 09/08/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# BG2801E2 BLANK
Benzene	0.0005	ND
Toluene	0.0005	ND
Ethylbenzene	0.0005	ND
Total Xylenes	0.0005	ND
TPH as Gasoline	0.050	ND
% Surrogate Recovery		122%
Instrument I.D.		HP4
Date Analyzed		08/28/92
RLMF		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.

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

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

Analyst 9/9/92 Date

Supervisor 9/9/92 Date

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

Anametrix W.O.: 9208258
Matrix : WATER
Date Sampled : 08/20/92
Date Extracted: 08/24/92

Project Number : 204-5508-5801
Date Released : 09/08/92
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9208258-08	MW-10	08/27/92	0.050	0.46
9208258-09	MW-6	08/27/92	0.050	0.51
9208258-10	MW-3	08/27/92	0.050	0.34
9208258-11	MW-4	08/27/92	0.050	3.4
9208258-12	MW-1	08/28/92	0.050	5.2
9208258-13	MW-5	08/27/92	0.050	0.12
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.

Analyst 9/9/92 Date

Supervisor 9/9/92 Date

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

Sample I.D. : 204-5508-5801 MW-6
Matrix : WATER
Date Sampled : 08/20/92
Date Analyzed : 08/26/92

Anametrix I.D. : 9208258-09
Analyst : IS
Supervisor : CH
Date Released : 09/08/92

COMPOUND	SPIKE AMT. (mg/L)	MS (mg/L)	%REC MS	MD (mg/L)	%REC MD	RPD	%REC LIMITS
BENZENE	0.040	0.037	93%	0.037	93%	0%	49-159
TOLUENE	0.040	0.038	95%	0.037	93%	-3%	53-156
ETHYLBENZENE	0.040	0.038	95%	0.038	95%	0%	54-151
M+P-XYLENES	0.027	0.026	96%	0.025	93%	-4%	56-157
O-XYLENE	0.013	0.013	100%	0.013	100%	0%	56-157
p-BFB			104%		104%		53-147

* Quality control established by Anametrix, Inc.

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

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSW0826
Matrix	: WATER	Analyst	: IS
Date Sampled	: N/A	Supervisor	: [illegible]
Date Analyzed	: 08/26/92	Date Released	: 09/08/92
		Instrument ID	: HP4

COMPOUND	SPIKE AMT. (mg/L)	LCS (mg/L)	REC LCS	%REC LIMITS
Benzene	0.040	0.043	107%	49-159
Toluene	0.040	0.043	108%	53-156
Ethylbenzene	0.040	0.043	109%	54-151
M+P-Xylenes	0.027	0.029	107%	56-157
O-Xylene	0.013	0.014	111%	58-154
P-BFB			93%	53-147

* Limits established by Anametrix, 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 : 08/27/92

Anametrix I.D. : LCSW0824
Analyst : IS
Supervisor : [illegible]
Date Released : 09/08/92
Instrument I.D.: HP23

COMPOUND	SPIKE AMT (mg/L)	LCS REC (mg/L)	% REC LCS	LCSD REC (mg/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1.25	0.98	78%	0.98	78%	0%	63-130

*Quality control established by Anametrix, Inc.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: 8225

Date:
Page 1 of 2

Site Address: 630 High Street Oakland, CA

WIC#: 204-5508-5801

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 (SR) for diesel

Sampled By:

Printed Name:

LAB: Anametrix

CHECK ONE (1) BOX ONLY | CT/DT

Quarterly Monitoring	X	5461
Site Investigation		5441
Soil for disposal		5442
Water for disposal		5443
Air Sample- Sys O&M		5452
Water Sample - Sys O&M		5453
Other		

TURN AROUND TIME

- 24 hours
- 48 hours
- 15 days (Normal) X
- Other

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

Analysis Required

Sample ID	Date	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1 MW-2	8-20-92		X		3	X		X			40 ml	HCl	No		
2 MW-7															
3 MW-8															
4 MW-9															
5 MW-9D															
6 MW-22														1 VOA received with bubbles	
7 FB															

Relinquished By (signature):	Printed name: IAN GRATHAM	Date: 8-20-92 Time: 1710	Received (signature): Michele D. Aguilar	Printed name: Michele D AGUILAR	Date: 8/21/92 Time: 1710
Relinquished By (signature):	Printed name:	Date: Time:	Received (signature):	Printed name:	Date: Time:
Relinquished By (signature):	Printed name:	Date: Time:	Received (signature):	Printed name:	Date: Time:

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

Last Revision Date: 10/15/91

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: 8225

Date:
Page 2 of 2

Site Address: 630 High Street Oakland, CA

WIC#: 204-5508-5801

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

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

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

Comments: See page 1.

Sampled By:

Printed Name:

LAB: Anametrix

CHECK ONE (1) BOX ONLY

	CT/DT
Quarterly Monitoring	☒ 5461
Site Investigation	☐ 5441
Soil for disposal	☐ 5442
Water for disposal	☐ 5443
Air Sample- Sys O&M	☐ 5452
Water Sample - Sys O&M	☐ 5453
Other	☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 15 days ☒ (Normal)
- Other ☐ _____

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

Analysis Required

Sample ID	Date	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(8) MW-10	8-20-92		X		5	X	X	X			40 ml	HCl	NO		
(9) MW-6	↓		↓		↓	↓	↓	↓			↓	↓	↓		
(10) MW-3															
(11) MW-4															
(12) MW-1															
(13) MW-5			↓		↓	↓	↓	↓			↓	↓	↓		
	↓														

	Printed name:	Date:	Received (signature):	Printed name:	Date:
Relinquished By (signature):	Ian Graham	Time: 1710	Michele D. Aguilar	Michele D. Aguilar	Time: 1710
Relinquished By (signature):	Printed name:	Date:	Received (signature):	Printed name:	Date:
		Time:			Time:
Relinquished By (signature):	Printed name:	Date:	Received (signature):	Printed name:	Date:
		Time:			Time:

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

Last Revision Date: 10/15/91