



COF # 3737

98 FEB -2 PM 1:56

February 1, 1993

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
ACDEH STID #3737
WA Job #81-602-203

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 fourth quarter 1992 and proposed work for the first quarter 1993.

Fourth 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 First Quarter 1993 Activities:

- WA will submit a report presenting the results of the first quarter 1993 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.

Richard Hiatt
February 1, 1993

2

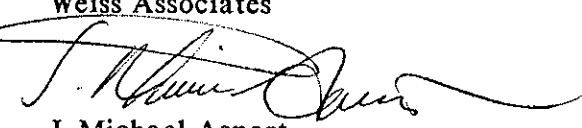
Weiss Associates 

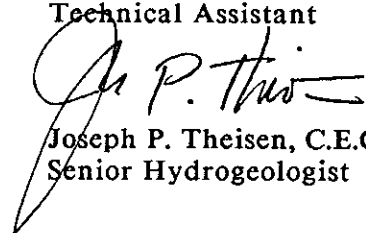
- Since analytic results consistently indicate that hydrocarbons quantified by the total petroleum hydrocarbons as diesel analysis are not typical of diesel, we will no longer analyze for total petroleum hydrocarbons as diesel. We will continue analyzing all water samples for total petroleum hydrocarbons as gasoline, benzene, ethyl benzene, toluene, and xylenes.

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:fcv

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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

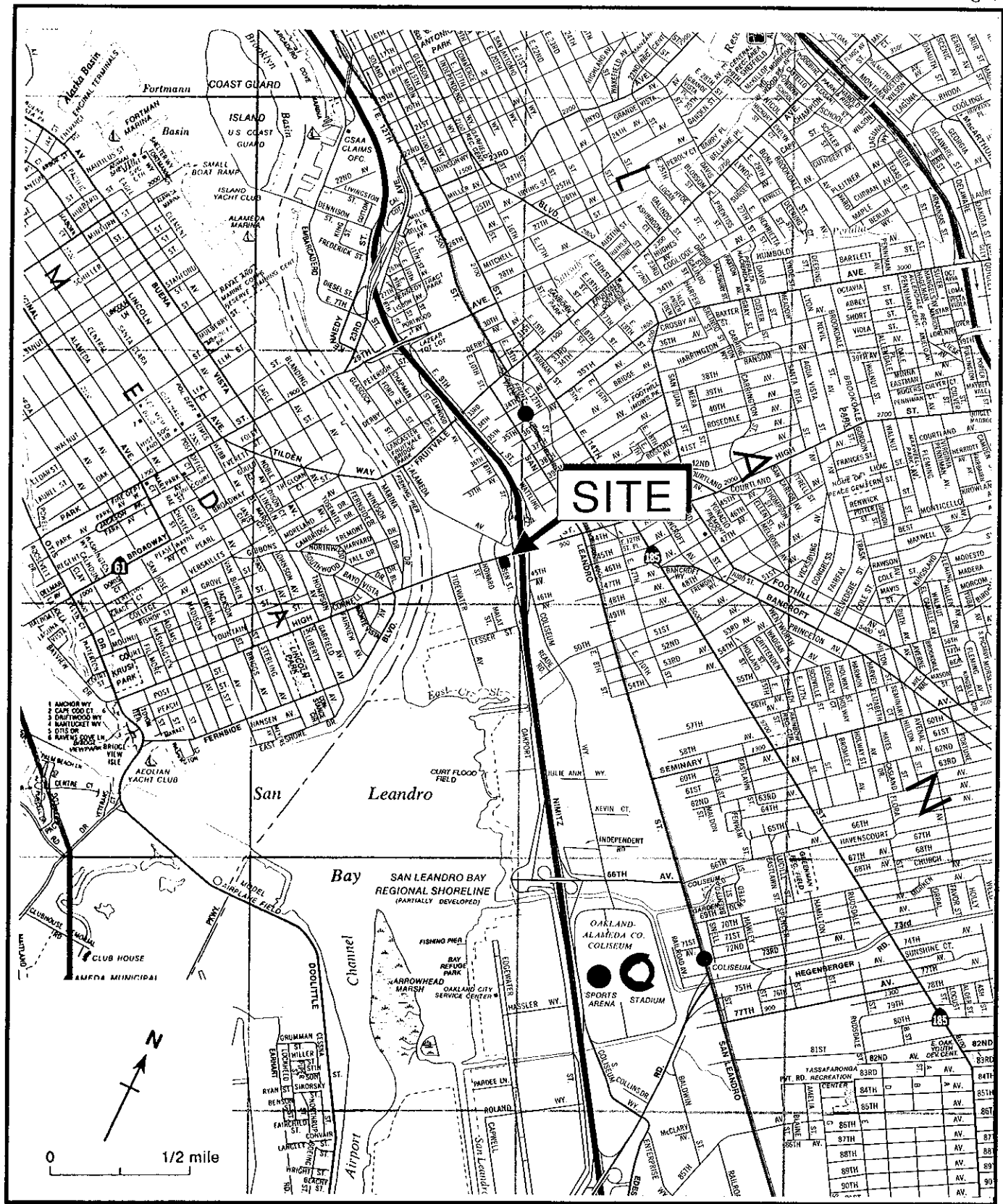


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

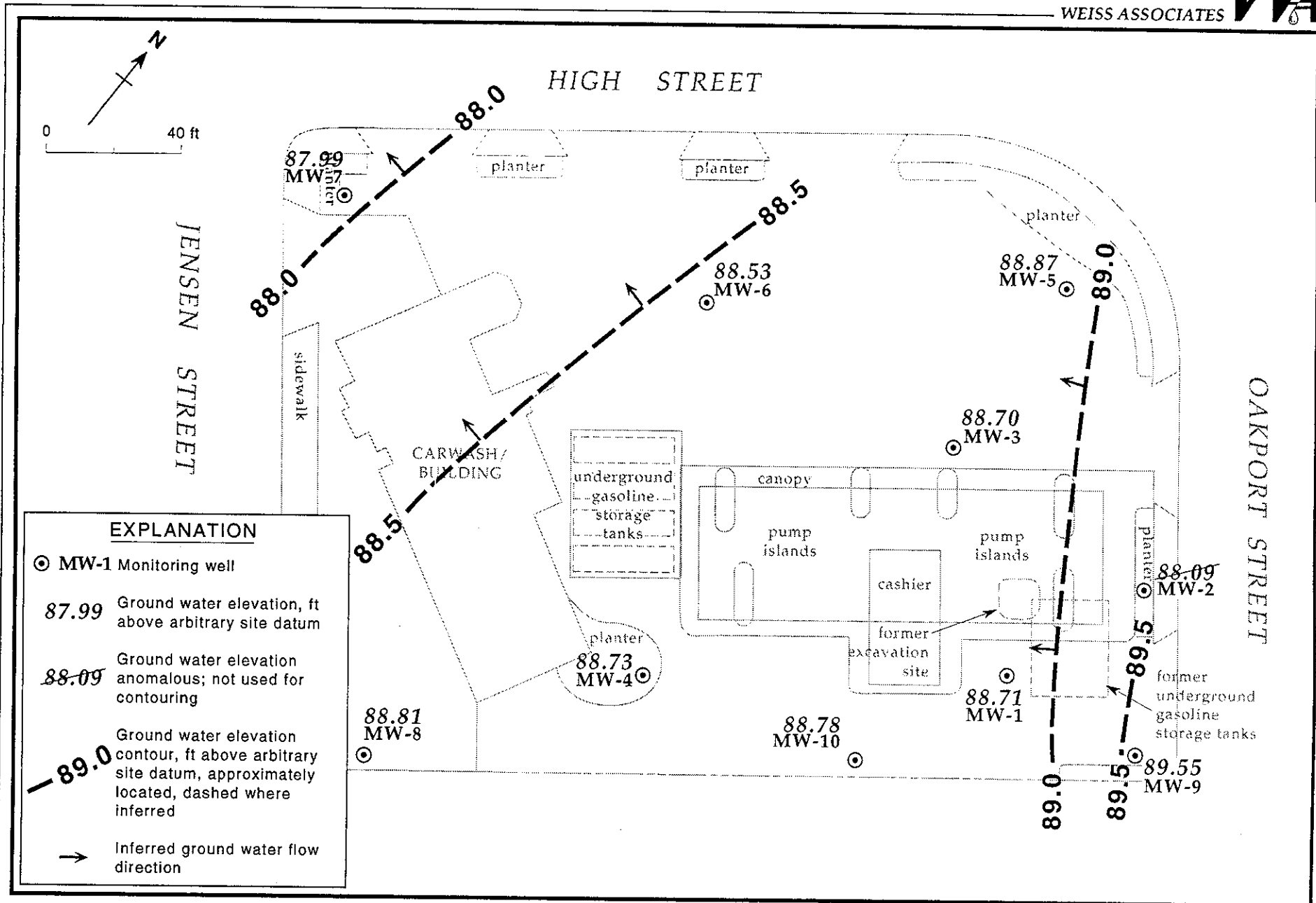


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - November 18, 1992 - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

ATTACHMENT A

EMCON'S GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



EMCON
ASSOCIATES

Consultants in Wastes
Management and
Environmental Control

December 17, 1992
Project: OG67-051.01
WIC#: 204-5508-5801

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

Re: Fourth quarter 1992 ground-water monitoring report, Shell Oil
Company, 630 High Street, Oakland, California

Dear Mr. Elias:

This letter presents the results of the fourth quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 630 High Street, Oakland, California (figure 1). Fourth quarter monitoring was conducted on November 18, 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 fourth 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 November 18, 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. Wells MW-1, MW-3, MW-9, and MW-10 were evacuated to dryness before the removal of three casing volumes. The wells were allowed to recharge for up to 24 hours. Samples were collected after the wells had recharged to a sufficient level. Field measurements from fourth 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

OG6705101D.DOC



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 fourth 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 fourth 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 through MW-6, and MW-10 were analyzed for total petroleum hydrocarbons as diesel (TPH-d).

ANALYTICAL RESULTS

Analytical results for the fourth 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

Mr. David Elias
December 17, 1992
Page 3

Project 0G67-051.01
WIC# 204-5508-5801

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
Fourth Quarter 1992

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

Date: 12/16/92
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-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-1	11/18/92	99.35	10.64	88.71	11.1	ND	11/18/92	6.78	2370	69.8	>200
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-2	11/18/92	101.15	13.06	88.09	19.1	ND	11/18/92	6.66	994	70.1	170
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-3	11/18/92	99.49	10.79	88.70	17.3	ND	11/18/92	6.90	1018	69.3	>200
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
MW-4	11/18/92	99.24	10.51	88.73	17.8	ND	11/18/92	6.80	1644	68.7	121

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
ND = None detected
\$ = Data collected by Weiss Associates
NR = Not reported; data not available
NA = Not analyzed

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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-5	11/18/92	100.08	11.21	88.87	17.7	ND	11/18/92	6.74	945	70.9	196
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-6	11/18/92	98.56	10.03	88.53	19.0	ND	11/18/92	6.86	1166	72.5	123
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-7	11/18/92	97.53	9.54	87.99	19.0	ND	11/18/92	7.12	1167	68.9	68
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
MW-8	11/18/92	97.13	8.32	88.81	20.5	ND	11/18/92	6.99	1243	65.5	129

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

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Table 1
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Date: 12/16/92
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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	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-9	11/18/92	99.72	10.17	89.55	11.5	ND	11/18/92	6.81	590	69.8	119
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
MW-10	11/18/92	98.99	10.21	88.78	12.5	ND	11/18/92	7.46	1738	69.8	89

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
ND = None detected
\$ = Data collected by Weiss Associates
NR = Not reported; data not available
NA = Not analyzed

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

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

Date: 12/16/92
 Project Number: G67-51.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	TPH-d (mg/l)	TPH-mo (mg/l)
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-1	11/18/92	15.	0.22	0.050	0.79	0.34	4.1*	NA
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-2	11/18/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
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-3	11/18/92	2.1	0.021	0.0036	0.011	0.013	0.43*	NA
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
MW-4	11/18/92	2.2	0.032	0.012	0.0042	0.024	1.4	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 characteristic of the standard diesel chromatographic pattern

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

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

Date: 12/16/92
 Project Number: G67-51.01

Sample Designation	Water Sample Field Date	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-d	TPH-mo
		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
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-5	11/18/92	3.3	0.027	<0.0125	0.020	0.047	0.32*	NA
MW-6	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.06@	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-6	11/18/92	0.20+	<0.0005	<0.0005	<0.0005	<0.0005	0.35	NA
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
MW-7	11/18/92	<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 constituents of gasoline

* = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene

NA = Not analyzed

@ = Compounds detected within the diesel range are not characteristic 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
 Fourth Quarter 1992
 milligrams per liter (mg/l) or parts per million (ppm)

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

Date: 12/16/92
 Project Number: G67-51.01

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-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-8	11/18/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
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-9	11/18/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-9D	08/20/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-9D	11/18/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
MW-10	02/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.12 ^a	NA
MW-10	05/22/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.31 ^a	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 ^a	NA
MW-10	11/18/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.47 ^a	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

^a = Compounds detected within the diesel range are not characteristic 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

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

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

Date: 12/16/92
 Project Number: G67-51.01

Sample Designation	Water Sample Field Date	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-d	TPH-mo
		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
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
MW-22	11/18/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
FB	08/20/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
FB	11/18/92	<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

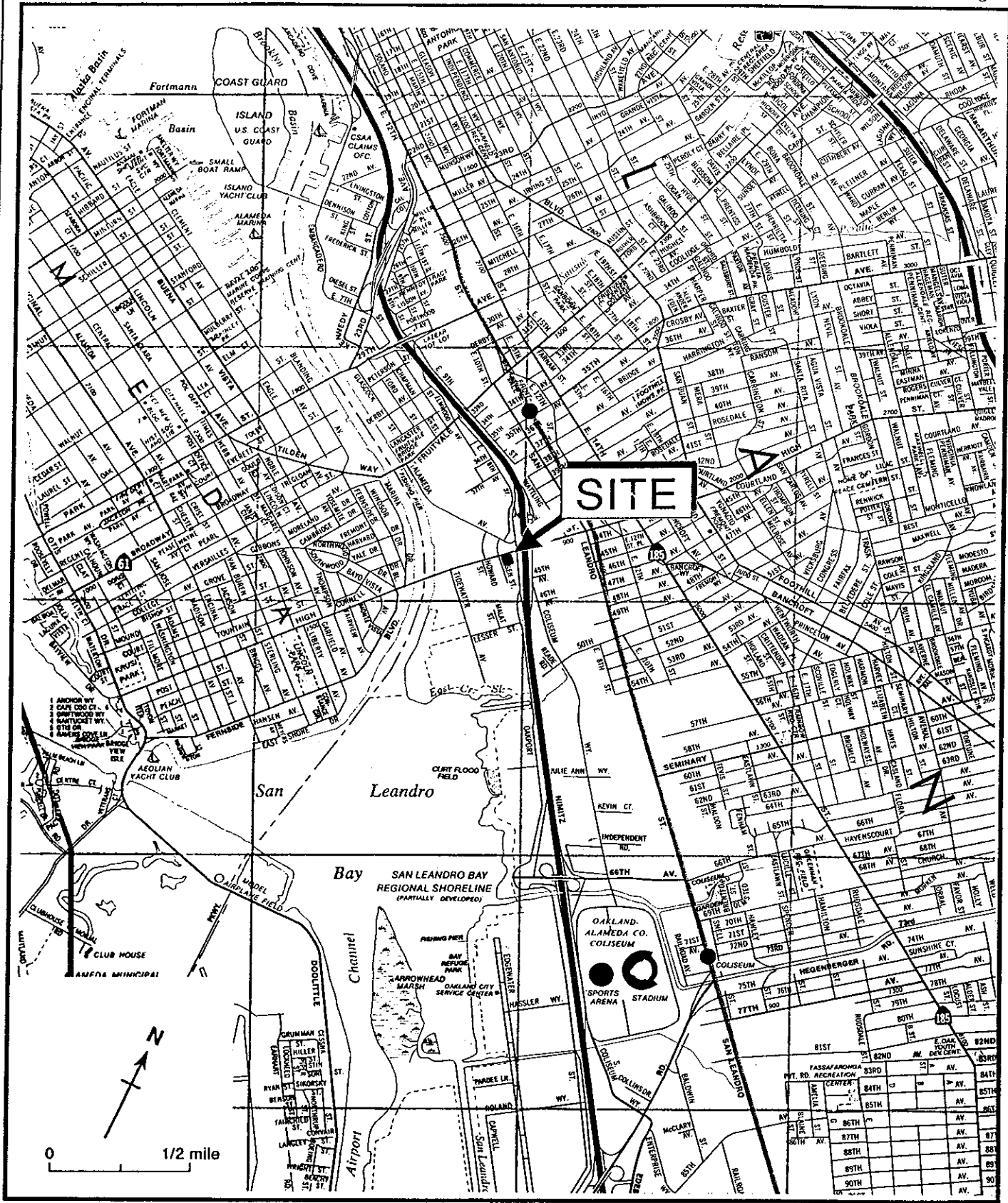


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California

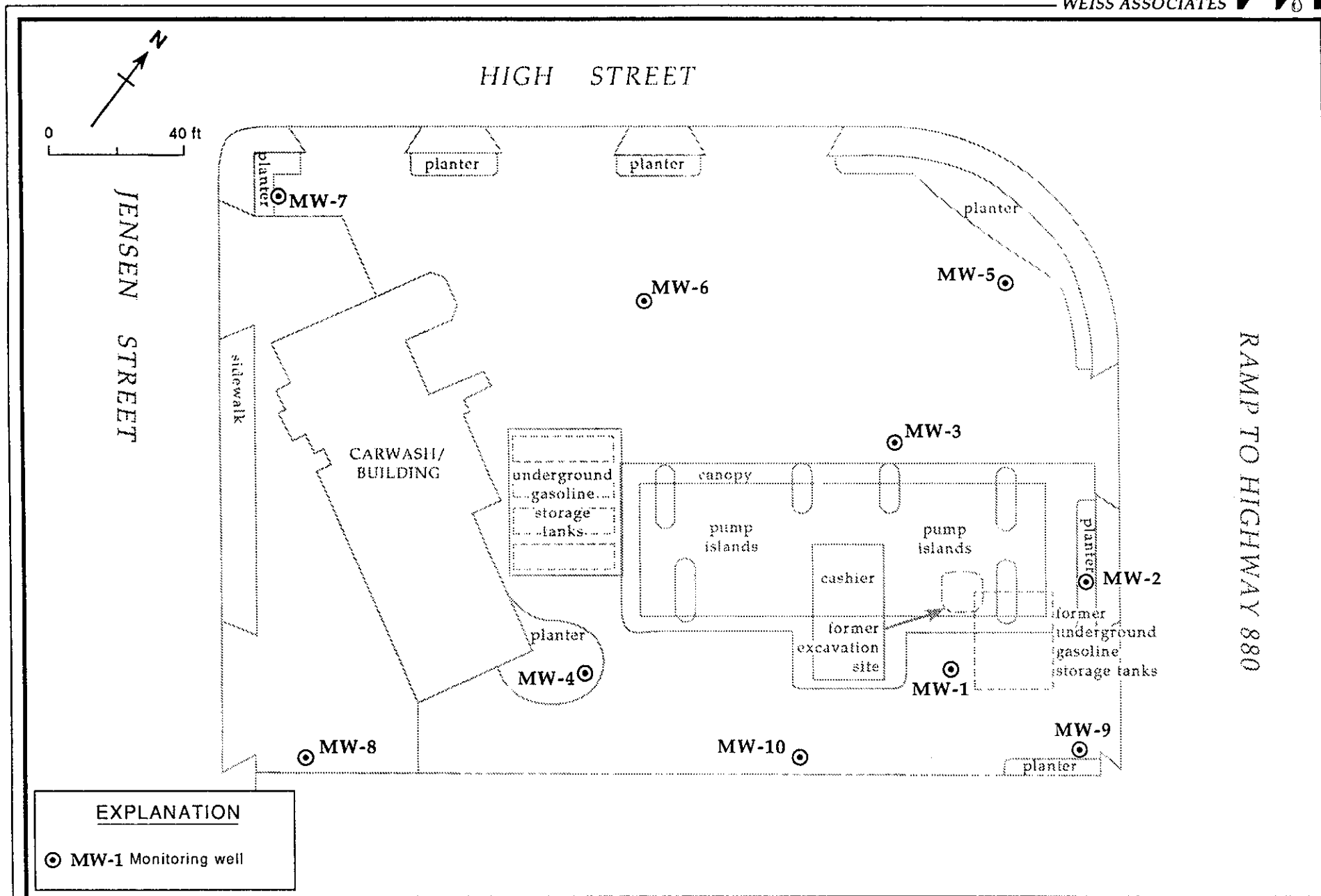


Figure 2. Monitoring Well Locations - Shell Service Station WIC #204-5508-5801, 630 High Street, Oakland, California



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

Workorder # : 9211290
Date Received : 11/19/92
Project ID : 204-5508-5801
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9211290- 1	MW-2
9211290- 2	MW-7
9211290- 3	MW-8
9211290- 4	MW-9
9211290- 5	MW-9D
9211290- 6	MW-22
9211290- 7	FB
9211290- 8	MW-10
9211290- 9	MW-6
9211290-10	MW-3
9211290-11	MW-4
9211290-12	MW-1
9211290-13	MW-5

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

12-02-92

Date

EMCON ASSOCIATES

DEC 03 1992

RECEIVED

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

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

Workorder # : 9211290
Date Received : 11/19/92
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
9211290- 8	MW-10	WATER	11/18/92	TPHd
9211290- 9	MW-6	WATER	11/18/92	TPHd
9211290-10	MW-3	WATER	11/18/92	TPHd
9211290-11	MW-4	WATER	11/18/92	TPHd
9211290-12	MW-1	WATER	11/18/92	TPHd
9211290-13	MW-5	WATER	11/18/92	TPHd
9211290- 1	MW-2	WATER	11/18/92	TPHg/BTEX
9211290- 2	MW-7	WATER	11/18/92	TPHg/BTEX
9211290- 3	MW-8	WATER	11/18/92	TPHg/BTEX
9211290- 4	MW-9	WATER	11/18/92	TPHg/BTEX
9211290- 5	MW-9D	WATER	11/18/92	TPHg/BTEX
9211290- 6	MW-22	WATER	11/18/92	TPHg/BTEX
9211290- 7	FB	WATER	11/18/92	TPHg/BTEX
9211290- 8	MW-10	WATER	11/18/92	TPHg/BTEX
9211290- 9	MW-6	WATER	11/18/92	TPHg/BTEX
9211290-10	MW-3	WATER	11/18/92	TPHg/BTEX
9211290-11	MW-4	WATER	11/18/92	TPHg/BTEX
9211290-12	MW-1	WATER	11/18/92	TPHg/BTEX
9211290-13	MW-5	WATER	11/18/92	TPHg/BTEX

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

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

Workorder # : 9211290
Date Received : 11/19/92
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 or kerosene.
- The concentration reported as diesel for sample MW-10 is primarily due to the presence of a heavier petroleum product, possibly motor oil.

Cheryl Beilman 12/1/92
Department Supervisor Date

Steve Puma 12/01/92
Chemist Date

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

Anamatrix W.O.: 9211290
Matrix : WATER
Date Sampled : 11/18/92

Project Number : 204-5508-5801
Date Released : 12/01/92

Reporting Limit	Sample I.D.# MW-2	Sample I.D.# MW-7	Sample I.D.# MW-8	Sample I.D.# MW-9	Sample I.D.# MW-9D
COMPOUNDS (mg/L)	-01	-02	-03	-04	-05
Benzene	0.0005	ND	ND	ND	ND
Toluene	0.0005	ND	ND	ND	ND
Ethylbenzene	0.0005	ND	ND	ND	ND
Total Xylenes	0.0005	ND	ND	ND	ND
TPH as Gasoline	0.050	ND	ND	ND	ND
% Surrogate Recovery	95%	96%	106%	95%	100%
Instrument I.D.	HP12	HP12	HP12	HP12	HP12
Date Analyzed	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92
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.

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

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

Steve Jones 12/01/92
Analyst Date

Cheryl Balmer 12/1/92
Supervisor Date

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

Anamatrix W.O.: 9211290
Matrix : WATER
Date Sampled : 11/18/92

Project Number : 204-5508-5801
Date Released : 12/01/92

Reporting Limit	Sample I.D.# MW-22	Sample I.D.# FB	Sample I.D.# MW-10	Sample I.D.# MW-6	Sample I.D.# MW-3	
COMPOUNDS (mg/L)	-06	-07	-08	-09	-10	
Benzene	0.0005	ND	ND	ND	ND	0.021
Toluene	0.0005	ND	ND	ND	ND	0.0036
Ethylbenzene	0.0005	ND	ND	ND	ND	0.011
Total Xylenes	0.0005	ND	ND	ND	ND	0.013
TPH as Gasoline	0.050	ND	ND	ND	0.20	2.1
% Surrogate Recovery	95%	94%	90%	87%	78%	
Instrument I.D.	HP12	HP12	HP12	HP12	HP12	
Date Analyzed	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	
RLMF	1	1	1	1	5	

- 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.

Steve Sma 12/01/92
Analyst Date

Cheryl Bolmer 12/1/92
Supervisor Date

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

Anamatrix W.O.: 9211290
Matrix : WATER
Date Sampled : 11/18/92

Project Number : 204-5508-5801
Date Released : 12/01/92

Reporting Limit	Sample I.D.# MW-4	Sample I.D.# MW-1	Sample I.D.# MW-5	Sample I.D.# BN2301E2	
COMPOUNDS (mg/L)	-11	-12	-13	BLANK	
Benzene	0.0005	0.032	0.22	0.027	ND
Toluene	0.0005	0.012	0.050	ND	ND
Ethylbenzene	0.0005	0.0042	0.79	0.020	ND
Total Xylenes	0.0005	0.024	0.34	0.047	ND
TPH as Gasoline	0.050	2.2	15	3.3	ND
% Surrogate Recovery	140%	112%	112%	110%	
Instrument I.D.	HP12	HP12	HP12	HP12	
Date Analyzed	11/23/92	11/23/92	11/23/92	11/23/92	
RLMF	5	100	25	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.

Steve Ama 12/01/92
Analyst Date

Cheryl Balmer 12/1/92
Supervisor Date

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

Anametrix W.O.: 9211290
 Matrix : WATER
 Date Sampled : 11/18/92
 Date Extracted: 11/23/92

Project Number : 204-5508-5801
 Date Released : 12/01/92
 Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9211290-08	MW-10	11/25/92	0.050	0.47
9211290-09	MW-6	11/24/92	0.050	0.35
9211290-10	MW-3	11/24/92	0.050	0.43
9211290-11	MW-4	11/24/92	0.050	1.4
9211290-12	MW-1	11/25/92	0.25	4.1
9211290-13	MW-5	11/24/92	0.050	0.32
DWBL112392	METHOD BLANK	11/23/92	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.

Steve Arma 12/01/92
 Analyst Date

Cheryl Balmer 12/1/92
 Supervisor Date

EPA METHOD 5030 WITH GC/FID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-5508-5801 MW-10
 Matrix : WATER
 Date Sampled : 11/18/92
 Date Analyzed : 11/23/92

Anamatrix I.D. : 9211290-08
 Analyst : *M*
 Supervisor : *CB*
 Date Released : 12/01/92
 Instrument I.D.: HP12

COMPOUND	SPIKE AMT (mg/L)	SAMPLE CONC (mg/L)	REC MS	%REC MS	REC MD (mg/L)	%REC MD	RPD	%REC LIMITS
BENZENE	0.020	0.000	0.018	90%	0.020	100%	11%	49-159
TOLUENE	0.020	0.000	0.020	100%	0.021	105%	5%	53-156
ETHYLBENZENE	0.020	0.000	0.021	105%	0.021	105%	0%	54-151
TOTAL XYLENES	0.020	0.000	0.020	100%	0.020	100%	0%	56-157
p-BFB				87%		94%		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.: LCSW1123
Matrix : WATER	Analyst : M
Date Sampled : N/A	Supervisor : CS
Date Analyzed : 11/23/92	Date Released : 12/01/92
	Instrument ID : HP12

COMPOUND	SPIKE AMT. (mg/L)	LCS (mg/L)	REC LCS	%REC LIMITS
Benzene	0.020	0.019	95%	49-159
Toluene	0.020	0.021	105%	53-156
Ethylbenzene	0.020	0.021	105%	54-151
TOTAL-Xylenes	0.020	0.022	110%	56-157
P-BFB			89%	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: 11/23/92
 Date Analyzed : 11/23/92

Anamatrix I.D. : LCSW1123
 Analyst : *M*
 Supervisor : *CO*
 Date Released : 12/01/92
 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	0.79	63%	0.82	66%	4%	63-130

*Quality control established by Anamatrix, Inc.



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 1507-C

Date: _____
Page 1 of 2

Site Address: 630 High Street
Oakland, CA

WIC#: 204-5508-5801

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

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

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

Comments: 3-VOAs (HCl) for gas, BTEX
2-Liter Glass (SR) for diesel

Sampled by: _____

Printed Name: _____

Analysis Required

LAB: Anamatrix

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	6442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6452	
Water Rem. or Sys. O & M <input type="checkbox"/>	6453	
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
							40 ml	HU	No

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS

- ①
- ②
- ③
- ④
- ⑤
- ⑥
- ⑦
- ⑧

Sample ID	Date	Sludge	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	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
MW-2	11-19-92			X		3						X		40 ml	HU	No
MW-7				X		3						X				
MW-8				X		3						X				
MW-9				X		3						X				
MW-9D				X		3						X				
MW-22				X		3						X				
FB				X		3						X				
MW-10				X		5		X				X				

Bubbles
3x Vat

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>JAN GRANTAM</u>	Date: <u>11-19-92</u>	Time: <u>0540</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>Kathy PEAFFLE</u>	Date: <u>11-19-92</u>	Time: <u>0540</u>
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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 1507-C

Date: _____
Page 2 of 2

Site Address: 630 High Street
Oakland, CA

Analysis Required

LAB: Anamatrix

WIC#: 204-5508-5801

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

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

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

Comments: See page 1

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

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

Sampled by:

Printed Name:

Sample ID	Date	Sludge	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	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
⑨ MW-6	11-18-92			X		5	X					X		40 ml	HU	NO		
⑩ MW-3				X		5	X					X						
⑪ MW-4				X		5	X					X						
⑫ MW-1				X		5	X					X						Bubbles 3XVOA
⑬ MW-5				X		5	X					X						

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>JAN CLAHAM</u>	Date: <u>11-19-92</u>	Time: <u>0835</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>KATHY PEAFFLE</u>	Date: <u>11-19-92</u>	Time: <u>0935</u>
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

EMCON Associates - Ground Water Sampling and Analysis Request Form

PROJECT NAME : **SHELL OIL COMPANY**
630 High Street, Oakland, CA

WIC#: 204-5508-5801
MOH#: MOH-90649
EMCON Project #: 0G67-051.01

DATE SUBMITTED : **18-Nov-92**

Authorized By: EEJ
Date: 11-13-92

SPECIAL INSTRUCTIONS / CONSIDERATIONS :

Quarterly Monitoring - Second Month of the Quarter

Perform a water level survey prior to sampling (see Shell SOP).
Well survey points are top of well casings.
Survey and sample the wells in the order listed below.

Lead Consultant: Weiss Associates
Lead Contact: David Elias
Phone Number: (510) 547-5420
Report Due: 18-Dec-92

Shell Engineer: Dan Kirk
Phone Number: (510) 675-6168

Site Contact: _____

Site Phone#: _____

Well Locks: 2357

Submit samples to Anametric

Well ID or Source	Casing Diameter (inches)	Casing Length (feet)	Floating Product (feet)	Scheduled Purging Equipment	Analyses Requested
- MW-2	4.0	19.0	ND	PVC Bailer	TPH-Gasoline, BTEX 3-VOAs (HCl) Field Measurements: pH, EC, Temp., Turbidity (NTU) (Measure NTU at casing volume intervals; not a stabilization parameter)
- MW-7	4.0	19.5	ND	PVC Bailer	
• MW-8	4.0	20.5	ND	PVC Bailer	
• MW-9	4.0	11.5	ND	PVC Bailer	
Above wells in any order					
• MW-9D	[Duplicate - Well MW-9; 3-VOAs (HCl)]				
• MW-22	[Trip Blank (label "MW-22"); 3-VOAs (HCl)]				
FB	[Field Blank; 3-VOAs (HCl)]				
• MW-10	4.0	12.5	ND	PVC Bailer	TPH-Gasoline, BTEX TPH-Diesel 3-VOAs (HCl), 2-Liter Glass (SR) Field Measurements: pH, EC, Temp., Turbidity (NTU) (Measure NTU at casing volume intervals; not a stabilization parameter)
• MW-6	4.0	19.5	ND	PVC Bailer	
• MW-3	4.0	17.5	ND	PVC Bailer	
• MW-4	4.0	18.5	ND	PVC Bailer	
MW-1	4.0	14.0	ND	PVC Bailer	
MW-5	4.0	18.0	ND	PVC Bailer	
Above wells in indicated order					

C-11-18-92
S-11-19-92
16, JW

Laboratory Instructions:

Detection Limits: TPH-G = 0.05 ppm
BTEX = 0.0005 ppm
TPH-D = 0.05 ppm

Anametric Reference #: 1507-C

ND = None Detected

IP = Intermittent Product

† = Dedicated

* Field Filtered

EMCON Associates - Drum Inventory Record

0G67-051.01

630 High Street, Oakland, CA

11-18-92

Project No

Location

Date

Shell Oil Company

I.G./J.W.

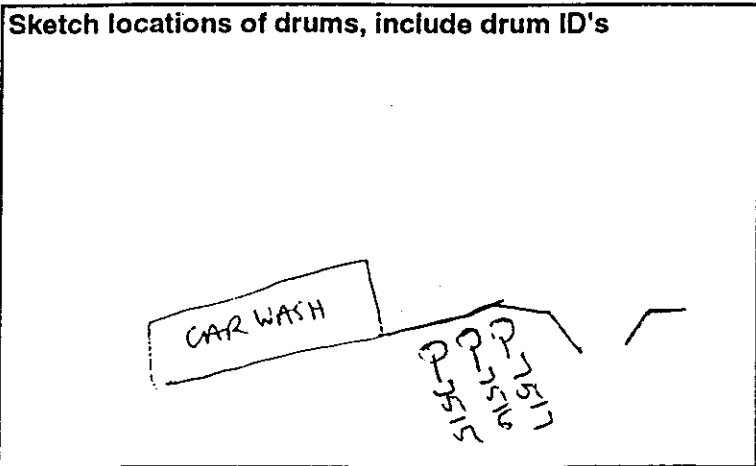
WEDNESDAY

Client

Sampler

Day of Week

DRUM NUMBER OR ID	WELL OR SOURCE ID(s)	TYPE OF MATERIAL	AMOUNT OF MATERIAL IN DRUM	DATE ACCUMULATED OR GENERATED
7516	MW-	GROUND WATER	50 GAL.	11-18-92
7517	MW-	↓	55 GAL.	11-18-92
7515	N/A	N/A	EMPTY	N/A



COMMENTS:

Number of Drums From This Event 2 (1 Empty)

Total Number of Drums At Site 1 (Empty)

FIELD REPORT
DEPTH TO WATER / FLOATING PRODUCT SURVEY

PROJECT # : 0G67-051.01

STATION ADDRESS : 630 High Street, Oakland, CA

DATE : 11-19-92

Shell WIC # : 204-5508-5801

FIELD TECHNICIAN : SALIG

DAY : WED

DTW Order	WELL ID	Well Box Seal	Well Lid Secure	Gasket	Lock	Locking Well Cap	FIRST DEPTH TO WATER (feet)	SECOND DEPTH TO WATER (feet)	DEPTH TO FLOATING PRODUCT (feet)	FLOATING PRODUCT THICKNESS (feet)	WELL TOTAL DEPTH (feet)	COMMENTS
9	MW-1	OK	YES	YES	2357	YES	10.64	10.64	ND	NR	11.1	
1	MW-2			YES	17		13.06	13.06	ND	NR	19.1	WATER IN BOX
7	MW-3			YES	11		10.79	10.79	ND	NR	17.3	STRONG ODOR
8	MW-4			YES	11		10.51	10.51	ND	NR	17.8	
10	MW-5			YES	11		11.21	11.21	ND	NR	17.7	
6	MW-6			YES	11		10.03	10.03	ND	NR	19.0	
2	MW-7			YES	11		9.54	9.54	ND	NR	19.0	WATER IN BOX
3	MW-8			YES	11		8.32	8.32	ND	NR	20.5	
4	MW-9			YES	11		10.17	10.17	ND	NR	11.5	
5	MW-10			YES	11		10.21	10.21	ND	NR	12.5	



WATER SAMPLE FIELD DATA SHEET

EMCON ASSOCIATES

PROJECT NO: 0667-051.01
PURGED BY: IAN GRAHAM
SAMPLED BY: IAN GRAHAM

SAMPLE ID: MW-1
CLIENT NAME: 204-5508-58.01
LOCATION: 630 HIGH ST.
OAKLAND, CA,

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>.30</u>
DEPTH TO WATER (feet): <u>10.64</u>	CALCULATED PURGE (gal.): <u>.90</u>
DEPTH OF WELL (feet): <u>11.1</u> <u>.46</u>	ACTUAL PURGE VOL. (gal.): <u>.50</u>

DATE PURGED: <u>11-18-92</u>	Start (2400 Hr) <u>1404</u>	End (2400 Hr) <u>1406</u>
DATE SAMPLED: <u>11-18-92</u>	Start (2400 Hr) <u>1420</u>	End (2400 Hr) <u>1420</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1405</u>	<u>.50</u>	<u>6.78</u>	<u>2370</u>	<u>69.8</u>	<u>LT. GREY</u>	<u>HEAVY</u>
<u>1406</u>	<u>WELL DIED @</u>		<u>.5 GAL W/L @</u>	<u>10.98</u>		
	<u>NOT ENOUGH WATER FOR RECHARGE READING</u>					
D. O. (ppm): <u>NR</u>	ODOR: _____				<u>NR</u> (COBALT 0 - 100)	<u>7200</u> (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT

SAMPLING EQUIPMENT

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
| Other: _____ | | Other: _____ | |

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1330 Meter Serial #: 9105 Temperature °F: _____
(EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)
Location of previous calibration: MW-4

Signature: [Signature] Reviewed By: [Signature] Page 1 of 10



EMCON ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: OG67-051.01

SAMPLE ID: MW-2

PURGED BY: IAN GRAHAM

CLIENT NAME: 204-5508-58.01

SAMPLED BY: IAN GRAHAM

LOCATION: 630 HIGH ST.
OAKLAND, CA,

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>3.90</u>
DEPTH TO WATER (feet): <u>13.06</u>	CALCULATED PURGE (gal.): <u>11.83</u>
DEPTH OF WELL (feet): <u>19.1</u>	ACTUAL PURGE VOL. (gal.): <u>12.0</u>

DATE PURGED: <u>11-18-92</u>	Start (2400 Hr) <u>1030</u>	End (2400 Hr) <u>1045</u>
DATE SAMPLED: <u>11-18-92</u>	Start (2400 Hr) <u>1047</u>	End (2400 Hr) <u>1047</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1037</u>	<u>4.0</u>	<u>6.45</u>	<u>957</u>	<u>64.5</u>	<u>LT. GREY</u>	<u>MODERATE</u>
<u>1040</u>	<u>8.0</u>	<u>6.61</u>	<u>964</u>	<u>69.4</u>	<u>"</u>	<u>"</u>
<u>1045</u>	<u>12.0</u>	<u>6.66</u>	<u>994</u>	<u>70.1</u>	<u>"</u>	<u>"</u>

D. O. (ppm): NR ODOR: ND NR 170
(COBALT 0 - 100) (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT

SAMPLING EQUIPMENT

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
| Other: _____ | | Other: _____ | |

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1000 Meter Serial #: 9105 Temperature °F: 57.3
 (EC 1000 1199 / 1000) (DI 18.00) (pH 7 6.99 / 7.00) (pH 10 10.05 / 10.00) (pH 4 3.91 / _____)

Location of previous calibration: _____

Signature: [Signature] Reviewed By: [Signature] Page 2 of 10



EMCON ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: 0667-051.01

SAMPLE ID: MW-3

PURGED BY: IAN GRAHAM

CLIENT NAME: 204-5508-58.01

SAMPLED BY: IAN GRAHAM

LOCATION: 630 HIGH ST.

OAKLAND, CA

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL):	<u>NR</u>	VOLUME IN CASING (gal.):	<u>4.5</u>
DEPTH TO WATER (feet):	<u>10.79</u>	CALCULATED PURGE (gal.):	<u>12.75</u>
DEPTH OF WELL (feet):	<u>17.3</u> <u>651</u>	ACTUAL PURGE VOL. (gal.):	<u>9.5</u>

DATE PURGED: 11-18-92 Start (2400 Hr) 1315 End (2400 Hr) 1323
 DATE SAMPLED: 11-18-92 Start (2400 Hr) 1338 End (2400 Hr) 1338

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1318</u>	<u>4.5</u>	<u>6.84</u>	<u>1194</u>	<u>70.7</u>	<u>LT. GREEN</u>	<u>HEAVY</u>
<u>1321</u>	<u>9.0</u>	<u>6.82</u>	<u>1203</u>	<u>70.4</u>	<u>11</u>	<u>11</u>
<u>1323</u>	<u>WELL DRIED @ 9.5 GAL</u>		<u>W/L @ 17.21</u>		<u>11</u>	<u>11</u>
<u>1336</u>	<u>RECHARGE</u>	<u>6.90</u>	<u>1018</u>	<u>69.3</u>	<u>11</u>	<u>11</u>

D. O. (ppm): NR ODOR: STRONG NR >200
 (COBALT 0 - 100) (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT **SAMPLING EQUIPMENT**

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
| Other: _____ | | Other: _____ | |

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: _____ Meter Serial #: _____ Temperature °F: _____
(EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)

Location of previous calibration: _____

Signature: [Signature] Reviewed By: [Signature] Page 3 of 10



EMCON ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: 0667-051.01

SAMPLE ID: MW-4

PURGED BY: IAN GRAHAM

CLIENT NAME: 204-5508-58.01

SAMPLED BY: IAN GRAHAM

LOCATION: 630 HIGH ST.
OAKLAND, CA

TYPE: Ground Water Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER (inches): 2 _____ 3 _____ 4 4.5 _____ 6 _____ Other _____

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>4.76</u>
DEPTH TO WATER (feet): <u>10.51</u>	CALCULATED PURGE (gal.): <u>14.28</u>
DEPTH OF WELL (feet): <u>17.8</u> <small>1.29</small>	ACTUAL PURGE VOL. (gal.): <u>14.5</u>

DATE PURGED: <u>11-18-92</u>	Start (2400 Hr) <u>1340</u>	End (2400 Hr) <u>1354</u>
DATE SAMPLED: <u>11-18-92</u>	Start (2400 Hr) <u>1356</u>	End (2400 Hr) <u>1356</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1344</u>	<u>5.0</u>	<u>6.72</u>	<u>1489</u>	<u>68.8</u>	<u>LT. GREY</u>	<u>MODERATE</u>
<u>1349</u>	<u>10.0</u>	<u>6.74</u>	<u>16998</u>	<u>68.9</u>	<u>11</u>	<u>11</u>
<u>1354</u>	<u>14.5</u>	<u>6.80</u>	<u>16740</u>	<u>68.7</u>	<u>11</u>	<u>11</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

D. O. (ppm): NR ODOR: STRONG COBALT 0 - 100: NR NTU 0 - 200: 121.0

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> DDL Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____	Other: _____	Other: _____	Other: _____

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1330 Meter Serial #: 9105 Temperature °F: 74.0
 (EC 1000 10% / 1000) (DI 19.00) (pH 7 6.96 / 7.00) (pH 10 10.03 / 10.00) (pH 4 3.94 / _____)

Location of previous calibration: _____

Signature: [Signature] Reviewed By: [Signature] Page 4 of 10



EMCON ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: 0667-051.01

SAMPLE ID: MW-5

PURGED BY: IAN GRAHAM

CLIENT NAME: 204-5508-58.01

SAMPLED BY: IAN GRAHAM

LOCATION: 630 HIGH ST., OAKLAND, CA

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL):	<u>NR</u>	VOLUME IN CASING (gal.):	<u>4.24</u>
DEPTH TO WATER (feet):	<u>11.21</u>	CALCULATED PURGE (gal.):	<u>12.72</u>
DEPTH OF WELL (feet):	<u>17.7</u> <u>6.49</u>	ACTUAL PURGE VOL. (gal.):	<u>13.0</u>

DATE PURGED:	<u>11-18-92</u>	Start (2400 Hr)	<u>1425</u>	End (2400 Hr)	<u>1435</u>
DATE SAMPLED:	<u>11-18-92</u>	Start (2400 Hr)	<u>1437</u>	End (2400 Hr)	<u>1437</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1429</u>	<u>4.5</u>	<u>6.80</u>	<u>958</u>	<u>70.2</u>	<u>GREY</u>	<u>HEAVY</u>
<u>1433</u>	<u>9.0</u>	<u>6.68</u>	<u>924</u>	<u>71.1</u>	<u>n</u>	<u>n</u>
<u>1435</u>	<u>13.0</u>	<u>6.74</u>	<u>945</u>	<u>70.9</u>	<u>n</u>	<u>n</u>

D. O. (ppm): NR ODOR: STRONG NR 196.0
(COBALT 0 - 100) (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): FB

PURGING EQUIPMENT

SAMPLING EQUIPMENT

<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> DDL Samplier	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1330 Meter Serial #: 9105 Temperature °F: _____
 (EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)

Location of previous calibration: MW-4

Signature: [Signature] Reviewed By: [Signature] Page 5 of 10



EMCON ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

Rev. 2, 5/91

PROJECT NO: 0667-051.01

SAMPLE ID: MW-6

PURGED BY: IAN GRAHAM

CLIENT NAME: 204-5508-58.01

SAMPLED BY: IAN GRAHAM

LOCATION: 630 HIGH ST.

OAKLAND, CA

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>5.85</u>
DEPTH TO WATER (feet): <u>10.04</u>	CALCULATED PURGE (gal.): <u>17.56</u>
DEPTH OF WELL (feet): <u>19.0</u> <small>3.76</small>	ACTUAL PURGE VOL. (gal.): <u>18.0</u>

DATE PURGED: <u>11-18-92</u>	Start (2400 Hr) <u>1252</u>	End (2400 Hr) <u>1309</u>
DATE SAMPLED: <u>11-18-92</u>	Start (2400 Hr) <u>1310</u>	End (2400 Hr) <u>1310</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1256</u>	<u>6.0</u>	<u>6.75</u>	<u>1223</u>	<u>71.0</u>	<u>LT. GREY</u>	<u>MODERATE</u>
<u>1302</u>	<u>12.0</u>	<u>6.77</u>	<u>1152</u>	<u>72.7</u>	<u>"</u>	<u>"</u>
<u>1309</u>	<u>18.0</u>	<u>6.86</u>	<u>1166</u>	<u>72.5</u>	<u>"</u>	<u>"</u>

D. O. (ppm): NR ODOR: ND NR 123.0
(COBALT 0 - 100) (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT

SAMPLING EQUIPMENT

<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> DDL Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1000 Meter Serial #: 9105 Temperature °F: _____
(EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)

Location of previous calibration: MW-2

Signature: [Signature] Reviewed By: [Signature] Page 6 of 10



WATER SAMPLE FIELD DATA SHEET

EMCON
ASSOCIATES

PROJECT NO: OG67-051.01
PURGED BY: IAN GRAHAM
SAMPLED BY: IAN GRAHAM

SAMPLE ID: MW-7
CLIENT NAME: 204-5508-58.01
LOCATION: 630 HIGH ST.
OAKLAND, CA

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>6.18</u>
DEPTH TO WATER (feet): <u>9.54</u>	CALCULATED PURGE (gal.): <u>18.54</u>
DEPTH OF WELL (feet): <u>19.0</u> <u>9.46</u>	ACTUAL PURGE VOL. (gal.): <u>19.0</u>

DATE PURGED: <u>11-18-92</u>	Start (2400 Hr) <u>1156</u>	End (2400 Hr) <u>1210</u>
DATE SAMPLED: <u>11-18-92</u>	Start (2400 Hr) <u>1212</u>	End (2400 Hr) <u>1212</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1201</u>	<u>6.5</u>	<u>6.93</u>	<u>1137</u>	<u>67.2</u>	<u>CLEAR</u>	<u>LIGHT</u>
<u>1205</u>	<u>13.0</u>	<u>7.04</u>	<u>1142</u>	<u>69.2</u>	<u>"</u>	<u>"</u>
<u>1210</u>	<u>19.0</u>	<u>7.12</u>	<u>1167</u>	<u>68.9</u>	<u>"</u>	<u>"</u>

D. O. (ppm): NR ODOR: NO NR 68.0
(COBALT 0 - 100) (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT

SAMPLING EQUIPMENT

<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> DDL Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____	Other: _____	Other: _____	Other: _____

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1000 Meter Serial #: 9105 Temperature °F: _____
 (EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)
 Location of previous calibration: MW-2

Signature: [Signature] Reviewed By: [Signature] Page 7 of 10



WATER SAMPLE FIELD DATA SHEET

EMCON
ASSOCIATES

PROJECT NO: OG67-051.01

SAMPLE ID: MW-8

PURGED BY: IAN GRAHAM

CLIENT NAME: 204-5508-58.01

SAMPLED BY: IAN GRAHAM

LOCATION: 630 HIGH ST.
OAKLAND, CA

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>7.95</u>
DEPTH TO WATER (feet): <u>8.32</u>	CALCULATED PURGE (gal.): <u>23.87</u>
DEPTH OF WELL (feet): <u>20.5</u> <u>12.15</u>	ACTUAL PURGE VOL. (gal.): <u>24.0</u>

DATE PURGED: <u>11-18-92</u>	Start (2400 Hr) <u>1126</u>	End (2400 Hr) <u>1140</u>
DATE SAMPLED: <u>11-18-92</u>	Start (2400 Hr) <u>1142</u>	End (2400 Hr) <u>1142</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1131</u>	<u>8.0</u>	<u>6.95</u>	<u>1190</u>	<u>65.2</u>	<u>LT. GREEN</u>	<u>MODERATE</u>
<u>1135</u>	<u>16.0</u>	<u>6.93</u>	<u>1235</u>	<u>65.3</u>	<u>11</u>	<u>11</u>
<u>1140</u>	<u>24.0</u>	<u>6.99</u>	<u>1243</u>	<u>65.5</u>	<u>11</u>	<u>11</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

D. O. (ppm): NR ODOR: ND NR 129.0
(COBALT 0 - 100) (NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> DDL Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1000 Meter Serial #: 9105 Temperature °F: _____
 (EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)
 Location of previous calibration: MW-2

Signature: [Signature] Reviewed By: [Signature] Page 8 of 10



WATER SAMPLE FIELD DATA SHEET

EMCON ASSOCIATES

PROJECT NO: OG67-051.01
PURGED BY: IAN GRAHAM
SAMPLED BY: IAN GRAHAM

SAMPLE ID: MW-9
CLIENT NAME: 204-5508-58.01
LOCATION: 630 HIGH ST.
OAKLAND, CA

TYPE: Ground Water Surface Water _____ Treatment Effluent _____ Other _____
CASING DIAMETER (inches): 2 _____ 3 _____ 4 4.5 _____ 6 _____ Other _____

CASING ELEVATION (feet/MSL): NR VOLUME IN CASING (gal.): .86
DEPTH TO WATER (feet): 10.17 CALCULATED PURGE (gal.): 2.60
DEPTH OF WELL (feet): 11.5 ACTUAL PURGE VOL. (gal.): 1.50
132

DATE PURGED: <u>11-18-92</u>	Start (2400 Hr) <u>1058</u>	End (2400 Hr) <u>1105</u>				
DATE SAMPLED: <u>11-18-92</u>	Start (2400 Hr) <u>1115</u>	End (2400 Hr) <u>1115</u>				
TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1101</u>	<u>1.0</u> <u>2.0</u>	<u>6.76</u>	<u>588</u>	<u>69.5</u>	<u>CLOUDY CLR</u>	<u>MODERATE</u>
<u>1105</u>	<u>3.0 WELL DRIED</u>	<u>DRIED</u>	<u>@ 1.5 GAL</u>			
<u>1114</u>	<u>RECHARGE</u>	<u>6.81</u>	<u>590</u>	<u>69.6</u>	<u>11</u>	<u>4</u>
D. O. (ppm): <u>NR</u>	ODOR: <u>ND</u>				<u>NR</u>	<u>119.0</u>
					(COBALT 0 - 100)	(NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT

SAMPLING EQUIPMENT

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
| Other: _____ | | Other: _____ | |

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1000 Meter Serial #: 9105 Temperature °F: _____
(EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)
Location of previous calibration: MW-2

Signature: [Signature] Reviewed By: [Signature] Page 9 of 10



WATER SAMPLE FIELD DATA SHEET

PROJECT NO: OG67-051.01
 PURGED BY: IAN GRAHAM
 SAMPLED BY: IAN GRAHAM

SAMPLE ID: MW-10
 CLIENT NAME: 204-5508-58.01
 LOCATION: 630 HIGH ST.
OAKLAND, CA

TYPE: Ground Water Surface Water _____ Treatment Effluent _____ Other _____
 CASING DIAMETER (inches): 2 _____ 3 _____ 4 4.5 _____ 6 _____ Other _____

CASING ELEVATION (feet/MSL): NR VOLUME IN CASING (gal.): 1.49
 DEPTH TO WATER (feet): 10.21 CALCULATED PURGE (gal.): 4.48
 DEPTH OF WELL (feet): 12.5 ACTUAL PURGE VOL. (gal.): 2.0
2.29

DATE PURGED: 11-18-92 Start (2400 Hr) 1226 End (2400 Hr) 1233
 DATE SAMPLED: 11-18-92 Start (2400 Hr) 1243 End (2400 Hr) 1243

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1230</u>	<u>1.5</u>	<u>7.05</u>	<u>1720</u>	<u>69.0</u>	<u>LT. GREY</u>	<u>MODERATE</u>
<u>1233</u>	<u>WELL DRIED @ 2.0 GAL W/L @ 12,34</u>					
<u>1242</u>	<u>RECHARGE</u>	<u>7.46</u>	<u>1738</u>	<u>69.8</u>	<u>11</u>	<u>11</u>
D. O. (ppm):	<u>NR</u>	ODOR:	<u>ND</u>		<u>NR</u>	<u>89.0</u>
					(COBALT 0 - 100)	(NTU 0 - 200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): NONE

PURGING EQUIPMENT

SAMPLING EQUIPMENT

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
| Other: _____ | | Other: _____ | |

WELL INTEGRITY: OK LOCK #: 2357

REMARKS: _____

Meter Calibration: Date: 11-18-92 Time: 1000 Meter Serial #: 9105 Temperature °F: _____
 (EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)
 Location of previous calibration: MW-2

Signature: [Signature] Reviewed By: [Signature] Page 10 of 10