3714

GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

December 9, 1992

Alameda County
Department of Environmental Health
80 Swan Way, Suite 200
Oakland, California 94621

Attention: Ms. Jennifer Eberle

Reference: Shell Service Station
350 Grand Avenue
Oakland, California
WIC 204-5510-0204

Ms. Eberle:

As requested by Mr. Dan Kirk of Shell Oil Company, we are forwarding a copy of the December 9, 1992 Quarterly Report for the above referenced location. This report presents the results of the ground-water sampling conducted during the fourth quarter of 1992.

The hydropunch investigation proposed in our August 6, 1992 Work Plan will be completed in the first quarter of 1993. These proposed activities have been delayed until January 1993 due to a moratorium on street work through December 1992.

:ellens\667-s.wp

If you have any questions, please call.

Sincerely,

Ellen Fostersmith

Ellen Fostersmith
Geologist

enclosure

cc: Mr. Dan Kirk, Shell Oil Company
Mr. Lester Feldman, Regional Water Quality Control Board

:ellens\667-s.wp

GeoStrategies Inc.

QUARTERLY REPORT

Shell Service Station
350 Grand Avenue
Oakland, California
WIC# 204-5510-0204

766702-11

December 9, 1992

GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

December 9, 1992

Shell Oil Company
P. O. Box 5278
Concord, California 94520

Attn: Mr. Dan Kirk

Re: QUARTERLY REPORT
Shell Service Station
350 Grand Avenue
Oakland, California
WIC# 204-5510-0204

Mr. Kirk:

This Quarterly Report has been prepared by GeoStrategies Inc. (GSI) and presents the results of the 1992 fourth quarter sampling for the above-referenced site (Plate 1). Sampling data were furnished by the Shell Oil Company sampling contractor.

There are currently three ground-water monitoring wells at the site; Wells S-1 through S-3 (Plate 2). In addition, five exploratory soil borings have been drilled at the site (S-A through S-E). These wells and borings were installed and drilled in 1990 by GSI.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well on October 6, 1992. Static ground-water levels were measured from the surveyed top of each well box and recorded to the nearest ±0.01 foot. Water level elevations, referenced to Mean Sea Level (MSL) datum and the stabilized values of measured physical parameters are presented in the EMCON monitoring report (Appendix A). Water level data were used to construct a quarterly water-level map (Plate 2). Historically, shallow ground-water flow has been to the south, towards Lake Merritt, at an approximate gradient of 0.02.

Each well was checked for the presence of floating product. Floating product was not observed in the wells this quarter.

but this time (+ previously) it's kinda N

Not There

S-1 had a sheen!

766702-11

Ground-water samples were collected on October 6, 1992. Samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline) and as Diesel (TPH-Diesel) according to EPA Method 8015 (Modified, and for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) according to EPA Method 8020. The ground-water samples were analyzed by Anametrix, Inc., a California State-certified laboratory located in San Jose, California. The laboratory analytical report and Chain-of-Custody form are presented in Appendix A. A chemical isoconcentration map for benzene is presented on Plate 3. Historical chemical analytical data are presented in Appendix A.

If you have any question, please call.

GeoStrategies Inc. by,

Ellen C. Fostersmith

Ellen C. Fostersmith
Geologist

Michael Carey

Michael Carey
Engineering Geologist
C.E.G. 1351

CERTIFIED ENGINEERING GEOLOGIST
MICHAEL C. CAREY
C.E.G. 1351
EXP: 6-30-94
STATE OF CALIFORNIA

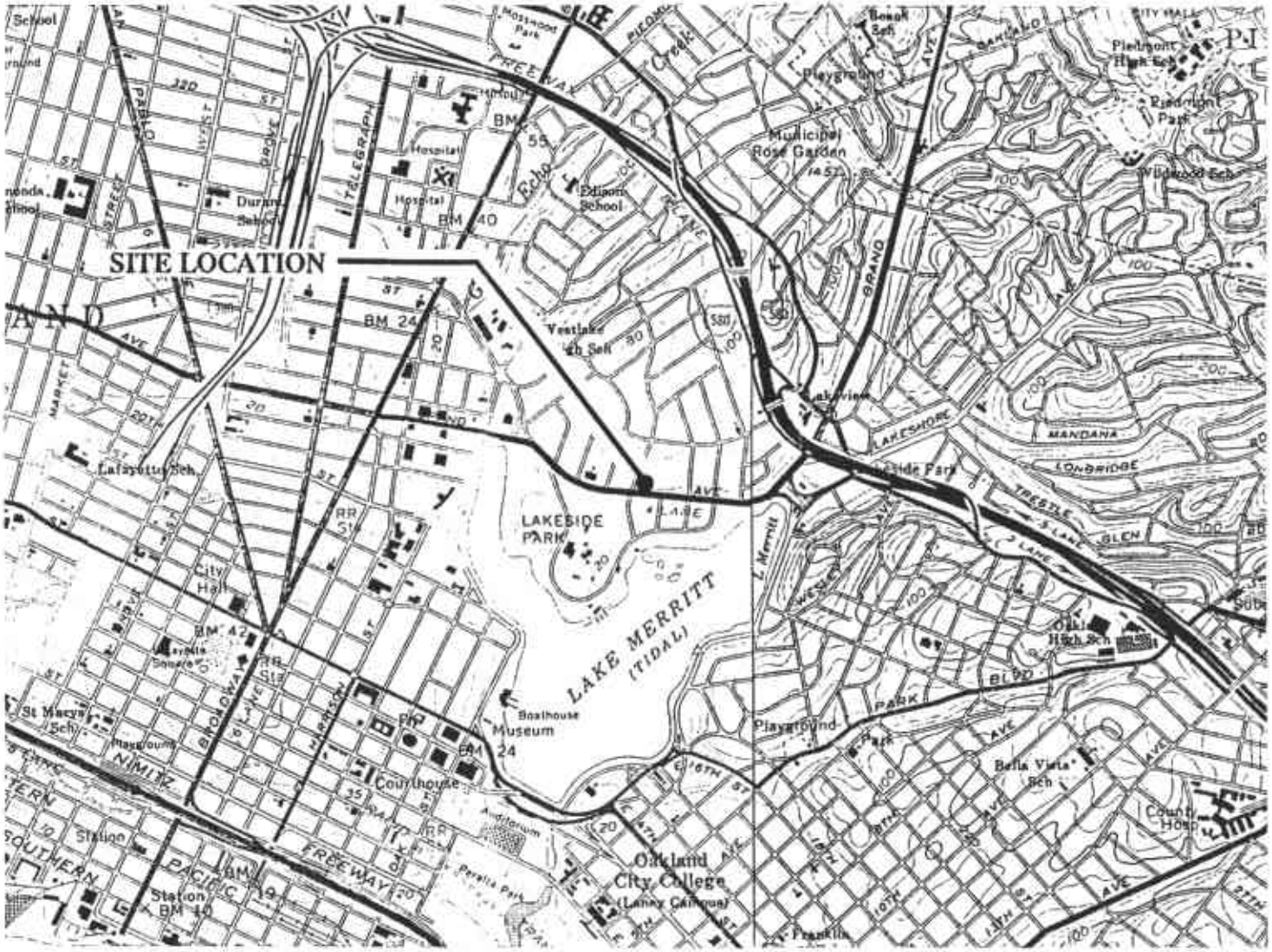
ECF/MCC/rmt

Plate 1. Vicinity Map
Plate 2. Site Plan/Potentiometric Map
Plate 3. Benzene Isoconcentration Map

Appendix A: EMCON Monitoring Report and Chain-of-Custody

QC Review: JW

766702-11



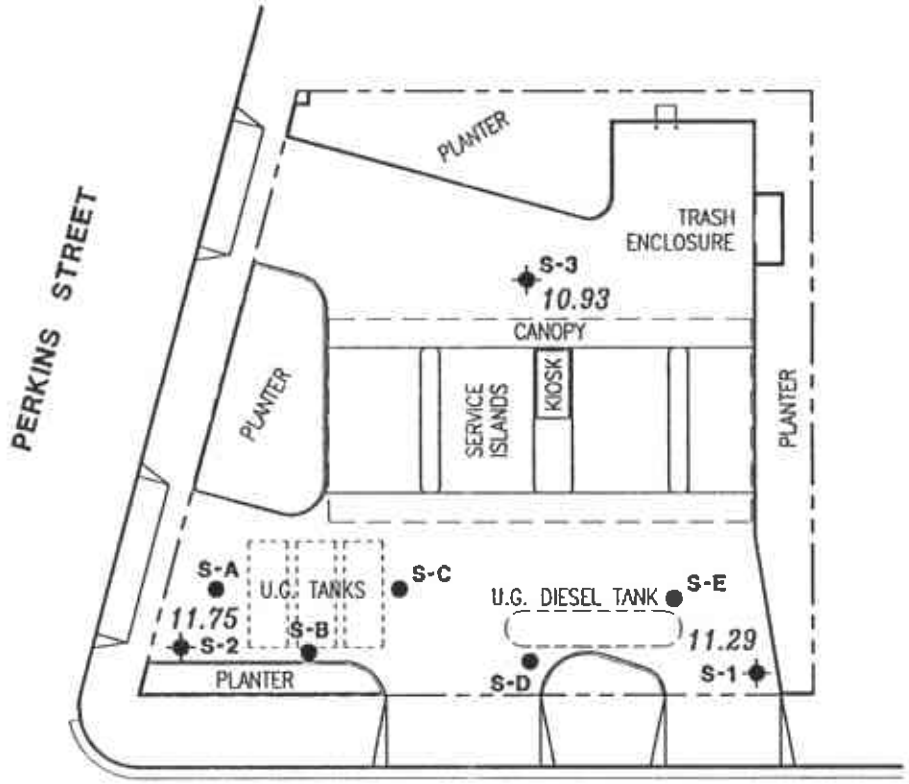
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
Shell Service Station
350 Grand Avenue
Oakland, California

PLATE
1

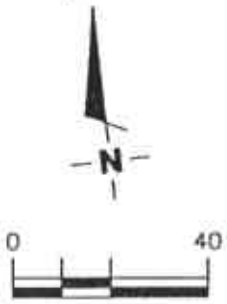
JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7667		3/91	



EXPLANATION

- ✦ Ground-water monitoring well
- ● Soil boring
- ***99.99*** Ground-water elevation in feet referenced to Mean Sea Level (MSL) measured on October 6, 1992

NOTES:
1. Water levels may be influenced by irrigation practices and/or site construction activities.
2. Well S-3 appeares anomalous and was not used in contouring.



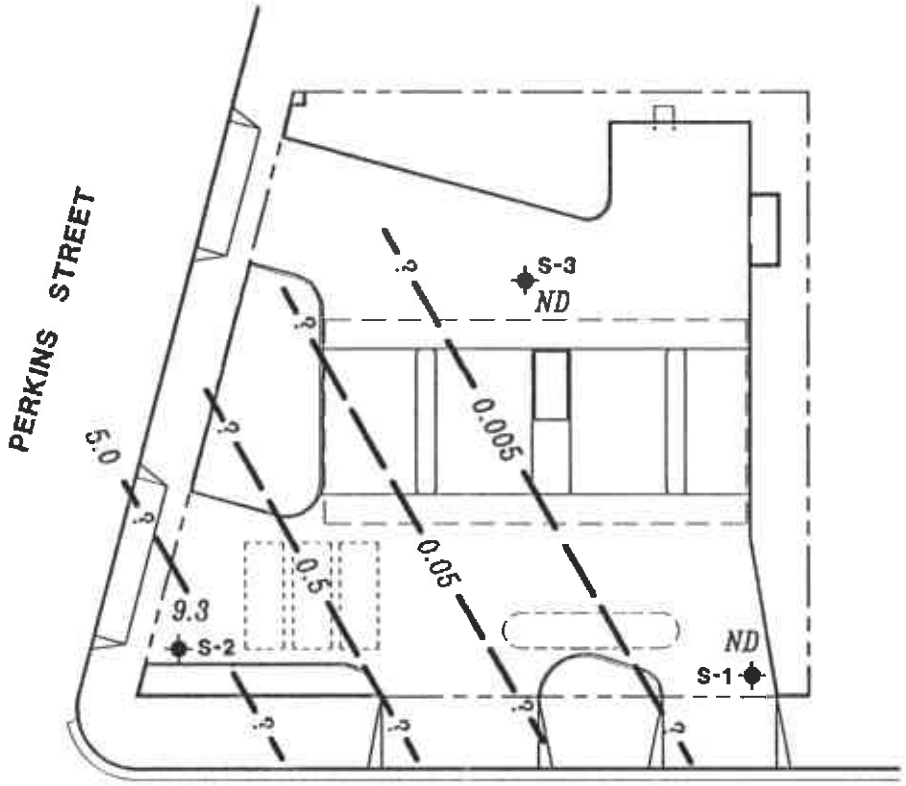
Base Map: Shell Site Plan dated 12-21-89

GeoStrategies Inc.

SITE PLAN/WATER LEVEL MAP
Shell Service Station
350 Grand Avenue
Oakland, California

PLATE **2**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
766702-11		12/92	



EXPLANATION

- Ground-water monitoring well
- 0.05 — Benzene isoconcentration contour
- *0.05* — Benzene concentration in ppm sampled on October 6, 1992
- *ND* — Not Detected (See laboratory reports for detection limits)

N

0 40

Scale in Feet

Base Map: Shell Site Plan dated 12-21-89

GeoStrategies Inc.

BENZENE ISOCONCENTRATION MAP
Shell Service Station
350 Grand Avenue
Oakland, California

PLATE **3**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
766702-11		12/92	

APPENDIX A
LABORATORY ANALYTICAL REPORT
AND
CHAIN-OF-CUSTODY FORM

EMCON
ASSOCIATES
Consultants in Wastes
Management and
Environmental Control

November 12, 1992
Project: 0G67-024.01
WIC#: 204-5510-0204

Ms. Ellen Fostersmith
Geo Strategies Inc.
2140 West Winton Avenue
Hayward, California 94545

Re: Fourth quarter 1992 ground-water monitoring report, Shell Oil Company, 350 Grand Avenue, Oakland, California

Dear Ms. Fostersmith:

This letter presents the results of the fourth quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 350 Grand Avenue, Oakland California. Fourth quarter monitoring was conducted on October 6, 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 1 (supplied by Geo Strategies Inc.). During the survey, wells S-1, S-2, and S-3 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 any 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 S-1, S-2, and S-3 on October 6, 1992. Prior to sample collection, the wells were purged with polyvinyl chloride or Teflon® 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. All three wells 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 level sufficient for sample collection. Field measurements from fourth quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from

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

the monitoring wells was contained in a 55-gallon drum. The drum was identified with a Shell-approved label 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 (QC) samples for fourth quarter monitoring included a trip blank (TB), a field blank (FB), and a duplicate well sample (S-2D) collected from well S-2. All water samples collected during fourth quarter monitoring were analyzed for total petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 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

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

Table 1
Monitoring Well Field Measurement Data
Fourth Quarter 1992

Shell Station: 350 Grand Avenue
Oakland, California
WIC #: 204-5510-0204

Date: 11/12/92
Project Number: G67-24.01

Well Designation	Water Level Field Date	TOB Elevation (ft-MSL)	Depth to Water (feet)	Ground-water Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
S-1	10/09/91	20.84	9.62	11.22	17.6	ND	10/09/91	7.19	676	70.1	NR
S-1	01/23/92	20.84	8.94	11.90	17.5	ND	01/23/92	6.65	749	60.9	>200
S-1	04/27/92	20.84	7.06	13.78	17.3	ND	04/27/92	6.94	707	67.7	>200
S-1	07/10/92	20.84	8.31	12.53	17.6	ND	07/10/92	6.72	785	74.4	229
S-1	10/06/92	20.84	9.55	11.29	17.6	SHEEN	10/06/92	6.75	709	76.1	238
S-2	10/09/91	21.24	10.26	10.98	15.0	ND	10/09/91	6.67	680	71.9	NR
S-2	01/23/92	21.24	9.51	11.73	15.0	ND	01/23/92	6.35	1150	51.8	>200
S-2	04/27/92	21.24	7.83	13.41	14.8	ND	04/27/92	6.66	1094	74.1	>200
S-2	07/10/92	21.24	8.57	12.67	15.0	ND	07/10/92	6.40	1017	76.2	425
S-2	10/06/92	21.24	9.49	11.75	15.0	ND	10/06/92	6.27	843	75.4	224
S-3	10/09/91	22.70	12.98	9.72	15.1	ND	10/09/91	6.51	451	70.1	NR
S-3	01/23/92	22.70	13.06	9.64	15.0	ND	01/23/92	5.58	544	55.5	>200
S-3	04/27/92	22.70	7.25	15.45	14.7	ND	04/28/92	6.80	667	72.4	>200
S-3	07/10/92	22.70	8.46	14.24	15.0	ND	07/11/92	7.13	490	76.3	128
S-3	10/06/92	22.70	11.77	10.93	15.0	ND	10/06/92	6.11	542	79.3	175

TOB = top of well box
ft-MSL = elevation in feet, relative to mean sea level
std. units = standard pH units
micromhos/cm = micromhos per centimeter
degrees F = degrees Fahrenheit
NTU = nephelometric turbidity units
ND = None detected
NR = Not reported; data not available

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

Shell Station: 350 Grand Avenue
Oakland, California
WIC #: 204-5510-0204

Date: 11/12/92
Project Number: G67-24.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l) ppb	Benzene (mg/l) ppb	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)	TPH-d (mg/l) ppb
S-1	10/09/91	0.12	0.010	<0.0005	<0.0005	<0.0005	0.26^
S-1	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-1	04/27/92	<0.05	0.0012	<0.0005	<0.0005	<0.0005	0.07*
S-1	07/10/92	<0.05	0.013	<0.0005	<0.0005	<0.0005	0.093
S-1	10/06/92	0.062 62	<0.0005 ND	<0.0005	<0.0005	<0.0005	0.11 110
S-2	10/09/91	29.	6.3	0.51	1.7	2.4	32.*
S-2	01/23/92	31.	5.8	0.48	2.0	2.7	36.*
S-2	04/27/92	21.+	4.8	0.32	1.6	1.4	12.*
S-2	07/10/92	31.	7.5	0.94	3.4	3.5	3.7@
S-2	10/06/92	57. 57,000	9.3 4,300	1.2	4.0	4.9	4.5@ 4,500
S-2 Duplicate	10/06/92	58. 58,000	9.0 9,000	0.97	3.9	4.6	3.8@ 3,800
S-3	10/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA
S-3	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA$
S-3	04/28/92	<0.05	0.0005	<0.0005	<0.0005	<0.0005	0.10
S-3	07/11/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.068
S-3	10/06/92	<0.05 ND	<0.0005 ND	<0.0005	<0.0005	<0.0005	<0.10& ND

TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
^ = Compounds detected and calculated as diesel are not characteristic of the standard diesel chromatographic pattern
* = Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline
+ = Compounds detected and calculated as gasoline are not characteristic of the standard gasoline chromatographic pattern
@ = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene
NA = Not analyzed
$ = Well dried during purging and did not recover to a level sufficient for collection of a sample for analysis of TPH-d
& = The TPHd reporting limit was increased due to the low sample volume available

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

Shell Station: 350 Grand Avenue
Oakland, California
WIC #: 204-5510-0204

Date: 11/12/92
Project Number: G67-24.01

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)
TB	10/09/91	NR	NR	NR	NR	NR	NR
TB	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
TB	04/28/92	<0.05	0.0011	<0.0005	<0.0005	<0.0005	<0.05
TB	07/10/92	<0.05	<0.0005	0.0007	<0.0005	0.0006	<0.05
TB	10/06/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
FB	07/10/92	0.055	<0.0005	0.0015	<0.0005	0.0014	<0.05
FB	10/06/92	<0.05	<0.0005	0.0015	<0.0005	0.0008	<0.05

TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
NR = Not reported; data not available

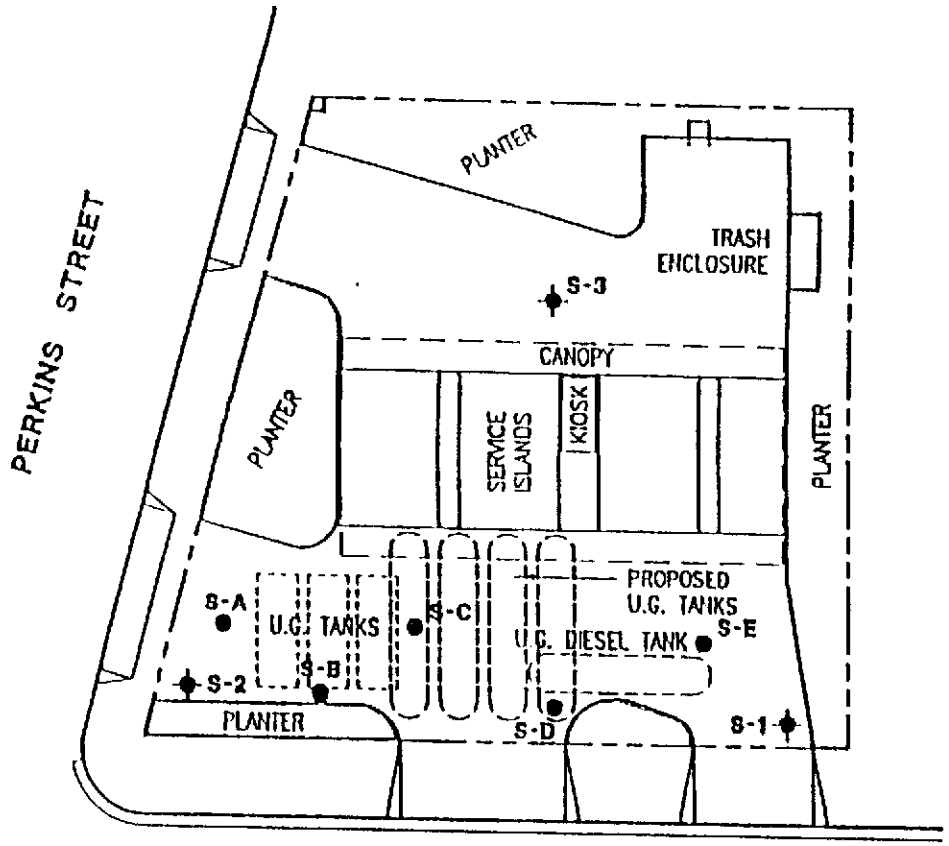
Table 2
Summary of Analytical Results
Fourth Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 350 Grand Avenue
Oakland, California
WIC #: 204-5510-0204

Date: 11/12/92
Project Number: G67-24.01

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)
TB	10/09/91	NR	NR	NR	NR	NR	NR
TB	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
TB	04/28/92	<0.05	0.0011	<0.0005	<0.0005	<0.0005	<0.05
TB	07/10/92	<0.05	<0.0005	0.0007	<0.0005	0.0006	<0.05
TB	10/06/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
FB	07/10/92	0.055	<0.0005	0.0015	<0.0005	0.0014	<0.05
FB	10/06/92	<0.05	<0.0005	0.0015	<0.0005	0.0008	<0.05

TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
NR = Not reported; data not available



EXPLANATION

- Ground-water monitoring well
- Soil boring

Figure 1
(Supplied by Geo Strategies, Inc.)

N

0 40

Scale in Feet

Base Map: Shell Site Plan dated 12-21-89

GeoStrategies Inc.

SITE PLAN
Shell Service Station
350 Grand Avenue
Oakland, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
66702-5	CFS	9/91	

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of INCHCAPE ENVIRONMENTAL

REPORT

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

Workorder # : 9210082
Date Received : 10/06/92
Project ID : 204-5510-0204
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9210082- 1	S-3
9210082- 2	S-1
9210082- 3	S-2
9210082- 4	S-2D
9210082- 5	TB
9210082- 6	FB

This report consists of 8 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

10-21-92
Date

EMCON ASSOCIATES

OCT 22 1992

RECEIVED

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

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

Workorder # : 9210082
Date Received : 10/06/92
Project ID : 204-5510-0204
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210082- 1	S-3	WATER	10/06/92	TPHd
9210082- 2	S-1	WATER	10/06/92	TPHd
9210082- 3	S-2	WATER	10/06/92	TPHd
9210082- 4	S-2D	WATER	10/06/92	TPHd
9210082- 5	TB	WATER	09/30/92	TPHd
9210082- 6	FB	WATER	10/06/92	TPHd
9210082- 1	S-3	WATER	10/06/92	TPHg/BTEX
9210082- 2	S-1	WATER	10/06/92	TPHg/BTEX
9210082- 3	S-2	WATER	10/06/92	TPHg/BTEX
9210082- 4	S-2D	WATER	10/06/92	TPHg/BTEX
9210082- 5	TB	WATER	09/30/92	TPHg/BTEX
9210082- 6	FB	WATER	10/06/92	TPHg/BTEX

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

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

Workorder # : 9210082
Date Received : 10/06/92
Project ID : 204-5510-0204
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The surrogate recovery for the laboratory control sample is outside of quality control limits due to an individual purge and trap vessel leak.
- The concentrations reported as diesel for samples S-2 and S-2D are primarily due to the presence of a lighter petroleum product, possibly gasoline.
- The TPHd reporting limit for sample S-3 was increased due to the low sample volume available.

Cheryl Baerner 10/21/92
Department Supervisor Date

Lucca Stor 10/21/92
Chemist Date

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

Anametrix W.O.: 9210082
Matrix : WATER
Date Sampled : 09/30 & 10/06/92

Project Number : 204-5510-0204
Date Released : 10/19/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# S-3 -01	Sample I.D.# S-1 -02	Sample I.D.# S-2 -03	Sample I.D.# S-2D -04	Sample I.D.# TB -05
Benzene	0.0005	ND	ND	9.3	9.0	ND
Toluene	0.0005	ND	ND	1.2	0.97	ND
Ethylbenzene	0.0005	ND	ND	4.0	3.9	ND
Total Xylenes	0.0005	ND	ND	4.9	4.6	ND
TPH as Gasoline	0.050	ND	0.062	57	58	ND
% Surrogate Recovery		95%	99%	94%	96%	103%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/09/92	10/09/92	10/09/92	10/09/92	10/09/92
RLMF		1	1	1000	1000	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 10/20/92
Analyst Date

Cheryl Bedner 10/19/92
Supervisor Date

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

Anametrix W.O.: 9210082
Matrix : WATER
Date Sampled : 10/06/92

Project Number : 204-5510-0204
Date Released : 10/19/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# FB -06	Sample I.D.# BO0902E3 BLANK
Benzene	0.0005	ND	ND
Toluene	0.0005	0.0015	ND
Ethylbenzene	0.0005	ND	ND
Total Xylenes	0.0005	0.0008	ND
TPH as Gasoline	0.050	ND	ND
% Surrogate Recovery		99%	95%
Instrument I.D.		HP12	HP12
Date Analyzed		10/09/92	10/09/92
RLMF		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 10/20/92
Analyst / Date

Cheryl Balmer 10/19/92
Supervisor / Date

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

Anametrix W.O.: 9210082
Matrix : WATER
Date Sampled : 09/30 & 10/06/92
Date Extracted: 10/12/92

Project Number : 204-5510-0204
Date Released : 10/19/92
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9210082-01	S-3	10/13/92	0.10	ND
9210082-02	S-1	10/13/92	0.050	0.11
9210082-03	S-2	10/14/92	0.5	4.5
9210082-04	S-2D	10/14/92	0.5	3.8
9210082-05	TB	10/13/92	0.050	ND
9210082-06	FB	10/13/92	0.050	ND
DWBL101292	METHOD BLANK	10/13/92	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 10/21/92
Date

Supervisor 10/21/92
Date

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

Sample I.D. : 204-5510-0204 S-1
Matrix : WATER
Date Sampled : 10/06/92
Date Analyzed : 10/09/92

Anametrix I.D. : 9210082-02
Analyst : RO
Supervisor : CO
Date Released : 10/19/92
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	0.023	115%	0.020	100%	-14%	49-159
TOLUENE	0.020	0.000	0.022	110%	0.020	100%	-10%	53-156
ETHYLBENZENE	0.020	0.000	0.022	110%	0.021	105%	-5%	54-151
TOTAL XYLENES	0.020	0.000	0.020	100%	0.021	105%	5%	56-157
p-BFB				92%		101%		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.	: LCSW1009
Matrix	: WATER	Analyst	: RD
Date Sampled	: N/A	Supervisor	:
Date Analyzed	: 10/09/92	Date Released	: 10/19/92
		Instrument ID	: HP12

COMPOUND	SPIKE AMT. (mg/L)	LCS (mg/L)	REC LCS	%REC LIMITS
Benzene	0.020	0.020	100%	49-159
Toluene	0.020	0.019	95%	53-156
Ethylbenzene	0.020	0.019	95%	54-151
TOTAL Xylenes	0.020	0.019	95%	56-157
P-BFB			47%	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	Anametrix I.D.	: LCSW1012
Matrix	: WATER	Analyst	: RP
Date Sampled	: N/A	Supervisor	: [illegible]
Date Extracted	: 10/12/92	Date Released	: 10/19/92
Date Analyzed	: 10/13/92	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	0.94	75%	1.00	80%	6%	63-130

*Quality control established by Anametrix, Inc.

9210082 (10/33) (18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 1137-C

Date: 10-6-92
Page / of /

Site Address: 350 Grand Avenue Oakland, CA

WIC#: 204-5510-0204

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

Consultant Name & Address: EMCON Associates 1938 Junction Avenue 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: Bart Stafford

Printed Name: Bart Stafford

LAB: Anametrix

CHECK ONE (1) BOX ONLY	CT/DT
Quarterly Monitoring	X 6441
Site Investigation	6441
Soil Classify/Disposal	6442
Water Classify/Disposal	6443
Soil/Air Rem. or Sys. O & M	6462
Water Rem. or Sys. O & M	6463
Other	

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days X (Normal) Other ☐

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

Analysis Required

	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 gasoline	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1	S-3	10-6-92			X		B 4	BB	X				X		40 ml	HCl	No		
2	S-1						5												
3	S-2						5												
4	S-2D						5												
5	TB	9-30-92					4												
6	FB	10-1-92					4												

Relinquished By (signature): Bart Stafford	Printed Name: Bart Stafford	Date: 10-6-92	Received (signature): Maria Barajas	Printed Name: Maria Barajas	Date: 10/6/92
Relinquished By (signature):	Printed Name:	Time: 1750	Received (signature):	Printed Name:	Time: 12:50
Relinquished By (signature):	Printed Name:	Date:	Received (signature):	Printed Name:	Date:
		Time:			Time:
		Date:			Date:
		Time:			Time:

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