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

October 22, 1992

Ms. Susan Hugo
Alameda County
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Reference: Shell Service Station
1800 Powell Street
Emeryville, California
WIC 204-2495-0101

Ms. Hugo:

As requested by Mr. Dan Kirk of Shell Oil Company, we are forwarding a copy of the October 22, 1992 Quarterly Report for the above referenced location. The report presents the results of the ground-water sampling conducted during the third quarter of 1992.

If you have any questions, please call.

Sincerely,

Ellen Fostersmith

Ellen Fostersmith
Geologist

EF/rmt

Enclosure

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

GeoStrategies Inc.

QUARTERLY REPORT

Shell Service Station
1800 Powell Street
Emeryville, California
WIC# 204-2495-0101

760501-16

October 22, 1992

Each well was checked for the presence of floating product. Floating product was observed in wells S-8, S-10 and S-13 this quarter. Well S-9 has contained a high viscosity black sludge-like substance since 1986, and was not monitored or sampled.

Ground-water samples were collected on September 1, 1992. Samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline), according to EPA Method 8015 (Modified) and for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) according to EPA Method 8020. Samples from Wells S-12 and S-14 were also analyzed for TPH-Diesel and TPH-Oil according to EPA Method 8015. The ground-water samples were analyzed by Anametrix Inc., a California State-certified laboratory located in San Jose, California. These data are summarized in the EMCON Monitoring report (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 questions, please call.

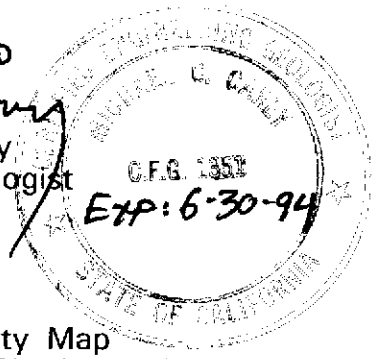
GeoStrategies Inc. by,

Ellen C. Fostersmith

Ellen C. Fostersmith
Geologist

Michael Carey

Michael C. Carey
Engineering Geologist
C.E.G. 1351



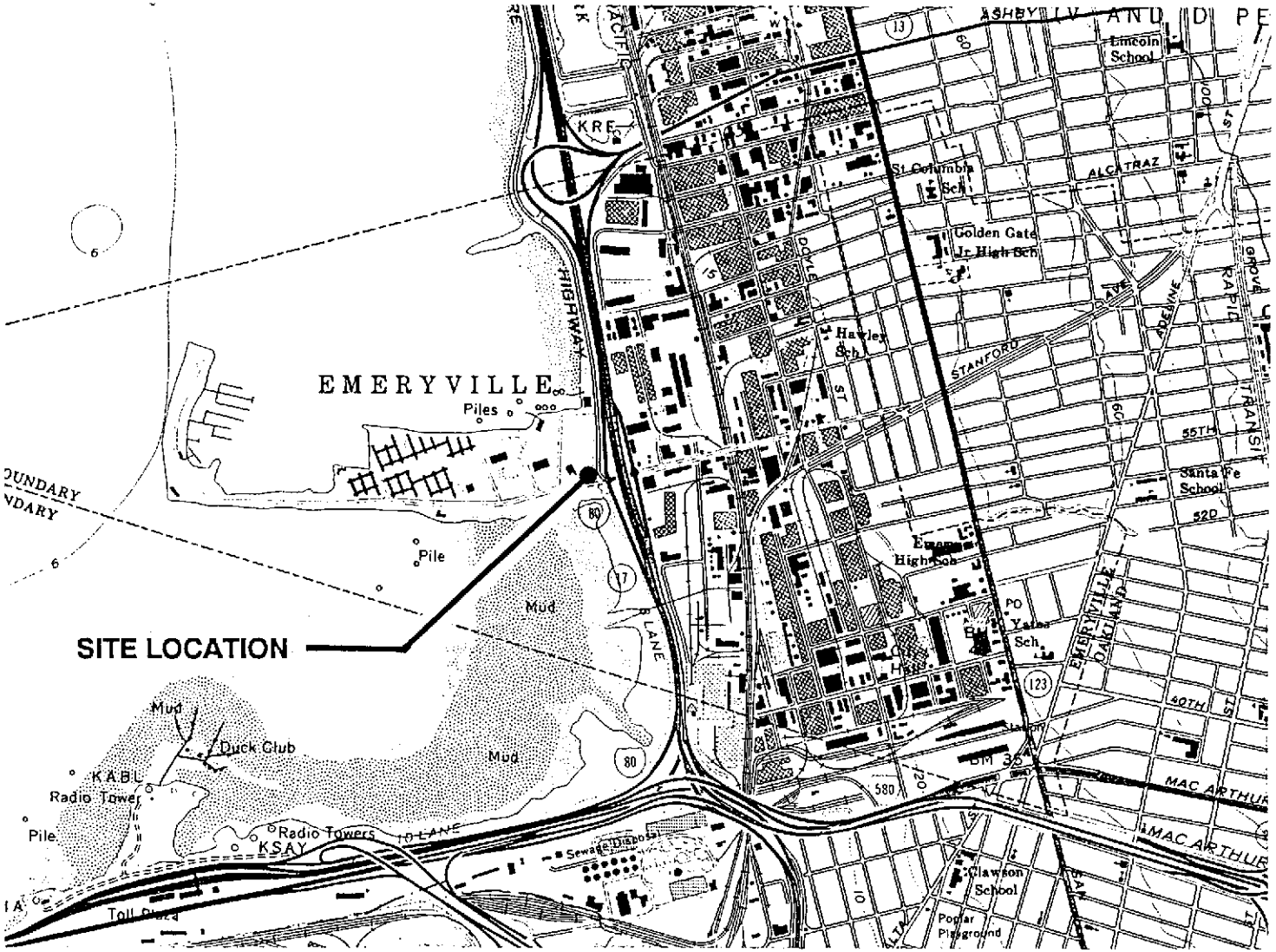
ECF/MCC/rmt

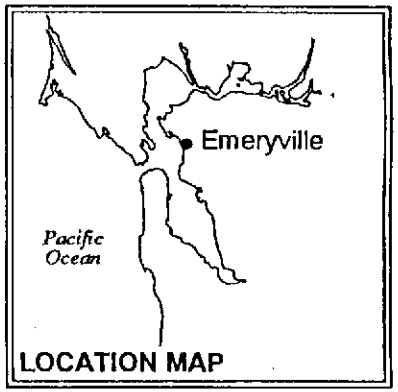
Plate 1. Vicinity Map
Plate 2. Site Plan/Potentiometric Map
Plate 3. Benzene Isoconcentration Map

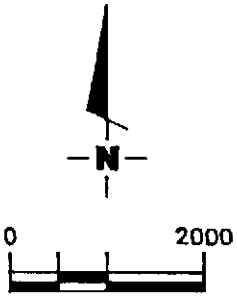
Appendix A: EMCON Monitoring Report and Chain-of-Custody

QC Review: JH

760501-16







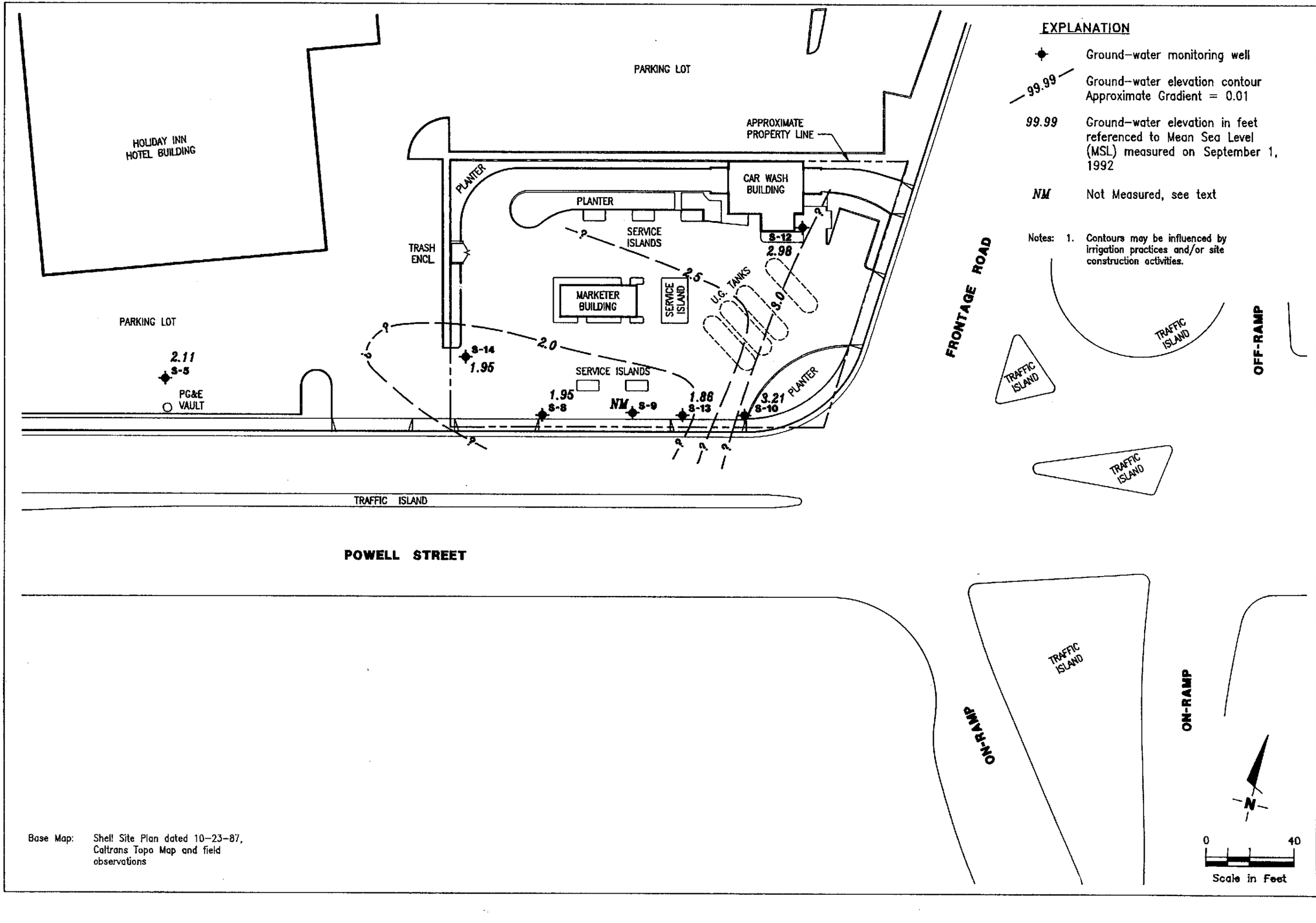
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
Shell Service Station
1800 Powell Street
Emeryville, California

PLATE 1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7605			



EXPLANATION

- Ground–water monitoring well
- 99.99 — Ground–water elevation contour Approximate Gradient = 0.01
- *99.99* — Ground–water elevation in feet referenced to Mean Sea Level (MSL) measured on September 1, 1992
- *NM* — Not Measured, see text

Notes: 1. Contours may be influenced by irrigation practices and/or site construction activities.

Base Map: Shell Site Plan dated 10–23–87, Caltrans Topo Map and field observations

PLATE **2**

SITE PLAN/POTENTIOMETRIC MAP
Shell Service Station
1800 Powell Street
Emeryville, California

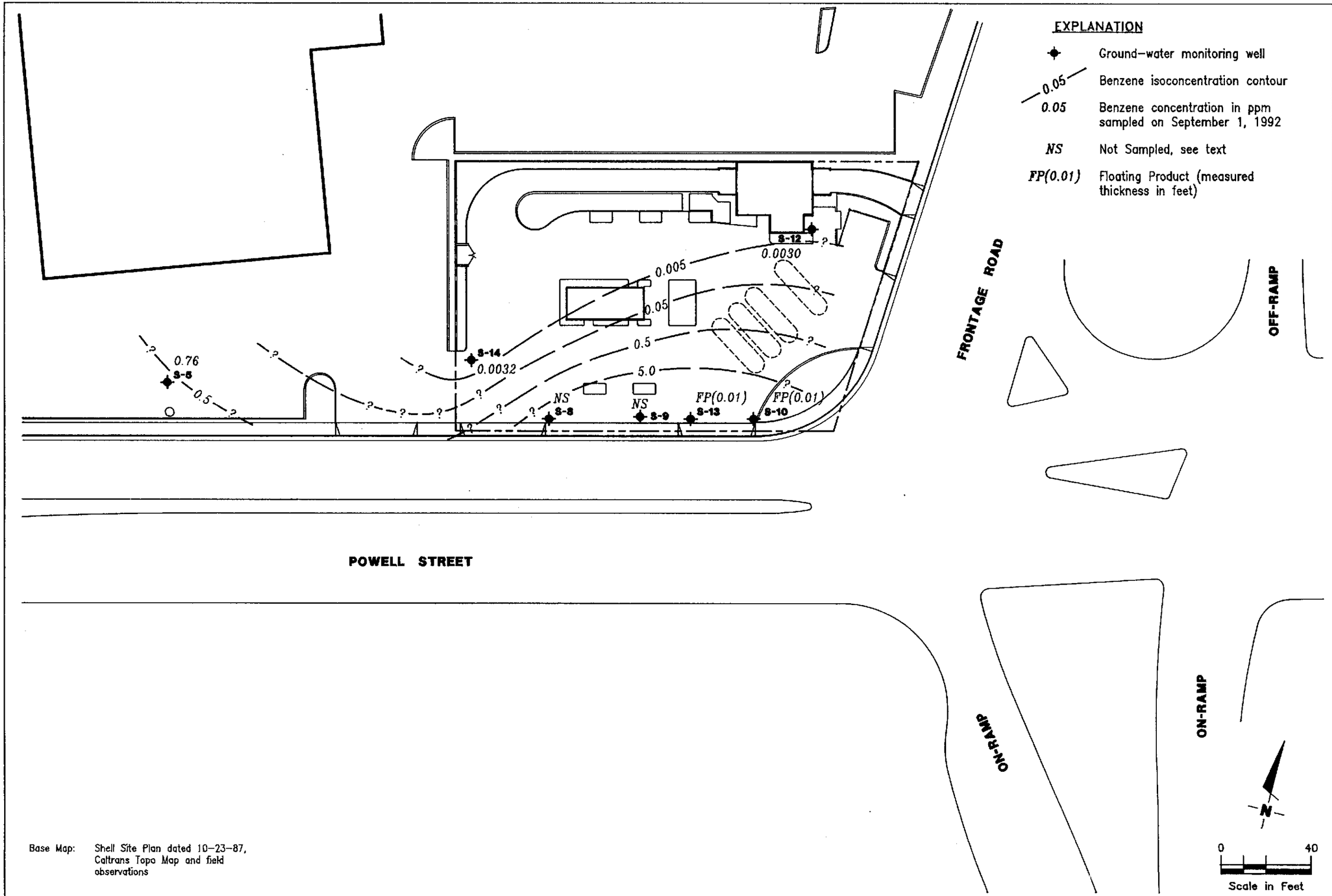
REVISED DATE

DATE 10/92

GeoStrategies Inc.

REVIEWED BY

JOB NUMBER 760501–16



Base Map: Shell Site Plan dated 10–23–87, Caltrans Topo Map and field observations

PLATE 3

BENZENE ISOCONCENTRATION MAP
Shell Service Station
1800 Powell Street
Emeryville, California

GeoStrategies Inc.

REVISED DATE

DATE 10/92

REVIEWED BY

JOB NUMBER 760501–16

APPENDIX A
EMCON MONITORING REPORT
AND
CHAIN-OF-CUSTODY

EMCON
ASSOCIATES
Consultants in Wastes
Management and
Environmental Control

September 30, 1992
Project: G67-20.01
WIC#: 204-2495-0101

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

Re: Third quarter 1992 ground-water monitoring report, Shell Oil Company, 1800 Powell Street, Emeryville, California

Dear Ms. Fostersmith:

This letter presents the results of the third quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 1800 Powell Street, Emeryville, California. Third quarter monitoring was conducted on September 1, 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-5, S-8, S-10, S-12, S-13, and S-14 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. Floating product, 0.01 foot thick, was observed in wells S-10 and S-13. Although floating product was not detected in well S-8 during the water-level survey, floating product, 0.01 foot thick, entered well S-8 during well purging. 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 monitoring wells S-5, S-12, and S-14 on September 1, 1992. Wells S-8, S-10, and S-13 contained floating product and were not sampled during third quarter monitoring. Prior to sample collection, the wells were purged with polyvinyl chloride bailers. During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Field measurements from third quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained in 55-

gallon drums. The drums were identified with Shell-approved labels and secured for on-site storage.

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

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

Quality control samples for third quarter monitoring included a trip blank (TB), a field blank (FB), and a duplicate well sample (SD-5) collected from well S-5. 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 S-12 and S-14 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 plan
Certified analytical report
Chain-of-custody document

Table 1
Monitoring Well Field Measurement Data
Third Quarter 1992

Shell Station: 1800 Powell Street
Emeryville, California
WIC #: 204-2495-0101

Date: 09/30/92
Project Number: G67-20.01

Well Designation	Water Level Field Date	TOB Elevation (ft-MSL)	Depth to Water (feet)	Groundwater 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-5	04/23/91	11.72	8.03	3.69	12.1	ND	04/23/91	6.66	1950	62.8	NR
S-5	07/08/91	11.72	9.15	2.57	12.1	ND	07/08/91	7.05	2400	68.8	NR
S-5	02/12/92	11.72	9.00	2.72	12.0	ND	02/12/92	7.00	2350	58.6	>200
S-5	05/11/92	11.72	8.61	3.11	11.9	ND	05/11/92	6.67	2880	67.9	>200
S-5	09/01/92	11.72	9.61	2.11	12.2	ND	09/01/92	6.72	2370	70.8	>200
S-8	04/23/91	12.76	9.48	3.28	19.2	ND	04/23/91	6.43	3150	65.8	NR
S-8	07/08/91	12.76	10.45	2.31	19.3	ND	07/08/91	7.28	6300	69.3	NR
S-8	02/12/92	12.76	10.44	2.32	19.2	ND	02/12/92	7.04	7440	64.1	>200
S-8	05/11/92	12.76	10.17	2.59	18.6	ND	05/11/92	6.46	4340	70.3	>200
S-8	09/01/92	12.76	10.81	1.95	19.2	ND$	09/01/92	FP$	FP$	FP$	FP$
S-10	04/23/91	12.58	9.68	2.91**	NR	0.01	04/23/91	NR	NR	NR	NR
S-10	07/08/91	12.58	9.41	3.19**	NR	0.03	07/08/91	NR	NR	NR	NR
S-10	02/12/92	12.58	6.41	6.17	19.2	ND	02/13/92	6.12	696	63.5	109
S-10	05/11/92	12.58	9.04	3.54	19.6	ND	05/12/92	6.31	1911	68.7	>200
S-10	09/01/92	12.58	9.38	3.21**	19.1	0.01	09/01/92	FP	FP	FP	FP
S-12	04/23/91	12.84	8.80	4.04	24.4	ND	04/23/91	6.49	4320	66.2	NR
S-12	07/08/91	12.84	9.50	3.34	24.4	ND	07/08/91	6.90	5810	67.0	NR
S-12	02/12/92	12.84	9.43	3.41	24.4	ND	02/12/92	6.45	6120	66.1	95.4
S-12	05/11/92	12.84	8.65	4.19	23.8	ND	05/11/92	5.98	6490	68.3	>200
S-12	09/01/92	12.84	9.86	2.98	24.4	ND	09/01/92	6.21	6860	67.6	>200

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
$ = Floating product entered the well during purging, well sampling was discontinued
FP = Floating product; well contained floating product and was not sampled
** = groundwater elevation corrected to include 80 percent of the floating product thickness measured in the well

Table 1
Monitoring Well Field Measurement Data
Third Quarter 1992

Shell Station: 1800 Powell Street
Emeryville, California
WIC #: 204-2495-0101

Date: 09/30/92
Project Number: G67-20.01

Well Designation	Water Level Field Date	TOB Elevation (ft-MSL)	Depth to Water (feet)	Groundwater 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-13	04/23/91	12.59	9.66	2.93	20.0	ND	04/23/91	6.54	7590	66.7	NR
S-13	07/08/91	12.59	10.38	2.21	20.1	ND	07/08/91	7.27	9150	68.9	NR
S-13	02/12/92	12.59	10.48	2.11	20.0	ND	02/12/92	7.02	1066	53.3	66.9
S-13	05/11/92	12.59	9.48	3.11	19.5	ND	05/11/92	6.50	1327	68.9	>200
S-13	09/01/92	12.59	10.74	1.86**	24.6	0.01	09/01/92	FP	FP	FP	FP
S-14	04/23/91	12.69	9.69	3.00	23.6	ND	04/23/91	6.37	7250	66.8	NR
S-14	07/08/91	12.69	10.32	2.37	23.2	ND	07/08/91	7.35	8210	67.7	NR
S-14	02/12/92	12.69	10.40	2.29	23.9	ND	02/12/92	6.77	6850	64.3	80.1
S-14	05/11/92	12.69	9.66	3.03	23.4	ND	05/11/92	6.68	9490	68.8	>200
S-14	09/01/92	12.69	10.74	1.95	24.0	ND	09/01/92	6.73	7040	66.0	>200

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
** = groundwater elevation corrected to include 80 percent of the floating product thickness measured in the well
FP = Floating product; well contained floating product and was not sampled

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

Shell Station: 1800 Powell Street
Emeryville, California
WIC #: 204-2495-0101

Date: 09/30/92
Project Number: G67-20.01

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)
S-5	04/23/91	2.8	0.50	0.008	0.014	0.010	NA	NA
S-5	07/08/91	3.2	1.0	0.016	0.009	0.012	NA	NA
S-5	02/12/92	1.3	0.30	0.005	<0.005	<0.005	NA	NA
S-5	05/11/92	1.9	0.49	<0.005	<0.005	<0.005	NA	NA
S-5	09/01/92	6.7	0.75	<0.025	<0.025	<0.025	NA	NA
SD-5	09/01/92	8.4	0.76	0.026	<0.025	<0.025	NA	NA
S-8	04/23/91	2.4&	0.74	0.054	0.0057	0.059	NA	NA
S-8	07/08/91	1.1	0.45	0.015	<0.0025	0.042	NA	NA
S-8	02/12/92	<1.0	0.26	<0.01	<0.01	0.011	NA	NA
S-8	05/11/92	1.8	0.70	0.014	<0.005	0.046	NA	NA
S-8	09/01/92	FP$	FP$	FP$	FP$	FP$	FP$	FP$
S-10	04/23/91	NR	NR	NR	NR	NR	NR	NR
S-10	07/08/91	NR	NR	NR	NR	NR	NR	NR
S-10	02/13/92	1.2	0.47	0.016	<0.005	0.014	NA	NA
S-10	05/12/92	1.1	0.10	0.006	0.004	0.019	NA	NA
S-10	09/01/92	FP	FP	FP	FP	FP	FP	FP

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 gasoline range are not characteristic of the standard gasoline chromatographic pattern
FP = Floating product; well contained floating product and was not sampled
$ = Floating product entered the well during purging, well sampling was discontinued
NR = Not reported; data not available

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

Shell Station: 1800 Powell Street
Emeryville, California
WIC #: 204-2495-0101

Date: 09/30/92
Project Number: G67-20.01

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)
S-12	04/23/91	0.10	0.0037	0.0038	0.0008	0.011	0.82*	0.80
S-12	07/08/91	0.07	0.0025	0.0008	<0.0005	0.0024	NA	NA
S-12	02/12/92	0.11	0.0008	<0.0005	<0.0005	0.0013	2.5#	1.4
S-12	05/11/92	0.14	0.0008	0.0008	<0.0005	0.0025	3.8^	NA
S-12	09/01/92	0.19	0.0030	0.015	0.0005	0.0045	2.6^	NA
S-13	04/23/91	2.9&	1.1	0.02	0.03	0.14	0.77+	0.64
S-13	07/08/91	1.5	0.88	0.010	0.006	0.16	NA	NA
S-13	02/12/92	1.3	0.51	<0.01	<0.01	0.086	1.3@	1.3
S-13	05/11/92	1.0	0.47	<0.005	<0.005	0.050	1.3^	NA
S-13	09/01/92	FP	FP	FP	FP	FP	FP	FP
S-14	04/23/91	1.2	0.0074	0.0027	0.015	0.11	18.+	<5.0
S-14	07/08/91	0.19	0.0065	0.0006	0.0019	0.026	NA	NA
S-14	02/12/92	0.37	0.0046	<0.0025	<0.0025	0.026	12.*	2.5
S-14	05/11/92	0.65	0.0029	<0.0025	<0.0025	0.024	2.2^	NA
S-14	09/01/92	0.70	0.0032	<0.0025	<0.0025	0.015	7.9	NA
SD-14	05/11/92	0.66	<0.0025	<0.0025	<0.0025	0.023	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 a diesel do not match the diesel standard; pattern is characteristic of weathered diesel
NA = Not analyzed
# = 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 heavier petroleum product, possibly motor oil
& = Compounds detected within the gasoline range are not characteristic of the standard gasoline chromatographic pattern
+ = Results include compounds apparently due to gasoline as well as those due to diesel
@ = Compounds detected within the diesel range are not characteristic of the standard diesel chromatographic pattern
FP = Floating product; well contained floating product and was not sampled

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

Shell Station: 1800 Powell Street
Emeryville, California
WIC #: 204-2495-0101

Date: 09/30/92
Project Number: G87-20.01

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	09/01/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
TB	02/13/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
TB	05/11/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
TB	09/01/92	<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

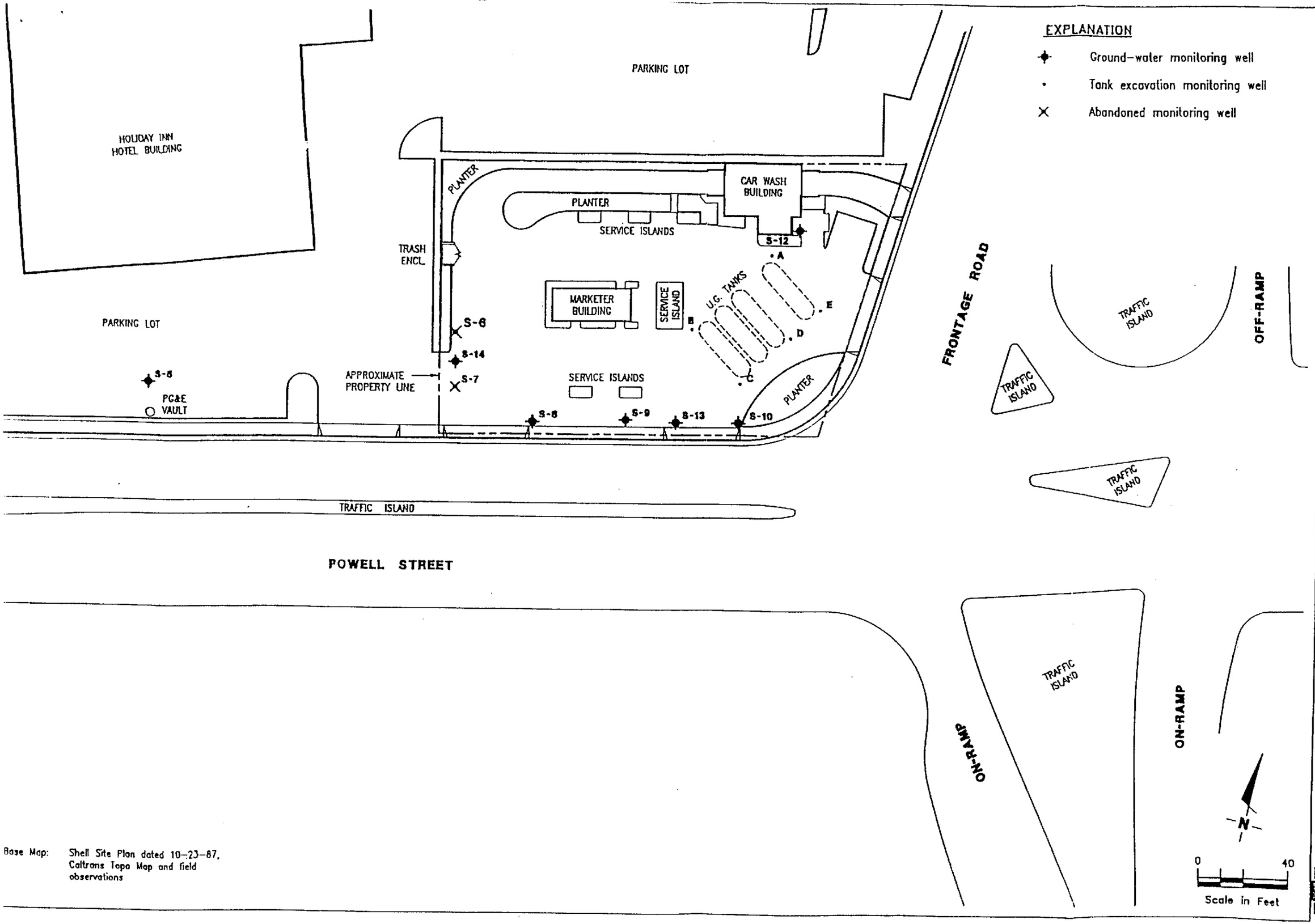


Figure 1: Site Map

SITE PLAN
Shell Service Station
1800 Powell Street
Emeryville, California

GeoStrategies Inc.

JOB NUMBER 760501-12
REVIEWED BY
DATE 10/91
REVISED DATE

Base Map: Shell Site Plan dated 10-23-87, Caltrans Topo Map and field observations

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 # : 9209011
Date Received : 09/01/92
Project ID : 204-2495-0101
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9209011- 1	S-12
9209011- 2	S-14
9209011- 3	S-5
9209011- 4	SD-5
9209011- 5	TB
9209011- 6	FB

This report consists of 7 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.

Larry Kent for
Sarah Schoen, Ph.D.
Laboratory Director

09-18-92
Date

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

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

Workorder # : 9209011
Date Received : 09/01/92
Project ID : 204-2495-0101
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9209011- 1	S-12	WATER	09/01/92	TPHd
9209011- 2	S-14	WATER	09/01/92	TPHd
9209011- 1	S-12	WATER	09/01/92	TPHg/BTEX
9209011- 2	S-14	WATER	09/01/92	TPHg/BTEX
9209011- 3	S-5	WATER	09/01/92	TPHg/BTEX
9209011- 4	SD-5	WATER	09/01/92	TPHg/BTEX
9209011- 5	TB	WATER	09/01/92	TPHg/BTEX
9209011- 6	FB	WATER	09/01/92	TPHg/BTEX

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

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

Workorder # : 9209011
Date Received : 09/01/92
Project ID : 204-2495-0101
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as diesel for sample S-12 is primarily due to the presence of a heavier petroleum product, possibly motor oil or aged diesel fuel.

Department Supervisor 9/18/92 Date

Chemist 9/18/92 Date

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

Anametrix W.O.: 9209011
Matrix : WATER
Date Sampled : 09/01/92

Project Number : 204-2495-0101
Date Released : 09/18/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# S-12 -01	Sample I.D.# S-14 -02	Sample I.D.# S-5 -03	Sample I.D.# SD-5 -04	Sample I.D.# TB -05
Benzene	0.0005	0.0030	0.0032	0.75	0.76	ND
Toluene	0.0005	0.015	ND	ND	0.026	ND
Ethylbenzene	0.0005	0.0005	ND	ND	ND	ND
Total Xylenes	0.0005	0.0045	0.015	ND	ND	ND
TPH as Gasoline	0.050	0.19	0.70	6.7	6.4	ND
% Surrogate Recovery		90%	92%	94%	87%	94%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		09/03/92	09/03/92	09/03/92	09/03/92	09/03/92
RLMF		1	5	50	50	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 9/18/92 Date

Supervisor 9/16/92 Date

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

Anametrix W.O.: 9209011
Matrix : WATER
Date Sampled : 09/01/92

Project Number : 204-2495-0101
Date Released : 09/18/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# FB -06	Sample I.D.# BS0301E3 BLANK
Benzene	0.0005	ND	ND
Toluene	0.0005	ND	ND
Ethylbenzene	0.0005	ND	ND
Total Xylenes	0.0005	ND	ND
TPH as Gasoline	0.050	ND	ND
% Surrogate Recovery		86%	98%
Instrument I.D.		HP12	HP12
Date Analyzed		09/03/92	09/03/92
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.

Analyst 9/18/92 Date

Supervisor 9/18/92 Date

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

Anametrix W.O.: 9209011
Matrix : WATER
Date Sampled : 09/01/92
Date Extracted: 09/10/92

Project Number : 204-2495-0101
Date Released : 09/18/92
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9209011-01	S-12	09/15/92	0.050	2.6
9209011-02	S-14	09/15/92	0.25	7.9
DWBL091092	METHOD BLANK	09/15/92	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 Sims 9/18/92
Analyst Date

Cheryl Balmon 9/16/92
Supervisor Date

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.	: LCSW0910
Matrix	: WATER	Analyst	: M
Date Sampled	: N/A	Supervisor	: CO
Date Extracted	: 09/10/92	Date Released	: 09/18/92
Date Analyzed	: 09/15/92	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	0.72	58%	0.68	54%	-6%	36-150

*Quality control established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Analyzed : 09/03/92

Anametrix I.D. : LCSW0301E3
Analyst : M
Supervisor : CA
Date Released : 09/18/92
Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (mg/L)	REC LCS (mg/L)	%REC LCS	% REC LIMITS
GASOLINE	0.25	0.25	100%	56-116
SURROGATE		89%		53-147

* Quality control established by Anametrix, Inc.

4/20/1011 10/5 (16) 16:05 MA

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: 9195

Date:
Page 1 of 2

Site Address: 1800 Powell Street
Emeryville, CA

FIC#: 204-2495-0101

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: [illegible] / IAN GRAHAM

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

Sample ID	Date	Soil	Water	Air	No. of conts.	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-12	9-1-92		X		5	40 ml	HCl	No	Bubbles	
S-14	9-1-92				5				Bubbles	
~~S-8~~					3					
~~S-13~~					5					
S-5	9-1-92				3				Bubbles	
~~S-10~~					3					
D-5	9-1-92				3				Bubbles	
TB	9-1-92				3					

Relinquished By (signature): [signature]	Printed name: IAN GRAHAM	Date: 9-1-92 Time: 1550	Received (signature): Michele D Aguilar	Printed name: MICHELE D AGUILAR	Date: 9-1-92 Time: 1550
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

Revision Date: 10/15/91

9/20/1011 10/5 (R) 16:02 MA

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: 9195

Date:
Page 2 of 2

Site Address: 1800 Powell Street
Emeryville, CA

STC#: 204-2495-0101

Cell 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: See page 1.

Sampled By: [signature]

Printed Name: IAN GRAHAM

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 X (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
FB	9-1-92		X		3	X		X			40 ml	HCl	No		

Relinquished By (signature): [signature]	Printed name: IAN GRAHAM	Date: 9-1-92	Received (signature): [signature]	Printed name: MICHELE D. AGUILAR	Date: 9-1-92
		Time: 1550			Time: 1550
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

Revision Date: 10/15/91