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

July 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 July 22, 1992 Quarterly Report for the above referenced location. The report presents the results of the ground-water sampling conducted during the second quarter of 1992.

If you have any questions, please call.

Sincerely,

Ellen Fostersmith
Geologist

EF/shl

Enclosure

cc: Mr. Lester Feldman, S.F. 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

760501-15

July 22, 1992

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

July 22, 1992

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

Attn: Mr. Dan Kirk

Re: QUARTERLY REPORT
Shell Service Station
1800 Powell Street
Emeryville, California
WIC #204-2495-0101

Mr. Kirk:

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

There are currently seven monitoring wells at the site; S-4, S-5, S-8, S-9, S-10, S-12, and S-13 (Plate 2). Wells S-1 through S-10 were installed prior to 1983. GSI installed Wells S-11 through S-14 in 1989. Wells S-6 and S-7 were abandoned in 1989. Wells S-1 through S-4 and S-11 were redesignated as tank backfill wells S-A through S-E, respectively.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well on May 11, 1992. Static ground-water levels were measured from the surveyed top of each well box and recorded to 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 potentiometric map (Plate 2). Shallow groundwater flow is to the south at an approximate hydraulic gradient of 0.01.

Each well was checked for the presence of floating product. Floating product was not observed in the wells 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 May 11 and 12, 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, S-13 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.

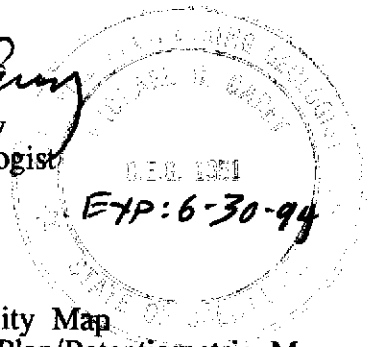
GeoStrategies Inc. by,

Ellen C. Fostersmith

Ellen C. Fostersmith
Geologist

Michael Carey

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



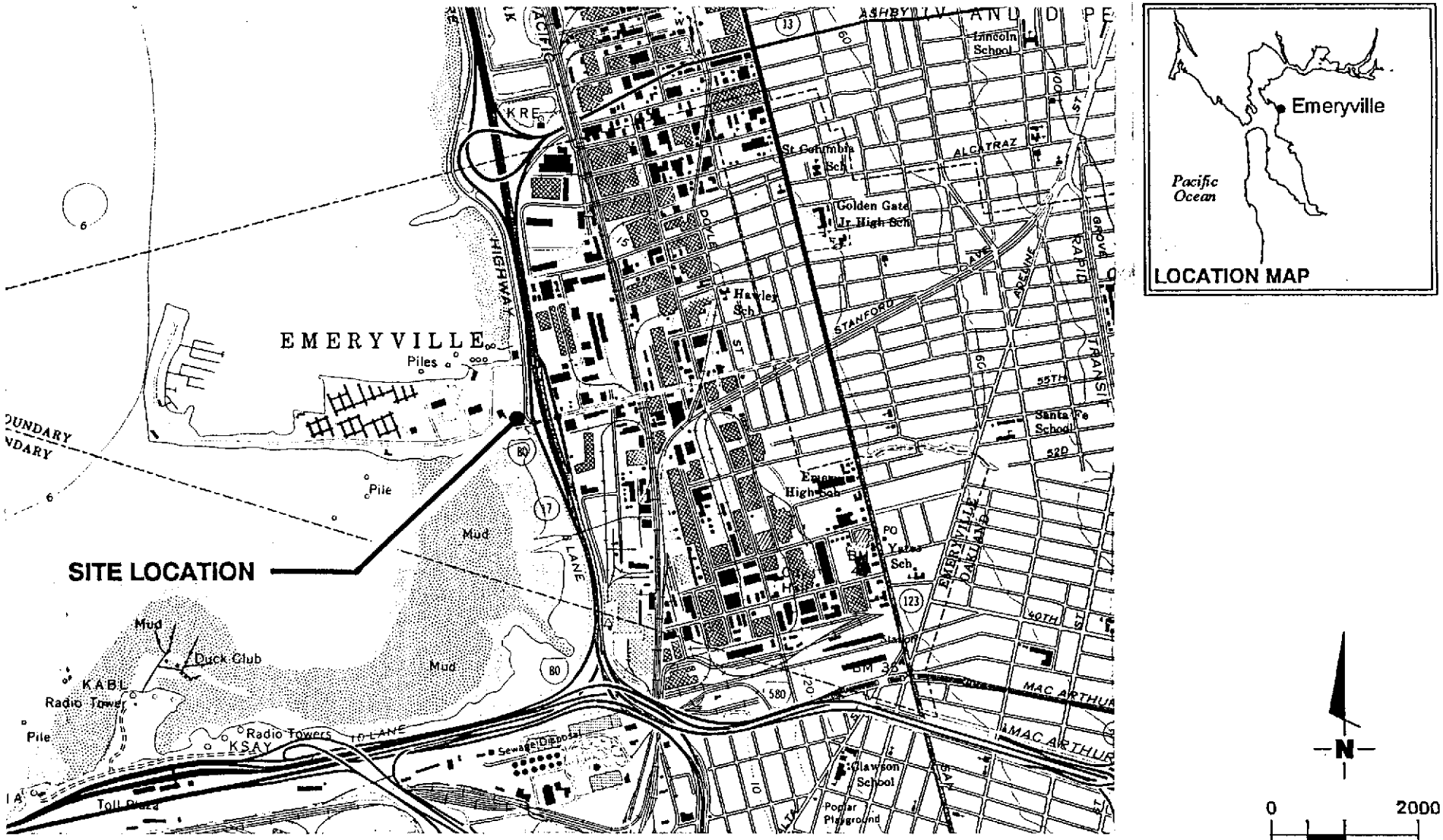
ECF/MCC/dls

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: JLP

760501-15



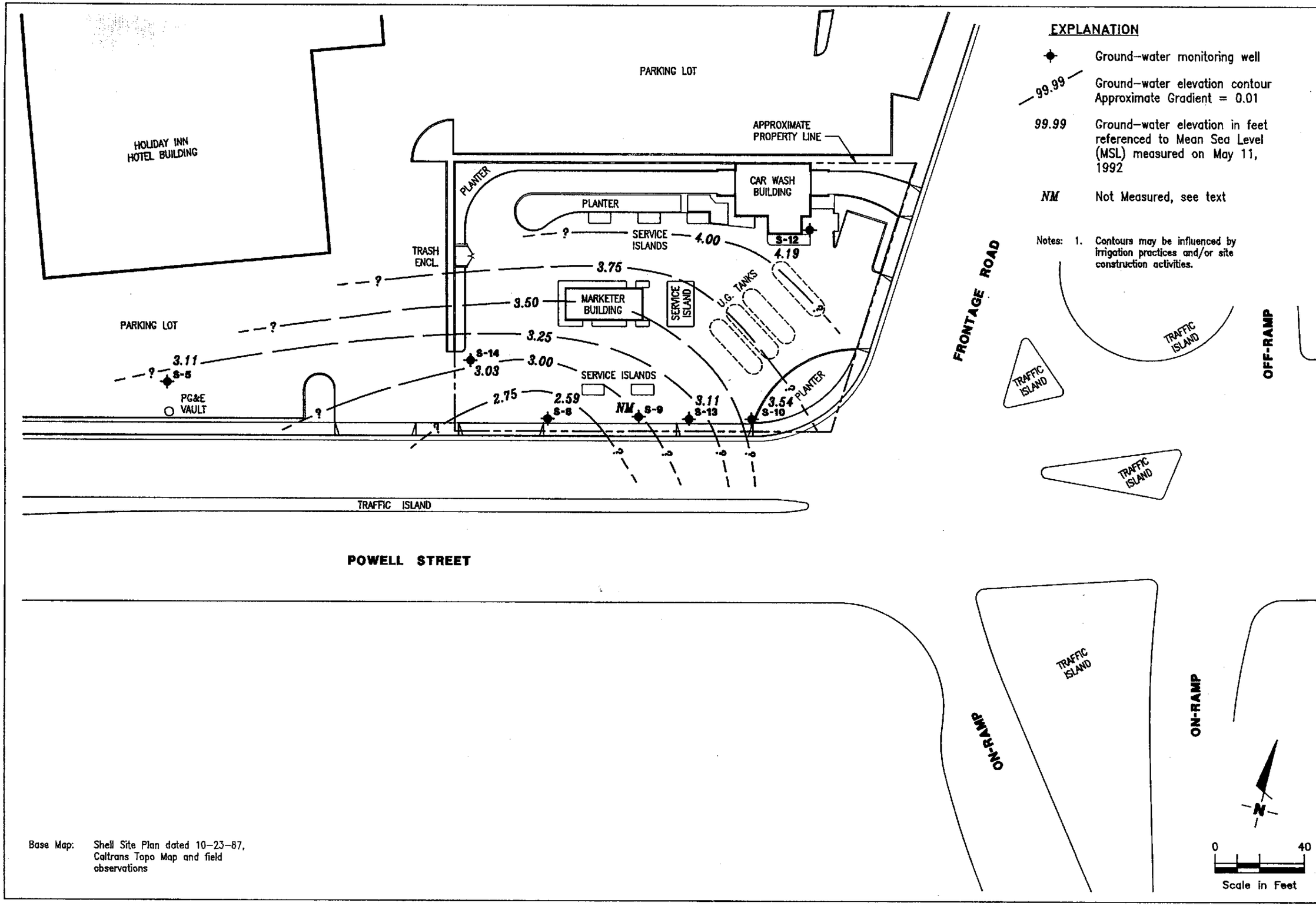
Base Map: USGS Topographic Map

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 May 11, 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

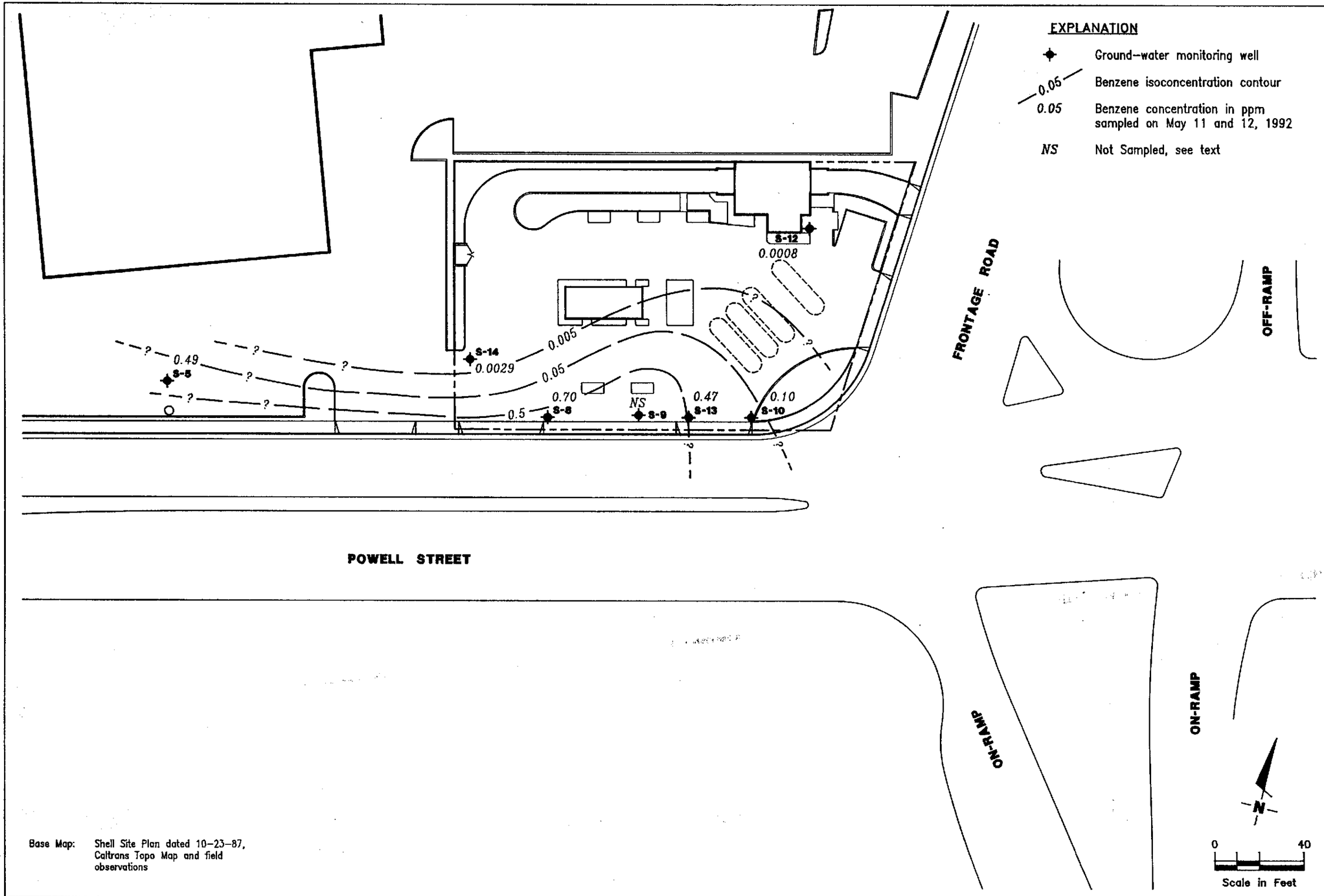
GeoStrategies Inc.

JOB NUMBER 760501-15
REVIEWED BY
DATE 7/92
REVISED DATE

PLATE 3

EXPLANATION

- Ground-water monitoring well
- 0.05 — Benzene isoconcentration contour
- 0.05 — Benzene concentration in ppm sampled on May 11 and 12, 1992
- NS — Not Sampled, see text



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

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

GeoStrategies Inc.

GSI

JOB NUMBER 760501-15
REVIEWED BY
DATE 7/92
REVISED DATE

APPENDIX A
EMCON MONITORING REPORT
AND
CHAIN-OF-CUSTODY

EMCON
ASSOCIATES
Consultants in Wastes
Management and
Environmental Control

June 29, 1992
Project: G67-20.01
WIC#: 204-2495-0101

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

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

Dear Ms. Fostersmith:

This letter presents the results of the second quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 1800 Powell Street, Emeryville, California. Second quarter monitoring was conducted on May 11 and 12, 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. No floating product was observed in the wells. Results of the second 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-8, S-10, S-12, S-13, and S-14 on May 11 and 12, 1992. Prior to sample collection, the wells were purged with a centrifugal pump (well S-10), or polyvinyl chloride bailers (all other wells). During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Well S-10 was evacuated to dryness before the removal of three casing volumes. The well was allowed to recharge for up to 24 hours. Samples were collected after the well had recharged to a level sufficient for sample collection. Field measurements from second 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) 452-0710, Fax (408) 452-0452

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 a Shell-approved and state-certified analytical laboratory 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 second quarter monitoring included a trip blank (TB) and a duplicate well sample (SD-14) collected from well S-14. All water samples collected during second 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, S-13, and S-14 were analyzed for total petroleum hydrocarbons as diesel (TPH-d).

ANALYTICAL RESULTS

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

If you have any questions, please call.

Very truly yours,

EMCON Associates

David Larsen
Environmental Sampling Coordinator

for
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

G672001B.DOC

Table 1
Monitoring Well Field Measurement Data
Second Quarter 1992

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

Date: 06/29/92
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	01/14/91	11.72	9.23	2.49	NR	ND	01/14/91	NR	NR	NR	NR
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-8	01/14/91	12.76	10.28	2.48	NR	ND	01/14/91	NR	NR	NR	NR
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-10	01/14/91	12.58	10.46	2.14**	NR	0.03	01/14/91	NR	NR	NR	NR
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-12	01/14/91	12.84	9.74	3.10	NR	ND	01/14/91	NR	NR	NR	NR
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

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
NR = Not reported; data not available
ND = None detected
** = groundwater elevation corrected to include 80 percent of the floating product thickness measured in the well

Table 1
Monitoring Well Field Measurement Data
Second Quarter 1992

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

Date: 06/29/92
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	01/14/91	12.59	11.22	1.37	NR	ND	01/14/91	NR	NR	NR	NR
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	63.3	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-14	01/14/91	12.69	10.41	2.29**	NR	0.01	01/14/91	NR	NR	NR	NR
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

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
NR = Not reported; data not available
ND = None detected
** = groundwater elevation corrected to include 80 percent of the floating product thickness measured in the well

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

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

Date: 08/29/92
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)
S-5	01/14/91	4.5	1.1	0.015	0.030	0.025	6.1	NA
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-8	01/14/91	0.67	0.19	0.0058	<0.0005	0.019	0.76	0.6
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-10	01/14/91	NR	NR	NR	NR	NR	NR	NR
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-12	01/14/91	0.12	0.0036	0.0008	<0.0005	0.0029	1.0	0.6
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

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.
NR = Not reported; data not available
* = Compounds detected and calculated as diesel do not match the diesel standard; pattern is characteristic of weathered diesel.
# = 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

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

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

Date: 06/29/92
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-13	01/14/91	1.9	0.83	0.015	<0.01	0.099	0.9	1.6
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
SD-13	02/12/92	1.2	0.46	<0.01	<0.01	0.08	NA	NA
S-14	01/14/91	NA	NA	NA	NA	NA	NA	NA
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
SD-14	05/11/92	0.66	<0.0025	<0.0025	<0.0025	0.023	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

TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
TPH-mo = total petroleum hydrocarbons as 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
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 the presence of a heavier petroleum product, possibly motor oil
* = Compounds detected and calculated as diesel do not match the diesel standard; pattern is characteristic of weathered diesel.

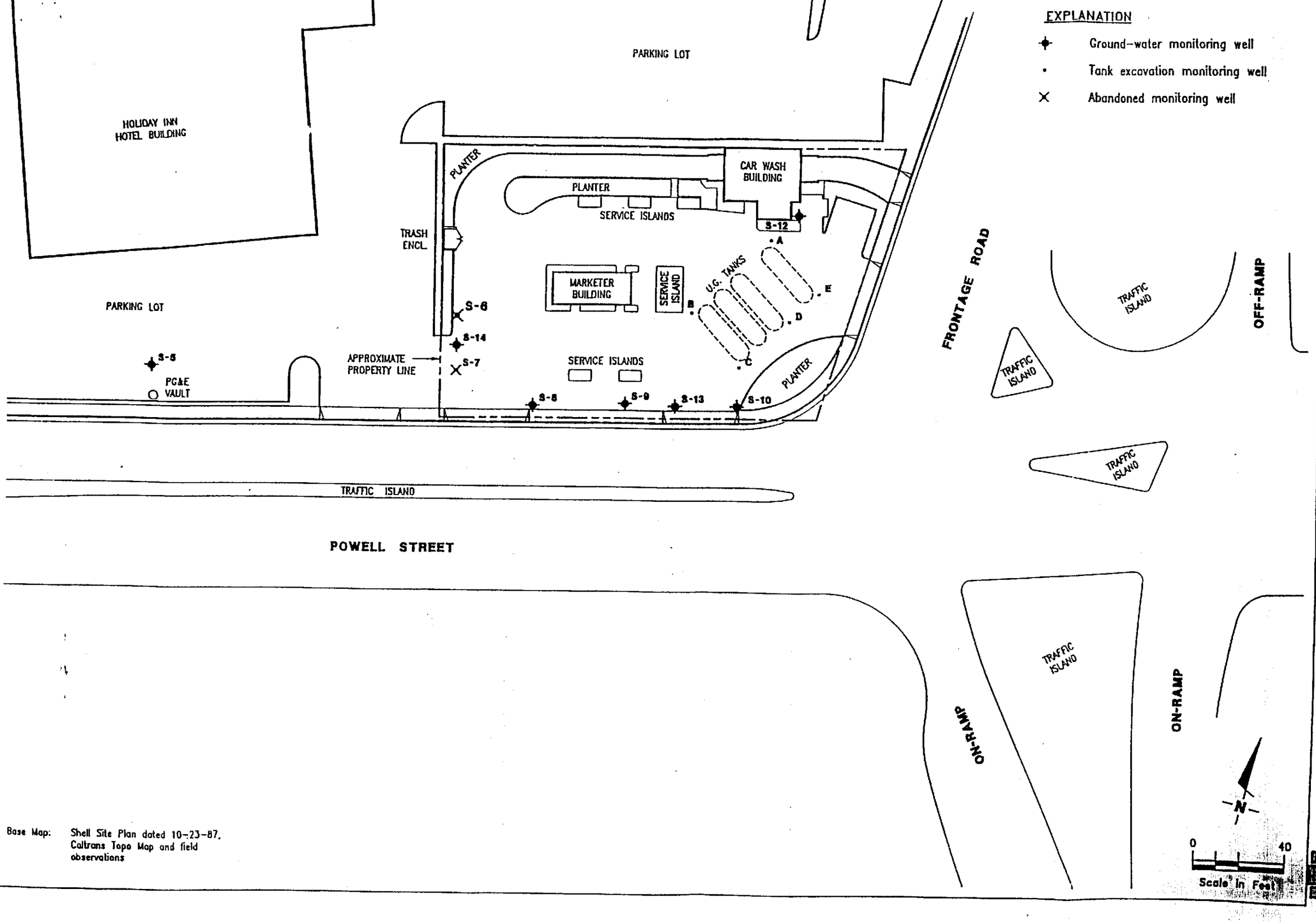


Figure 1: Site Map

SITE PLAN
Shell Service Station
1800 Powell Street
Emeryville, California

DATE 10/91

REVISED DATE

GeoStrategies Inc.

JOB NUMBER 760501-12

REVIEWED BY

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 # : 9205199
Date Received : 05/13/92
Project ID : G67-20.01
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9205199- 1	S-12
9205199- 2	S-14
9205199- 3	S-8
9205199- 4	S-13
9205199- 5	S-5
9205199- 6	S-10
9205199- 7	SD-14
9205199- 8	TB

This report consists of 6 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

5-28-92
Date

EMCON ASSOCIATES
JUN 01 1992
RECEIVED

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

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

Workorder # : 9205199
Date Received : 05/13/92
Project ID : G67-20.01
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9205199- 1	S-12	WATER	05/11/92	TPHd
9205199- 2	S-14	WATER	05/11/92	TPHd
9205199- 4	S-13	WATER	05/11/92	TPHd
9205199- 1	S-12	WATER	05/11/92	TPHg/BTEX
9205199- 2	S-14	WATER	05/11/92	TPHg/BTEX
9205199- 3	S-8	WATER	05/11/92	TPHg/BTEX
9205199- 4	S-13	WATER	05/11/92	TPHg/BTEX
9205199- 5	S-5	WATER	05/11/92	TPHg/BTEX
9205199- 6	S-10	WATER	05/12/92	TPHg/BTEX
9205199- 7	SD-14	WATER	05/11/92	TPHg/BTEX
9205199- 8	TB	WATER	05/11/92	TPHg/BTEX

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

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

Workorder # : 9205199
Date Received : 05/13/92
Project ID : G67-20.01
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as diesel for samples S-12, S-14, and S-13 are primarily due to the presence of a heavier petroleum product, possibly motor oil.

Cheryl Balmer 5/28/92
Department Supervisor Date

Chemist 5.28.92
Date

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

Anametrix W.O.: 9205199
Matrix : WATER
Date Sampled : 05/11/92

Project Number : G67-20.01
Date Released : 05/27/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# S-12 -01	Sample I.D.# S-14 -02	Sample I.D.# S-8 -03	Sample I.D.# S-13 -04	Sample I.D.# S-5 -05
Benzene	0.0005	0.0008	0.0029	0.70	0.47	0.49
Toluene	0.0005	0.0008	ND	0.014	ND	ND
Ethylbenzene	0.0005	ND	ND	ND	ND	ND
Total Xylenes	0.0005	0.0025	0.024	0.046	0.050	ND
TPH as Gasoline	0.050	0.14	0.65	1.8	1.0	1.9
% Surrogate Recovery		101%	100%	93%	94%	99%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		05/22/92	05/22/92	05/22/92	05/22/92	05/22/92
RLMF		1	5	10	10	10

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

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

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

Analyst 5.28.92 Date

Supervisor Cheryl Balmes 5/28/92 Date

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

Anametrix W.O.: 9205199
Matrix : WATER
Date Sampled : 05/11/92 & 05/12/92

Project Number : G67-20.01
Date Released : 05/27/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# S-10 -06	Sample I.D.# SD-14 -07	Sample I.D.# TB -08	Sample I.D.# 04B0522A BLANK
Benzene	0.0005	0.10	ND	ND	ND
Toluene	0.0005	0.006	ND	ND	ND
Ethylbenzene	0.0005	0.004	ND	ND	ND
Total Xylenes	0.0005	0.019	0.023	ND	ND
TPH as Gasoline	0.050	1.1	0.66	ND	ND
% Surrogate Recovery		95%	98%	94%	102%
Instrument I.D.		HP4	HP4	HP4	HP4
Date Analyzed		05/22/92	05/22/92	05/22/92	05/22/92
RLMF		5	5	1	1

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

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

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

Steve Rowe 5/28/92
Analyst Date

Cheryl Balmer 5/28/92
Supervisor Date

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

Anametrix W.O.: 9205199
Matrix : WATER
Date Sampled : 05/11/92
Date Extracted: 05/18/92

Project Number : G67-20.01
Date Released : 05/27/92
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9205199-01	S-12	05/19/92	0.050	3.8
9205199-02	S-14	05/20/92	0.25	2.2
9205199-04	S-13	05/20/92	0.25	1.3
DWBL051892	METHOD BLANK	05/19/92	0.050	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.
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 Jones 5/28/92
Analyst Date

Cheryl Balmer 5/28/92
Supervisor Date

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

Sample I.D. : METHOD SPIKE
Matrix : REAGENT WATER
Date Sampled : N/A
Date Extracted: 05/18/92
Date Analyzed : 05/20/92

Anametrix I.D. : SPK0518B
Analyst : [illegible]
Supervisor : [illegible]
Date Released : 05/21/92
Instrument I.D.: HP9

COMPOUND	SPIKE AMT. (mg/L)	MS (mg/L)	%REC MS	MSD (mg/L)	%REC MSD	RPD	%REC LIMITS
Diesel	1.25	0.42	34%	0.50	40%	17%	36-150

* Limits established by Anametrix, Inc.

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No.: 207

Date: 5-13-92

Page 1 of 1

Site Address: 1800 Powell Street #2 #0028 9205199
Emeryville, CA FB

WIC#: 204-2495-0101

Shell Engineer: Kurt Miller
Phone No. (510)
Fax #: 685-3853

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

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

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

Sampled By:

Printed Name:

LAB: Anametrix

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	XXX	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 XXX (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
S-12	5-11-92		X		5	X	X	X								40 ml	HCl	No		
S-14	5-11-92		↓		5	X	X	X								↓	↓	↓		
S-8	5-11-92		↓		3	X		X								↓	↓	↓		
S-13	5-11-92		↓		5	X	X	X								↓	↓	↓		
S-5	5-11-92		↓		3	X		X								↓	↓	↓		
S-10	5-12-92		↓		3	X		X								↓	↓	↓		
SD-14	5-11-92		↓		3	X		X								↓	↓	↓		
TB	5-11-92		↓		3	X		X								↓	↓	↓		

Relinquished By (signature)	Printed name	Date/Time	Received (signature)	Printed name	Date/Time
[signature]	Bart Stafford	Date: 5-13-92 Time: 8:00	[signature]	D Larsen	Date: 5-13-92 Time: 8:00
[signature]	D Larsen	Date: 5-13-92 Time: 16:00	[signature]	JAGHI MEMARZADEH	Date: 5/13/92 Time: 16:00
[signature]	JAGHI MEMARZADEH	Date: 5/13/92 Time: 16:10	[signature]	FARAH BADIEI	Date: 5/13/92 Time: 1610

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

Last Revision Date: 10/15/91