



GeoStrategies Inc.

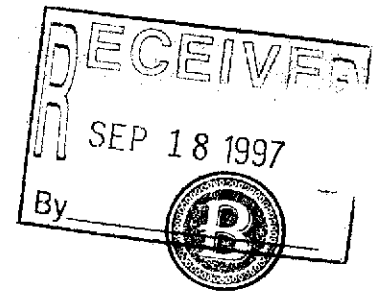
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DEC 14 1992

ENVIRO BAY AREA

December 2, 1992

Hazardous Materials Specialist
City of Pleasanton
Pleasanton Fire Department
Post Office Box 520
Pleasanton, California 94566-0802



Reference: Shell Service Station
5251 Hopyard Road
Pleasanton, California
WIC 204-6138-0907

Gentlemen:

As requested by Mr. Dan Kirk of Shell Oil Company, we are forwarding a copy of the December 2, 1992 Quarterly Report prepared for the above referenced location. The report documents the results of the ground-water sampling conducted during the fourth quarter of 1992.

If you have any questions, please call.

Sincerely,

A handwritten signature in cursive script that reads "Ellen Fostersmith".

Ellen Fostersmith
Geologist

enclosure

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

:ellens\633-s.wp(ef)



GeoStrategies Inc.

QUARTERLY REPORT

Shell Service Station
5251 Hopyard Road
Pleasanton, California
WIC# 204-6138-0907

763301-16

December 2, 1992



GeoStrategies Inc.

December 2, 1992

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

Attn: Mr. Dan Kirk

Re: QUARTERLY REPORT
Shell Service Station
5251 Hopyard Road
Pleasanton, California
WIC# 204-6138-0907

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 eight ground-water monitoring wells at the site; Wells S-1 through S-8 (Plate 2). There are also three vadose zone wells; Wells V-1 through V-3. These wells were installed between 1988 and 1989 by Pacific Environmental Group and GSI. The old underground storage tanks were replaced in January 1988.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well on October 16, 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 potentiometric map (Plate 2). Shallow ground-water flow is to the north-northwest at an approximate hydraulic gradient of 0.005.

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

763301-16

GeoStrategies Inc.

Shell Oil Company
December 2, 1992
Page 2

Ground-water samples were collected on October 16, 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.

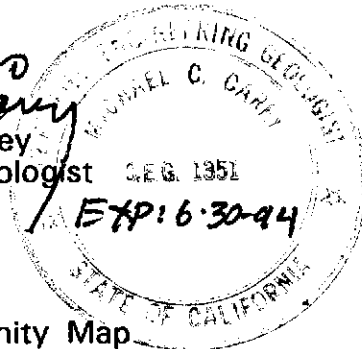
If you have any questions, please call.

GeoStrategies Inc, by,

Ellen C. Fostersmith

Ellen C. Fostersmith
Geologist

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



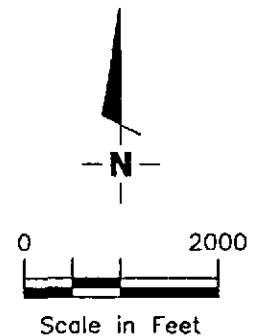
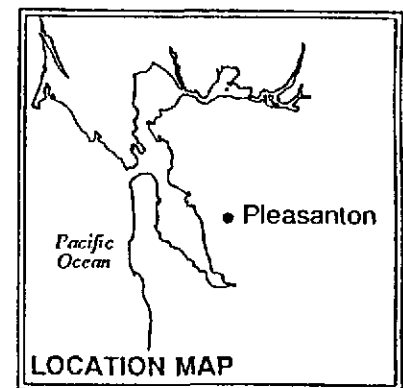
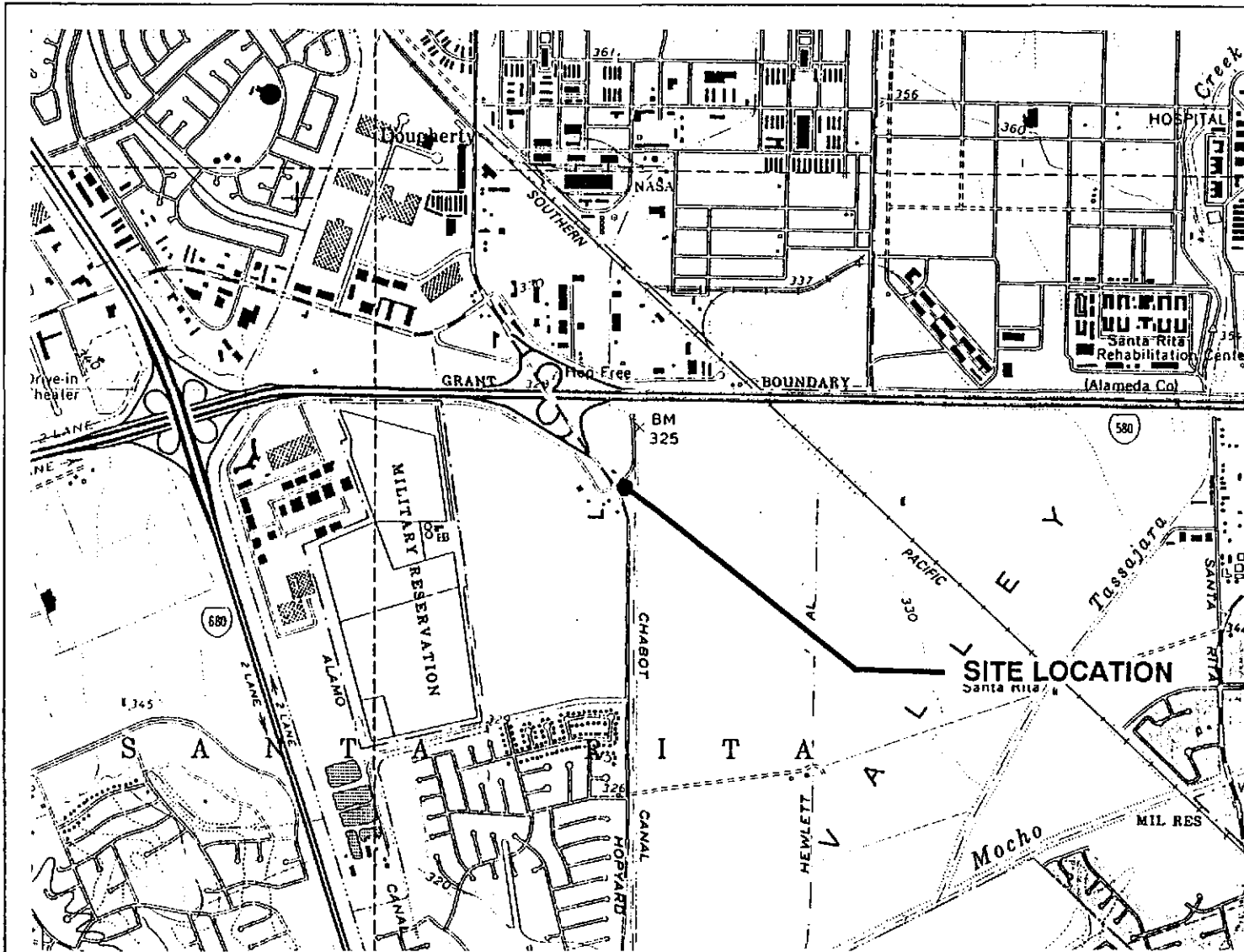
ECF/MCC/rmt

- 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: *gzo*

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Base Map: USGS Topographic Map



GeoStrategies Inc.

VICINITY MAP
 Shell Service Station
 5251 Hopyard Road
 Pleasanton, California

PLATE

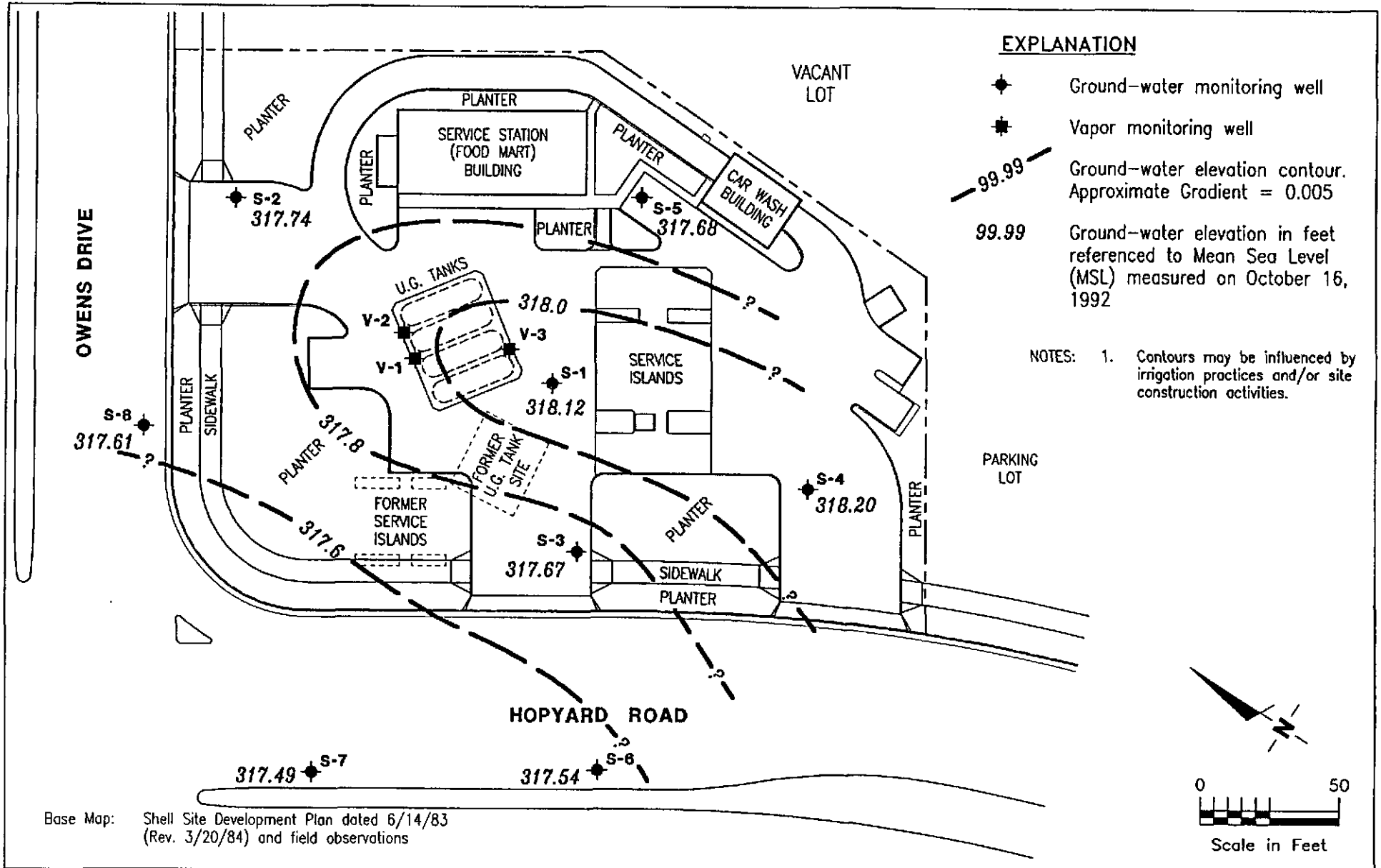
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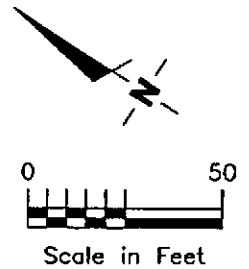


EXPLANATION

- ◆ Ground-water monitoring well
- ◆ Vapor monitoring well
- - 99.99 - - Ground-water elevation contour. Approximate Gradient = 0.005
- 99.99 Ground-water elevation in feet referenced to Mean Sea Level (MSL) measured on October 16, 1992

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

Base Map: Shell Site Development Plan dated 6/14/83 (Rev. 3/20/84) and field observations



GeoStrategies Inc.

SITE PLAN/POTENTIOMETRIC MAP
 Shell Service Station
 5251 Hopyard Road
 Pleasanton, California

PLATE

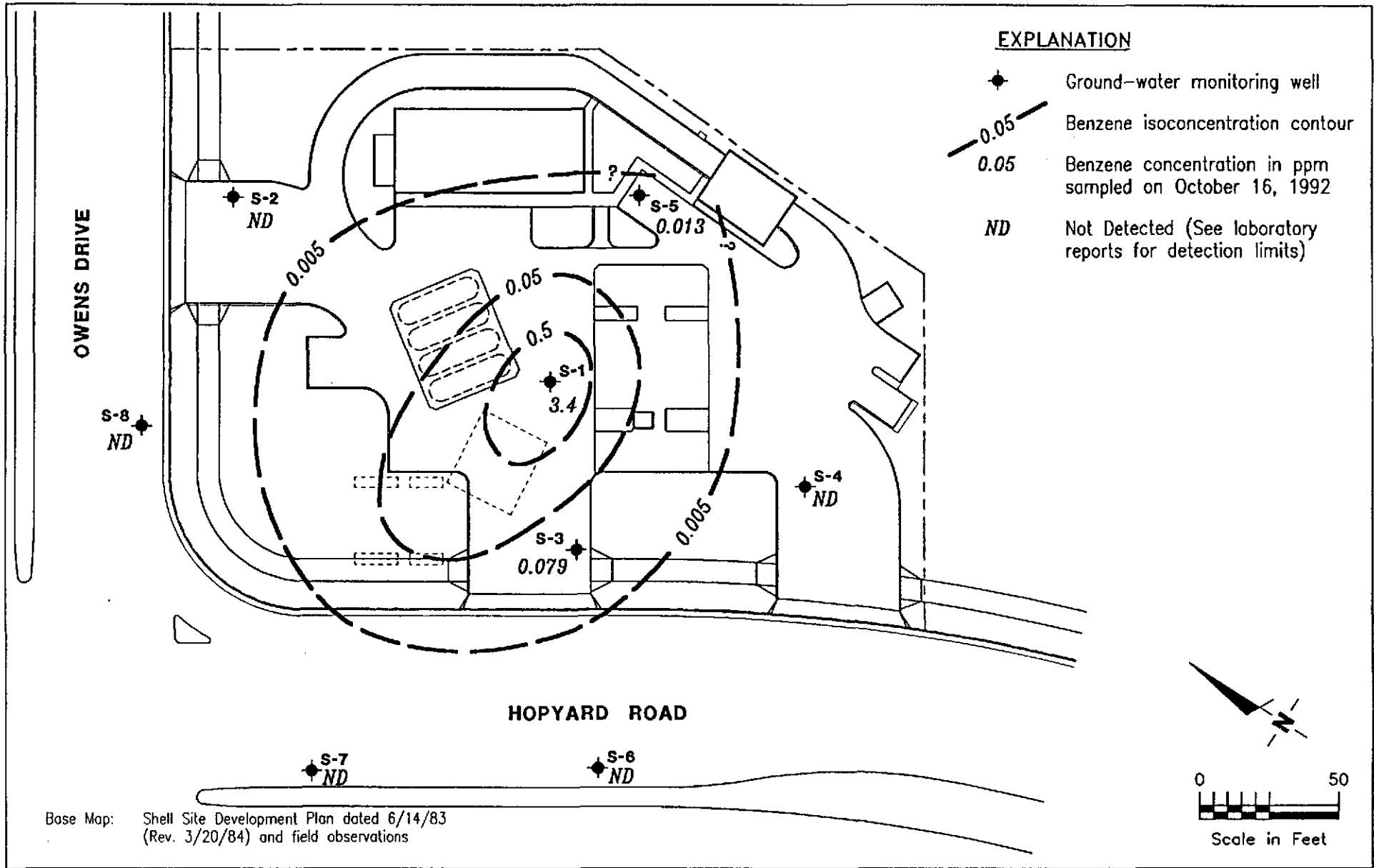
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763301-16

REVIEWED BY
[Signature]

DATE
12/92

REVISED DATE



GeoStrategies Inc.

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



EMCON
ASSOCIATES

Consultants in Wastes
Management and
Environmental Control

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NOV 17 1992

GeoStrategies Inc.

November 16, 1992
Project: OG67-027.01
WIC#: 204-6138-0907

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

Re: Fourth quarter 1992 ground-water monitoring report, Shell Oil
Company, 5251 Hopyard Road, Pleasanton, 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 5251 Hopyard Road, Pleasanton, California. Fourth quarter monitoring was conducted on October 16, 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 through S-8 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 through S-8 on October 16, 1992. Prior to sample collection, the wells were purged with polyvinyl chloride bailers. During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Well S-1 was evacuated to dryness before three casing volumes were removed. The well was allowed to recharge for up to 24 hours. Samples were collected after the well had recharged to a sufficient level. Field measurements from fourth quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained

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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 fourth quarter monitoring included a trip blank (TB), a field blank (FB), and a duplicate well sample (SD-1) collected from well S-1. 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.

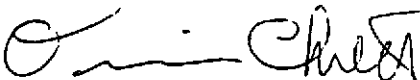
If you have any questions, please call.

Very truly yours,

EMCON Associates



David Larsen
Environmental Sampling Coordinator



Orrin Childs
Environmental Sampling Supervisor

DL/OC:dI

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: 5251 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0907

Date: 11/16/92
Project Number: G87-27.01

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	10/18/91	326.73	8.85	317.88	28.5	ND	10/18/91	7.04			
S-1	01/23/92	326.73	9.42	317.31	28.5	ND	01/23/92	7.48	2270	70.4	NR
S-1	04/27/92	326.73	9.21	317.52	30.0	ND	04/27/92	7.49	3320	52.1	>200
S-1	07/17/92	326.73	8.62	318.11	30.0	ND	07/21/92	7.71	3080	66.2	>1000
S-1	10/16/92	326.73	8.61	318.12	29.9	ND	10/16/92	7.46	3120	76.3	>200
									3020	69.5	>200
S-2	10/18/91	326.59	8.83	317.76	24.6	ND	10/18/91	7.43			
S-2	01/23/92	326.59	9.49	317.10	24.5	ND	01/23/92	7.21	3280	66.4	NR
S-2	04/27/92	326.59	9.23	317.36	24.6	NO	04/27/92	7.30	4530	53.8	>200
S-2	07/17/92	326.59	8.75	317.84	24.7	ND	07/17/92	7.29	4500	68.4	610
S-2	10/16/92	326.59	8.85	317.74	24.5	NO	10/16/92	7.49	4840	68.0	>200
									4460	67.4	>200
S-3	10/18/91	327.38	9.64	317.74	24.9	ND	10/18/91	7.20			
S-3	01/23/92	327.38	9.86	317.52	25.0	ND	01/23/92	7.15	2520	68.2	NR
S-3	04/27/92	327.38	10.05	317.33	24.8	ND	04/27/92	7.25	3370	51.8	>200
S-3	07/17/92	327.38	9.63	317.75	24.9	ND	07/17/92	7.07	2870	68.0	>1000
S-3	10/16/92	327.38	9.71	317.67	24.8	ND	10/16/92	7.28	3380	69.1	>200
									2880	67.8	>1000
S-4	10/18/91	327.38	8.82	318.56	24.5	ND	10/18/91	7.86			
S-4	01/23/92	327.38	10.05	317.33	24.5	ND	01/23/92	7.56	1228	71.8	NR
S-4	04/27/92	327.38	9.92	317.46	24.5	ND	04/27/92	7.64	1847	53.1	>200
S-4	07/17/92	327.38	8.98	318.40	24.6	ND	07/17/92	7.56	1927	70.0	>1000
S-4	10/16/92	327.38	9.18	318.20	24.5	ND	10/16/92	7.47	1876	70.1	>200
									1508	70.6	946

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 1
Monitoring Well Field Measurement Data
Fourth Quarter 1992

Shell Station: 5251 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0907

Date: 11/16/92
Project Number: G67-27.01

Well Desig- nation	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-5	10/18/91	327.76	10.00	317.76	24.7	ND	10/18/91	7.66	1179	65.5	NR
S-5	01/23/92	327.76	10.63	317.13	24.5	ND	01/23/92	7.12	1684	55.8	>200
S-5	04/27/92	327.76	10.35	317.41	24.7	ND	04/27/92	7.49	1395	68.7	>1000
S-5	07/17/92	327.76	10.00	317.76	24.9	ND	07/17/92	7.02	1678	67.1	>200
S-5	10/16/92	327.76	10.08	317.68	24.7	ND	10/16/92	7.17	1467	65.5	>1000
S-6	10/18/91	326.56	8.84	317.72	26.1	ND	10/18/91	7.62	941	70.3	NR
S-6	01/23/92	326.56	9.43	317.13	26.0	ND	01/23/92	7.78	1690	58.6	>200
S-6	04/27/92	326.56	9.07	317.49	26.1	ND	04/27/92	7.76	895	70.1	>1000
S-6	07/17/92	326.56	8.81	317.75	26.1	ND	07/17/92	7.44	1610	72.9	>200
S-6	10/16/92	326.56	9.02	317.54	26.0	ND	10/16/92	7.47	1466	70.1	>1000
S-7	10/18/91	326.49	8.92	317.57	25.4	ND	10/18/91	7.26	2870	70.5	NR
S-7	01/23/92	326.49	9.26	317.23	25.5	ND	01/23/92	7.05	9400	52.0	>200
S-7	04/27/92	326.49	9.11	317.38	25.4	ND	04/27/92	7.23	6900	72.8	>1000
S-7	07/17/92	326.49	8.79	317.70	25.4	ND	07/17/92	7.44	3260	72.0	>200
S-7	10/16/92	326.49	9.00	317.49	25.4	ND	10/16/92	7.53	1880	69.4	>200
S-8	10/18/91	325.32	7.62	317.70	25.3	ND	10/18/91	7.40	4880	68.0	NR
S-8	01/23/92	325.32	8.23	317.09	25.0	ND	01/23/92	7.06	6810	55.3	>200
S-8	04/27/92	325.32	7.97	317.35	25.3	ND	04/27/92	7.04	5940	71.2	>1000
S-8	07/17/92	325.32	7.66	317.66	25.3	ND	07/21/92	7.12	6880	67.0	>200
S-8	10/16/92	325.32	7.71	317.61	25.2	ND	10/16/92	7.14	6440	67.5	>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

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

Shell Station: 5251 Hopyard Road
 Pleasanton, California
 WIC #: 204-6138-0907

Date: 11/16/92
 Project Number: G67-27.01

Sample Designation	Water Sample Field Date	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-d
		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
S-1	10/18/91	12.	3.6	0.38	0.99	0.58	3.3*
S-1	01/23/92	1.6	0.45	0.003	0.12	0.017	0.89*
S-1	04/27/92	1.1+	0.61	<0.01	0.11	0.01	0.50*
S-1	07/21/92	5.1	1.9	0.054	0.43	0.14	0.29a
S-1	10/16/92	13.	3.2	0.31	0.78	0.36	0.39a
SD-1	10/16/92	13.	3.4	0.34	0.81	0.32	0.41a
S-2	10/18/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-2	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-2	04/27/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-2	07/17/92	<0.05	<0.0005	<0.0005	<0.0005	0.0005	<0.05
S-2	10/16/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-3	10/18/91	1.9	0.37	0.0031	0.12	0.22	0.5
S-3	01/23/92	2.0	0.58	0.003	0.20	<0.002	0.65*
S-3	04/27/92	1.1+	0.15	<0.003	0.076	0.014	0.23*
S-3	07/17/92	0.81	0.20	<0.0025	0.057	0.0038	0.058
S-3	10/16/92	0.44	0.079	0.0018	0.018	0.0046	0.19a
S-4	10/18/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-4	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-4	04/27/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-4	07/17/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.074
S-4	10/16/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

* = Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline

+ = The chromatographic pattern of the purgeable hydrocarbons found in the sample is similar to the pattern of weathered gasoline

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

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

Shell Station: 5251 Hopyard Road
 Pleasanton, California
 WIC #: 204-6138-0907

Date: 11/16/92
 Project Number: G67-27.01

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)
S-5	10/18/91	0.12 [^]	0.043	<0.0005	0.001	0.0007	<0.05
S-5	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-5	04/27/92	<0.05	<0.0005	<0.0005	<0.0005	0.0006	<0.05
S-5	07/17/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.070
S-5	10/16/92	0.23	0.013	<0.0005	0.0049	0.0043	0.057
S-6	10/18/91	<0.05	<0.0005	<0.0005	<0.0005	0.0005	<0.05
S-6	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-6	04/27/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-6	07/17/92	0.40	<0.0005	<0.0005	<0.0005	<0.0005	0.13
S-6	10/16/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-7	10/18/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.14&
S-7	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-7	04/27/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-7	07/17/92	<0.05	<0.0005	0.0018	0.0008	0.0041	<0.05
S-7	10/16/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-8	10/18/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.36&
S-8	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.09
S-8	04/27/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-8	07/21/92	0.053	<0.0005	0.0010	<0.0005	0.0018	<0.05
S-8	10/16/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
FB	07/21/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
FB	10/16/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

[^] = Compounds detected and calculated as gasoline are not characteristic of the standard gasoline chromatographic pattern

& = Compounds detected and calculated as diesel 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: 5251 Hopyard Road
 Pleasanton, California
 WIC #: 204-6138-0907

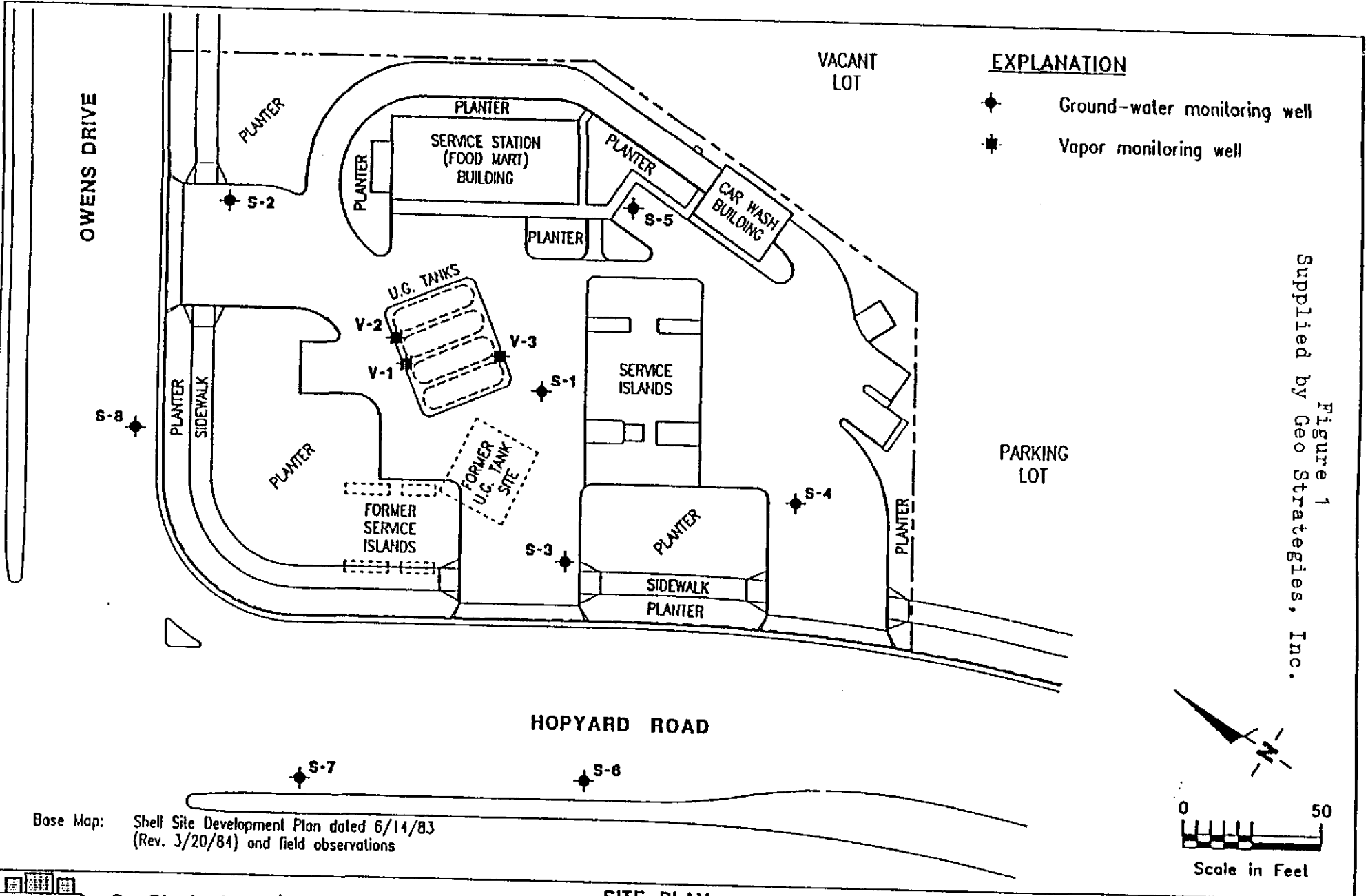
Date: 11/16/92
 Project Number: G67-27.01

Sample Designation	Water Sample Field Date	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-d
		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
TB	01/25/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
TB	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.60#
TB	04/27/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
TB	07/21/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
TB	10/16/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

= Positive result for diesel in the TB was confirmed with the laboratory; no explanation was given by the laboratory



EXPLANATION

- ◆ Ground-water monitoring well
- ★ Vapor monitoring well

Figure 1
Supplied by Geo Strategies, Inc.

Base Map: Shell Site Development Plan dated 6/14/83
(Rev. 3/20/84) and field observations



GeoStrategies Inc.

SITE PLAN
Shell Service Station
5251 Hopyard Road
Pleasanton, California

JOB NUMBER
763301-11

REVIEWED BY
EFS

DATE
9/91

REVISED DATE



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

Workorder # : 9210271
Date Received : 10/16/92
Project ID : 204-6138-0907
Purchase Order: MOH-B813


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

ANAMETRIX ID	CLIENT SAMPLE ID
9210271- 1	S-2
9210271- 2	S-4
9210271- 3	S-5
9210271- 4	S-6
9210271- 5	S-7
9210271- 6	S-8
9210271- 7	S-3
9210271- 8	S-1
9210271- 9	SD-1
9210271-10	TB
9210271-11	FB

This report consists of 10 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

10-30-92
Date

EMCON ASSOCIATES

NOV 02 1992

RECEIVED

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

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

Workorder # : 9210271
Date Received : 10/16/92
Project ID : 204-6138-0907
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210271- 1	S-2	WATER	10/16/92	TPHd
9210271- 2	S-4	WATER	10/16/92	TPHd
9210271- 3	S-5	WATER	10/16/92	TPHd
9210271- 4	S-6	WATER	10/16/92	TPHd
9210271- 5	S-7	WATER	10/16/92	TPHd
9210271- 6	S-8	WATER	10/16/92	TPHd
9210271- 7	S-3	WATER	10/16/92	TPHd
9210271- 8	S-1	WATER	10/16/92	TPHd
9210271- 9	SD-1	WATER	10/16/92	TPHd
9210271-10	TB	WATER	10/16/92	TPHd
9210271-11	FB	WATER	10/16/92	TPHd
9210271- 1	S-2	WATER	10/16/92	TPHg/BTEX
9210271- 2	S-4	WATER	10/16/92	TPHg/BTEX
9210271- 3	S-5	WATER	10/16/92	TPHg/BTEX
9210271- 4	S-6	WATER	10/16/92	TPHg/BTEX
9210271- 5	S-7	WATER	10/16/92	TPHg/BTEX
9210271- 6	S-8	WATER	10/16/92	TPHg/BTEX
9210271- 7	S-3	WATER	10/16/92	TPHg/BTEX
9210271- 8	S-1	WATER	10/16/92	TPHg/BTEX
9210271- 9	SD-1	WATER	10/16/92	TPHg/BTEX
9210271-10	TB	WATER	10/16/92	TPHg/BTEX

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

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

Workorder # : 9210271
Date Received : 10/16/92
Project ID : 204-6138-0907
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210271-11	FB	WATER	10/16/92	TPHg/BTEX

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

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

Workorder # : 9210271
Date Received : 10/16/92
Project ID : 204-6138-0907
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as diesel for samples S-3, S-1 and SD-1 are primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene.

Cheryl Balmer 10/30/92
Department Supervisor Date

Steve Pons 10/30/92
Chemist Date

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

Anamatrix W.O.: 9210271
Matrix : WATER
Date Sampled : 10/16/92

Project Number : 204-6138-0907
Date Released : 10/29/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# S-2	Sample I.D.# S-4	Sample I.D.# S-5	Sample I.D.# S-6	Sample I.D.# S-7
Benzene	0.0005	ND	ND	0.013	ND	ND
Toluene	0.0005	ND	ND	ND	ND	ND
Ethylbenzene	0.0005	ND	ND	0.0049	ND	ND
Total Xylenes	0.0005	ND	ND	0.0043	ND	ND
TPH as Gasoline	0.050	ND	ND	0.23	ND	ND
% Surrogate Recovery		116%	108%	108%	111%	113%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/22/92	10/22/92	10/22/92	10/22/92	10/23/92
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 Sims 10/30/92
Analyst Date

Cheryl Belmer 10/30/92
Supervisor Date

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

Anamatrix W.O.: 9210271
Matrix : WATER
Date Sampled : 10/16/92

Project Number : 204-6138-0907
Date Released : 10/29/92

Reporting Limit	Sample I.D.# S-8	Sample I.D.# S-3	Sample I.D.# S-1	Sample I.D.# SD-1	Sample I.D.# TB
COMPOUNDS (mg/L)	-06	-07	-08	-09	-10
Benzene	0.0005 ND	0.079	3.2	3.4	ND
Toluene	0.0005 ND	0.0018	0.31	0.34	ND
Ethylbenzene	0.0005 ND	0.018	0.78	0.81	ND
Total Xylenes	0.0005 ND	0.0046	0.36	0.32	ND
TPH as Gasoline	0.050 ND	0.44	13	13	ND
% Surrogate Recovery	111%	121%	109%	104%	95%
Instrument I.D.	HP12	HP12	HP12	HP12	HP12
Date Analyzed	10/23/92	10/23/92	10/23/92	10/23/92	10/23/92
RLMF	1	1	100	100	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 Poma 10/30/92
Analyst Date

Christ Balmer 10/30/92
Supervisor Date

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

Anamatrix W.O.: 9210271
Matrix : WATER
Date Sampled : 10/16/92

Project Number : 204-6138-0907
Date Released : 10/29/92

Reporting Limit	Sample I.D.# FB	Sample I.D.# B02201E2	Sample I.D.# B02302E2
COMPOUNDS (mg/L)	-11	BLANK	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	105%	92%	103%
Instrument I.D.	HP12	HP12	HP12
Date Analyzed	10/23/92	10/22/92	10/23/92
RLMF	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 Sore 10/30/92
Analyst Date

Cheryl Balmer 10/30/92
Supervisor Date

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

Anamatrix W.O.: 9210271
Matrix : WATER
Date Sampled : 10/16/92
Date Extracted: 10/24/92

Project Number : 204-6138-0907
Date Released : 10/29/92
Instrument I.D.: HP23

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/L)	Amount Found (mg/L)
9210271-01	S-2	10/26/92	0.050	ND
9210271-02	S-4	10/26/92	0.050	ND
9210271-03	S-5	10/26/92	0.050	0.057
9210271-04	S-6	10/26/92	0.050	ND
9210271-05	S-7	10/26/92	0.050	ND
9210271-06	S-8	10/27/92	0.050	ND
9210271-07	S-3	10/27/92	0.050	0.19
9210271-08	S-1	10/27/92	0.050	0.39
9210271-09	SD-1	10/27/92	0.050	0.41
9210271-10	TB	10/27/92	0.050	ND
9210271-11	FB	10/27/92	0.050	ND
DWBL102492	METHOD BLANK	10/26/92	0.050	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 0.050 mg/L.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

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

Steve Amer 11/16/92
Analyst Date

Charles D. Bachman 11/16/92
Supervisor Date

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

Sample I.D. : 204-6138-0907 S-8
 Matrix : WATER
 Date Sampled : 10/16/92
 Date Analyzed : 10/23/92

Anamatrix I.D. : 9210271-06
 Analyst : *n*
 Supervisor : *LS*
 Date Released : 10/30/92
 Instrument ID : HP12

COMPOUND	SPIKE AMT (mg/L)	SAMPLE AMT (mg/L)	REC MS (mg/L)	% REC MS	REC MD (mg/L)	% REC MD	RPD	% REC LIMITS
GASOLINE	0.25	0.00	0.25	100%	0.26	104%	4%	48-145
P-BFB				97%		100%		53-147

* Limits established by Anamatrix, 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 : 10/23/92

Anamatrix I.D. : LCSW1023
 Analyst : *AS*
 Supervisor : *B*
 Date Released : 10/30/92
 Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (mg/L)	REC LCS (mg/L)	%REC LCS	% REC LIMITS
GASOLINE	0.25	0.22	88%	56-116
SURROGATE			84%	53-147

* Quality control 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: 10/24/92
 Date Analyzed : 10/27/92

Anamatrix I.D. : LCSW1024
 Analyst : *M*
 Supervisor : *CB*
 Date Released : 10/29/92
 Instrument I.D.: HP23

COMPOUND	SPIKE AMT (mg/L)	LCS REC (mg/L)	% REC LCS	LCS REC (mg/L)	% REC LCS	RPD	% REC LIMITS
DIESEL	1.25	1.20	96%	1.25	100%	4%	36-150

*Quality control established by Anamatrix, Inc.



SHELL OIL COMPANY 9210271
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 1233-5

Date: _____
 Page 1 of 2

Site Address: 5251 Hopwood Road
 Pleasanton, CA

WIC#: 204-6138-0907

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

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

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

Comments: 3-VOL% (TK) for gas, BTEX
 2-Liter Glass (SR) for diesel

Sampled by: _____
 Printed Name: _____

Analysis Required

LAB: Anamatrix

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	6442	16 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 hrs. TAT.

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
S-2	10-16-92			X		5	X					X		40 ml	HCl	No		
S-4							X					X						
S-5							X					X						
S-6							X					X						
S-7							X					X						
S-8							X					X						
S-3							X					X						
S-1							X					X						

Relinquished By (signature): <i>[Signature]</i>	Printed Name: <i>M. Adler</i>	Date: 12/16/92	Received (signature): <i>[Signature]</i>	Printed Name: <i>Maria Barajas</i>	Date: 10/16/92
Relinquished By (signature):	Printed Name:	Time: 1455	Received (signature):	Printed Name:	Time: 1455
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



SHELL OIL COMPANY 9210271
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 1233-5

Date: _____
 Page 2 of 2

Site Address: 5251 Hayward Road
 Pleasanton, CA

WIC#: 204-638-0907

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

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

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

Comments: see page 1.

Analysis Required

LAB: AnametriX

CHECK ONE (1) BOX ONLY	C1/D1	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 Classfy/Disposal <input type="checkbox"/>	6442	16 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6462	
Water Rem. or Sys. O & M <input type="checkbox"/>	6463	
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as Possible of 24/48 hrs. 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 <i>baseline</i>	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
SD - L	10-16-92			X		5		X				X		40 ml	HCl	No		
TB						4		X				X						
FB						4		X				X						

Relinquished By (signature): *[Signature]*
 Printed Name: MADCEK
 Date: 10-16-92
 Time: 1455

Received (signature): *[Signature]*
 Printed Name: Maria Barajas
 Date: 10/16/92
 Time: 14:55

Received (signature): *[Signature]*
 Printed Name: Maria Barajas
 Date: 10/16/92
 Time: 14:55

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