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

March 27, 1992

Ms. Pam Evans
Alameda County Health Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Reference: Former Shell Service Station
15275 Washington Street
San Leandro, California
WIC 204-6852-1008

Ms. Evans:

As requested by Paul Hayes of Shell Oil Company, we are forwarding the March 27, 1992 Quarterly Report prepared for the referenced location. The report presents the results of the ground-water sampling conducted during the first quarter of 1992.

If you have any questions, please call.

Sincerely,

Ellen Fostersmith

Ellen Fostersmith
Geologist

enclosure

cc: Mr. Paul Hayes, Shell Oil Company
Mr. Tom Callaghan, Regional Water Quality Control Board
Mr. Larry Turner, Shell Oil Company

GeoStrategies Inc.

QUARTERLY REPORT

Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC 204-6852-1008

761501-16

March 27, 1992

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

March 27, 1992

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

Attn: Mr. E. Paul Hayes

Re: QUARTERLY REPORT
Former Shell Service Station
15275 Washington Avenue
San Leandro, California
WIC# 204-6852-1008

Gentlemen:

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

There are currently sixteen monitoring wells and one recovery well at the site; Wells S-1, S-3, S-5 through S-18, and SR-1 (Plate 2). These wells were installed between 1985 and 1991 by EMCON Associates, Woodward-Clyde Consultants and GSI. Wells S-2 and S-4 were destroyed in 1987.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well on February 5, 1992. Static ground-water levels were measured from the surveyed top of the well box and recorded to the nearest $\pm$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 report (Appendix A). Water-level data were used to construct a quarterly potentiometric map (Plate 2). Shallow ground-water flow is to the south and southwest at an approximate hydraulic gradient of 0.003.

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

Ground-water samples were collected on February 5, 1992. Samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline), according to EPA Method 8015 (Modified) and for BTEX according to EPA Method 8020. Well S-5 was also analyzed for Volatile Organic Constituents (VOCs) according to EPA Method 601/602. The ground-water samples were analyzed by International Technology (IT) Analytical Services, a California State-certified laboratory located in San Jose, California. These data are summarized in the EMCON report (Appendix A). A chemical [redacted] is presented on [redacted]. 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

CERTIFIED ENGINEERING GEOLOGIST
MICHAEL C. CAREY
C.E.G. 1351
EXP: 6-30-92
STATE OF CALIFORNIA

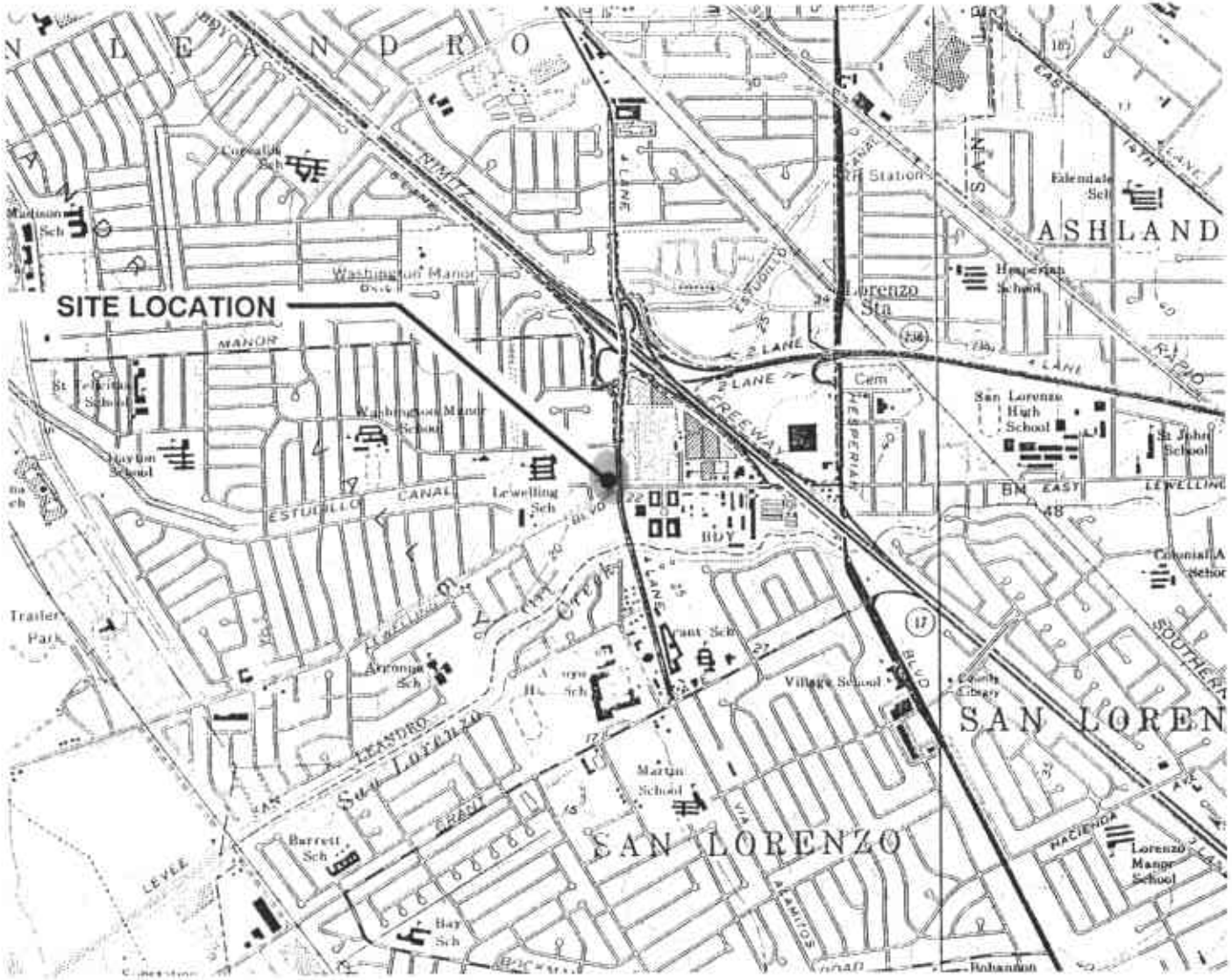
ECF/MCC/dls

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: _____

761501-16



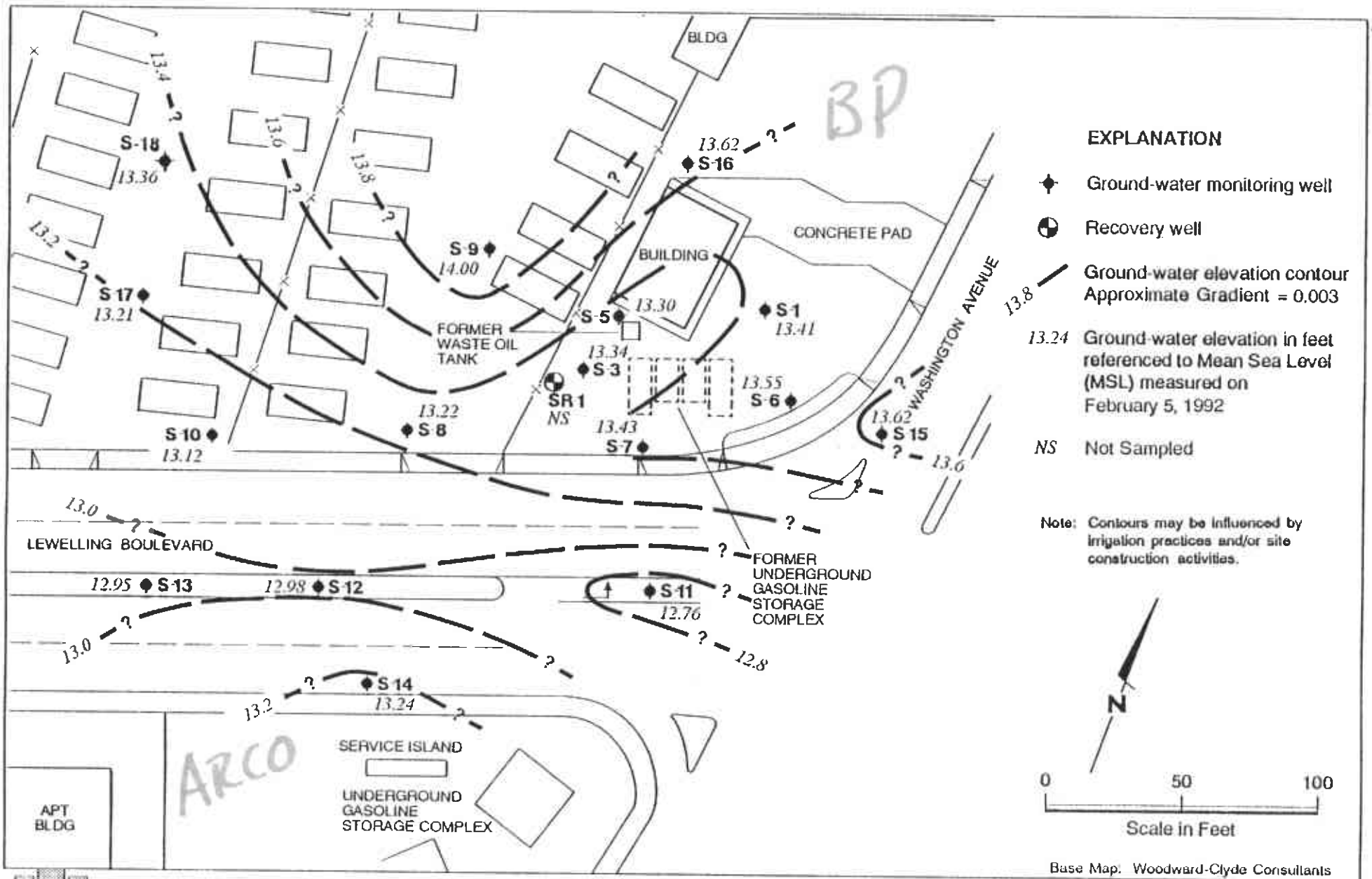
Base Map: USGS Topographic Map

GeoStrategies Inc.

Vicinity Map
Former Shell Service Station
15275 Washington Avenue
San Leandro, California

PLATE
1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615		11/89		

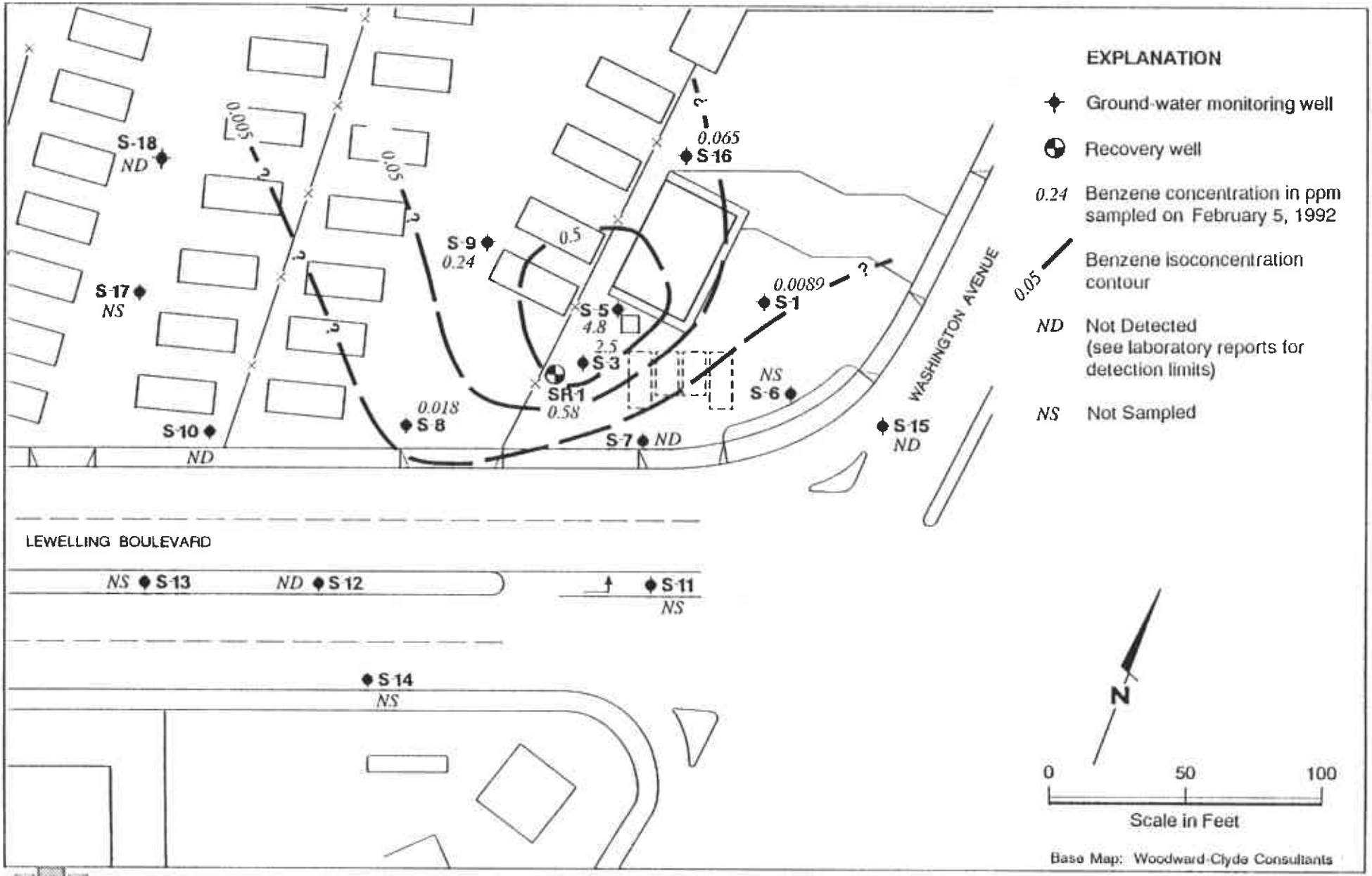


GeoStrategies Inc.

Site Plan/Potentiometric Map
Former Shell Service Station
15275 Washington Avenue
San Leandro, California

PLATE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
761501-16	CPS	3/92		



GeoStrategies Inc.

Benzene Isoconcentration Map
Former Shell Service Station
15275 Washington Avenue
San Leandro, California

PLATE
3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
761501-16	[illegible]	3/92		

APPENDIX A
EMCON MONITORING REPORT
AND
CHAIN-OF-CUSTODY

emcon
ASSOCIATES
Consultants in Wastes
Management and
Environmental Control

GeoStrategies Inc.

March 5, 1992
Project: G67-28.01
WIC#: 204-6852-1008

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

Re: First quarter 1992 ground-water monitoring report, Shell Oil Company, 15275 Washington Avenue, San Leandro, California

Dear Ms. Fostersmith:

This letter presents the results of the first quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) service station located at 15275 Washington Avenue, San Leandro, California. First quarter monitoring was conducted on February 5 and 6, 1992. The site is monitored quarterly; selected wells are sampled semiannually.

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-3, S-5 through S-18 and SR-1 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. No floating product was observed in the wells. Total depth was measured to the nearest 0.1 foot. Results of the first quarter water-level survey, and available data from four previous water-level surveys, are summarized in table 1.

SAMPLING AND ANALYSIS

Ground-water samples were collected from wells S-1, S-3, S-5, S-7 through S-10, S-12, S-15, S-16, S-18, and SR-1 on February 5 and 6, 1992. Prior to sample collection, the wells were purged with a polyvinyl chloride (PVC) bailer or an electric submersible pump. 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 first quarter monitoring, and available data from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells

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

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 on site with steaming hot deionized water prior to use at each well.

Quality control samples included one duplicate sample (SD-9) collected from well S-9 and a trip blank (TB). All water samples from the first quarter 1992 monitoring event were analyzed for total petroleum hydrocarbons (TPH) as gasoline and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Samples collected from well S-5 were also analyzed for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) methods 601 and 602.

ANALYTICAL RESULTS

Analytical results for the first quarter 1992 monitoring event, and available data from four previous monitoring events, are summarized in table 2. Note that BTEX results were reported twice for well S-5. BTEX results reported with TPH as gasoline analysis are included in table 2; BTEX results reported with VOC analysis are summarized in table 3. The original certified analytical reports and copies of the final chain-of-custody documents are also 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

G672801A.DOC

Attachments: Table 1 - Monitoring well field measurement data, first quarter 1992

Table 2 - Summary of analytical results (TPH-g, BTEX), first quarter 1992

Table 3 - Summary of analytical results (VOCs), first quarter 1992

Figure 1 - Site map

Certified analytical reports

Chain-of-custody documents

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: G67-28.01

Well Designation	Water Level Field Date	TOC 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	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-1	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-1	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-1	07/09/91	21.55	8.22	13.33	19.9	ND	07/09/91	7.37	1187	69.2	NR
S-1	02/05/92	21.55	8.14	13.41	19.9	ND	02/05/92	7.30	1308	65.0	>200
S-3	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-3	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-3	05/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-3	07/09/91	21.14	8.07	13.07	15.3	ND	07/09/91	7.65	651	68.7	NR
S-3	02/05/92	21.14	7.80	13.34	15.4	ND	02/06/92	7.79	951	66.2	>200
S-5	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-5	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-5	04/28/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-5	07/09/91	21.41	8.52	12.89	18.4	ND	07/09/92	7.30	1499	68.1	NR
S-5	02/05/92	21.41	8.11	13.30	18.4	ND	02/06/92	7.40	756	66.8	>200
S-6	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-6	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-6	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-6	07/09/91	22.02	8.81	13.21	24.6	ND	07/09/91	7.26	1065	68.7	NR
S-6	02/05/92	22.02	8.47	13.55	24.7	ND	02/05/92	NA	NA	NA	NA

TOC = top of casing
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
NA = not applicable; well was not scheduled for sampling

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: G67 28 01

Well Designation	Water Level Field Date	TOC 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-7	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-7	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-7	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-7	07/09/91	21.47	8.41	13.06	21.7	ND	07/09/91	7.37	1388	70.3	NR
S-7	02/05/92	21.47	8.04	13.43	24.4	ND	02/05/92	7.37	1538	63.5	>200
S-8	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-8	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-8	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-8	07/09/91	20.72	7.98	12.74	24.3	ND	07/09/91	7.79	1655	70.4	NR
S-8	02/05/92	20.72	7.50	13.22	24.2	ND	02/05/92	7.21	1840	64.1	>200
S-9	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-9	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-9	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-9	07/09/91	20.96	8.00	12.96	17.9	ND	07/09/91	7.47	1547	71.2	NR
S-9	02/05/92	20.96	6.96	14.00	17.9	ND	02/06/92	7.20	1010	63.8	>200
S-10	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-10	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-10	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-10	07/09/91	20.69	8.14	12.55	18.1	ND	07/09/91	7.39	965	63.6	NR
S-10	02/05/92	20.69	7.57	13.12	18.1	ND	02/05/92	7.18	963	64.0	>200

TOC = top of casing
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

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: G67 28.01

Well Designation	Water Level Field Date	TOC 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-11	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-11	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-11	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-11	07/09/91	21.26	8.85	12.41	22.6	ND	07/09/91	7.85	1078	67.6	NR
S-11	02/05/92	21.26	8.50	12.76	24.1	ND	02/05/92	NA	NA	NA	NA
S-12	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-12	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-12	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-12	07/09/91	21.05	8.42	12.63	24.1	ND	07/09/91	7.80	1164	66.5	NR
S-12	02/05/92	21.05	8.07	12.98	24.0	ND	02/05/92	7.69	1151	64.3	>200
S-13	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-13	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-13	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-13	07/09/91	20.57	8.12	12.45	23.9	ND	07/09/91	7.59	1596	66.9	NR
S-13	02/05/92	20.57	7.62	12.95	23.8	ND	02/05/92	NA	NA	NA	NA
S-14	10/19/90	NR	NR	NR	NR	NR	10/19/90	NR	NR	NR	NR
S-14	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-14	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-14	07/09/91	20.44	7.69	12.75	23.2	ND	07/09/91	7.77	1384	67.2	NR
S-14	02/05/92	20.44	7.20	13.24	23.2	ND	02/05/92	NA	NA	NA	NA

TOC = top of casing
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
NA = not applicable; well was not scheduled for sampling

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: 667 28 01

Well Designation	Water Level Field Date	TOC 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-15	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-15	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-15	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-15	07/09/91	22.22	8.93	13.29	23.7	ND	07/09/91	8.12	980	68.2	NR
S-15	02/05/92	22.22	8.60	13.62	23.6	ND	02/06/92	7.52	928	63.0	>200
S-16	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-16	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-16	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-16	07/09/91	21.82	8.48	13.34	24.0	ND	07/09/91	7.42	1385	65.5	NR
S-16	02/05/92	21.82	8.20	13.62	23.9	ND	02/05/92	7.20	1496	65.6	>200
S-17	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
S-17	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
S-17	04/25/91	NR	NR	NR	NR	NR	04/25/91	NR	NR	NR	NR
S-17	07/09/91	20.95	8.24	12.71	24.3	ND	07/09/91	7.66	1142	66.3	NR
S-17	02/05/92	20.95	7.74	13.21	24.4	ND	02/05/92	NA	NA	NA	NA
S-18	05/31/91	NR	NR	NR	NR	NR	05/31/91	NR	NR	NR	NR
S-18	07/09/91	21.03	8.23	12.80	18.1	ND	07/09/91	7.62	1152	70.1	NR
S-18	02/05/92	21.03	7.67	13.36	18.1	ND	02/05/92	7.39	1520	65.5	>200

TOC = top of casing
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
NA = not applicable; well was not scheduled for sampling

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: G67-28.01

Well Designation	Water Level Field Date	TOC 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)
SR-1	07/23/90	NR	NR	NR	NR	NR	07/23/90	NR	NR	NR	NR
SR-1	10/18/90	NR	NR	NR	NR	NR	10/18/90	NR	NR	NR	NR
SR-1	01/28/91	NR	NR	NR	NR	NR	01/28/91	NR	NR	NR	NR
SR-1	07/09/91	NR	8.11	NR	21.2	ND	07/09/91	7.17	1613	67.8	NR
SR-1	02/05/92	NR	7.68	NR	21.2	ND	02/06/92	6.89	1520	61.1	>200

TOC = top of casing
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

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

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: 667 28 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)
S-1	10/18/90	0.08	0.0050	<0.0005	<0.0005	0.0030
S-1	01/28/91	<0.05	0.0045	<0.0005	<0.0005	0.002
S-1	04/25/91	0.08ß	0.0037	<0.0005	0.0007	0.0020
S-1	07/09/91	0.20	0.016	<0.0005	0.0013	0.0058
S-1	02/05/92	0.16	0.0089	<0.0005	<0.0005	0.0060
S-3	10/18/90	44.	3.5	0.65	2.4	11.
S-3	01/28/91	64.	4.09	0.57	1.94	8.09
S-3	04/25/91	120.	3.9	3.6	2.4	8.9
S-3	07/09/91	50.	3.6	2.3	1.8	10.
S-3	02/06/92	150.	2.5	0.67	2.7	10.
S-5	10/18/90	12.	3.2	0.04	0.72	0.90
S-5	01/28/91	2.55	0.41	.015	0.11	0.06
S-5	04/25/91	67.	5.1	3.1	2.8	11.
S-5	07/09/92	4.9	0.48	0.036	0.36	1.0
S-5	02/06/92	44.	4.8	0.85	2.7	8.4
S-6	10/18/90	<0.05	<0.0005	0.0007	<0.0005	0.0008
S-6	01/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-6	04/25/91	<0.05	<0.0005	<0.0005	<0.0005	0.0007
S-6	07/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-6	02/05/92	NA	NA	NA	NA	NA

TPH-g = total petroleum hydrocarbons as gasoline
ß = Compounds detected within the gasoline range are not charcteristic of the standard gasoline chromatographic pattern.
NA = not applicable; well was not scheduled for sampling

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

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: G67-28.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)
S-7	10/18/90	<0.05	<0.0005	<0.0005	0.0005	0.0041
S-7	01/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	04/25/91	0.06&	<0.0005	<0.0005	<0.0005	<0.0005
S-7	07/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	02/05/92	<0.5	<0.0005	<0.0005	<0.0005	<0.0005
S-8	10/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-8	01/28/91	<0.05	0.055	0.0005	<0.0005	0.0014
S-8	04/25/91	0.13&	0.019	<0.0005	0.0013	0.0011
S-8	07/09/91	0.20	0.033	<0.0005	0.0018	0.0028
S-8	02/05/92	0.09&	0.018	<0.0005	0.0062	0.0018
S-9	10/18/90	0.39	0.14	0.0007	0.0033	0.024
S-9	01/28/91	1.040	0.450	0.0046	0.085	0.097
S-9	04/25/91	5.8	0.88	0.0090	0.36	0.50
S-9	07/09/91	1.4	0.22	0.0028	0.082	0.10
S-9	02/06/92	0.95	0.24	<0.0025	0.028	0.055
SD-9	02/06/92	1.1	0.29	<0.0025	0.038	0.068
S-10	10/18/90	0.14	<0.0005	0.0007	<0.0005	0.0070
S-10	01/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-10	04/25/91	<0.05	<0.0005	<0.0005	0.0011	0.0008
S-10	07/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-10	02/05/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline
& = Compounds detected within the gasoline range are not charcteristic of the standard gasoline chromatographic pattern.

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

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: G67 28 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)
S-11	10/18/90	<0.05	<0.0005	<0.0005	<0.0005	0.0005
S-11	01/28/91	0.063	<0.0005	0.0033	0.0009	0.007
S-11	04/25/91	<0.05	<0.0005	<0.0005	0.0008	<0.0005
S-11	07/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-11	02/05/92	NA	NA	NA	NA	NA
S-12	10/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-12	01/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-12	04/25/91	0.09	0.0054	<0.0005	0.0011	0.0007
S-12	07/09/91	<0.05	0.0029	<0.0005	<0.0005	<0.0005
S-12	02/05/92	0.05&	<0.0005	<0.0005	<0.0005	<0.0005
S-13	10/18/90	0.13	<0.0005	<0.0005	<0.0005	<0.0005
S-13	01/28/91	<0.05	<0.0005	0.0009	<0.0005	0.001
S-13	04/25/91	0.44&	0.0038	<0.0005	0.0012	0.0006
S-13	07/09/91	0.32&	0.0006	<0.0005	<0.0005	<0.0005
S-13	02/05/92	NA	NA	NA	NA	NA
S-14	10/19/90	1.8	0.77	0.013	0.017	0.12
S-14	01/28/91	0.72	0.200	0.036	0.021	0.078
S-14	04/25/91	14.	0.93	0.43	0.25	0.97
S-14	07/09/91	0.16	0.030	0.0053	0.0050	0.016
S-14	02/05/92	NA	NA	NA	NA	NA

TPH-g = total petroleum hydrocarbons as gasoline
NA = not applicable; well was not scheduled for sampling
& = Compounds detected within the gasoline range are not charcteristic of the standard gasoline chromatographic pattern.

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

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/05/92
Project Number: G67-28.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)
S-15	10/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-15	01/28/91	<0.05	<0.0005	0.0006	<0.0005	0.0008
S-15	04/25/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-15	07/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-15	02/06/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-16	10/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-16	01/28/91	<0.05	<0.0005	0.0006	<0.0005	0.0009
S-16	04/25/91	0.06^	0.021	0.0005	0.0032	0.0048
S-16	07/09/91	<0.05	0.0010	<0.0005	<0.0005	<0.0005
S-16	02/05/92	0.15	0.065	0.0007	<0.0005	0.0084
S-17	10/18/90	0.39	0.010	0.062	0.022	0.11
S-17	01/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-17	04/25/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-17	07/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-17	02/05/92	NA	NA	NA	NA	NA
S-18	05/31/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-18	07/09/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-18	02/05/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
SR-1	07/23/90	3.2	0.47	0.32	0.17	0.87
SR-1	10/18/90	1.3	0.28	0.0066	0.11	0.13
SR-1	01/28/91	1.1	0.120	0.012	0.051	0.110
SR-1	07/09/91	1.4	0.20	0.027	0.13	0.34
SR-1	02/06/92	3.8	0.58	0.036	0.32	0.40

TPH-g = total petroleum hydrocarbons as gasoline
^ = Compounds reported as gasoline are due to volatile aromatics (BTEX) in the sample; gasoline was not detected.
NA = not applicable; well was not scheduled for sampling

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

Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date 03/05/92
Project Number G67 28 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)
TB	02/06/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline

Table 3
Summary of Analytical Results
Volatile Organic Compounds by EPA Method 8020
First Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

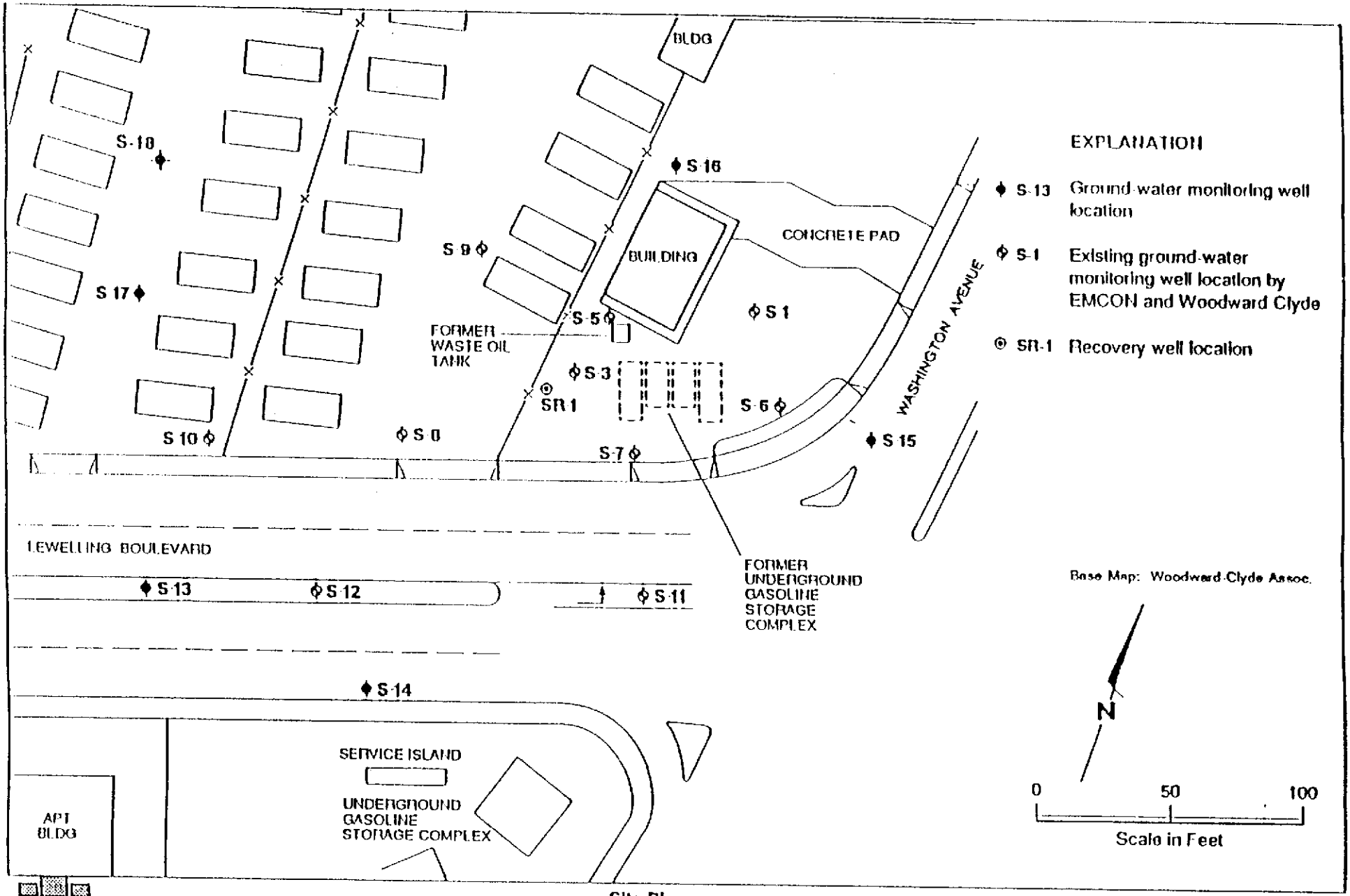
Shell Station: 15275 Washington
San Leandro, California
WIC #: 204-6852-1008

Date: 03/06/92
Project Number: G67-28.01

Sample Designation	Water Sample Field Date	B (mg/l)	T (mg/l)	E (mg/l)	X (mg/l)
S-5	02/06/92	4.9	0.94	2.9	9.0

B = benzene
T = toluene
E = ethylbenzene
X = xylenes (total)

Figure 1
(Supplied by Geo Strategies, Inc.)



GSI GeoStrategies Inc.

Site Plan
Former Shell Service Station
15275 Washington Avenue
San Leandro, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
761501-14		9/91		

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Shell Oil Company
Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
David Larsen

Date: 02/19/92

Work Order: T2-02-056

P.O. Number: MOH 880-021 Vendor #I0002402

This is the Certificate of Analysis for the following samples:

Client Work ID: G6728, 15275 Wash., S.Lndro
Date Received: 02/06/92
Number of Samples: 8
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

Reviewed and Approved:

Thomas L. Paulson
Project Manager

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: S-7
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202056-01
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/10/92
Low Boiling Hydrocarbons	Mod.8015		02/10/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	107.
1,3-Dichlorobenzene (BTEX)	98.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-10
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202056-02
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/11/92
Low Boiling Hydrocarbons	Mod.8015		02/11/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	106.
1,3-Dichlorobenzene (BTEX)	103.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-15[illegible]

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-15**
SAMPLE DATE: **02/06/92**
LAB SAMPLE ID: **T202056-03**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/10/92
Low Boiling Hydrocarbons	Mod.8015		02/10/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	106.
1,3-Dichlorobenzene (BTEX)	100.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-18**
SAMPLE DATE: **02/06/92**
LAB SAMPLE ID: **T202056-04**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/10/92
Low Boiling Hydrocarbons	Mod.8015		02/10/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	103.
1,3-Dichlorobenzene (BTEX)	98.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-16**
SAMPLE DATE: **02/06/92**
LAB SAMPLE ID: **T202056-05**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/11/92
Low Boiling Hydrocarbons	Mod.8015		02/11/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.15
BTEX		
Benzene	0.0005	0.065
Toluene	0.0005	0.0007
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	0.0084

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	102.
1,3-Dichlorobenzene (BTEX)	103.

Company: Shell Oil Company
Date: 02/20/92
Client Work ID: G6728, 15275 Wash., S.Lndro

IT ANALYTICAL SERVICES
SAN JOSE, CA

Work Order: T2-02-056

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-12
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202056-06
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/10/92
Low Boiling Hydrocarbons	Mod.8015		02/10/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.05 &
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	105.
1,3-Dichlorobenzene (BTEX)	99.

Comments:
& Compounds detected and calculated as low boiling hydrocarbons consist of compounds eluting within the chromatographic range of gasoline, but are not characteristic of the standard gasoline standard pattern.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-1
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202056-07
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/10/92
Low Boiling Hydrocarbons	Mod.8015		02/10/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.16
BTEX		
Benzene	0.0005	0.0089
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	0.0060

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	106.
1,3-Dichlorobenzene (BTEX)	104.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: S-8
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202056-08
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/11/92
Low Boiling Hydrocarbons	Mod.8015		02/11/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.09 &
BTEX		
Benzene	0.0005	0.018
Toluene	0.0005	None.
Ethylbenzene	0.0005	0.0062
Xylenes (total)	0.0005	0.0018

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	101.
1,3-Dichlorobenzene (BTEX)	102.

Comments:
& Compounds detected and calculated as low boiling hydrocarbons consist of compounds eluting within the chromatographic range of gasoline, but are not characteristic of the standard gasoline standard pattern.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: T202056-09A
EXTRACTION DATE:
ANALYSIS DATE: 02/10/92
ANALYSIS METHOD: 8020

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD
Benzene	None	50.0	39.6	39.9	79	80	1
Toluene	None	50.0	40.8	41.2	82	82	0
Ethylbenzene	None	50.0	41.0	41.2	82	82	0
Total Xylenes	None	150	130	131	87	87	0

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	103	103

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/18/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-056

TEST CODE **QC** TEST NAME **Quality Control**

Quality control (QC) samples are analyzed and used to assess the laboratory control measures. Routine QC samples include method blanks, spikes and duplicates. The purpose of the method blank (MB) analysis is to demonstrate that artifacts of the test do not yield false positives. The laboratory control spike (LS) and /or matrix spike (MS) analysis is used to evaluate the ability of the test to recover analytes of interest, i.e. accuracy. Accuracy is expressed as percent (%) recovery. The laboratory spike duplicate (LSD), matrix spike duplicate (MSD), or duplicate sample (DUP) is used to determine the precision of the test, by comparing the result from the original spike (or sample) to the duplicate spike (or sample). Precision is expressed as relative percent difference (RPD).

The results of appropriate QC samples from QC batches associated with the listed samples are included in this report.

TEST CODE **TPHVB** TEST NAME **TPH Gas,BTEX by 8015/8020**

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: 72-02-056

Date:
Page 1 of 2

Site Address: (San Leandro)
15275 Washington Ave.

WIC#: 204-6852-1008

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:

Sampled By: Lisa Ralph

Printed Name: Lisa Ralph

LAB: IT Analytical - San Jose

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	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-7	2-6-92		X		3	X		X			40 ml	HCl	No		Cool/OK
S-10															
S-15															
S-18															
S-16															
S-12															
S-1															
S-8															

Relinquished By (signature): Lisa Ralph
Printed name: Lisa Ralph
Date: 2/6/92
Time: 1641

Relinquished By (signature):
Printed name:
Date:
Time:

Relinquished By (signature):
Printed name:
Date:
Time:

Received (signature):
Printed name:
Date: 2692
Time: 1641

Received (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

Last Revision Date: 10/15/91

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Shell Oil Company
Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
David Larsen

Date: 02/25/92

Work Order: T2-02-057

P.O. Number: MOH 880-021 Vendor #I0002402

This is the Certificate of Analysis for the following samples:

Client Work ID: G6728, 15275 Wash., S.Lndro
Date Received: 02/06/92
Number of Samples: 6
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

Reviewed and Approved:

Thomas L. Paulson
Project Manager

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-9**
SAMPLE DATE: **02/06/92**
LAB SAMPLE ID: **T202057-01**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/12/92
Low Boiling Hydrocarbons	Mod.8015		02/12/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.25	0.95
BTEX		
Benzene	0.0025	0.24
Toluene	0.0025	None.
Ethylbenzene	0.0025	0.028
Xylenes (total)	0.0025	0.055

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	111.
1,3-Dichlorobenzene (BTEX)	101.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **SR-1**
SAMPLE DATE: **02/06/92**
LAB SAMPLE ID: **T202057-02**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/13/92
Low Boiling Hydrocarbons	Mod.8015		02/13/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.25	3.8
BTEX		
Benzene	0.0025	0.58
Toluene	0.0025	0.036
Ethylbenzene	0.0025	0.32
Xylenes (total)	0.0025	0.40

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	128*.
1,3-Dichlorobenzene (BTEX)	111.

*Surrogate elevated due to hydrocarbon interferences.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: EPA 601/602 in series

SAMPLE ID: S-5
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202057-03
SAMPLE MATRIX: AQUEOUS
RECEIPT CONDITION: COOL pH < 2
EXTRACTION DATE: N/A
ANALYSIS DATE: 02/20/92

RESULTS in MILLIGRAMS PER LITER

PARAMETER	DETECTION LIMIT	DETECTED
Bromodichloromethane	0.05	None
Bromoform	0.05	None
Bromomethane	0.05	None
Carbon tetrachloride	0.05	None
Chlorobenzene	0.05	None
Chloroethane	0.05	None
Chloroform	0.05	None
Chloromethane	0.05	None
Dibromochloromethane	0.05	None
1,2-Dichlorobenzene	0.05	None
1,3-Dichlorobenzene	0.05	None
1,4-Dichlorobenzene	0.05	None
Dichlorodifluoromethane	0.05	None
1,1-Dichloroethane	0.05	None
1,2-Dichloroethane	0.05	None
1,1-Dichloroethene	0.05	None
cis-1,2-Dichloroethene	0.05	None
trans-1,2-Dichloroethene	0.05	None
1,2-Dichloropropane	0.05	None
cis-1,3-Dichloropropene	0.05	None
trans-1,3-Dichloropropene	0.05	None
Methylene chloride	0.05	None
1,1,2,2-Tetrachloroethane	0.05	None
Tetrachloroethene	0.05	None
1,1,1-Trichloroethane	0.05	None
1,1,2-Trichloroethane	0.05	None
Trichloroethene	0.05	None
Trichlorofluoromethane	0.05	None
1,1,2-Trichlorotrifluoroethane	0.05	None
Vinyl chloride	0.05	None
1-Chloro-2-fluorobenzene (Surr)	70-120%	108.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: **EPA 601/602 in series**

SAMPLE ID: S-5
SAMPLE DATE: 02/06/92

RESULTS IN MILLIGRAMS PER LITER

PARAMETER	DETECTION LIMIT	DETECTED
Benzene	0.05	4.9
Toluene	0.05	.94
Ethylbenzene	0.05	2.9
Xylenes (total)	0.1	9.0
1-Chloro-2-fluorobenzene (Surr)	76-114%	105.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-5
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202057-03
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/14/92
Low Boiling Hydrocarbons	Mod.8015		02/14/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	2.5	44.
BTEX		
Benzene	0.025	4.8
Toluene	0.025	0.85
Ethylbenzene	0.025	2.7
Xylenes (total)	0.025	8.4

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	129*.
1,3-Dichlorobenzene (BTEX)	113*.

*Surrogate elevated due to hydrocarbon interferences.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-3**
SAMPLE DATE: **02/06/92**
LAB SAMPLE ID: **T202057-04**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/13/92
Low Boiling Hydrocarbons	Mod.8015		02/13/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	5.	150.
BTEX		
Benzene	0.05	2.5
Toluene	0.05	0.67
Ethylbenzene	0.05	2.7
Xylenes (total)	0.05	10.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	140*.
1,3-Dichlorobenzene (BTEX)	111.

*Surrogate elevated due to hydrocarbon interferences.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: SD-9
SAMPLE DATE: 02/06/92
LAB SAMPLE ID: T202057-05
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/12/92
Low Boiling Hydrocarbons	Mod.8015		02/12/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.25	1.1
BTEX		
Benzene	0.0025	0.29
Toluene	0.0025	None.
Ethylbenzene	0.0025	0.038
Xylenes (total)	0.0025	0.068

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	104.
1,3-Dichlorobenzene (BTEX)	100.

IT ANALYTICAL SERVICES
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Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **TRIP BLANK**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T202057-06**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/12/92
Low Boiling Hydrocarbons	Mod.8015		02/12/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	None
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	109.
1,3-Dichlorobenzene (BTEX)	99.

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: T202057-07A
EXTRACTION DATE:
ANALYSIS DATE: 02/12/92
ANALYSIS METHOD: **Mod.8015**

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD
Gasoline	None	500	402	423	80	85	5

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	110	112

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: T202057-08A
EXTRACTION DATE:
ANALYSIS DATE: 02/18/92
ANALYSIS METHOD: 601_2

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD
Chlorobenzene	None	10.0	10.5	12.0	105	120	13
1,1-Dichloroethene	None	10.0	9.9	10.4	99	104	5
Trichloroethene	None	10.0	11.0	12.0	110	120	9
Benzene	None	10.0	10.5	11.3	105	113	7
Toluene	None	10.0	10.1	11.0	101	110	9

SURROGATES	MS %Rec	MSD %Rec
1-Chloro-2-Fluoro-benzene (601)	107	120
1-Chloro-2-Fluoro-benzene (602)	102	98

IT ANALYTICAL SERVICES
SAN JOSE, CA
(408) 943-1540

Company: Shell Oil Company
Date: 02/25/92
Client Work ID: G6728, 15275 Wash., S.Lndro

Work Order: T2-02-057

TEST CODE 601_2 TEST NAME **EPA 601/602 in series**

The method of analysis for volatile organics is taken from E.P.A. Methods 601 and 602. Samples are examined using the purge and trap technique. Final detection is by gas chromatography using a photoionization detector and an electrolytic conductivity detector in series.

TEST CODE QC TEST NAME **Quality Control**

Quality control (QC) samples are analyzed and used to assess the laboratory control measures. Routine QC samples include method blanks, spikes and duplicates. The purpose of the method blank (MB) analysis is to demonstrate that artifacts of the test do not yield false positives. The laboratory control spike (LS) and /or matrix spike (MS) analysis is used to evaluate the ability of the test to recover analytes of interest, i.e. accuracy. Accuracy is expressed as percent (%) recovery. The laboratory spike duplicate (LSD), matrix spike duplicate (MSD), or duplicate sample (DUP) is used to determine the precision of the test, by comparing the result from the original spike (or sample) to the duplicate spike (or sample). Precision is expressed as relative percent difference (RPD).

The results of appropriate QC samples from QC batches associated with the listed samples are included in this report.

TEST CODE TPHV TEST NAME **TPH Gasoline by 8015**

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

TEST CODE TPHVB TEST NAME **TPH Gas,BTEX by 8015/8020**

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: 72-02-056

Date:

Site Address: 15275 Washington Ave (San Leandro)

WIC#: 204-6852-1008

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:

Sampled By:

Printed Name:

LAB: IT Analytical - San Jose

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	EPA 601/602 (include BTEX)	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-9	2-6-92		X		3	X		X				40 ml	HCl	No		
SR-1	↓		↓		3	X		X				↓	↓	↓		
S-5					6	X					X					
S-3					3	X		X								
SD-9					3	X		X								
TB	↓		↓		1	X		X				↓	↓	↓		

Relinquished By (signature): Lisle Roth	Printed name: Lisle Roth	Date: 2/6/92 Time: 1644	Received (signature):
Relinquished By (signature):	Printed name:	Date: Time:	Received (signature):
Relinquished By (signature):	Printed name:	Date: Time:	Received (signature):

Printed name: Rasmussen — Date: 2-6-92 Time: 1644

Printed name: — Date: Time:

Printed name: — Date: Time:

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

Last Revision Date: 10/15/91