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

May 8, 1992

Mr. Rick Mueller
City of Pleasanton
Pleasanton Fire Department
Post Office Box 520
Pleasanton, California 94566-0802

Re: **Shell Service Station**
3790 Hopyard Road
Pleasanton, California
WIC 204-6138-0501

Mr. Mueller:

As requested by Mr. Dan Kirk of Shell Oil Company, we are forwarding a copy of the May 8, 1992 Quarterly Report prepared for the above 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. Tom Callaghan, Regional Water Quality Control Board
Mr. Dan Kirk, Shell Oil Company

GeoStrategies Inc.

QUARTERLY REPORT

Shell Service Station
3790 Hopyard Road
Pleasanton, California
WIC 204-6138-0501

763201-13

May 8,1992

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

May 8, 1992

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

Attn: Mr. Dan Kirk

Re: QUARTERLY REPORT
Shell Service Station
3790 Hopyard Road
Pleasonton, California
WIC #204-6138-0501

Gentlemen:

This Quarterly Report has been prepared by GeoStrategies Inc. (GSI) and 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 twelve monitoring wells at the site; Wells S-2 through S-10, SR-1, SR-2 and SR-3 (Plate 2). These wells were installed between 1986 and 1989 by EMCON Associates, Woodward - Clyde Consultants, Pacific Environmental Group and GSI. Well S-1 was destroyed in 1988.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well on March 11, 1992. Static ground-water levels were measured from the surveyed top of the 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 east and southeast 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.

Ground-water samples were collected on March 11, 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. The ground-water samples were analyzed by Sequoia Analytical, a California State-certified laboratory located in Redwood City, California. The analytical laboratory report and Chain-of-Custody form are presented in Appendix A. These data are summarized and included with the historical chemical analytical data presented in Appendix A. A chemical isoconcentration map for benzene is presented on Plate 3.

If you have any questions, please call.

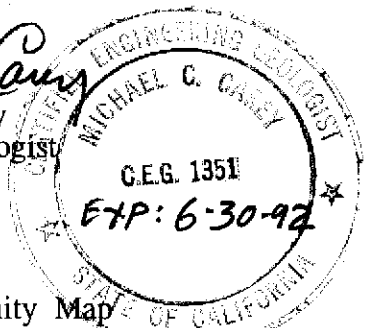
GeoStrategies Inc. by,

Ellen C. Fostersmith

Ellen C. Fostersmith
Geologist

Michael Carey

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



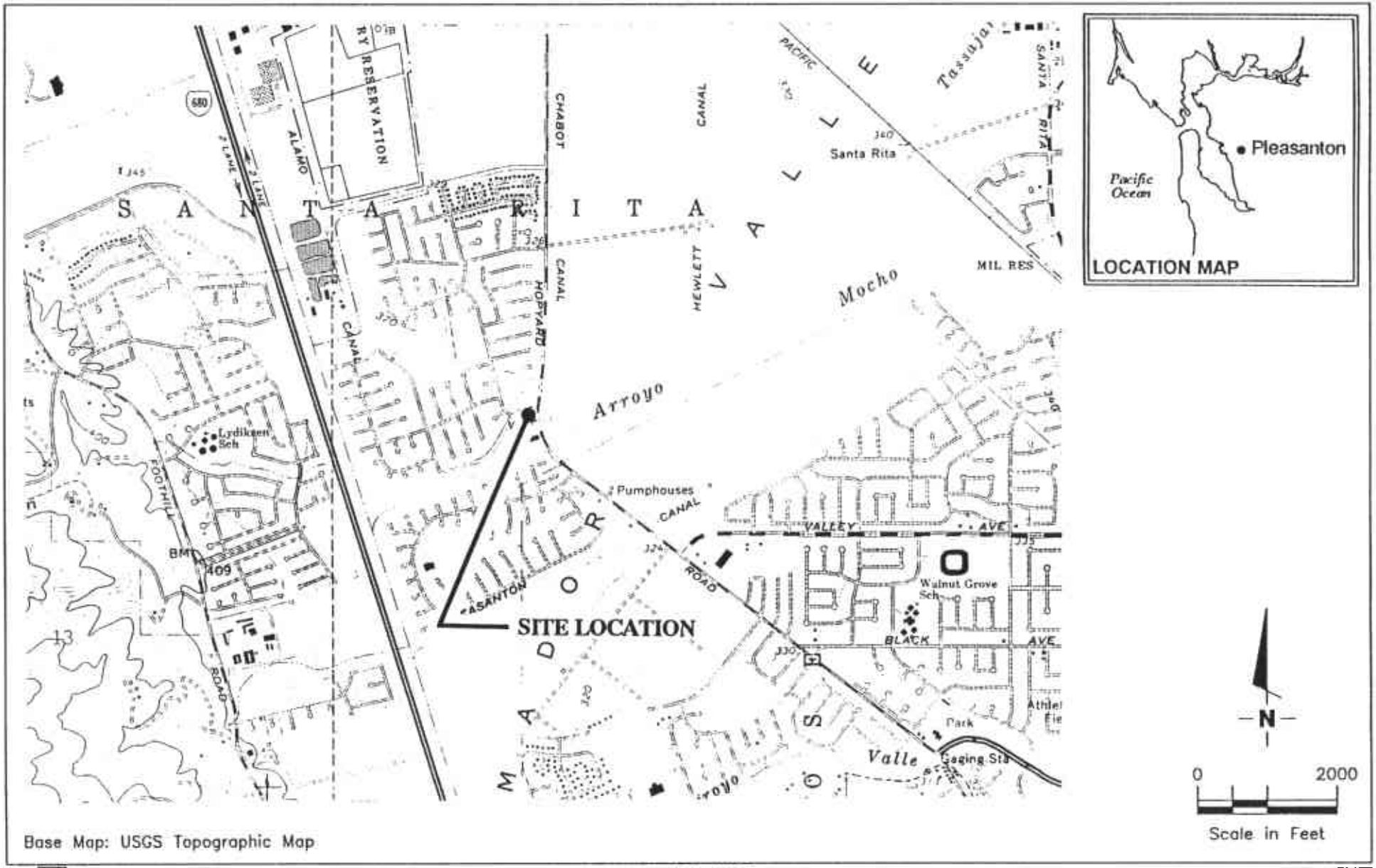
ECF/MCC/dls

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: JBP

763201-13



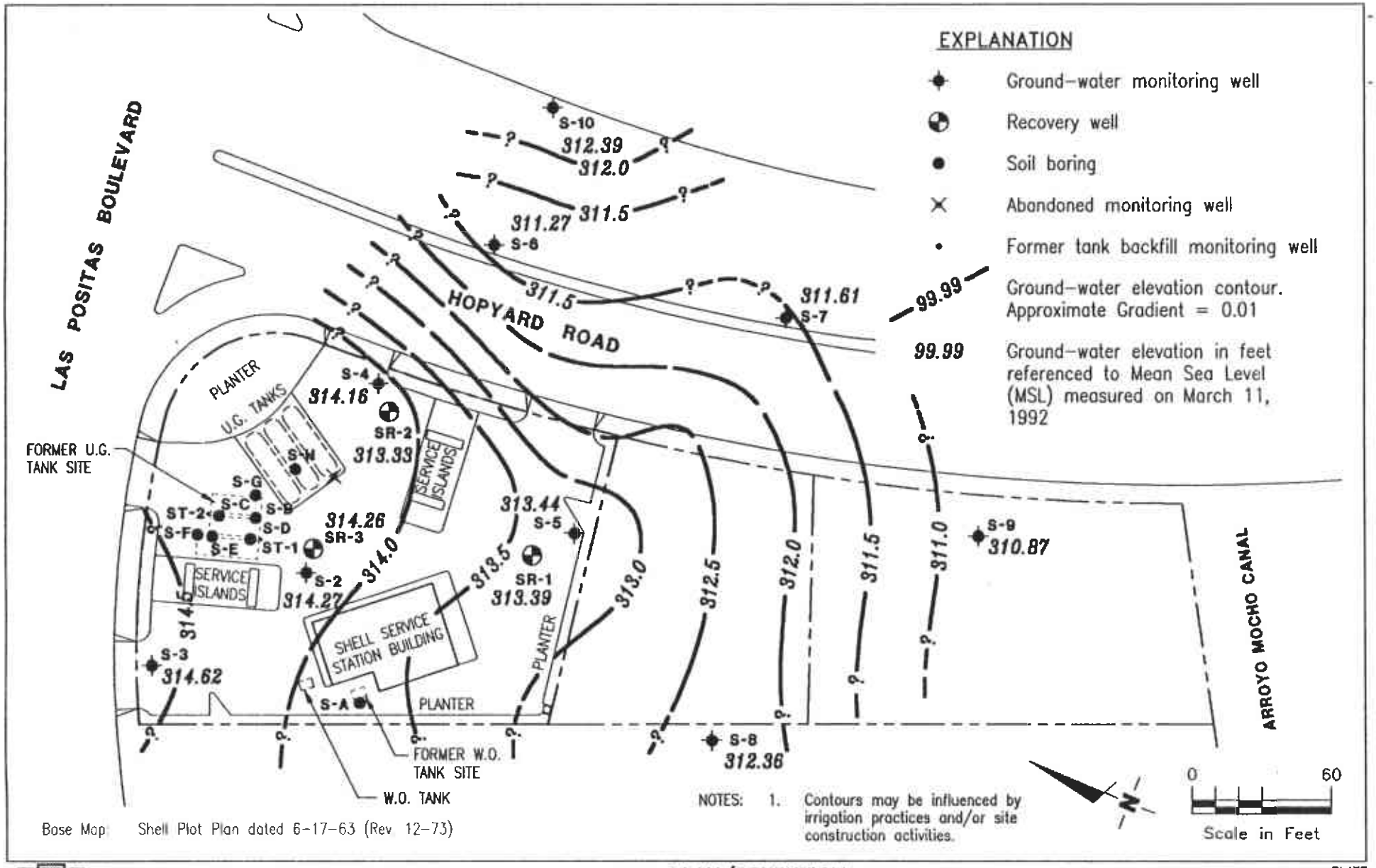
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7632		2/91	



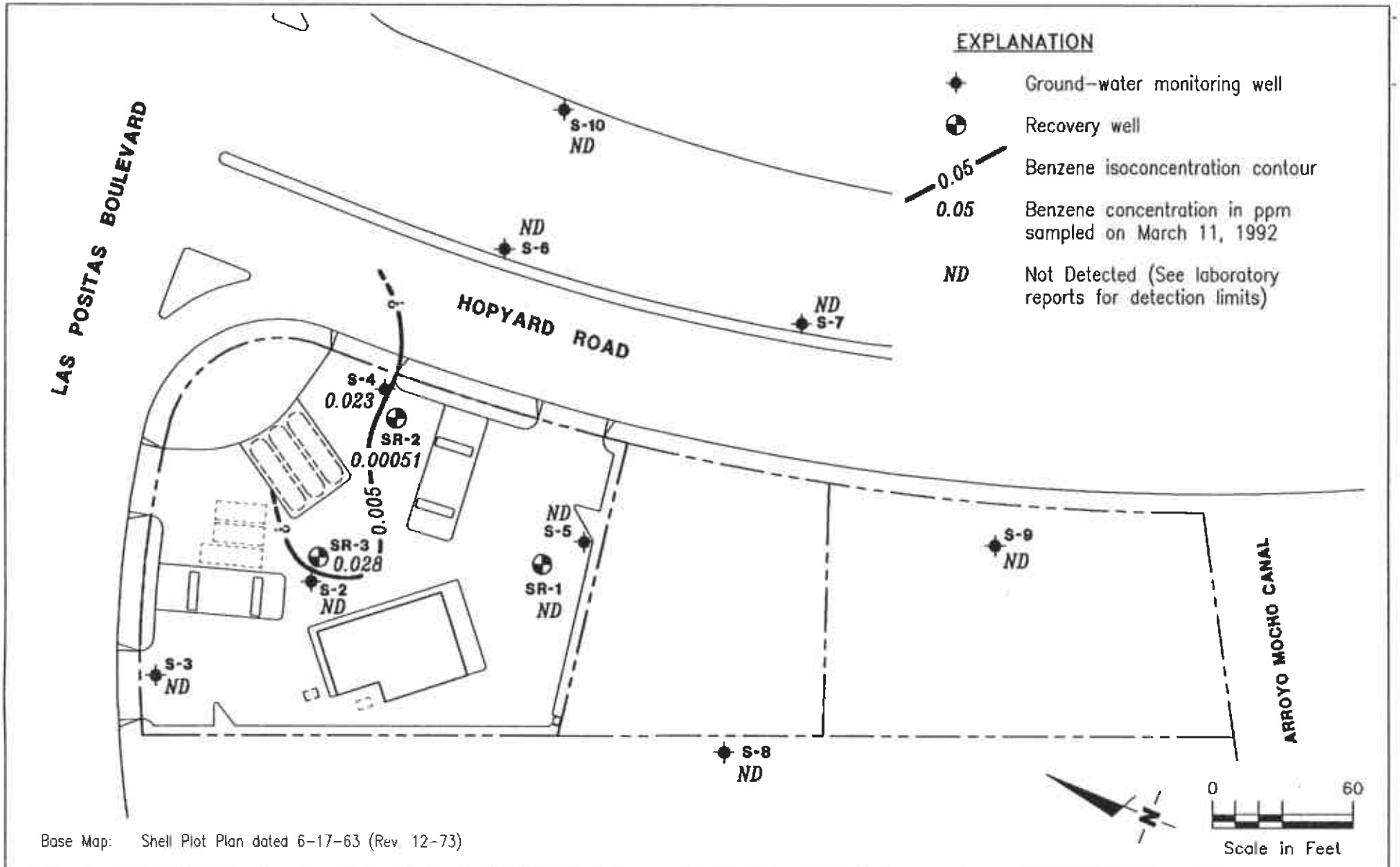
Base Map Shell Plot Plan dated 6-17-63 (Rev 12-73)

GeoStrategies Inc.

SITE PLAN/POTENTIOMETRIC MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **2**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-13	GM	5/92	



Base Map: Shell Plot Plan dated 6-17-63 (Rev. 12-73)

GeoStrategies Inc.

BENZENE ISOCONCENTRATION MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **3**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-13		5/92	

APPENDIX A
EMCON MONITORING REPORT
AND
CHAIN-OF-CUSTODY

EMCON ASSOCIATES
Consultants in Wastes Management and Environmental Control

GeoStrategies Inc.

April 3, 1992
Project: G67-26.01
WIC#: 204-6138-0501

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

Re: First quarter 1992 ground-water monitoring report, Shell Oil Company, 3790 Hopyard Road, Pleasanton, 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 3790 Hopyard Road, Pleasanton California. Monitoring was conducted on March 11, 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-2 through S-10 and SR-1 through SR-3 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. No floating product was observed in any of the wells. Total depth was measured to the nearest 0.1 foot. Results of the first quarter 1992 water-level survey, and available results from four previous surveys, are summarized in table 1.

SAMPLING AND ANALYSIS

Ground-water samples were collected from monitoring wells S-2 through S-10 and SR-1 through SR-3 on March 11, 1992. Prior to sample collection, the wells were purged with an electric submersible pump (wells SR-1 and SR-2), or a polyvinyl chloride (PVC) bailer (all others). 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. Wells S-2 and S-4 were evacuated to dryness before three casing volumes were removed. The wells were allowed to recharge for up to 24 hours. Samples were collected as soon as the wells had recharged to a level sufficient for

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

sample collection. Field measurements from first quarter 1992 monitoring, and available measurements from four previous events, are summarized in table 1. Purge water from the monitoring wells was contained in 55-gallon drums. The drums were identified with Shell-approved labels and secured for on-site storage.

Ground water samples were collected with a Teflon bailer, labeled, placed on ice, and transported to 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 (QC) samples for first quarter 1992 monitoring included a trip blank (TB), a field blank (SF-2) collected near well S-2, and a duplicate sample (SD-9) collected from well S-9. 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).

ANALYTICAL RESULTS

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

If you have any questions, please call.

Very truly yours,

EMCON Associates

David Larsen
Environmental Sampling Coordinator

Orrin Childs
Environmental Sampling Supervisor

DL/OC:dl

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

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 3790 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0501

Date: 04/02/92
Project Number: G87-26.01

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-2	03/20/91	329.21	14.68	314.53	34.0	NR	03/20/91	6.48	4100	66.3	NR
S-2	06/26/91	329.21	15.31	313.90	33.9	NR	06/26/91	6.74	4580	68.5	NR
S-2	09/05/91	329.21	15.50	313.71	34.4	NR	09/05/91	6.69	3780	74.0	NR
S-2	12/13/91	329.21	15.85	313.36	34.1	NR	12/13/91	7.21	3360	66.3	NR
S-2	03/11/92	329.21	14.94	314.27	34.0	ND	03/11/92	6.59	4830	68.2	>200
S-3	03/20/91	327.67	13.00	314.67	35.0	NR	03/20/91	6.53	3600	67.2	NR
S-3	06/26/91	327.67	13.34	314.33	34.8	NR	06/26/91	6.85	4620	68.0	NR
S-3	09/05/91	327.67	13.58	314.09	34.8	NR	09/05/91	6.69	4020	70.3	NR
S-3	12/13/91	327.67	13.87	313.80	34.9	NR	12/13/91	6.79	3610	69.5	NR
S-3	03/11/92	327.67	13.05	314.62	34.6	ND	03/11/92	6.67	5280	65.2	>200
S-4	03/20/91	328.53	14.37	314.16	35.3	NR	03/20/91	6.71	3520	66.5	NR
S-4	06/26/91	328.53	14.75	313.78	35.4	NR	06/26/91	6.87	4210	67.7	NR
S-4	09/05/91	328.53	14.84	313.69	35.6	NR	09/05/91	6.33	3130	68.0	NR
S-4	12/13/91	328.53	15.20	313.33	35.5	NR	12/13/91	7.00	2760	65.0	NR
S-4	03/11/92	328.53	14.37	314.16	35.5	ND	03/11/92	7.62	3440	65.8	>200
S-5	03/20/91	329.66	15.90	313.76	34.5	NR	03/20/91	6.41	1411	68.6	NR
S-5	06/26/91	329.66	17.11	312.55	34.2	NR	06/26/91	6.88	2360	66.3	NR
S-5	09/05/91	329.66	17.30	312.36	34.3	NR	09/05/91	6.88	2190	68.4	NR
S-5	12/13/91	329.66	17.48	312.18	34.4	NR	12/13/91	7.50	2670	63.9	NR
S-5	03/11/92	329.66	16.22	313.44	34.0	ND	03/11/92	6.55	1831	66.0	>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: 3790 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0501

Date: 04/02/92
Project Number: G67-26.01

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-6	03/20/91	327.62	15.09	312.53	34.7	NR	03/20/91	6.72	2050	66.5	NR
S-6	06/26/91	327.62	15.32	312.30	34.1	NR	06/26/91	6.89	2380	64.8	NR
S-6	09/05/91	327.62	16.00	311.62	34.2	NR	09/05/91	6.78	1864	68.0	NR
S-6	12/13/91	327.62	15.11	312.51	34.2	NR	12/13/91	6.80	1561	68.1	NR
S-6	03/11/92	327.62	16.35	311.27	34.0	ND	03/11/92	6.76	2090	64.5	>200
S-7	03/20/91	328.67	17.21	311.46	34.9	NR	03/20/91	6.31	4230	64.9	NR
S-7	06/26/91	328.67	17.40	311.27	34.6	NR	06/26/91	6.83	4160	65.9	NR
S-7	09/05/91	328.67	17.50	311.17	34.6	NR	09/05/91	6.58	3370	67.6	NR
S-7	12/13/91	328.67	17.70	310.97	34.8	NR	12/13/91	6.73	3150	67.1	NR
S-7	03/11/92	328.67	17.06	311.61	34.7	ND	03/11/92	7.35	4310	63.4	>200
S-8	03/20/91	327.00	15.08	311.92	33.5	NR	03/20/91	6.65	4690	65.6	NR
S-8	06/26/91	327.00	15.46	311.54	33.8	NR	06/26/91	6.68	4890	66.3	NR
S-8	09/05/91	327.00	15.71	311.29	33.7	NR	09/05/91	6.18	3760	66.5	NR
S-8	12/13/91	327.00	15.73	311.27	34.2	NR	12/13/91	7.50	3490	63.8	NR
S-8	03/11/92	327.00	14.64	312.36	34.0	ND	03/11/92	7.00	3550	62.0	>200
S-9	03/20/91	328.24	17.28	310.96	34.6	NR	03/20/91	6.56	4340	66.4	NR
S-9	06/26/91	328.24	18.18	310.06	34.8	NR	06/26/91	6.53	4370	66.7	NR
S-9	09/05/91	328.24	18.34	309.90	34.8	NR	09/05/91	6.17	3390	66.7	NR
S-9	12/13/91	328.24	18.18	310.06	34.9	NR	12/13/91	7.50	3010	63.4	NR
S-9	03/11/92	328.24	17.37	310.87	34.7	ND	03/11/92	6.63	4600	63.4	>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: 3790 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0501

Date: 04/02/92
Project Number: G67-26.01

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-10	03/20/91	326.55	14.08	312.47	34.2	NR	03/20/91	6.55	1950	64.0	NR
S-10	06/26/91	326.55	14.44	312.11	34.1	NR	06/26/91	6.67	2410	64.9	NR
S-10	09/05/91	326.55	14.56	311.99	34.2	NR	09/05/91	6.79	2010	65.9	NR
S-10	12/13/91	326.55	14.77	311.78	34.1	NR	12/13/91	6.82	1904	66.1	NR
S-10	03/11/92	326.55	14.16	312.39	34.1	ND	03/11/92	7.28	1385	62.9	>200
SR-1	03/20/91	329.78	16.31	313.47	35.2	NR	03/20/91	6.55	4750	66.3	NR
SR-1	06/26/91	329.78	16.99	312.79	35.2	NR	06/26/91	6.56	4790	67.2	NR
SR-1	09/05/91	329.78	17.17	312.61	35.2	NR	09/05/91	6.80	3680	69.6	NR
SR-1	12/13/91	329.78	17.37	312.41	35.2	NR	12/13/91	6.50	3460	65.2	NR
SR-1	03/11/92	329.78	16.39	313.39	34.9	ND	03/11/92	6.56	4890	68.9	80.
SR-2	03/20/91	328.35	15.00	313.35	35.0	NR	03/20/91	6.73	4390	66.1	NR
SR-2	06/26/91	328.35	15.08	313.27	35.1	NR	06/26/91	6.70	4430	66.6	NR
SR-2	09/05/91	328.35	15.52	312.83	35.2	NR	09/05/91	6.32	3370	67.8	NR
SR-2	12/13/91	328.35	15.27	313.08	35.2	NR	12/13/91	7.50	3070	65.5	NR
SR-2	03/11/92	328.35	15.02	313.33	35.0	ND	03/11/92	7.51	4700	68.3	51.
SR-3	03/20/91	329.11	14.61	314.50	35.0	NR	03/20/91	6.33	3430	66.2	NR
SR-3	06/26/91	329.11	15.23	313.88	34.9	NR	06/26/91	6.77	4230	69.2	NR
SR-3	09/05/91	329.11	15.60	313.51	35.1	NR	09/05/91	6.23	3590	68.7	NR
SR-3	12/13/91	329.11	15.80	313.31	35.0	NR	12/13/91	6.50	3140	66.8	NR
SR-3	03/11/92	329.11	14.85	314.26	34.8	ND	03/11/92	6.51	4350	67.8	>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: 3790 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0501

Date: 04/02/92
Project Number: G67-26.01

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-2	03/20/91	0.11	0.03	0.0022	0.01	0.0070
S-2	06/26/91	0.05&	0.0063	<0.0005	0.0033	0.0019
S-2	09/05/91	0.09	0.012	0.0032	0.0025	0.0023
S-2	12/13/91	<0.05	0.012	<0.0005	<0.0005	<0.0005
S-2	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	03/20/91	0.07	0.0023	0.0089	0.0040	0.023
S-3	06/26/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-3	09/05/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-3	12/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-3	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-4	03/20/91	1.2	0.10	<0.002	0.21	0.13
S-4	06/26/91	0.22	0.014	<0.0005	0.034	0.017
S-4	09/05/91	0.58	0.031	0.0008	0.053	0.026
S-4	12/13/91	0.37	0.024	0.0009	0.0013	0.046
S-4	03/11/92	1.6	0.023	0.0012	0.012	0.02
S-5	03/20/91	0.31	0.039	0.012	0.018	0.03
S-5	06/26/91	1.3	0.25	0.052	0.12	0.16
S-5	09/05/91	4.7	0.66	0.15	0.17	0.28
S-5	12/13/91	1.4	0.58	0.019	0.11	0.08
S-5	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003

TPH-g = total petroleum hydrocarbons as gasoline
& = Compounds detected within the gasoline range are not characteristic 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: 3790 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0501

Date: 04/02/92
Project Number: G67-26.01

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-6	03/20/91	0.13&	0.0066	0.0006	0.0007	0.003
S-6	06/26/91	0.12&	0.0038	0.0008	<0.0005	0.0017
S-6	09/05/91	0.06	<0.0005	0.0008	<0.0005	0.0005
S-6	12/13/91	0.15	0.0023	<0.0005	<0.0005	0.15
S-6	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-7	03/20/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	06/26/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	09/05/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	12/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-8	03/20/91	0.05&	0.0008	0.0016	0.0026	0.0052
S-8	06/26/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-8	09/05/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-8	12/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-8	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-9	03/20/91	0.07&	0.0007	0.0007	<0.0005	0.0010
S-9	06/26/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-9	09/05/91	<0.05	<0.0005	0.0008	<0.0005	<0.0005
S-9	12/13/91	<0.05	<0.0005	0.0008	<0.0005	<0.0005
S-9	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
SD-9	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003

TPH-g = total petroleum hydrocarbons as gasoline
& = Compounds detected within the gasoline range are not characteristic 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)

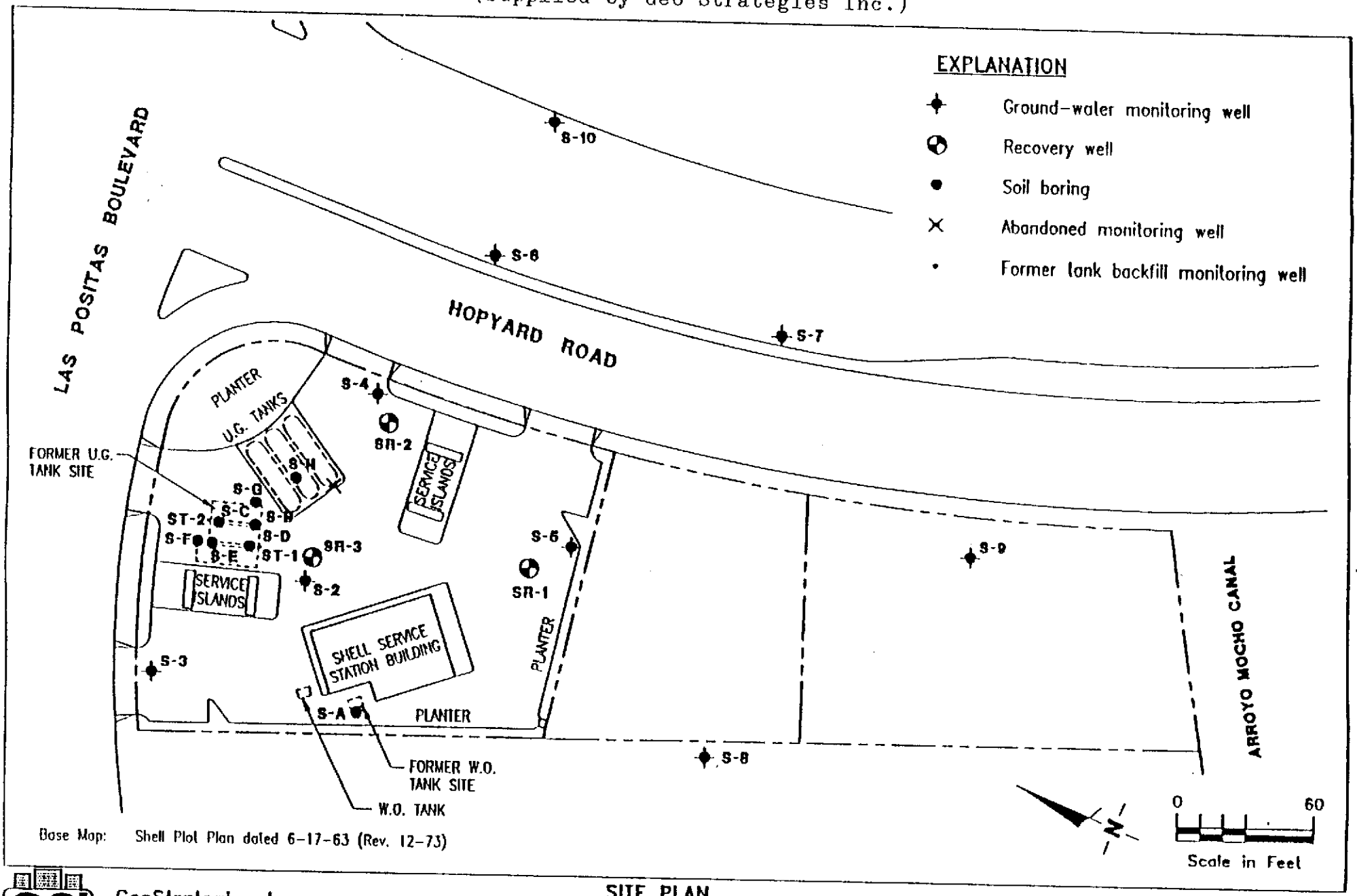
Shell Station: 3790 Hopyard Road
Pleasanton, California
WIC #: 204-6138-0501

Date: 04/02/92
Project Number: G67-26.01

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-10	03/20/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-10	06/26/91	0.05	0.0018	0.0058	0.0019	0.013
S-10	09/05/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-10	12/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-10	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
SR-1	03/20/91	<0.05&	0.0042	<0.0005	0.0014	0.0005
SR-1	06/26/91	<0.05	0.0050	<0.0005	0.0005	<0.0005
SR-1	09/05/91	<0.05	0.0086	<0.0005	0.0007	<0.0005
SR-1	12/13/91	0.07	0.0094	0.0071	0.0066	0.022
SR-1	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
SR-2	03/20/91	0.09	0.0013	<0.0005	0.0061	0.0014
SR-2	06/26/91	<0.05	0.0006	<0.0005	0.0017	<0.0005
SR-2	09/05/91	<0.05	0.0012	<0.0005	0.0012	<0.0005
SR-2	12/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
SR-2	03/11/92	<0.03	0.00051	<0.0003	<0.0003	<0.0003
SR-3	03/20/91	1.35	0.97	0.0036	0.064	0.079
SR-3	06/26/91	0.24	0.048	0.0042	0.015	0.020
SR-3	09/05/91	0.16	0.019	<0.0005	0.006	0.0059
SR-3	12/13/91	0.05	0.013	<0.0005	0.0031	0.0047
SR-3	03/11/92	0.41	0.028	0.0016	0.022	0.024
TB	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
SF-2	03/11/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003

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

Figure 1
(Supplied by Geo Strategies Inc.)



Base Map: Shell Plot Plan dated 6-17-63 (Rev. 12-73)

GSI GeoStrategies Inc.

SITE PLAN
Shell Service Station
3790 Hopyard Road
Pleasanton, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-11	EFS	11/91	

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

EMCON ASSOCIATES

MAR 25 1992

RECEIVED

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: David Larsen

Project: 3790 Hopyard Rd., Pleasanton, Shell

Enclosed are the results from 15 water samples received at Sequoia Analytical on March 13,1992. The requested analyses are listed below:

2032392	Water, S-3	3/11/92	EPA 5030/8015/8020
2032393	Water, S-7	3/11/92	EPA 5030/8015/8020
2032394	Water, S-8	3/11/92	EPA 5030/8015/8020
2032395	Water, S-9	3/11/92	EPA 5030/8015/8020
2032396	Water, S-10	3/11/92	EPA 5030/8015/8020
2032397	Water, SR-2	3/11/92	EPA 5030/8015/8020
2032398	Water, S-6	3/11/92	EPA 5030/8015/8020
2032399	Water, SR-1	3/11/92	EPA 5030/8015/8020
2032400	Water, S-2	3/11/92	EPA 5030/8015/8020
2032401	Water, SR-3	3/11/92	EPA 5030/8015/8020
2032402	Water, S-4	3/11/92	EPA 5030/8015/8020
2032403	Water, S-5	3/11/92	EPA 5030/8015/8020
2032404	Water, TB	3/11/92	EPA 5030/8015/8020
2032405	Water, SF-2	3/11/92	EPA 5030/8015/8020
2032406	Water, SD-9	3/11/92	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates	Client Project ID:	3790 Hopyard Rd., Pleasanton, Shell	Sampled:	Mar 11, 1992
1938 Junction Ave.	Matrix Descript:	Water	Received:	Mar 13, 1992
San Jose, CA 95131	Analysis Method:	EPA 5030/8015/8020	Analyzed:	3/16-17&19/92
Attention: David Larsen	First Sample #:	203-2392	Reported:	Mar 23, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
203-2392	S-3	N.D.	N.D.	N.D.	N.D.	N.D.
203-2393	S-7	N.D.	N.D.	N.D.	N.D.	N.D.
203-2394	S-8	N.D.	N.D.	N.D.	N.D.	N.D.
203-2395	S-9	N.D.	N.D.	N.D.	N.D.	N.D.
203-2396	S-10	N.D.	N.D.	N.D.	N.D.	N.D.
203-2397	SR-2	N.D.	0.51	N.D.	N.D.	N.D.
203-2398	S-6	N.D.	N.D.	N.D.	N.D.	N.D.
203-2399	SR-1	N.D.	N.D.	N.D.	N.D.	N.D.
203-2400	S-2	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates	Client Project ID:	3790 Hopyard Rd., Pleasanton, Shell	Sampled:	Mar 11, 1992
1938 Junction Ave.	Matrix Descript:	Water	Received:	Mar 13, 1992
San Jose, CA 95131	Analysis Method:	EPA 5030/8015/8020	Analyzed:	3/16-17/92
Attention: David Larsen	First Sample #:	203-2401	Reported:	Mar 23, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
203-2401	SR-3	410	28	1.6	22	24
203-2402	S-4	1,600	23	1.2	12	20
203-2403	S-5	N.D.	N.D.	N.D.	N.D.	N.D.
203-2404	TB	N.D.	N.D.	N.D.	N.D.	N.D.
203-2405	SF-2	N.D.	N.D.	N.D.	N.D.	N.D.
203-2406	SD-9	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: David Larsen

Client Project ID: 3790 Hopyard Rd., Pleasanton, Shell

QC Sample Group: 2032392-96, 98-99, 2402-04, 06

Reported: Mar 23, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	L.Laikhtman	L.Laikhtman	L.Laikhtman	L.Laikhtman
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992
QC Sample #:	BLK031692	BLK031692	BLK031692	BLK031692
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	8.9	8.6	8.7	27
Matrix Spike % Recovery:	89	86	87	90
Conc. Matrix Spike Dup.:	8.6	8.8	8.9	27
Matrix Spike Duplicate % Recovery:	86	88	89	90
Relative % Difference:	3.4	2.3	2.3	0.0

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: David Larsen

Client Project ID: 3790 Hopyard Rd., Pleasanton, Shell

QC Sample Group: 303-2397

Reported: Mar 23, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.Nipp	M.Nipp	M.Nipp	M.Nipp
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992
QC Sample #:	GBLK031792	GBLK031792	GBLK031792	GBLK031792
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	11	11	11	33
Matrix Spike % Recovery:	110	110	110	110
Conc. Matrix Spike Dup.:	10	10	10	31
Matrix Spike Duplicate % Recovery:	100	100	100	103
Relative % Difference:	9.5	9.5	9.5	6.2

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: David Larsen

Client Project ID: 3790 Hopyard Rd., Pleasanton, Shell

QC Sample Group: 203-2400

Reported: Mar 23, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.Nipp	M.Nipp	M.Nipp	M.Nipp
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 19, 1992	Mar 19, 1992	Mar 19, 1992	Mar 19, 1992
QC Sample #:	GBLK031992	GBLK031992	GBLK031992	GBLK031992
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	10	10	10	32
Matrix Spike % Recovery:	100	100	100	107
Conc. Matrix Spike Dup.:	10	10	10	30
Matrix Spike Duplicate % Recovery:	100	100	100	100
Relative % Difference:	0.0	0.0	0.0	6.5

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: David Larsen

Client Project ID: 3790 Hopyard Rd., Pleasanton, Shell

QC Sample Group: 203-2401

Reported: Mar 23, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	L.Laikhtman	L.Laikhtman	L.Laikhtman	L.Laikhtman
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992	Mar 16, 1992
QC Sample #:	BLK031692	BLK031692	BLK031692	BLK031692
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	9.5	9.5	9.7	29
Matrix Spike % Recovery:	95	95	97	97
Conc. Matrix Spike Dup.:	9.5	9.6	9.7	28
Matrix Spike Duplicate % Recovery:	95	96	97	93
Relative % Difference:	0.0	1.0	0.0	3.5

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: David Larsen

Client Project ID: 3790 Hopyard Rd., Pleasanton, Shell

QC Sample Group: 203-2405

Reported: Mar 23, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.Nipp	M.Nipp	M.Nipp	M.Nipp
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992
QC Sample #:	GBLK031792	GBLK031792	GBLK031792	GBLK031792
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	8.9	8.8	8.8	27
Matrix Spike % Recovery:	89	88	88	90
Conc. Matrix Spike Dup.:	9.7	9.7	9.4	29
Matrix Spike Duplicate % Recovery:	97	97	94	97
Relative % Difference:	8.6	9.7	6.6	7.1

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: _____

Date:
Page 1 of 2

Site Address: 3790 Hopyard Road, Pleasanton, CA

WIC#: 204-6138-0501

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: John D Watada

Printed Name: JOHN WATADA

LAB: Sequoia

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-3	03-11-92		X		3	X		X			40 ml	HCl	No	2032392	
S-7	03-11-92					X		X						93	
S-8	03-11-92					X		X						94	
S-9	03-11-92					X		X						95	
S-10	03-11-92					X		X						96	
SR-2	03-11-92					X		X						97	
S-6	03-11-92					X		X						98	
SR-1	03-11-92					X		X						99	

COPY

Relinquished By (signature): John D Watada	Printed name: JOHN WATADA	Date: 3-11-92	Received (signature): D Larson	Printed name: D Larson	Date: 3-11-92
Relinquished By (signature): D Larson	Printed name: D Larson	Time: 1615	Received (signature): Alex Savun	Printed name: Alex SAVUN	Time: 1615
Relinquished By (signature): Alex Savun	Printed name: Alex Savun	Date: 3-13-92	Received (signature):	Printed name:	Date: 3-13-92
		Time: 1640			Time: 1640
		Date: 3-13-92			Date:
		Time: 515			Time:

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

Last Revision Date: 10/15/91

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No.: ____________

Date:
Page 2 of 2

Site Address: 3790 Hopyard Road, Pleasanton, CA

WIC#: 204-6138-0501

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: John Watalla
Printed Name: JOHN WATONA

Analysis Required

LAB: Sequoia

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.

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-2	03-11-92		X		3	X		X							40 ml	HCl	No	2032400	
SR-3	03-11-92		↓		↓	X		X							↓	↓	↓	01	
S-4	03-11-92		↓		↓	X		X							↓	↓	↓	02	
S-5	03-11-92		↓		↓	X		X							↓	↓	↓	03	
TB	03-11-92		↓		1	X		X							↓	↓	↓	04	
SF-2	03-11-92		↓		2	X		X							↓	↓	↓	05	
SD-9	03-11-92		↓		↓	X		X							↓	↓	↓	06	

Relinquished By (signature):	Printed name:	Date / Time	Received (signature):	Printed name:	Date / Time
John Watalla	JOHN WATONA	Date: 3-11-92 Time: 1615	D Larsen	D Larsen	Date: 3-11-92 Time: 16:15
D Larsen	D Larsen	Date: 3-13-92 Time: 16:40	Alex Savva	Alex SAVVA	Date: 16:40 Time:
Alex Savva	Alex SAVVA	Date: 3-13-92 Time: 515	K Marcus	K. Marcus	Date: 3-13 Time: 5:15

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

Last Revision Date: 10/15/91

COPY