GeoStrategies Inc.

SITE UPDATE

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

763301-13

March 2, 1992

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

March 2, 1992

Mr. Rick Mueller
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

Mr. Mueller:

As requested by Mr. Paul Hayes of Shell Oil Company, we are forwarding a copy of the March 2, 1992 Quarterly Report prepared for the above referenced location. The report documents 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

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

March 2, 1992

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

Attn: Mr. E. Paul Hayes

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

Gentlemen:

This Site Update 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 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 January 23, 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 Table 1. Water level data were used to construct a quarterly potentiometric map (Plate 2). Shallow ground-water flow is to the north 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 January 23, 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 International Technology (IT) Analytical Services, a California State-certified laboratory located in San Jose, California. These data are summarized in Table 2. A chemical isoconcentration map for benzene is presented on Plate 3. Historical chemical analytical data are presented in Table 3.

If you have any questions, please call.

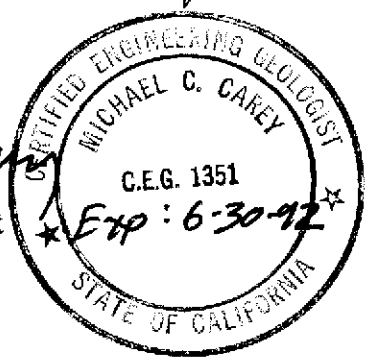
GeoStrategies Inc. by,

Ellen C. Butterworth for

Stephen J. Carter
Project Manager

Michael Carey

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



SJC/MCC/dls

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

Appendix A: Analytical Laboratory Report and Chain-of-Custody

QC Review: JSL

763301-13

Table 1

Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 5251 Hopyard Road
Pleasanton, California

WIC#: 204-6138-0907

Well Identification	Water Level Survey Date	Depth To Water (feet)	Well Total Depth (feet)	Floating Product Thickness (feet)	Well Sampling Date	pH (stnd. units[1])	Electrical Conductivity (µmhos/cm[2])	Temperature (°F[3])	Turbidity (NTU[4])
S-1	01/23/92	9.42	28.5	ND.[5]	01/23/92	7.48	3,320	52.1	>200
S-2	01/23/92	9.49	24.5	ND.	01/23/92	7.21	4,530	53.8	>200
S-3	01/23/92	9.86	25.0	ND.	01/23/92	7.15	3,370	51.8	>200
S-4	01/23/92	10.05	24.5	ND.	01/23/92	7.56	1,847	53.1	>200
S-5	01/23/92	10.63	24.5	ND.	01/23/92	7.12	1,684	55.8	>200
S-6	01/23/92	9.43	26.0	ND.	01/23/92	7.78	1,690	58.6	>200
S-7	01/23/92	9.26	25.5	ND.	01/23/92	7.05	9,400	52.0	>200
S-8	01/23/92	8.23	25.0	ND.	01/23/92	7.06	6,810	55.3	>200

1. Standard pH units
2. µmhos/cm = micromhos per centimeter
3. °F = degrees Fahrenheit
4. NTU = nephelometric turbidity units
5. ND. = not detected

Table 2

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

Shell Station: 5251 Hopyard Road
Pleasanton, California

WIC#: 204-6138-0907

Sample Designation	Sampling Date	TPH[1] as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPH as Diesel (ppm)
S-1	01/23/92	1.6	0.45	0.003	0.12	0.017	0.89[2]
S-2	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-3	01/23/92	2.0	0.58	0.003	0.20	<0.002	0.65[2]
S-4	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-5	01/23/92	<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-7	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
S-8	01/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.09[2,3]
SD-5	01/23/92	<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[4]

1. TPH = total petroleum hydrocarbons
2. Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.
3. First positive result for TPH as diesel in well S-8 since fourth quarter 1989; based on historical data supplied by Geo Strategies, Inc., in their third quarter 1991 ground-water monitoring report.
4. Positive result for diesel in the trip blank was confirmed with the laboratory; no explanation was given by the laboratory.

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
06-Jan-88	S-1	0.6	0.22	<0.005	----	<0.02	<0.05	<0.2
14-Dec-88	S-1	17.	5.1	0.04	0.57	0.20	8.	N/A
30-Mar-89	S-1	8.2	2.9	<0.02	0.33	0.16	3.6	N/A
20-Jul-89	S-1	21.	6.2	1.5	1.1	0.7	8.5	N/A
16-Oct-89	S-1	16.	3.9	0.89	1.2	0.9	11.	N/A
05-Jan-90	S-1	8.2	2.3	0.10	0.66	0.32	6.5	N/A
11-Apr-90	S-1	11.	3.0	0.12	0.83	0.52	N/A	N/A
12-Jul-90	S-1	20.	4.4	0.96	1.3	1.2	8.0	N/A
25-Oct-90	S-1	6.0	1.4	0.14	0.60	0.32	3.5	N/A
25-Jan-91	S-1	2.5	0.46	<0.025	0.13	0.036	1.5	N/A
16-Apr-91	S-1	6.7	2.6	0.014	0.58	0.25	2.6*	N/A
24-Jul-91	S-1	8.8	2.3	0.03	0.64	0.22	3.8*	N/A
18-Oct-91	S-1	12.	3.6	0.38	0.99	0.58	3.3*	N/A
23-Jan-92	S-1	1.6	0.45	0.003	0.12	0.017	0.89	N/A
11-May-89	S-2	<0.05	<0.0005	<0.001	<0.001	<0.003	<0.1	N/A
20-Jul-89	S-2	<0.05	<0.0005	<0.001	<0.001	<0.003	<0.1	N/A
16-Oct-89	S-2	<0.05	<0.0005	<0.001	<0.001	<0.003	<0.1	N/A
05-Jan-90	S-2	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A
11-Apr-90	S-2	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Jul-90	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
25-Oct-90	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
25-Jan-91	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
16-Apr-91	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
24-Jul-91	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
18-Oct-91	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
23-Jan-92	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
11-May-89	S-3	2.6	0.33	0.014	0.22	0.20	1.4	N/A
20-Jul-89	S-3	9.7	2.3	0.03	0.88	0.16	2.2	N/A

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
16-Oct-89	S-3	3.4	0.70	0.008	0.36	0.06	2.8	N/A
05-Jan-90	S-3	0.86	0.14	0.0016	0.078	0.002	1.6	N/A
11-Apr-90	S-3	1.0	0.21	<0.002	0.15	0.013	N/A	N/A
12-Jul-90	S-3	2.8	0.49	0.0085	0.21	0.081	2.0	N/A
24-Oct-90	S-3	1.2	0.12	<0.0025	0.082	0.0051	0.86	N/A
25-Jan-91	S-3	0.87	0.23	<0.0025	0.13	<0.0025	0.33	N/A
16-Apr-91	S-3	0.19	0.012	0.0008	0.0062	0.0015	0.14*	N/A
24-Jul-91	S-3	1.7	0.45	0.0044	0.15	0.0029	1.2*	N/A
18-Oct-91	S-3	1.9	0.37	0.0031	0.12	0.22	0.5	N/A
23-Jan-92	S-3	2.0	0.58	0.003	0.20	<0.0005	0.65	N/A
11-May-89	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	<0.1	N/A
20-Jul-89	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	<0.1	N/A
16-Oct-89	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	<0.1	N/A
05-Jan-90	S-4	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A
11-Apr-90	S-4	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Jul-90	S-4	<0.05	<0.0005	0.0017	<0.0005	0.0021	<0.05	N/A
25-Oct-90	S-4	<0.05	<0.0005	<0.0005	<0.0005	0.0006	<0.05	N/A
25-Jan-91	S-4	<0.05	<0.0005	0.0015	<0.0005	0.0028	<0.05	N/A
16-Apr-91	S-4	<0.05	0.0007	<0.0005	<0.0005	<0.0005	<0.05	N/A
24-Jul-91	S-4	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
18-Oct-91	S-4	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
23-Jan-92	S-4	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
11-May-89	S-5	0.05	<0.0005	<0.001	0.001	0.003	<0.1	N/A
20-Jul-89	S-5	<0.05	0.01	<0.001	<0.001	<0.003	<0.1	N/A
16-Oct-89	S-5	<0.05	<0.0005	<0.001	<0.001	<0.003	<0.1	N/A
05-Jan-90	S-5	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A
11-Apr-90	S-5	<0.050	0.0005	0.0034	0.0008	0.004	N/A	N/A
12-Jul-90	S-5	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
25-Oct-90	S-5	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
25-Jan-91	S-5	<0.05	<0.0005	<0.0005	<0.0005	0.0007	<0.05	N/A
16-Apr-91	S-5	<0.05	<0.0005	<0.0005	<0.0005	0.0008	<0.05	N/A
24-Jul-91	S-5	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
18-Oct-91	S-5	0.12^	0.043	<0.0005	0.001	0.0007	<0.05	N/A
23-Jan-92	S-5	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
15-Nov-89	S-6	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A
05-Jan-90	S-6	<0.050	<0.0005	0.0005	<0.0005	<0.001	<0.1	N/A
11-Apr-90	S-6	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Jul-90	S-6	<0.05	<0.0005	0.0005	<0.0005	0.0006	<0.05	N/A
25-Oct-90	S-6	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
25-Jan-91	S-6	<0.05	<0.0005	0.0017	<0.0005	0.0028	<0.05	N/A
16-Apr-91	S-6	<0.05	<0.0005	<0.0005	<0.0005	0.0006	<0.05	N/A
24-Jul-91	S-6	<0.05	<0.0005	<0.0005	<0.0005	0.0005	<0.05	N/A
18-Oct-91	S-6	<0.05	<0.0005	<0.0005	<0.0005	0.0005	<0.05	N/A
23-Jan-92	S-6	<0.05	<0.0005	<0.0005	<0.0005	0.0005	<0.05	N/A
15-Nov-89	S-7	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A
05-Jan-90	S-7	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A
11-Apr-90	S-7	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Jul-90	S-7	<0.05	<0.0005	0.0006	<0.0005	0.0007	N/A	N/A
25-Oct-90	S-7	<0.05	<0.0005	0.0005	<0.0005	0.0010	<0.05	N/A
25-Jan-91	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
16-Apr-91	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
24-Jul-91	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
18-Oct-91	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.14&	N/A
23-Jan-92	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
15-Nov-89	S-8	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
05-Jan-90	S-8	<0.050	<0.0005	<0.0005	<0.0005	<0.001	<0.1	N/A
11-Apr-90	S-8	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Jul-90	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
25-Oct-90	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
25-Jan-91	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
16-Apr-91	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
24-Jul-91	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	N/A
18-Oct-91	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.36&	N/A
23-Jan-92	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.09	N/A
14-Dec-88	V-1	0.77	0.0064	0.021	0.009	0.087	4.5	N/A
14-Dec-88	V-2	0.16	0.0038	<0.001	<0.001	0.004	1.0	N/A
14-Dec-88	V-3	0.14	0.0087	<0.001	<0.001	0.003	0.8	N/A

Current Regional Water Quality Control Board Maximum Contaminant Levels
Benzene 0.001 ppm Xylenes 1.750 ppm Ethylbenzene 0.680 ppm

Current DHS Action Levels Toluene 0.1000 ppm

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPM = Parts Per Million
* Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.
^ Compounds detected and calculated as low boiling hydrocarbons consist of compounds eluting within the chromatographic range of gasoline,

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)

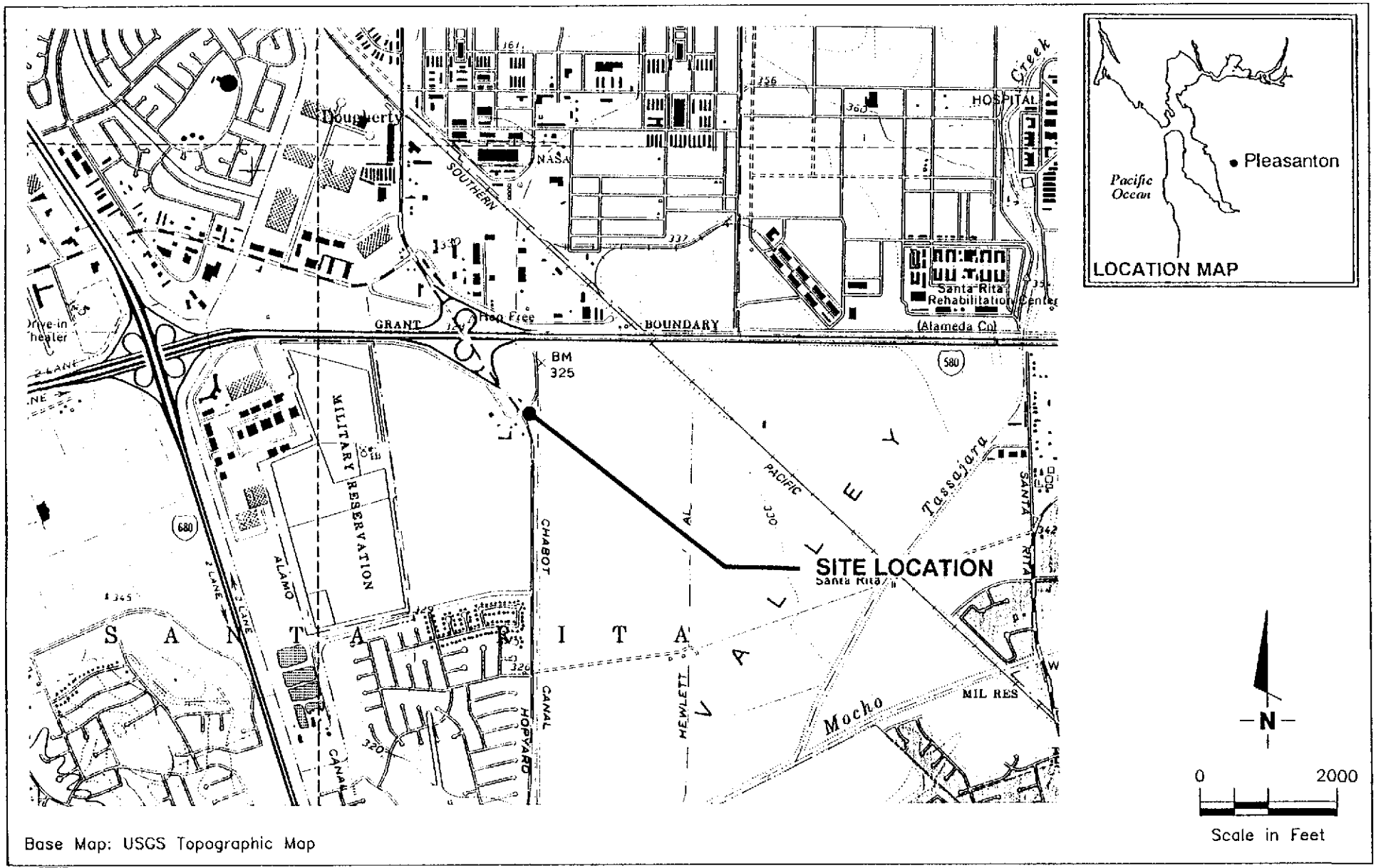
but are not characteristic of the standard gasoline standard pattern.

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

NOTE: 1. DHS Action levels and MCL's are subject to change pending State of California review.

2. All data shown as <X are reported as ND (none detected).

3. Ethylbenzene and Xylenes were combined in January 1988 in well S-1.



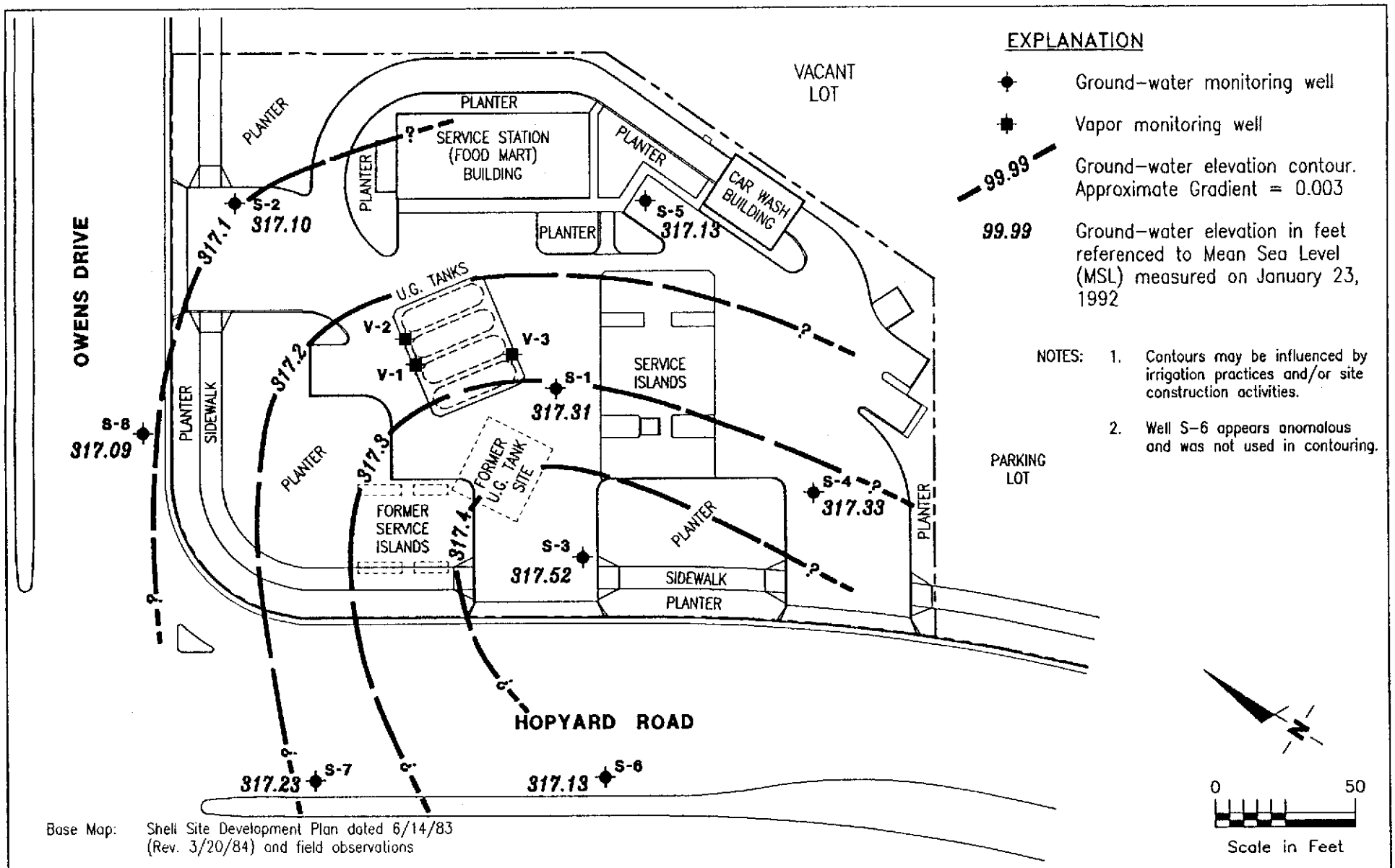
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
Shell Service Station
5251 Hopyard Road
Pleasanton, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7633		12/90	



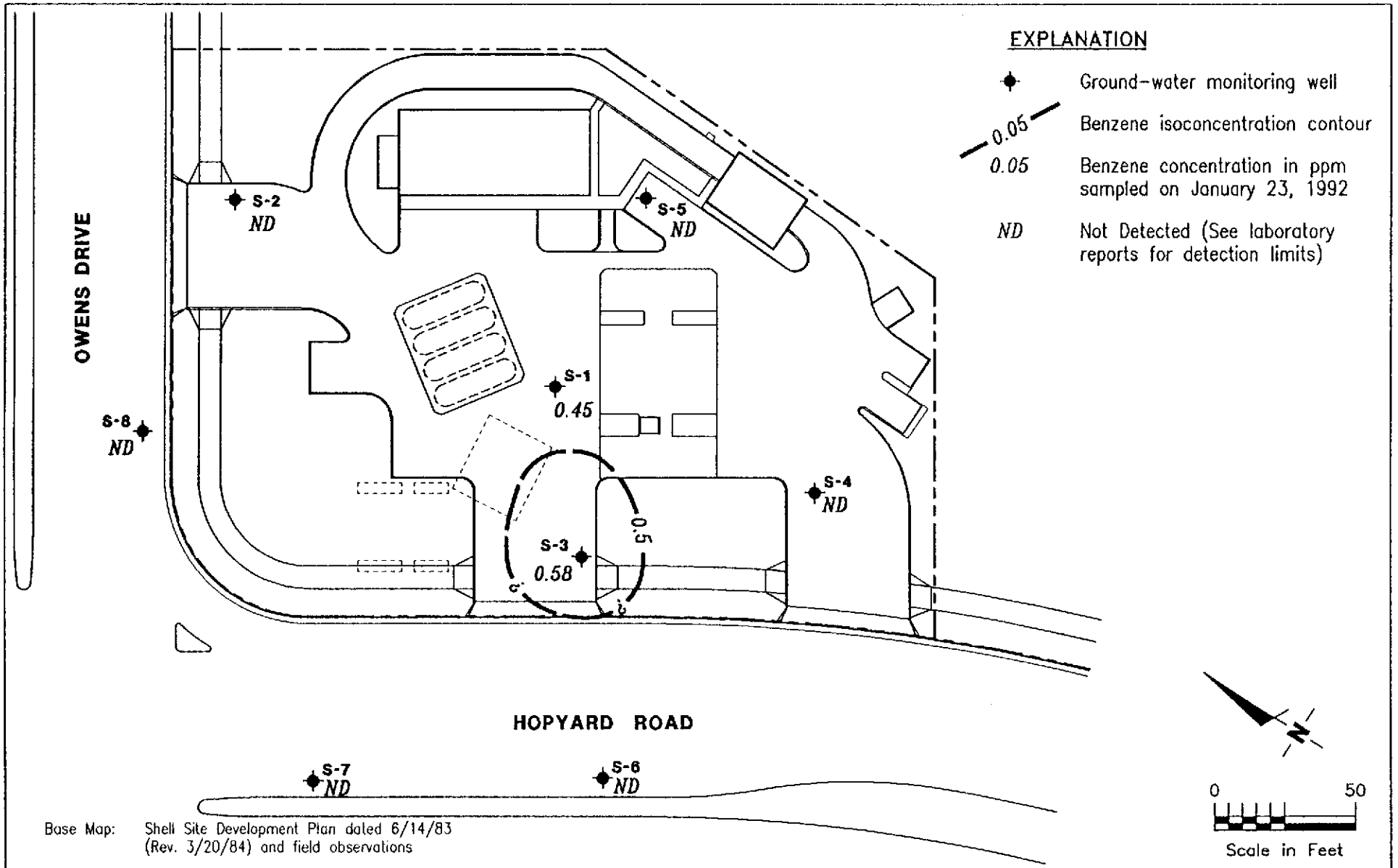
Base Map: Shell Site Development Plan dated 6/14/83 (Rev. 3/20/84) and field observations

GeoStrategies Inc.

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

PLATE 2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763301-13	EFS	3/92	



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

GeoStrategies Inc.

BENZENE ISOCONCENTRATION MAP

Shell Service Station
5251 Hopyard Road
Pleasanton, California

PLATE 3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763301-13	CPS	3/92	

EMCON ASSOCIATES
Consultants in Wastes Management and Environmental Control

February 10, 1992
Project: G67-27.01
WIC#: 204-6138-0907

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

Re: First quarter 1992 ground-water monitoring report, Shell Oil Company, 5251 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 5251 Hopyard Road, Pleasanton, California. First quarter monitoring was conducted on January 23, 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 0.5 foot. Results of the water-level survey are summarized in table 1.

SAMPLING AND ANALYSIS

Ground-water samples were collected from wells S-1 through S-8 on January 23, 1992. Prior to sample collection, the wells were purged with a polyvinyl chloride (PVC) bailer. 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 level sufficient for sample collection. Field measurements from first quarter monitoring are summarized in table 1. Purge water from the

6330-13

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

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 samples included one duplicate sample (SD-5) collected from well S-5, and a trip blank (TB). All water samples from the first quarter 1992 monitoring event were analyzed for total petroleum hydrocarbons (TPH) as gasoline, TPH as diesel, and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

ANALYTICAL RESULTS

Analytical results for the first quarter 1992 monitoring event are summarized in table 2. The original certified analytical reports and a copy of the final chain-of-custody documents are attached.

If you have any questions, please call.

Very truly yours,

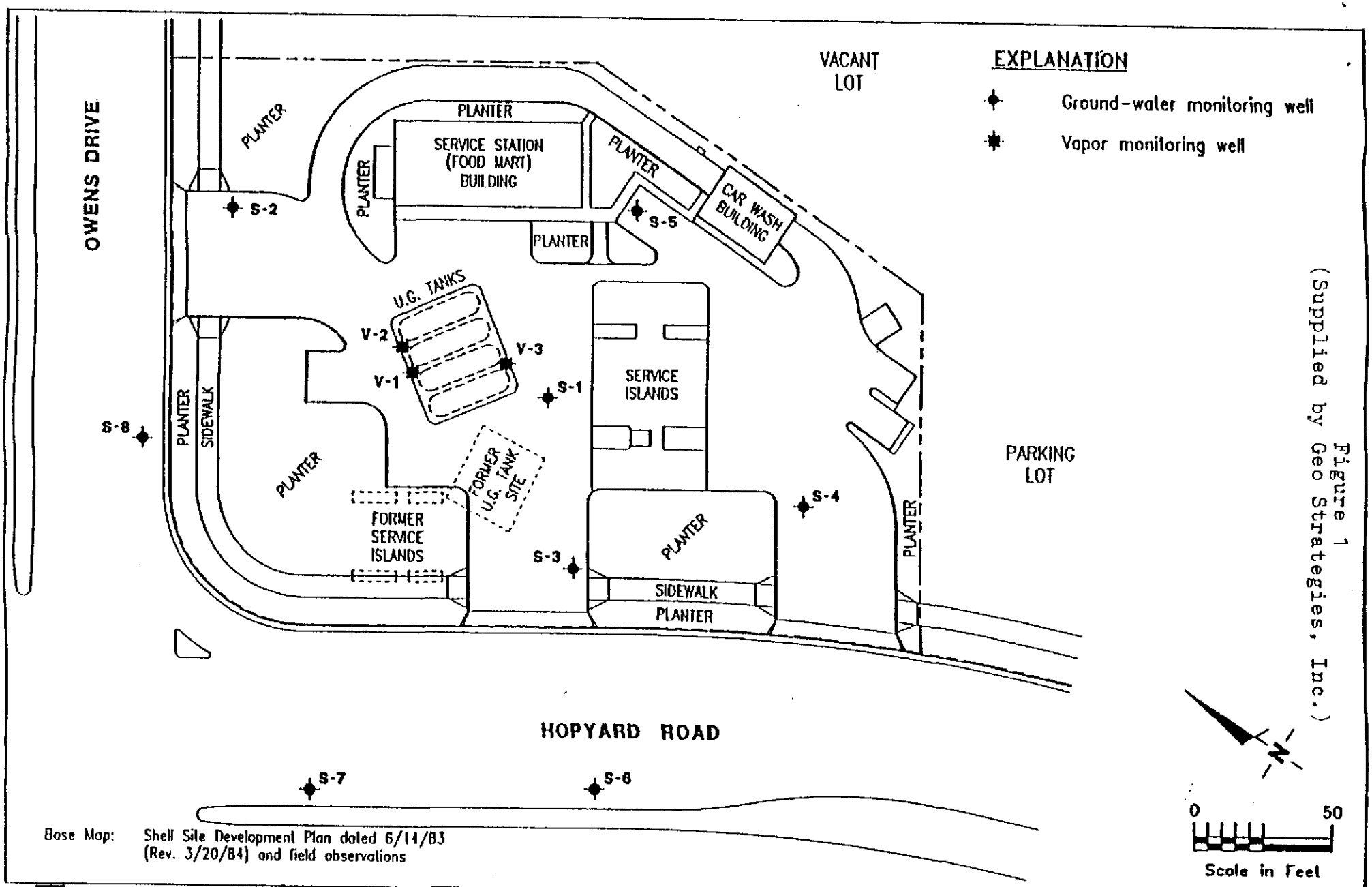
EMCON Associates

David Larsen
Environmental Sampling Coordinator

Orrin Childs
Environmental Sampling Supervisor

DL/OC:dl

Attachments: Table 1 - Monitoring well field measurement data, first quarter 1992
Table 2 - Summary of analytical results, first quarter 1992
Figure 1 - Site map
Certified analytical reports
Chain-of-custody documents



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

Figure 1
(Supplied by Geo Strategies, Inc.)

GeoStrategies Inc.

SITE PLAN
Shell Service Station
5251 Hopyard Road
Pleasanton, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763301-11	CFS	9/91	

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

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

Date: 02/06/92

Work Order: T2-01-151

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

This is the Certificate of Analysis for the following samples:

Client Work ID: EM6727, 5251 Hopyard, Plsnton
Date Received: 01/24/92
Number of Samples: 12
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

Reviewed and Approved:

David A. Pichette
Project Manager

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-151

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-1**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201151-01**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		01/29/92
Low Boiling Hydrocarbons	8015		01/29/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

PARAMETER	DETECTION LIMIT	DETECTED	
Low Boiling Hydrocarbons calculated as Gasoline	0.2	1.6	
BTEX			
Benzene	0.002	0.45	
Toluene	0.002	0.003	
Ethylbenzene	0.002	0.12	
Xylenes (total)	0.002	0.017	
High Boiling Hydrocarbons calculated as Diesel	0.05	0.89	#

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	106.
1,3-Dichlorobenzene (BTEX)	102.
nC32 (Diesel)	67.

Comments:
Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-151

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-2**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201151-02**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		01/29/92
Low Boiling Hydrocarbons	8015		01/29/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

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
High Boiling Hydrocarbons calculated as Diesel	0.05	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	97.
1,3-Dichlorobenzene (BTEX)	97.
nC32 (Diesel)	83.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Pleasanton

Work Order: T2-01-151

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-3**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201151-03**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		01/29/92
Low Boiling Hydrocarbons	8015		01/29/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

PARAMETER	DETECTION LIMIT	DETECTED	
Low Boiling Hydrocarbons calculated as Gasoline	0.2	2.0	
BTEX			
Benzene	0.002	0.58	
Toluene	0.002	0.003	
Ethylbenzene	0.002	0.20	
Xylenes (total)	0.002	None	
High Boiling Hydrocarbons calculated as Diesel	0.05	0.65	#

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	103.
1,3-Dichlorobenzene (BTEX)	103.
nC32 (Diesel)	111.

Comments:
Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-151

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-4**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201151-04**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		01/29/92
Low Boiling Hydrocarbons	8015		01/29/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

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
High Boiling Hydrocarbons calculated as Diesel	0.05	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	99.
1,3-Dichlorobenzene (BTEX)	94.
nC32 (Diesel)	110.

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Pleasanton

Work Order: T2-01-151

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-5
SAMPLE DATE: 01/23/92
LAB SAMPLE ID: T201151-05
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8015		01/27/92
Low Boiling Hydrocarbons	8020		01/27/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

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
High Boiling Hydrocarbons calculated as Diesel	0.05	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	114.
1,3-Dichlorobenzene (BTEX)	104.
nC32 (Diesel)	104.

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-151

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-6**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201151-06**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8015		01/30/92
Low Boiling Hydrocarbons	8020		01/30/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

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
High Boiling Hydrocarbons calculated as Diesel	0.05	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	94.
1,3-Dichlorobenzene (BTEX)	96.
nC32 (Diesel)	103.

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-151

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-7**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201151-07**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8015		01/29/92
Low Boiling Hydrocarbons	8020		01/29/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

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
High Boiling Hydrocarbons calculated as Diesel	0.05	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	99.
1,3-Dichlorobenzene (BTEX)	96.
nC32 (Diesel)	114.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Pleasnton

Work Order: T2-01-151

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-8**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201151-08**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8015		01/29/92
Low Boiling Hydrocarbons	8020		01/29/92
High Boiling Hydrocarbons	8015	01/24/92	01/27/92

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	
High Boiling Hydrocarbons calculated as Diesel	0.05	0.09	#

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	101.
1,3-Dichlorobenzene (BTEX)	99.
nC32 (Diesel)	110.

Comments:
Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-151

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: T201151-09A
EXTRACTION DATE: 01/21/92
ANALYSIS DATE: 01/24/92
ANALYSIS METHOD: Mod.8015

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	LS Result	LSD Result	LS %Rec	LSD %Rec	RPD
Diesel	0.00	1000	878	943	88	94	7

SURROGATES	LS %Rec	LSD %Rec
nC32	112	114

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

IT ANALYTICAL SERVICES
SAN JOSE, CA

Work Order: T2-01-151

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control
SAMPLE DATE: not spec
LAB SAMPLE ID: T201151-10A
EXTRACTION DATE:
ANALYSIS DATE: 01/24/92
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	0.00	500	440	421	88	84	4
SURROGATES					MS %Rec	MSD %Rec	
1,3-Dichlorobenzene					125	119	

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-151

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T201151-11A**
EXTRACTION DATE:
ANALYSIS DATE: **01/28/92**
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	0.00	500	451	426	90	85	6

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	99	100

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Pleasanton

Work Order: T2-01-151

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control
SAMPLE DATE: not spec
LAB SAMPLE ID: T201151-12A
EXTRACTION DATE:
ANALYSIS DATE: 01/29/92
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	0.00	50.0	41.6	42.7	83	85	2
Toluene	0.00	50.0	43.0	44.0	86	88	2
Ethylbenzene	0.00	50.0	43.0	44.1	86	88	2
Total Xylenes	0.00	150	136	140	91	93	2

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	101	99

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Pleasanton

Work Order: T2-01-151

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 TPHN TEST NAME TPH High Boiling by 8015

The method of analysis for high boiling hydrocarbons s taken from the LUFT field manual. Samples are extracted with solvent and examined by gas chromatography using a flame ionization detector. 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.: T2-01-151

Date:
Page 1 of 2

Site Address: 5251 Hopyard Rd, Pleasanton, CA

WIC#: 204-6138-0907

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

Consultant Name & Address: ENCON Associates, 1938 Junction Ave. San Jose, CA 95131

Consultant Contact: David Larsen — Phone No. 453-2269 Fax #: 453-0452

Comments: Late Start, provide results ASAP

Sampled By: Jim Butera and Joe Williams

Printed Name: David Larsen for Jim and Joe

LAB: IT Analytical, San Jose

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-1	1-23-92		X		4	X	X	X			40 ml	HCl	X	Also 1 Liter HCl Glass	Cool
S-2			X			X	X	X					X		
S-3			X			X	X	X					X		
S-4			X			X	X	X					X		
S-5			X			X	X	X					X		
S-6			X			X	X	X					X		
S-7			X			X	X	X					X		
S-8			X			X	X	X					X		

Analysis Required

CHECK ONE (1) BOX ONLY

	CT/DT
[X] Quarterly Monitoring	5461
[ ] Site Investigation	5441
[ ] Soil for disposal	5442
[ ] Water for disposal	5443
[ ] Air Sample- Sys O&M	5452
[ ] Water Sample - Sys O&M	5453
[ ] Other	

TURN AROUND TIME

- [ ] 24 hours
- [ ] 48 hours
- [X] 15 days (Normal)
- [ ] Other ____

NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.

Relinquished By (signature)	Printed name	Date	Time	Received (signature)	Printed name	Date	Time
X J Butera	X J BUTERA	1-24-92	0700	David Larsen	David Larsen	1-24-92	7:00
David Larsen	David Larsen	1-24-92	845	Josephine DeCarli	Josephine DeCarli	1/24/92	08:45

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 Larson

Date: 02/05/92

Work Order: T2-01-152

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

This is the Certificate of Analysis for the following samples:

Client Work ID: EM6727, 5251 Hopyard, Plsnton
Date Received: 01/24/92
Number of Samples: 3
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

Reviewed and Approved:

David A. PicKette
Project Manager

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

Company: Shell Oil Company
Date: 02/06/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-152

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **TB**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T201152-01**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		01/27/92
Low Boiling Hydrocarbons	Mod.8015		01/27/92
High Boiling Hydrocarbons	Mod.8015	01/24/92	01/27/92

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
High Boiling Hydrocarbons calculated as Diesel	0.05	.60

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	107.
1,3-Dichlorobenzene (BTEX)	100.
nC32 (Diesel)	109.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 02/05/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-152

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **SD-5**
SAMPLE DATE: **01/23/92**
LAB SAMPLE ID: **T201152-02**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		01/27/92
Low Boiling Hydrocarbons	Mod.8015		01/27/92
High Boiling Hydrocarbons	Mod.8015	01/24/92	01/28/92

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
High Boiling Hydrocarbons calculated as Diesel	0.05	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	114.
1,3-Dichlorobenzene (BTEX)	102.
nC32 (Diesel)	108.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 02/05/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-152

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control
SAMPLE DATE: not spec
LAB SAMPLE ID: T201152-03A
EXTRACTION DATE: 01/21/92
ANALYSIS DATE: 01/24/92
ANALYSIS METHOD: Mod. 8015

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	LS Result	LSD Result	LS %Rec	LSD %Rec	RPD
Diesel	None	1000	878	943	88	94	7

SURROGATES	LS %Rec	LSD %Rec
nC32	112	114

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 02/05/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-152

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T201152-03A**
EXTRACTION DATE:
ANALYSIS DATE: 01/24/92
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	440	421	88	84	4

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	125	119

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 02/05/92
Client Work ID: EM6727, 5251 Hopyard, Plsnton

Work Order: T2-01-152

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 TPHN TEST NAME TPH High Boiling by 8015

The method of analysis for high boiling hydrocarbons s taken from the LUFT field manual. Samples are extracted with solvent and examined by gas chromatography using a flame ionization detector. 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.: T2-01-152

Date:
Page 2 of 2

Site Address: 5251 Hopyard Rd, Pleasanton, CA

WIC#: 204-6138-0907

Shell Engineer: Kurt Miller — Phone No. / Fax #:

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

Consultant Contact: David Larsen — Phone No. 453-2269, Fax #: 453-0452

Comments: Late start provide results ASAP.

Sampled By: Jim Butera and Joe Williams

Printed Name: David Larsen for Jim and Joe

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
TB	1-23-92		X		#2	X	X	X			40ml	HCl	X	Also 1-Liter Glass	Cool
SD-5	"		X		4	X	X	X			"	"	X	"	"

Relinquished By (signature): X J Butera	Printed name: X J BUTERA X	Date: 1/24/92	Received (signature): David Larsen	Printed name: David Larsen	Date: 1-24-92
Relinquished By (signature): David Larsen	Printed name: David Larsen	Time: 0700	Received (signature): Josephine DeCarli	Printed name: Josephine DeCarli	Time: 700
Relinquished By (signature):	Printed name:	Date: 1-24-92	Received (signature):	Printed name:	Date: 1/24/92
		Time: 8:45			Time: 08:45
		Date:			Date:
		Time:			Time:

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

Last Revision Date: 10/15/91