GeoStrategies Inc.

QUARTERLY REPORT

Shell Service Station
999 San Pablo Avenue
Albany, California
WIC# 204-0079-0109

766601-13

December 23, 1992

GeoStrategies Inc.

December 23, 1992

Shell Oil Company
Post Office Box 5278
Concord, California 94520

Attn: Mr. Dan Kirk

Re: **QUARTERLY REPORT**
Shell Service Station
999 San Pablo Avenue
Albany, California
WIC #204-0079-0109

Mr. Kirk:

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

There are currently seven monitoring wells at the site; Wells S-1 through S-7 (Plate 2). These wells were installed in 1990.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well on October 28, 1992. Static ground-water levels were measured from the surveyed top of each 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 Monitoring 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 west at an approximate hydraulic gradient of 0.03.

:766601-13

Each well was checked for the presence of floating product. Floating product was observed in Well S-5 at a measured thickness of 3.81 feet.

Ground-water samples were collected on October 28, 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 Anametrix Inc., a California State-certified laboratory located in San Jose, California. the laboratory analytical report and Chain-of-Custody form are presented in Appendix A. 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.

DISCUSSION

Based on data presented in reports prepared for the service station located across Marin Avenue and the contaminant distribution, the floating product observed in Well S-5 appears to be related to the service station south of the Shell site.

If you have any questions or comments, please call.

GeoStrategies Inc. by,

Ellen C. Fostersmith
Geologist

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

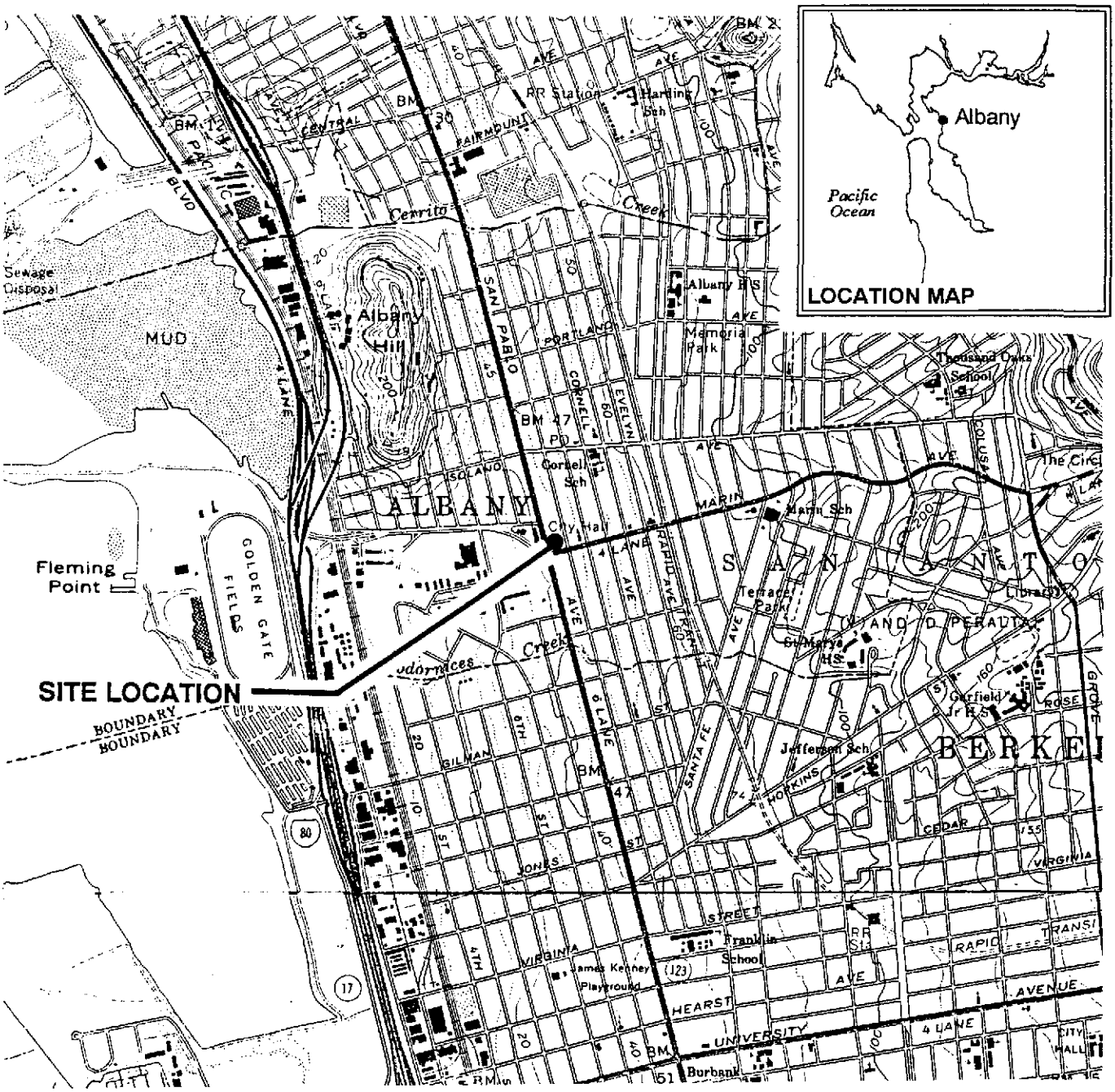
ECF/MCC/rmt

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

Appendix A. EMCON Monitoring Report and Chain-of-Custody Form

Q.C. Review: _____

:766601-13



Base Map: USGS Topographic Map

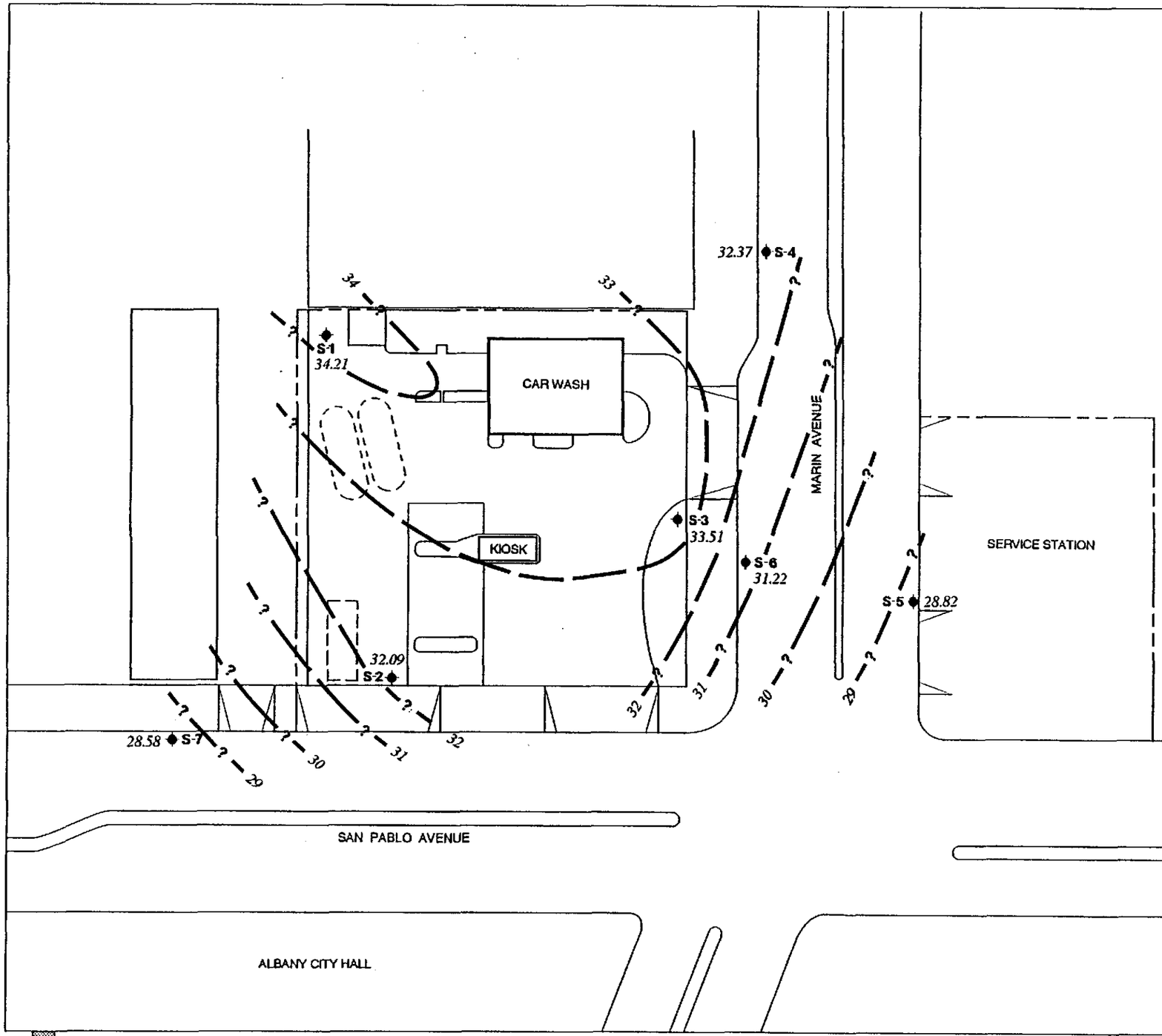
Approximate Scale : 1" = 2000'

GeoStrategies Inc.

Vicinity Map
Shell Service Station
999 San Pablo Avenue
Albany, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
7666		1/90		



EXPLANATION

- ◆ S-1 — Ground-water monitoring well location
- 33 — Ground-water elevation contour Approximate Gradient = 0.03
- *28.58* — Ground-water elevation in feet referenced to Mean Sea Level (MSL) measured on October 28, 1992

Note: Contours may be influenced by irrigation practices and/or site construction activities

N

0 40 80

Scale in Feet

GeoStrategies Inc.

SITE PLAN/POTENTIOMETRIC MAP
Shell Service Station
999 San Pablo Avenue
Albany, California

PLATE **2**

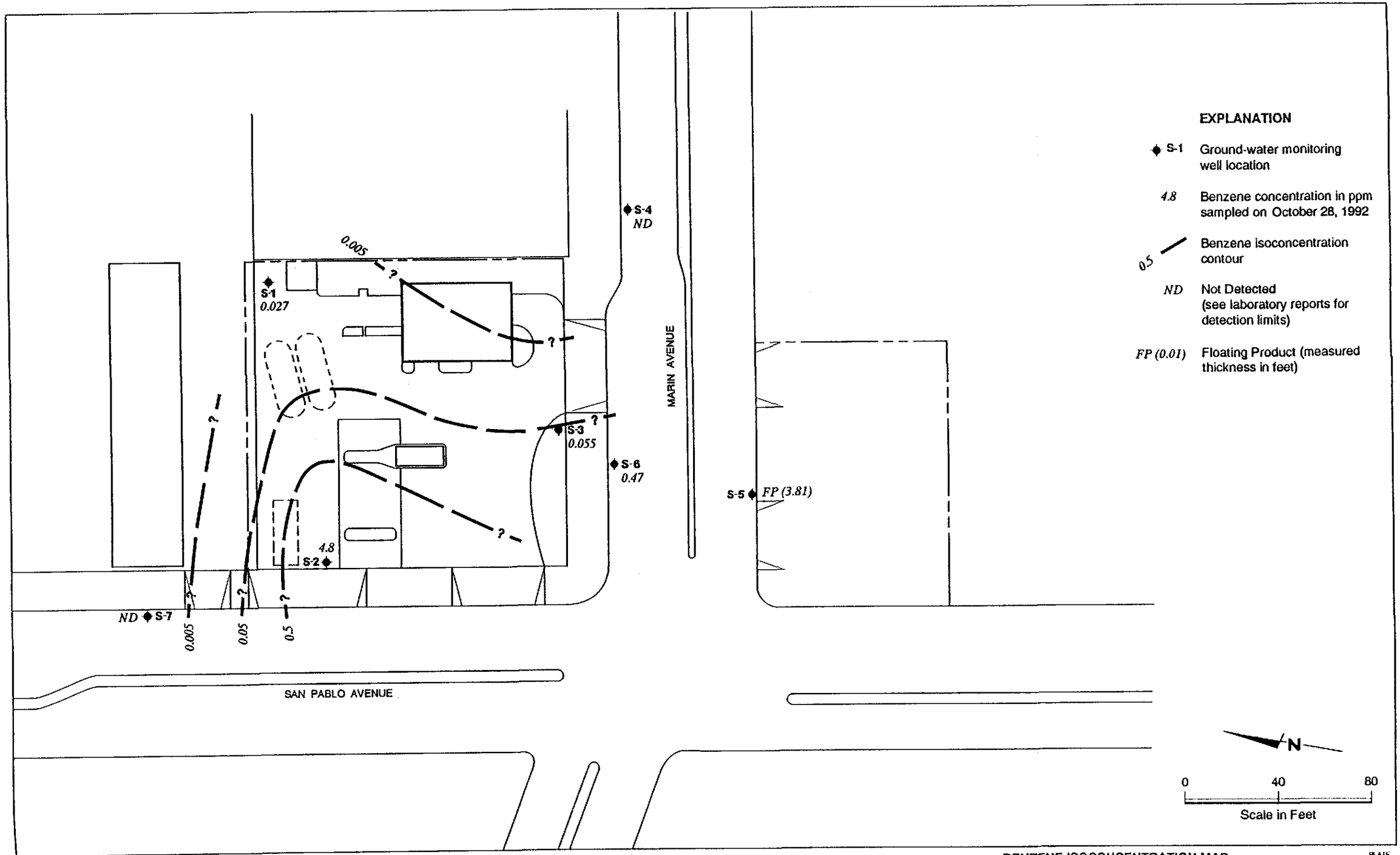
JOB NUMBER 766601-13

REVIEWED BY

DATE 12/92

REVISED DATE

REVISED DATE



GeoStrategies Inc.

BENZENE ISOCONCENTRATION MAP
Shell Service Station
999 San Pablo Avenue
Albany, California

PLATE **3**

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
766601-13		12/92		

November 20, 1992
Project: 0G67-019.01
WIC#: 204-0079-0109

EMCON ASSOCIATES
Consultants in Wastes Management and Environmental Control

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

Re: Fourth quarter 1992 ground-water monitoring report, Shell Oil Company, 999 San Pablo Avenue, Albany, California

Dear Ms. Fostersmith:

This letter presents the results of the fourth quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 999 San Pablo Avenue, Albany, California. Fourth quarter monitoring was conducted on October 28, 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-7 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. Floating product, 3.81 feet thick, was observed in well S-5. Total depth was measured to the nearest 0.1 foot. Results of the fourth quarter water-level survey, and available data from four previous surveys, are summarized in table 1.

SAMPLING AND ANALYSIS

Ground-water samples were collected from wells S-1 through S-4, S-6, and S-7 on October 28, 1992. Well S-5 contained floating product and was not sampled during fourth quarter monitoring. Prior to sample collection, the wells were purged with polyvinyl chloride bailers. During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Wells S-1, S-2, S-4, S-6, and S-7 were evacuated to dryness before the removal of three casing volumes. The wells were allowed to recharge for up to 24 hours. Samples were collected after the wells had recharged to a sufficient level. Field measurements from fourth quarter monitoring, and available

measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained in a 55-gallon drum. The drum was identified with a Shell-approved label and secured for on-site storage.

Ground-water samples were collected with a Teflon® bailer, labeled, placed on ice, and transported to Anametrix Inc. for analysis. Shell chain-of-custody documents accompanied all samples to the laboratory.

All equipment that was placed down a well or that came in contact with ground water was steam cleaned with deionized water prior to use at each well.

Quality control samples for fourth quarter monitoring included a trip blank (TB), a field blank (FB), and a duplicate well sample (SD-3) collected from well S-3. All water samples collected during fourth quarter monitoring were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

ANALYTICAL RESULTS

Analytical results for the fourth quarter 1992 monitoring event, and available results from four previous monitoring events, are summarized in table 2. The original certified analytical report and final chain-of-custody 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 - Monitoring well locations
Certified analytical report
Chain-of-custody documents

Table 1
Monitoring Well Field Measurement Data
Fourth Quarter 1992

Shell Station: 999 San Pablo Avenue
Albany, California
WIC #: 204-0079-0109

Date: 11/18/92
Project Number: G67-19.01

Well Designation	Water Level Field Date	TOB Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
S-1	11/07/91	42.73	8.30	34.43	11.8	ND	11/07/91	7.04	544	68.3	NR
S-1	01/28/92	42.73	7.84	34.89	11.4	ND	01/28/92	6.87	707	63.9	>200
S-1	05/06/92	42.73	7.95	34.78	11.8	ND	05/06/92	6.56	692	67.3	833
S-1	08/06/92	42.73	8.24	34.49	11.8	ND	07/29/92	6.71	856	68.0	191
S-1	10/28/92	42.73	8.52	34.21	11.8	ND	10/28/92	6.76	720	61.4	>1000
S-2	11/07/91	40.73	8.61	32.12	12.2	ND	11/07/91	6.66	855	69.8	NR
S-2	01/28/92	40.73	7.80	32.93	11.8	ND	01/28/92	6.94	1177	62.4	>200
S-2	05/06/92	40.73	8.10	32.63	12.1	ND	05/06/92	7.02	1154	63.5	21.6
S-2	08/06/92	40.73	8.37	32.36	12.2	ND	07/29/92	6.50	1401	68.0	>200
S-2	10/28/92	40.73	8.64	32.09	12.1	ND	10/28/92	6.78	1134	64.3	>1000
S-3	11/07/91	41.46	7.91	33.55	12.2	ND	11/07/91	6.93	614	70.8	NR
S-3	01/28/92	41.46	7.53	33.93	11.9	ND	01/28/92	6.76	777	61.2	>200
S-3	05/06/92	41.46	7.55	33.91	12.1	ND	05/06/92	6.54	704	65.2	>1000
S-3	08/06/92	41.46	7.53	33.93	12.2	ND	07/29/92	6.16	767	68.9	>200
S-3	10/28/92	41.46	7.95	33.51	12.2	ND	10/28/92	6.63	693	64.5	>1000
S-4	11/07/91	41.10	8.32	32.78	14.1	ND	11/07/91	6.60	356	69.5	NR
S-4	01/28/92	41.10	7.40	33.70	13.8	ND	01/28/92	6.80	409	63.6	>200
S-4	05/06/92	41.10	7.21	33.89	14.1	ND	05/06/92	6.16	419	67.9	>1000
S-4	08/06/92	41.10	8.13	32.97	14.0	ND	07/29/92	5.20	490	65.5	>200
S-4	10/28/92	41.10	8.73	32.37	14.0	ND	10/28/92	6.46	424	65.1	>1000

TOB = top of well box
ft-MSL = elevation in feet, relative to mean sea level
std. units = standard pH units
micromhos/cm = micromhos per centimeter
degrees F = degrees Fahrenheit
NTU = nephelometric turbidity units
ND = None detected
NR = Not reported; data not available

Table 1
Monitoring Well Field Measurement Data
Fourth Quarter 1992

Shell Station: 999 San Pablo Avenue
Albany, California
WIC #: 204-0079-0109

Date: 11/18/92
Project Number: G87-19.01

Well Designation	Water Level Field Date	TOB Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
S-5	11/07/91	39.99	15.10	29.17**	NR	5.35	11/07/91	FP	FP	FP	FP
S-5	01/28/92	39.99	14.05	29.86**	15.7	4.80	01/28/92	FP	FP	FP	FP
S-5	05/06/92	39.99	14.31	30.21**	16.1	5.66	05/06/92	FP	FP	FP	FP
S-5	08/06/92	39.99	14.26	28.77**	16.1	3.80	07/29/92	FP	FP	FP	FP
S-5	10/28/92	39.99	14.22	28.82**	16.1	3.81	10/28/92	FP	FP	FP	FP
S-6	11/07/91	40.12	10.86	29.26	15.3	ND	11/07/91	7.34	538	70.2	NR
S-6	01/28/92	40.12	8.97	31.15	14.8	ND	01/28/92	7.09	728	65.8	>200
S-6	05/06/92	40.12	8.27	31.85	15.2	ND	05/06/92	7.27	594	64.5	>1000
S-6	08/06/92	40.12	9.57	30.55	15.2	ND	07/29/92	5.89	912	67.5	>200
S-6	10/28/92	40.12	8.90	31.22	15.2	ND	10/28/92	7.00	720	63.1	290
S-7	11/07/91	40.10	11.48	28.62	15.2	ND	11/07/91	6.39	606	69.8	NR
S-7	01/28/92	40.10	10.72	29.38	14.7	ND	01/28/92	6.79	800	62.7	>200
S-7	05/06/92	40.10	10.34	29.76	15.1	ND	05/06/92	6.84	826	67.2	>1000
S-7	08/06/92	40.10	11.13	28.97	15.1	ND	07/29/92	5.80	958	65.6	>200
S-7	10/28/92	40.10	11.52	28.58	15.0	ND	10/28/92	6.44	819	66.9	>1000

TOB = top of well box
ft-MSL = elevation in feet, relative to mean sea level
std. units = standard pH units
micromhos/cm = micromhos per centimeter
degrees F = degrees Fahrenheit
NTU = nephelometric turbidity units
** = groundwater elevation corrected to include 80 percent of the floating product thickness measured in the well
NR = Not reported; data not available
FP = Floating product; well contained floating product and was not sampled
ND = None detected

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

Shell Station: 999 San Pablo Avenue
Albany, California
WIC #: 204-0079-0109

Date: 11/18/92
Project Number: G87-19.01

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	11/07/91	2.9	0.0080	0.0025	0.046	0.026
S-1	01/28/92	2.0	0.011	<0.0025	0.060	0.020
S-1	05/06/92	1.2	0.0055	<0.0025	0.080	0.036
S-1	07/29/92	2.0	0.0094	<0.0025	0.13	<0.0025
S-1	10/28/92	1.3	0.027	0.0032	0.072	0.013
S-2	11/07/91	40.	4.0	0.16	1.02	3.4
S-2	01/28/92	22.	1.6	0.07	0.42	1.7
S-2	05/06/92	20.	2.8	0.11	0.86	1.9
S-2	07/29/92	42.	5.0	0.16	1.1	3.5
S-2	10/28/92	34.	4.8	0.33	1.6	2.9
S-3	11/07/91	4.0	0.020	0.0039	0.0050	0.0049
S-3	01/28/92	2.1	0.021	0.0076	0.0067	0.015
S-3	05/06/92	6.6	0.038	0.051	0.045	0.065
S-3	07/29/92	5.1	0.018	0.0059	0.027	0.060
S-3	10/28/92	3.0	0.055	0.011	0.016	0.032
SD-3	07/29/92	5.8	0.013	0.012	0.029	0.060
SD-3	10/28/92	2.7	0.046	0.0083	0.014	0.025
S-4	11/07/91	0.26	<0.0005	<0.0005	<0.0005	<0.0005
S-4	01/28/92	0.11*	<0.0005	<0.0005	<0.0005	<0.0005
S-4	05/06/92	0.054+	<0.0005	<0.0005	<0.0005	<0.0005
S-4	07/29/92	0.067	<0.0005	<0.0005	<0.0005	<0.0005
S-4	10/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline
* = Compounds detected and calculated as gasoline are not characteristic of the standard gasoline chromatographic pattern
+ = The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline

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

Shell Station: 999 San Pablo Avenue
Albany, California
WIC #: 204-0079-0109

Date: 11/18/92
Project Number: 067-19.01

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-5	11/07/91	FP	FP	FP	FP	FP
S-5	01/28/92	FP	FP	FP	FP	FP
S-5	05/06/92	FP	FP	FP	FP	FP
S-5	07/29/92	FP	FP	FP	FP	FP
S-5	10/28/92	FP	FP	FP	FP	FP
S-6	11/07/91	6.2	0.24	0.023	0.025	0.027
S-6	01/28/92	5.6	0.25	0.015	0.041	0.036
S-6	05/06/92	7.1	0.33	0.029	0.11	0.21
S-6	07/29/92	13.	0.24	<0.05	0.056	0.078
S-6	10/28/92	10.	0.47	0.21	0.067	0.17
S-7	11/07/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	01/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	05/06/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-7	07/29/92	0.16	<0.0005	<0.0005	<0.0005	<0.0005
S-7	10/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
FB	07/29/92	<0.05^	<0.0005^	<0.0005^	<0.0005^	<0.0005^
FB	10/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	01/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	05/06/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	07/29/92	<0.05^	<0.0005^	<0.0005^	<0.0005^	<0.0005^
TB	10/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline
FP = Floating product; well contained floating product and was not sampled
^ = Samples TB and FB from 07/29/92 are called TB-1 and FB-1 on the chain-of-custody form and certified analytical report

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of INCHCAPE ENVIRONMENTAL

REPORT

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

Workorder # : 9210445
Date Received : 10/28/92
Project ID : 204-0079-0109
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9210445- 1	S-4
9210445- 2	S-7
9210445- 3	S-3
9210445- 4	S-1
9210445- 5	S-6
9210445- 6	S-2
9210445- 7	SD-3
9210445- 8	TB
9210445- 9	FB

This report consists of 6 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

11-09-92
Date

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

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

Workorder # : 9210445
Date Received : 10/28/92
Project ID : 204-0079-0109
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210445- 1	S-4	WATER	10/28/92	TPHg/BTEX
9210445- 2	S-7	WATER	10/28/92	TPHg/BTEX
9210445- 3	S-3	WATER	10/28/92	TPHg/BTEX
9210445- 4	S-1	WATER	10/28/92	TPHg/BTEX
9210445- 5	S-6	WATER	10/28/92	TPHg/BTEX
9210445- 6	S-2	WATER	10/28/92	TPHg/BTEX
9210445- 7	SD-3	WATER	10/28/92	TPHg/BTEX
9210445- 8	TB	WATER	10/28/92	TPHg/BTEX
9210445- 9	FB	WATER	10/28/92	TPHg/BTEX

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

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

Workorder # : 9210445
Date Received : 10/28/92
Project ID : 204-0079-0109
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Barnes 11/6/92
Department Supervisor Date

Lucia Shen 11/6/92
Chemist Date

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

Anametrix W.O.: 9210445
Matrix : WATER
Date Sampled : 10/28/92

Project Number : 204-0079-0109
Date Released : 11/05/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# S-4 -01	Sample I.D.# S-7 -02	Sample I.D.# S-3 -03	Sample I.D.# S-1 -04	Sample I.D.# S-6 -05
Benzene	0.0005	ND	ND	0.055	0.027	0.47
Toluene	0.0005	ND	ND	0.011	0.0032	0.21
Ethylbenzene	0.0005	ND	ND	0.016	0.072	0.067
Total Xylenes	0.0005	ND	ND	0.032	0.013	0.17
TPH as Gasoline	0.050	ND	ND	3.0	1.3	10
% Surrogate Recovery		99%	88%	114%	104%	91%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		11/03/92	11/03/92	11/03/92	11/03/92	11/03/92
RLMF		1	1	10	5	100

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

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

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

Lucia Shea 11/6/92
Analyst Date

Cheryl Bremer 11/6/92
Supervisor Date

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

Anametrix W.O.: 9210445
Matrix : WATER
Date Sampled : 10/28/92

Project Number : 204-0079-0109
Date Released : 11/05/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# S-2 -06	Sample I.D.# SD-3 -07	Sample I.D.# TB -08	Sample I.D.# FB -09	Sample I.D.# BN0301E3 BLANK
Benzene	0.0005	4.8	0.046	ND	ND	ND
Toluene	0.0005	0.33	0.0083	ND	ND	ND
Ethylbenzene	0.0005	1.6	0.014	ND	ND	ND
Total Xylenes	0.0005	2.9	0.025	ND	ND	ND
TPH as Gasoline	0.050	34	2.7	ND	ND	ND
% Surrogate Recovery		100%	102%	97%	96%	100%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		11/03/92	11/03/92	11/03/92	11/03/92	11/03/92
RLMF		250	10	1	1	1

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

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

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

Irma Shor 11/6/92
Analyst Date

Cheryl Balma 11/6/92
Supervisor Date

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

Sample I.D.	: 204-0079-0109 S-4	Anametrix I.D.	: 9210445-01
Matrix	: WATER	Analyst	: JJ
Date Sampled	: 10/28/92	Supervisor	: CP
Date Analyzed	: 11/03/92	Date Released	: 11/06/92
		Instrument ID	: HP12

COMPOUND	SPIKE AMT (mg/L)	SAMPLE AMT (mg/L)	REC MS (mg/L)	% REC MS	REC MD (mg/L)	% REC MD	RPD	% REC LIMITS
GASOLINE	0.25	0.00	0.30	120%	0.27	108%	-11%	48-145
P-BFB				107%		95%		53-147

* Limits established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Analyzed : 11/03/92

Anametrix I.D. : LCSW1103
Analyst : [illegible]
Supervisor : [illegible]
Date Released : 11/06/92
Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (mg/L)	REC LCS (mg/L)	%REC LCS	% REC LIMITS
GASOLINE	0.25	0.27	108%	56-116
SURROGATE		104%		53-147

* Quality control established by Anametrix, Inc.

9210445 (18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 1291-5

Date:
Page 1 of 2

Site Address: 999 San Pablo Avenue Albany, CA

WIC#: 204-0079-0109

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

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

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

Comments: 3-VOAs (HCl) for gas, BTEX

Sampled by: Lisle Rotto

Printed Name: LisleRotto

LAB: Anametrix

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 gasoline			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-4	10-25-			X		3						X				40 ml	HCl	No		
S-7						3						X								
S-3						3						X								
S-1						3						X								
S-6						3						X							ALL VOA'S received w/ bubbles	
S-2						3						X								
~~S-5~~						~~3~~						X							NO Samples taken Product in well	
SD-3						3						X								

Relinquished By (signature): Lisle Rotto	Printed Name: LISLERATH	Date: 10-28-92 Time: 1416	Received (signature): Michele D Aguilar	Printed Name: MICHELE D AGUILAR	Date: 10/28/92 Time: 1416
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished By (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

Rev. 01/91

Shell Oil Co. Chain of Custody

9210445 (18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 1291-5

Date:
Page 2 of 2

Site Address: 999 San Pablo Avenue Albany, CA

WIC#: 204-0079-0109

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

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

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

Comments: 3-VOAs (HCl) for gas, BTEX

Sampled by: Lisle Rath

Printed Name: LISLE Rath

LAB: Anametrix

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 gasoline	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
TB	10-28			X		3						X		40 ml	HCl	No	1 VOA received w/bubble	
FB	10-28			X		3						X		↓	↓	↓		

CHECK ONE (1) BOX ONLY — C1/D1

Quarterly Monitoring	X	6441
Site Investigation		6441
Soil Classify/Disposal		6442
Water Classify/Disposal		6443
Soil/Air Rem. or Sys. O & M		6452
Water Rem. or Sys. O & M		6453
Other		

TURN AROUND TIME

- 24 hours
- 48 hours
- 15 days (Normal) X
- 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
Lisa Rath	Lisle Ruth	10-28-92	1416	Michele D Aguilar	MICHELE D AGUILAR	10/28/92	1416

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

Rev. 07/91

Part Of One of Custody