GeoStrategies Inc.

October 30, 1993

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

Attn: Mr. Dan Kirk

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

Mr. Kirk:

This Quarterly Report has been prepared by GeoStrategies Inc. (GSI) and presents the results of the 1993 third quarter sampling for the above referenced site (Plate 1). Sampling data were furnished by the Shell Oil Company sampling contractor.

EXECUTIVE SUMMARY

- The dissolved hydrocarbon plume appears delineated to the east, south, and west of the site.
- Monitoring well S-2 results indicated not detected concentrations of total petroleum hydrocarbons as gasoline (TPH-G) and benzene during the third quarter of 1993.
- The groundwater gradient and flow direction remained consistent with historical observations.

SITE DESCRIPTION

There are currently nine groundwater monitoring (S-2 through S-10) and three groundwater recovery (SR-1 through SR-3) wells at the site (Plate 2). These wells were installed between 1986 and 1989 by EMCON

2140 WEST WINTON AVENUE • HAYWARD, CALIFORNIA 94545 • (510) 352-4800
601 UNIVERSITY AVENUE • SUITE 150 • SACRAMENTO, CALIFORNIA 95825 • (916) 568-7500

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 by Blaine Tech Services, Inc. (Blaine) in each monitoring well on September 15, 1993. 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 measurements are presented in the Blaine Groundwater Sampling Report (Appendix A) and in Table 1. Water-level data were used to construct a quarterly potentiometric map (Plate 3). Shallow ground-water flow is interpreted to the southeast at an approximate hydraulic gradient of 0.012.

Each well was checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not observed in the wells this quarter.

Groundwater samples were collected from wells S-2 through S-10 by Blaine on September 15, 1993. The samples were submitted under Chain-of-Custody Documentation to Anametrix Inc., a California State-certified laboratory located in San Jose, California. Samples from wells S-2, S-4, S-5, and S-6 were analyzed for TPH-G and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using Environmental Protection Agency (EPA) Methods 5030/modified 8015/8020. Samples collected from wells S-3, and S-7 through S-10 were not analyzed due to the not detected concentrations of TPH-G and BTEX reported for at least the past year. The Blaine Groundwater Sampling 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 Table 2. A chemical concentration map for benzene is presented on Plate 4.

TPH-G was detected in wells S-4, S-5, and S-6 at concentrations ranging from 80 parts per billion (ppb) in well S-5 to 700 ppb in well S-4. Benzene detected in the same wells at concentrations ranging from 1.4 ppb in well S-6 to 21 ppb in well S-4.

DISCUSSION

Dissolved phase hydrocarbons appear to be in the immediate vicinity of the UST pit and based on previous quarter results, are delineated to not detected in downgradient and crossgradient directions from the site. Results indicated benzene concentrations decreased in wells S-2, S-4, and S-5 during the third quarter 1993, and remained approximately the same in well S-6.

If you have any questions, please call us at (510) 352-4800.

Sincerely,
GeoStrategies Inc.

Robert D. Campbell
Project Manager

Gary Pischke
Senior Geologist
CEG 1501

REGISTERED GEOLOGIST
GARY PISCHKE
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CERTIFIED
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Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Potentiometric Map
Plate 4. Benzene Isoconcentration Map

Appendix A: Blaine Tech Services Groundwater Sampling Report and Chain-of-Custody Form

QC Review: VR

cc: Mr. Rick Mueller, Pleasanton Fire Department
Mr. Lester Feldman, Regional Water Quality Control Board

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Table 1
Field Monitoring Data
Shell Service Station
3790 Hopyard Road, Pleasanton

Well No.	Monitoring Date	Casing Dia. (in)	Total Well Depth (ft)	Well Elev. (ft)	Depth to Water (ft)	Product Thickness (ft)	Static Water Elev. (ft)	Purged Well Volumes	pH	Temp. (F)	Conductivity (uHMOS/CM)	Turbidity (NTUs)
S-2	15-Sep-93	3	35.32	329.21	14.63	---	314.58	23	6.8	70	3300	37.3
S-3	15-Sep-93	3	35.35	327.67	13.02	---	314.65	25	6.6	69.4	3600	13.97
S-4	15-Sep-93	3	36.25	328.53	13.86	---	314.67	12	7.6	68.6	3100	36
S-5	15-Sep-93	3	36.16	329.66	16.20	---	313.46	22.5	6.5	69.8	2000	15.47
S-6	15-Sep-93	3	35.01	327.62	14.16	---	313.46	24	7.2	68.2	1100	104.5
S-7	15-Sep-93	3	35.20	328.67	16.65	---	312.02	21	6.6	68.4	2800	> 200
S-8	15-Sep-93	3	34.66	327.00	14.91	---	312.09	12	8.2	73.9	3100	> 200
S-9	15-Sep-93	3	35.06	328.24	17.42	---	310.82	20	6.7	69.2	3500	> 200
S-10	15-Sep-93	3	34.56	326.55	13.66	---	312.89	24	7.0	67.8	1800	> 200
SR-1	15-Sep-93	4	35.31	329.78	16.30	---	313.48	---	---	---	---	---
SR-2	15-Sep-93	4	35.45	328.35	14.12	---	314.23	---	---	---	---	---
SR-3	15-Sep-93	4	35.23	329.11	14.57	---	314.54	---	---	---	---	---

1. Static water elevations referenced to mean sea level (MSL)
2. Wells SR-1, SR-2 and SR-3 contained pumps, and were not sampled.
3. Physical parameter measurements represent stabilized values

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
06-Nov-87	S-1	920	230	<5	150	150
14-Feb-88	S-1	3,500	1,300	<40	500	500
06-Aug-88	S-1	Well Destroyed				
06-Nov-87	S-2	16,000	870	100	2,700	2,700
14-Feb-88	S-2	1,800	440	<10	140	140
13-Oct-88	S-2	550	110	1	45	15
31-Jan-89	S-2	620	170	2	62	14
07-Mar-89	S-2	1,900	260	270	130	260
26-Jun-89	S-2	320	88	1	32	10
08-Sep-89	S-2	230	80	1	30	15
14-Dec-89	S-2	160	56	0.5	21	3
05-Mar-90	S-2	710	57	<0.5	<0.5	88
14-Jun-90	S-2	110	39	0.5	11	2
02-Oct-90	S-2	290	84	1.7	160	8.1
18-Dec-90	S-2	61	18	1.4	2.2	2.4
20-Mar-91	S-2	110	30	2.2	10	7
26-Jun-91	S-2	50*	6.3	<0.5	3.3	1.9
05-Sep-91	S-2	90	12	3.2	2.5	2.3
13-Dec-91	S-2	<50	12	<0.5	<0.5	<0.5
11-Mar-92	S-2	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-2	<50	0.9	<0.5	<0.5	<0.5
17-Sep-92	S-2	78	2.6	<0.5	1.3	0.9
11-Dec-92	S-2	<50	0.8	<0.5	<0.5	<0.5
04-Feb-93	S-2	55	1.3	<0.5	0.7	<0.5
03-Jun-93	S-2	<50	0.7	<0.5	<0.5	<0.5
15-Sep-93	S-2	<50	<0.5	<0.5	<0.5	<0.5
14-Feb-88	S-3	<50	<0.5	<1	<4	<4
13-Oct-88	S-3	<50	<0.5	<1	<1	<3
31-Jan-89	S-3	<50	<0.5	<1	<1	<3
07-Mar-89	S-3	<50	<0.5	<1	<1	<3
26-Jun-89	S-3	<50	<0.5	<1	<1	<3
08-Sep-89	S-3	<50	<0.5	<1	<1	<3
14-Dec-89	S-3	<50	<0.5	<0.5	<0.5	<1
05-Mar-90	S-3	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-3	<500	<0.5	<0.5	<0.5	<1
02-Oct-90	S-3	<50	<0.5	<0.5	<0.5	1

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HISTORICAL GROUNDWATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
18-Dec-90	S-3	<50	<0.5	1.6	<0.5	2
20-Mar-91	S-3	70	2.3	8.9	4	23
26-Jun-91	S-3	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-3	<50	<0.5	<0.5	<0.5	<0.5
13-Dec-91	S-3	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-3	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-3	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-3	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-3	<50	<0.5	<0.5	<0.5	<0.5
04-Feb-93	S-3	<50	<0.5	<0.5	<0.5	<0.5
03-Jun-93	S-3	<50	<0.5	<0.5	<0.5	<0.5
15-Sep-93	S-3		Not	Analyzed		
14-Feb-88	S-4	5,100	160	8	730	730
13-Oct-88	S-4	530	24	1	25	16
31-Jan-89	S-4	1,100	33	2	20	24
07-Mar-89	S-4	650	37	1	35	27
26-Jun-89	S-4	670	110	<1	85	71
08-Sep-89	S-4	380	32	<1	36	26
14-Dec-89	S-4	210	21	<0.5	30	23
05-Mar-90	S-4	350	43	<0.5	24	47
14-Jun-90	S-4	430	74	<0.5	71	46
02-Oct-90	S-4	700	74	2.2	100	55
18-Dec-90	S-4	1,400	180	2.9	280	230
20-Mar-91	S-4	1,200	100	<2	210	130
26-Jun-91	S-4	220	14	<0.5	34	17
05-Sep-91	S-4	580	31	0.8	53	26
13-Dec-91	S-4	370	24	0.9	1.3	46
11-Mar-92	S-4	1,600	23	1.2	12	20
16-Jun-92	S-4	480	48	<1	95	22
17-Sep-92	S-4	260	35	1.2	51	7.8
11-Dec-92	S-4	270	34	0.6	28	4.5
05-Feb-93	S-4	1,100	12	<5	69	100
03-Jun-93	S-4	210	48	1.1	42	4.0
16-Sep-93	S-4	700	21	<1	110	91
14-Feb-88	S-5	1,000	40	86	180	180
13-Oct-88	S-5	560	66	20	18	36

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Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
31-Jan-89	S-5	180	27	8	9	13
07-Mar-89	S-5	3,800	520	530	260	570
26-Jun-89	S-5	<50	3.8	<1	2	<3
08-Sep-89	S-5	110	25	2	2	12
14-Dec-89	S-5	1,700	300	86	67	140
05-Mar-90	S-5	1,100	100	110	79	240
14-Jun-90	S-5	600	94	36	40	62
02-Oct-90	S-5	4,500	1,400	160	260	300
20-Nov-90	S-5	16,000	4,600	720	790	1,000
18-Dec-90	S-5	25,000	7,600	1,100	1,300	2,300
20-Mar-91	S-5	310	39	12	18	30
26-Jun-91	S-5	1,300	250	62	120	160
05-Sep-91	S-5	4,700	660	150	170	280
13-Dec-91	S-5	1,400	580	19	110	80
11-Mar-92	S-5	<30	<0.3	<0.3	<0.3	<0.3
16-Jun-92	S-5	1,800	380	52	120	180
17-Sep-92	S-5	2,200	750	91	170	170
11-Dec-92	S-5	8,700	1,600	86	48	340
04-Feb-93	S-5	150	15	0.7	4.7	4
03-Jun-93	S-5	460	140	3.4	17	14
15-Sep-93	S-5	80	2.4	0.5	1.4	2.9
13-Oct-88	S-6	1,100	13	1	42	33
31-Jan-89	S-6	340	3.8	<1	8	3
07-Mar-89	S-6	190	3.8	<1	7	3
26-Jun-89	S-6	480	15	<1	6	<3
08-Sep-89	S-6	270	1.3	1	7	<3
15-Dec-89	S-6	320	1	<0.5	2.6	<1
06-Mar-90	S-6	420	3.1	<0.5	14	<1
14-Jun-90	S-6	370	3.7	0.9	4.8	3
02-Oct-90	S-6	190	6.6	1.6	1.9	2.8
18-Dec-90	S-6	430	10	0.7	1.6	1.5
20-Mar-91	S-6	130*	6.6	0.6	0.7	3
26-Jun-91	S-6	120*	3.8	0.8	<0.5	1.7
05-Sep-91	S-6	60	<0.5	0.8	<0.5	0.5
13-Dec-91	S-6	150	2.3	<0.5	<0.5	150
11-Mar-92	S-6	<30	<0.3	<0.3	<0.3	<0.3

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
15-Jun-92	S-6	170	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-6	190	<0.5	1.6	<0.5	1.2
11-Dec-92	S-6	180	<0.5	0.8	<0.5	0.7
05-Feb-93	S-6	290	<0.5	<0.5	<0.5	0.7
03-Jun-93	S-6	100	1.2	<0.5	<0.5	<0.5
15-Sep-93	S-6	160	1.4	<0.5	0.9	2.0
13-Oct-88	S-7	<50	0.6	1	<1	<3
31-Jan-89	S-7	<50	<0.5	<1	<1	<3
07-Mar-89	S-7	<50	<0.5	<1	<1	<3
26-Jun-89	S-7	<50	<0.5	<1	<1	<3
08-Sep-89	S-7	<50	<0.5	<1	<1	<3
15-Dec-89	S-7	<50	<0.5	<0.5	<0.5	<1
06-Mar-90	S-7	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-7	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-7	<50	<0.5	0.6	<0.5	0.9
18-Dec-90	S-7	<50	0.5	<0.5	<0.5	0.8
20-Mar-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
26-Jun-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-7	<50	<0.5	0.6	<0.5	<0.5
13-Dec-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-7	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-7	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-7	<50	0.6	0.6	<0.5	<0.5
11-Dec-92	S-7	<50	<0.5	<0.5	<0.5	<0.5
05-Feb-93	S-7	<50	<0.5	<0.5	<0.5	<0.5
03-Jun-93	S-7	<50	<0.5	<0.5	<0.5	<0.5
15-Sep-93	S-7	Not	Analyzed			
07-Mar-89	S-8	<50	1.2	1	<1	<3
26-Jun-89	S-8	<50	0.8	1	<1	<3
08-Sep-89	S-8	<50	<0.5	<1	<1	<3
14-Dec-89	S-8	<50	<0.5	<0.5	<0.5	<1
05-Mar-90	S-8	<50	<0.5	0.5	<0.5	<1
14-Jun-90	S-8	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-8	<50	<0.5	<0.5	<0.5	<0.5
18-Dec-90	S-8	<50	2.9	7	1	6.4
20-Mar-91	S-8	50*	0.8	1.6	2.6	5.2

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
15-Jun-92	S-6	170	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-6	190	<0.5	1.6	<0.5	1.2
11-Dec-92	S-6	180	<0.5	0.8	<0.5	0.7
05-Feb-93	S-6	290	<0.5	<0.5	<0.5	0.7
03-Jun-93	S-6	100	1.2	<0.5	<0.5	<0.5
15-Sep-93	S-6	160	1.4	<0.5	0.9	2.0
13-Oct-88	S-7	<50	0.6	1	<1	<3
31-Jan-89	S-7	<50	<0.5	<1	<1	<3
07-Mar-89	S-7	<50	<0.5	<1	<1	<3
26-Jun-89	S-7	<50	<0.5	<1	<1	<3
08-Sep-89	S-7	<50	<0.5	<1	<1	<3
15-Dec-89	S-7	<50	<0.5	<0.5	<0.5	<1
06-Mar-90	S-7	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-7	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-7	<50	<0.5	0.6	<0.5	0.9
18-Dec-90	S-7	<50	0.5	<0.5	<0.5	0.8
20-Mar-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
26-Jun-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-7	<50	<0.5	0.6	<0.5	<0.5
13-Dec-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-7	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-7	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-7	<50	0.6	0.6	<0.5	<0.5
11-Dec-92	S-7	<50	<0.5	<0.5	<0.5	<0.5
05-Feb-93	S-7	<50	<0.5	<0.5	<0.5	<0.5
03-Jun-93	S-7	<50	<0.5	<0.5	<0.5	<0.5
15-Sep-93	S-7	Not	Analyzed			
07-Mar-89	S-8	<50	1.2	1	<1	<3
26-Jun-89	S-8	<50	0.8	1	<1	<3
08-Sep-89	S-8	<50	<0.5	<1	<1	<3
14-Dec-89	S-8	<50	<0.5	<0.5	<0.5	<1
05-Mar-90	S-8	<50	<0.5	0.5	<0.5	<1
14-Jun-90	S-8	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-8	<50	<0.5	<0.5	<0.5	<0.5
18-Dec-90	S-8	<50	2.9	7	1	6.4
20-Mar-91	S-8	50*	0.8	1.6	2.6	5.2

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
26-Jun-91	S-8	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-8	<50	<0.5	<0.5	<0.5	<0.5
13-Dec-91	S-8	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-8	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-8	<50	1.4	1.9	<0.5	<0.5
17-Sep-92	S-8	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-8	<50	<0.5	<0.5	<0.5	<0.5
04-Feb-93	S-8	<50	<0.5	<0.5	<0.5	<0.5
03-Jun-93	S-8	<50	<0.5	<0.5	<0.5	<0.5
15-Sep-93	S-8	Not	Analyzed			
07-Mar-89	S-9	<50	<0.5	<1	<1	<3
26-Jun-89	S-9	<50	<0.5	<1	<1	<3
08-Sep-89	S-9	<50	1.7	2	<1	<3
15-Dec-89	S-9	<50	0.5	<0.5	<0.5	<1
06-Mar-90	S-9	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-9	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-9	<50	<0.5	<0.5	<0.5	<0.5
18-Dec-90	S-9	<50	20	27	7.1	35
20-Mar-91	S-9	70*	0.7	0.7	<0.5	1
26-Jun-91	S-9	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-9	<50	<0.5	0.8	<0.5	<0.5
13-Dec-91	S-9	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-9	<30	<0.3	<0.3	<0.3	<0.3
16-Jun-92	S-9	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-9	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-9	<50	<0.5	<0.5	<0.5	<0.5
04-Feb-93	S-9	<50	<0.5	<0.5	<0.5	<0.5
03-Jun-93	S-9	<50	<0.5	<0.5	<0.5	<0.5
15-Sep-93	S-9	Not	Analyzed			
11-Aug-89	S-10	<50	<0.5	<1	<1	<3
08-Sep-89	S-10	<50	<0.5	<1	<1	<3
15-Dec-89	S-10	<50	<0.5	<0.5	<0.5	<1
06-Mar-90	S-10	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-10	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-10	<50	<0.5	<0.5	<0.5	1
18-Dec-90	S-10	<50	<0.5	<0.5	<0.5	1.4

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
20-Mar-91	S-10	<50	<0.5	<0.5	<0.5	<0.5
26-Jun-91	S-10	50	1.8	5.8	1.9	13
05-Sep-91	S-10	<50	<0.5	<0.5	<0.5	<0.5
13-Dec-91	S-10	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-10	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-10	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-10	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-10	<50	<0.5	<0.5	<0.5	<0.5
05-Feb-93	S-10	<50	<0.5	<0.5	<0.5	<0.5
03-Jun-93	S-10	<50	<0.5	<0.5	<0.5	<0.5
15-Sep-93	S-10	Not	Analyzed			
11-Oct-89	SR-1	200	100	<1	10	10
14-Dec-89	SR-1	500	210	<0.5	16	16
05-Mar-90	SR-1	64	20	<0.5	1.5	4
14-Jun-90	SR-1	60	17	<0.5	1.9	1
02-Oct-90	SR-1	<50	5	<0.5	<0.5	<0.5
18-Dec-90	SR-1	<50	28	5.5	4.5	4.5
20-Mar-91	SR-1	<50*	4.2	<0.5	1.4	0.5
26-Jun-91	SR-1	<50	5	<0.5	0.5	<0.5
05-Sep-91	SR-1	<50	8.6	<0.5	0.7	<0.5
13-Dec-91	SR-1	70	9.4	7.1	6.6	22
11-Mar-92	SR-1	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	SR-1	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	SR-1	51	1.4	<0.5	<0.5	<0.5
11-Oct-89	SR-2	880	<10	1	29	33
14-Dec-89	SR-2	1,100	17	<0.5	100	67
05-Mar-90	SR-2	140	3	<0.5	12	7
14-Jun-90	SR-2	<50	<0.5	<0.5	2.6	<1
02-Oct-90	SR-2	<50	<0.5	<0.5	0.5	<0.5
18-Dec-90	SR-2	<50	1.6	1.4	1.6	2.7
20-Mar-91	SR-2	90	1.3	<0.5	6.1	1.4
26-Jun-91	SR-2	<50	0.6	<0.5	1.7	<0.5
05-Sep-91	SR-2	<50	1.2	<0.5	1.2	<0.5
13-Dec-91	SR-2	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	SR-2	<30	0.5	<0.3	<0.3	<0.3
15-Jun-92	SR-2	120	6	1	0.7	2.1

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

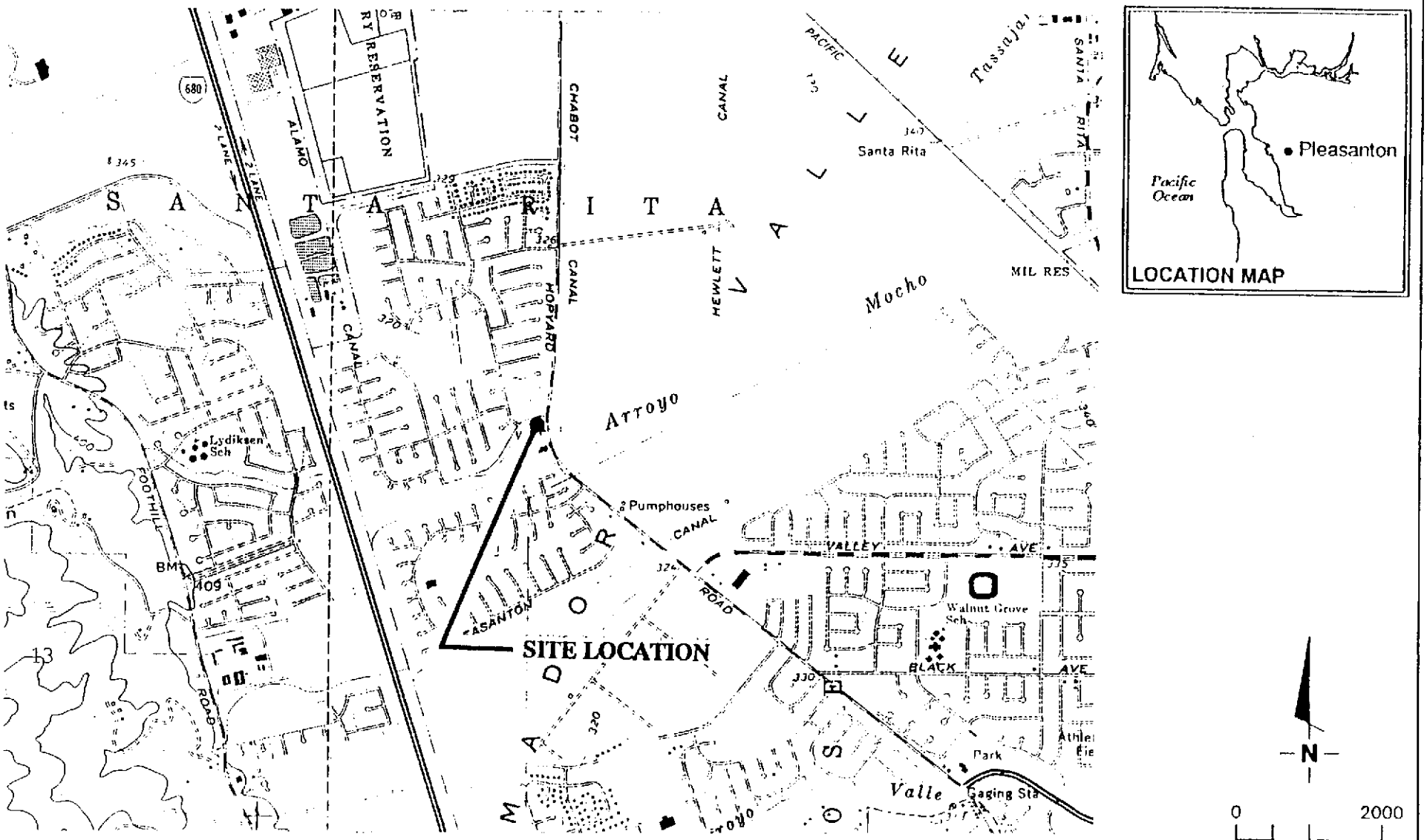
Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
17-Sep-92	SR-2	140	8.3	0.6	0.9	0.7
11-Oct-89	SR-3	500	92	10	43	100
14-Dec-89	SR-3	2,400	310	27	170	340
05-Mar-90	SR-3	70	15	0.8	5.8	10
14-Jun-90	SR-3	470	59	2.3	35	50
02-Oct-90	SR-3	1,700	91	6.2	7	100
18-Dec-90	SR-3	140	10	0.8	7.5	14
20-Mar-91	SR-3	1,350	970	3.6	64	79
26-Jun-91	SR-3	240	48	15	20	N/A
26-Jun-91	SR-3	240	48	4.2	15	20
05-Sep-91	SR-3	160	19	<0.5	6	5.9
13-Dec-91	SR-3	50	13	<0.5	3.1	4.7
11-Mar-92	SR-3	410	28	1.6	22	24
16-Jun-92	SR-3	600	55	2.1	2.8	33
17-Sep-92	SR-3	210	25	1.8	17	20

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPB = Parts Per Billion

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

Notes:

1. All data shown as <x are reported as ND (none detected).
2. Wells SR-1, SR-2, and SR-3 were monitored only subsequent to the September 17, 1992 sampling.
3. S-3 and S-7 through S-10 were sampled by Blaine but not analyzed by Anametrix.



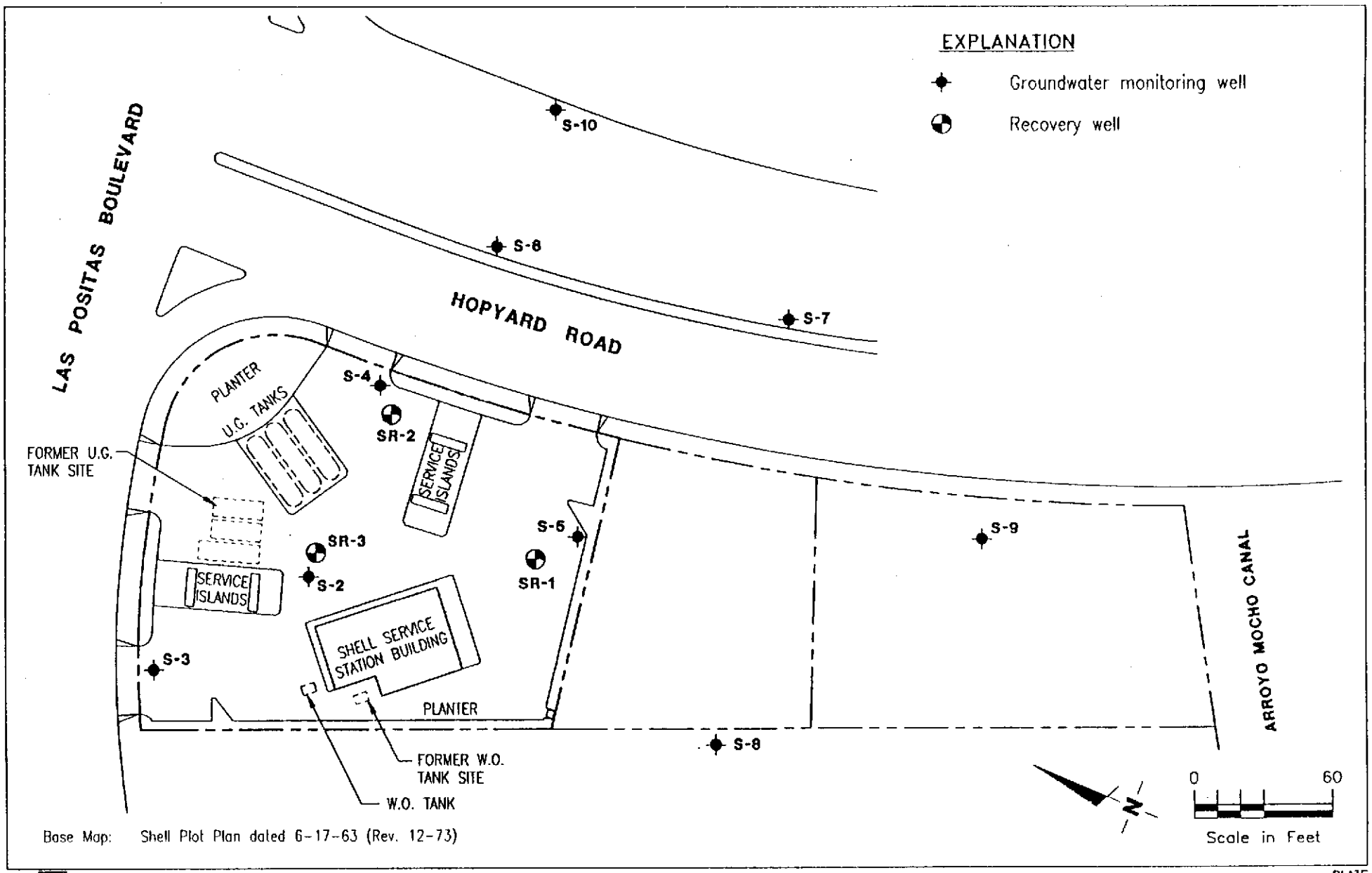
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **1**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7632		2/91	



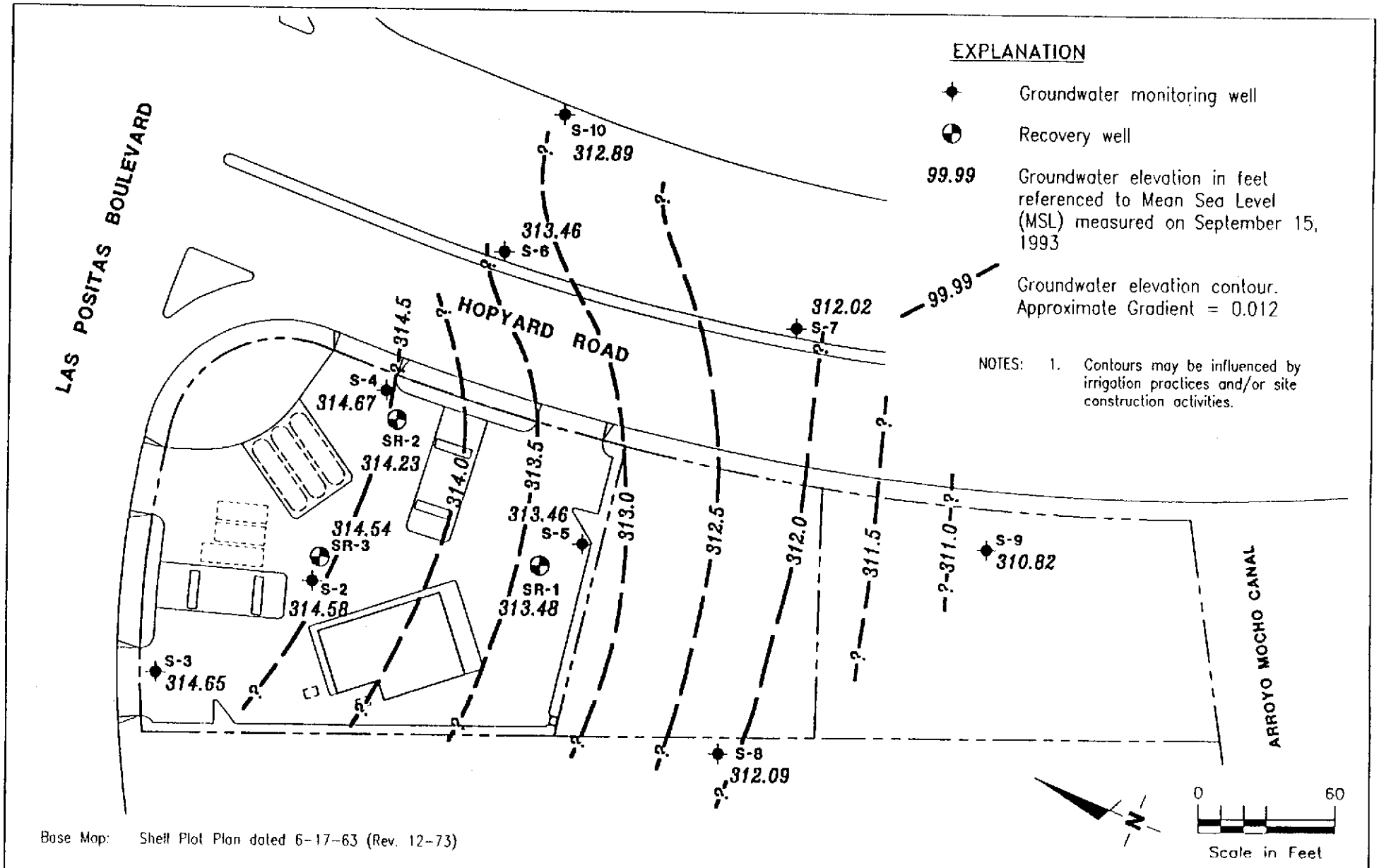
Base Map: Shell Plot Plan dated 6-17-63 (Rev. 12-73)

GeoStrategies Inc.

SITE PLAN
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7632		9/93	

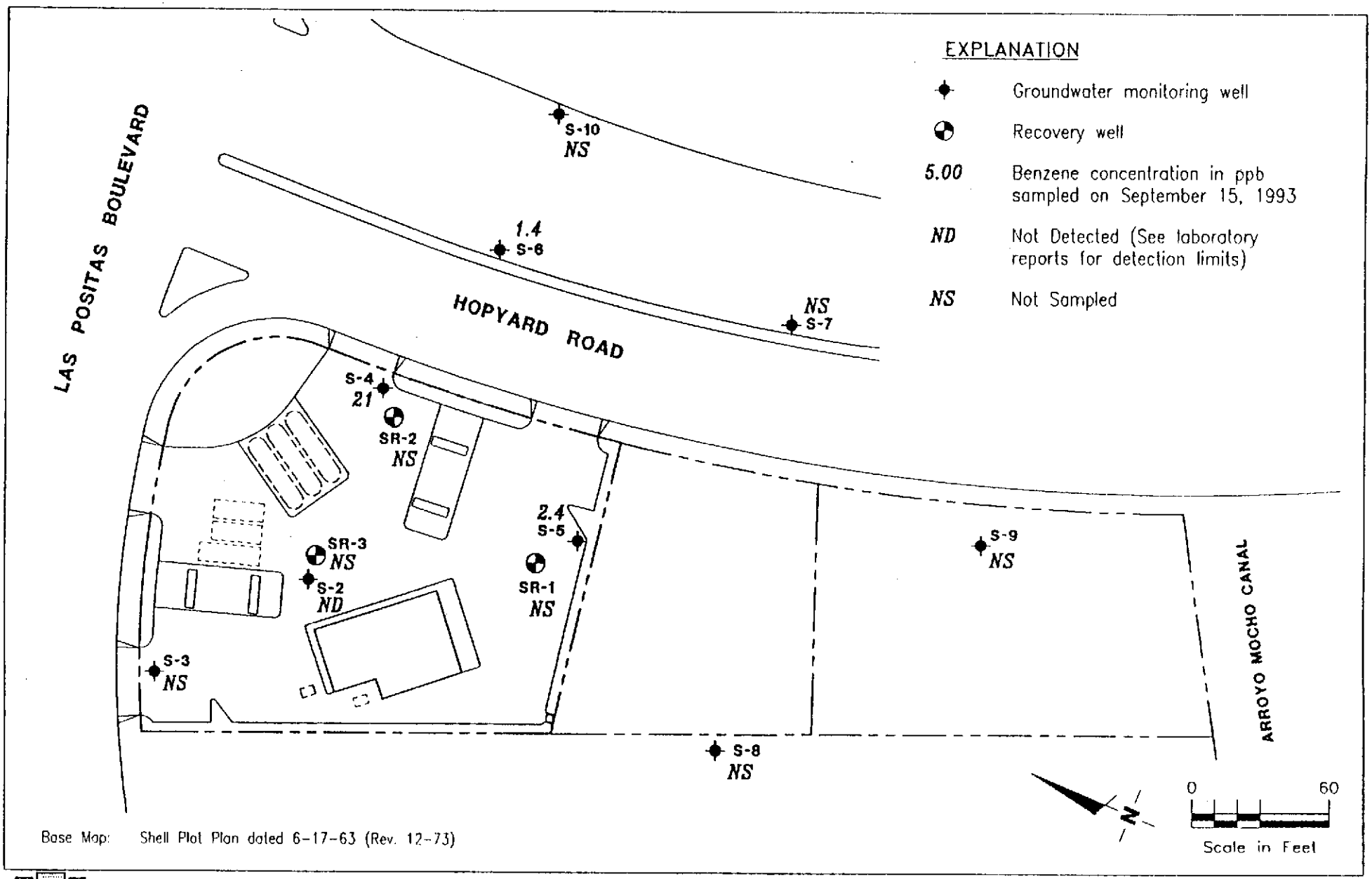


GeoStrategies Inc.

POTENTIOMETRIC MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **3**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-19		10/93	



GeoStrategies Inc.

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

PLATE
4

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-19		10/93	

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE CA 95133
(408) 995-5535
FAX (408) 293-8773

October 4, 1993

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Daniel T. Kirk

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

QUARTER:
3rd quarter of 1993

QUARTERLY GROUNDWATER SAMPLING REPORT 930915-N-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in reponse to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be removed in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to Anametrix, Inc. in San Jose, California. Anametrix, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1234.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/lpn

attachments: table of well gauging data
chain of custody
certified analytical report

cc: Hydro Environmental Technologies, Inc.
2363 Mariner Square Drive, Suite 243
Alameda, CA 94501
ATTN: Markus Niebanck

9309234 (18) 21:20 MB

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 930915.N.1

Date: 9/15/93
Page 1 of 2

Site Address: 3790 Hopyard Rd., Pleasanton
WIC#: 204-6130-0501 g gm 9-22-93

Shell Engineer: Dan Kirk — Phone No.: (510) 675-6168 Fax #: 675-6160

Consultant Name & Address: Blaine Tech Services, Inc. 985 Timothy Drive San Jose, CA 95133

Consultant Contact: Jim Keller — Phone No.: (408) 995-5535 Fax #: 293-8773

Comments:

Sampled by: [signature]

Printed Name: NATE OVERMEYER

LAB: Anametrix

CHECK ONE (1) BOX ONLY: Quarterly Monitoring (8411) ☒; Site Investigation (8411) ☐; Soil Closure/Disposal (8413) ☐; Water Closure/Disposal (8413) ☐; Soil/Air Rem. or Sys. O & M (8412) ☐; Water Rem. or Sys. O & M (8413) ☐; Other ☐

TURN AROUND TIME: 24 hours ☐; 48 hours ☐; 10 days ☒ (Normal); Other ☐ _____

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

Analysis Required: TPH (EPA 8015 Mod. Gas); TPH (EPA 8015 Mod. Diesel); BTEX (EPA 8020/602); Volatile Organics (EPA 8240); Test for Disposal; Combination TPH 8015 & BTEX 8020; Asbestos; Container Size; Preparation Used; Composite Y/N

	Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1	S-2	9/14/93			X		3	X	NO	40 ML	HCL	N	GW	
2	S-3	"						X						HOLD
3	S-4	9/14/93						X						
4	S-5	9/15/93						X						
5	S-6							X						
6	S-7							X						HOLD
7	S-8							X						HOLD
8	DUP.	↓			↓		↓	X	↓	↓	↓	↓		

Relinquished By (Signature): [signature]	Printed Name: NATE OVERMEYER	Date: 9-17-93 Time: 5:15	Received (Signature): [signature]	Printed Name: JENNIFER MILLER	Date: 9-17-93 Time: 17:45
Relinquished By (Signature): [signature]	Printed Name: JENNIFER J. MILLER	Date: 9-17-93 Time: 18:20	Received (Signature): [signature]	Printed Name: Maria Burgos	Date: 9/17/93 Time: 18:20
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

9309234

(18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 930915.N1

Date: 9/15/93
Page 2 of 2

Site Address: 3790 Hopyard Rd., Pleasanton

WIC#: 204-6138-0501
8 gm 9-22-93

Shell Engineer: Dan Kirk
Phone No.: (510) 675-6168
Fax #: 675-6160

Consultant Name & Address: Blaine Tech Services, Inc.
985 Timothy Drive San Jose, CA 95133

Consultant Contact: Jim Keller
Phone No.: (408) 995-5535
Fax #: 293-8773

Comments:

Sampled by: Nate Overmeyer

Printed Name: NATE OVERMEYER

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)	Total Lead Disposal	Combination TPH 8015 & BTEX 8020			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(9) S.9	9/15/93			X		3						X			NO	40 ml	HCl	N	GW	HOLD
(10) S.10	"			"		"						X			"	"	"	"	"	HOLD
(11) EB	"			"		"						X			"	"	"	"	DI H_2O	
(12) TB	"			"		2						X			"	"	"	"	TRIP BLANK	

CHECK ONE (1) BOX ONLY — CT/DI

- Quarterly Monitoring ☒ $441
- Site Investigation ☐ $441
- Soil Clean/Disposal ☐ $443
- Water Clean/Disposal ☐ $443
- Soil/Air Rem. or Sys. O & M ☐ $463
- Water Rem. or Sys. O & M ☐ $463
- Other ☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 15 days ☒ (Normal)
- Other ☐ ___

NOTE: Notify lab at least 24/48 hrs. TAT.

Relinquished By (Signature)	Printed Name	Date / Time	Received (Signature)	Printed Name	Date / Time
Nate Overmeyer	NATE OVERMEYER	9-17-93 2:45	Jennifer J. Miller	JENNIFER MILLER	9-17-93 17:45
Jennifer J. Miller	JENNIFER J. MILLER	9-17-93 18:20	Maria Lang	Maria Lang	9/17/93 18:20
Relinquished By (Signature)	Printed Name	Date / Time	Received (Signature)	Printed Name	Date / Time

THE LABORATORY MUST PROVIDE A COPY OF THE [illegible] WITH INVOICE AND REPORT

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-2	9/15/93	TOB	ODOR	NONE	--	--	14.63	35.32
S-3	9/15/93	TOB	--	NONE	--	--	13.02	35.35
S-4	9/15/93	TOB	ODOR	NONE	--	--	13.86	36.25
S-5 *	9/15/93	TOB	ODOR	NONE	--	--	16.20	36.16
S-6	9/15/93	TOB	--	NONE	--	--	14.16	35.01
S-7	9/15/93	TOB	--	NONE	--	--	16.65	35.20
S-8	9/15/93	TOB	--	NONE	--	--	14.91	34.66
S-9	9/15/93	TOB	--	NONE	--	--	17.42	35.06
S-10	9/15/93	TOB	--	NONE	--	--	13.66	34.56
SR-1	9/15/93	TOB	--	NONE	--	--	16.30	35.31
SR-2	9/15/93	TOB	--	NONE	--	--	14.12	35.45
SR-3	9/15/93	TOB	ODOR	NONE	--	--	14.57	35.23

* Sample DUP was a duplicate sample taken from well S-5.

Inchcape Testing Services
Anametrix Laboratories

1961 Concourse Drive
Suite E
San Jose, CA 95131
Tel: 408-432-8192
Fax: 408-432-8198

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9309234
Date Received : 09/17/93
Project ID : 204-6138-0501
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9309234- 1	S-2
9309234- 2	S-3
9309234- 3	S-4
9309234- 4	S-5
9309234- 5	S-6
9309234- 6	S-7
9309234- 7	S-8
9309234- 8	DUP
9309234- 9	S-9
9309234-10	S-10
9309234-11	EB
9309234-12	TB

This report consists of 8 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.

Corinne Ham for
Sarah Schoen, Ph.D.
Laboratory Director

09/29/93
Date

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

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9309234
Date Received : 09/17/93
Project ID : 204-6138-0501
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9309234- 1	S-2	WATER	09/15/93	TPHgBTEX
9309234- 3	S-4	WATER	09/16/93	TPHgBTEX
9309234- 4	S-5	WATER	09/15/93	TPHgBTEX
9309234- 5	S-6	WATER	09/15/93	TPHgBTEX
9309234- 8	DUP	WATER	09/15/93	TPHgBTEX
9309234-11	EB	WATER	09/15/93	TPHgBTEX
9309234-12	TB	WATER	09/15/93	TPHgBTEX

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

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9309234
Date Received : 09/17/93
Project ID : 204-6138-0501
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 9/25/93
Department Supervisor Date

Charlotte Bruck 9.28.93
Chemist Date

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

Anametrix W.O.: 9309234
Matrix : WATER
Date Sampled : 09/15 & 16/93

Project Number : 204-6138-0501
Date Released : 09/28/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# S-2 -01	Sample I.D.# S-4 -03	Sample I.D.# S-5 -04	Sample I.D.# S-6 -05	Sample I.D.# DUP -08
Benzene	0.5	ND	21	2.4	1.4	2.9
Toluene	0.5	ND	ND	0.5	ND	0.6
Ethylbenzene	0.5	ND	110	1.4	0.9	1.5
Total Xylenes	0.5	ND	91	2.9	2.0	3.4
TPH as Gasoline	50	ND	700	80	160	80
% Surrogate Recovery		103%	116%	107%	105%	119%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		09/22/93	09/24/93	09/22/93	09/22/93	09/22/93
RLMF		1	2	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 61-139%.

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

Charlotte Bench 9-28-93
Analyst Date

Cheryl Balmer 9/28/93
Supervisor Date

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

Anametrix W.O.: 9309234
Matrix : WATER
Date Sampled : 09/15/93

Project Number : 204-6138-0501
Date Released : 09/28/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# EB -11	Sample I.D.# TB -12	Sample I.D.# BS2101E2 BLANK	Sample I.D.# BS2201E2 BLANK	Sample I.D.# BS2402E2 BLANK
Benzene	0.5	ND	ND	ND	ND	ND
Toluene	0.5	ND	ND	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND	ND	ND
% Surrogate Recovery		126%	107%	106%	107%	100%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		09/23/93	09/23/93	09/21/93	09/22/93	09/24/93
RLMF		1	1	1	1	1

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

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

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

Charlotte Bench 9.28.93
Analyst Date

Cheryl Balmer 9/28/93
Supervisor Date

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

Sample I.D. : 204-6138-0501 DUP
Matrix : WATER
Date Sampled : 09/15/93
Date Analyzed : 09/22/93

Anametrix I.D. : 09234-08
Analyst : CMB
Supervisor : CS
Date Released : 09/28/93
Instrument ID : HP21

COMPOUND	SPIKE AMT (ug/L)	SAMPLE AMT (ug/L)	REC MS (ug/L)	% REC MS	REC MD (ug/L)	% REC MD	RPD	% REC LIMITS
GASOLINE	500	80	580	100%	580	100%	0%	48-149
P-BFB				112%		116%		61-139

* 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 : 09/22/93

Anametrix I.D. : MS2202E1
Analyst : AMB
Supervisor : CB
Date Released : 09/28/93
Instrument I.D.: HP21

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	500	400	80%	67-127
SURROGATE			128%	61-139

* Quality control established by Anametrix, Inc.

BTEX LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MS2101E3
Matrix	: WATER	Analyst	: CmB
Date Sampled	: N/A	Supervisor	:
Date Analyzed	: 09/21/93	Date Released	: 09/28/93
		Instrument ID	: HP21

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	15.8	79%	52-133
Toluene	20.0	17.0	85%	57-136
Ethylbenzene	20.0	17.2	86%	56-139
TOTAL Xylenes	20.0	17.8	89%	56-141
P-BFB			111%	61-139

* Limits established by Anametrix, Inc.

BTEX LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MS2401E3
Matrix	: WATER	Analyst	: GMB
Date Sampled	: N/A	Supervisor	: CS
Date Analyzed	: 09/24/93	Date Released	: 09/28/93
		Instrument ID	: HP21

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	14.4	72%	52-133
Toluene	20.0	15.6	78%	57-136
Ethylbenzene	20.0	15.7	78%	56-139
TOTAL Xylenes	20.0	16.4	82%	56-141
P-BFB			116%	61-139

* Limits established by Anametrix, Inc.

WIC #

204-6138-0501

WELL GAUGING DATA

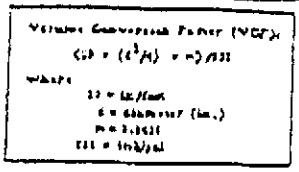
Project # 930915.N.1 Date 9/15/93 Client SOC

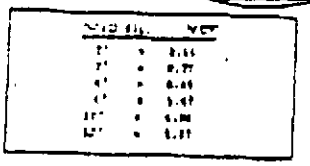
Site 3760 HOPYARD, PLEASANTON

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immisible Liquid (feet)	Thickness of Immisible Liquid (ft.)	Volume of Immisibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
S-2	3	SLIGHT ODOR				14.63	35.32	TOB
S-3	3	—				13.02	35.35	
S-4	3	SLIGHT ODOR				13.86	36.25	
S-5	3	ODOR				16.20	36.16	
S-6	3	—				14.16	35.01	
S-7	3	—				16.65	35.20	
S-8	3	—				14.91	34.66	
S-9	3	—				17.42	35.06	
S-10	3	—				13.66	34.56	
SR-1	4	—				16.30	35.31	
SR-2	4	—				14.12	35.45	
SR-3	4	NON FUEL ODOR				14.57	35.23	

WELL MONITORING DATA SHEET

Project #: 930915.N.1	Client: SOC
Sampler: (N)	Date Sampled: 9.15.93
Well I.D.: S.2	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 35.32 After	Depth to Water: Before 14.63 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





7.65 (1 Case Volume) x 3 (Specified Volumes) = 22.96 Gallons

Purging: Bailer ☐
Middleburg ☐
Electric Submersible ☑
Suction Pump ☐
Type of Installed Pump ___

Sampling: Bailer ☑
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1627	69.6	7.2	3300	25.8	7.5	
1631	70.2	6.8	3300	48.7	15	
1634	70.0	6.8	3300	37.3	23	

Did Well Dewater? NO If yes, gals. ___ Gallons Actually Evacuated: 23

Sampling Time: 1640

Sample I.D.: S.2 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

WELL MONITORING DATA SHEET

Project #: 930915.N.1 Client: SOC

Sampler: (N) Date Sampled: 9.15.93

Well I.D.: S.3 Well Diameter: (circle one) 2 (3) 4 6 ____

Total Well Depth: Before 35.35 After

Depth to Water: Before 13.02 After

Depth to Free Product:

Thickness of Free Product (feet):

Measurements referenced to: PVC (Grade) Other --

Volume Conversion Factor (VCF): [illegible]

Well dia.		VCF
[illegible]	=	[illegible]

8.26 x 3 = 24.78

1 Case Volume × Specified Volumes = gallons

Purging: Bailer ☐
Middleburg ☐
Electric Submersible ☐ [checked]
Suction Pump ☐
Type of Installed Pump ________

Sampling: Bailer ☐ [checked]
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1604	69.4	6.7	3500	21.0	8	
1607	69.6	6.7	3500	16.50	16	
1610	69.4	6.6	3600	13.97	25	

Did Well Dewater? NO If yes, gals. ____ Gallons Actually Evacuated: 25

Sampling Time: 1615

Sample I.D.: S-3 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: Cleaning Blank I.D.:

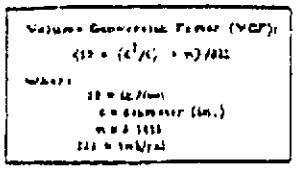
Analyzed for:

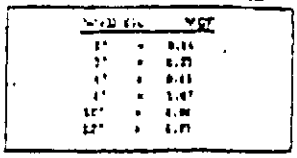
Shipping Notations:

Additional Notations:

WELL MONITORING DATA SHEET

Project #: 930915 N.1	Client: SOC
Sampler: (N)	Date Sampled: 9.16.93
Well I.D.: S.4	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 36.25 After	Depth to Water: Before 13.86 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





8.28	x	3	=	24.85
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☑ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☑ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1655	69.4	6.8	2100	> 200	8	
1658					12	DEWATERED
9/16 1000	Return	to	Sample	BTW.	13.70	
1002	68.6	7.6	3100	36		

Did Well Dewater? YES If yes, gals. 12 Gallons Actually Evacuated: 12

Sampling Time: 1002

Sample I.D.: S.4 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: Cleaning Blank I.D.:

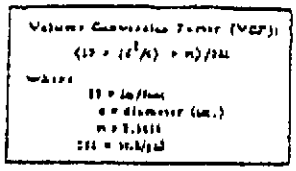
Analyzed for:

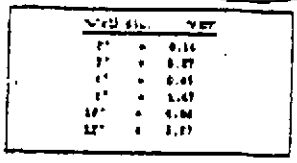
Shipping Notations:

Additional Notations:

WELL MONITORING DATA SHEET

Project #: 930915.N.1	Client: SOC
Sampler: (N)	Date Sampled: 9.15.93
Well I.D.: S.5	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 36.16 After	Depth to Water: Before 16.20 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





1 Case Volume	x	Specified Volumes	=	gallons
7.38	x	3	=	22.15

Purging: Bailer ☐
Middleburg ☐
Electric Submersible ☑
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☑
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1711	69.0	6.5	1900	23.4	7	
1715	69.6	6.5	1900	17.51	15	
1719	69.8	6.5	2000	15.47	22.5	

Did Well Dewater? N If yes, gals. _____ Gallons Actually Evacuated: 22.5

Sampling Time: 1725

Sample I.D.: S.5 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: DUP. Cleaning Blank I.D.:

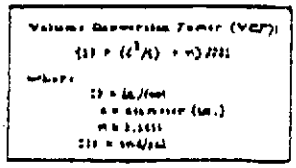
Analyzed for: SAME

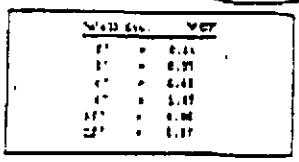
Shipping Notations:

Additional Notations:

WELL MONITORING DATA SHEET

Project #: 930915.N.1	Client: SOC
Sampler: (N) /Tom	Date Sampled: 9.15.93
Well I.D.: S.6	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 35.01 After	Depth to Water: Before 14.16 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





7.71	x	3	=	23.14
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☐
Middleburg ☑
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☑
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1650	68.1	7.4	1100	120.4	7.5	
1658	67.8	7.4	1100	76.1	15	
1705	68.2	7.2	1100	104.5	24	

Did Well Dewater? n.a. If yes, gals. Gallons Actually Evacuated: 24

Sampling Time: 1710

Sample I.D.: S-6 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: Cleaning Blank I.D.:

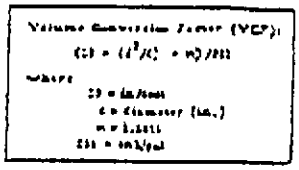
Analyzed for:

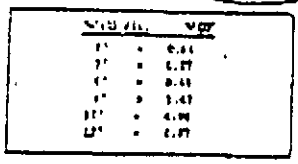
Shipping Notations:

Additional Notations:

WELL MONITORING DATA SHEET

Project #: 930915.N.1	Client: SOC
Sampler: (N)	Date Sampled: 9.15.93
Well I.D.: S.7	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 35.20 After	Depth to Water: Before 16.65 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





6.86	x	3	=	20.59
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☐
Middleburg ☐
Electric Submersible ☑
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☑
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1506	69.0	7.0	2600	>200	7	
1509	68.8	6.7	2700	>200	14	
1512	68.4	6.6	2800	>200	21	

Did Well Dewater? N If yes, gals. ___ Gallons Actually Evacuated: 21

Sampling Time: 1515

Sample I.D.: S.7 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: Cleaning Blank I.D.: EB @ 1514

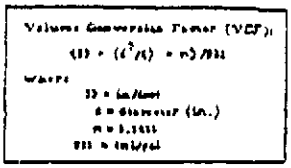
Analyzed for:

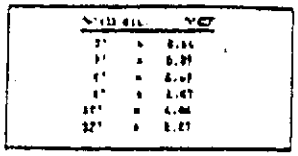
Shipping Notations:

Additional Notations:

WELL MONITORING DATA SHEET

Project #: 930915.N.1	Client: SOC
Sampler: (N)	Date Sampled: 9.15.93
Well I.D.: S.8	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 34.66 After	Depth to Water: Before 14.91 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





7.30	x	3	=	21.92
1 Case Volume		Specified Volumes		Gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☑ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☑ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1414	74.2	8.4	3400	>200	7	
1420					12 -	DEWATERED
1715	73.9	8.2	3100	>200	SAMPLE	

Did Well Dewater? YES If yes, gals. 12 Gallons Actually Evacuated: 12

Sampling Time: 1719

Sample I.D.: S-8 Laboratory: (A)

Analyzed for: TPH (GAS) BTEX

Duplicate I.D.: Cleaning Blank I.D.:

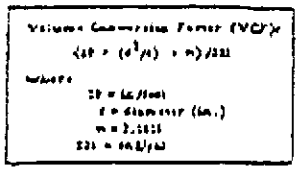
Analyzed for:

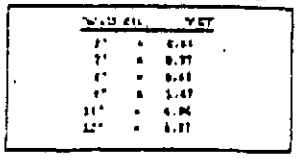
Shipping Notations:

Additional Notations: DTW AT SAMPLE TIME - 14.90

WELL MONITORING DATA SHEET

Project #: 930915.N.1	Client: SOC
Sampler: (N)	Date Sampled: 9.15.93
Well I.D.: S.9	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 35.06 After	Depth to Water: Before 17.42 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





1 Case Volume	x Specified Volumes	= gallons
6.52	3	19.58

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☑ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☑ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1434	69.2	6.7	3500	> 200	6	
1438	68.8	6.7	3500	> 200	13	
1440	69.2	6.7	3500	> 200	20	

Did Well Dewater? N If yes, gals. ___ Gallons Actually Evacuated: 20

Sampling Time: 1445

Sample I.D.: S.9 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: Cleaning Blank I.D.:

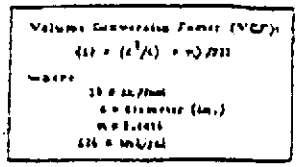
Analyzed for:

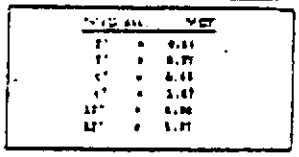
Shipping Notations:

Additional Notations: WELL SAMPLED JUST PRIOR TO EB

WELL MONITORING DATA SHEET

Project #: 930915.N.1	Client: SOC
Sampler: (N)	Date Sampled: 9.15.93
Well I.D.: S.10	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 34.56 After	Depth to Water: Before 13.66 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





7.73	x	3	$23.19
1 Case Volume		Specified Volumes	= gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☑ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☑ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1537	66.8	7.6	1700	>200	8	
1546	67.4	7.1	1700	>200	16	
1544	67.8	7.0	1800	>200	24	

Did Well Dewater? N If yes, gals. ___ Gallons Actually Evacuated: 24

Sampling Time: 1550

Sample I.D.: S.10 Laboratory: (A)

Analyzed for: TPH (GAS) BTXE

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations: