EMCON
1433 North Market Boulevard • Sacramento, California 95834-1943 • (916) 928-3300 • Fax (916) 928-3341

January 5, 1995
Project 0117-115.01

HAZARDOUS MATERIALS
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Mr. Lynn Walker
Shell Oil Company
P.O. Box 4023
Concord, California 94524

Re: Fourth Quarter 1994 Groundwater Monitoring Report for Shell Oil Company (Shell) Service Station, 15275 Washington, San Leandro, California (WIC No. 204-6852-1008)

Dear Mr. Walker:

This letter presents the results of the fourth quarter 1994 monitoring performed by Blaine Tech Services, Inc., (Blaine) at and near the Shell service station located at 15275 Washington in San Leandro, California (see Figure 1). The monitoring activities were performed consistent with regulatory requirements for quarterly monitoring and reporting.

Groundwater samples were collected from monitoring wells S-1, S-3, S-5 through S-18, and SR-1 on October 28, 1994. Water levels were also measured in each of these wells. Samples were collected and water levels were measured consistent with the procedures described in Blaine's *Quarterly Groundwater Sampling Report 941028-M-1* presented in Attachment A.

BACKGROUND

In July 1985 four groundwater monitoring wells (S-1 through S-4) were installed by EMCON to assess soil and groundwater conditions beneath the site (see Figure 2). Total petroleum hydrocarbons as gasoline (TPHG) were detected in soil and groundwater samples, and well S-3 contained approximately 0.5 foot of floating product.

In August 1986 four soil borings (S-A through S-D) were drilled within the underground fuel tank complex prior to removal of the tanks. Boring S-A was drilled adjacent to the former waste oil tank, and boring S-B was converted to a temporary tank backfill monitoring well. TPHG was detected in soil samples from these borings; however, no waste oil was detected in the analyzed soil samples.

In June 1987 the underground fuel storage tanks were removed. The temporary tank backfill well S-B and monitoring wells S-2 and S-4 were destroyed during construction activities.

Between December 1986 and May 1991 fourteen groundwater monitoring wells (S-5 through S-18) and one recovery well (SR-1) were installed on and off site. The groundwater monitoring well network has been monitored quarterly since September 1988.

In October 1988 a soil-gas survey was conducted by Tracer Research Corporation at 15 off-site locations. Samples were collected south of the site along Lewelling Boulevard and on the adjacent property to the west. The highest soil vapor concentrations were detected south of the site along Lewelling Boulevard.

In March 1990 hydraulic testing was conducted. A variable discharge test was conducted using well SR-1, and slug tests were conducted in several wells. The hydraulic tests indicated low-yield conditions in the shallow aquifer.

At some time between July 23, 1993, and October 27, 1993, monitoring wells S-11 through S-15 were paved over by the city of San Leandro. On May 3, 1994, the wells were relocated and the vault boxes raised to match the new grade.

GROUNDWATER FLOW DIRECTION

Table 1 presents a summary of historical groundwater elevation data, including data for the fourth quarter of 1994. Based on water levels measured in wells S-1, S-3, S-5 through S-18, and SR-1 on October 28, 1994 (see Table 1), and top-of-casing elevations, the direction of groundwater flow at the site is generally toward the southeast (see Figure 2). This is consistent with the historical direction of groundwater flow.

SAMPLING FREQUENCY

Groundwater samples are collected quarterly from monitoring wells S-1, S-3, S-5, S-7 through S-10, S-12, S-15, S-16, S-18, and SR-1. Wells S-6, S-11, S-13, S-14, and S-17 are sampled semiannually during the second and fourth quarters. The samples are analyzed for TPHG; and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

1/4
1, 3, 5, 7, 8, 9, 10, 12, 15, 16, 18, SR-1

Semi
6, 11, 13, 14, 17

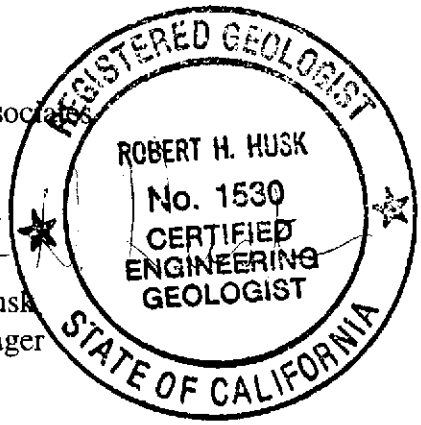
ANALYTICAL RESULTS

Table 2 presents a summary of historical groundwater analytical results, including analytical results for the fourth quarter 1994 monitoring event. Certified analytical reports are included in Attachment A. Figure 3 shows the concentrations of TPHG and BTEX at each monitoring location.

If you have any questions, please call

Sincerely,

EMCON Associates



Robert H. Husk
Project Manager
C.E.G. 1530

Charles S. Metzinger
Project Supervisor

Attachments:

Table 1	Summary of Historical Groundwater Elevation Data
Table 2	Summary of Historical Groundwater Analytical Results
Table 3	Proposed Sampling Frequency
Figure 1	Site Location Map
Figure 2	Groundwater Contour Map, October 28, 1994
Figure 3	TPHG and BTEX Concentration Map, October 28, 1994
Attachment A	*Quarterly Groundwater Sampling Report 941028-M-1*, Blaine Tech Services, Inc.

Cc: Juliette Shin, Alameda County Department of Environmental Health
Rich Hiett, Regional Water Quality Control Board, San Francisco Bay Region

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-1	11/22/88	21.55	8.01	NA	0.00	13.54
	08/10/89	21.55	7.93	NA	0.00	13.62
	10/10/89	21.55	8.09	NA	0.00	13.46
	01/25/90	21.55	7.73	NA	0.00	13.82
	04/18/90	21.55	7.91	NA	0.00	13.64
	07/23/90	21.55	7.72	NA	0.00	13.83
	10/18/90	21.55	8.55	NA	0.00	13.00
	01/28/91	21.55	8.52	NA	0.00	13.03
	04/25/91	21.55	7.18	NA	0.00	14.37
	07/09/91	21.55	8.22	NA	0.00	13.33
	10/08/91	21.55	8.70	NA	0.00	12.85
	02/05/91	21.55	8.14	NA	0.00	13.41
	04/28/92	21.55	7.52	NA	0.00	14.03
	07/27/92	21.55	8.28	NA	0.00	13.27
	10/26/92	21.55	8.74	NA	0.00	12.81
	01/13/93	21.55	5.91	NA	0.00	15.64
	04/16/93	21.55	6.66	NA	0.00	14.89
	07/23/93	21.55	7.53	NA	0.00	14.02
	10/27/93	21.55	8.20	NA	0.00	13.35
	01/27/94	21.55	7.26	NA	0.00	14.29
	05/05/94	21.27*	7.38	NA	0.00	13.89
	07/26/94	21.27	7.86	NA	0.00	13.41
	10/28/94	21.27	7.86	NA	0.00	13.41
S-3	11/22/88	21.14	7.76	NA	0.00	13.38
	08/10/89	21.14	7.92	NA	0.00	13.22
	10/10/89	21.14	8.00	NA	0.00	13.14
	01/25/90	21.14	7.54	NA	0.00	13.60
	04/18/90	21.14	7.74	NA	0.00	13.40
	07/23/90	21.14	7.55	NA	0.00	13.59
	10/18/90	21.14	8.47	NA	0.00	12.67
	01/28/91	21.14	8.38	NA	0.00	12.76
	04/25/91	21.14	6.91	NA	0.00	14.23
	07/09/91	21.14	8.07	NA	0.00	13.07
	10/08/91	21.14	8.61	NA	0.00	12.53
	02/05/91	21.14	7.80	NA	0.00	13.34
	04/28/92	21.14	7.27	NA	0.00	13.87
	07/27/92	21.14	8.10	NA	0.00	13.04
	10/26/92	21.14	8.62	NA	0.00	12.52
	01/13/93	21.14	5.16	NA	0.00	15.98
	04/16/93	21.14	7.18	NA	0.00	13.96
	07/23/93	21.14	7.34	NA	0.00	13.80
	10/27/93	21.14	8.03	NA	0.00	13.11
	01/27/94	21.14	6.79	NA	0.00	14.35
	05/05/94	20.48*	6.75	NA	0.00	13.73
	07/26/94	20.48	7.30	NA	0.00	13.18
	10/28/94	20.48	8.36	NA	0.00	12.12

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-5	08/10/89	21.41	8.28	NA	0.00	13.13
	10/10/89	21.41	8.32	NA	0.00	13.09
	01/25/90	21.41	8.20	NA	0.00	13.21
	04/18/90	21.41	8.32	NA	0.00	13.09
	07/23/90	21.41	8.03	NA	0.00	13.38
	10/18/90	21.41	9.03	NA	0.00	12.38
	01/28/91	21.41	8.80	NA	0.00	12.61
	04/25/91	21.41	7.40	NA	0.00	14.01
	07/09/91	21.41	8.52	NA	0.00	12.89
	10/08/91	21.41	9.00	NA	0.00	12.41
	02/05/92	21.41	8.11	NA	0.00	13.30
	04/28/92	21.41	7.70	NA	0.00	13.71
	07/27/92	21.41	8.52	NA	0.00	12.89
	10/26/92	21.41	9.02	NA	0.00	12.39
	01/13/93	21.41	5.22	NA	0.00	16.19
	04/16/93	21.41	7.04	NA	0.00	14.37
	07/23/93	21.41	7.75	NA	0.00	13.66
	10/27/93	21.41	8.49	NA	0.00	12.92
	01/27/94	21.41	7.04	NA	0.00	14.37
	05/05/94	21.03*	7.20	NA	0.00	13.83
	07/27/94	21.03	7.72	NA	0.00	13.31
	10/28/94	21.03	7.82	NA	0.00	13.21
S-6	11/22/88	22.02	8.58	NA	0.00	13.44
	08/10/89	22.02	8.54	NA	0.00	13.48
	10/10/89	22.02	8.58	NA	0.00	13.44
	01/25/90	22.02	8.31	NA	0.00	13.71
	04/18/90	22.02	8.43	NA	0.00	13.59
	07/23/90	22.02	8.24	NA	0.00	13.78
	10/18/90	22.02	9.20	NA	0.00	12.82
	01/28/91	22.02	9.10	NA	0.00	12.92
	04/25/91	22.02	7.74	NA	0.00	14.28
	07/09/91	22.02	8.81	NA	0.00	13.21
	10/08/91	22.02	9.26	NA	0.00	12.76
	02/05/92	22.02	8.47	NA	0.00	13.55
	04/28/92	22.02	7.91	NA	0.00	14.11
	07/27/92	22.02	8.83	NA	0.00	13.19
	10/26/92	22.02	9.29	NA	0.00	12.73
	01/13/93	22.02	9.43	NA	0.00	15.59
	04/16/93	22.02	7.12	NA	0.00	14.90
	07/23/93	22.02	8.14	NA	0.00	13.88
	10/27/93	22.02	8.75	NA	0.00	13.27
	01/27/94	22.02	7.87	NA	0.00	14.15
	05/05/94	21.40*	7.71	NA	0.00	13.69
	07/26/94	21.40	8.10	NA	0.00	13.30
	10/28/94	21.40	8.04	NA	0.00	13.36

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-7	11/22/88	21.47	8.24	NA	0.00	13.23
	08/10/89	21.47	8.18	NA	0.00	13.29
	10/10/89	21.47	8.35	NA	0.00	13.12
	01/25/90	21.47	7.95	NA	0.00	13.52
	04/18/90	21.47	8.06	NA	0.00	13.41
	07/23/90	21.47	7.89	NA	0.00	13.58
	10/18/90	21.47	8.83	NA	0.00	12.64
	01/28/91	21.47	8.77	NA	0.00	12.70
	04/25/91	21.47	7.25	NA	0.00	14.22
	07/09/91	21.47	8.41	NA	0.00	13.06
	10/08/91	21.47	8.95	NA	0.00	12.52
	02/05/92	21.47	8.04	NA	0.00	13.43
	04/28/92	21.47	7.45	NA	0.00	14.02
	07/27/92	21.47	8.48	NA	0.00	12.99
	10/26/92	21.47	9.95	NA	0.00	11.52
	01/13/93	21.47	5.84	NA	0.00	15.63
	04/16/93	21.47	6.38	NA	0.00	15.09
	07/23/93	21.47	7.72	NA	0.00	13.75
	10/27/93	21.47	7.79	NA	0.00	13.68
	01/27/94	21.47	7.85	NA	0.00	13.62
	05/05/94	20.85*	9.45	NA	0.00	11.40
	07/26/94	20.85	7.64	NA	0.00	13.21
	10/28/94	20.85	7.68	NA	0.00	13.17
S-8	11/22/88	20.72	7.76	NA	0.00	12.96
	08/10/89	20.72	7.79	NA	0.00	12.93
	10/10/89	20.72	7.84	NA	0.00	12.88
	01/25/90	20.72	7.47	NA	0.00	13.25
	04/18/90	20.72	7.59	NA	0.00	13.13
	07/23/90	20.72	7.49	NA	0.00	13.23
	10/18/90	20.72	8.44	NA	0.00	12.28
	01/28/91	20.72	8.28	NA	0.00	12.44
	04/25/91	20.72	6.72	NA	0.00	14.00
	07/09/91	20.72	7.98	NA	0.00	12.74
	10/08/91	20.72	8.55	NA	0.00	12.17
	02/05/91	20.72	7.50	NA	0.00	13.22
	04/28/92	20.72	7.14	NA	0.00	13.58
	07/27/92	20.72	8.06	NA	0.00	12.66
	10/26/92	20.72	8.58	NA	0.00	12.14
	01/13/93	20.72	5.32	NA	0.00	15.40
	04/16/93	20.72	5.76	NA	0.00	14.96
	07/23/93	20.72	7.29	NA	0.00	13.43
	10/27/93	20.72	7.93	NA	0.00	12.79
	01/27/94	20.72	6.31	NA	0.00	14.41
	05/05/94	20.32*	6.84	NA	0.00	13.48
	07/26/94	20.32	7.42	NA	0.00	12.90
	10/28/94	20.32	7.56	NA	0.00	12.76

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-9	11/22/88	20.96	7.78	NA	0.00	13.18
	08/10/89	20.96	7.82	NA	0.00	13.14
	10/10/89	20.96	7.87	NA	0.00	13.09
	01/25/90	20.96	7.41	NA	0.00	13.55
	04/18/90	20.96	7.65	NA	0.00	13.31
	07/23/90	20.96	7.58	NA	0.00	13.38
	10/18/90	20.96	8.46	NA	0.00	12.50
	01/28/91	20.96	8.29	NA	0.00	12.67
	04/25/91	20.96	6.09	NA	0.00	14.87
	07/09/91	20.96	7.82	NA	0.00	13.14
	10/08/91	20.96	8.55	NA	0.00	12.41
	02/05/91	20.96	6.96	NA	0.00	14.00
	04/28/92	20.96	6.76	NA	0.00	14.20
	07/27/92	20.96	8.10	NA	0.00	12.86
	10/26/92	20.96	8.53	NA	0.00	12.43
	01/13/93	20.96	6.80	NA	0.00	14.16
	04/16/93	20.96	6.28	NA	0.00	14.68
	07/23/93	20.96	7.26	NA	0.00	13.70
	10/27/93	20.96	8.00	NA	0.00	12.96
	01/27/94	20.96	5.96	NA	0.00	15.00
	05/05/94	20.68*	6.99	NA	0.00	13.69
	07/26/94	20.68	7.56	NA	0.00	13.12
	10/28/94	20.68	7.78	NA	0.00	12.90
S-10	11/22/88	20.69	7.91	NA	0.00	12.78
	08/10/89	20.69	7.94	NA	0.00	12.75
	10/10/89	20.69	7.99	NA	0.00	12.70
	01/25/90	20.69	7.56	NA	0.00	13.13
	04/18/90	20.69	7.71	NA	0.00	12.98
	07/23/90	20.69	7.64	NA	0.00	13.05
	10/18/90	20.69	8.58	NA	0.00	12.11
	01/28/91	20.69	8.35	NA	0.00	12.34
	04/25/91	20.69	6.91	NA	0.00	13.78
	07/09/91	20.69	8.14	NA	0.00	12.55
	10/08/91	20.69	8.70	NA	0.00	11.99
	02/05/91	20.69	7.57	NA	0.00	13.12
	04/28/92	20.69	7.20	NA	0.00	13.49
	07/27/92	20.69	8.17	NA	0.00	12.52
	10/26/92	20.69	8.68	NA	0.00	12.01
	01/13/93	20.69	3.78	NA	0.00	16.91
	04/16/93	20.69	6.46	NA	0.00	14.23
	07/23/93	20.69	7.38	NA	0.00	13.31
	10/27/93	20.69	8.09	NA	0.00	12.60
	01/27/94	20.69	5.81	NA	0.00	14.88
	05/05/94	20.15*	6.82	NA	0.00	13.33
	07/26/94	20.15	7.40	NA	0.00	12.75
	10/28/94	20.15	7.62	NA	0.00	12.53

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-11	11/22/88	21.26	8.62	NA	0.00	12.64
	08/10/89	21.26	8.65	NA	0.00	12.61
	10/10/89	21.26	8.64	NA	0.00	12.62
	01/25/90	21.26	8.43	NA	0.00	12.83
	04/18/90	21.26	8.42	NA	0.00	12.84
	07/23/90	21.26	8.23	NA	0.00	13.03
	10/18/90	21.26	9.20	NA	0.00	12.06
	01/28/91	21.26	9.13	NA	0.00	12.13
	04/25/91	21.26	7.53	NA	0.00	13.73
	07/09/91	21.26	8.85	NA	0.00	12.41
	10/08/91	21.26	9.34	NA	0.00	11.92
	02/05/91	21.26	8.50	NA	0.00	12.76
	04/28/92	21.26	7.80	NA	0.00	13.46
	07/27/92	21.26	8.80	NA	0.00	12.46
	10/26/92	21.26	9.42	NA	0.00	11.84
	01/13/93	21.26	6.52	NA	0.00	14.74
	04/16/93	21.26	6.86	NA	0.00	14.40
	07/23/93	21.26	8.07	NA	0.00	13.19
	10/27/93	21.26	NM	NM	NM	NM
	01/27/94	21.26	NM	NM	NM	NM
	05/05/94	21.24*	7.73	NA	0.00	13.51
	07/26/94	21.24	8.30	NA	0.00	12.94
	10/28/94	21.24	8.30	NA	0.00	12.94
S-12	08/10/89	21.05	8.32	NA	0.00	12.73
	10/10/89	21.05	8.32	NA	0.00	12.73
	01/25/90	21.05	8.18	NA	0.00	12.87
	04/18/90	21.05	8.05	NA	0.00	13.00
	07/23/90	21.05	7.92	NA	0.00	13.13
	10/18/90	21.05	8.90	NA	0.00	12.15
	01/28/91	21.05	8.54	NA	0.00	12.51
	04/25/91	21.05	7.08	NA	0.00	13.97
	07/09/91	21.05	8.42	NA	0.00	12.63
	10/08/91	21.05	8.80	NA	0.00	12.25
	02/05/92	21.05	8.07	NA	0.00	12.98
	04/28/92	21.05	8.33	NA	0.00	12.72
	07/27/92	21.05	8.55	NA	0.00	12.50
	10/26/92	21.05	9.03	NA	0.00	12.02
	01/13/93	21.05	6.38	NA	0.00	14.67
	04/16/93	21.05	6.56	NA	0.00	14.49
	07/23/93	21.05	7.76	NA	0.00	13.29
	10/27/93	21.05	NM	NM	NM	NM
	01/27/94	21.05	NM	NM	NM	NM
	05/05/94	20.71*	7.49	NA	0.00	13.22
	07/26/94	20.71	7.92	NA	0.00	12.79
	10/28/94	20.71	7.78	NA	0.00	12.93

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-13	08/10/89	20.57	8.00	NA	0.00	12.57
	10/10/89	20.57	7.95	NA	0.00	12.62
	01/25/90	20.57	7.79	NA	0.00	12.78
	04/18/90	20.57	7.73	NA	0.00	12.84
	07/23/90	20.57	7.63	NA	0.00	12.94
	10/18/90	20.57	8.58	NA	0.00	11.99
	01/28/91	20.57	8.39	NA	0.00	12.18
	04/25/91	20.57	7.00	NA	0.00	13.57
	07/09/91	20.57	8.12	NA	0.00	12.45
	10/08/91	20.57	8.69	NA	0.00	11.88
	02/05/92	20.57	7.62	NA	0.00	12.95
	04/28/92	20.57	7.15	NA	0.00	13.42
	07/27/92	20.57	8.20	NA	0.00	12.37
	10/26/92	20.57	8.73	NA	0.00	11.84
	01/13/93	20.57	5.06	NA	0.00	15.51
	04/16/93	20.57	6.38	NA	0.00	14.19
	07/23/93	20.57	7.45	NA	0.00	13.12
	10/27/93	20.57	NM	NM	NM	NM
	01/27/94	20.57	NM	NM	NM	NM
	05/05/94	20.16*	6.91	NA	0.00	13.25
	07/26/94	20.16	7.52	NA	0.00	12.64
	10/28/94	20.16	7.68	NA	0.00	12.48
S-14	08/10/89	20.44	7.58	NA	0.00	12.86
	10/10/89	20.44	7.62	NA	0.00	12.82
	01/25/90	20.44	7.82	NA	0.00	12.62
	04/18/90	20.44	7.37	NA	0.00	13.07
	07/23/90	20.44	7.28	NA	0.00	13.16
	10/18/90	20.44	8.10	NA	0.00	12.34
	01/28/91	20.44	8.04	NA	0.00	12.40
	04/25/91	20.44	6.40	NA	0.00	14.04
	07/09/91	20.44	7.69	NA	0.00	12.75
	10/08/91	20.44	8.24	NA	0.00	12.20
	02/05/92	20.44	7.20	NA	0.00	13.24
	04/28/92	20.44	9.75	NA	0.00	10.69
	07/27/92	20.44	7.64	NA	0.00	12.80
	10/26/92	20.44	8.32	NA	0.00	12.12
	01/13/93	20.44	5.07	NA	0.00	15.37
	04/16/93	20.44	5.86	NA	0.00	14.58
	07/23/93	20.44	7.06	NA	0.00	13.38
	10/27/93	20.44	NM	NM	NM	NM
	01/27/94	20.44	NM	NM	NM	NM
	05/05/94	19.99*	6.48	NA	0.00	13.51
	07/26/94	19.99	7.04	NA	0.00	12.95
	10/28/94	19.99	7.07	NA	0.00	12.92

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-15	08/10/89	22.22	8.48	NA	0.00	13.74
	10/10/89	22.22	8.46	NA	0.00	13.76
	01/25/90	22.22	8.34	NA	0.00	13.88
	04/18/90	22.22	8.45	NA	0.00	13.77
	07/23/90	22.22	8.22	NA	0.00	14.00
	10/18/90	22.22	9.11	NA	0.00	13.11
	01/28/91	22.22	9.13	NA	0.00	13.09
	04/25/91	22.22	7.83	NA	0.00	14.39
	07/09/91	22.22	8.93	NA	0.00	13.29
	10/08/91	22.22	9.26	NA	0.00	12.96
	02/05/92	22.22	8.60	NA	0.00	13.62
	04/28/92	22.22	8.09	NA	0.00	14.13
	07/27/92	22.22	8.83	NA	0.00	13.39
	10/26/92	22.22	9.31	NA	0.00	12.91
	01/13/93	22.22	6.64	NA	0.00	15.58
	04/16/93	22.22	7.14	NA	0.00	15.08
	07/23/93	22.22	8.23	NA	0.00	13.99
	10/27/93	22.22	NM	NM	NM	NM
	01/27/94	22.22	NM	NM	NM	NM
	05/05/94	21.42*	7.57	NA	0.00	13.85
	07/26/94	21.42	8.16	NA	0.00	13.26
	10/28/94	21.42	7.87	NA	0.00	13.55
S-16	08/10/89	21.82	8.36	NA	0.00	13.46
	10/10/89	21.82	8.23	NA	0.00	13.59
	01/25/90	21.82	7.88	NA	0.00	13.94
	04/18/90	21.82	8.19	NA	0.00	13.63
	07/23/90	21.82	8.09	NA	0.00	13.73
	10/18/90	21.82	8.90	NA	0.00	12.92
	01/28/91	21.82	8.55	NA	0.00	13.27
	04/25/91	21.82	7.48	NA	0.00	14.34
	07/09/91	21.82	8.48	NA	0.00	13.34
	10/08/91	21.82	8.95	NA	0.00	12.87
	02/05/92	21.82	8.20	NA	0.00	13.62
	04/28/92	21.82	7.80	NA	0.00	14.02
	07/27/92	21.82	8.29	NA	0.00	13.53
	10/26/92	21.82	9.02	NA	0.00	12.80
	01/13/93	21.82	5.78	NA	0.00	16.04
	04/16/93	21.82	6.80	NA	0.00	15.02
	07/23/93	21.82	7.67	NA	0.00	14.15
	10/27/93	21.82	8.52	NM	NM	13.30
	01/27/94	21.82	7.20	NM	NM	14.62
	05/05/94	21.24*	7.76	NA	0.00	13.48
	07/26/94	21.24	7.84	NA	0.00	13.40
	10/28/94	21.24	7.97	NA	0.00	13.27

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
S-17	08/10/89	20.95	8.13	NA	0.00	12.82
	10/10/89	20.95	8.18	NA	0.00	12.77
	01/25/90	20.95	7.60	NA	0.00	13.35
	04/18/90	20.95	7.95	NA	0.00	13.00
	07/23/90	20.95	7.87	NA	0.00	13.08
	10/18/90	20.95	8.71	NA	0.00	12.24
	01/28/91	20.95	8.54	NA	0.00	12.41
	04/25/91	20.95	7.15	NA	0.00	13.80
	07/09/91	20.95	8.24	NA	0.00	12.71
	10/08/91	20.95	8.86	NA	0.00	12.09
	02/05/92	20.95	7.74	NA	0.00	13.21
	04/28/92	20.95	7.41	NA	0.00	13.54
	07/27/92	20.95	8.34	NA	0.00	12.61
	10/26/92	20.95	8.87	NA	0.00	12.08
	01/13/93	20.95	3.43	NA	0.00	17.52
	04/16/93	20.95	6.70	NA	0.00	14.25
	07/23/93	20.95	7.53	NA	0.00	13.42
	10/27/93	20.95	8.29	NA	0.00	12.66
	01/27/94	20.95	5.78	NA	0.00	15.17
	05/05/94	20.45*	6.99	NA	0.00	13.46
	07/26/94	20.45	7.62	NA	0.00	12.83
	10/28/94	20.45	7.91	NA	0.00	12.54
S-18	04/25/91	21.03	NM	NM	NM	NM
	07/09/91	21.03	8.23	NA	0.00	12.80
	10/08/91	21.03	8.84	NA	0.00	12.19
	02/05/92	21.03	7.67	NA	0.00	13.36
	04/28/92	21.03	7.40	NA	0.00	13.63
	07/27/92	21.03	8.38	NA	0.00	12.69
	10/26/92	21.03	8.83	NA	0.00	12.20
	01/13/93	21.03	5.86	NA	0.00	15.17
	04/16/93	21.03	4.88	NA	0.00	16.15
	07/23/93	21.03	7.56	NA	0.00	13.47
	10/27/93	21.03	8.30	NA	0.00	12.73
	01/27/94	21.03	6.84	NA	0.00	14.19
	05/05/94	20.57*	7.05	NA	0.00	13.52
	07/26/94	20.57	7.62	NA	0.00	12.95
	10/28/94	20.57	8.01	NA	0.00	12.56
SR-1	01/25/90	21.45	7.53	NA	0.00	13.92
	04/18/90	21.45	8.17	NA	0.00	13.28
	07/23/90	21.45	7.58	NA	0.00	13.87
	10/18/90	21.45	8.81	NA	0.00	12.64
	01/28/91	21.45	8.37	NA	0.00	13.08
	04/25/91	21.45	6.91	NA	0.00	14.54
	07/09/91	21.45	8.11	NA	0.00	13.34
	10/08/91	21.45	8.63	NA	0.00	12.82
	02/05/92	21.45	7.68	NA	0.00	13.77
	04/28/92	21.45	7.27	NA	0.00	14.18

Table 1
Summary of Historical Groundwater Elevation Data

well	Date	Reference Elevation (ft.-MSL)	Depth to Groudwater (feet)	Depth to Floating Product (feet)	Floating Product Thickness (feet)	Groundwater Elevation (Ft.-MSL)
SR-1 (cont.)	07/27/92	21.45	8.11	8.10	0.01	13.34
	10/26/92	21.45	8.63	NA	0.00	12.82
	01/13/93	21.45	5.46	NA	0.00	15.99
	04/16/93	21.45	6.28	NA	0.00	15.17
	07/23/93	21.45	7.34	NA	0.00	14.11
	10/27/93	21.45	8.04	NA	0.00	13.41
	01/27/94	21.45	6.68	NA	0.00	14.77
	05/05/94	20.57*	6.81	NA	0.00	13.76
	07/26/94	20.57	7.38	NA	0.00	13.19
	10/28/94	20.57	7.48	NA	0.00	13.09

FT.-MSL = feet above mean sea level
NM = not measured
* Top of casing elevation surveyed by L. Wade Hammond on 5/31/94

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-1	07/08/85	0.52	NA	NA	NA	NA
	09/06/88	<0.050	<0.0005	<.0.001	<.0.001	<0.003
	11/16/88	<0.050	<0.0005	<.0.001	<.0.001	<0.003
	02/27/89	<0.050	0.0005	<.0.001	<.0.001	<0.003
	05/04/89	<0.050	0.001	<.0.001	<.0.001	<0.003
	08/10/89	<0.050	0.0007	<.0.001	<.0.001	<0.003
	10/10/89	<0.050	<0.0005	<.0.001	<.0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	04/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	07/23/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/18/90	0.08	0.005	<0.0005	<0.0005	0.003
	01/28/91	<0.050	0.0045	<0.0005	<0.0005	0.002
	04/25/91	0.080*	0.0037	<0.0005	0.0007	0.002
	07/09/91	0.20	0.016	<0.0005	0.0013	0.0058
	10/08/91	<0.050	0.0023	<0.0005	<0.0005	<0.0005
	02/05/92	0.16	0.0089	<0.0005	0.0021	0.006
	04/28/92	<0.050	0.0024	<0.0005	<0.0005	0.0009
	07/27/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	0.057	0.003	0.0016	0.0014	0.0017
	01/14/93	0.49	0.053	0.0012	0.020	0.033
	04/16/93	0.24	0.020	<0.0005	0.015	0.24
	07/23/93	<0.050	0.0005	<0.0005	<0.0005	<0.0005
	10/27/93	0.060	0.0059	<0.0005	0.0025	0.0017
	01/27/94	<0.050	0.0021	<0.0005	<0.0005	0.00063
	05/05/94	0.057	0.0039	<0.0005	0.0019	0.0019
	07/26/94	<0.05	0.0022	<0.0003	<0.0003	<0.0006
	10/28/94	<0.05	0.0008	<0.0003	<0.0003	0.0008
S-3	09/06/88	96	3.4	9.5	2.7	17
	11/16/88	70	4.6	8.4	2.5	13
	02/27/89	32	2.4	3.1	1.5	6.4
	05/04/89	47	4.4	0.30	2.4	15
	08/10/89	110	5.7	5.7	3.2	19
	10/10/89	52	4.6	3.3	2.6	15
	01/25/90	420	5.2	4.1	6.7	34
	04/18/90	58	3.8	1.4	2.4	12
	07/23/90	49	3.4	1.8	2.3	12
	10/18/90	44	3.5	0.65	2.4	11
	01/28/91	64	40.9	0.57	1.94	8.09
	04/25/91	120	3.9	3.6	2.4	8.9
	07/09/91	50	3.6	2.3	1.8	10
	10/08/91	130	3.6	1.0	2.8	8.4
	02/05/92	150	2.5	0.67	2.7	10
	04/28/92	120	2.2	1.2	2	5.8
	07/27/92	190	1.4	<1.25	<1.25	3.4
	10/26/92	950	2.0	8.4	16	36
	01/14/93	41	2.7	2.5	1.8	6.9
	04/16/93	40	0.93	2.8	1.9	14
	07/23/93	87	1.6	<0.0050	1.3	4.0

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-3 (cont.)	10/27/93	36	2.2	<0.5	1.5	3.2
	01/27/94	190	3.2	3.1	4.1	15
	05/05/94	36	1.1	0.49	1.6	4.7
	07/26/94	18.0	1.039	0.1705	0.8454	0.9675
	10/28/94	**25.869** 25,869	**0.4679** 467.9	0.2940	0.5462	0.3433
S-5	01/08/87	7.8	0.38	0.51	NR	1.0
	09/06/88	7.0	2.6	0.060	0.40	0.7
	11/16/88	3.0	0.66	0.060	0.12	0.22
	02/27/89	5.7	2.0	0.22	0.26	0.32
	05/04/89	9.0	3.0	0.6	0.63	1.7
	08/10/89	5.1	1.1	<0.050	0.27	0.40
	10/10/89	15	3.3	0.16	0.83	2.2
	01/25/90	12	2.4	0.36	0.57	1.4
	04/18/90	5.2	1.1	0.040	0.30	0.46
	07/23/90	5.5	1.3	0.14	0.32	0.73
	10/18/90	12	3.2	0.040	0.72	0.9
	01/28/91	2.55	0.41	0.015	0.11	0.060
	04/25/91	67	5.1	3.1	2.8	11
	07/09/91	4.9	0.48	0.036	0.36	1.0
	10/08/91	6.6	0.37	0.007	0.19	0.38
	02/05/92	44	4.8	0.85	2.7	8.4
	04/28/92	33	1.4	0.32	1.6	5.2
	07/27/92	20	2.4	<0.025	1.8	2.3
	10/26/92	21	1.6	0.14	1.5	2.8
	01/14/93	54	1.9	1.0	2.7	16
	04/16/93	42	2.0	1.3	4.3	18
	07/23/93	46	2.5	2.2	3.4	11
	10/27/93	6.5	0.99	0.031	1.1	1.0
	01/27/94	34	1.8	0.58	2.9	9.7
	05/05/94	24	0.67	0.070	1.4	2.7
	07/27/94	4.7	0.1936	0.0331	0.3323	0.2812
	10/28/94	**3.2** 3200	**0.1673** 167.3	0.0180	0.2387	0.1045
S-6	11/16/88	**0.050**	**0.0007**	<0.001	<0.001	<0.003
	02/27/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	05/04/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	08/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	10/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	04/18/90	<0.050	<0.0005	**0.0006**	<0.0005	**0.001**
	07/23/90	<0.050	<0.0005	**0.0009**	<0.0005	**0.0018**
	10/18/90	<0.050	<0.0005	**0.0007**	<0.0005	**0.0008**
	01/28/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/25/91	<0.050	<0.0005	<0.0005	<0.0005	**0.0007**
	07/09/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/08/91	<0.050	**0.0007**	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-6 (cont.)	01/13/94	NR	NR	NR	NR	NR
	04/16/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/23/93	NR	NR	NR	NR	NR
	10/27/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/27/94	NR	NR	NR	NR	NR
	05/05/94	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/26/94	NR	NR	NR	NR	NR
	10/28/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0006
S-7	11/16/88	0.10	0.0051	0.015	0.002	0.013
	02/27/89	0.050	0.0005	0.003	0.001	0.011
	05/04/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	08/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	10/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	04/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	07/23/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/18/90	<0.050	<0.0005	0.0005	0.0005	0.0041
	01/28/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/25/91	0.060	<0.0005	<0.0005	<0.0005	<0.0005
	07/09/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	02/05/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/08/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/27/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	0.57^	<0.0005	<0.0005	<0.0005	<0.0005
	01/14/93	0.056^	<0.0005	<0.0005	<0.0005	<0.0005
	04/16/93	0.11	0.028	<0.0005	<0.0005	0.0018
	07/23/93	0.080	0.00048	<0.0005	<0.0005	0.0008
	10/27/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/27/94	0.070**	<0.0005	<0.0005	<0.0005	<0.0005
	05/05/94	0.092	0.0021	<0.0005	<0.0005	<0.0005
	07/26/94	0.088	<0.0003	<0.0003	<0.0003	<0.0006
	10/28/94	0.06 GP	<0.0003	0.0005	<0.0003	<0.0006
S-8	11/16/88	0.21	0.005	<0.001	0.001	0.005
	02/27/89	<0.050	0.0024	<0.001	<0.001	<0.003
	05/04/89	<0.050	0.0075	<0.001	0.002	<0.003
	08/10/89	<0.050	0.0006	<0.001	<0.001	<0.003
	10/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	04/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	07/23/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/28/91	<0.050	0.055	0.0005	<0.0005	0.0014
	04/25/91	0.13*	0.019	<0.0005	0.0013	0.0011
	07/09/91	0.20	0.033	<0.0005	0.0018	0.0028
	10/08/91	0.58	0.095	0.0022	0.0049	0.0065
	02/05/92	0.090*	0.018	<0.0005	0.0062	0.0018

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-8 (cont.)	04/28/92	<0.050	0.0059	<0.0005	0.0025	<0.0005
	07/27/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/14/93	0.27	0.074	0.0009	0.025	0.0055
	04/16/93	1.1	0.42	<0.0005	0.20	0.020
	07/23/93	0.16	0.023	<0.0005	0.0012	0.0015
	10/27/93	0.42	0.65	0.0007	0.011	0.0017
	01/27/94	0.29	0.065	<0.0010	0.0069	0.0024
	05/05/94	0.12	0.013	<0.0005	<0.0005	<0.0005
	07/26/94	0.115	0.0122	0.0013	<0.0003	0.0027
	10/28/94	0.733 733	0.0759 75.9	0.0032	0.0049	0.0042
S-9	11/16/88	1.4	0.069	0.003	0.052	0.18
	02/27/89	1.6	0.24	0.004	0.13	0.18
	05/04/89	2.6	0.47	0.010	0.24	0.48
	08/10/89	0.52	0.073	<0.01	0.040	<0.030
	10/10/89	0.38	0.082	<0.001	0.046	0.013
	01/25/90	0.75	0.14	0.0012	0.069	0.075
	04/18/90	0.68	0.15	0.0017	0.050	0.037
	07/23/90	0.49	0.094	0.0012	0.032	0.024
	10/18/90	0.39	0.14	0.0007	0.0033	0.024
	01/28/91	1.04	0.45	0.0046	0.085	0.097
	04/25/91	5.8	0.88	0.009	0.36	0.50
	07/09/91	1.4	0.22	0.0028	0.082	0.10
	10/08/91	0.89	0.96	<0.0025	0.016	0.029
	02/05/92	0.95	0.24	<0.0025	0.028	0.055
	04/28/92	1.4*	0.29	0.003	0.10	0.081
	07/27/92	0.89	0.19	<0.0025	0.066	0.068
	10/26/92	0.65	0.16	<0.0025	0.063	0.089
	01/13/93	19	2.4	0.038	1.7	2.2
	04/16/93	10	1.5	<0.005	1.1	0.99
	07/23/93	1.1	0.40	<0.0050	0.26	0.16
	10/27/93	2.5	0.40	<0.005	0.19	0.11
	01/27/94	4.8	0.99	0.016	0.63	0.49
	05/05/94	3.7	0.48	<0.005	0.021	0.12
	07/26/94	1.0	0.1246	<0.0003	0.0358	0.0286
	10/28/94	0.979 979	0.0803 80.3	0.0070	0.0217	0.0292
S-10	11/16/88	0.33	0.0005	<0.001	0.001	0.011
	02/27/89	0.14	<0.0005	<0.003	0.002	0.006
	05/03/89	0.22	<0.0005	0.001	0.002	0.007
	08/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	10/09/89	0.17	<0.0005	<0.001	<0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.0005	0.0011	0.004
	04/18/90	<0.050	<0.0005	0.0009	<0.0005	0.002
	07/23/90	0.59	<0.0005	<0.0005	0.0019	0.019
	10/18/90	0.14	<0.0005	0.0007	<0.0005	0.007
	01/28/91	<0.050	<0.0005	<0.0005	<0.0005	0.0005
	04/25/91	<0.050	<0.0005	<0.0005	0.0011	0.0008

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-10 (cont.)	07/09/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/08/91	0.14	<0.0005	<0.0005	<0.0005	<0.0005
	02/05/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/27/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/13/93	0.088	<0.0005	0.0006	0.0006	<0.0005
	04/16/93	0.080	<0.0005	<0.0005	<0.0005	<0.0005
	07/23/93	<0.050	0.0015	<0.0005	0.0007	0.0027
	10/27/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/27/94	0.27	0.0011	0.0013	0.0020	0.0074
	05/05/94	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/26/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0006
	10/28/94	<0.05	0.0024 2.4	<0.0003	0.0005	0.0008
S-11	11/16/88	<0.050	<0.0005	<0.001	<0.001	<0.003
	02/27/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	05/03/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	08/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	10/09/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	04/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	07/23/90	<0.050	<0.0005	0.0006	<0.0005	0.0011
	10/18/90	<0.050	<0.0005	<0.0005	<0.0005	0.0005
	01/28/91	0.063	<0.0005	0.0033	0.0009	0.007
	04/25/91	<0.050	<0.0005	<0.0005	0.0008	<0.0005
	07/09/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/08/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/27/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/13/93	NR	NR	NR	NR	NR
	04/16/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/23/93	NR	NR	NR	NR	NR
	10/27/93	NA	NA	NA	NA	NA
	01/27/94	NR	NR	NR	NR	NR
	05/05/94	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/26/94	NR	NR	NR	NR	NR
	10/28/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0006
S-12	11/16/88	0.050	0.0035	<0.001	<0.001	<0.003
	02/27/89	<0.050	0.0008	<0.001	<0.001	<0.003
	05/03/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	08/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	10/09/89	<0.050	<0.0005	<0.001	<0.001	<0.001
	01/25/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	04/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/23/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-12 (cont.)	01/28/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/25/91	0.090	0.0054	<0.0005	0.0011	0.0007
	07/09/91	<0.050	0.0029	<0.0005	<0.0005	<0.0005
	10/08/91	0.050	<0.0005	<0.0005	<0.0005	<0.0005
	02/05/92	0.050*	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/27/92	0.094^	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	0.086^	<0.0005	<0.0005	<0.0005	<0.0005
	01/14/93	0.12	0.002	<0.0005	<0.0005	<0.0005
	04/16/93	0.060	<0.0005	<0.0005	<0.0005	<0.0005
	07/23/93	0.090	<0.0005	<0.0005	<0.0005	<0.0005
	10/27/93	NA	NA	NA	NA	NA
	01/27/94	NA	NA	NA	NA	NA
	05/05/94	<0.050	0.0020	<0.0005	<0.0005	<0.0005
	07/26/94	0.128	<0.0003	<0.0003	<0.0003	<0.0006
	10/28/94	0.167	<0.0003	<0.0003	<0.0003	<0.0006
S-13	05/03/89	0.15	0.0049	0.004	0.002	0.014
	08/10/89	0.11	0.0029	<0.001	<0.001	<0.003
	10/09/89	0.077	0.0014	<0.001	<0.001	<0.003
	01/25/90	0.051	0.0005	<0.0005	<0.0005	<0.001
	04/18/90	0.085	0.0087	<0.0005	<0.0005	<0.001
	07/23/90	0.080	0.0008	<0.0005	<0.0005	<0.0005
	10/18/90	0.13	<0.0005	<0.0005	<0.0005	<0.005
	01/28/91	<0.050	<0.0005	0.0009	0.0012	0.001
	04/25/91	0.44*	0.0038	<0.0005	<0.0005	0.0006
	07/09/91	0.32*	0.0006	<0.0005	<0.0005	<0.0005
	10/08/91	0.31	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	0.18^	<0.0005	<0.0005	<0.0005	<0.0005
	01/13/93	NR	NR	NR	NR	NR
	04/16/93	0.24	0.0048	<0.0005	0.0013	<0.0005
	07/23/93	NR	NR	NR	NR	NR
	10/27/93	NA	NA	NA	NA	NA
	01/27/94	NR	NR	NR	NR	NR
	05/05/94	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/26/94	NR	NR	NR	NR	NR
	10/28/94	0.368	<0.0003	<0.0003	<0.0003	<0.0006
S-14	05/03/89	5.3	0.75	0.40	0.2	0.80
	08/10/89	1.8	0.54	0.14	0.042	0.05
	10/09/89	1.0	0.36	0.060	0.02	0.030
	01/25/90	0.64	0.16	0.077	0.017	0.039
	04/18/90	1.2	0.20	0.11	0.03	0.096
	07/23/90	5.0	0.43	0.34	0.14	0.66
	10/18/90	1.8	0.77	0.013	0.017	0.12
	01/28/91	0.72	0.20	0.036	0.021	0.078
	04/25/91	14	0.93	0.43	0.25	0.97
	07/09/91	0.16	0.030	0.0053	0.005	0.016

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-14 (cont.)	10/08/91	5.4	0.081	0.057	0.095	0.38
	04/28/92	2.0	0.27	0.14	0.048	0.17
	10/26/92	0.92	0.033	0.012	0.025	0.088
	01/13/93	NR	NR	NR	NR	NR
	04/16/93	4.5	1.1	0.029	0.091	0.17
	07/23/93	NR	NR	NR	NR	NR
	10/27/93	NA	NA	NA	NA	NA
	01/27/94	NR	NR	NR	NR	NR
	05/05/94	0.81	0.25	<0.0025	0.0094	0.019
	07/26/94	NR	NR	NR	NR	NR
	10/28/94	**5.385**	**0.2906**	0.0858	0.0497	0.1862
S-15	05/03/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	08/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	10/09/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.001	<0.001	<0.001
	04/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	07/23/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/28/91	<0.050	<0.0005	0.0006	<0.0005	**0.0008**
	04/25/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/09/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/08/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	02/05/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	**0.050**	**0.0008**	**0.0009**	<0.0005	**0.0014**
	07/27/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/14/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/16/93	<0.050	**0.0006**	**0.001**	<0.0005	**0.0007**
	07/23/93	<0.050	**0.0012**	<0.0005	<0.0005	**0.0016**
	10/27/93	NA	NA	NA	NA	NA
	01/27/94	NA	NA	NA	NA	NA
	05/05/94	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/26/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0006
	10/28/94	<0.05	**0.0003**	<0.0003	<0.0003	<0.0006
S-16	05/04/94	0.38	0.044	0.003	0.002	<0.003
	08/10/89	<0.050	0.0006	<0.001	<0.001	<0.003
	10/10/89	<0.005	<0.0005	<0.001	<0.001	<0.003
	01/25/90	0.24	0.16	0.0033	0.0008	0.011
	04/18/90	<0.050	0.001	<0.0005	<0.0005	<0.001
	07/23/90	<0.050	0.0011	<0.0005	<0.0005	<0.0005
	10/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/28/91	<0.050	<0.0005	0.0006	<0.0005	0.0009
	04/25/91	0.060^	0.021	0.0005	0.0032	0.0048
	07/09/91	<0.050	0.001	<0.0005	<0.0005	<0.0005
	10/08/91	0.050	0.017	0.0014	0.0012	0.0055
	02/05/92	0.15	0.065	0.0007	<0.0005	0.0084
	04/28/92	<0.050	**0.013**	<0.0005	<0.0005	<0.0005

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-16 (cont.)	07/27/92	0.51	0.13	<0.0025	<0.0005	0.021
	10/26/92	<0.050	<0.0005	<0.0005	<0.0025	<0.0005
	01/13/93	0.10	0.025	0.0019	<0.0005	0.0084
	04/16/93	0.15	0.056	0.0018	0.0046	0.012
	07/23/93	<0.050	0.0009	<0.0005	<0.0005	<0.0005
	10/27/93	<0.050	0.0015	<0.0005	<0.0005	<0.0005
	01/27/94	0.14	0.085	<0.0010	<0.0010	0.013
	05/05/94	0.071	0.025	<0.0005	<0.0005	0.0042
	07/26/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0006
	10/28/94	<0.05	0.0115	<0.0003	<0.0003	0.0018
S-17	05/03/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	08/10/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	10/09/89	<0.050	<0.0005	<0.001	<0.001	<0.003
	01/25/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	04/18/90	<0.050	<0.0005	<0.0005	<0.0005	<0.001
	07/23/90	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/18/90	**0.39**	**0.010**	**0.062**	**0.022**	**0.11**
	01/28/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/25/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/09/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/08/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/13/93	NR	NR	NR	NR	NR
	04/16/93	**0.13**	<0.0005	<0.0005	<0.0005	<0.0005
	07/23/93	NR	NR	NR	NR	NR
	10/27/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/27/94	NR	NR	NR	NR	NR
	05/05/94	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/26/94	NR	NR	NR	NR	NR
	10/28/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0006
S-18	05/31/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/09/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/08/91	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	02/05/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/28/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/27/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/26/92	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/13/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	04/16/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/23/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/27/93	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	01/27/94	<0.050	**0.0019**	<0.0005	<0.0005	<0.0005
	05/05/94	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	07/26/94	<0.5	<0.003	**0.0011**	<0.0003	**0.0018**
	10/28/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0006

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
SR-1	03/22/89	5.4	1.1	0.23	0.35	1.3
	01/25/90	2.2	0.47	0.12	0.11	0.51
	04/18/90	1.0	0.13	0.047	0.047	0.22
	07/23/90	3.2	0.47	0.32	0.17	0.87
	10/18/90	1.3	0.28	0.0066	0.11	0.13
	01/28/91	0.11	0.12	0.012	0.051	0.11
	07/09/91	1.4	0.20	0.027	0.13	0.34
	10/08/91	0.98	0.079	0.0015	0.044	0.052
	02/05/91	3.8	0.58	0.036	0.32	0.40
	04/28/92	38	1.8	0.46	1.9	0.75
	07/27/92	FP	FP	FP	FP	FP
	10/26/92	1.8	0.37	0.010	0.13	0.13
	1/13/93	47	1.0	1.1	1.7	13
	4/16/93	25	1.7	0.43	2.4	8.3
	7/23/93	33	2.4	2.0	3.8	14
	10/27/93	2.3	0.34	<0.0125	0.27	0.44
	1/27/94	36	2	1.7	3.0	11
	5/5/94	43	1.5	0.13	2.9	12
	7/26/94	13.6	0.6827	0.0392	0.9966	2.516
	10/28/94	**8.462**	**0.3015**	0.0293	0.3847	2.019
		8462	301.5			

TPHG = Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified).
BTEX = Benzene, toulene, ethylbenzene and total xylenes by EPA Method 8020.
NA = Not analyzed; well inaccessible.
NR = Not required.
* = Compounds detected within the chromatographic range of gasoline but not characteristic of the standard gasoline pattern.
** = The concentration reported as gasoline is primarily due to the presence of a discrete peak not indicative of gasoline.
^ = Compounds detected are volatile aromatics (BTEX) present in sample.

Table 3

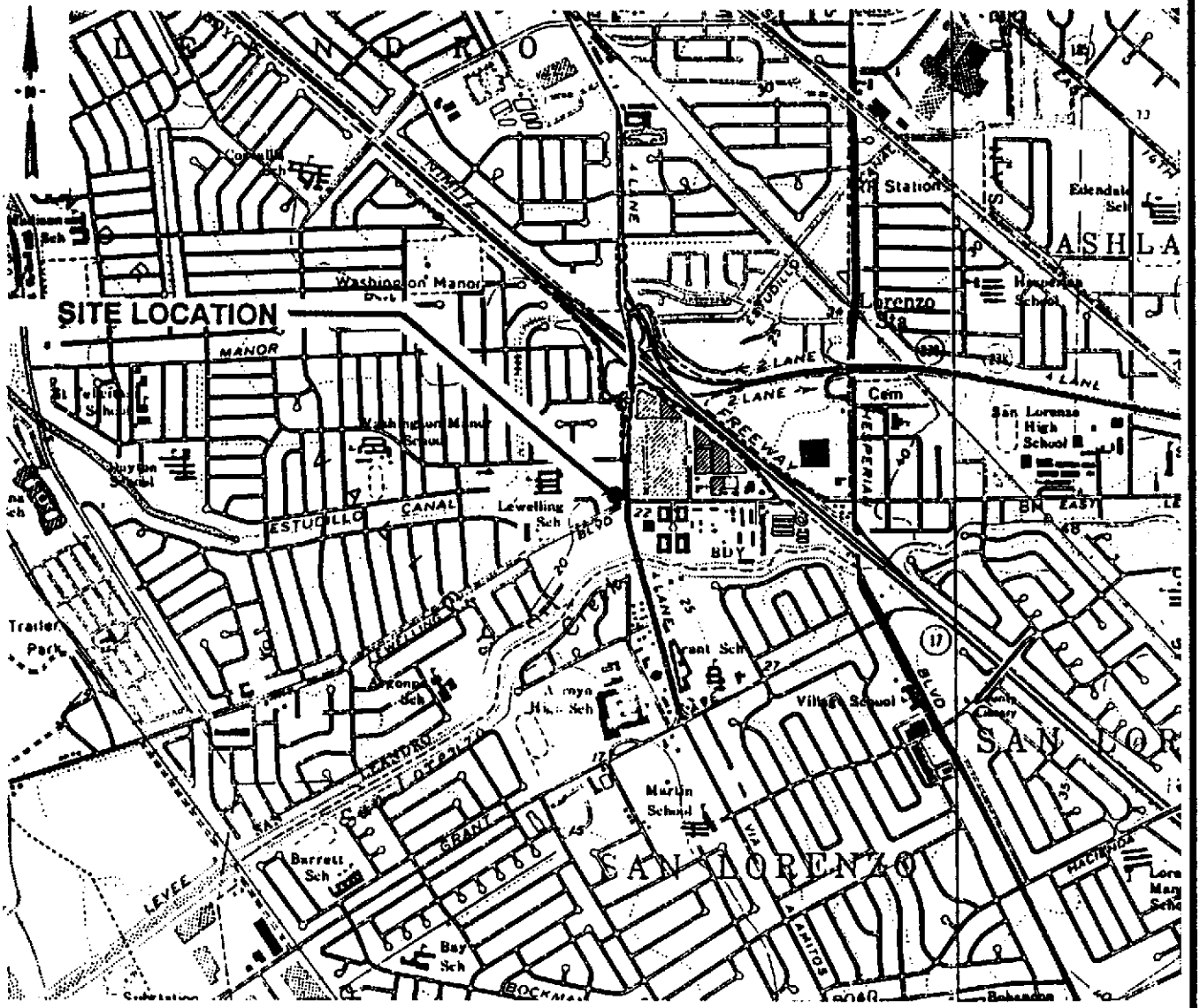
Proposed Sampling Frequency

Well Designation	Quarter 1	2	3	4	
S-1	X				
S-3	X	X	X	X	
[redacted]	X		X		
S-6		X			
[redacted]	X		X		
S-8	X	X	X	X	
[redacted]		X		X	
S-10		X			
[redacted]		X		X	
[redacted]		X		X	
S-13	X				
S-14	X	X	X	X	
S-15			X		
S-16				X	
S-17			X		
S-18				X	
[redacted]		X		X	
# wells sampled per quarter:	7	9	7	9	

quarterly

[redacted] semi

182783



SCALE: 0 2000 FEET

Base map from GeoStrategies, Inc.

12/93

EMCON Associates

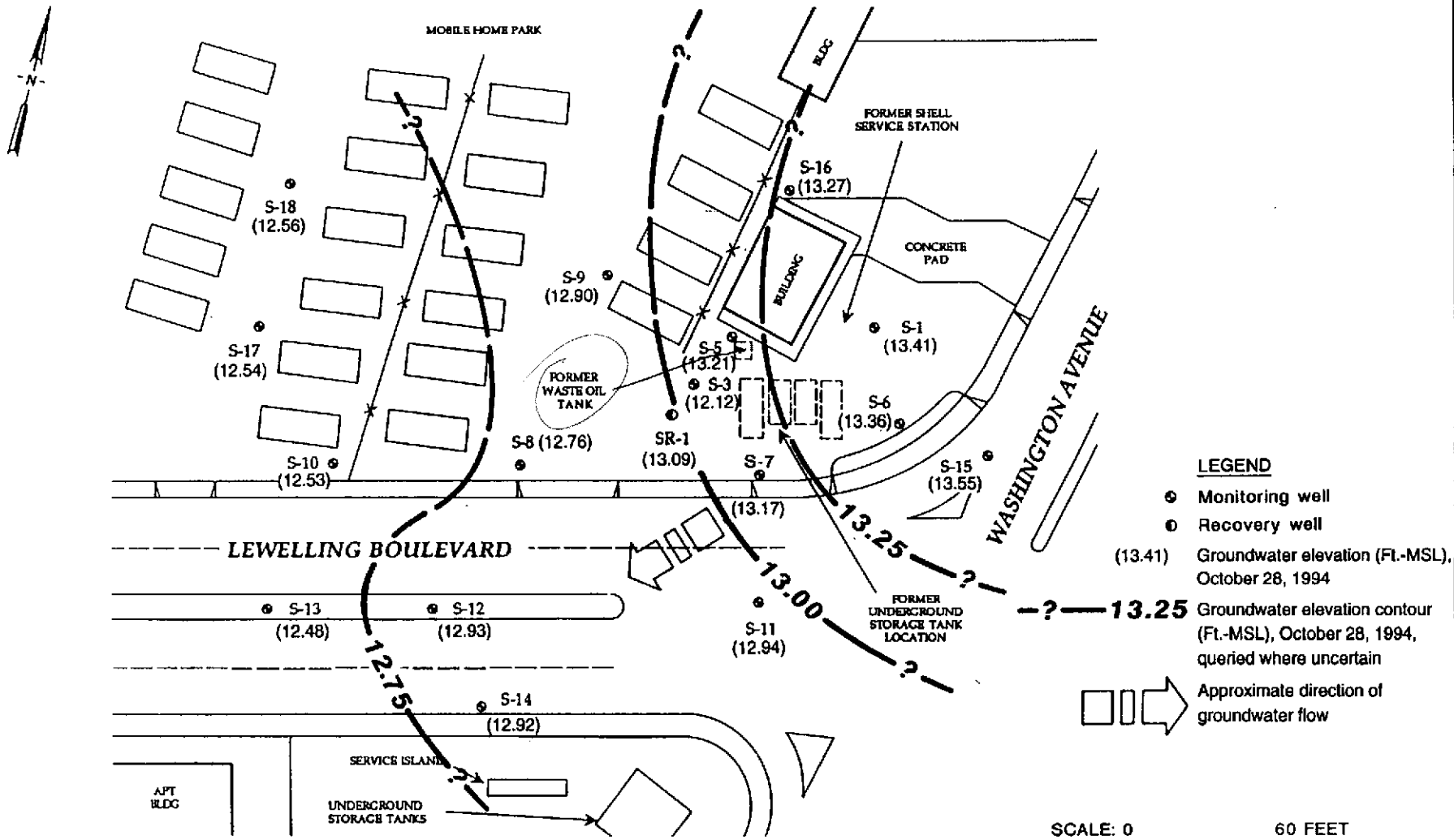
SHELL OIL COMPANY
FORMER SHELL SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

SITE LOCATION MAP

FIGURE
1

PROJECT NO.
0117-115.01

149964



Base map from Hydro-Environmental Technologies, Inc.

12/94

EMCON Associates
Sacramento, California

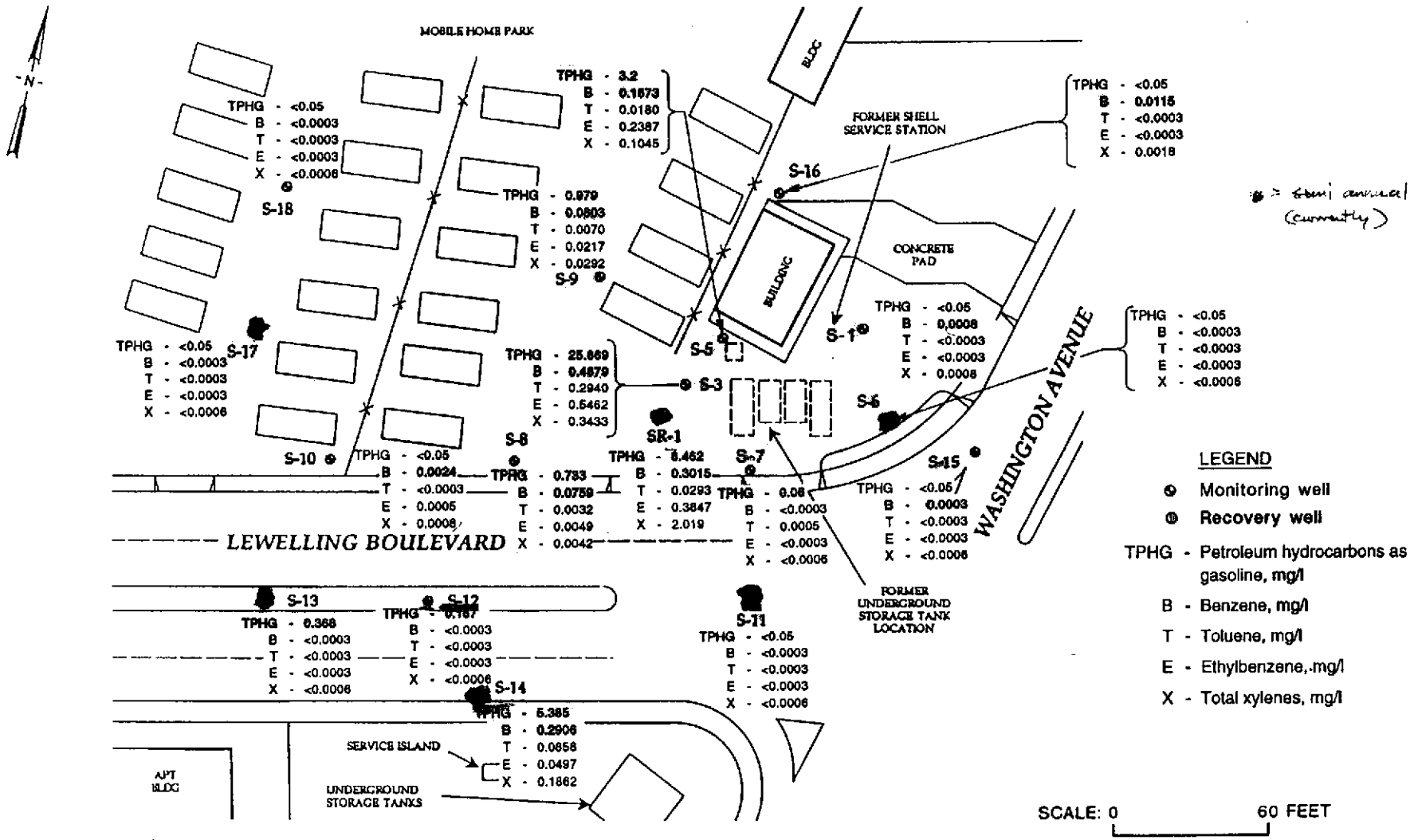
SHELL OIL COMPANY
FORMER SHELL SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

GROUNDWATER CONTOUR MAP, OCTOBER 28, 1994

FIGURE 2

PROJECT NO. 0117-115.01

149964



Base map from Hydro-Environmental Technologies, Inc.

12/94

EMCON Associates
Sacramento, California

SHELL OIL COMPANY
FORMER SHELL SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

TPHG AND BTEX CONCENTRATION MAP, OCTOBER 28, 1994

FIGURE
3

PROJECT NO.
0117-115.01

ATTACHMENT A

QUARTERLY GROUNDWATER SAMPLING REPORT 941028-M-1
BLAINE TECH SERVICES, INC.

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 9513
(408) 995-553
FAX (408) 293-877

November 11, 1994

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: Lynn Walker

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

QUARTER:
4th quarter of 1994

RECEIVED
NOV 28 1994
ENVIRONMENTAL

QUARTERLY GROUNDWATER SAMPLING REPORT 941028-M-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response 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 site 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 Crosby Laboratories, Inc. in Anaheim, California. Crosby Laboratories, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1552.

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/lp

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

cc: EMCON Associates
1433 N. Market Blvd.
Sacramento, CA 95834-1943
ATTN: Bob Husk

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-1	10/28/94	TOC	ODOR	NONE	--	--	7.86	19.70
S-3	10/28/94	TOC	ODOR	NONE	--	--	8.36	14.82
S-5	10/28/94	TOC	ODOR	NONE	--	--	7.82	17.78
S-6	10/28/94	TOC	--	NONE	--	--	8.04	24.08
S-7	10/28/94	TOC	--	NONE	--	--	7.68	23.70
S-8	10/28/94	TOC	ODOR	NONE	--	--	7.56	23.78
S-9	10/28/94	TOC	--	NONE	--	--	7.78	17.60
S-10	10/28/94	TOC	--	NONE	--	--	7.62	17.70
S-11	10/28/94	TOC	--	NONE	--	--	8.30	22.20
S-12	10/28/94	TOC	--	NONE	--	--	7.78	23.65
S-13	10/28/94	TOC	--	NONE	--	--	7.68	23.28
S-14	10/28/94	TOC	--	NONE	--	--	7.07	22.72
S-15	10/28/94	TOC	--	NONE	--	--	7.87	22.66
S-16	10/28/94	TOC	--	NONE	--	--	7.97	23.58
S-17	10/28/94	TOC	--	NONE	--	--	7.91	23.90
S-18	10/28/94	TOC	--	NONE	--	--	8.01	17.65
SR-1 *	10/28/94	TOC	--	NONE	--	--	7.48	20.75

* Sample DUP was a duplicate sample taken from well SR-1.

Green Bin # 2

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 941028-M1 9410.23

Date: 10/31/94
Page 1 of 3

Site Address: 15275 Washington, San Leandro

WIC#: 204-6852-1008

Shell Engineer: Lynn Walker — Phone No.: (510) 675-6170 Fax #: 675-6170

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: MIKE MYERS

Printed Name: Mike Myers

LAB: CROSBY

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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	10-28			W		3						X							AA52093	
S-3						3						X							AA52094	
S-5						3						X							AA52095	
S-6						3						X							AA52096	
S-7						3						X							AA52097	
S-8						3						X							AA52098	
S-9						3						X							AA52099	
S-10	↓			↓		3						X							AA52100	

Relinquished By (Signature): Mike Myers	Printed Name: MIKE MYERS	Date: 10/31/94 Time: 21:30	Received (Signature): D CAPOCCIA E-I	Printed Name: D CAPOCCIA	Date: 10/31/94 Time: 21:30
Relinquished By (Signature): D CAPOCCIA	Printed Name: D CAPOCCIA	Date: 10/31/94 Time: 15:25	Received (Signature): L. Angel 1450	Printed Name: L. Angel	Date: 10/31/94 Time: 15:25
Relinquished By (Signature): L. Angel	Printed Name: L. Angel	Date: 11/1/94 Time: 7:38	Received (Signature):	Printed Name:	Date: 11/1/94 Time: 10:30

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

CHECK ONE (1) BOX ONLY — C1/DT — TURN AROUND TIME

- Quarterly Monitoring X [X] — 6441 — 24 hour [ ]
- Site Investigation [ ] — 6441 — 48 hour [ ]
- Soil Classify/Disposal [ ] — 6442 — 15 days [X] (Normal)
- Water Classify/Disposal [ ] — 6443 — Other [ ] ____
- Soil/Air Rem. or Sys. O & M [ ] — 6462
- Water Rem. or Sys. O & M [ ] — 6463 — NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
- Other [ ]

Groundwater

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 9410280 9410234

Date:
Page 2 of 3

Site Address: 15275 Washington, San Leandro

WIC#: 204-6852-1008

Shell Engineer: Lynn Walker — Phone No.: (510) 675-6170 Fax #: 675-6170

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: Mike Ben

Printed Name: MIKE MYERS

LAB: CLOSE

CHECK ONE (1) BOX ONLY	CT/DT
Quarterly Monitoring XX	6461
Site Investigation	6441
Soil Classify/Disposal	6442
Water Classify/Disposal	6443
Soil/Air Rem. or Sys. O & M	6462
Water Rem. or Sys. O & M	6463
Other	

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days XX (Normal) Other ☐ ____

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

	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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
X	S-11	10/28					3						X							AA52107	
X	S-12						3						X							AA52108	
X	S-13						3						X							AA52109	
X	S-14						3						X							AA52110	
X	S-15						3						X							AA52111	
X	S-16						3						X							AA52112	
X	S-17						3						X							AA52113	
X	S-18	↓					3						X							AA52114	

	Relinquished by (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
1	Mike Ben	MIKE MYERS	Date: 10/31/94 Time: 21:30	D CAPOCCIA	D CAPOCCIA	Date: 10/31/94 Time: 2130
2	D CAPOCCIA	D CAPOCCIA	Date: 10/31/94 Time: 1525	L. Angel 1950	L. ANGEL	Date: 10/31/94 Time: 1525
3	L. Angel	L. Angel	Date: 10/26/94 Time: 1950			Date: Time:

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

Gary Britt

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 941028-M1 941028-1

Date:
Page 3 of 3

Site Address: 15275 Washington, San Leandro

WIC#: 204-6852-1008

Shell Engineer: Lynn Walker
Phone No.: (510) 675-6170
Fax #: 675-6170

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: Mike Myers
Printed Name: MIKE MYERS

LAB: CROSBY

CHECK ONE (1) BOX ONLY		CT/DT
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 [ ]
- 16 days [X] (Normal)
- Other [ ] ______

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

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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
SR-1	10-28			W		5						X							AA52115	
EB	↓			↓		3						X							AA52116	
DUP	↓			↓		3						X							AA52117	
TB	↓			↓		2						X							AA52118	

Relinquished By (signature):	Printed Name:	Date / Time	Received (signature):	Printed Name:	Date / Time
Mike Myers	MIKE MYERS	Date: 10/31/94 Time: 0930	B Capoccia	B CAPOCCIA	Date: 10/31/94 Time: 09:30
B Capoccia	B CAPOCCIA	Date: 10/31/94 Time: 1525	L. Angel E-I	L. Angel E-I	Date: 10/25/94 Time: 1525
L. Angel	L. Angel	Date: 10-31/94 Time: 1728			Date: Time:

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

CROSBY
LABORATORIES
INCORPORATED

Analytical Report

1101 South Richfield Road Placentia, California 92670 • 714-777-1425 • 1-800-3 CROSBY • FAX 714-777-3926

ENVIRONMENTAL • CHEMICAL • MICROBIOLOGICAL • TESTING SERVICES

LAB RECEIVING #: 9410.234

REPORT DATE: 11/16/94

REPORTED TO: BLAINE TECH SERVICES, INC.
ATTN.: MR. JIM KELLER
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

WIC #: 204-6852-1008
PROJECT #: 941028-M1
PROJECT NAME: SHELL-15275 WASHINGTON, SAN LEANDRO

DATE SAMPLED: 10/28/94
DATE RECEIVED: 10/31/94
 # OF SAMPLES: 20

SAMPLE MATRIX: LIQUID

SAMPLE ID:

S-1	S-13
S-3	S-14
S-5	S-15
S-6	S-16
S-7	S-17
S-8	S-18
S-9	SR-1
S-10	EB
S-11	DUP
S-12	TB

SAMPLE HANDLING & CONTROL STATEMENT

The above mentioned samples were received in appropriate containers accompanied by a fully signed and dated chain-of-custody record. The containers were assigned unique identification numbers and had sufficient amount for the test requested. There were no site specific quality control requirements made at the time of sample submittal. Samples submitted did not exceed the holding time of the requested test parameters.

QUALITY CONTROL SUMMARY STATEMENT

Laboratory Quality Control parameters and results of instrument calibration standards were all within control limits and the analytical data hereby submitted falls within acceptable limits of accuracy and precision unless otherwise indicated. Please see the attached Quality Control Data for additional information.

SUBMITTED BY:

Girma Selassie
QA/QC Director

CERTIFICATE OF APPROVED ANALYSIS

The information contained in this cover sheet is an integral part of the attached analytical report.

DOHS Lab Certificate #: 1552
Expiration Date: 6/30/95

A2LA Certificate #: 0389.01
Expiration Date: 9/30/94

Approved by the State of California, Department of Health Services
This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction or use of the Laboratory's name for advertising or publicity without authorization is prohibited.

CROSBY LABORATORIES INCORPORATED

1101 South Richfield Road Placentia, California 92670 • 714-777-1425 • 1-800-3 CROSBY • FAX 714-777-3926

ENVIRONMENTAL • CHEMICAL • MICROBIOLOGICAL • TESTING SERVICES

Analytical Report

CLIENT: BLAINE TECH SERVICES, INC.

ATTN.: MR. JIM KELLER

LAB RECEIVING#: 9410.234

WIC #: 204-6852-1008

PROJECT #: 941028-M1

PROJECT NAME: SHELL-15275 WASHINGTON, SAN LEANDRO

Spl. Prep. Meth.: EPA 5030

MATRIX: LIQUID

UNIT: µg/l

Prepared: 11/10-11/94

Analyzed: 11/10-11/94

Analyst: AR

			EPA 8020 (Partial)/8015 TPH-Modified (Gasoline)					%Surrogate Recovery	
Lab ID	Client Sample ID	D.F.	Benzene	Toluene	Ethyl Benzene	Total Xylene	TPH Gasoline	BTEX (80-120)	TPH (80-120)
RA111094	METHOD BLANK	1	ND	ND	ND	ND	ND	101	89
AA52093	S-1	1	0.8	ND	ND	0.8	ND	85	100
AA52094	S-3	10	467.9	294.0	546.2	343.3	25869	125*	175*
AA52095	S-5	20	167.3	18.0	238.7	104.5	3200	93	91
AA52096	S-6	1	ND	ND	ND	ND	ND	77*	75*
AA52097	S-7	1	ND	0.5	ND	ND	60	103	92
AA52098	S-8**	1	75.9**	3.2	4.9	4.2	733	96	90
AA52099	S-9	10	80.3	7.0	21.7	29.2	979	79*	77*
AA52100	S-10	1	2.4	ND	0.5	0.8	ND	78*	64*
AA52107	S-11	1	ND	ND	ND	ND	ND	90	84
AA52108	S-12	1	ND	ND	ND	ND	167	81	72*
AA52109	S-13	94	ND	ND	ND	ND	368	94	87
AA52110	S-14	50	290.6	85.8	49.7	186.2	5385	89	80
AA52111	S-15	1	0.3	ND	ND	ND	ND	85	74*
AA52112	S-16	1	11.5	ND	ND	1.8	ND	89	79
AA52113	S-17	1	ND	ND	ND	ND	ND	91	83
AA52114	S-18	1	ND	ND	ND	ND	ND	90	77*
AA52115	SR-1	20	301.5	29.3	384.7	2019	8462	88	80
AA52116	EB	1	ND	ND	ND	ND	ND	87	84
AA52117	DUP	10	246.8	25.3	306.5	1422	6814	93	83
AA52118	TB	1	ND	ND	ND	ND	ND	83	79*
DETECTION LIMITS			0.3	0.3	0.3	0.6	50		

QUALITY CONTROL DATA, EPA-8020Part./8015Mod.

MATRIX SPIKE/ MATRIX SPIKE DUPLICATE	*ACCURACY* SPK CONC. (µg/l)	MS (µg/l)	% MS	MSD (µg/l)	% MSD	ACP % MS	*PRECISION* RPD	ACP % RPD
Benzene	8.0	8.0	100	7.5	94	80-120	6	0-25
Toluene	8.0	7.7	96	7.1	89	80-120	8	0-25
Ethyl Benzene	8.0	8.2	103	7.5	94	80-120	9	0-25

AUDIT DATA	LAB ID	SAMPLE ID	BATCH #	QC STD #	ANALYZED
	AA52114	S-18	BT111094	GC148	11/11/94

NOTES:

ND denotes Not Detected at the indicated detection limit.

**Out of criteria, due to sample matrix.*

***Due to a high concentration of Benzene, results were obtained from a dilution factor of 20 for Benzene only.*

This report is preceded by a cover sheet that contains vital information.

Approved by the State of California, Department of Health Services

This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction or use of the Laboratory's name for advertising or publicity without authorization is prohibited.

WELL GAUGING DATA

Project # 94028-MM Date 10-28-94 Client #204-6852-1008

Site 15275 WASHINGTON ST SAN LEANDRO, CA

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (feet)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
S-1	3					7.86	19.70	TOC
S-3	3					8.36	14.82	
S-5	4					7.82	17.78	
S-6	3					8.04	24.08	
S-7	3					7.68	23.70	
S-8	3					7.56	23.78	
S-9	3					7.78	17.60	
S-10	3					7.62	17.70	
S-11	3					8.30	22.20	
S-12	3					7.78	23.65	
S-13	3					7.68	23.28	
S-14	3					7.07	22.72	
S-15	3					7.87	22.66	
S-16	3					7.97	23.58	
S-17	3					7.91	23.90	

WELL GAUGING DATA

Project # 94102B-M Date 10-28-94 Client #204-6852-1008

Site 15275 WASHINGTON ST SAN LEANDRO, CA

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (feet)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
S-18	3					8.01	17.65	TOC
SR-1	6					7.48	20.75	↓

SHELL WELL MONITORING DATA SHEET

Project #: 94028-M1 | Wic #: 204-6852-1006

Sampler: MM | Date Sampled: 10-28

Well I.D.: S-1 | Well Diameter: (circle one) 2 (3) 4 6 ____

Total Well Depth: Before 19.70 After | Depth to Water: Before 7.86 After

Depth to Free Product: | Thickness of Free Product (feet):

Measurements referenced to: (PVC) Grade Other --

Volume Conversion Factor (VCF):
(12 × (d^2/4) × π)/231
where
12 = in/ft
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

4.4 (1 Case Volume) × 3 (Specified Volumes) = 13.2 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:
10:50	67.0	7.4	950	>200	5	
10:51	67.5	7.4	950	>200	9	
10:52		7.4	1000	>200	15	ODOR

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 15

Sampling Time: 10:55

Sample I.D.: S-1 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

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

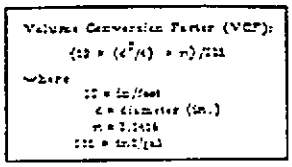
Analyzed for:

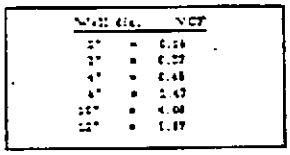
Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94028-44	Wic # 204-6852-1006
Sampler: MM	Date Sampled: 10-28
Well I.D.: S-3	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 14.82 After	Depth to Water: Before 8.36 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --





2.4	x	3	=	7.2
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:
12:08	73.8	6.9	1050	140.0	2.5	Slight odor
12:09	70.4	6.9	1100	169.3	5	
12:10	70.8	6.9	1100	188.2	7.5	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 7.5

Sampling Time: 12:20

Sample I.D.: S-3 Laboratory: CLS54

Analyzed for: TPH6, BTEX

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

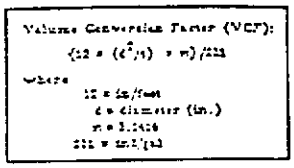
Analyzed for:

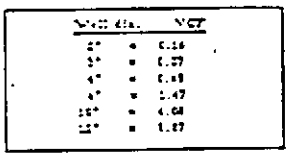
Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94028-M1	Wic # 204-6852-7006
Sampler: MR	Date Sampled: 10-28
Well I.D.: S-5	Well Diameter: (circle one) 2 3 (4) 6 ____
Total Well Depth: Before 17.78 After	Depth to Water: Before 7.82 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --





6.5	x	3	=	19.5
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:
11:51	72.2	7.1	1250	>200	7.0	ODOR
11:52	71.0	7.1	1200	>200	13.	
11:54	71.2	7.1	1200	118.6	21	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 21

Sampling Time: 11:56

Sample I.D.: S-5 Laboratory: CROSBY

Analyzed for: TPH, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94102B-M1 | Wic #: 204-6852-1008

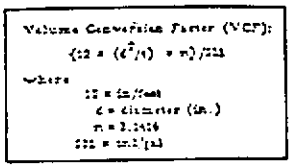
Sampler: MM | Date Sampled: 10-28

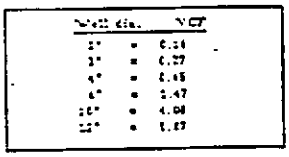
Well I.D.: S-6 | Well Diameter: (circle one) 2 3 4 6 ____

Total Well Depth: Before 24.08 After | Depth to Water: Before 8.04 After

Depth to Free Product: | Thickness of Free Product (feet):

Measurements referenced to: (PVC) Grade Other --





5.9 (1 Case Volume) x 3 (Specified Volumes) = 17.7 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:
10:02	68.8	7.3	1000	171.2	6	
10:03	68.6	7.4	1000	123.1	12	
10:04	68.8	7.4	1000	>200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 10:08

Sample I.D.: S-6 Laboratory: CLOSED

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 96028-M1	Wic # 204-6852-1006
Sampler: MA	Date Sampled: 10-28
Well I.D.: S-7	Well Diameter: (circle one) 2 (3) 4 6 ____
Total Well Depth: Before 23.70 After	Depth to Water: Before 7.68 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
$(12 \times ((d^2)/4) \times \pi)/231$
Where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal.

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

5.9	x	3	=	17.7
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:
11:05	70.2	7.2	1050	7200	6	
11:06	70.4	7.2	1100	7200	12	
11:07	71.0	7.2	1100	7200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 11:10

Sample I.D.: S-7 Laboratory: Clossy

Analyzed for: TPH6/BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94028-M1	Wic # 204-6852-1006
Sampler: MM	Date Sampled: 10-28
Well I.D.: S-8	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 23.78 After	Depth to Water: Before 7.56 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
(12 × (d²/4) × π)/231
where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

6.0 (1 Case Volume) × 3 (Specified Volumes) = 18 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:
11:18	68.6	7.0	1100	<200	6	ODOR
11:19	70.0	7.0	1100	<200	12	
11:20	70.4	7.0	1150	<200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 11:25

Sample I.D.: S-8 Laboratory: CLOSEY

Analyzed for: TPH G, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028-M1	Wic #: 204-6852-1006
Sampler: MA	Date Sampled: 10-28
Well I.D.: S-9	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 17.60 After	Depth to Water: Before 7.78 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
(12 x (d^2/4) x π)/231
Where
12 = in/ft
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

3.6 (1 Case Volume) x 3 (Specified Volumes) = 10.8 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:
11:32	70.4	7.0	1200	7200	4	
11:33	70.8	7.0	1200	7200	8	
11:34	71.0	7.0	1200	7200	12	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 12

Sampling Time: 11:37

Sample I.D.: S-9 Laboratory: CLS84

Analyzed for: TPH6, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028-M1	Wic # 204-6852-1006
Sampler: MM	Date Sampled: 10-28
Well I.D.: S-10	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 17.70 After	Depth to Water: Before 7.62 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):

(12 * (d²/4) * π)/231

Where
12 = in/feet
d = diameter (in.)
π = 3.1416
231 = in³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

3.7 (1 Case Volume) x 3 (Specified Volumes) = 11.1 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:
10:33	66.8	7.5	900	>200	4	
10:34	67.6	7.5	950	>200	9	
10:35	67.3	7.5	930	>200	12	

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

Sampling Time: 10:40

Sample I.D.: S-10 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

Duplicate I.D.: Cleaning Blank I.D.: EB @ 10:38

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028-M1	Wic # 204-6852-1008
Sampler: MM	Date Sampled: 10-28
Well I.D.: SR-1	Well Diameter: (circle one) 2 3 4 (6) ___
Total Well Depth: Before 20.75 After	Depth to Water: Before 7.48 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

19.5 (1 Case Volume) x 3 (Specified Volumes) = 58.5 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:
12:35	71.2	7.1	1200	7200	20	
12:41	71.6	7.1	1250	7200	40	
12:48	71.2	7.1	1200	181.7	60	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 60

Sampling Time: 12:50

Sample I.D.: SR-1 Laboratory: CROSBY

Analyzed for: TPH6, BTEX

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

Analyzed for: TPH6, BTEX

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028M1	Wic # 204-6852-1008
Sampler: J.G.	Date Sampled: 10/28/94
Well I.D.: S-13	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 23.28 After	Depth to Water: Before 7.68 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
{12 × (d^2/4) × π}/231
Where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5.7 (1 Case Volume) × 3 (Specified Volumes) = 17.1 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:
10:21	61.8	8.0	1800	>200	6	
10:23	64.0	8.1	1700	>200	12	
10:25	64.2	8.2	1600	>200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 10:30

Sample I.D.: S-13 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028M1	Wic # 204-6852-1008
Sampler: J.G.	Date Sampled: 10/28/94
Well I.D.: S-12	Well Diameter: (circle one) 2 (3) 4 6 ____
Total Well Depth: Before 23.65 After	Depth to Water: Before 7.78 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal.

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
10"	4.08
12"	5.87

5.8 (1 Case Volume) x 3 (Specified Volumes) = 17.4 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:
10:41	64.6	8.0	800	>200	6	
10:43	63.4	8.2	1000	25.	12	
10:45	63.0	8.4	1100	30.	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 10:50

Sample I.D.: S-12 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028M1	Wic # 204-6852-1008
Sampler: J.G.	Date Sampled: 10/28/94
Well I.D.: S-11	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 22,20 After	Depth to Water: Before 8,30 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
Where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5,1	x	3	15,3
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:
11:02	64.4	7.8	1600	65.	6	
11:04	63.8	7.6	1500	61.	12	
11:05	63.6	7.7	1500	50.	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 11:10

Sample I.D.: S-11 Laboratory: CROSBY

Analyzed for: ~~TPHG~~, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94 1028 M1	Wic # 204-6852-1008
Sampler: J.G.	Date Sampled: 10/28/94
Well I.D.: S-15	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 22.66 After	Depth to Water: Before 7.87 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal.

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5.4	x	3	=	16.2
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:
11:27	64.6	8.0	1200	44.1	6	
11:29	63.8	7.8	1100	>200	12	
11:30	64.0	7.8	1100	>200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 11:36

Sample I.D.: S-15 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94 1028 M1	Wic # 204-6852-1008
Sampler: J.G.	Date Sampled: 10/28/94
Well I.D.: S-17	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 23.90 After	Depth to Water: Before 7.91 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.^{3}/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5.9	x	3	=	17.7
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:
11:51	67.2	8.1	900	>200	6	
11:53	65.6	8.3	1000	>200	12	
11:55	65.0	8.4	1100	>200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 11:58

Sample I.D.: S-17 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028M1	Wic # 204-6852-1008
Sampler: J.G.	Date Sampled: 10/28/94
Well I.D.: S-18	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 17.65 After	Depth to Water: Before 8.01 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
(12 x (d^2/4) x π)/231
Where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

3.5	x	3	=	10.5
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:
12:08	65.2	7.8	1600	>200	4	
12:10	65.4	7.6	1500	>200	8	
12:12	65.0	7.5	1400	>200	12	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 12

Sampling Time: 12:16

Sample I.D.: S-18 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028M1	Wic # 204-6852-1008
Sampler: JCG	Date Sampled: 10/28/94
Well I.D.: S-16	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 23.58 After	Depth to Water: Before 7.97 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
(12 × (d²/4) × π)/231
where
12 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5.7	x	3	=	17.1
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:
12:34	70.4	7.7	1200	>200	6	
12:36	70.0	7.6	1100	>200	12	
12:38	69.4	7.7	1100	>200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 12:40

Sample I.D.: S-16 Laboratory: CAS/BV

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 941028M1	Wic # 204-6852-1008
Sampler: JcG	Date Sampled: 10/28/94
Well I.D.: S-14	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 22,72 After	Depth to Water: Before 7,07 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other --

Volume Conversion Factor (VCF):
$(12 \times (d^2/4) \times \pi)/231$
where
12 = in./feet
d = diameter (in.)
π = 3.1416
231 = in.³/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

5,7 (1 Case Volume) x 3 (Specified Volumes) = 17,1 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:
12,50	65,0	7,6	800	>200	6	
12,52	63,8	7,8	900	>200	12	
12,54	63,0	7,7	900	>200	18	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 18

Sampling Time: 12,56

Sample I.D.: S-14 Laboratory: CROSBY

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations:

WELL HEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client SHELL Site # 204-6852-1008 Inspection date: 10-28-94

Site address 15275 WASHINGTON ST. Inspected by: MIKE HICKS

SAN LEANDRO, CA BTS Event # 941028-M1

1. Lid on the box? Yes No	5. Water standing in the well box?	7. Can cap be pulled loose?
2. Lid whole?	5a. Standing above well top?	8. Can cap seal out water?
3. Lid secure?	5b. Standing below well top?	9. Padlock present?
4. Lid seal intact?	5c. Water even with top of well cap?	10. Padlock found locked?
	6. Well cap/plug present?	11. Padlock functional?

☒ Check box if *no deficiences* were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken

Note below all deficiences that could not be corrected and *still need to be corrected.*

Well I.D.	Persisting Deficiency

BTS Office assigns or defers Correction to:	Date assigned	Date corrected

Office review and assignments made by _____ date _____