EMCON Associates
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ENVIRONMENTAL PROTECTION

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March 15, 1995
Project 0117-115.01

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

Re: **First Quarter 1995 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 first quarter 1995 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, S-7 through S-10, S-12, S-15, S-16, S-18, and SR-1 on January 2, 1995. 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 950102-J-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, 14 groundwater monitoring wells (S-5 through S-18) and 1 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 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 first quarter of 1995. Based on water levels measured in wells S-1, S-3, S-5 through S-18, and SR-1 on January 2, 1995 (see Table 1), and top-of-casing elevations, the direction of groundwater flow at the site is generally toward the south (see Figure 2). This is consistent with the historical direction of groundwater flow at the site.

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).

ANALYTICAL RESULTS

Table 2 presents a summary of historical groundwater analytical results, including analytical results for the first quarter 1995 monitoring event. Certified analytical reports are included in Attachment A. Figure 3 shows the concentrations of TPHG and BTEX at each monitoring location.

TPHG and BTEX were not detected in samples from wells S-1, S-7, S-10, S-15 or S-18. The highest TPHG and BTEX concentrations were generally detected in the sample from well S-3, which contained 23.0 milligrams per liter (mg/L) of TPHG and 0.850 mg/L of benzene.

RECOMMENDATIONS

Currently there are 17 on- and off-site monitoring wells for the 15275 Washington Avenue site. For some of these wells, there is over six years of data. For SR-1 there is four years of data. As indicated above in the background section, the shallow groundwater-bearing zone yields very little water. This means that groundwater migration is very likely to be slow. The groundwater analytical data supports this idea. Given that there is a long history of groundwater analytical data and groundwater is migrating slowly, it is proposed that the sampling frequency for wells S-1, S-6, S-10, S-13, S-15, S-16, S-17, and S-18 be reduced to annually, that the sampling frequency for wells S-5, S-7, S-9, S-11, S-12, and SR-1 be changed to semiannually, and that wells S-3, S-8, and S-14 continue to be sampled quarterly. Table 3 presents the proposed sampling frequency.

The proposed sampling frequency has an overall pattern of one upgradient and one off-site downgradient well being sampled each quarter, selected downgradient wells being sampled semiannually on alternate quarters, and three wells being sampled quarterly. Well S-3 was selected for quarterly sampling because this well has historically had the highest concentrations of TPHG and BTEX; S-8 was selected for quarterly sampling because it is downgradient of well S-3; and S-14 was selected for quarterly sampling because it monitors impacted groundwater likely from the gas station to the southwest (see Figure 2).

LIMITATIONS

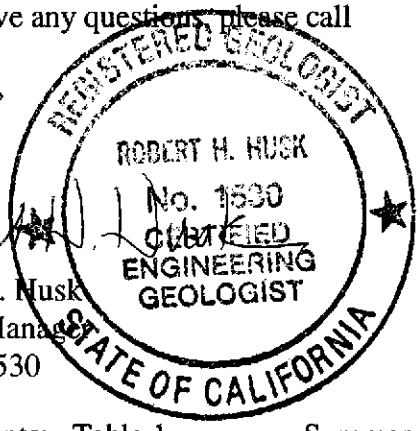
The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This

report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole

If you have any questions, please call

Sincerely,

EMCON



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, January 2, 1995
Figure 3	TPHG and BTEX Concentration Map, January 2, 1995
Attachment A	*Quarterly Groundwater Sampling Report, 950102-J-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
	01/02/95	21.27	6.85	NA	0.00	14.42
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
	01/02/95	20.48	6.36	NA	0.00	14.12

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
	01/02/95	21.03	6.65	NA	0.00	14.38
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
	01/02/95	21.40	7.07	NA	0.00	14.33

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
	01/02/95	20.85	6.95	NA	0.00	13.90
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
	01/02/95	20.32	6.19	NA	0.00	14.13

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
	01/02/95	20.68	6.29	NA	0.00	14.39
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
	01/02/95	20.15	6.13	NA	0.00	14.02

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
	01/02/95	21.24	7.25	NA	0.00	13.99
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
	01/02/95	20.71	7.33	NA	0.00	13.38

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
	01/02/95	20.16	6.37	NA	0.00	13.79
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
	01/02/95	19.99	5.95	NA	0.00	14.04

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
	01/02/95	21.42	7.02	NA	0.00	14.40
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
	01/02/95	21.24	6.49	NA	0.00	14.75

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
	01/02/95	20.45	6.33	NA	0.00	14.12
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
	01/02/95	20.57	6.26	NA	0.00	14.31
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

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.)	02/05/92	21.45	7.68	NA	0.00	13.77
	04/28/92	21.45	7.27	NA	0.00	14.18
	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
	01/02/95	20.57	6.34	NA	0.00	14.23

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
	01/02/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
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

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-3 (cont.)	07/23/93	87	1.6	<0.0050	1.3	4.0
	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	0.4679	0.2940	0.5462	0.3433
	01/02/95	23	0.85	0.26	0.9	2.1
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	0.1673	0.0180	0.2387	0.1045
	01/02/95	18	1.3	0.22	3.4	10
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

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-6 (cont.)	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
	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
	01/02/95	NR	NR	NR	NR	NR
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	<0.0003	0.0005	<0.0003	<0.0006
	01/02/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
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

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-8 (cont.)	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
	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	0.0759	0.0032	0.0049	0.0042
	01/02/95	0.29	0.054	<0.0005	0.01	<0.0005
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	0.0803	0.0070	0.0217	0.0292
	01/02/95	3.9	0.54	0.0024	0.35	0.15
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

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
S-10 (cont.)	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
	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	<0.0003	0.0005	0.0008
	01/02/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
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
	01/02/95	NR	NR	NR	NR	NR

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
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
	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
	01/02/95	0.05	<0.0005	<0.0005	<0.0005	<0.0005
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
	01/02/95	NR	NR	NR	NR	NR

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
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
	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
	01/02/95	NR	NR	NR	NR	NR
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
	01/02/95	<0.05	<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-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
	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
	01/02/95	0.07	0.064	<0.0005	<0.0005	0.004
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
	01/02/95	NR	NR	NR	NR	NR

Table 2

Summary of Historical Groundwater Analytical Results
(milligrams per liter)

Well Number	Sampling Date	TPHG	Benzene	Toluene	Ethylbenzene	Total Xylenes
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
	01/02/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
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
	01/02/95	13	0.4	0.12	2.5	10

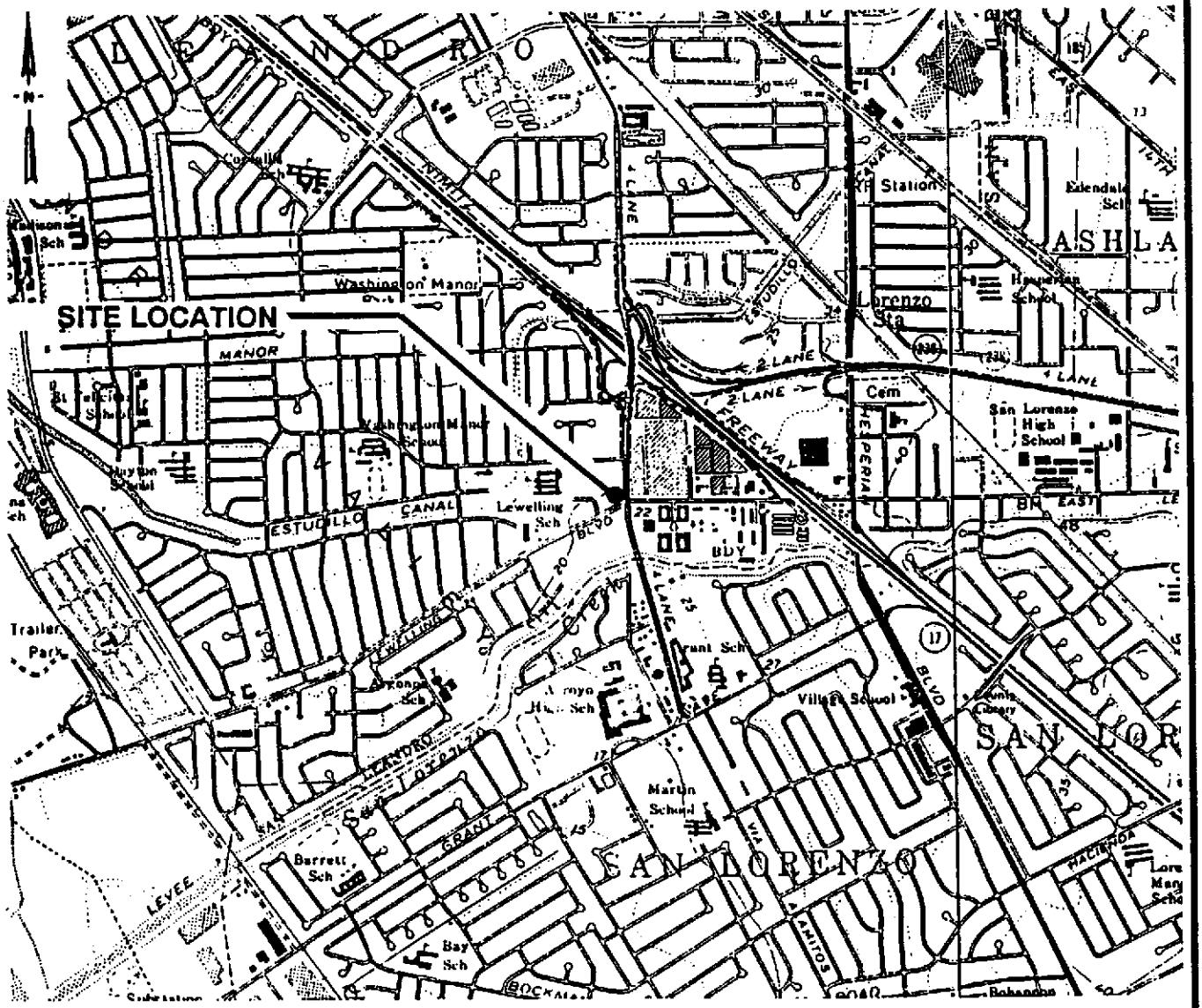
TPHG = Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified).
BTEX = Benzene, toulene, ethylbenzene and total xylenes by EPA Method 8020.
NA = Not analyzed; well inaccessible.
NR = Not required.
* = Compounds detected within the chromatographic range of gasoline but not characteristic 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	
S-5	X		X		
S-6		X			
S-7	X		X		
S-8	X	X	X	X	
S-9		X		X	
S-10		X			
S-11		X		X	
S-12		X		X	
S-13	X				
S-14	X	X	X	X	
S-15			X		
S-16				X	
S-17			X		
S-18				X	
SR-1		X		X	
# wells sampled per quarter:	7	9	7	9	

152753



Base map from GeoStrategies, Inc.

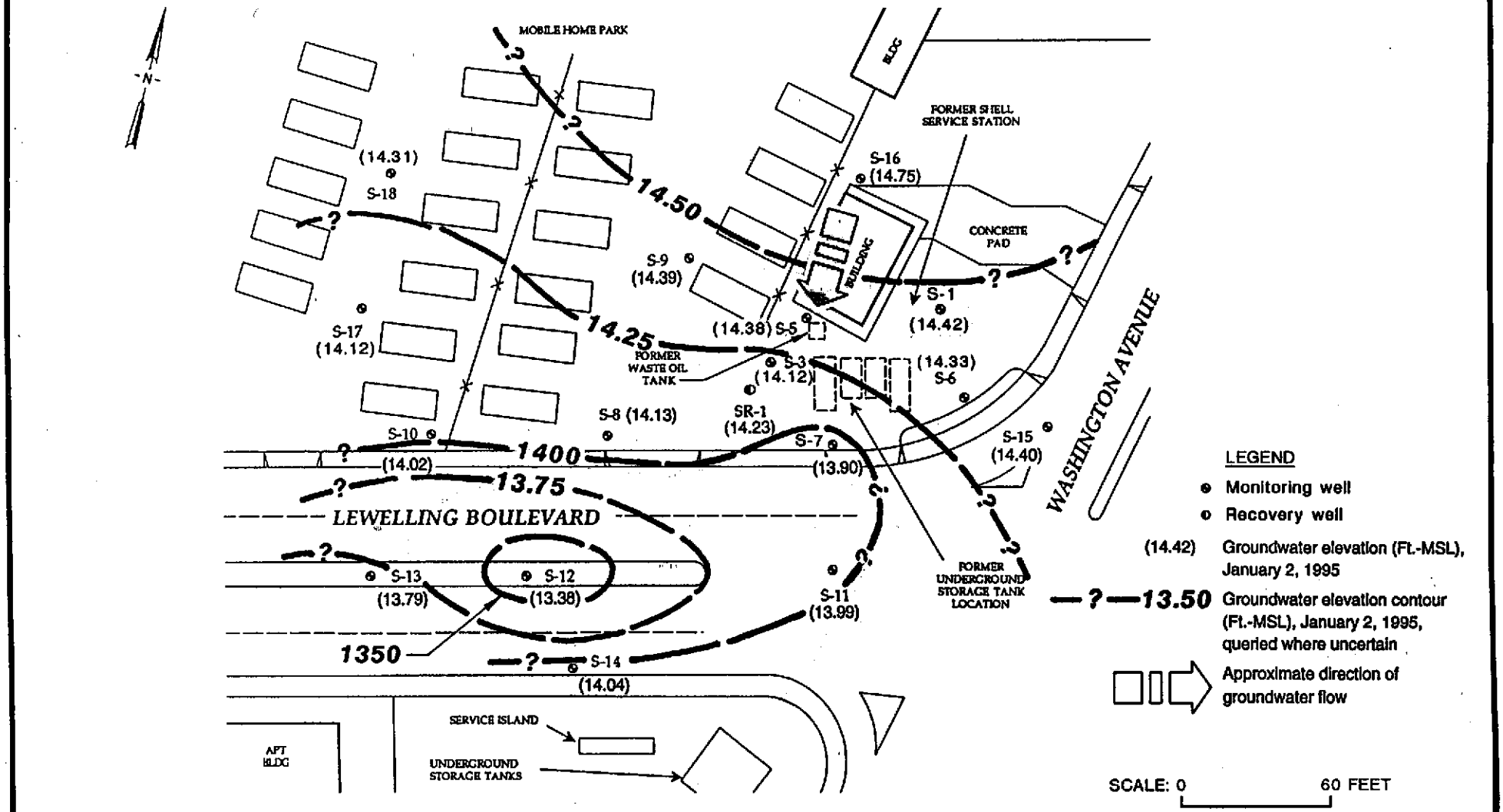
EMCON Associates

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.

2/95

EMCON

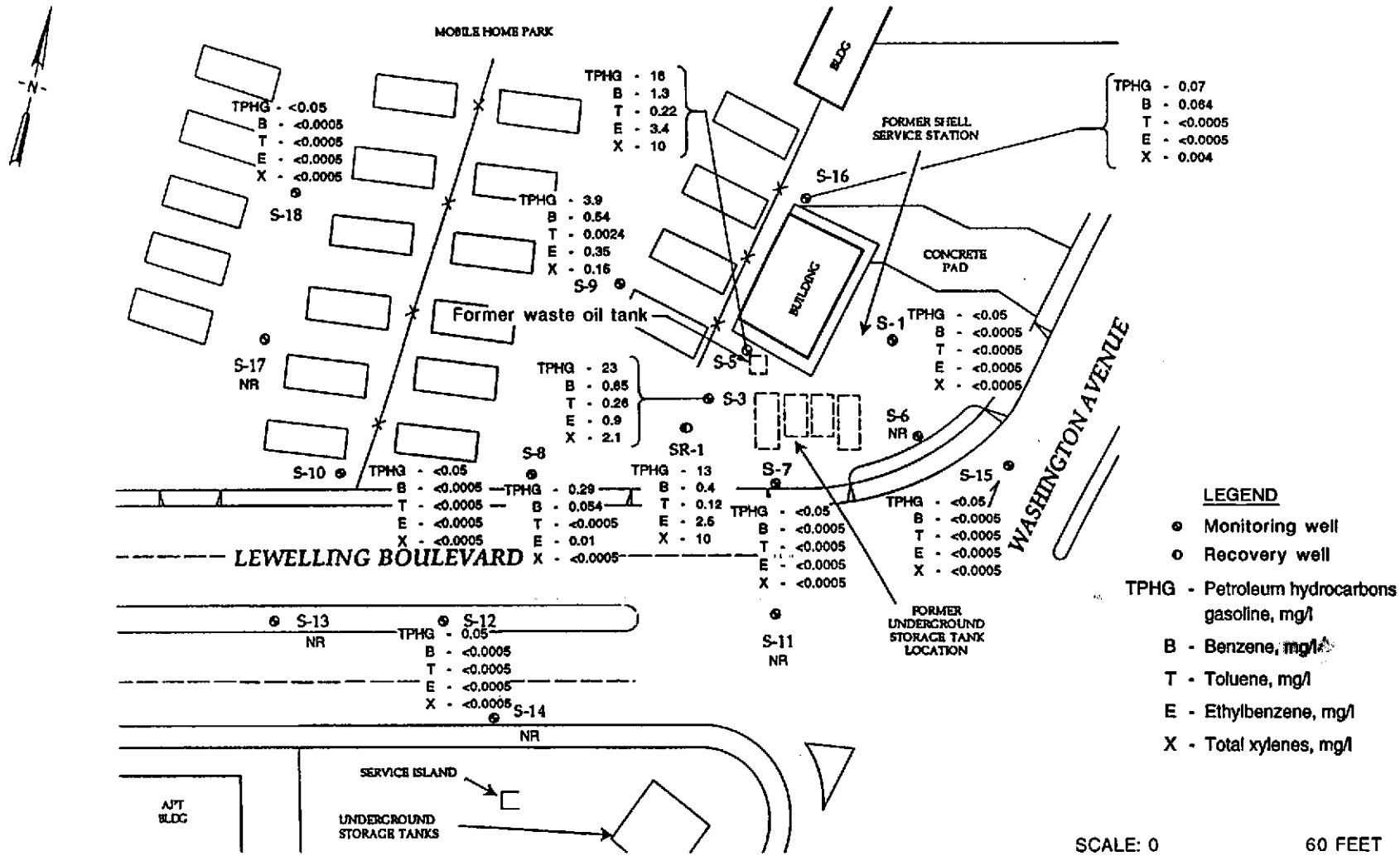
SHELL OIL COMPANY
FORMER SHELL SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

GROUNDWATER CONTOUR MAP, JANUARY 2, 1995

FIGURE
2

PROJECT NO.
0117-115.01

149964



Base map from Hydro-Environmental Technologies, Inc.

2/95

EMCON

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

TPHG AND BTEX CONCENTRATION MAP, JANUARY 2, 1995

FIGURE
3

PROJECT NO.
0117-115.01

ATTACHMENT A

QUARTERLY GROUNDWATER SAMPLING REPORT 950102-J-1
BLAINE TECH SERVICES, INC.

BLAINE
TECH SERVICES INC.

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

January 18, 1995

RECEIVED
JAN 25 1995
EMCON/SACRAMENTO

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:
1st quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950102-J-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 National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #178.

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	1/2/95	TOC	ODOR	NONE	--	--	6.85	19.73
S-3 *	1/2/95	TOC	SHEEN/ODOR	--	--	--	6.36	14.83
S-5	1/2/95	TOC	SHEEN/ODOR	--	--	--	6.65	17.80
S-6	1/2/95	TOC	--	NONE	--	--	7.07	24.07
S-7	1/2/95	TOC	--	NONE	--	--	6.95	23.69
S-8	1/2/95	TOC	ODOR	NONE	--	--	6.19	23.79
S-9	1/2/95	TOC	ODOR	NONE	--	--	6.29	17.59
S-10	1/2/95	TOC	--	NONE	--	--	6.13	17.69
S-11	1/2/95	TOC	--	NONE	--	--	7.25	23.38
S-12	1/2/95	TOC	--	NONE	--	--	7.33	23.66
S-13	1/2/95	TOC	--	NONE	--	--	6.37	23.30
S-14	1/2/95	TOC	--	NONE	--	--	5.95	22.70
S-15	1/2/95	TOC	--	NONE	--	--	7.02	22.65
S-16	1/2/95	TOC	--	NONE	--	--	6.49	23.57
S-17	1/2/95	TOC	--	NONE	--	--	6.33	23.89
S-18	1/2/95	TOC	--	NONE	--	--	6.26	17.65
SR-1	1/2/95	TOC	ODOR	NONE	--	--	6.34	20.74

* Sample DUP was a duplicate sample taken from well S-3.

4766

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950102J1

Date: 1/2/95
Page 1 of 2

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:

Printed Name: JEAN GATINEAU

LAB: NET

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	1/2			X		3						X								
S-3	"			"		11						"								
S-5	"			"		"						"								
S-7	"			"		"						"								
S-8	"			"		"						"								
S-9	"			"		"						"								
S-10	"			"		"						"								
S-12	"			"		"						"							1/3/95 Seal intact S.S.	

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		6452
Water Rem. or Sys. O & M		6453
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.

Relinquished By (signature): Jean Gatineau	Printed Name: JEAN GATINEAU	Date: 1/3/95 Time: 9:45	Received (signature): B Kumbre	Printed Name: G P LUMBRE	Date: 1/3/95 Time: 9:40
Relinquished By (signature): B Kumbre	Printed Name: G P LUMBRE	Date: 1/3/95 Time: 16:00	Received (signature): J Sorensen	Printed Name: J. SORENSEN	Date: 1/4/95 Time: 07:00
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

White Copy with Report — Yellow Copy to Shell

4766

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950102J1

Date: 1/2/95

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:

Printed Name: JEAN GATTNEAU

LAB: NET

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-15	1/2			X		3						X								
S-16	"			"		11						"								
S-18	"			"		"						"								
SR-1	"			"		"						"								
E.B.	"			"		"						"								
DUP	"			"		"						"								
T.B.	"			"		2						"							1/3/95 Seal intact J.S.	

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

Quarterly Monitoring XXX	6461	24 hours ☐
Site Investigation ☐	6441	48 hours ☐
Soil Classify/Disposal ☐	6442	15 days XX (Normal)
Water Classify/Disposal ☐	6443	Other ☐
Soil/Air Rem. or Sys. O & M ☐	6452	
Water Rem. or Sys. O & M ☐	6453	
Other ☐		

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

	Printed Name	Date / Time		Printed Name	Date / Time
Relinquished By (signature): Jean Gattneau	JEAN GATTNEAU	Date: 1/3/95 Time: 1400	Received (signature): D Lumbre	G T LUMBRE	Date: 1/3/95 Time: 1424
Relinquished By (signature): G T Lumbre	G T LUMBRE	Date: 1/3/95 Time: 1600	Received (signature): J Sorensen	J. Sorensen	Date: 1/4/95 Time: 07:00
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

Shell Chain of Custody

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Keller
Blaine Tech Services
985 Timothy Dr.
San Jose, CA 95133

Date: 01/13/1995
NET Client Acct. No: 1821
NET Pacific Job No: 94.06398
Received: 01/04/1995

Client Reference Information

SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-1
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232624

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	ND		50	ug/L	5030		01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	110			% Rec.	5030		01/07/1995	2459

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-3
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232625

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/12/1995	2484
DILUTION FACTOR*	50						01/12/1995	2484
as Gasoline	23,000		2,500	ug/L	5030		01/12/1995	2484
Carbon Range:	C5-C14						01/12/1995	2484
METHOD 8020 (GC,Liquid)	--						01/12/1995	2484
Benzene	850		25	ug/L	8020		01/12/1995	2484
Toluene	260		25	ug/L	8020		01/12/1995	2484
Ethylbenzene	900		25	ug/L	8020		01/12/1995	2484
Xylenes (Total)	2,100		25	ug/L	8020		01/12/1995	2484
SURROGATE RESULTS	--						01/12/1995	2484
Bromofluorobenzene (SURR)	114			% Rec.	5030		01/12/1995	2484

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-5
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232626

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	10						01/07/1995	2459
as Gasoline	18,000		500	ug/L	5030		01/07/1995	2459
Carbon Range:	C5-C12						01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	1,300	FF	50	ug/L	8020		01/09/1995	2468
Toluene	220		5	ug/L	8020		01/07/1995	2459
Ethylbenzene	3,400	FF	50	ug/L	8020		01/09/1995	2468
Xylenes (Total)	10,000	FI	500	ug/L	8020		01/10/1995	2471
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	113			% Rec.	5030		01/07/1995	2459

FF : Compound quantitated at a 100X dilution factor.
FI : Compound quantitated at a 1000X dilution factor.

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-7
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232627

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	ND		50	ug/L	5030		01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	107			% Rec.	5030		01/07/1995	2459

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-8
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232628

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	290		50	ug/L	5030		01/07/1995	2459
Carbon Range:	C5-C12						01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	54	FC	5	ug/L	8020		01/09/1995	2468
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	10		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	104			% Rec.	5030		01/07/1995	2459

FC : Compound quantitated at a 10X dilution factor.

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-9
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232629

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	3,900		50	ug/L	5030		01/07/1995	2459
Carbon Range:	C5-C12						01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	540	FD	10	ug/L	8020		01/09/1995	2468
Toluene	2.4		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	350	FD	10	ug/L	8020		01/09/1995	2468
Xylenes (Total)	150	FD	10	ug/L	8020		01/09/1995	2468
SURROGATE RESULTS	--						01/09/1995	2468
Bromofluorobenzene (SURR)	102			% Rec.	5030		01/09/1995	2468

FD : Compound quantitated at a 20X dilution factor.

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-10
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232630

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	ND		50	ug/L	5030		01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	107			% Rec.	5030		01/07/1995	2459

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-12
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232631

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	50	G1	50	ug/L	5030		01/07/1995	2459
Carbon Range:	C4-C5						01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	102			% Rec.	5030		01/07/1995	2459

G1 : The result for Gasoline is an unk. HC which consists of a single peak.

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-15
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232632

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	ND		50	ug/L	5030		01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	102			% Rec.	5030		01/07/1995	2459

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-16
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232633

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	70		50	ug/L	5030		01/07/1995	2459
Carbon Range:	C5-C12						01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	64	FC	5	ug/L	8020		01/09/1995	2468
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	4.0		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	108			% Rec.	5030		01/07/1995	2459

FC : Compound quantitated at a 10X dilution factor.

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: S-18
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232634

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	ND		50	ug/L	5030		01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	99			% Rec.	5030		01/07/1995	2459

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: SR-1
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232635

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	20						01/07/1995	2459
as Gasoline	13,000		1,000	ug/L	5030		01/07/1995	2459
Carbon Range:	C5-C12						01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	400		10	ug/L	8020		01/07/1995	2459
Toluene	120		10	ug/L	8020		01/07/1995	2459
Ethylbenzene	2,500	FG	100	ug/L	8020		01/09/1995	2468
Xylenes (Total)	10,000	FG	100	ug/L	8020		01/09/1995	2468
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	114			% Rec.	5030		01/07/1995	2459

FG : Compound quantitated at a 200X dilution factor.

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: EB
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232636

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	ND		50	ug/L	5030		01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	104			% Rec.	5030		01/07/1995	2459

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: DUP
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232637

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/12/1995	2484
DILUTION FACTOR*	50						01/12/1995	2484
as Gasoline	28,000		2,500	ug/L	5030		01/12/1995	2484
Carbon Range:	C5-C14						01/12/1995	2484
METHOD 8020 (GC,Liquid)	--						01/12/1995	2484
Benzene	830		25	ug/L	8020		01/12/1995	2484
Toluene	280		25	ug/L	8020		01/12/1995	2484
Ethylbenzene	940		25	ug/L	8020		01/12/1995	2484
Xylenes (Total)	2,200		25	ug/L	8020		01/12/1995	2484
SURROGATE RESULTS	--						01/12/1995	2484
Bromofluorobenzene (SURR)	110			% Rec.	5030		01/12/1995	2484

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

SAMPLE DESCRIPTION: TB
Date Taken: 01/02/1995
Time Taken:
NET Sample No: 232638

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/07/1995	2459
DILUTION FACTOR*	1						01/07/1995	2459
as Gasoline	ND		50	ug/L	5030		01/07/1995	2459
METHOD 8020 (GC,Liquid)	--						01/07/1995	2459
Benzene	ND		0.5	ug/L	8020		01/07/1995	2459
Toluene	ND		0.5	ug/L	8020		01/07/1995	2459
Ethylbenzene	ND		0.5	ug/L	8020		01/07/1995	2459
Xylenes (Total)	ND		0.5	ug/L	8020		01/07/1995	2459
SURROGATE RESULTS	--						01/07/1995	2459
Bromofluorobenzene (SURR)	102			% Rec.	5030		01/07/1995	2459

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)							
as Gasoline	114.0	1.14	1.00	mg/L	01/07/1995	dfw	2459
Benzene	106.0	5.30	5.00	ug/L	01/07/1995	dfw	2459
Toluene	112.0	5.60	5.00	ug/L	01/07/1995	dfw	2459
Ethylbenzene	115.2	5.76	5.00	ug/L	01/07/1995	dfw	2459
Xylenes (Total)	113.3	17.0	15.0	ug/L	01/07/1995	dfw	2459
Bromofluorobenzene (SURR)	114.0	114	100	% Rec.	01/07/1995	dfw	2459
TPH (Gas/BTXE,Liquid)							
as Gasoline	107.0	1.07	1.00	mg/L	01/08/1995	aal	2467
Benzene	98.6	4.93	5.00	ug/L	01/08/1995	aal	2467
Toluene	105.4	5.27	5.00	ug/L	01/08/1995	aal	2467
Ethylbenzene	110.4	5.52	5.00	ug/L	01/08/1995	aal	2467
Xylenes (Total)	109.3	16.4	15.0	ug/L	01/08/1995	aal	2467
Bromofluorobenzene (SURR)	105.0	105	100	% Rec.	01/08/1995	aal	2467
TPH (Gas/BTXE,Liquid)							
as Gasoline	104.0	1.04	1.00	mg/L	01/09/1995	dfw	2468
Benzene	88.2	4.41	5.00	ug/L	01/09/1995	dfw	2468
Toluene	93.8	4.69	5.00	ug/L	01/09/1995	dfw	2468
Ethylbenzene	100.0	5.00	5.00	ug/L	01/09/1995	dfw	2468
Xylenes (Total)	96.0	14.4	15.0	ug/L	01/09/1995	dfw	2468
Bromofluorobenzene (SURR)	95.0	95	100	% Rec.	01/09/1995	dfw	2468
TPH (Gas/BTXE,Liquid)							
as Gasoline	97.0	0.97	1.00	mg/L	01/10/1995	lss	2471
Benzene	96.6	4.83	5.00	ug/L	01/10/1995	lss	2471
Toluene	104.4	5.22	5.00	ug/L	01/10/1995	lss	2471
Ethylbenzene	107.6	5.38	5.00	ug/L	01/10/1995	lss	2471
Xylenes (Total)	104.0	15.6	15.0	ug/L	01/10/1995	lss	2471
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	01/10/1995	lss	2471
TPH (Gas/BTXE,Liquid)							
as Gasoline	97.0	0.97	1.00	mg/L	01/12/1995	aal	2484
Benzene	101.0	5.06	5.00	ug/L	01/12/1995	aal	2484
Toluene	102.0	5.09	5.00	ug/L	01/12/1995	aal	2484
Ethylbenzene	101.0	5.06	5.00	ug/L	01/12/1995	aal	2484
Xylenes (Total)	97.0	14.6	15.0	ug/L	01/12/1995	aal	2484
Bromofluorobenzene (SURR)	115.0	115	100	% Rec.	01/12/1995	aal	2484

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	01/07/1995	dfw	2459
Benzene	ND	0.5	ug/L	01/07/1995	dfw	2459
Toluene	ND	0.5	ug/L	01/07/1995	dfw	2459
Ethylbenzene	ND	0.5	ug/L	01/07/1995	dfw	2459
Xylenes (Total)	ND	0.5	ug/L	01/07/1995	dfw	2459
Bromofluorobenzene (SURR)	107		% Rec.	01/07/1995	dfw	2459
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	01/08/1995	aal	2467
Benzene	ND	0.5	ug/L	01/08/1995	aal	2467
Toluene	ND	0.5	ug/L	01/08/1995	aal	2467
Ethylbenzene	ND	0.5	ug/L	01/08/1995	aal	2467
Xylenes (Total)	ND	0.5	ug/L	01/08/1995	aal	2467
Bromofluorobenzene (SURR)	110		% Rec.	01/08/1995	aal	2467
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	01/09/1995	dfw	2468
Benzene	ND	0.5	ug/L	01/09/1995	dfw	2468
Toluene	ND	0.5	ug/L	01/09/1995	dfw	2468
Ethylbenzene	ND	0.5	ug/L	01/09/1995	dfw	2468
Xylenes (Total)	ND	0.5	ug/L	01/09/1995	dfw	2468
Bromofluorobenzene (SURR)	91		% Rec.	01/09/1995	dfw	2468
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	01/10/1995	lss	2471
Benzene	ND	0.5	ug/L	01/10/1995	lss	2471
Toluene	ND	0.5	ug/L	01/10/1995	lss	2471
Ethylbenzene	ND	0.5	ug/L	01/10/1995	lss	2471
Xylenes (Total)	ND	0.5	ug/L	01/10/1995	lss	2471
Bromofluorobenzene (SURR)	95		% Rec.	01/10/1995	lss	2471
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	01/12/1995	aal	2484
Benzene	ND	0.5	ug/L	01/12/1995	aal	2484
Toluene	ND	0.5	ug/L	01/12/1995	aal	2484
Ethylbenzene	ND	0.5	ug/L	01/12/1995	aal	2484
Xylenes (Total)	ND	0.5	ug/L	01/12/1995	aal	2484
Bromofluorobenzene (SURR)	107		% Rec.	01/12/1995	aal	2484

Ref: SHELL, 15275 Washington, San Leandro, Job No. 950102-J1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Liquid)											232624
as Gasoline	112.0	113.0	0.9	1.00	ND	1.12	1.13	mg/L	01/07/1995	2459	232624
Benzene	101.3	101.7	0.4	23.7	ND	24.0	24.1	ug/L	01/07/1995	2459	232624
Toluene	99.6	97.8	1.8	96.8	ND	96.4	94.7	ug/L	01/07/1995	2459	232624
TPH (Gas/BTXE,Liquid)											232756
as Gasoline	113.0	106.0	6.4	1.00	ND	1.13	1.06	mg/L	01/08/1995	2467	232756
Benzene	104.8	100.4	4.3	23.1	ND	24.2	23.2	ug/L	01/08/1995	2467	232756
Toluene	104.6	99.7	4.7	93.1	ND	97.4	92.8	ug/L	01/08/1995	2467	232756
TPH (Gas/BTXE,Liquid)											232806
as Gasoline	92.0	99.0	7.3	1.00	ND	0.92	0.99	mg/L	01/09/1995	2468	232806
Benzene	95.3	100.9	5.6	21.1	ND	20.1	21.3	ug/L	01/09/1995	2468	232806
Toluene	94.3	101.3	7.1	86.0	ND	81.1	87.1	ug/L	01/09/1995	2468	232806
TPH (Gas/BTXE,Liquid)											232914
as Gasoline	86.0	87.0	1.2	1.00	0.13	0.99	1.00	mg/L	01/10/1995	2471	232914
Benzene	95.3	98.1	2.9	21.4	ND	20.4	21.0	ug/L	01/10/1995	2471	232914
Toluene	96.7	98.5	1.8	86.7	ND	83.8	85.4	ug/L	01/10/1995	2471	232914
TPH (Gas/BTXE,Liquid)											233219
as Gasoline	90.0	93.0	3.3	1.00	ND	0.90	0.93	mg/L	01/12/1995	2484	233129
Benzene	96.0	96.0	0.0	34.1	ND	32.6	32.8	ug/L	01/12/1995	2484	233129
Toluene	94.0	96.0	2.1	105.0	ND	99.2	101.0	ug/L	01/12/1995	2484	233129

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. **Do not** multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
abb.93

COOLER RECEIPT FORM

950102-J1

Project: Shell 15275 Washington, San Leandro Log No: 47616
Cooler received on: 1/4/95 and checked on 1/4/95 by J. Sorensen
(signature) J. Sorensen

Were custody papers present?.....(YES) NO

Were custody papers properly filled out?.....YES (NO)*

Were the custody papers signed?.....(YES) NO

Was sufficient ice used?.....(YES) NO 0.0°C

Did all bottles arrive in good condition (unbroken)?.....(YES) NO

Did bottle labels match COC?.....(YES) NO

Were proper bottles used for analysis indicated?.....(YES) NO

Correct preservatives used?.....(YES) NO

VOA vials checked for headspace bubbles?.....(YES) NO
Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:
5-16	1 of 3

*All VOAs with headspace bubbles have been set aside so they will not be used for analysis.....YES NO

List here all other jobs received in the same cooler:

Client Job #	NET log #

No analysis marked. Run gas/BTEX per Fran Thie to J.S. 1/4/95 07:50.

(coolerrec)