

COLISEUM BOULEVARD PLUME SITE

MEMBRANE INTERFACE PROBE INVESTIGATION



DEPARTMENT OF TRANSPORTATION

April 16, 2001

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**Membrane Interface Probe
Investigation
Coliseum Boulevard Plume Site
April 16, 2001**

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INTRODUCTION

This report provides the results of investigations of the extent of TCE (trichloroethylene) in the area east of Fairground Road and the Montgomery Zoo, north of Chisholm Street, and in the Vista View Development. This investigation was performed from January 15 through February 16, 2001 and was a continuation of efforts to delineate TCE in the shallow sediments and ground water in the above areas. A MIP (membrane interface probe) was used to conduct real-time measurements of sediment conductivity and to screen for chlorinated hydrocarbons to assist in selecting depths to collect samples for laboratory analyses. A Geoprobe was used to collect sediment and ground-water samples. Twenty-five (25) probeholes were completed in the areas described above. The locations of these probeholes (PH 34-PH 58) are shown on Plate 1.

METHODOLOGY

The MIP and soil-conductivity probes were provided and operated by Zebra Environmental Corporation. The MIP is a screening tool used to detect volatile organic compounds in sediments and ground water adjacent to the probe. Detections for this investigation were accomplished by heating the MIP to above the boiling point of TCE. Vapors that are released by the heating cross the membrane of the MIP and are conveyed to the surface by an inert carrier gas. A laboratory-grade PID (photoionization detector) and an ECD (electron-capture detector) were used to analyze the vapors released by the heating. The MIP was advanced at 1-foot intervals so that a continual record of potential occurrences of chlorinated hydrocarbons could be recorded. Measurements with the ECD were important particularly because it is sensitive to occurrences of TCE. Equipment for the MIP also included a system-controller unit, laptop computer, printer, compressed carrier gas, "trunk lines", and associated tools and supplies.



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Typically, an initial probehole was driven with Geoprobe 5400 Series equipment to the first distinct clay beneath the water table. This first distinct clay was identified by review of the conductivity measurements. Measurements with the MIP were reviewed to identify depths of potential TCE occurrences.

After completing the initial probehole, a second probehole was driven within about 3 feet of the initial probehole so that sediment and ground-water samples could be collected. Continuous sediment samples were retrieved from this second probehole and described by an on-site geologist to verify the lithologies interpreted with the soil-conductivity probe. The ground-water samples were collected by the "drop-out-screen" method, which produced ground-water samples from 1- to 3-foot intervals. This second probehole also was advanced to the depth of the first distinct clay.

A combination MIP/soil-conductivity probe was used to drive the initial probehole. The MIP tool, however, is more sensitive to the driving forces than is the soil-conductivity tool. Consequently, a Geoprobe Direct Sensing Soil Conductivity system was used to measure sediment conductivity when there was "refusal" of the combination MIP/soil-conductivity probe. Refusal typically would occur at a zone that contained gravel. Upon refusal, the combination tool would be withdrawn from the probehole and a new, adjacent probehole would be driven with only the soil-conductivity probe. The contacts of the soil-conductivity probe on the combination MIP/soil-conductivity probe were in a dipole array. The contacts of the soil-conductivity probe were in a Wenner array when only the soil-conductivity probe was used.

Probeholes were grouted to the land surface immediately upon completion of the sample collections. Each probehole was pressure grouted by "bottom-up" pumping of a bentonite slurry through the drive pipe. Bentonite was injected until it overflowed at the land surface.



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The performance of the MIP and soil-conductivity systems were checked at the beginning of each work day, when there was a change or adjustment to the MIP or soil-conductivity systems, or a change in the system parameters. Performance of the MIP system was checked by introducing a measured amount of TCE onto the MIP membrane, measuring the trip time and magnitude of the detector responses, and comparing these to standard-performance values. The performance of the soil-conductivity probe was verified with a series of electrical-conductivity measurements and was checked for both isolation and continuity with a hand-held multi-meter. Upon satisfactory completion of these tests, the probe was calibrated by using a series of solutions with known electrical conductivities.

The probes and associated rods were cleaned prior to use at each probehole site. Cleaning was accomplished by: (1) Alconox wash; (2) wash with tap water; and (3) wash/rinse with deionized water.

RESULTS

Plots of the data, with field notes, from the MIP and the soil-conductivity probes are shown in Attachment A. Shown in Attachment A are the sediment conductivities in milliSiemens per Meter (mS/M), the speed (in feet per minute) of advancement of the probe, the measurements from the PID (shown as Detector 1) in microvolts (μV), the measurements from the electron-capture detector (shown as Detector 2) in microvolts, and the temperature of the MIP. The "dips" in the plots for the speed of advancement of the probe and the temperature result from the pauses at 1-foot increments to heat the MIP to the boiling point of TCE.

There is signal noise within the data from the detectors and, sometimes, there is "baseline drift" of the data for the detectors. This drift commonly results from increases in



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the soil moisture as the MIP probe advances. The technicians that operated the MIP and soil-conductivity probe removed the signal noise and provided "corrected" values for the ECD response. A plot of sediment-conductivity, corrected MIP responses, stratigraphy, and the concentrations of TCE in ground-water and sediment samples are provided in Attachment B for each of the 25 probeholes. Ninety-two (92) sediment samples and 53 ground-water samples were collected from the 25 MIP sites (probeholes PH 34 through 58 of Plate 1). The analytical results for the sediment and ground-water samples are compiled in Tables 1 and 2, respectively. These tables also include previous data for the Coliseum Boulevard Site investigations.

The peak and average, corrected, MIP data (for the ECD) were correlated to the concentrations of TCE in the sediment and ground-water samples to determine whether the MIP probe might be used, alone, to expedite delineations of the TCE. The peak ECD values were used ultimately for the comparisons because there was no improvement of the correlations when the average ECD values were used.

A plot of the peak values for the ECD of the MIP and the corresponding, by depth, TCE concentrations is shown in Figure 1. For the plot, "non detects" in the TCE concentrations were entered as a "zero." Review of Figure 1 indicates that there is a break in the data such that TCE concentrations less than 500 ($\mu\text{g/L}$) micrograms per Liter qualitatively correlated with less than 50,000-microvolt outputs from the ECD of the MIP. Further, TCE concentrations greater than 1,000 $\mu\text{g/L}$ qualitatively correlated with greater than 150,000-microvolt outputs from the ECD of the MIP.



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CONCLUSIONS

- MIP-TCE data from this investigation can be divided into two groups: (1) MIP (electron-capture detector) responses less than 50,000 microvolts; and, (2) MIP response greater than 150,000 microvolts.
- MIP data do not correlate sufficiently to provide for use of the MIP to predict the concentrations of TCE in ground water or sediments at the Coliseum Boulevard Site.
- MIP responses (electron-capture detector) that are greater than 150,000 microvolts may indicate ground water at the Coliseum Boulevard Site that contains at least 1,000 micrograms per liter of TCE.
- MIP responses (electron-capture detector) that are less than 50,000 microvolts might be indicative of ground water at the Coliseum Boulevard Site that contains less than 500 micrograms per Liter of TCE.
- The MIP (electron-capture detector) can be used to search qualitatively for zones of shallow ground water, within the Coliseum Boulevard Site, that contain at least 1,000 micrograms per liter of TCE. The results of such investigating with the MIP should be verified with selective collection and analysis of ground-water samples. The results of these additional investigations should be reviewed continually to determine whether the MIP also might be used to identify TCE concentrations that are less than 1,000 micrograms per Liter.

Table 1. Results of analyses for volatile organic compounds in sediment samples; Coliseum Blvd. Plume Investigation; Montgomery, Alabama.

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/kg [micrograms per kilogram])																	
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		M,P Xylenes ³	Toluene ³	Ethylbenzene ³	O-Xylene ³	MC	
				0.1 µg/kg*	3.0 µg/kg**	0.1 µg/kg*	3.0 µg/kg**	0.1 µg/kg*	3.0 µg/kg**	0.1 µg/kg*	3.0 µg/kg**	0.1 µg/kg*	3.0 µg/kg**	0.1 µg/kg*	3.0 µg/kg**	3.0 µg/kg**	3.0 µg/kg**	3.0 µg/kg**	3.0 µg/kg**	3.0 mg/kg**	
				Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Lab ²	Lab ²	Lab ²	Lab ²
PH-1		1	02/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
		8	02/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-2		1	02/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		9	02/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		11.5	02/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		17	02/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-3		1	02/17/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		24	02/17/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
Dup ⁴		24	02/17/00	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	4.2	3.8	ND	ND	ND	
PH-4		1	02/18/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		5	02/18/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		12	02/18/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-5		1	02/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		8	02/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		18	02/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-6		1	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		7.5	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		12	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-7		5.5	02/22/00	ND	NS	ND	NS	ND	NS	ND	NS	5.9	NS	ND	NS	NS	NS	NS	NS	NS	
PH-8		1	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		7	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		17	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-9		1	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		Dup ⁴	1	02/23/00	ND	NS	NS	NS	NS	NS	NS										
		7	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		15	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-10		1	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		6.5	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		17.5	02/23/00	ND	NS	5.2	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-11		1	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		7	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		22.5	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-12		1	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		7.5	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		12.5	02/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-13		1	03/01/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		10	03/01/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		Dup ⁴	10	03/01/00	ND	-	-	-	-	-	-										
PH-14		1	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		8	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		14.5	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-15		1	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		10	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		20	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		Dup ⁴	20	02/28/00	ND	-	ND	-	ND	-	ND										
PH-16		1	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		7	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		16	02/28/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
HA-1		0.5	02/29/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
HA-2		0.5	03/01/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
HA-3		0.5	03/01/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	

Continued on next page

TABLE 1--Continued

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/kg [micrograms per kilogram])																	
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		M,P Xylenes ³	Toluene ³	Ethylbenzene ³	O-Xylene ³	MC	
				2.0 µg/kg*	3.0 µg/kg**	2.0 µg/kg*	3.0 µg/kg**	2.0 µg/kg*	3.0 µg/kg**	2.0 µg/kg*	3.0 µg/kg**	2.0 µg/kg*	3.0 µg/kg**	2.0 µg/kg*	3.0 µg/kg**	2.0 µg/kg*	3.0 µg/kg**	3.0 µg/kg**	3.0 µg/kg**	3.0 µg/kg**	3.0 mg/kg**
		Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Lab ²	Lab ²	Lab ²	Lab ²		
PH-17		3.5-4	05/08/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
		8-8.5	05/08/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
PH-18		3.5-4	05/09/00	ND	NS	ND	NS	ND	NS	3.0	NS	3.0	NS	ND	NS	NS	NS	NS	NS	NS	NS
		7.5-8	05/09/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
Dup ⁴		7.5-8	05/09/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
		9.5-10	05/09/00	ND	NS	ND	NS	ND	NS	3.0	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
PH-19		3.5-4	05/10/00	ND	NS	ND	NS	ND	NS	5.0	NS	6.0	NS	ND	NS	NS	NS	NS	NS	NS	NS
		6-6.5	05/10/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
		8-8.5	05/10/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
		11.5-12	05/10/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
PH-20		5-5.5	05/11/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		10.5-11	05/11/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		21-21.5	05/11/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		23-23.5	05/11/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-21		4-4.5	05/12/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		12.5-13	05/12/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		22.5-23	05/12/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-22		2.5-3	05/15/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		4.5-5	05/15/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		15-15.5	05/15/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-23		4-4.5	05/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		10.5-11	05/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		14-14.5	05/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		21-21.5	05/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		23.5-24	05/16/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-24	Dup ⁴	10-10.5	05/18/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		10-10.5	05/18/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		12.5-13	05/18/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		26.5-27	05/18/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-25		4-4.5	05/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		9.5-10	05/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		19-19.5	05/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-26		2-2.5	05/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		9-9.5	05/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		24.5-25	05/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		24.5-25	05/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-27		2-2.5	05/24/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		9.5-10	05/24/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		26-26.5	05/24/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-28	Dup ⁴	5-5.5	05/25/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		5-5.5	05/25/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		7-7.5	05/25/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		15.5-16	05/25/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/kg [micrograms per kilogram])																
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		M,P Xylenes ³	Toluene ³	Ethylbenzene ³	O-Xylene ³	MC
				Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	3.0 µg/kg**	3.0 µg/kg**	3.0 µg/kg**
PH-29		7-8	08/21/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
		17-18	08/21/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
PH-30		7-8	08/22/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
		13-14	08/22/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
PH-31		5.5-6.5	08/25/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
		10-11	08/25/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
PH-32		6.5-7.5	08/23/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
		37-38	08/23/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND
PH-33		4-5	08/29/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND

Continued on next page

TABLE 1--Continued

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/kg [micrograms per kilogram])																				
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		M,P Xylenes ³	Toluene ³	Ethylbenzene ³	O-Xylene ³	MC				
				Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Lab ⁺	Lab ⁺	Lab ⁺	Lab ⁺	Lab ⁺		
PH-34	ZT-03	12.5-13	01/23/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND			
		30.5-31	01/23/01	N/A	ND	N/A	69.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		41.5-42	01/24/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		42-42.5	01/24/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-35	ZT-04	13-14	01/25/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		28-29	01/25/01	N/A	ND	N/A	91.5	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		34.5-35	01/25/01	N/A	ND	N/A	66.8	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		35-35.5	01/25/01	N/A	ND	N/A	18.8	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PH-36	ZT-05	6-6.5	01/17/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	4.5		
		23-23.5	01/17/00	N/A	ND	N/A	58.5	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	6.3		
		31.5-32	01/17/00	N/A	ND	N/A	9.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	4.6		
PH-37	ZT-07	10.5-11	01/19/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		13.5-14	01/19/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		30.5-31	01/19/00	N/A	ND	N/A	16.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		31-31.5	01/19/00	N/A	ND	N/A	30.4	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-38	ZT-08	15-15.5	01/23/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		37.5-38	01/23/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		38-38.5	01/23/01	N/A	ND	N/A	4.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-39	ZT-09	11.5-12	01/24/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		19-20	01/24/01	N/A	ND	N/A	29.7	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		38-38.5	01/24/01	N/A	ND	N/A	53.3	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		40.5-41	01/24/01	N/A	ND	N/A	128	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		41.5-42	01/24/01	N/A	ND	N/A	61.9	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-40	ZT-10	10-10.5	01/25/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		23-24	01/25/01	N/A	ND	N/A	136	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		24.5-25	01/25/01	N/A	ND	N/A	162	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		32-33	01/25/01	N/A	ND	N/A	121	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		34-34.5	01/25/01	N/A	ND	N/A	81.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-41	ZT-06	14-14.5	01/29/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	9.4	ND	ND	ND	ND		
		22.5-23	01/29/01	N/A	ND	N/A	20.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	7.8	ND	ND	ND	ND		
		37-37.5	01/29/01	N/A	ND	N/A	4.8	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	5.6	ND	ND	ND	ND		
		42-43	01/29/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	8.3	ND	ND	ND	ND		
		43-44	01/29/01	N/A	ND	N/A	49.5	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	5.8	ND	ND	ND	ND		
PH-42	ZT-11	11-12	01/29/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	4.5	ND	ND	ND	ND		
		29-30	01/30/01	N/A	ND	N/A	61.2 ⁵	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		34.5-35.5	01/30/01	N/A	ND	N/A	56.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	3.3	ND	ND	ND	ND		
		35.5-36	01/30/01	N/A	ND	N/A	83.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	4.7	ND	ND	ND	ND		
PH-43	ZT-12A	7-8	01/31/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	15.9		
		26-27	01/31/01	N/A	ND	N/A	56.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	15.2		
		33.5-34.5	01/31/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	13.9		
		35-35.5	01/31/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	13.6		
PH-44	ZT-14	4-4.5	02/01/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		11-12	02/01/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		19-20	02/01/01	N/A	ND	N/A	34.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		32.5-33.5	02/01/01	N/A	ND	N/A	128	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		34.5-35	02/01/01	N/A	ND	N/A	151	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
PH-45	ZT-18	12-13	02/06/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		23-24	02/06/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		24-24.5	02/06/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
PH-46	ZT-15	9-10	02/07/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		22.5-23.5	02/07/01	N/A	ND	N/A	36.4	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		26.5-27	02/07/01	N/A	ND	N/A	132	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
PH-47	ZT-16C	6.5-7.5	02/07/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		23-24	02/07/01	N/A	ND	N/A	26.8	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		25-26	02/07/01	N/A	ND	N/A	105	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		26-27	02/07/01	N/A	ND	N/A	150	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		
		27-28	02/07/01	N/A	ND	N/A	22.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND		

Continued on next page

TABLE 1--Continued

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/kg [micrograms per kilogram])																		
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		M,P Xylenes ¹	Toluene ¹	Ethylbenzene ¹	O-Xylene ¹	MC		
				Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Field	3.0 µg/kg**	Lab ²	Lab ²	Lab ²	Lab ²	Lab ²
PH-48	ZT-17A	11-12	02/08/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND		
		18-19	02/08/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		19-19.5	02/08/01	N/A	ND	N/A	5.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-49	ZT-19	14-15	02/08/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		26-27	02/08/01	N/A	ND	N/A	42.8	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		31-31.5	02/08/01	N/A	ND	N/A	4.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		31.5-32	02/08/01	N/A	ND	N/A	7.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-50	ZT-22	2-3	02/09/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	5.1	ND	ND	ND	ND	
		7-8	02/09/01	N/A	ND	N/A	9.3	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	5.9	ND	ND	ND	ND	
		8.5-9	02/09/01	N/A	ND	N/A	7.7	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	4.1	ND	ND	ND	ND	
PH-51	ZT-23	3-4	02/09/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		10-11	02/09/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	3.4	ND	ND	ND	ND	
		11-12	02/09/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-52	ZT-13A	11-12	02/12/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		31-32	02/12/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		32-32.5	02/12/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-53	ZT-20	19-20	02/13/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		21-21.5	02/13/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		23-23.5	02/13/01	N/A	ND	N/A	7.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		35-36	02/13/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND
		36-36.5	02/13/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND
PH-54	ZT-21	16-17	02/14/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		29-30	02/14/01	N/A	ND	N/A	3.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		30-30.5	02/14/01	N/A	ND	N/A	12.8	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-55	ZT-26A	11-12	02/14/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		24.5-25.5	02/14/01	N/A	ND	N/A	27.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
		25.5-26	02/14/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	4.5	ND	ND	ND	ND
PH-56	ZT-24B	29.5-30.5	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	4.7	ND	ND	ND	ND
		45-46	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	3.3	ND	ND	ND	ND
Blind Sample B		45-46	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-56		50.5-51.5	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
Blind Sample C		50.5-51.5	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-56		52-52.5	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
Blind Sample D		52-52.5	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
PH-57	ZT-25	15-16	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	
Blind Sample F			15-16	02/15/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	
PH-57			52-53	02/16/01	N/A	ND	N/A	4.7	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	
Blind Sample H		52-53	02/16/01	N/A	ND	N/A	11.9	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-58	ZT-27	22-23	02/16/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	3.6	
		44-45	02/16/01	N/A	ND	N/A	4.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND	

¹ Analyzed by field headspace GCMS (Gas Chromatography Mass Spectrometry). The samples that were analyzed in the field were scanned only for tetrachloroethylene; trichloroethylene; carbon tetrachloride; cis-1,2-dichloroethene; 1,1-dichloroethene; and vinyl chloride.

² Testing of the samples was in accordance with Method 8260 outlined in Test Methods for Evaluating Solid Waste, EPA, SW-846, Third Edition, November, 1986.

³ Detected when sample analyzed for VOCs in TTL's laboratory. The samples that were analyzed in TTL's laboratory (see also footnote 2) were scanned for 33 VOCs. Included in these 33 VOCs were the 6 VOCs analyzed in the field. A concentration is shown when the specified VOC was detected.

⁴ Dup=Duplicate sample for Quality Assurance/Quality Control for field analysis.

⁵ The sample was prepared out of the 48-hour preparation holding time for the low-level component of Method 5035. The sample was also prepared and analyzed by the high level technique of Method 5035.

* Detection concentration for the field analyses.

** MDL = Method Detection Limit for the laboratory analyses.

ND = Compound not detected.

NS = Not sampled for laboratory analysis.

N/A = Not applicable; field analysis not performed.

PCE = Tetrachloroethylene
TCE = Trichloroethylene
CT = Carbon Tetrachloride
cis-DCE = cis-1,2-Dichloroethene
1,1-DCE = 1,1-Dichloroethene
VC = Vinyl Chloride
MC = Methylene Chloride

Table 2. Results of analyses for volatile organic compounds in ground-water samples; Coliseum Blvd. Plume Investigation; Montgomery, Alabama.

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/L [micrograms per Liter])																	
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		1,1,1 TCA	CF	CM	BDCM	Toluene	1,4-DCB
				0.1 µg/L*	1.0 µg/L**	0.1 µg/L*	1.0 µg/L**	0.1 µg/L*	1.0 µg/L**	0.1 µg/L*	1.0 µg/L**	0.1 µg/L*	1.0 µg/L**	0.1 µg/L*	1.0 µg/L**	0.1 µg/L*	1.0 µg/L**				
		Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Field ¹	Lab ²	Lab ²	Lab ²	Lab ²	Lab ²	Lab ²	Lab ²
PH-1		9-10	2/16/00	ND	NS	22.6	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		22-23	2/16/00	ND	NS	47.3	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-2		13-14	2/16/00	ND	ND	4.5	14.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2	ND	ND	ND	ND
		28-29	2/16/00	ND	ND	331	1100	ND	ND	ND	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	ND
PH-3		27-28	2/17/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		27-28	3/2/00	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND
		38-39	2/17/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
		65-66	2/17/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS
PH-4		15-16	2/18/00	ND	NS	0.2	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		33-34	2/18/00	ND	NS	690	NS	6.5	NS	0.4	NS	38.5	NS	ND	NS	NS	NS	NS	NS	NS	NS
Dup ⁴		33-34	2/18/00	ND	-	480	-	7.9	-	ND	-	28.3	-	ND	-	ND	ND	ND	ND	ND	
PH-5		20-21	2/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		41-42	2/22/00	ND	NS	120	NS	8.2	NS	ND	NS	152	NS	ND	NS	NS	NS	NS	NS	NS	NS
PH-6		26-27	2/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		23-27	2/29/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		57-60	2/29/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dup ⁴		57-60	2/29/00	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	
PH-8		22-23	2/23/00	ND	ND	0.9	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		55-58	3/1/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dup ⁴		55-58	3/1/00	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	
PH-9		19-20	2/23/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
		52-55	2/29/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PH-10		19-20	2/23/00	ND	NS	113	NS	ND	NS	32.5	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
		45-48	2/29/00	ND	ND	1.1	2.5	ND	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND	
PH-11		27-28	2/23/00	3.0	<5.0 ⁵	5000 J ⁷	8640	16.4	17.8	3.7	<5.0 ⁵	51.5	40.0	ND	<5.0 ⁵	65.4	ND	ND	ND	ND	
		57-60	2/29/00	ND	ND	0.1	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-12		24-25	2/23/00	ND	ND	75.3	41.1	ND	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	
		Dup ⁴	24-25	2/23/00	ND	-	92.1	-	ND	-	ND	-	0.4	-	ND	-	ND	ND	ND	ND	
PH-12		48-51	2/29/00	0.2	<10.0 ⁶	11000 J ⁷	12600	135	228	0.8	<10.0 ⁶	793	535	ND	<10.0 ⁶	15.3	ND	ND	ND	ND	
		Dup ⁴	48-51	2/29/00	0.3	-	9500 J ⁷	-	213	-	1.0	-	762	-	ND	-	ND	ND	ND	ND	
PH-13		22-23	3/1/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		57-60	3/1/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PH-14		31-32	2/28/00	0.1	ND	1440 J ⁷	1220	1.7	ND	1.9	1.7	11.3	6.0	ND	ND	3.8	2.0	ND	ND	ND	
		Dup ⁴	31-32	2/28/00	0.2	-	1690 J ⁷	-	2.2	-	2.4	-	15.1	-	ND	-	ND	ND	ND	ND	
PH-14		50-53	2/28/00	ND	<5.0 ⁵	3860 J ⁷	4890	62.2	87.0	0.5	<5.0 ⁵	445	310	ND	<5.0 ⁵	9.3	ND	ND	ND		
PH-15		30-31	2/28/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		59-62	2/28/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	
PH-16		17-18	2/28/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		

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TABLE 2-Continued

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/L [micrograms per Liter])																		
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		1,1,1 TCA	CF	CM	BDCM	Toluene	1,4-DCB	
				2.0 µg/L*	1.0 µg/L**	2.0 µg/L*	1.0 µg/L**	2.0 µg/L*	1.0 µg/L**	2.0 µg/L*	1.0 µg/L**	2.0 µg/L*	1.0 µg/L**	2.0 µg/L*	1.0 µg/L**	2.0 µg/L*	1.0 µg/L**					
				Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²	Field ²	Lab ²					
PH-17		11-12	5/8/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS		
		43.5-45.5	5/24/00	ND	NS	37.9	NS	ND	NS	ND	NS	7.30	NS	25.7	NS	NS	NS	NS	NS	NS	NS	
		51-52	5/8/00	ND	NS	36.4d ⁸	NS	ND	NS	ND	NS	5.25	NS	98.2d ⁸	NS	NS	NS	NS	NS	NS	NS	
Dup ^{4,9}		51-52	5/9/00	ND	NS	30.3	NS	ND	NS	ND	NS	4.20	NS	75.7	NS	NS	NS	NS	NS	NS		
		PH-18	12-13	5/9/00	ND	NS	NS	NS	NS	NS	NS											
PH-18		37-38	5/9/00	ND	ND	305d ⁸	305	ND	11.7	ND	ND	11.4	16.6	ND	ND	ND	2.2	ND	ND	ND		
		PH-19	13-14	5/10/00	ND	NS	5.8	NS	NS	NS	NS	NS	NS									
PH-19		54-55	5/10/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS		
		PH-20	23-24	5/11/00	ND	NS	NS	NS	NS	NS	NS											
PH-20		47-48	5/11/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	5.12	NS	NS	NS	NS	NS	NS		
		PH-21	24-26	5/12/00	ND	NS	5.72	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
PH-21		54-56	5/12/00	ND	NS	7.81	NS	ND	NS	ND	NS	ND	NS	54.6	NS	NS	NS	NS	NS	NS		
		PH-22	17-18	5/15/00	ND	NS	5.64	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
PH-22		42-44	5/15/00	ND	NS	17.6	NS	ND	NS	ND	NS	ND	NS	28.0	NS	NS	NS	NS	NS	NS		
		PH-23	22-24	5/16/00	ND	NS	NS	NS	NS	NS	NS											
PH-23		58-60	5/17/00	ND	NS	16.4	NS	ND	NS	ND	NS	ND	NS	39.4	NS	NS	NS	NS	NS	NS		
		PH-24	28-30	5/18/00	ND	NS	20.4	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	NS	NS	NS	NS	
PH-24		58-60	5/18/00	ND	NS	2.57	NS	ND	NS	ND	NS	6.43	NS	6.62	NS	NS	NS	NS	NS	NS		
		Dup	58-60	5/18/00	ND	NS	2.38	NS	ND	NS	ND	NS	14.10	NS	10.9	NS	NS	NS	NS	NS	NS	
PH-25		21-23	5/22/00	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	2.80	NS	NS	NS	NS	NS	NS		
		49-51	5/26/00	NA	ND	NA	59.2	NA	ND	NA	ND	NA	3.6	NA	ND	ND	ND	ND	ND	ND		
PH-26		26-28	5/23/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
		32.5-34.5	5/23/00	ND	NS	40.5	NS	ND	NS	ND	NS	ND	NS	6.9	NS	NS	NS	NS	NS	NS		
Dup		32.5-34.5	5/23/00	ND	NS	44.6	NS	ND	NS	ND	NS	ND	NS	11.1	NS	NS	NS	NS	NS	NS		
		54-56	5/23/00	ND	NS	ND	NS	ND	NS	ND	NS	18.2	NS	30.0	NS	NS	NS	NS	NS	NS		
PH-27		27-29	5/24/00	ND	NS	297d ⁸	NS	ND	NS	19.7	NS	8.10	NS	ND	NS	NS	NS	NS	NS	NS		
		55-58	5/24/00	ND	NS	3.61	NS	ND	NS	ND	NS	ND	NS	6.21	NS	NS	NS	NS	NS	NS		
PH-28		16.5-20	5/25/00	ND	NS	2.49	NS	ND	NS	ND	NS	ND	NS	4.38	NS	NS	NS	NS	NS	NS		
		44.5-46.5	5/25/00	ND	NS	48.1	NS	ND	NS	ND	NS	42.5	NS	14.9	NS	NS	NS	NS	NS	NS		

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/L [micrograms per Liter])																	
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		1,1,1 TCA	CF	CM	BDCM	Toluene	1,4-DCB
				1.0 µg/L**		1.0 µg/L**		1.0 µg/L**		1.0 µg/L**		1.0 µg/L**		1.0 µg/L**		1.0 µg/L**	1.0 µg/L**	1.0 µg/L**	1.0 µg/L**	1.0 µg/L**	1.0 µg/L**
				Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²				
PH-29		19-20	8/21/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	
		41-43	8/21/00	N/A	ND	N/A	1.9	N/A	ND	N/A	ND	N/A	1.5	N/A	ND	ND	5.0	ND	ND	ND	
PH-30		15-16	8/22/00	N/A	ND	N/A	12.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	
		40.5-42.5	8/22/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	
PH-31		12-15	8/25/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	
		35.5-37.5	8/25/00	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	
PH-32		39-41	8/23/00	N/A	ND	N/A	3.7	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	
		77-79	8/24/00	N/A	ND	N/A	1.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	1.7	ND	ND	ND	
PH-33		6-8	8/29/00	N/A	ND	N/A	283	N/A	ND	N/A	ND	N/A	ND	N/A	ND	13.4	ND	1.6	ND	ND	
		11-13	8/29/00	N/A	ND	N/A	374	N/A	ND	N/A	ND	N/A	1.4	N/A	ND	10.6	ND	1.1	ND	ND	
		28-30	8/29/00	N/A	ND	N/A	8.4	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	5.8	ND	ND	ND	

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TABLE 2--Continued

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/L [micrograms per Liter])																	
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		1,1,1 TCA	CF	CM	BDCM	Toluene	1,4-DCB
				Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²				
PH-34	ZT-03	16-18	1/23/01	N/A	ND	N/A	37.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		40-42	1/24/01	N/A	ND	N/A	31.3	N/A	5.5	N/A	1.0	N/A	52.3	N/A	ND	ND	2.7	ND	ND	ND	ND
PH-35	ZT-04	15-17	1/25/01	N/A	ND	N/A	157	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		33-35	1/25/01	N/A	2.9	N/A	2,020	N/A	ND	N/A	ND	N/A	9.8	N/A	ND	ND	ND	ND	ND	ND	ND
PH-36	ZT-05	12-16	1/17/01	N/A	ND	N/A	16.7	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		28.5-32	1/17/01	N/A	ND	N/A	978	N/A	ND	N/A	ND	N/A	5.5	N/A	ND	ND	ND	ND	ND	ND	ND
PH-37	ZT-07	15-17	1/19/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	38.0	ND	ND	ND	ND
		29-31	1/19/01	N/A	ND	N/A	161	N/A	11.2	N/A	ND	N/A	13.7	N/A	ND	ND	ND	ND	ND	ND	ND
PH-38	ZT-08	16-18	1/23/01	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		36-38	1/23/01	N/A	ND	N/A	89.1	N/A	ND	N/A	ND	N/A	5.1	N/A	ND	ND	ND	ND	ND	ND	ND
PH-39	ZT-09	13-15	1/24/01	N/A	ND	N/A	31.4	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		39.5-41.5	1/24/01	N/A	ND	N/A	1280	N/A	ND	N/A	ND	N/A	4.7	N/A	ND	ND	ND	ND	ND	ND	ND
PH-40	ZT-10	11-14	1/25/01	N/A	ND	N/A	31.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		32-34	1/25/01	N/A	3.3	N/A	2,020	N/A	ND	N/A	ND	N/A	5.4	N/A	ND	ND	ND	ND	ND	ND	ND
PH-41	ZT-06	16-18	1/29/01	N/A	5.0	N/A	20.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	1.1	ND
		41-43	1/29/01	N/A	4.4	N/A	437	N/A	ND	N/A	ND	N/A	4.1	N/A	ND	ND	ND	ND	ND	ND	ND
PH-42	ZT-11	12-14	1/29/01	N/A	2.3	N/A	451	N/A	ND	N/A	ND	N/A	2.8	N/A	ND	ND	1.2	ND	ND	ND	ND
		34-36	1/30/01	N/A	3.8	N/A	351	N/A	12.4	N/A	ND	N/A	12.2	N/A	ND	ND	1.5	ND	ND	ND	ND
PH-43	ZT-12A	11-15	1/31/01	N/A	4.1	N/A	141	N/A	ND	N/A	2.7	N/A	1.1	N/A	ND	ND	ND	ND	ND	1.1	ND
		31-35	1/31/01	N/A	1.3	N/A	222	N/A	ND	N/A	ND	N/A	1.1	N/A	ND	ND	ND	ND	ND	ND	ND
PH-44	ZT-14	12-15	2/1/01	N/A	1.8	N/A	402	N/A	ND	N/A	ND	N/A	1.8	N/A	ND	ND	ND	ND	ND	ND	ND
		19-20	2/1/01	N/A	2.1	N/A	1040	N/A	ND	N/A	ND	N/A	5.1	N/A	ND	ND	1.1	ND	ND	ND	ND
		32-35	2/1/01	N/A	2.7	N/A	1,640	N/A	ND	N/A	ND	N/A	7.5	N/A	ND	ND	ND	ND	ND	ND	ND
PH-45	ZT-18	13-16	2/6/01	N/A	3.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		19-23	2/6/01	N/A	2.6	N/A	31.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
PH-46	ZT-15	11-14	2/7/01	N/A	1.6	N/A	57.4	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		22.5-26.5	2/7/01	N/A	3.3	N/A	1,170	N/A	ND	N/A	ND	N/A	5.8	N/A	ND	ND	ND	ND	ND	ND	ND
PH-47	ZT-16C	8-10	2/7/01	N/A	2.6	N/A	12.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	1.0	ND	ND	ND	ND
		23.5-27.5	2/7/01	N/A	2.9	N/A	1080	N/A	ND	N/A	ND	N/A	3.9	N/A	ND	ND	ND	ND	ND	ND	ND
PH-48	ZT-17A	15-18	2/8/01	N/A	1.3	N/A	49.6	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		18-20	2/8/01	N/A	3.7	N/A	47.5	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	1.2	ND
PH-49	ZT-19	15-18	2/8/01	N/A	1.9	N/A	411	N/A	ND	N/A	1.7	N/A	1.9	N/A	ND	ND	ND	ND	ND	ND	ND
		27.5-31.5	2/8/01	N/A	4.4	N/A	300	N/A	ND	N/A	ND	N/A	1.4	N/A	ND	ND	ND	ND	ND	1.0	ND
PH-50	ZT-22	3-6	2/9/01	N/A	1.6	N/A	18.6	N/A	ND	N/A	5.2	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		7-9	2/9/01	N/A	3.2	N/A	122	N/A	ND	N/A	8.3	N/A	ND	N/A	ND	ND	ND	ND	ND	1.1	ND
PH-51	ZT-23	4-6	2/9/01	N/A	1.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		10-12	2/9/01	N/A	3.4	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
PH-52	ZT-13A	12-15	2/12/01	N/A	1.5	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		28-32	2/12/01	N/A	ND	N/A	3.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
PH-53	ZT-20	20-23	2/13/01	N/A	3.6	N/A	27.0	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	1.1	ND
		33-36	2/13/01	N/A	2.8	N/A	28.4	N/A	ND	N/A	1.1	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
PH-54	ZT-21	17-20	2/14/01	N/A	2.2	N/A	6.3	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
		28-30	2/14/01	N/A	2.8	N/A	115	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
PH-55	ZT-26A	13-16	2/14/01	N/A	3.3	N/A	35.0	N/A	ND	N/A	22.8	N/A	1.1	N/A	ND	ND	ND	ND	ND	ND	ND
		23-26	2/14/01	N/A	3.7	N/A	302	N/A	ND	N/A	ND	N/A	3.6	N/A	ND	ND	ND	ND	ND	1.2	ND

Continued on next page

TABLE 2--Continued

Sample Identifier	MIP Identifier	Depth of Sample (ft. BLS)	Sample Date	(Concentrations are in µg/L [micrograms per Liter])																	
				PCE		TCE		CT		cis-DCE		1,1-DCE		VC		1,1,1 TCA	CF	CM	BDCM	Toluene	1,4-DCB
				Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²	Field	Lab ²				
PH-56***	ZT-24B	31-34	2/15/01	N/A	4.1	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	1.3	ND	ND	1.5	ND
Blind Sample A***		31-34	2/15/01	N/A	4.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	1.4	ND	ND	1.6	ND
PH-56		48.5-51.5	2/15/01	N/A	3.1	N/A	ND	N/A	17.5	N/A	ND	N/A	ND	N/A	ND	ND	1.8	ND	ND	ND	ND
Blind Sample E		48.5-51.5	2/15/01	N/A	3.3	N/A	ND	N/A	17.4	N/A	ND	N/A	ND	N/A	ND	ND	1.8	ND	ND	ND	ND
PH-57	ZT-25	17-19	2/15/01	N/A	1.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
Blind Sample G		17-19	2/15/01	N/A	2.2	N/A	ND	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	ND	ND
PH-57		51-53	2/16/01	N/A	1.9	N/A	155	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	2.4	1.3
Blind Sample I		51-53	2/16/01	N/A	2.2	N/A	150	N/A	ND	N/A	ND	N/A	ND	N/A	ND	ND	ND	ND	ND	2.8	1.5
PH-58	ZT-27	22-24	2/16/01	N/A	1.8	N/A	103	N/A	ND	N/A	1.8	N/A	ND	N/A	ND	ND	ND	ND	ND	2.2	ND
		43-45	2/16/01	N/A	2.3	N/A	116	N/A	ND	N/A	ND	N/A	1.0	N/A	ND	ND	ND	ND	ND	2.8	1.1

Notes:

- ¹ Analyzed by field headspace GCMS (Gas Chromatography Mass Spectrometry). The samples that were analyzed in the field were scanned only for tetrachloroethylene; trichloroethylene; carbon tetrachloride; cis-1,2-dichloroethene; 1,1-dichloroethene; and vinyl chloride.
- ² Testing of the samples was in accordance with Method 8260 outlined in Test Methods for Evaluating Solid Waste, EPA, SW-846, Third Edition, November, 1986.
- ³ Detected when sample analyzed for VOCs in TTL's laboratory. The samples that were analyzed in TTL's laboratory (see also footnote 2) were scanned for 33 VOCs. Included in these 33 VOCs were the 6 VOCs analyzed in the field. A concentration is shown when the specified VOC was detected.
- ⁴ Dup=Duplicate sample for Quality Assurance/Quality Control for field analysis.
- ⁵ Detection concentration elevated to <5.0 due to 1/5 dilution of sample.
- ⁶ Detection concentration elevated to <10.0 due to .5/5 dilution of sample.
- ⁷ J=Estimated concentration.
- ⁸ d=Individual value obtained by dilution.
- ⁹ PQL was 4.0 µg/L.
- * Detection concentration for the field analyses.
- ** MDL = Method Detection Limit for the laboratory analyses.
- *** Trichlorofluoromethane was detected in PH-56 @ 31-34' (1.5 µg/L) and in Blind Sample A (1.8 µg/L) on 2/15/01.
- ND = Compound not detected.
- NS = Not sampled for laboratory analysis.
- NA = Not Analyzed
- N/A = Not Applicable; field analyses not performed.

PCE = Tetrachloroethylene
TCE = Trichloroethylene
CT = Carbon Tetrachloride
cis-DCE = cis-1,2-Dichloroethene
1,1-DCE = 1,1-Dichloroethene
VC = Vinyl Chloride
1,1-TCA = 1,1,1 Trichloroethane
CF = Chloroform
CM = Chloromethane
BDCM = Bromodichloromethane
1,4-DCB = 1,4-Dichlorobenzene

