SDMS Document
111537

BROS REMEDIAL INVESTIGATION REPORT REVISED DRAFT

VOLUME 2 OF 2

Submitted:

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Submitted By:

BROS Technical Committee

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Table 2-1. Summary of LNAPL Soil Sampling Locations and Rational. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	Total Depth (feet)	Sample Depth Interval	Analytical Parameters	Continuous Split Spoon Intervals	Boring Justification
Property Perimeter Borings					
N-1	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS 30 to 40 feet BGS	Delineation of NAPL encountered in B-1 and B-2 along southwestern property boundary
N-2	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet --- • 13 to14 feet BGS	• NAPL Screening • NAPL Screening --- • PCBs, VOCs	0 to 20 feet BGS 30 to 40 feet BGS	Delineation of NAPL and soil exceedances encountered in L-16B along southwestern property boundary
N-3	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet --- • 15 to 15.5 feet BGS	• NAPL Screening • NAPL Screening --- • PCBs, VOCs	0 to 20 feet BGS 30 to 40 feet BGS	Delineation of NAPL and soil exceedances encountered in P-20 along southwestern property boundary
N-4	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS 30 to 40 feet BGS	Delineation of NAPL encountered L-15B along southwestern property boundary
N-5 through N-9	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS	Delineation of NAPL along the southeastern and eastern property boundary (L-14B, S9W-2, S11AA-2, B-13-EE1, and L-13B)
N-10 and N-11	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS	Delineation of NAPL encountered along the eastern property boundary (L-12B and the drum excavation area) and delineation of soil exceedances
N-12	30	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 30 feet BGS	Delineation of B-27 and L-12B along the northeastern property boundary
N-13	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS	Delineation of P-43 along the northeastern property boundary
N-14	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS	Delineation of P-42 along the northeastern property boundary
N-15	30	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 30 feet BGS	Delineation of P-40 along the northeastern property boundary

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Table 2-1. Summary of LNAPL Soil Sampling Locations and Rational. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	Total Depth (feet)	Sample Depth Interval	Analytical Parameters	Continuous Split Spoon Intervals	Boring Justification
N-16	50	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet --- • 5 to 6 feet BGS	• NAPL Screening • NAPL Screening --- • PCBs	12 to 50 feet BGS	Delineation of NAPL and soil exceedances in P-31 and NAPL in MW-13A along the northern property boundary
N-17	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet --- • 0 to 1 feet BGS	• NAPL Screening • NAPL Screening --- • PCBs	0 to 20 feet BGS	Delineation of NAPL and soil exceedances in P-30 along the northern property boundary
N-18	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS	Delineation of NAPL and soil exceedances in P-29 along the northern property boundary
N-19	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet --- • 4 to 4.5 feet BGS	• NAPL Screening • NAPL Screening --- • PCBs	0 to 20 feet BGS	Delineation of NAPL and soil exceedances in P-26 along the northern property boundary
N-20	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet --- • 8 to 8.5 feet BGS	• NAPL Screening • NAPL Screening --- • PCBs, VOCs	0 to 20 feet BGS	Delineation of NAPL and soil exceedances in P-25 along the northern property boundary
N-31	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS	Delineation of NAPL encountered in P-21 along western property boundary
Lagoon Borings					
L-5	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 20 feet BGS	Further delineation in the zone above the water table in the Lagoon Area between borings L-2 and L-8.
L-8	31	• 29 to 31 feet BGS	• Geotechnical	29 to 31 feet BGS Ring Barrel Samples	Evaluate the ability of peat to conduct free phase NAPL in the vicinity of L-8
L-9A	17	• 16 to 17 feet BGS	• Geotechnical	16 to 17 feet BGS Ring Barrel Samples	Evaluate the ability of peat to conduct free phase NAPL in the vicinity of L-9A
MW-26D	23	• Interval between exhibiting the greatest degree of impact based on field screening and visual observations	• SPLP VOCs, SPLP SVOCs	16 to 23 feet BGS	Evaluate residual NAPL in the vicinity of MW-26D as source of ground water contamination
N-21	40	• Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening	16 to 40 feet BGS	Delineation of L-8 and MW-26D in the Lagoon Area

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Table 2-1. Summary of LNAPL Soil Sampling Locations and Rational. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	Total Depth (feet)	Sample Depth Interval	Analytical Parameters	Continuous Split Spoon Intervals	Boring Justification
N-22	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 40 feet BGS	Delineation of L-8 and L-5 in the Lagoon Area
N-23 through N-25, N-27 through N-28	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 40 feet BGS	Further delineation of data gap areas within the Lagoon Area.
N-31	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening	0 to 20 feet BGS	Delineation of the extent of NAPL north of boring N-1
N-32	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening	0 to 20 feet BGS	Delineation of the extent of NAPL south of boring N-6
N-33	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening	0 to 20 feet BGS	Delineation of the extent of NAPL east of boring N-6
N-34	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening	0 to 20 feet BGS	Delineation of the extent of NAPL west of boring N-1
N-35	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening	0 to 40 feet BGS	Delineation of the extent of NAPL west of boring N-4
N-36	20	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening	0 to 20 feet BGS	Delineation of the extent of NAPL west of boring N-2
N-37	0.5	• Six-inch interval above the water table	• NAPL Screening	0 to 0.5 feet BGS	Delineation of the extent of NAPL west of boring N-7
N-38	0.5	• Six-inch interval above the water table	• NAPL Screening	0 to 0.5 feet BGS	Delineation of the extent of NAPL south of boring N-7
N-39	0.5	• Six-inch interval above the water table	• NAPL Screening	0 to 0.5 feet BGS	Delineation of the extent of NAPL east of boring N-7
N-40	0.5	• Six-inch interval above the water table	• NAPL Screening	0 to 0.5 feet BGS	Delineation of the extent of NAPL south of boring L-13B
N-41	0.5	• Six-inch interval above the water table	• NAPL Screening	0 to 0.5 feet BGS	Delineation of the extent of NAPL south of boring L-13B
N-42	0.5	• Six-inch interval above the water table	• NAPL Screening	0 to 0.5 feet BGS	Delineation of the extent of NAPL south east of boring B-13-EE1

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Table 2-1. Summary of LNAPL Soil Sampling Locations and Rational. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	Total Depth (feet)	Sample Depth Interval	Analytical Parameters	Continuous Split Spoon Intervals	Boring Justification
Process Area Borings					
P-22	12	• Interval exhibiting the greatest degree of impact based on field screening and visual observations	• SPLP VOCs, SPLP SVOCs	5 to 12 feet BGS	Evaluate residual NAPL in the vicinity of P-22 as source of ground water contamination
P-23	13	• Interval exhibiting the greatest degree of impact based on field screening and visual observations	• SPLP VOCs, SPLP SVOCs	6 to 13 feet BGS	Evaluate residual NAPL in the vicinity of P-23 as source of ground water contamination
P-26	8	• 0 to 1 foot BGS • 3 to 5 feet BGS • Interval exhibiting the greatest degree of impact based on field screening and visual observations	• Total Cr, Cr^{6+} • Geotechnical • SPLP VOCs, SPLP SVOCs	0 to 8 feet BGS (3 to 5 feet BGS Ring Barrel Samples)	Further evaluation of chromium detections in boring P-26, Evaluate the ability of sand to conduct free phase NAPL in the vicinity of P-26, Evaluate residual NAPL in the vicinity of P-26 as source of ground water contamination
P-28	13	• 8 to 10 feet BGS • Interval between 5 and 13 feet BGS exhibiting the greatest degree of impact based on field screening and visual observations	• Geotechnical • SPLP VOCs, SPLP SVOCs	0 to 13feet BGS (8 to 10 feet BGS Ring Barrel Samples)	Evaluate the ability of sand to conduct free phase NAPL in the vicinity of P-28, Evaluate residual NAPL in the vicinity of P-28 as source of ground water contamination
P-31	1	• 0 to 1 foot BGS	• Total Cr, Cr^{6+}	0 to 1 foot BGS	Further evaluation of chromium detections in boring P-31
P-36	13	• 0 to 1 foot BGS • 4 to 5 feet BGS • Interval between 6 and 13 feet BGS exhibiting the greatest degree of impact based on field screening and visual observations	• Total Cr, Cr^{6+} • Geotechnical • SPLP VOCs, SPLP SVOCs	0 to 13 feet BGS (4 to 5 feet BGS Ring Barrel Samples)	Further evaluation of chromium detections in boring P-36, Evaluate the ability of silty clay to conduct free phase NAPL in the vicinity of P-36, Evaluate residual NAPL in the vicinity of P-36 as source of ground water contamination
P-37	17	• 6 to 7 feet BGS • 13 to 14 Feet BGS • Interval between 10 and 17 feet BGS exhibiting the greatest degree of impact based on field screening and visual observations	• Geotechnical • Geotechnical • SPLP VOCs, SPLP SVOCs	0 to 17 feet BGS (6 to 7 and 13 to 14 feet BGS Ring Barrel Samples)	Evaluate the ability of sand, silt and ash to conduct free phase NAPL in the vicinity of P-37, Evaluate residual NAPL in the vicinity of P-37 as source of ground water contamination
B-1	11	• 7 to 9 feet BGS • Interval between 4 and 11 feet BGS exhibiting the greatest degree of impact based on field screening and visual observations	• Geotechnical • SPLP VOCs, SPLP SVOCs	0 to 11 feet BGS (7 to 9 feet BGS Ring Barrel Samples)	Evaluate the ability of sand to conduct free phase NAPL in the vicinity of B-1, Evaluate residual NAPL in the vicinity of B-1 as source of ground water contamination

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Table 2-1. Summary of LNAPL Soil Sampling Locations and Rational. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	Total Depth (feet)	Sample Depth Interval	Analytical Parameters	Continuous Split Spoon Intervals	Boring Justification
B-33	15	• 11 to 13 feet BGS • Interval between 8 and 15 feet BGS exhibiting the greatest degree of impact based on field screening and visual observations	• Geotechnical • SPLP VOCs, SPLP SVOCs	0 to 15 feet BGS (11 to 13 feet BGS Ring Barrel Samples)	Evaluate the ability of sand, silt and ash to conduct free phase NAPL in the vicinity of B-33, Evaluate residual NAPL in the vicinity of B-33 as source of ground water contamination
N-26	40	• Six-inch interval above the water table • Intervals exhibiting potential NAPL with a minimum of one sample per every 10 feet	• NAPL Screening • NAPL Screening	0 to 40 feet BGS	Further delineation of data gap areas within the Process Area.

Notes:
BGS - Below Ground Surface
Cr^{+6} - Hexavalent Chromium
Geotechnical Parameters - total organic carbon, bulk density and porosity
NAPL - Non-aqueous phase liquids
NAPL Screening - Hydrophobic dye testing and UV fluorescence screening. Total petroleum hydrocarbons (Diesel Range Organics and Gasoline Range Organics) to be analyzed on samples that exhibit positive results for Hydrophobic dye testing and UV fluorescence screening.
PCB - Polychlorinated biphenyls
SPLP - Synthetic Precipitation Leachate Procedure
SVOC - Semivolatile organic compounds
VOCs - Volatile organic compounds

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Table 2-2. Justification for Free LNAPL Delineation Soil Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Monitoring Well Identification	Delineation Boring Identification	Total Boring Depth (ft bgs)	Geoprobe Sampling Interval (ft bgs)	Rationale
MW-32S	MW-32S/1	15	0-4,4-8,8-12,12-15	Delineation of the Extent of Free NAPL south of MW-32S
	MW-32S/1A	15	0-4,4-8,8-12,12-15	Delineation of the Extent of Free NAPL south of MW-32S/1
	MW-32S/2	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL west of MW-32S
	MW-32S/2A	16	0-4, 4-8, 8-12, 12-16	Delineation of the Extent of Free NAPL west of MW-32S/2
	MW-32S/3	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL north of MW-32S
	MW-32S/3A	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL north of MW-32S/3
	MW-32S/4	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL east of MW-32S
	MW-32S/4A	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL east of MW-32S/4
MW-24S	MW-24S/1	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL west of MW-24S
	MW-24S/1A	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL west of MW-24S/1
	MW-24S/1B	16	0-4, 4-8, 8-12, 12-16	Delineation of the Extent of Free NAPL west of MW-24S/1B
	MW-24S/2	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL south of MW-24S
	MW-24S/3	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL north of MW-24S
P-5	P-5/1	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL north of P-5
	P-5/1A	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL north of P-5/1
	P-5/3	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL south of P-5
	P-5/3A	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL south of P-5/3
	P-5/3B	16	0-4, 4-8, 8-12, 12-16	Delineation of the Extent of Free NAPL south of P-5/3A
	P-5/4	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL east of P-5
MW-13A	MW-13A/1	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL west of MW-13A
	MW-13A/3	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL south of MW-13A
	MW-13A/3A	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL south of MW-13A/3
	MW-13A/4	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL east of MW-13A
PZ-4	PZ-4/1	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL south of PZ-4
	PZ-4/1A	12	0-4, 4-8, 8-12	Delineation of the Extent of Free NAPL south of PZ-4/1
	PZ-4/3	16	0-4, 4-8, 8-12, 12-16	Delineation of the Extent of Free NAPL west of PZ-4
	PZ-4/3A	16	0-4, 4-8, 8-12, 12-16	Delineation of the Extent of Free NAPL west of PZ-4/3

Note
ft bgs = Feet below ground surface.

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Table 2-3. LNAPL Field Gauging Log (December 27, 2000). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Event Date: 12/27/2000 **On Site: D. Teti; J. Kohl**

Well ID	Time	Depth to Water (feet below grade)	Depth to Product (feet below grade)	Apparent Product Thickness (feet)
PZ-15	830	11.10	NP	NP
PZ-16	835	9.60	NP	NP
PZ-17	840	9.69	NP	NP
PZ-18	932	11.19	11.18	0.01
PZ-19	953	9.02	NP	NP
PZ-20	926	10.50	NP	NP
PZ-21	945	4.98	4.97	0.01
PZ-22	1215	12.59	10.31	2.28
PZ-23	1202	12.10	10.45	1.65
PZ-24	1150	13.72	12.50	1.22
PZ-25	1143	12.12	NP	NP
PZ-26	1112	10.56	NP	NP
PZ-27	1102	9.04	NP	NP
PZ-28	1050	8.69	NP	NP
PZ-29	910	12.03	NP	NP
PZ-30	855	12.26	NP	NP
PZ-31	915	12.63	NP	NP
PZ-32	900	12.57	NP	NP
PZ-33	1135	15.52	12.24	3.28
PZ-4	1200	9.11	9.05	0.06
P-5	1120	14.71	14.69	0.02
MW-24S	1208	9.98	9.91	0.07
MW-32S	905	11.74	11.33	0.41
MW-13A	845	5.84	NP	NP

Notes:
NP = No product encountered.
NM = Not measured.

Table 2-4. LNAPL Field Gauging Log (January 8, 2001). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Event Date: 01/08/2001 **On Site: J. Bjorklund; A. Santiago**

Well ID	Time	Depth to Water (feet below grade)	Depth to Product (feet below grade)	Apparent Product Thickness (feet)
PZ-15	1335	11.05	NP	NP
PZ-16	1330	9.71	NP	NP
PZ-17	1340	9.78	NP	NP
PZ-18	1429	11.32	NP	NP
PZ-19	1434	9.25	NP	NP
PZ-20	1430	10.26	NP	NP
PZ-21	1432	5.09	NP	NP
PZ-22	1113	13.26	10.53	2.73
PZ-23	1132	12.25	10.65	1.60
PZ-24	1140	14.73	12.17	2.56
PZ-25	1455	11.97	NP	NP
PZ-26	1545	10.60	NP	NP
PZ-27	1600	NM	NM	NM
PZ-28	1610	8.73	NP	NP
PZ-29	1357	12.75	12.00	0.75
PZ-30	1415	12.19	NP	NP
PZ-31	1420	12.64	NP	NP
PZ-32	1401	12.42	NP	NP
PZ-33	1150	15.85	14.32	1.53
PZ-4	1519	9.21	9.20	0.01
P-5	1455	14.88	14.74	0.14
MW-24S	1510	10.28	10.14	0.14
MW-32S	1354	11.85	11.48	0.37
MW-13A	1528	5.93	NP	NP

Notes:
NP = No product encountered.
NM = Not measured.

302690

Table 2-5. LNAPL Field Gauging Log (March 9, 2001). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Event Date: 03/09/2001 **On Site: J. Bjorklund; D. Teti**

Well ID	Time	Depth to Water (feet below grade)	Depth to Product (feet below grade)	Apparent Product Thickness (feet)
PZ-15	938	9.64	NP	NP
PZ-16	940	8.27	NP	NP
PZ-17	943	8.35	NP	NP
PZ-18	1000	10.06	NP	NP
PZ-19	958	7.76	NP	NP
PZ-20	951	8.79	NP	NP
PZ-21	953	3.65	NP	NP
PZ-22	1125	11.11	9.01	2.10
PZ-23	1134	10.82	9.12	1.70
PZ-24	1140	14.89	10.79	4.10
PZ-25	1204	10.03	NP	NP
PZ-26	1138	8.92	NP	NP
PZ-27	1145	7.45	NP	NP
PZ-28	1156	7.06	NP	NP
PZ-29	1010	11.76	10.61	1.15
PZ-30	1019	10.80	NP	NP
PZ-31	1005	11.35	NP	NP
PZ-32	1015	11.00	NP	NP
PZ-33	1215	15.80	12.40	3.40
PZ-4	955	8.14	8.05	0.09
P-5	1220	12.92	12.61	0.31
MW-24S	1130	8.60	8.54	0.06
MW-32S	1025	10.37	10.10	0.27
MW-13A	1115	4.54	NP	NP
MW-28S	1255	8.92	NP	NP
P-1	1120	12.25	NP	NP
S-3A	910	9.93	NP	NP
MW-27S	1210	9.97	NP	NP
MW-26S	1035	9.83	NP	NP

Notes:
NP = No product encountered.
NM = Not measured.

302691

Table 2-6. Summary of the Product Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-32S	P-5	MW-13A
Sample Date	5/11/00	5/11/00	5/11/00
Parameter			
Volatile Organic Compounds (ug/kg)			
1,1,1-Trichloroethane	58,000	500 U	500 U
1,1,2,2-Tetrachloroethane	2,500 U	500 U	500 U
1,1,2-Trichloroethane	5,000 U	1,000 U	1,000 U
1,1-Dichloroethane	8,100 J	500 U	500 U
1,1-Dichloroethene	5,000 U	1,000 U	1,000 U
1,2-Dichloroethane	5,000 U	1,000 U	1,000 U
1,2-Dichloropropane	7,500 U	1,500 U	1,500 U
2-Butanone	18,000 U	3,500 U	3,500 U
2-Hexanone	7,500 U	1,500 U	1,500 U
4-Methyl-2-pentanone	7,500 U	1,500 U	1,500 U
Acetone	18,000 U	3,500 U	3,500 U
Benzene	120,000	1,600 J	500 U
Bromodichloromethane	5,000 U	1,000 U	1,000 U
Bromoform	2,500 U	500 U	500 U
Bromomethane	7,500 U	1,500 U	1,500 U
Carbon disulfide	7,500 U	1,500 U	1,500 U
Carbon tetrachloride	2,500 U	500 U	500 U
Chlorobenzene	14,000	500 U	500 U
Chloroethane	7,500 U	1,500 U	1,500 U
Chloroform	7,400 J	500 U	500 U
Chloromethane	5,000 U	1,000 U	1,000 U
cis-1,2-Dichloroethene	900,000 D	1,000 U	1,000 U
cis-1,3-Dichloropropene	2,500 U	500 U	500 U
Dibromochloromethane	2,500 U	500 U	500 U
Ethylbenzene	640,000	4,500	1,200 J
Methylene chloride	5,000 U	1,000 U	1,000 U
Styrene	2,500 U	500 U	500 U
Tetrachloroethene	51,000	500 U	500 U
Toluene	1,500,000 D	2,200 J	500 U
trans-1,2-Dichloroethene	5,300 J	1,000 U	1,000 U
trans-1,3-Dichloropropene	2,500 U	500 U	500 U
Trichloroethene	360,000	500 U	500 U
Vinyl chloride	5000 U	1,000 U	1,000 U
Xylenes (Total)	4,400,000 D	24,000	1,200 J
Polychlorinated Biphenyls (ug/kg)			
Aroclor-1016	2,500 U	5000 U	500 U
Aroclor-1221	2,500 U	5,000 U	500 U
Aroclor-1232	2,500 U	5,000 U	500 U
Aroclor-1242	39,000	120,000	35,900
Aroclor-1248	2,500 U	5,000 U	500 U
Aroclor-1254	2,500 U	5,000 U	500 U
Aroclor-1260	79,000	290,000	27,300
Petroleum Hydrocarbons (mg/kg)			
GRO	45,000	2,100	3,500
DRO	430,000	390,000	380,000
Metals (mg/kg)			
Lead	12.8	257	29
Chemical Properties			
Specific Gravity	0.9099	0.9036	0.8995
Density (g/cm^3)	0.9132	0.9059	0.9207
Viscosity (Kinematic)	537.1	165.8	150

Notes:

GRO = Gasoline Range Organic Compounds.
DRO = Diesel Range Organic Compounds.
U = Compound not detected.
J = Estimated Concentration.
D = Sample Dilution required.
Specific Gravity and Viscosity at 25°C.

302692

Table 2-7. Analytical Results for Composite LNAPL Waste Characterization Sample. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID Sample Date Parameter	Federal Waste Characterization Level	WC/10-12/WO 10/12/2000
TCLP VOLATILE ORGANIC COMPOUNDS (mg/l)		
1,1-Dichloroethene	0.7	0.5 U
1,2-Dichloroethane	0.5	0.5 U
2-Butanone	200	20 U
Benzene	0.5	50
Carbon tetrachloride	0.5	0.5 U
Chlorobenzene	100	1 J
Chloroform	6	0.5 U
Tetrachloroethene	0.7	0.7 J
Trichloroethene	0.5	1.1 J
Vinyl chloride	0.2	0.5 U
TCLP SEMIVOLATILE ORGANIC COMPOUNDS (mg/l)		
1,4-Dichlorobenzene	7.5	10 U
2,4,5-Trichlorophenol	400	20 U
2,4,6-Trichlorophenol	2	20 U
2,4-Dinitrotoluene	0.13	10 U
2-Methylphenol	200	10 U
4-Methylphenol	200	30 U
Hexachlorobenzene	0.13	20 U
Hexachlorobutadiene	0.5	20 U
Hexachloroethane	3	10 U
Nitrobenzene	2	10 U
Pentachlorophenol	100	30 U
Pyridine	5	20 U
TCLP METALS (mg/l)		
Arsenic	5	1.2 J
Barium	100	1270
Cadmium	1	0.44 U
Chromium	5	43
Lead	5	573
Selenium	1	0.79 J
Silver	5	0.61 U
Mercury	0.2	0.071 U
TCLP PESTICIDES AND HERBICIDES		
Gamma BHC	0.4	0.1 U
Heptachlor	0.008	0.01 U
Heptachlor Epoxide	0.008	0.5 U
Methoxychlor	10	1 U
Endrin	0.02	1.8 U
Chlordane	0.3	25 U
Toxaphene	0.5	50 U
2,4-D	10	2 U
2,4,5-TP	1	0.02 U
GENERAL CHEMISTRY (mg/kg unless otherwise indicated)		
British Thermal Units (BTU) (BTU/lb)	--	17,590
Cyanide (Reactivity)	--	97 U
Sulfide (Reactivity)	--	39. U
Ignitibility	--	Not ignitable
Total Organic Halogen	--	460

Notes:
U = Compound not detected.
J = Estimated value.
-- = No Federal Regulation established.

302693

Table 2-8. Summary of the USEPA Product Sampling Results (February 28, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW5		MW32S		PZ18		RW1		PZ5	
Sample Media	Oil		Oil		Oil		Oil		Oil	
Sample Date	2/28/2002		2/28/2002		2/28/2002		2/28/2002		2/28/2002	
Dilution Factor	20000/5		20000		20000		2000		1000	
Volatile Organic Compounds (ug/kg)										
Dichlorodifluoromethane	20000	U	20000	U	20000	U	2000	U	1000	U
Chloromethane	20000	U	20000	U	20000	U	2000	U	1000	U
Vinyl chloride	40000	U	40000	U	40000	U	4000	U	2000	U
Bromomethane	20000	U	20000	U	20000	U	2000	U	1000	U
Chloroethane	20000	U	20000	U	20000	U	2000	U	1000	U
Trichlorofluoromethane	20000	U	20000	U	20000	U	2000	U	1000	U
Acetone	61000	JB	44000	JB	81000	JB	5600	JB	6500	JB
1,1-Dichloroethene	20000	U	20000	U	20000	U	2000	U	1000	U
Methylene chloride	20000	U	20000	U	20000	U	2000	U	1000	U
Carbon disulfide	20000	U	20000	U	20000	U	2000	U	1000	U
Methyl-t-butyl Ether	20000	U	20000	U	20000	U	2000	U	1000	U
trans-1,2-Dichloroethene	20000	U	20000	U	20000	U	2000	U	1000	U
1,1-Dichloroethane	20000	U	20000	U	20000	U	2000	U	1000	U
2-Butanone	20000	U	20000	U	20000	U	2000	U	1000	U
2,2-Dichloropropane	20000	U	20000	U	20000	U	2000	U	1000	U
cis-1,2-Dichloroethene	20000	U	400000		20000	U	2000	U	1000	U
Chloroform	20000	U	20000	U	20000	U	2000	U	1000	U
1,1-Dichloropropene	20000	U	20000	U	20000	U	2000	U	1000	U
1,2-Dichloroethane	20000	U	20000	U	20000	U	2000	U	1000	U
1,1,1-Trichloroethane	20000	U	33000		20000	U	2000	U	1000	U
Carbon tetrachloride	20000	U	20000	U	20000	U	2000	U	1000	U
Benzene	20000	U	52000		59000		22000		1000	U
Trichloroethene	20000	U	120000		20000	U	2000	U	1000	U
1,2-Dichloropropane	20000	U	20000	U	20000	U	2000	U	1000	U
Bromodichloromethane	20000	U	20000	U	20000	U	2000	U	1000	U
Dibromomethane	20000	U	20000	U	20000	U	2000	U	1000	U
cis-1,3-Dichloropropene	20000	U	20000	U	20000	U	2000	U	1000	U
trans-1,3-Dichloropropene	20000	U	20000	U	20000	U	2000	U	1000	U
1,1,2-Trichloroethane	20000	U	20000	U	20000	U	2000	U	1000	U
1,3-Dichloropropane	20000	U	20000	U	20000	U	2000	U	1000	U
Dibromochloromethane	20000	U	20000	U	20000	U	2000	U	1000	U
1,2-Dibromoethane	20000	U	20000	U	20000	U	2000	U	1000	U
Bromoform	20000	U	20000	U	20000	U	2000	U	1000	U
4-Methyl-2-pentanone	20000	U	20000	U	47000		2000	U	1000	U
Toluene	510000		730000		1000000		9300		1000	U
2-Hexanone	20000	U	20000	U	20000	U	2000	U	1000	U
Tetrachloroethene	20000	U	48000		20000	U	2000	U	1000	U
Chlorobenzene	20000	U	20000	U	20000	U	2000	U	1000	U
1,1,1,2-Tetrachloroethane	20000	U	20000	U	20000	U	2000	U	1000	U
Ethylbenzene	250000		340000		240000		24000		1000	U
Xylene, (m,p-)	1000000		3600000		1000000		96000		4800	
Xylene, (o-)	440000		1100000		410000		44000		5200	
Styrene	20000	U	20000	U	20000	U	2000	U	1000	U
Isopropylbenzene	48000		20000	U	20000	U	7400		1000	U
1,1,2,2-Tetrachloroethane	20000	U	20000	U	20000	U	2000	U	1000	U
1,2,3-Trichloropropane	20000	U	20000	U	20000	U	2000	U	1000	U

302694

Table 2-8. Summary of the USEPA Product Sampling Results (February 28, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW5		MW32S		PZ18		RW1		PZ5	
Sample Media	Oil		Oil		Oil		Oil		Oil	
Sample Date	2/28/2002		2/28/2002		2/28/2002		2/28/2002		2/28/2002	
Dilution Factor	20000/5		20000		20000		2000		1000	
n-Propylbenzene	130000		26000		59000		13000		1200	
Bromobenzene	20000	U	20000	U	20000	U	2000	U	1000	U
1,3,5-Trimethylbenzene	270000		97000		150000		35000		1700	
2-Chlorotoluene	810000		20000	U	590000		2000	U	24000	
4-Chlorotoluene	20000	U	20000	U	270000		2000	U	8200	
tert-Butylbenzene	20000	U	20000	U	20000	U	2000	U	1000	U
1,2,4-Trimethylbenzene	870000		310000		430000		110000		5000	
sec-Butylbenzene	51000		20000	U	20000	U	2000	U	1000	U
p-Isopropyltoluene	53000		22000		21000		13000		1000	U
1,3-Dichlorobenzene	20000	U	20000	U	20000	U	2000	U	1000	U
1,4-Dichlorobenzene	20000	U	20000	U	20000	U	2000	U	1600	
n-Butylbenzene	20000	U	20000	U	20000	U	2000	U	1000	U
1,2-Dichlorobenzene	20000	U	45000		33000		6100		1000	U
1,2-Dibromo-3-chloropropane	20000	U	20000	U	20000	U	2000	U	1000	U
1,2,4-Trichlorobenzene	790000		21000		40000		24000		2900	
Hexachlorobutadiene	20000	U	20000	U	20000	U	2000	U	1000	U
Naphthalene	580000		270000		180000		130000		1000	U
1,2,3-Trichlorobenzene	230000		20000	U	20000	U	4600		1000	U
Semivolatile Organic Compounds (ug/kg)										
Phenol	500000	U	500000	U	500000	U	500000	U	500000	U
bis(2-Chloroethyl)ether	500000	U	500000	U	500000	U	500000	U	500000	U
2-Chlorophenol	500000	U	500000	U	500000	U	500000	U	500000	U
1,3-Dichlorobenzene	500000	U	500000	U	500000	U	500000	U	500000	U
1,4-Dichlorobenzene	500000	U	500000	U	500000	U	500000	U	500000	U
Benzyl alcohol	500000	U	500000	U	500000	U	500000	U	500000	U
1,2-Dichlorobenzene	500000	U	500000	U	500000	U	500000	U	500000	U
2-Methylphenol	500000	U	500000	U	500000	U	500000	U	500000	U
bis(2-Chloroisopropyl)ether	500000	U	500000	U	500000	U	500000	U	500000	U
4-Methylphenol	500000	U	500000	U	500000	U	500000	U	500000	U
N-Nitrosodi-n-propylamine	500000	U	500000	U	500000	U	500000	U	500000	U
Hexachloroethane	500000	U	500000	U	500000	U	500000	U	500000	U
Nitrobenzene	500000	U	500000	U	500000	U	500000	U	500000	U
Isophorone	500000	U	500000	U	500000	U	500000	U	500000	U
2-Nitrophenol	500000	U	500000	U	500000	U	500000	U	500000	U
2,4-Dimethylphenol	500000	U	500000	U	500000	U	500000	U	500000	U
bis(2-Chloroethoxy)methane	500000	U	500000	U	500000	U	500000	U	500000	U
2,4-Dichlorophenol	500000	U	500000	U	500000	U	500000	U	500000	U
1,2,4-Trichlorobenzene	980000		500000	U	500000	U	500000	U	500000	U
Naphthalene	630000		440000	J	280000	J	140000	J	500000	U
4-Chloroaniline	500000	U	150000	J	500000	U	500000	U	500000	U
Hexachlorobutadiene	500000	U	500000	U	500000	U	500000	U	500000	U
4-Chloro-3-methylphenol	500000	U	500000	U	500000	U	500000	U	500000	U
2-Methylnaphthalene	1600000		540000		560000		460000	J	500000	U
Hexachlorocyclopentadiene	500000	U	500000	U	500000	U	500000	U	500000	U
2,4,6-Trichlorophenol	500000	U	500000	U	500000	U	500000	U	500000	U
2,4,5-Trichlorophenol	500000	U	500000	U	500000	U	500000	U	500000	U

302695

Table 2-8. Summary of the USEPA Product Sampling Results (February 28, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW5		MW32S		PZ18		RW1		PZ5	
Sample Media	Oil		Oil		Oil		Oil		Oil	
Sample Date	2/28/2002		2/28/2002		2/28/2002		2/28/2002		2/28/2002	
Dilution Factor	20000/5		20000		20000		2000		1000	
2-Chloronaphthalene	500000	U	500000	U	500000	U	500000	U	500000	U
2-Nitroaniline	500000	U	500000	U	500000	U	500000	U	500000	U
Dimethylphthalate	500000	U	500000	U	500000	U	500000	U	500000	U
Acenaphthylene	500000	U	500000	U	500000	U	500000	U	500000	U
2,6-Dinitrotoluene	500000	U	500000	U	500000	U	500000	U	500000	U
3-Nitroaniline	500000	U	500000	U	500000	U	500000	U	500000	U
Acenaphthene	500000	U	500000	U	500000	U	500000	U	500000	U
2,4-Dinitrophenol	500000	U	500000	U	500000	U	500000	U	500000	U
4-Nitrophenol	500000	U	500000	U	500000	U	500000	U	500000	U
Dibenzofuran	500000	U	500000	U	500000	U	500000	U	500000	U
2,4-Dinitrotoluene	500000	U	500000	U	500000	U	500000	U	500000	U
Diethylphthalate	500000	U	500000	U	500000	U	500000	U	500000	U
4-Chlorophenyl-phenylether	500000	U	500000	U	500000	U	500000	U	500000	U
Fluorene	500000	U	500000	U	500000	U	500000	U	500000	U
4-Nitroaniline	500000	U	500000	U	500000	U	500000	U	500000	U
4,6-Dinitro-2-methylphenol	500000	U	500000	U	500000	U	500000	U	500000	U
N-Nitrosodiphenylamine	500000	U	500000	U	500000	U	500000	U	500000	U
4-Bromophenyl-phenylether	500000	U	500000	U	500000	U	500000	U	500000	U
Hexachlorobenzene	500000	U	500000	U	500000	U	500000	U	500000	U
Pentachlorophenol	500000	U	500000	U	500000	U	500000	U	500000	U
Phenanthrene	250000	J	500000	U	150000	J	240000	J	500000	U
Anthracene	500000	U	500000	U	500000	U	500000	U	500000	U
Carbazole	500000	U	500000	U	500000	U	500000	U	500000	U
Di-n-butylphthalate	500000	U	500000	U	500000	U	500000	U	500000	U
Fluoranthene	500000	U	500000	U	500000	U	500000	U	500000	U
Pyrene	500000	U	500000	U	500000	U	500000	U	500000	U
Butylbenzylphthalate	1500000		500000	U	500000	U	500000	U	500000	U
Benzo(a)anthracene	500000	U	500000	U	500000	U	500000	U	500000	U
3,3'-Dichlorobenzidine	500000	U	500000	U	500000	U	500000	U	500000	U
Chrysene	500000	U	500000	U	500000	U	500000	U	500000	U
bis(2-Ethylhexyl)phthalate	500000	U	130000	J	160000	J	500000	U	260000	J
Di-n-octylphthalate	500000	U	500000	U	500000	U	500000	U	500000	U
Benzo(b)fluoranthene	500000	U	500000	U	500000	U	500000	U	500000	U
Benzo(k)fluoranthene	500000	U	500000	U	500000	U	500000	U	500000	U
Benzo(a)pyrene	500000	U	500000	U	500000	U	500000	U	500000	U
Indeno(1,2,3-cd)pyrene	500000	U	500000	U	500000	U	500000	U	500000	U
Dibenz(a,h)anthracene	500000	U	500000	U	500000	U	500000	U	500000	U
Benzo(ghi)perylene	500000	U	500000	U	500000	U	500000	U	500000	U

302696

Table 2-8. Summary of the USEPA Product Sampling Results (February 28, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW5		MW32S		PZ18		RW1		PZ5	
Sample Media	Oil		Oil		Oil		Oil		Oil	
Sample Date	2/28/2002		2/28/2002		2/28/2002		2/28/2002		2/28/2002	
Dilution Factor	20000/5		20000		20000		2000		1000	
Pesticides/PCBs (ug/kg)										
a-BHC	5000	U	1000	U	1000	U	1000	U	1000	U
g-BHC	5000	U	1000	U	1000	U	1000	U	1000	U
b-BHC	5000	U	1000	U	1000	U	1000	U	1000	U
Heptachlor	5000	U	1000	U	1000	U	1000	U	1000	U
d-BHC	5000	U	1000	U	1000	U	1000	U	1000	U
Aldrin	22000		1000	U	1000	U	1000	U	1000	U
Heptachlor epoxide	5000	U	1000	U	1000	U	1000	U	1000	U
g-Chlordane	5000	U	600	J	1000	U	2500		1000	U
a-Chlordane	5000	U	1000	U	1000	U	1000	U	1000	U
Endosulfan I	5300		1000	U	1000	U	1000	U	920	J
p,p'-DDE	5000	U	310	J	88000		17000		1200	
Dieldrin	5000	U	1000	U	1000	U	1000	U	1000	U
Endrin	5000	U	1000	U	1000	U	1000	U	1000	U
p,p'-DDD	5000	U	1000	U	35000		1000	U	580	J
Endosulfan II	5000	U	1000	U	1000	U	1000	U	1000	U
p,p'-DDT	5000	U	1000	U	1000	U	1000	U	1000	U
Endrin aldehyde	5000	U	1000	U	1000	U	1000	U	1000	U
Endosulfan sulfate	5000	U	1000	U	1000	U	1000	U	1000	U
Methoxychlor	5000	U	1000	U	1000	U	1000	U	1000	U
Endrin ketone	5000	U	1000	U	1000	U	1000	U	1000	U
Toxaphene	125000	U	25000	U	25000	U	25000	U	25000	U
Aroclor-1016	65000	U	13000	U	13000	U	13000	U	13000	U
Aroclor-1221	125000	U	25000	U	25000	U	25000	U	25000	U
Aroclor-1232	65000	U	13000	U	13000	U	13000	U	13000	U
Aroclor-1242	65000	U	13000	U	13000	U	13000	U	13000	U
Aroclor-1248	NC[2]		20000	W	74000	W	66000	W	43000	
Aroclor-1254	2000000		NC[1]		NC[1]		NC[1]		NC[1]	
Aroclor-1260	1100000		38000		130000		200000		27000	
Aroclor-1268	65000	U	13000	U	13000	U	13000	U	13000	U
Metals (mg/kg)										
Aluminum	10.0	U	370		160		130		150	
Antimony	4.0	U	4.8		3.8		4		5.2	
Arsenic	1.0	U	1.2		3.4		1.0	U	1.0	U
Barium	9.6		40.1		240		320		490	
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Calcium	30		250		28		140		250	
Chromium	2.2		18		340		94		57	
Cobalt	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Copper	1.0	U	1.0	U	1.0	U	2.3		4.8	
Iron	25		990		160		330		720	
Lead	3.0		12		150		220		600	
Magnesium	10.0	U	26		10.0	U	15		16	
Manganese	1.0	U	6.8		1.0	U	3.4		4.7	

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Table 2-8. Summary of the USEPA Product Sampling Results (February 28, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW5		MW32S		PZ18		RW1		PZ5	
Sample Media	Oil		Oil		Oil		Oil		Oil	
Sample Date	2/28/2002		2/28/2002		2/28/2002		2/28/2002		2/28/2002	
Dilution Factor	20000/5		20000		20000		2000		1000	
Mercury	0.01	U	0.01	U	0.01	U	0.01	U	0.02	U
Nickel	1.0	U	1.3		1.6		1.0	U	4.8	
Potassium	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Selenium	1.6		1.9		2.3		0.99		1.2	
Silver	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Sodium	40.0	U	57		40.0	U	40.0	U	40.0	U
Thallium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vanadium	1.0	U	9.1		25		7.7		34	
Zinc	17		38		10		23		39	
Chemical Properties										
Specific Gravity (g/cm^3)	0.868		0.917		0.893		0.901		0.941	
Viscosity (cP***)	****		610		70		10		140	

Notes:

1 Aroclor 1254 has the same congeners as Aroclor 1248 and Aroclor 1260 and may be present. Aroclor 1254 cannot be accurately identified and quantified when Aroclor 1248 and Aroclor 1260 are present. Aroclor 1248 and Aroclor 1260 were caclulated and reported.

2 Aroclor 1248 is present in the sample, but was not quantified because of the high concentrations of Aroclor 1254 and Aroclor 1260.

*** cP denotes centipoise

**** There was insufficient sample for this analysis

U = Compound not detected.

B = Also detected in blank.

J = Estimated Concentration

302698

Table 2-9. Summary of the USEPA Product Sampling Results (August 23, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW-06		RW-07		RW-08		RW-09		X-004		X-032		RW-11		X-006/1,000x	
Sample Media	Oil		Oil		Oil		Oil		Oil		Oil		Oil		Oil	
Sample Date	8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002	
Dilution Factor	20000		20000		20000		20000		1000		1000		1000		1000	
Volatile Organic Compounds (ug/kg)																
Dichlorodifluoromethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Chloromethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Vinyl chloride	40000	U	40000	U	40000	U	40000	U	2000	U	2000	U	2000	U	2000	U
Bromomethane	20000	U	20000	U	20000	U	20000	U	2000	B	1000	U	1000	U	1200	B
Chloroethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Trichlorofluoromethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Acetone	160000	U	160000	U	160000	U	160000	U	8000	U	8100	U	8000	U	8000	U
1,1-Dichloroethene	20000	U	20000	U	20000	U	20000	U	4200		1000	U	1000	U	1000	U
Methylene chloride	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Carbon disulfide	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Methyl-t-butyl Ether	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
trans-1,2-Dichloroethene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,1-Dichloroethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
2-Butanone	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
2,2-Dichloropropane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
cis-1,2-Dichloroethene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Chloroform	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,1-Dichloropropene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,2-Dichloroethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,1,1-Trichloroethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Carbon tetrachloride	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Benzene	20000	U	20000	U	20000	U	20000	U	6000		1700		2300		1000	U
Trichloroethene	20000	U	20000	U	20000	U	20000	U	5300		1000	U	1000	U	1000	U
1,2-Dichloropropane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Bromodichloromethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Dibromomethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
cis-1,3-Dichloropropene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
trans-1,3-Dichloropropene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,1,2-Trichloroethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,3-Dichloropropane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Dibromochloromethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,2-Dibromoethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Bromoform	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
4-Methyl-2-pentanone	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Toluene	570000		320000		20000	U	20000	U	5800		6400		1000	U	3200	

Table 2-9. Summary of the USEPA Product Sampling Results (August 23, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW-06		RW-07		RW-08		RW-09		X-004		X-032		RW-11		X-006/1,000x	
Sample Media	Oil		Oil		Oil		Oil		Oil		Oil		Oil		Oil	
Sample Date	8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002	
Dilution Factor	20000		20000		20000		20000		1000		1000		1000		1000	
2-Hexanone	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Tetrachloroethene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Chlorobenzene	20000	U	20000	U	20000	U	20000	U	5600		1000	U	1000	U	1000	U
1,1,1,2-Tetrachloroethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Ethylbenzene	75000		75000		52000		31000		1000	U	1800		5600		1800	
Xylene, (m,p-)	330000		360000		150000		97000		2000	U	6800		11000		7600	
Xylene, (o-)	110000		120000		37000		29000		1000	U	2500		5700		3700	
Styrene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Isopropylbenzene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,1,2,2-Tetrachloroethane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,2,3-Trichloropropane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
n-Propylbenzene	30000		30000		21000		20000	U	1000	U	1000	U	1600		1600	
Bromobenzene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,3,5-Trimethylbenzene	73000		67000		44000		29000		1100		1300		6600		5200	
2-Chlorotoluene	1100000		480000		20000	U	20000	U	1000	U	1000		1000	U	1000	U
4-Chlorotoluene	460000		190000		20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
tert-Butylbenzene	20000	U	20000	U	20000	U	20000	U	6900		2000		4600		1000	U
1,2,4-Trimethylbenzene	230000		190000		150000		98000		4000		4600		17000		16000	
sec-Butylbenzene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
p-Isopropyltoluene	20000	U	20000	U	20000	U	20000	U	1000	U	1500		2200		1100	
1,3-Dichlorobenzene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,4-Dichlorobenzene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
n-Butylbenzene	41000		35000		20000	U	20000	U	1000		1000	U	1000	U	1000	U
1,2-Dichlorobenzene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,2-Dibromo-3-chloropropane	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
1,2,4-Trichlorobenzene	59000		83000		20000	U	20000	U	3200		3300		3600		1800	
Hexachlorobutadiene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U
Naphthalene	88000		65000		34000		20000	U	3600	B	7700	B	13000	B	11000	B
1,2,3-Trichlorobenzene	20000	U	20000	U	20000	U	20000	U	1000	U	1000	U	1000	U	1000	U

Table 2-9. Summary of the USEPA Product Sampling Results (August 23, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW-06		RW-07		RW-08		RW-09		X-004		X-032		RW-11		X-006/1,000x	
Sample Media	Oil		Oil		Oil		Oil		Oil		Oil		Oil		Oil	
Sample Date	8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002	
Dilution Factor	20000		20000		20000		20000		1000		1000		1000		1000	
Pesticides/PCBs (ug/kg)																
a-BHC	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
g-BHC	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
b-BHC	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Heptachlor	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
d-BHC	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Aldrin	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Heptachlor epoxide	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
g-Chlordane	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
a-Chlordane	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Endosulfan I	1000	U	10000		3200		1000	U	1000	U	1000	U	1000	U	1000	U
p,p'-DDE	1000	U	1000	U	1000	U	7300		7000		18000		8600		760	J
Dieldrin	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Endrin	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
p,p'-DDD	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Endosulfan II	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
p,p'-DDT	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Endrin aldehyde	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Endosulfan sulfate	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Methoxychlor	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Endrin ketone	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U	1000	U
Toxaphene	25000	U	25000	U	25000	U	25000	U	25000	U	25000	U	25000	U	25000	U
Aroclor-1016	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U
Aroclor-1221	25000	U	25000	U	25000	U	25000	U	25000	U	25000	U	25000	U	25000	U
Aroclor-1232	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U
Aroclor-1242	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U
Aroclor-1248	13000	U	13000	U	13000	U	150000		120000		150000		68000		80000	
Aroclor-1254	810000		1700000		410000		13000	U	13000	U	13000	U	13000	U	13000	U
Aroclor-1260	1400000		2600000		620000		610000		430000		700000		330000		180000	
Aroclor-1268	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U	13000	U

Table 2-9. Summary of the USEPA Product Sampling Results (August 23, 2002). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RW-06		RW-07		RW-08		RW-09		X-004		X-032		RW-11		X-006/1,000x	
Sample Media	Oil		Oil		Oil		Oil		Oil		Oil		Oil		Oil	
Sample Date	8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002		8/23/2002	
Dilution Factor	20000		20000		20000		20000		1000		1000		1000		1000	
Metals (mg/kg)																
Aluminum	34		20	U	120		140		200		130		240		120	
Antimony	0.99	U	1.0	U	1.0	U	1.0	U	0.98	U	0.98	U	0.98	U	1.0	U
Arsenic	3.4		1.9		1.8		1.5		2.0		1.1		2.4		1.9	
Barium	26		20	U	62		100		130		94		260		510	
Beryllium	0.50	U	0.50	U	0.51	U	0.51	U	0.49	U	0.49	U	0.49	U	0.51	U
Cadmium	0.50	U	0.50	U	0.51	U	0.51	U	0.49	U	0.49	U	0.49	U	0.51	U
Calcium	500	U	500	U	510	U	510	U	490	U	490	U	490	U	510	U
Chromium	2.5		1.2		13		30		22		14		15		5.6	
Cobalt	5.0	U	5.0	U	5.1	U	5.1	U	4.9	U	4.9	U	4.9	U	5.1	U
Copper	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	5.7		2.5	U
Iron	44		24		96		130		180		110		500		200	
Lead	8.3		3.3		44		71		93		130		140		350	
Magnesium	500	U	500	U	510	U	510	U	490	U	490	U	490	U	510	U
Manganese	1.5	U	1.5	U	1.5	U	1.9		6.1		5.0		3.4		5.2	
Mercury	0.030	U	0.032	U	0.032	U	0.032	U	0.029	U	0.097		0.030	U	0.029	U
Nickel	4.0	U	4.0	U	4.0	U	4.0	U	3.9	U	3.9	U	3.9	U	4.0	U
Potassium	500	U	500	U	510	U	510	U	490	U	490	U	490	U	510	U
Selenium	1.5		1.0	U	0.98	U	0.98	U	1.0	U	1.0	U	1.0	U	1.0	U
Silver	0.99	U	1.0	U	1.0	U	1.0	U	0.98	U	0.98	U	0.98	U	1.0	U
Sodium	500	U	500	U	510	U	510	U	490	U	490	U	490	U	510	U
Thallium	0.99	U	1.0	U	1.0	U	1.0	U	0.98	U	0.98	U	0.98	U	1.0	U
Vanadium	5.0	U	5.0	U	5.1	U	5.1	U	19		4.9	U	8.9		24	
Zinc	2.0	U	2.0	U	2.3		3.9		3.4		4.0		14		2.0	U
Chemical Properties																
Specific Gravity (g/cm^3)	0.87		0.87		0.88		0.88		0.88		0.89		0.89		0.89	
Viscosity (cP***)	6.7		6.5		56.7		54.0		72.4		67.4		80.4		67.8	

Notes:

*** cP denotes centipoise

B = Also detected in blank.

U = Compound not detected.

J = Estimated Concentration.

302702

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	B-1	B-33	L-1	L-10A	L-10B	L-12A	L-12A	L-12B
Sample Depth	10.5-11.0	10.5-11	24-25	8-9	7-8	9-10	58-59	10-11
Sample Date	10/9/00	10/9/00	8/18/99	8/16/99	8/17/99	7/26/99	7/27/99	8/30/99
Matrix	Sand	Sand	Peat	Sand	Sand	Peat	Clay	Sand
SPLP VOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,1,1-Trichloroethane	3 J	9	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	1 U	1 U	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1 U	1 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	1 U	4 J	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	1 U	1 U	5 U	40 U	40 U	5 U	5 U	NA
1,2-Dichloroethane	1 U	1 U	10 U	80 U	80 U	10 U	10 U	NA
1,2-Dichloropropane	1 U	6	NA	NA	NA	NA	NA	NA
2-Butanone	3 U	6 J	19 J	120 U	120 U	15 U	15 U	NA
2-Hexanone	3 U	3 U	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	3 U	26	NA	NA	NA	NA	NA	NA
Acetone	8 J	12 J	NA	NA	NA	NA	NA	NA
Benzene	15	85	11 J	40 U	40 U	10 J	5 U	NA
Bromodichloromethane	1 U	1 U	NA	NA	NA	NA	NA	NA
Bromoform	1 U	1 U	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	2 U	2 U	NA	NA	NA	NA	NA	NA
Carbon disulfide	1 U	1 U	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	1 U	1 U	5 U	40 U	40 U	5 U	5 U	NA
Chlorobenzene	1 U	3 J	5 U	40 U	40 U	5 U	5 U	NA
Chloroethane	2 U	2 U	NA	NA	NA	NA	NA	NA
Chloroform	1 U	2 J	5 U	40 U	40 U	5 U	5 U	NA
Chloromethane	2 U	2 U	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	1 U	51	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	1 U	1 U	NA	NA	NA	NA	NA	NA
Dibromochloromethane	1 U	1 U	NA	NA	NA	NA	NA	NA
Ethylbenzene	3 JB	47 B	NA	NA	NA	NA	NA	NA
Methylene chloride	10	16	NA	NA	NA	NA	NA	NA
Styrene	1 U	1 U	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1 U	2 J	5 U	40 U	40 U	6 J	5 U	NA
Toluene	3 JB	670 DB	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	1 U	1 U	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	1 U	1 U	NA	NA	NA	NA	NA	NA
Trichloroethene	7	4 J	5 U	40 U	40 U	8 J	5 U	NA
Vinyl chloride	1 U	1 U	10 U	80 U	80 U	10 U	10 U	NA
Xylenes (Total)	18 B	270 B	NA	NA	NA	NA	NA	NA
SPLP SEMIVOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,2,4-Trichlorobenzene	4 J	4 J	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	1 J	6 J	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	1 J	1 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	1 U	1 U	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	1 U	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	2 U	2 U	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	2 U	2 U	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	1 U	1 U	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	2 J	19	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	20 U	20 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	1 U	1 U	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	2 U	2 U	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	1 U	1 U	NA	NA	NA	NA	NA	NA
2-Chlorophenol	1 U	1 U	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	21	67	NA	NA	NA	NA	NA	NA
2-Methylphenol	1 U	4 J	NA	NA	NA	NA	NA	NA
2-Nitroaniline	2 U	2 U	NA	NA	NA	NA	NA	NA
2-Nitrophenol	1 U	1 U	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	NA	NA	NA	NA	NA	NA
3-Nitroaniline	2 U	2 U	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	5 U	5 U	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	2 U	2 U	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	1 U	1 U	NA	NA	NA	NA	NA	NA
4-Chloroaniline	1 U	1 U	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	1 U	1 U	NA	NA	NA	NA	NA	NA

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Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	B-1	B-33	L-1	L-10A	L-10B	L-12A	L-12A	L-12B
Sample Depth	10.5-11.0	10.5-11	24-25	8-9	7-8	9-10	58-59	10-11
Sample Date	10/9/00	10/9/00	8/18/99	8/16/99	8/17/99	7/26/99	7/27/99	8/30/99
Matrix	Sand	Sand	Peat	Sand	Sand	Peat	Clay	Sand
4-Methylphenol	3 U	19	NA	NA	NA	NA	NA	NA
4-Nitroaniline	2 U	2 U	NA	NA	NA	NA	NA	NA
4-Nitrophenol	10 U	10 U	NA	NA	NA	NA	NA	NA
Acenaphthene	1 J	2 J	NA	NA	NA	NA	NA	NA
Acenaphthylene	1 U	1 U	NA	NA	NA	NA	NA	NA
Anthracene	1 U	1 U	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1 U	1 U	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	1 U	1 U	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1 U	1 U	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	1 U	1 U	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	1 U	1 U	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	1 U	1 U	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	1 U	1 J	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	2 U	2 U	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	2 U	3 J B	NA	NA	NA	NA	NA	NA
Carbazole	3 U	3 U	NA	NA	NA	NA	NA	NA
Chrysene	1 U	1 U	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	1 U	1 U	NA	NA	NA	NA	NA	NA
Dibenzofuran	1 J	1 J	NA	NA	NA	NA	NA	NA
Diethyl phthalate	2 U	2 U	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	2 U	2 U	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	2 U	2 U	NA	NA	NA	NA	NA	NA
Fluoranthene	1 U	1 U	NA	NA	NA	NA	NA	NA
Fluorene	2 J	3 J	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	2 U	2 U	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	2 U	2 U	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	5 U	5 U	NA	NA	NA	NA	NA	NA
Hexachloroethane	1 U	1 U	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1 U	1 U	NA	NA	NA	NA	NA	NA
Isophorone	1 U	1 U	NA	NA	NA	NA	NA	NA
Naphthalene	3 J	65	NA	NA	NA	NA	NA	NA
Nitrobenzene	1 U	1 U	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	13	1 U	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	1 U	1 U	NA	NA	NA	NA	NA	NA
Pentachlorophenol	3 U	3 U	NA	NA	NA	NA	NA	NA
Phenanthrene	3 J	4 J	NA	NA	NA	NA	NA	NA
Phenol	1 U	6 J	NA	NA	NA	NA	NA	NA
Pyrene	1 U	1 U	NA	NA	NA	NA	NA	NA
SPLP Metals								
(all results in ug/l)								
Arsenic	NA	NA	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U
Barium	NA	NA	3.6 B	107	49.9 B	244	1.5 U	31.5 B
Cadmium	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Chromium	NA	NA	5.4 U	33.4	18.3 B	9.9 B	5.4 U	5.4 U
Lead	NA	NA	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U
Selenium	NA	NA	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U
Silver	NA	NA	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Mercury	NA	NA	0.042 U	0.042 U	0.052 B	0.042 U	0.042 U	0.10 BN

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-12B	L-14A	L-14A	L-14A	L-14B	L-14B	L-14B	L-14B
Sample Depth	45-46	9-10	34-35	37-38	58.0-59.0	1.0-2.0	19.0-20.0	53.0-54.0
Sample Date	8/30/99	8/26/99	8/27/99	8/27/99	9/1/99	9/1/99	9/1/99	9/1/99
Matrix	Sand	Sand	Sand	Silty Clay	Silty Clay	Sand	Clay	Sand
SPLP VOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	16 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	46 J	15 U	15 U	15 U	15 U	15 U	15 U	15 U
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	45	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	NA	NA	NA	NA	NA	NA	NA	NA
SPLP SEMIVOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-12B	L-14A	L-14A	L-14A	L-14B	L-14B	L-14B	L-14B
Sample Depth	45-46	9-10	34-35	37-38	58.0-59.0	1.0-2.0	19.0-20.0	53.0-54.0
Sample Date	8/30/99	8/26/99	8/27/99	8/27/99	9/1/99	9/1/99	9/1/99	9/1/99
Matrix	Sand	Sand	Sand	Silty Clay	Silty Clay	Sand	Clay	Sand
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Metals								
(all results in ug/l)								
Arsenic	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U
Barium	65.6 B	13.0 B	21.0 B	4.7 B	4.0 B	16.7 B	9.8 B	22.7 B
Cadmium	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Chromium	5.4 U	5.4 U	5.4 U	7.0 B	5.4 U	5.4 U	7.4 B	5.4 U
Lead	23.0 U	23.0 U	128	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U
Selenium	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U
Silver	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Mercury	0.30 N*	0.042 U	0.042 U	0.042 U	5.4	0.042 U	0.042 U	0.042 U

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-15A	L-15A	L-15A	L-15B	L-15B	L-15B	L-16A	L-16A
Sample Depth	8.5-9.5	39-40	43-44	38-39	42-43	55-56	37.0-38.0	13.0-14.0
Sample Date	8/25/99	8/26/99	8/26/99	9/9/99	9/9/99	9/9/99	8/25/99	8/25/99
Matrix	Organic Silt	Sand	Clayey Silt	Sand	Silty Clay	Sand	Silty Clay	Peat
SPLP VOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	15 U	15 U	15 U	21 J	15 U	15 U	15 U	15 U
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	8 J
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	NA	NA	NA	NA	NA	NA	NA	NA
SPLP SEMIVOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-15A	L-15A	L-15A	L-15B	L-15B	L-15B	L-16A	L-16A
Sample Depth	8.5-9.5	39-40	43-44	38-39	42-43	55-56	37.0-38.0	13.0-14.0
Sample Date	8/25/99	8/26/99	8/26/99	9/9/99	9/9/99	9/9/99	8/25/99	8/25/99
Matrix	Organic Silt	Sand	Clayey Silt	Sand	Silty Clay	Sand	Silty Clay	Peat
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Metals								
(all results in ug/l)								
Arsenic	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U
Barium	38.3 B	16.5 B	5.0 B	1.5 U	4.0 B	4.2 B	8.3 B	31.3 B
Cadmium	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Chromium	6.9 B	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Lead	37.4 B	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	24.3 B
Selenium	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U
Silver	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Mercury	0.065 BN*	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 UN*	0.042 UN*

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

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Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-16B	L-3	L-3	L-3	L-3	L-4	L-4	L-4
Sample Depth	13-14	10-11	52-53	112-113	116-117	16.5-17.0	56-56.5	69-70
Sample Date	8/31/99	8/20/99	8/23/99	8/27/99	8/27/99	9/9/99	9/10/99	9/14/99
Matrix	Sand	Peat/Clay	Sand	Sand	Clay	Peat	Clay	Sand
SPLP VOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	15 U	15 U	15 U	15 U	15 U	40 J	15 U	15 U
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	5 U	52	5 U	5 U	5 U	41	5 U	5 U
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5 U	12 J	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5 U	35	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	NA	NA	NA	NA	NA	NA	NA	NA
SPLP SEMIVOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-16B	L-3	L-3	L-3	L-3	L-4	L-4	L-4
Sample Depth	13-14	10-11	52-53	112-113	116-117	16.5-17.0	56-56.5	69-70
Sample Date	8/31/99	8/20/99	8/23/99	8/27/99	8/27/99	9/9/99	9/10/99	9/14/99
Matrix	Sand	Peat/Clay	Sand	Sand	Clay	Peat	Clay	Sand
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Metals								
(all results in ug/l)								
Arsenic	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U
Barium	9.8 B	4.3 B	129	29.8 B	23.1 B	70.7 B	3.7 B	1.5 U
Cadmium	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Chromium	5.4 U	5.4 U	5.4 U	5.4 U	17.8 B	5.4 U	5.4 U	5.4 U
Lead	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U
Selenium	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U
Silver	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Mercury	0.042 U	0.10 BN	0.042 UN	0.042 U	0.042 U	0.11 BN	0.042 U	0.042 U

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-4	L-4	L-5	L-5	L-5	L-5	L-5	L-5
Sample Depth	109.5-110	113.5-114	57.5-58.0	53.5-54.0	17.5-18.0	60-62	110.5-111	115-116
Sample Date	9/15/99	9/15/99	9/7/99	9/7/99	9/7/99	9/28/99	9/30/99	9/30/99
Matrix	Sand	Clay	Peat	Sand	Peat	Sand	Sand	Silty Clay
SPLP VOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	5 U	5 U	5 U	5 U	11 J	5 U	5 U	5 U
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	NA	NA	NA	NA	NA	NA	NA	NA
SPLP SEMIVOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-4	L-4	L-5	L-5	L-5	L-5	L-5	L-5
Sample Depth	109.5-110	113.5-114	57.5-58.0	53.5-54.0	17.5-18.0	60-62	110.5-111	115-116
Sample Date	9/15/99	9/15/99	9/7/99	9/7/99	9/7/99	9/28/99	9/30/99	9/30/99
Matrix	Sand	Clay	Peat	Sand	Peat	Sand	Sand	Silty Clay
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Metals								
(all results in ug/l)								
Arsenic	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U
Barium	16.2 B	5.0 B	6.0 B	39.6 B	211	43.3 BE	24.4 B	16.3 B
Cadmium	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Chromium	5.6 B	5.4 U	5.4 U	8.0 B	5.4 U	5.4 U	5.4 U	5.4 U
Lead	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U
Selenium	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U
Silver	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 UN*	5.7 U	5.7 U
Mercury	0.065 B	0.042 U	0.10 BN	0.20 N	0.065 BN	0.14 B	0.042 U	0.042 U

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

302712

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-6	L-6	L-7	L-8	L-9A	L-9B	MW-26D	MW-26D
Sample Depth	17-18	41.5-42.5	13-14	29.0-30.0	16.0-17.0	5.0-6.0	19-20	21-22
Sample Date	7/22/99	7/22/99	7/21/99	8/12/99	8/18/99	8/23/99	7/8/99	7/8/99
Matrix	Sand	Clay	Sand	Peat	Peat	Sand	Peat	Sand
SPLP VOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	5 U	5 U	5 U	40 U	5 U	5 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	80 U	10 U	10 U	30	14 J
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	15 U	62	15 U	120 U	16 J	39 J	110	65
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	9 J	8 J	5 U	40 U	6 J	5 U	140	240
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5 U	5 U	5 U	40 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	40 U	5 U	5 U	5 U	5 U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	5 U	5 U	5 U	40 U	5 U	5 U	10 J	5 U
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5 U	5 U	5 U	40 U	5 U	5 U	29	51
Toluene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	11 J	5 U	5 U	40 U	5 U	5 U	330	180
Vinyl chloride	10 U	10 U	10 U	80 U	10 U	10 U	10 U	10 U
Xylenes (Total)	NA	NA	NA	NA	NA	NA	NA	NA
SPLP SEMIVOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA

302713

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	L-6	L-6	L-7	L-8	L-9A	L-9B	MW-26D	MW-26D
Sample Depth	17-18	41.5-42.5	13-14	29.0-30.0	16.0-17.0	5.0-6.0	19-20	21-22
Sample Date	7/22/99	7/22/99	7/21/99	8/12/99	8/18/99	8/23/99	7/8/99	7/8/99
Matrix	Sand	Clay	Sand	Peat	Peat	Sand	Peat	Sand
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Metals								
(all results in ug/l)								
Arsenic	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U
Barium	27.3 B	1.7 B	402	115	237	33.7 B	53.4 BNP*	62.0 BNP*
Cadmium	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	15.2	1.7 U
Chromium	5.4 U	5.4 U	28.9 B	7.5 B	7.2 B	5.4 U	258	5.4 U
Lead	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	23.0 U	2490	41.0 B
Selenium	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U	42.0 U
Silver	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Mercury	0.042 U	0.042 U	0.042 U	0.042 U	0.049 B	0.053 BN*	0.042 U	0.042 U

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-26D	MW-26D	MW-27D	MW-27D	P-36	P-37	P-22	P-23
Sample Depth	43-44	20.5-21	57-58	14-15	12.5-13	11.5-12	11-11.5	12-12.5
Sample Date	7/15/99	10/6/00	6/24/99	6/24/99	10/9/00	10/9/00	10/3/00	10/6/00
Matrix	Silt	Clayey Silt	Silty Clay	Sand	Sand	Ash	Sand	Sand
SPLP VOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,1,1-Trichloroethane	NA	10	NA	NA	2 J	120	1 U	1 U
1,1,2,2-Tetrachloroethane	NA	2 J	NA	NA	1 U	4 J	1 U	1 U
1,1,2-Trichloroethane	NA	1 U	NA	NA	1 U	1 J	1 U	1 U
1,1-Dichloroethane	NA	31	NA	NA	1 U	1 U	1 U	1 U
1,1-Dichloroethene	10 U	2 J	NA	NA	1 U	2 J	1 U	1 U
1,2-Dichloroethane	10 U	24	NA	NA	1 U	1 U	1 U	1 U
1,2-Dichloropropane	NA	5	NA	NA	1 U	1 U	1 U	1 U
2-Butanone	31 J	78	NA	NA	3 U	4 J	3 U	3 U
2-Hexanone	NA	7 J	NA	NA	3 U	3 U	3 U	3 U
4-Methyl-2-pentanone	NA	83	NA	NA	3 U	9 J	3 U	3 U
Acetone	NA	320	NA	NA	6 U	43	6 U	6 U
Benzene	5 U	250	NA	NA	3 J	23	12	1 U
Bromodichloromethane	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Bromoform	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Bromomethane/ Methyl bromide	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Carbon disulfide	NA	270	NA	NA	1 J	1 J	1 U	1 U
Carbon tetrachloride	5 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Chlorobenzene	5 U	7	NA	NA	4 J	110	1 U	1 U
Chloroethane	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Chloroform	5 U	5	NA	NA	1 U	2 J	1 U	1 U
Chloromethane	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	NA	97	NA	NA	12	16	1 U	1 U
cis-1,3-Dichloropropene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Dibromochloromethane	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Ethylbenzene	NA	110	NA	NA	310 DB	620 DB	20	6
Methylene chloride	NA	49	NA	NA	4 J	5 J	13	2 U
Styrene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Tetrachloroethene	5 U	71	NA	NA	2 J	72	1 U	1 U
Toluene	NA	1200 DB	NA	NA	52 B	970 DB	5 J B	2 J B
trans-1,2-Dichloroethene	NA	2 J	NA	NA	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Trichloroethene	5 U	590 D	NA	NA	3 J	3100 D	1 U	1 J
Vinyl chloride	10 U	2 J	NA	NA	1 U	1 U	1 U	1 U
Xylenes (Total)	NA	470	NA	NA	540 B	2800 DB	120	17
SPLP SEMIVOLATILE ORGANIC COMPOUNDS								
(all results in ug/l)								
1,2,4-Trichlorobenzene	NA	4 J	NA	NA	1 U	1 U	1 U	3 J
1,2-Dichlorobenzene	NA	5 J	NA	NA	25	150	2 J	1 J
1,3-Dichlorobenzene	NA	1 U	NA	NA	1 U	1 J	1 U	1 U
1,4-Dichlorobenzene	NA	1 U	NA	NA	2 J	9 J	2 J	1 U
2,2'-Oxybis(1-chloropropane)	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
2,4,6-Trichlorophenol	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
2,4-Dichlorophenol	NA	2 J	NA	NA	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	NA	75	NA	NA	4 J	9 J	19	8 J
2,4-Dinitrophenol	NA	20 U	NA	NA	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
2,6-Dinitrotoluene	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
2-Chloronapthalene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
2-Chlorophenol	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
2-Methylnapthalene	NA	130	NA	NA	28	42	27	31
2-Methylphenol	NA	47	NA	NA	2 J	4 J	1 U	1 U
2-Nitroaniline	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
2-Nitrophenol	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
3-Nitroaniline	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
4,6-Dinitro-2-methylphenol	NA	5 U	NA	NA	5 U	5 U	5 U	5 U
4-Bromophenyl phenyl ether	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
4-Chloro-3-methylphenol	NA	3 J	NA	NA	1 U	1 U	1 U	1 U
4-Chloroaniline	NA	1 U	NA	NA	17	1 J	1 U	1 U
4-Chlorophenyl phenyl ether	NA	1 U	NA	NA	1 U	1 U	1 U	1 U

302715

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-26D	MW-26D	MW-27D	MW-27D	P-36	P-37	P-22	P-23
Sample Depth	43-44	20.5-21	57-58	14-15	12.5-13	11.5-12	11-11.5	12-12.5
Sample Date	7/15/99	10/6/00	6/24/99	6/24/99	10/9/00	10/9/00	10/3/00	10/6/00
Matrix	Silt	Clayey Silt	Silty Clay	Sand	Sand	Ash	Sand	Sand
4-Methylphenol	NA	140	NA	NA	3 U	8 J	3 U	3 U
4-Nitroaniline	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
4-Nitrophenol	NA	10 U	NA	NA	10 U	10 U	10 U	10 U
Acenaphthene	NA	3 J	NA	NA	1 U	1 U	1 J	2 J
Acenaphthylene	NA	20	NA	NA	1 U	1 U	1 U	1 U
Anthracene	NA	2 J	NA	NA	1 U	1 U	1 U	1 U
Benzo(a)anthracene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(a)pyrene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(b)fluoranthene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(k)fluoranthene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
bis(2-Chloroethoxy)methane	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	NA	130	NA	NA	1 U	1 U	16	1 J
bis(2-Ethylhexyl)phthalate	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Butyl benzyl phthalate	NA	5 J B	NA	NA	2 U	2 U	2 U	2 U
Carbazole	NA	3 U	NA	NA	3 U	3 U	3 U	3 U
Chrysene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Dibenz(a,h)anthracene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Dibenzofuran	NA	2 J	NA	NA	1 U	1 U	1 U	1 J
Diethyl phthalate	NA	2 U	NA	NA	2 U	2 U	2 J	2 U
Dimethyl phthalate	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Di-n-butyl phthalate	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Di-n-octyl phthalate	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Fluoranthene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Fluorene	NA	11	NA	NA	1 J	1 U	2 J	3 J
Hexachlorobenzene	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Hexachlorobutadiene	NA	2 U	NA	NA	2 U	2 U	2 U	2 U
Hexachlorocyclopentadiene	NA	5 U	NA	NA	5 U	5 U	5 U	5 U
Hexachloroethane	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Indeno(1,2,3-cd)pyrene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Isophorone	NA	120	NA	NA	1 J	23	1 U	1 U
Naphthalene	NA	560 D	NA	NA	190 D	110	23	32
Nitrobenzene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
n-Nitrosodiphenylamine	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
n-Nitrosodipropylamine	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
Pentachlorophenol	NA	3 U	NA	NA	3 U	3 U	3 U	3 U
Phenanthrene	NA	12	NA	NA	2 J	2 J	3 J	4 J
Phenol	NA	100	NA	NA	1 J	3 J	1 U	1 U
Pyrene	NA	1 U	NA	NA	1 U	1 U	1 U	1 U
SPLP Metals								
(all results in ug/l)								
Arsenic	NA	NA	29.0 U	29.0 U	NA	NA	NA	NA
Barium	NA	NA	9.1 B	304	NA	NA	NA	NA
Cadmium	NA	NA	1.7 U	1.7 U	NA	NA	NA	NA
Chromium	NA	NA	5.4 U	5.4 U	NA	NA	NA	NA
Lead	NA	NA	23.0 U	23.0 U	NA	NA	NA	NA
Selenium	NA	NA	42.0 U	42.0 U	NA	NA	NA	NA
Silver	NA	NA	5.7 U	5.7 U	NA	NA	NA	NA
Mercury	NA	NA	0.042 U	0.042 U	NA	NA	NA	NA

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

302716

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	P-26	P-28
Sample Depth	4-4.5	11-11.5
Sample Date	6/15/99	10/6/00
Matrix	Sand	Sand
SPLP VOLATILE ORGANIC COMPOUNDS		
(all results in ug/l)		
1,1,1-Trichloroethane	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U
1,1-Dichloroethane	1 U	1 U
1,1-Dichloroethene	1 U	1 U
1,2-Dichloroethane	1 U	1 U
1,2-Dichloropropane	1 U	1 U
2-Butanone	3 U	3 U
2-Hexanone	3 U	17
4-Methyl-2-pentanone	3 U	3 U
Acetone	6 U	6 U
Benzene	13	1 U
Bromodichloromethane	1 U	1 U
Bromoform	1 U	1 U
Bromomethane/ Methyl bromide	2 U	2 U
Carbon disulfide	2 J	1 U
Carbon tetrachloride	1 U	1 U
Chlorobenzene	10	4 J
Chloroethane	2 U	2 U
Chloroform	1 U	1 U
Chloromethane	2 U	2 U
cis-1,2-Dichloroethene	8	1 U
cis-1,3-Dichloropropene	1 U	1 U
Dibromochloromethane	1 U	1 U
Ethylbenzene	91	39
Methylene chloride	9	2 U
Styrene	1 U	1 U
Tetrachloroethene	12	1 U
Toluene	380 DB	5 B
trans-1,2-Dichloroethene	1 U	1 U
trans-1,3-Dichloropropene	1 U	1 U
Trichloroethene	13	1 U
Vinyl chloride	1 U	1 U
Xylenes (Total)	440	150
SPLP SEMIVOLATILE ORGANIC COMPOUNDS		
(all results in ug/l)		
1,2,4-Trichlorobenzene	3 J	1 U
1,2-Dichlorobenzene	5 J	1 U
1,3-Dichlorobenzene	1 U	5 J
1,4-Dichlorobenzene	1 U	19
2,2'-Oxybis(1-chloropropane)	1 U	1 U
2,4,5-Trichlorophenol	2 U	2 U
2,4,6-Trichlorophenol	2 U	2 U
2,4-Dichlorophenol	1 U	1 U
2,4-Dimethylphenol	12	1 U
2,4-Dinitrophenol	20 U	20 U
2,4-Dinitrotoluene	1 U	1 U
2,6-Dinitrotoluene	2 U	2 U
2-Chloronapthalene	1 U	1 U
2-Chlorophenol	1 U	1 U
2-Methylnapthalene	51	92
2-Methylphenol	1 U	1 U
2-Nitroaniline	2 U	2 U
2-Nitrophenol	1 U	1 U
3,3'-Dichlorobenzidine	2 U	2 U
3-Nitroaniline	2 U	2 U
4,6-Dinitro-2-methylphenol	5 U	5 U
4-Bromophenyl phenyl ether	2 U	2 U
4-Chloro-3-methylphenol	1 U	1 U
4-Chloroaniline	1 U	1 U
4-Chlorophenyl phenyl ether	1 U	1 U

302717

Table 2-10. Analytical Results of SPLP Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	P-26	P-28
Sample Depth	4-4.5	11-11.5
Sample Date	6/15/99	10/6/00
Matrix	Sand	Sand
4-Methylphenol	14	3 U
4-Nitroaniline	2 U	2 U
4-Nitrophenol	10 U	10 U
Acenaphthene	2 J	11
Acenaphthylene	1 U	1 U
Anthracene	1 U	2 J
Benzo(a)anthracene	1 U	1 U
Benzo(a)pyrene	1 U	1 U
Benzo(b)fluoranthene	1 U	1 U
Benzo(g,h,i)perylene	1 U	1 U
Benzo(k)fluoranthene	1 U	1 U
bis(2-Chloroethoxy)methane	1 U	1 U
bis(2-Chloroethyl)ether	1 U	1 U
bis(2-Ethylhexyl)phthalate	2 U	2 U
Butyl benzyl phthalate	2 U	9 J B
Carbazole	3 U	3 U
Chrysene	1 U	1 U
Dibenz(a,h)anthracene	1 U	1 U
Dibenzofuran	1 J	11
Diethyl phthalate	2 U	2 U
Dimethyl phthalate	2 U	2 U
Di-n-butyl phthalate	2 U	2 U
Di-n-octyl phthalate	2 U	2 U
Fluoranthene	1 U	2 J
Fluorene	3 J	14
Hexachlorobenzene	2 U	2 U
Hexachlorobutadiene	2 U	2 U
Hexachlorocyclopentadiene	5 U	5 U
Hexachloroethane	1 U	1 U
Indeno(1,2,3-cd)pyrene	1 U	1 U
Isophorone	1 U	1 U
Naphthalene	46	76
Nitrobenzene	1 U	1 U
n-Nitrosodiphenylamine	1 U	1 U
n-Nitrosodipropylamine	1 U	1 U
Pentachlorophenol	3 U	3 U
Phenanthrene	9 J	18
Phenol	2 J	1 U
Pyrene	1 J	1 U
SPLP Metals		
(all results in ug/l)		
Arsenic	NA	NA
Barium	NA	NA
Cadmium	NA	NA
Chromium	NA	NA
Lead	NA	NA
Selenium	NA	NA
Silver	NA	NA
Mercury	NA	NA

Qualifiers:

B = (Organic) Compound detected in associated blank.
B = (Inorganic) Value is <CRDL, but >= IDL.
E = Estmated due to interference.
J = Estimated value.
N = Spike sample not with in control limits.
ND = Compound not detected above laboratory method detection limit.
P = Concentration difference between primary and secondary columns > 25 %.
U = Compound not detected above laboratory method detection limit.
* = Duplicate analysis not with in control limits.
NA = Not analyzed.

302718

Table 2-11. Summary of Product Recovery vs. Time in MW-13A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Product Level Elevation (ft MSL)	Water Level Elevation (ft MSL)	Corrected[(1)] Ground-Water Elevation (ft MSL)	Apparent Product Thickness (ft)	Product Recovered (gal)
8/18/2000	3.21	3.19	3.21	0.02	0.163
8/21/2000	3.12	3.08	3.12	0.04	0.163
8/25/2000	3.02	2.99	3.02	0.03	0.122
9/13/2000	2.77	2.75	2.77	0.02	0
11/2/2000	2.71	2.69	2.71	0.02	0
12/27/2000	NP	2.9	2.9	0	0
1/8/2001	NP	2.81	2.81	0	0
3/9/2001	NP	4.20	4.20	0	0

Notes:

TOC Elevation: 8.74

Measured Density: 0.9099

(1) Corrected Ground Water Elevation:

Elevation = CPE - ((CPE - CWE) * Density)

Where:

CPE - Corrected Product Elevation

CWE - Correct Ground Water Elevation

ft MSL = feet above mean sea level

gal = gallons

NP = No measurable product

Product Removal Phase 8/18/00 through 8/25/00

Post Removal Monitoring 8/18/00 through 3/9/01

302719

Table 2-12. Summary of Product Recovery vs. Time in MW-24S. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Product Level Elevation (ft MSL)	Water Level Elevation (ft MSL)	Corrected[(1)] Ground-Water Elevation (ft MSL)	Apparent Product Thickness (ft)	Product Recovered (gal)
8/18/2000	3.92	3.54	3.89	0.38	0.0625
8/21/2000	3.8	3.45	3.77	0.35	0.0781
8/25/2000	3.72	3.42	3.69	0.3	0.0391
9/13/2000	3.39	3.06	3.36	0.33	0.0234
11/2/2000	3.21	2.93	3.18	0.28	0
12/27/2000	3.41	3.34	3.40	0.07	0
1/8/2001	3.18	3.04	3.17	0.14	0
3/9/2001	4.78	4.72	4.77	0.06	0

Notes:

TOC Elevation: 13.32

Measured Density: 0.9099

(1) Corrected Ground Water Elevation:

Elevation = CPE - ((CPE - CWE) * Density)

Where:

CPE - Corrected Product Elevation

CWE - Correct Ground Water Elevation

ft MSL = feet below mean sea level

gal = gallons

Product Removal Phase 8/18/00 through 8/25/00

Post Removal Monitoring 8/18/00 through 3/9/01

302720

Table 2-13. Summary of Product Recovery vs Time in MW-32S. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Product Level Elevation (ft MSL)	Water Level Elevation (ft MSL)	Corrected[(1)] Ground-Water Elevation (ft MSL)	Apparent Product Thickness (ft)	Product Recovered (gal)
8/17/2000	3.07	2.22	2.99	0.85	0.163
8/18/2000	3.13	2.59	3.08	0.54	0.163
8/21/2000	2.96	2.52	2.92	0.44	0.163
8/23/2000	2.97	2.62	2.94	0.35	0.163
8/25/2000	2.87	2.62	2.85	0.25	0.122
8/28/2000	2.85	2.55	2.82	0.3	0.0815
8/29/2000	2.62	2.42	2.60	0.2	0.0815
9/1/2000	2.75	2.72	2.75	0.03	0
9/11/2000	2.59	2.5	2.58	0.09	0.0078
9/13/2000	2.53	2.51	2.53	0.02	0
12/27/2000	2.69	2.28	2.65	0.41	0
1/8/2001	2.54	2.17	2.51	0.37	0
3/9/2001	3.92	3.65	3.90	0.27	0

Notes:

TOC Elevation: 14.02

Measured Density: 0.9099

[(1)] Corrected Ground Water Elevation:

Elevation = CPE - ((CPE - CWE) * Density)

Where:

CPE - Corrected Product Elevation

CWE - Correct Ground Water Elevation

ft MSL = feet below mean sea level

gal = gallons

Product Removal Phase 8/17/00 through 8/25/00

Post Removal Monitoring 8/17/00 through 3/9/01

302721

Table 2-14. Summary of Product Recovery vs. Time in P-5. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Product Level Elevation (ft MSL)	Water Level Elevation (ft MSL)	Corrected[(1)] Ground-Water Elevation (ft MSL)	Apparent Product Thickness (ft)	Product Recovered (gal)
8/18/2000	3.36	2.95	3.32	0.41	0.1562
8/21/2000	3.19	3.04	3.18	0.15	0.5
8/25/2000	3.19	3.04	3.18	0.15	0.5
9/13/2000	2.44	2.28	2.43	0.16	0.0625
12/27/2000	2.45	2.43	2.45	0.02	0
1/8/2001	2.40	2.26	2.39	0.14	0
3/9/2001	4.53	4.22	4.50	0.31	0

Notes:

TOC Elevation: 17.14

Measured Density: 0.9099

[(1)] Corrected Ground Water Elevation:

Elevation = CPE - ((CPE - CWE) * Density)

Where:

CPE - Corrected Product Elevation

CWE - Correct Ground Water Elevation

ft MSL = feet below mean sea level

gal = gallons

Product Removal Phase 8/18/00 through 8/25/00

Post Removal Monitoring 8/18/00 through 3/9/01

302722

Table 2-15. Summary of Product Recovery vs. Time in PZ-4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Product Level Elevation (ft MSL)	Water Level Elevation (ft MSL)	Corrected[1] Ground-Water Elevation (ft MSL)	Apparent Product Thickness (ft)	Product Recovered (gal)
8/18/2000	3.45	2.92	3.40	0.53	0.0625
8/21/2000	3.25	3.2	3.25	0.05	0.0156
8/25/2000	3.05	3.04	3.05	0.01	0
9/13/2000	2.93	2.59	2.90	0.34	0.0469
12/27/2000	3.15	3.09	3.14	0.06	0
1/8/2001	3.00	2.99	3.00	0.01	0
3/9/2001	4.15	4.06	4.14	0.09	0

Notes:
TOC Elevation: 12.2
Measured Density: 0.9099

[1] Corrected Ground Water Elevation:
Elevation = CPE - ((CPE - CWE) * Density)
Where:
CPE - Corrected Product Elevation
CWE - Correct Ground Water Elevation
ft MSL = feet below mean sea level
gal = gallons

Product Removal Phase 8/18/00 through 8/25/00
Post Removal Monitoring 8/18/00 through 3/9/01

302723

Table 2-16. Justification, Boring Depths, Sampling Rationale, and Analytical Parameters for Soil Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Boring Number	Proposed Depth Interval (Ft. BGS)	Split Spoon Sampling Frequency	Justification	Sampling Strategy	Analytical Parameters
Lagoon Borings					
L-1	60	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL.	C, Plus Ash and Backfill	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-2	60	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL.	C, Plus Ash and Backfill	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-3	118	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL	D	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-4	116	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL	C, Plus Ash and Backfill and Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-5	116	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL	D	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-6	112	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL	D, Plus Ash and Backfill	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-7	44	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-8	60	Continuous	Evaluate the stratigraphy of the lagoon area, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals, below the former lagoon, remaining after initial remedial activities, including screening for DNAPL	C, Plus Ash and Backfill	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
Lagoon Perimeter Borings					
L-9A	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL.	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-9B	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-10A	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH

302724

Table 2-16. Justification, Boring Depths, Sampling Rationale, and Analytical Parameters for Soil Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Boring Number	Proposed Depth Interval (Ft. BGS)	Split Spoon Sampling Frequency	Justification	Sampling Strategy	Analytical Parameters
L-10B	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-11A	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-11B	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-12A	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-12B	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-13A	60	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-13B	40	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-14A	39	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-14B	59	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-15A	43	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-15B	44	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
L-16A	38	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH

302725

Table 2-16. Justification, Boring Depths, Sampling Rationale, and Analytical Parameters for Soil Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Boring Number	Proposed Depth Interval (Ft. BGS)	Split Spoon Sampling Frequency	Justification	Sampling Strategy	Analytical Parameters
L-16B	40	Continuous	Evaluate the stratigraphy of the soils surrounding the lagoon, including the presence of a confining and/or peat layer and the distribution and characteristics of chemical residuals remaining around the former lagoon after initial remedial activities, including screening for DNAPL	C	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
Process Area Borings					
P-20	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the west of the lagoon. Gives coverage between proposed borings L-15B and L-16B.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-21	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the west of the lagoon. Evaluate the extent of product encountered in USEPA borings B-1 and B-2.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-22	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs which were not analyzed in nearby USEPA boring SB-18, which had elevated concentrations of BTEX.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-23	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs and the extent of product encountered in USEPA boring B-1 and B-2.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-24	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs, which were not analyzed in nearby USEPA boring B-7, which had elevated concentrations of BTEX, and the extent of product encountered in USEPA boring B-33.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-25	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs and the extent of product encountered in USEPA boring B-6.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-26	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs in an area where soil borings were not previously installed.	A, Plus Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-27	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs and the extent of product encountered in USEPA boring B-32.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-28	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs.	A, Plus Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-29	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs in an area where soil borings were not previously installed.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-30	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the Former Process and Tank Areas and extent of product encountered in the drainage ditch (MW-13A).	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-31	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the Former Process and Tank Areas and the extent of product encountered in the drainage ditch (MW-13A).	A, Plus Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-32	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs which were not analyzed in nearby USEPA boring SB-19, which had elevated BTEX concentration.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-33	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the Former Process and Tank Areas and the extent of product encountered in the drainage ditch (MW-13A).	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH

302726

Table 2-16. Justification, Boring Depths, Sampling Rationale, and Analytical Parameters for Soil Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Boring Number	Proposed Depth Interval (Ft. BGS)	Split Spoon Sampling Frequency	Justification	Sampling Strategy	Analytical Parameters
P-34	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs.	A, Plus Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-35	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the Former Process and Tank Areas and the extent of product encountered in the drainage ditch (MW-13A).	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-36	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs in an area where soil borings were not previously installed.	A, Plus Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-37	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-38	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs in an area where soil borings were not previously installed.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-39	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs which were not analyzed in nearby USEPA boring S45Y-1, which had elevated BTEX concentrations.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-40	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs in an area where soil borings were not previously installed.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-41	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs in an area where soil borings were not previously installed.	A, Plus Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-42	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs in an area where soil borings were not previously installed.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-43	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs and the extent of product encountered in USEPA boring B-27.	A	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
P-44	40	Continuous	Evaluate the stratigraphy (clay/peat) and COPC concentrations to the north of the lagoon including chlorinated VOCs and the extent of product encountered in USEPA boring B-30 and B35MM-1.	A, Plus Surface Soils	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
PB-1 through PB-5	10	Continuous	Evaluate concentrations of COPCs in soil and the presence of NAPL in the vicinity of the Pepper Building.	B	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
Monitoring Well Borings					
MW-26D	120	Continuous	Evaluate the stratigraphy of the Upper and Middle PRM and to determine if confining layers are present between the Upper and Middle PRM and between the Upper-Middle and Lower-Middle PRM.	D	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH
MW-27D	120	Continuous	Evaluate the stratigraphy of the Upper and Middle PRM and to determine if confining layers are present between the Upper and Middle PRM and between the Upper-Middle and Lower-Middle PRM.	D	TCL-VOC, TCL-SVOC, PCBs, TAL Metals, TPH, TOC, Eh, pH

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SAMPLING STRATEGY

A = One sample biased to zone with the greatest evidence of contamination, the second sample below the first where screening indicates substantially less evidence of contamination, the third at the base of the boring or at an alternate, shallower location where screening indicates lower concentrations of contaminants in order to establish a vertical gradient. Additional samples will be collected if NAPL is detected or to establish vertical distribution of contaminants in the confining layer.

B = One sample biased to the portion of the unsaturated zone with the greatest evidence of contamination, the second sample from immediately above the water table, the third from the base of the boring.

C = One sample from the lagoon residuals, the second from the peat layer (if present), the third from the top of the clay/silt confining layer at the base of the Upper PRM, and the fourth sample from three feet into the confining layer.

D = In the Upper PRM: One sample from the lagoon residuals, the second from the peat layer (if present), the third from the top of the clay/silt confining layer at the base of the Upper PRM, and the fourth from three feet into the confining layer. In the Upper Middle PRM: One sample just below the confining layer, the second from an intermediate depth exhibiting the greatest evidence of contamination, the third from the top of the clay layer at the base of the Upper Middle PRM and the fourth sample from three feet into the confining layer. Additional samples will be collected if NAPL is detected or to establish vertical distribution of contaminants in the confining layer.

E = One sample from the six-inch interval above the water table and one sample from a deeper interval, based upon field screening, to evaluate the vertical distribution of contaminants. Additional samples will be collected if NAPL is detected.

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Table 2-17. Summary of Test Pit Soil and Ground Water Analytical Parameters. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Test Pit Identification	Soil Analytical Parameters	Ground Water Analytical Parameters
TP-A-1	VOCs, SVOCs, PCBs, TAL, Waste Characterization	VOCs, SVOCs, PCBs, TAL, Waste Characterization
TP-A-2	VOCs, SVOCs, PCBs, TAL, Waste Characterization	VOCs, SVOCs, PCBs, TAL, Waste Characterization
TP-A-3	VOCs, SVOCs, PCBs, TAL, Waste Characterization	
TP-A-4	VOCs, SVOCs, PCBs, TAL, Waste Characterization	
TP-A-5	VOCs, SVOCs, PCBs, TAL, Waste Characterization	
TP-A-6	VOCs, SVOCs, PCBs, TAL, Waste Characterization	VOCs, SVOCs, PCBs, TAL
TP-B-1	VOCs, SVOCs, PCBs, TAL, Waste Characterization	
TP-C-1	VOCs, SVOCs, PCBs, TAL, Waste Characterization	VOCs, SVOCs, PCBs, TAL, Waste Characterization
TP-D-1	VOCs, SVOCs, PCBs, TAL, Waste Characterization	
TP-E-1	VOCs, SVOCs, PCBs, TAL, Waste Characterization	VOCs, SVOCs, PCBs, TAL, Waste Characterization
TP-F-1	VOCs, SVOCs, PCBs, TAL, Waste Characterization	
TP-F-2	VOCs, SVOCs, PCBs, TAL, Waste Characterization	
TP-H-1	VOCs, SVOCs, PCBs, TAL, Waste Characterization	VOCs, SVOCs, PCBs, TAL, Waste Characterization

Note:
Waste Characterization parameters include: TCLP VOCs, TCLP SVOCs, TCLP Metals, PCBs, pH, Reactivity, Inability, Corrosivity, dioxins/furans.

Table 2-18. Summary of Soil Sample Results from LNAPL (N-Series) Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	N-2	N-2	N-3	N-3	N-4	N-4	N-4	N-6	N-6	N-6	N-6	N-7
Sample Date	10/4/00	10/4/00	10/4/00	10/5/00	9/26/00	9/26/00	9/26/00	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00
Sample Depth	12.5-3	13-13.5	15-15.5	19.5-20	8.5-9	10.5-11	36-36.5	4.5-5.0	6.5-7.0	9-9.5	10.5-11	7.5-8
Chemical Name												
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302730

Location ID	N-2	N-2	N-3	N-3	N-4	N-4	N-4	N-6	N-6	N-6	N-6	N-7
Sample Date	10/4/00	10/4/00	10/4/00	10/5/00	9/26/00	9/26/00	9/26/00	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00
Sample Depth	12.5-3	13-13.5	15-15.5	19.5-20	8.5-9	10.5-11	36-36.5	4.5-5.0	6.5-7.0	9-9.5	10.5-11	7.5-8
Chemical Name												
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (mg/kg)												
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302731

Location ID	N-2	N-2	N-3	N-3	N-4	N-4	N-4	N-6	N-6	N-6	N-6	N-7
Sample Date	10/4/00	10/4/00	10/4/00	10/5/00	9/26/00	9/26/00	9/26/00	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00
Sample Depth	12.5-3	13-13.5	15-15.5	19.5-20	8.5-9	10.5-11	36-36.5	4.5-5.0	6.5-7.0	9-9.5	10.5-11	7.5-8
Chemical Name												
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)												
Aroclor-1016	NA	370 U	4.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	520 U	5.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	770 U	8.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	370 U	4.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	400 U	4.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	370 U	4.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	17000	4.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (mg/kg)												
PHC as Diesel Fuel	21000	NA	NA	110	17000	23000	69	18000	18000	11000	13000	7900
PHC as Gasoline	1700	NA	NA	0.23 U	72	87	0.24 U	72	110	83	77	10
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GENERAL CHEMISTRY												
pH (S.U.)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (Quad)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302732

Location ID	N-7	N-10	N-10	N-10	N-11	N-11	N-11	N-16	N-16	N-17	N-19	N-19
Sample Date	10/10/00	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00	10/17/00	10/17/00	10/18/00	9/22/00	9/25/00
Sample Depth	9.5-10	3.5-4	9.5-10	15-15.5	9.5-10	11.5-12	15.5-16	4-5	11-12	10-11	4-4.5	4.5-5
Chemical Name												
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302733

Location ID	N-7	N-10	N-10	N-10	N-11	N-11	N-11	N-16	N-16	N-17	N-19	N-19
Sample Date	10/10/00	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00	10/17/00	10/17/00	10/18/00	9/22/00	9/25/00
Sample Depth	9.5-10	3.5-4	9.5-10	15-15.5	9.5-10	11.5-12	15.5-16	4-5	11-12	10-11	4-4.5	4.5-5
Chemical Name												
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (mg/kg)												
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302734

Location ID	N-7	N-10	N-10	N-10	N-11	N-11	N-11	N-16	N-16	N-17	N-19	N-19
Sample Date	10/10/00	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00	10/17/00	10/17/00	10/18/00	9/22/00	9/25/00
Sample Depth	9.5-10	3.5-4	9.5-10	15-15.5	9.5-10	11.5-12	15.5-16	4-5	11-12	10-11	4-4.5	4.5-5
Chemical Name												
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)												
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	3.4 U	NA	3.5 U	73 U	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	4.8 U	NA	5.0 U	100 U	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	7.1 U	NA	7.3 U	150 U	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	3.4 U	NA	3.5 U	73 U	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	3.7 U	NA	3.8 U	79 U	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	4.6 J	NA	3.5 U	73 U	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	3.4 U	NA	3.5 U	1500	NA
PETROLEUM HYDROCARBONS (mg/kg)												
PHC as Diesel Fuel	7800	7700	300	29000	1300	1700	2700	NA	41 U	NA	NA	70
PHC as Gasoline	29	150	4.9	11. J	4.1 U	1.6	13. J	NA	0.21 U	NA	NA	2.4
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GENERAL CHEMISTRY												
pH (S.U.)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (Quad)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302735

Location ID	N-20	N-22	N-23	N-23	N-23	N-23	N-25	N-25	N-25	N-26	N-26	N-26
Sample Date	9/25/00	9/29/00	10/2/00	10/2/00	10/2/00	10/2/00	10/3/00	10/3/00	10/3/00	10/2/00	10/2/00	10/2/00
Sample Depth	8-8.5	27.5-28	9.5-10	19.5-20	25-25.5	34-34.5	13-13.5	7-7.5	10-10.5	7.5-8	9.5-10	13.5-14
Chemical Name												
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302736

Location ID	N-20	N-22	N-23	N-23	N-23	N-23	N-25	N-25	N-25	N-26	N-26	N-26
Sample Date	9/25/00	9/29/00	10/2/00	10/2/00	10/2/00	10/2/00	10/3/00	10/3/00	10/3/00	10/2/00	10/2/00	10/2/00
Sample Depth	8-8.5	27.5-28	9.5-10	19.5-20	25-25.5	34-34.5	13-13.5	7-7.5	10-10.5	7.5-8	9.5-10	13.5-14
Chemical Name												
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (mg/kg)												
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302737

Location ID	N-20	N-22	N-23	N-23	N-23	N-23	N-25	N-25	N-25	N-26	N-26	N-26
Sample Date	9/25/00	9/29/00	10/2/00	10/2/00	10/2/00	10/2/00	10/3/00	10/3/00	10/3/00	10/2/00	10/2/00	10/2/00
Sample Depth	8-8.5	27.5-28	9.5-10	19.5-20	25-25.5	34-34.5	13-13.5	7-7.5	10-10.5	7.5-8	9.5-10	13.5-14
Chemical Name												
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)												
Aroclor-1016	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	5.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	8.0 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	4.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (mg/kg)												
PHC as Diesel Fuel	NA	57	86000	190000	230000	14000	2600	13000	3600	18000	30000	730
PHC as Gasoline	NA	2.3 U	400	2100	1500	370	210	240	250	290	400	280
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GENERAL CHEMISTRY												
pH (S.U.)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (Quad)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302738

Location ID	N-35	N-35	N-36	N-36	N-37	N-38	N-39	N-40	N-41	N-42	P-22	P-23
Sample Date	10/5/00	10/6/00	10/16/00	10/16/00	12/4/00	12/4/00	12/4/00	12/4/00	12/4/00	12/4/00	10/3/00	10/6/00
Sample Depth	29.5-30	33-33.5	13-14	40-41	0-0.5	0-0.05	0-0.5	0-0.5	0-0.5	0-0.5	11-11.5	12-12.5
Chemical Name												
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,2,4-Trichlorobenzene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	1100 U	1100 U	1400 U	1400 U	880 U	1100 U	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2-Chlorophenol	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2-Methylphenol	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
2-Nitroaniline	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
2-Nitrophenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
3-Nitroaniline	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	270 U	270 U	350 U	350 U	220 U	280 U	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
4-Chloroaniline	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
4-Methylphenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
4-Nitroaniline	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
4-Nitrophenol	NA	NA	NA	NA	270 U	270 U	350 U	350 U	220 U	280 U	NA	NA
Acenaphthene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Acenaphthylene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Anthracene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	110 U	110 U	210 J	140 U	88 U	110 U	NA	NA

302739

Location ID	N-35	N-35	N-36	N-36	N-37	N-38	N-39	N-40	N-41	N-42	P-22	P-23
Sample Date	10/5/00	10/6/00	10/16/00	10/16/00	12/4/00	12/4/00	12/4/00	12/4/00	12/4/00	12/4/00	10/3/00	10/6/00
Sample Depth	29.5-30	33-33.5	13-14	40-41	0-0.5	0-0.05	0-0.5	0-0.5	0-0.5	0-0.5	11-11.5	12-12.5
Chemical Name												
Butyl benzyl phthalate	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Carbazole	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Chrysene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Dibenzofuran	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Diethyl phthalate	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Fluoranthene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Fluorene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	270 U	270 U	350 U	350 U	220 U	280 U	NA	NA
Hexachloroethane	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Isophorone	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Naphthalene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Nitrobenzene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Pentachlorophenol	NA	NA	NA	NA	270 U	270 U	350 U	350 U	220 U	280 U	NA	NA
Phenanthrene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
Phenol	NA	NA	NA	NA	110 U	110 U	140 U	140 U	88 U	110 U	NA	NA
Pyrene	NA	NA	NA	NA	54 U	54 U	71 U	69 U	44 U	56 U	NA	NA
METALS (mg/kg)												
Aluminum	NA	NA	NA	NA	10200	1520	2950	2970	3610	2580	NA	NA
Antimony	NA	NA	NA	NA	3.5 U	3.5 U	4.6 U	4.6 U	2.8 U	3.6 U	NA	NA
Arsenic	NA	NA	NA	NA	4.7	2.8	1.7 B	1.7 B	1.4	0.69 U	NA	NA
Barium	NA	NA	NA	NA	127	9.9 B	54.0	36.3	18.2	23.5	NA	NA
Beryllium	NA	NA	NA	NA	0.95	0.31 B	0.38 U	0.38 U	0.23 U	0.30 U	NA	NA
Cadmium	NA	NA	NA	NA	0.35 U	0.35 U	0.46 U	0.46 U	0.28 U	0.36 U	NA	NA
Calcium	NA	NA	NA	NA	7910 E	220 E	1900 E	1950 E	307 E	810 E	NA	NA
Chromium	NA	NA	NA	NA	17.9 N*	10.7 N*	8.3 BN*	4.9 BN*	10.2 N*	6.9 N*	NA	NA
Cobalt	NA	NA	NA	NA	3.0 B	0.71 U	1.6 B	1.3 B	1.0 B	0.74 U	NA	NA
Copper	NA	NA	NA	NA	10.8	3.4 B	9.0	5.7 B	4.9 B	5.2 B	NA	NA
Iron	NA	NA	NA	NA	10200 *	8030 *	4200 *	1690 *	2390 *	1510 *	NA	NA
Lead	NA	NA	NA	NA	60.9	2.5 B	75.0	15.9	5.5	23.5	NA	NA
Magnesium	NA	NA	NA	NA	888	137	543	448	304	374	NA	NA

302740

Location ID	N-35	N-35	N-36	N-36	N-37	N-38	N-39	N-40	N-41	N-42	P-22	P-23
Sample Date	10/5/00	10/6/00	10/16/00	10/16/00	12/4/00	12/4/00	12/4/00	12/4/00	12/4/00	12/4/00	10/3/00	10/6/00
Sample Depth	29.5-30	33-33.5	13-14	40-41	0-0.5	0-0.05	0-0.5	0-0.5	0-0.5	0-0.5	11-11.5	12-12.5
Chemical Name												
Manganese	NA	NA	NA	NA	78.5	9.5	40.4	26.4	7.4	12.1	NA	NA
Nickel	NA	NA	NA	NA	7.1 B	1.5 B	6.8 B	5.3 B	1.8 B	2.6 B	NA	NA
Potassium	NA	NA	NA	NA	1130	238	826	289	439	398	NA	NA
Selenium	NA	NA	NA	NA	0.69 B	0.65 U	0.85 U	0.86 U	0.53 U	0.68 U	NA	NA
Silver	NA	NA	NA	NA	0.49 U	0.49 U	0.65 U	0.65 U	0.40 U	0.51 U	NA	NA
Sodium	NA	NA	NA	NA	115 B	44.3 U	121 B	58.7 U	36.0 U	46.2 U	NA	NA
Thallium	NA	NA	NA	NA	1.3 U	1.3 U	1.7 U	1.7 U	1.1 U	1.4 U	NA	NA
Vanadium	NA	NA	NA	NA	34.5	13.1	14.3	11.2	22.8	7.4	NA	NA
Zinc	NA	NA	NA	NA	79.5	6.5 B	55.4	20.0 B	7.6 B	7.3 B	NA	NA
Mercury	NA	NA	NA	NA	0.065 B	0.0053 U	0.086 B	0.026 B	0.012 B	0.011 B	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)												
Aroclor-1016	NA	NA	3.8 U	3.8 U	53 U	5.3 U	6.9 U	6.9 U	4.3 U	5.6 U	NA	NA
Aroclor-1221	NA	NA	5.5 U	5.5 U	76 U	7.6 U	9.8 U	9.8 U	6.2 U	8. U	NA	NA
Aroclor-1232	NA	NA	8.0 U	8.0 U	110 U	11 U	14 U	14 U	9.1 U	12 U	NA	NA
Aroclor-1242	NA	NA	3.8 U	3.8 U	53 U	5.3 U	6.9 U	6.9 U	4.3 U	5.6 U	NA	NA
Aroclor-1248	NA	NA	4.2 U	4.2 U	58 U	5.8 U	7.5 U	7.5 U	4.7 U	6.1 U	NA	NA
Aroclor-1254	NA	NA	12 J	13 J	270 J	5.3 U	57	30 J	65	24 J	NA	NA
Aroclor-1260	NA	NA	3.8 U	7.0 J	660	5.3 U	150 P	41 P	80	46	NA	NA
PETROLEUM HYDROCARBONS (mg/kg)												
PHC as Diesel Fuel	4.7 U	4.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHC as Gasoline	0.23 U	0.23 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GENERAL CHEMISTRY												
pH (S.U.)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (Quad)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302741

Table 2-18. Summary of Soil Sample Results from LNAPL (N-Series) Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-28	P-28	P-36	P-37	P-37	P-37	B-1	B-33	L-5	L-8
Sample Date	10/6/00	10/6/00	10/9/00	10/9/00	10/9/00	10/9/00	10/9/00	10/9/00	9/28/00	9/27/00
Sample Depth	8-8.5	11-11.5	12.5-13	6-7	11.5-12	13-14	7.5-8.5	10.5-11	11-11.5	30-30.5
Chemical Name										
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)										
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302742

Table 2-18. Summary of Soil Sample Results from LNAPL (N-Series) Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-28	P-28	P-36	P-37	P-37	P-37	B-1	B-33	L-5	L-8
Sample Date	10/6/00	10/6/00	10/9/00	10/9/00	10/9/00	10/9/00	10/9/00	10/9/00	9/28/00	9/27/00
Sample Depth	8-8.5	11-11.5	12.5-13	6-7	11.5-12	13-14	7.5-8.5	10.5-11	11-11.5	30-30.5
Chemical Name										
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (mg/kg)										
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302743

Table 2-18. Summary of Soil Sample Results from LNAPL (N-Series) Borings. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-28	P-28	P-36	P-37	P-37	P-37	B-1	B-33	L-5	L-8
Sample Date	10/6/00	10/6/00	10/9/00	10/9/00	10/9/00	10/9/00	10/9/00	10/9/00	9/28/00	9/27/00
Sample Depth	8-8.5	11-11.5	12.5-13	6-7	11.5-12	13-14	7.5-8.5	10.5-11	11-11.5	30-30.5
Chemical Name										
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)										
Aroclor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (mg/kg)										
PHC as Diesel Fuel	NA	NA	NA	NA	NA	NA	NA	NA	3700	NA
PHC as Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	11 J	NA
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GENERAL CHEMISTRY										
pH (S.U.)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	6600.	NA	NA	3500.	NA	710.	3200.	NA	NA	20600.
Total Organic Carbon (Quad)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302744

Table 2-19. Summary of Monitoring Well Construction Information. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well	Date Installed	Diameter (in)	Inner Casing Elevation (Ft)	Borehole Depth (ft BGS)	Screen Setting (ft BGS)	Screen Material	Aquifer Monitored
MW-1A	1990	2	10.37	23	2-12	SS	Water Table
MW-1C	Aug-90	2	9.09	181	132-142	SS	Lower Middle PRM
MW-2C	Sep-90	2	6.94	138	127-137	SS	Lower Middle PRM
MW-3A	1990/Jun-99	2	12.99	14	4-14	SS	Water Table
MW-3C	Jul-90	2	10.31	145	128-138	SS	Lower Middle PRM
MW-4A	1990	2	10.84	13	2-12	SS	Water Table
MW-4D	Sep-99	2	10.15	115	102-112	SS	Base of Upper Middle PRM
MW-4C	Aug-90	2	10.28	180	168-178	SS	Lower Middle PRM
MW-5B	Aug-90	2	16.32	135	100-110	SS	Base of Upper Middle PRM
MW-6A	1990	2	11.95	15	5-15	SS	Water Table
MW-6B	Aug-90/Jun-99	2	12.02	110	90-100	SS	Base of Upper Middle PRM
MW-7A	1990	2	9.91	15	5-15	SS	Water Table
MW-7B	Aug-90	2	9.77	85	62-72	SS	Base of Upper Middle PRM
MW-8A	1990	2	11.33	17	7-17	SS	Water Table
MW-8B	Aug-90	2	11.74	103	92-102	SS	Base of Upper Middle PRM
MW-9A	1990	2	10.91	16	5-15	SS	Water Table
MW-9B	Aug-90	2	11.00	100	85-95	SS	Base of Upper Middle PRM
MW-10A	1990	2	12.73	16	5-15	SS	Water Table
MW-10B	Sep-90	2	12.51	135	120-130	SS	Base of Upper Middle PRM
MW-11A	1990	2	10.50	15	4-14	SS	Water Table
MW-11A(D)	1990/Jun-99	2	9.41	75	65-75	SS	Base of Upper PRM
MW-11B	Aug-90	2	11.57	145	132-142	SS	Base of Upper Middle PRM
MW-12A	Aug-90	2	8.52	14	4-14	SS	Water Table
MW-12B	1990	2	10.72	162	133-143	SS	Upper Middle PRM
MW-13A	Aug-90	2	8.49	16	5-15	SS	Water Table
MW-14A	1990	2	16.29	115	105-115	SS	Base of Upper PRM
MW-14B	1990	2	16.32	203	190-200	SS	Base of Upper Middle PRM
MW-15A	1990	2	12.42	118	105-115	SS	Base of Upper PRM
MW-15B	1990	2	12.49	196	186-196	SS	Base of Upper Middle PRM
MW-16A	1990	2	9.31	130	120-130	SS	Base of Upper PRM
MW-16B	1990	2	9.33	192	182-192	SS	Base of Upper Middle PRM
MW-17I	Oct-99	2	14.78	135	119-129	SS	Upper Middle PRM
MW-17D	Jul-99	2	14.40	154	139-149	SS	Base of Upper Middle PRM
MW-18D	Jul-99	2	13.79	150	134-144	SS	Base of Upper Middle PRM
MW-19D	Aug-99	2	16.99	144	134-144	SS	Base of Upper Middle PRM

302745

Table 2-19. Summary of Monitoring Well Construction Information. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well	Date Installed	Diameter (in)	Inner Casing Elevation (Ft)	Borehole Depth (ft BGS)	Screen Setting (ft BGS)	Screen Material	Aquifer Monitored
MW-20D	Oct-99	2	7.90	115	101-111	SS	Base of Upper Middle PRM
MW-21D	Dec-99	2	8.85	136	112.5-122.5	SS	Base of Upper Middle PRM
MW-22S	Nov-99	2	8.71	12	2-12	SS	Water Table
MW-22I	Nov-99	2	9.10	100	90-100	SS	Upper Middle PRM
MW-22D	Nov-99	2	9.22	137	130-135	SS	Base of Upper Middle PRM
MW-23S	Sep-99	2	10.78	17	5-15	SS	Water Table
MW-23I	Sep-99	2	10.73	73	60-70	SS	Top of Upper Middle PRM
MW-23D	Sep-99	2	10.75	115	101-111	SS	Base of Upper Middle PRM
MW-24S	Sep-99	2	13.32	12	2-12	SS	Water Table
MW-25S	Aug-99	2	10.51	14	2-12	SS	Water Table
MW-26S	Jul-99	2	14.45	19	6-16	SS	Water Table
MW-26I	Jul-99	2	14.22	63.5	50.5-60.5	SS	Top of Upper Middle PRM
MW-26D	Jul-99	2	14.46	120	106-116	SS	Base of Upper Middle PRM
MW-27S	Jul-99	2	16.02	19	6-16	SS	Water Table
MW-27I	Jul-99	2	16.41	75	62-72	SS	Top of Upper Middle PRM
MW-27D	Jun-99	2	15.76	120	103-113	SS	Base of Upper Middle PRM
MW-28S	Sep-99	2	8.83	20	4-14	SS	Water Table
MW-29S	Sep-99	2	12.13	13	3-13	SS	Water Table
MW-30S	Sep-99	2	13.56	13	3-13	SS	Water Table
MW-31S	Sep-99	2	12.71	16	3-13	SS	Water Table
MW-32S	Sep-99	2	14.02	20	6-16	SS	Water Table
MW-32I	Oct-00	2	14.12	34	24-34	SS	Base of Water Table
MW-32D	Oct-00	2	13.90	109	99-109	SS	Base of Upper Middle PRM
MW-33D	Aug-99	2	8.94	150	132-142	SS	Base of Upper Middle PRM
MW-34D	Sep-00	2	15.82	206	195-205	SS	Base of Upper Middle PRM
MW-35D	Dec-00	2	15.65	202	185-195	SS	Base of Upper Middle PRM
MW-36S	Jun-00	2	7.16	12	1-11	SS	Water Table
MW-36D	Aug-02	2	--	116.5	106.5-116.5	SS	Base of Upper Middle PRM
MW-37D	Aug-02	2	--	115	102-112	SS	Base of Upper Middle PRM
WMW-1A	Aug-99	2	5.08	3	1-3	SS	Water Table
WMW-1B	Aug-99	2	5.20	6	4-6	SS	Water Table
WMW-2A	Aug-99	2	4.62	3	1-3	SS	Water Table
WMW-2B	Aug-99	2	4.63	6	4-6	SS	Water Table
WMW-3A	Aug-99	2	6.11	3	1-3	SS	Water Table
WMW-3B	Aug-99	2	5.94	6	4-6	SS	Water Table

302746

Table 2-19. Summary of Monitoring Well Construction Information. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well	Date Installed	Diameter (in)	Inner Casing Elevation (Ft)	Borehole Depth (ft BGS)	Screen Setting (ft BGS)	Screen Material	Aquifer Monitored
WMW-4A	Aug-99	2	5.89	3	1-3	SS	Water Table
WMW-4B	Aug-99	2	5.87	6	4-6	SS	Water Table
WMW-5A	Aug-99	2	6.08	3	1-3	SS	Water Table
WMW-5B	Aug-99	2	6.02	6	4-6	SS	Water Table
WMW-6A	Aug-99	2	5.38	3	1-3	SS	Water Table
WMW-6B	Aug-99	2	5.36	6	4-6	SS	Water Table
WMW-7A	Jun-00	2	5.75	3	1-3	SS	Water Table
WMW-7B	Jun-00	2	5.74	6	4-6	SS	Water Table
PZ-1	Dec-99	2	7.14	33	23-33	SS	Upper PRM
PZ-2	Jan-00	2	8.56	11	16-21	SS	Upper PRM
PZ-3	Nov-99	2	11.86	85	72-82	PVC	Upper Middle PRM
PZ-4	Sep-99	2	12.20	22	5-20	PVC	Water Table
PZ-5	Sep-99	2	9.09	22	5-20	PVC	Water Table
PZ-6	Sep-99	2	12.11	22	5-20	PVC	Water Table
PZ-7	Nov-99	2	12.44	148	137-147	PVC	Lower Middle PRM
PZ-8	Nov-99	2	12.61	85	72-82	PVC	Upper Middle PRM
PZ-9	Nov-99	2	14.61	85	72-82	PVC	Upper Middle PRM
PZ-10	Nov-99	2	12.22	32	5-30	PVC	Water Table
PZ-11A	Jun-00	2	13.02	36	25-35	PVC	Water Table
PZ-11B	Jun-00	2	13.14	23	2-23	PVC	Water Table
PZ-12	Jun-00	2	9.37	36	25-35	PVC	Water Table
PW-1	Jun-00	10	12.89	32	16-31	SS	Water Table
PW-2	Nov-99	10	12.69	126	37-58/62-116	SS	Upper Middle PRM
S-1A	1983/1984	4	8.83	23	13-23	SS	Water Table
S-1B	1983/1984	4	8.45	30	20-30	SS	Base of Upper PRM
S-1C	1983/1984	4	9.59	57	36-46	SS	Upper Middle PRM
S-2A	1983/1984	4	12.17	15	5-15	SS	Water Table
S-2B	1983/1984	4	13.49	50	40-50	SS	Top of Upper Middle PRM
S-2C	1983/1984	4	14.02	116	98-108	SS	Base of Upper Middle PRM
S-3A	1983/1984	4	13.96	15	5-15	SS	Water Table
S-3B	1983/1984	4	14.08	55	40-50	SS	Upper Middle PRM
S-3C	1983/1984	4	13.97	102	90-100	SS	Base of Upper Middle PRM
S-4	1983/1984	4	15.89	19	9-19	SS	Water Table
S-5	1983/1984	4	7.95	72	60-70	SS	Upper Middle PRM
S-6	1983/1984	4	9.64	92	79-89	SS	Base of Upper Middle PRM

302747

Table 2-19. Summary of Monitoring Well Construction Information. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well	Date Installed	Diameter (in)	Inner Casing Elevation (Ft)	Borehole Depth (ft BGS)	Screen Setting (ft BGS)	Screen Material	Aquifer Monitored
S-8	1983/1984	4	11.50	85	75-85	SS	Upper Middle PRM
S-9	1983/1984	4	7.96	52	40-50	SS	Upper PRM
S-11A	1983/1984	4	8.61	15	5-15	SS	Water Table
S-11B	1983/1984	4	9.91	95	81-91	SS	Upper Middle PRM
S-11C	1983/1984	4	9.88	157	105-115	SS	Base of Upper Middle PRM
EPA-101	Jun-81	2	10.39	46	35-37	SS	Upper PRM
EPA-102	Jun-81	2	16.90	51	36-38	SS	Upper PRM
EPA-103	Jun-81	2	11.89	55	45-47	SS	Upper PRM
EPA-104S	Jun-81	2	9.84	102	19-21	SS	Water Table
EPA-104D	Jun-81	2	9.83	102	49-51	SS	Upper Middle PRM
EPA-105	Jun-81	2	10.56	51	40-42	SS	Upper PRM
EPA-107	Jun-81	2	12.20	51	36-38	SS	Upper Middle PRM
EPA-108	Jun-81	2	9.16	100	86-96	SS	Base of Upper Middle PRM
NJDEP	Oct-81	4	15.75	100	84-97	SS	Upper Middle PRM
P-1	Dec-89	4	16.20	19	14-19	SS	Water Table
P-2	Dec-89	4	LOST	20	15-20	SS	Water Table
P-3	Dec-89	4	8.55	20	15-20	SS	Water Table
P-4	Jan-90	4	9.21	19	14-19	SS	Water Table
P-5	Dec-90	4	17.14	19	14-19	SS	Water Table

Notes:

PW-1 and PW-2 measured from 10-inch steel casing. No inner casing for these wells.

PRM = Potomac-Raritan-Magothy Aquifer System.

IN = Inches.

SS = Stainless Steel.

PVC = Polyvinyl Chloride.

302748

Table 2-20. Summary of Slotted Auger Ground Water Grab Sample Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Laboratory Sample Identification	MW-17D	MW-17D	MW-17D	MW-17D	MW-17D	MW-17D	MW-17D	MW-17D
Sample Identification	14-19	34-39	54-59	74-79	94-99	114-119	126-130	144-149
Sample Date	7/20/99	7/20/99	7/20/99	7/20/99	7/20/99	7/20/99	7/21/99	7/21/99
Parameter								
VOLATILE ORGANIC COMPOUNDS *(units in µg/ℓ)*								
Acetone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	35
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	2	2.3	1 U
Bromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.78
Carbon Tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1.6	1.6	1 U
Chloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	16
Chloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	6.6
1,2-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	29
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7
1,2-Dichloroethene(total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.3
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.3
Toluene	1 U	1 U	12	1 U	1 U	1.4	3.8	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	43
Vinyl Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	14
Total Xylenes	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.9

Notes:

MW-17D is screened between 139 and 149 feet below ground surface.

MW-17I is screened between 119 and 129 feet below ground surface.

U = Compound not detected with minimum detection limit.

J = Estimated concentration.

302749

Table 2-20. Summary of Slotted Auger Ground Water Grab Sample Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Laboratory Sample Identification	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D
Sample Identification	14-19	34-39	54-59	62-67	80-85	100-105	120-125	140-145
Sample Date	7/13/99	7/13/99	7/13/99	7/13/99	7/13/99	7/13/99	7/13/99	7/13/99
Parameter								
VOLATILE ORGANIC COMPOUNDS *(units in µg/ℓ)*								
Acetone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	13
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.7
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1
Bromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1.1	1 U	1 U
Chloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.2
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene(total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.4
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.3
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	1 U	1 U	29	160	49
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	6.6
Vinyl Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:
MW-18D is screened between 134 and 144 feet below ground surface.
U = Compound not detected with minimum detection limit.
J = Estimated concentration.

302750

Table 2-20. Summary of Slotted Auger Ground Water Grab Sample Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Laboratory Sample Identification	MW-19D	MW-19D	MW-19D	MW-19D	MW-19D	MW-19D	MW-19D	MW-19D
Sample Identification	14-19	34-39	51-56	69-74	89-94	109-114	129-134	140-145
Sample Date	7/27/99	7/27/99	7/27/99	7/28/99	7/28/99	7/28/99	7/29/99	7/29/99
Parameter								
VOLATILE ORGANIC COMPOUNDS *(units in µg/ℓ)*								
Acetone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1
Bromodichloromethane	1 U	1 U	1 U	1.3	1 U	1 U	1 U	1
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1
Bromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	2.4	1 U	1 U	1 U	1.8
Chloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene(total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	1 U	1.6	1 U	1 U	31
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

MW-19D is screened between 134 and 144 feet below ground surface.

U = Compound not detected with minimum detection limit.

J = Estimated concentration.

302751

Table 2-20. Summary of Slotted Auger Ground Water Grab Sample Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Laboratory Sample Identification	MW-33D	MW-33D	MW-33D	MW-33D	MW-33D	MW-33D	MW-33D	MW-33D
Sample Identification	10-15	30-35	45-50	70-75	90-95	110-115	130-135	142-147
Sample Date	08/19/99	08/19/99	08/19/99	08/19/99	08/19/99	08/19/99	08/19/99	08/19/99
Parameter								
VOLATILE ORGANIC COMPOUNDS *(units in µg/ℓ)*								
Acetone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene(total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.3
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	3	13	6.3	13	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	11
Vinyl Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

MW-33D is screened between 132 and 142 feet below ground surface.

U = Compound not detected with minimum detection limit.

J = Estimated concentration.

Results in **bold** indicate exceedance of the NJDEP Class II A Ground Water Quality Criteria.

302752

Table 2-20. Summary of Slotted Auger Ground Water Grab Sample Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Laboratory Sample Identification	MW-34D	MW-34D	MW-34D	MW-34D	MW-34D	MW-34D	MW-34D
Sample Identification	75-80	95-100	115-120	135-140	155-160	175-180	194-199
Sample Date			9/18/00	9/18/00	9/19/00	9/19/00	9/21/00
Parameter							
VOLATILE ORGANIC COMPOUNDS *(units in µg/ℓ)*							
Acetone	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Butanone	3 U	3 U	3 J	3 U	3 U	7 J	3 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 J	1 U	1 U	1 U
Chloroethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene(total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U
4-Methyl-2-Pentanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methylene Chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	15	1 U	28	27	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

MW-34D is screened between 195 and 205 feet below ground surface.

U = Compound not detected with minimum detection limit.

J = Estimated concentration.

302753

Table 2-20. Summary of Slotted Auger Ground Water Grab Sample Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Laboratory Sample Identification	MW-35D	MW-35D	MW-35D	MW-35D	MW-35D	MW-35D	MW-35D
Sample Identification	75-80	95-100	115-120	135-140	155-160	175-180	190-195
Sample Date	11/29/00	11/29/00	11/29/00	11/30/00	11/30/00	12/1/00	9/21/00
Parameter							
VOLATILE ORGANIC COMPOUNDS *(units in µg/ℓ)*							
Acetone	6 U	6 U	6 U	6 U	6 U	15 J	6 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Butanone	3 U	3 U	1 U	3 U	3 J	4 J	3 U
Carbon Disulfide	1 U	1 U	1 U	1 U	1 U	2 J	1 U
Carbon Tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene(total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U
4-Methyl-2-Pentanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methylene Chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	2 J	1 U	7	24	26	2 J
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

MW-35D is screened between 185 and 195 feet below ground surface.

U = Compound not detected with minimum detection limit.

J = Estimated concentration.

302754

Table 2-21. Geotechnical Analyses Results of Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Boring ID	Depth (ft.)	Visual Description	Permeability (cm/s)		Porosity	Water Content (%)	Specific Gravity	Bulk Density (pcf)
			Vertical	Horizontal				
L-12A	10.5-12.0	Peat	2.22 E-5	4.01 E-5	0.747	379.0	0.91	--
L-12A	54.0-54.3	Silt	3.85 E-4	--	0.195	12.2	2.64	--
L-12A	58.0-59.0	Clay	2.66 E-7	2.72 E-7	0.412	19.6	2.68	--
MW-4D	108-110.0	Silt	1.00 E-2	3.41 E-2*	0.303	13.5	2.65	--
MW-25S	9.0-10.0	Silt	3.80 E-5	6.01 E-5	0.333	12.8	2.63	--
MW-26D	120-122.0	Clay	7.68 E-8	1.01 E-7	0.387	26.0	2.69	--
MW-26I	56.5-57.0	Well Graded Sand with Silt	3.74 E-3	--	0.306	8.0	2.64	--
MW-26S	12.0-14.0	Silty Clay	3.76 E-4	3.14 E-4*	0.403	7.7	2.63	--
MW-27D	106-108.0	Well Graded Sand	2.81 E-3	--	0.289	18.3	2.67	--
MW-27I	66.0-68.0	Well Graded Sand with Silt	6.27 E-4	--	0.364	18.8	2.64	--
MW-27S	6.0-8.0	Silt	3.30 E-5	6.88 E-5	0.389	17.0	2.61	--
								--
P-20	16.0-18.0	Poorly Graded Sand	4.64 E-3	8.04 E-3*	0.421	19.7	2.65	--
P-20	34.0-36.0	Clay	3.90 E-6	3.97 E-6	0.382	21.3	2.67	--
P-23	24.0-26.0	Peat	5.27 E-6	9.46 E-6	0.731	367.0	0.82	--
P-23	36.0-38.0	Clay	8.01 E-6	9.67 E-6	0.371	19.4	2.70	--
P-26	20.5-21.5	Silt	4.39 E-6	3.96 E-6	0.342	15.8	2.69	--
P-26	30.0-32.5	Clayey Silt	5.73 E-6	--	0.391	22.0	2.71	--
B-1	7.5-8.0	Fine Sand	--	14.3	0.365	--	--	121.4
B-1	8.0-8.5	Fine Sand	--	3.7	0.303	--	--	120.8
B-33	11.5-12.0	Fine Sand	--	17.2	0.367	--	--	124.2
B-33	12.0-12.5	Fine Sand	--	19.8	0.430	--	--	114.3
L-8	28.5-29.0	Peat	--	357.6	0.758**	--	--	62.2
L-9	14.0-16.0	(Remolded) Peat	--	168.0	0.532**	--	--	70.5
L-9A	16.0-16.5	Coarse Sand	--	4.1	0.256	--	--	129.6
L-9A	16.5-17.0	Medium to Coarse Sand	--	6.9	0.202	--	--	142.6

302755

Table 2-21. Geotechnical Analyses Results of Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Boring ID	Depth (ft.)	Visual Description	Permeability (cm/s)		Porosity	Water Content (%)	Specific Gravity	Bulk Density (pcf)
			Vertical	Horizontal				
MW-32D	36.0-36.5	Clayey Gravel	--	12.6	0.391	--	--	114.5
MW-32D	36.5-37.0	Clay with Gravel	--	13.7	0.293	--	--	134.4
			--			--	--	
P-26	5.5-6.0	Sand with Brick Fragments	--	8.5	0.452	--	--	99.4
P-26	6.0-6.5	Fine Sand	--	21.5	0.492	--	--	103.2
P-28	8.0-8.5	Sand, Trace Roots	--	4.5	0.334	--	--	116.5
P-28	8.5-9.0	Fine Silty Sand	--	8.3	0.276	--	--	131.1
P-28	9.0-9.5	Fine Sand	--	17.0	0.375	--	--	122.3
P-28	9.5-10.0	Fine Sand	--	17.0	0.418	--	--	114.0
P-36	4.0-4.5	Fine Sand	--	14.1	0.444	--	--	106.2
P-37	6.0-6.5	Fine Sand with Silt	--	14.5	0.429	--	--	109.3
P-37	6.5-7.0	Silty Fine Sand	--	28.6	0.466	--	--	114.8
P-37	13.0-13.5	Medium to Coarse Sand	--	10.4	0.354	--	--	119.3
P-37	13.5-14.0	Fine to Medium Sand	--	13.6	0.473	--	--	100.1
R-36	4.5-5.0	Fine Sand	--	16.9	0.379	--	--	121.5

(1)Vertical permeabilities by flex membrane with confining pressures to approximate overburden, based on 100 pcf.

(2)Horizontial permeabilities were measured, when amount of sample permitted, by trimming the 2.4-inch diameter samples at right angles into 2-inch diameter permeability mold cylinders (permitting about 1-inch sample length). The three granular samples, denoted by asterisks (*), had to be gently compacted to accomplish this, hence were disturbed.

*Porosity based on Specific Gravity (G_s) of 2.68.

**Porosity based on Specific Gravity (G_s) of 0.90.

All geotechnical analyses performed by Valley Forge Laboratories of Devon, Pennsylvania.

302756

Table 2-22. Synoptic Ground Water Level Measurements. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well ID	Measuring Point Elevation (ft)	July 19, 1999		September 23, 1999		January 3, 2000		November 6, 2000		April 19, 2001		March 5, 2002		May 28, 2002	
		Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)
EPA-101	10.39	NM	--	5.7	4.69	6.16	4.23	7.82	2.57	6.11	4.28	NM	--	NM	--
EPA-102	16.9	14.11	2.79	11.81	5.09	12.82	4.08	14.46	2.44	12.7	4.20	NM	--	NM	--
EPA-103	11.89	9.38	2.51	6.82	5.07	8.34	3.55	10.62	1.27	8.1	3.79	NM	--	NM	--
EPA-104S	9.84	7.25	2.59	4.53	5.31	6.14	3.7	7.45	2.39	5.82	3.17	NM	--	NM	--
EPA-104D	9.83	7.58	2.25	5.26	4.57	6.49	3.34	5.41	4.42	6.15	3.68	NM	--	NM	--
EPA-105	10.56	7.99	2.57	5.55	5.01	6.97	3.59	NM	--	6.67	3.89	NM	--	NM	--
EPA-107	12.2	10.03	2.17	7.47	4.73	8.80	3.4	10.05	2.15	8.5	3.70	NM	--	NM	--
EPA-108	9.16	6.90	2.26	4.81	4.35	5.65	3.51	NM	--	5.59	3.57	NM	--	NM	--
MW-1A	10.37	NM	--	5.40	4.97	5.50	--	6.48	3.89	5.47	4.90	NM	--	NM	--
MW-1C	9.09	NM	--	5.40	3.69	5.89	3.2	7.45	1.64	5.6	3.49	NM	--	NM	--
MW-2C	6.94	5.23	1.71	3.20	3.74	3.74	3.2	5.21	1.73	3.51	3.43	NM	--	NM	--
MW-3A	12.99	8.96	4.03	6.9	6.09	7.33	5.66	Dry	--	6.94	6.05	NM	--	NM	--
MW-3C	10.31	8.4	1.91	5.65	4.66	7.51	2.8	8.03	2.28	7.34	2.97	NM	--	NM	--
MW-4A	10.84	NM	--	5.9	4.94	6.60	4.24	8.12	2.72	6.45	4.39	1.22	9.62	2.08	8.76
MW-4D	10.15	NM	--	8.8	1.35	6.75	3.4	8.35	1.8	6.48	3.67	NM	--	NM	--
MW-4C	10.28	NM	--	7.08	3.2	7.50	2.78	9.13	1.15	7.2	3.08	NM	--	NM	--
MW-5B	16.32	14.14	2.18	11.94	4.38	12.76	3.56	14.32	2	12.58	3.74	NM	--	NM	--
MW-6A	11.95	9.43	2.52	6.85	5.1	8.39	3.56	9.65	2.3	8.18	3.77	NM	--	NM	--
MW-6B	12.02	9.87	2.15	7.75	4.27	8.75	3.27	10.1	1.92	8.65	3.37	NM	--	NM	--
MW-7A	9.91	7.47	2.44	5.13	4.78	6.32	3.59	7.52	2.39	5.86	4.05	NM	--	NM	--
MW-7B	9.77	7.39	2.38	5.36	4.41	6.47	3.3	7.65	2.12	6.34	3.43	NM	--	NM	--
MW-8A	11.33	9.08	2.25	6.3	5.03	7.77	3.56	9.14	2.19	8.39	2.94	NM	--	NM	--
MW-8B	11.74	9.64	2.1	7.33	4.41	8.28	3.46	10.63	1.11	8.09	3.65	NM	--	NM	--
MW-9A	10.91	8.28	2.63	6.64	4.27	7.10	3.81	8.12	2.79	7.17	3.74	NM	--	NM	--
MW-9B	11	9.05	1.95	6.7	4.3	7.54	3.46	8.99	2.01	7.35	3.65	NM	--	NM	--
MW-10A	12.73	11.3	1.43	7.91	4.82	8.75	3.98	10.8	1.93	8.45	4.28	NM	--	NM	--
MW-10B	12.51	12.06	0.45	9.16	3.35	9.70	2.81	11.78	0.73	9.33	3.18	NM	--	NM	--
MW-11A	10.5	7.84	2.66	5.64	4.86	6.16	4.34	6.92	3.58	6.07	4.43	NM	--	NM	--
MW-11AD	9.41	8.58	0.83	5.9	3.51	6.38	3.03	8.32	1.09	6.09	3.32	NM	--	NM	--
MW-11B	11.57	10.33	1.24	7.95	3.62	8.48	3.09	10.2	1.37	8.21	3.36	NM	--	NM	--
MW-12A	8.52	6.1	2.42	3.9	4.62	4.30	4.22	6.03	2.49	4.29	4.23	NM	--	NM	--
MW-12B	10.72	9.44	1.28	6.99	3.73	7.56	3.16	9.37	1.35	8.26	2.46	NM	--	NM	--
MW-13A	8.49	NM	--	LNAPL	--	LNAPL	--	NM	--	LNAPL	--	NM	--	NM	--
MW-14A	16.29	22.29	-6	19.19	-2.9	18.48	-2.19	20.95	-4.66	17.88	-1.59	NM	--	NM	--
MW-14B	16.32	23.32	-7	20.29	-3.97	19.69	-3.37	21.91	-5.59	18.92	-2.60	NM	--	NM	--
MW-15A	12.42	18.66	-6.24	15.2	-2.78	14.66	-2.24	17.06	-4.64	13.9	-1.48	NM	--	NM	--

302757

Table 2-22. Synoptic Ground Water Level Measurements. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well ID	Measuring Point Elevation (ft)	July 19, 1999		September 23, 1999		January 3, 2000		November 6, 2000		April 19, 2001		March 5, 2002		May 28, 2002	
		Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)
MW-15B	12.49	20.27	-7.78	16.85	-4.36	16.10	-3.61	18.41	-5.92	15.3	-2.81	NM	--	NM	--
MW-16A	9.31	17.12	-7.81	13.64	-4.33	12.78	-3.47	15.2	-5.89	11.91	-2.60	NM	--	NM	--
MW-16B	9.33	17.43	-8.1	13.9	-4.57	13.12	-3.79	15.55	-6.22	12.27	-2.94	NM	--	NM	--
MW-17I	14.78	NM	--	NI	--	13.40	1.38	15.65	-0.87	12.88	1.90	NM	--	NM	--
MW-17D	14.4	NM	--	12.93	1.47	13.05	1.35	15.38	-0.98	12.65	1.75	NM	--	NM	--
MW-18D	13.79	NM	--	11.54	2.25	11.95	1.84	14.28	-0.49	11.51	2.28	NM	--	NM	--
MW-19D	16.99	NM	--	14.61	2.38	14.92	2.07	17.28	-0.29	14.52	2.47	NM	--	NM	--
MW-20D	7.9	NM	--	NM	--	4.43	3.47	5.94	1.96	4.31	3.59	NM	--	NM	--
MW-21D	8.85	NI	--	NI	--	5.99	2.86	7.89	0.96	5.63	3.22	NM	--	NM	--
MW-22S	8.71	NI	--	NI	--	3.87	4.84	4.8	3.91	4.12	4.59	NM	--	NM	--
MW-22I	9.1	NI	--	NI	--	5.79	3.31	7.74	1.36	6.64	2.46	NM	--	NM	--
MW-22D	9.22	NI	--	NI	--	6.43	2.79	8.33	0.89	6.07	3.15	NM	--	NM	--
MW-23S	10.78	NM	--	3.2	7.58	6.22	4.56	7.29	3.49	6.31	4.47	2.74	8.04	3.27	7.51
MW-23I	10.73	NM	--	3.85	6.88	7.35	3.38	8.9	1.83	7.1	3.63	NM	--	NM	--
MW-23D	10.75	NM	--	4.00	6.75	7.84	2.91	9.12	1.63	7.29	3.46	NM	--	NM	--
MW-24S	13.32	NM	--	NM	--	8.82	4.5	LNAPL	--	LNAPL	--	NM	--	NM	--
MW-25S	10.51	NM	--	5.70	4.81	6.74	3.77	8.07	2.44	6.32	4.19	1.51	9.00	2.33	8.18
MW-26S	14.45	NM	--	10.8	3.65	9.82	4.63	10.91	3.54	9.16	5.29	1.97	12.48	2.97	11.48
MW-26I	14.22	NM	--	10.02	4.2	10.81	3.41	12.13	2.09	10.53	3.69	NM	--	NM	--
MW-26D	14.46	NM	--	10.8	3.66	11.50	2.96	12.84	1.62	11.2	3.26	NM	--	NM	--
MW-27S	16.02	NM	--	10.3	5.72	10.29	5.73	11.73	4.29	9.04	6.98	NM	--	NM	--
MW-27I	16.41	NM	--	12.1	4.31	12.92	3.49	14.24	2.17	12.63	3.78	NM	--	NM	--
MW-27D	15.76	NM	--	11.45	4.31	12.25	3.51	13.59	2.17	12	3.76	NM	--	NM	--
MW-28S	8.83	NM	--	3.65	5.18	5.25	3.58	6.66	2.17	4.95	3.88	NM	--	NM	--
MW-29S	12.13	NM	--	7.29	4.84	8.05	4.08	9.38	2.75	7.34	4.79	2.3	9.83	2.72	9.41
MW-30S	13.56	NM	--	8.42	5.14	9.94	3.62	11.08	2.48	9.23	4.33	1.43	12.13	2.28	11.28
MW-31S	12.71	NM	--	7.68	5.03	9.10	3.61	10.22	2.49	8.74	3.97	1.46	11.25	1.21	11.50
MW-32S	14.02	NM	--	9.40	4.62	10.29	3.73	LNAPL	--	LNAPL	--	NM	--	NM	--
MW-32I	14.12	NI	--	NI	--	NI	--	NI	--	10.18	3.94	NM	--	NM	--
MW-32D	13.9	NI	--	NI	--	NI	--	NI	--	10.38	3.52	NM	--	NM	--
MW-33D	8.94	NM	--	5.49	3.45	6	2.94	8.38	0.56	5.62	3.32	NM	--	NM	--
MW-34D	15.82	NI	--	NI	--	NI	--	19.87	-4.05	16.83	-1.01	NM	--	NM	--
MW-35D	15.65	NI	--	NI	--	NI	--	NI	--	17.14	-1.49	NM	--	NM	--
MW-36S	7.16	NI	--	NI	--	NI	--	3.37	3.79	2.54	4.62	3.57	3.59	3.85	3.31
NJDEP-1	15.75	13.56	--	11.37	4.38	12.15	3.6	13.7	2.05	12	3.75	NM	--	NM	--
P-1	16.2	NM	--	11.25	4.95	12.58	3.62	NM	--	12.2	4.00	NM	--	NM	--

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Table 2-22. Synoptic Ground Water Level Measurements. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well ID	Measuring Point Elevation (ft)	July 19, 1999		September 23, 1999		January 3, 2000		November 6, 2000		April 19, 2001		March 5, 2002		May 28, 2002	
		Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)
P-3	8.55	NM	--	3.85	4.7	3.78	4.77	NM	--	3.97	4.58	NM	--	NM	--
P-4	9.21	NM	--	4.6	4.61	4.90	4.31	6.13	3.08	5.27	3.94	NM	--	NM	--
PW-1	12.89	NI	--	NI	--	NM	--	LNAPL	--	LNAPL	--	NM	--	NM	--
PW-2	12.69	NI	--	NI	--	NM	--	10.75	1.94	9.02	3.67	NM	--	NM	--
PZ-1	7.14	NM	--	NM	--	NM	--	NM	--	2.5	4.64	NM	--	NM	--
PZ-2	8.56	NM	--	NM	--	NM	--	NM	--	3.93	4.63	NM	--	NM	--
PZ-3	11.86	NI	--	NI	--	NM	--	9.92	1.94	LNAPL	--	NM	--	NM	--
PZ-4	12.20	NI	--	NI	--	NM	--	9.45	2.75	LNAPL	--	NM	--	NM	--
PZ-5	9.09	NI	--	NI	--	NM	--	6.61	2.48	LNAPL	--	NM	--	NM	--
PZ-6	12.11	NI	--	NI	--	NM	--	9.01	3.1	7.21	4.90	NM	--	NM	--
PZ-7	12.44	NI	--	NI	--	NM	--	10.79	1.65	8.99	3.45	NM	--	NM	--
PZ-8	12.61	NI	--	NI	--	NM	--	10.60	2.01	8.92	3.69	NM	--	NM	--
PZ-9	14.61	NI	--	NI	--	NM	--	12.64	1.97	10.91	3.70	NM	--	NM	--
PZ-10	12.22	NI	--	NI	--	NM	--	9.79	2.43	8.22	4.00	NM	--	NM	--
PZ-11A	13.02	NI	--	NI	--	NM	--	9.80	3.22	8.93	4.09	NM	--	NM	--
PZ-11B	13.14	NI	--	NI	--	NM	--	9.75	3.39	8.21	4.93	NM	--	NM	--
PZ-12	9.37	NI	--	NI	--	NI	--	NI	--	4.92	4.45	NM	--	NM	--
PZ-15	13.68	NI	--	NI	--	NI	--	NI	--	10.88	2.80	NM	--	NM	--
PZ-16	12.28	NI	--	NI	--	NI	--	NI	--	8.73	3.55	NM	--	NM	--
PZ-17	12.38	NI	--	NI	--	NI	--	NI	--	8.88	3.50	NM	--	NM	--
PZ-18	14.11	NI	--	NI	--	NI	--	NI	--	9.82	4.29	NM	--	NM	--
PZ-19	12.75	NI	--	NI	--	NI	--	NI	--	8.1	4.65	NM	--	NM	--
PZ-20	13.06	NI	--	NI	--	NI	--	NI	--	9.01	4.05	NM	--	NM	--
PZ-21	8.62	NI	--	NI	--	NI	--	NI	--	LNAPL	--	NM	--	NM	--
PZ-22	13.69	NI	--	NI	--	NI	--	NI	--	LNAPL	--	NM	--	NM	--
PZ-23	13.97	NI	--	NI	--	NI	--	NI	--	LNAPL	--	NM	--	NM	--
PZ-24	15.22	NI	--	NI	--	NI	--	NI	--	LNAPL	--	NM	--	NM	--
PZ-25	15.81	NI	--	NI	--	NI	--	NI	--	9.69	6.12	NM	--	NM	--
PZ-26	13.02	NI	--	NI	--	NI	--	NI	--	NM	--	NM	--	NM	--
PZ-27	11.57	NI	--	NI	--	NI	--	NI	--	NM	--	NM	--	NM	--
PZ-28	11.18	NI	--	NI	--	NI	--	NI	--	NM	--	NM	--	NM	--
PZ-29	14.64	NI	--	NI	--	NI	--	NI	--	LNAPL	--	NM	--	NM	--
PZ-30	14.74	NI	--	NI	--	NI	--	NI	--	11.15	3.59	NM	--	NM	--
PZ-31	15.42	NI	--	NI	--	NI	--	NI	--	11.64	3.78	NM	--	NM	--
PZ-32	14.95	NI	--	NI	--	NI	--	NI	--	11.24	3.71	NM	--	NM	--
PZ-33	16.84	NI	--	NI	--	NI	--	NI	--	LNAPL	--	NM	--	NM	--

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Table 2-22. Synoptic Ground Water Level Measurements. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well ID	Measuring Point Elevation (ft)	July 19, 1999		September 23, 1999		January 3, 2000		November 6, 2000		April 19, 2001		March 5, 2002		May 28, 2002	
		Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)
S1A	8.83	NM	--	4.2	4.63	4.62	4.21	5.82	3.01	4.48	4.35	NM	--	NM	--
S1B	8.45	NM	--	3.9	4.55	4.20	4.25	5.62	2.83	4.16	4.29	NM	--	NM	--
S1C	9.59	NM	--	5.2	4.39	5.70	3.89	7.18	2.41	5.52	4.07	NM	--	NM	--
S-2A	12.17	NM	--	7.35	4.82	8.53	3.64	9.75	2.42	8.14	4.03	NM	--	NM	--
S-2B	13.49	NM	--	9.15	4.34	10.09	3.4	11.40	2.09	9.79	3.70	NM	--	NM	--
S-2C	14.02	NM	--	9.75	4.27	10.68	3.34	12	2.02	10.41	3.61	NM	--	NM	--
S-3A	13.96	NM	--	8.6	5.36	10.31	3.65	11.55	2.41	9.92	4.04	NM	--	NM	--
S-3B	14.08	NM	--	9.3	4.78	10.54	3.54	11.73	2.35	10.23	3.85	NM	--	NM	--
S-3C	13.97	NM	--	9.6	4.37	10.52	3.45	11.75	2.22	10.29	3.68	NM	--	NM	--
S-4	15.89	13.05	2.84	10.84	5.05	11.87	4.02	13.33	2.56	11.7	4.19	NM	--	NM	--
S-5	7.95	5.48	2.47	3.54	4.41	4.12	3.83	5.75	2.2	4.01	3.94	NM	--	NM	--
S-6	9.64	NM	--	6.03	3.61	6.51	3.13	NM	--	6.23	3.41	NM	--	NM	--
S-8	11.5	9.39	2.11	7.19	4.31	8.23	3.27	9.39	2.11	7.97	3.53	NM	--	NM	--
S-9	7.96	5.43	2.53	3.12	4.84	4.33	3.63	5.55	2.41	4.17	3.79	NM	--	NM	--
S-11A	8.61	NM	--	4.70	3.91	LNAPL	--	LNAPL	--	LNAPL	--	NM	--	NM	--
S-11B	9.91	NM	--	5.90	4.01	6.55	3.36	8.05	1.86	6.25	3.66	NM	--	NM	--
S-11C	9.88	NM	--	6.15	3.73	6.81	3.07	8.23	1.65	6.52	3.36	NM	--	NM	--
SG-1	2.77	NM	--	NM	--	1.46	4.23	NM	--	1.38	4.15	NM	--	NM	--
SG-2	2.41	NM	--	NM	--	2.2	4.61	NM	--	2.08	4.49	NM	--	NM	--
SG-3	3.5	NM	--	NM	--	0.87	4.37	NM	--	0.79	4.29	NM	--	NM	--
SG-4	3.46	NM	--	NM	--	1.04	4.5	NM	--	0.925	4.39	NM	--	NM	--
SG-5	3.56	NM	--	NM	--	1.07	4.63	NM	--	0.975	4.54	NM	--	NM	--
SG-6	3.43	NM	--	NM	--	1.19	4.62	NM	--	0.98	4.41	NM	--	NM	--
SG-7	2.58	NM	--	3.28	5.86	3.15	5.73	-0.3	2.28	1	3.58	NM	--	NM	--
SG-8	2.86	NM	--	3.20	6.06	2.95	5.81	1.00	3.86	0.9	3.76	NM	--	NM	--
SG-9	2.05	NM	--	NM	--	NM	--	NM	--	2.575	4.63	NM	--	NM	--
SG-10	1.22	NM	--	2.6	3.82	NM	--	1.56	2.78	2.58	3.80	NM	--	NM	--
SG-11	1.51	NM	--	2.6	4.11	NM	--	NM	--	3.3	4.81	NM	--	NM	--
SG-12	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--	NM	--
SG-13	3.68	NM	--	1.38	5.06	NM	--	NM	--	NM	--	NM	--	NM	--
SG-17	--	NM	--	NM	--	NM	--	NM	--	0.71	--	NM	--	NM	--
UNKN	16.42	NM	--	11.5	4.92	12.37	4.05	NM	--	12.18	4.24	NM	--	NM	--
WMW-1A	5.08	NM	--	NM	--	NM	--	NM	--	0.81	4.27	NM	--	NM	--
WMW-1B	5.2	NM	--	NM	--	NM	--	NM	--	1.04	4.16	NM	--	NM	--
WMW-2A	4.62	NM	--	NM	--	NM	--	NM	--	0.12	4.50	NM	--	NM	--
WMW-2B	4.63	NM	--	NM	--	NM	--	NM	--	0.12	4.51	NM	--	NM	--

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Table 2-22. Synoptic Ground Water Level Measurements. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Well ID	Measuring Point Elevation (ft)	July 19, 1999		September 23, 1999		January 3, 2000		November 6, 2000		April 19, 2001		March 5, 2002		May 28, 2002	
		Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)
WMW-3A	6.11	NM	--	NM	--	NM	--	NM	--	1.91	4.20	NM	--	NM	--
WMW-3B	5.94	NM	--	NM	--	NM	--	NM	--	2.02	3.92	NM	--	NM	--
WMW-4A	5.89	NM	--	NM	--	NM	--	NM	--	1.48	4.41	NM	--	NM	--
WMW-4B	5.87	NM	--	NM	--	NM	--	NM	--	1.38	4.49	NM	--	NM	--
WMW-5A	6.08	NM	--	NM	--	NM	--	NM	--	1.53	4.55	NM	--	NM	--
WMW-5B	6.02	NM	--	NM	--	NM	--	NM	--	1.42	4.60	NM	--	NM	--
WMW-6A	5.38	NM	--	NM	--	NM	--	NM	--	0.89	4.49	NM	--	NM	--
WMW-6B	5.36	NM	--	NM	--	NM	--	NM	--	0.81	4.55	NM	--	NM	--
WMW-7A	5.75	NM	--	NM	--	NM	--	NM	--	1.41	4.34	NM	--	NM	--
WMW-7B	5.74	NM	--	NM	--	NM	--	NM	--	1.44	4.30	NM	--	NM	--
Chemical Leaman Tank Line Monitoring Wells															
GM95-MW-8I	8.43	NM	--	4.45	3.98	NM	--	5.93	2.5	4.72	3.71	NM	--	NM	--
GM95-MW-7S	10.79	NM	--	6.29	4.5	NM	--	9.29	1.5	6.78	4.01	NM	--	NM	--
GM95-MW10D	9.28	NM	--	5.46	3.82	NM	--	7.01	2.27	5.55	3.73	NM	--	NM	--
GM95-MW-2S	11.54	NM	--	8.19	3.35	NM	--	8.81	2.73	8.25	3.29	NM	--	NM	--
GM95-MW-2I	11.64	NM	--	7.88	3.76	NM	--	8.92	2.72	7.92	3.72	NM	--	NM	--
GM95-MW-7D	9.35	NM	--	NM	--	NM	--	7.35	2	5.64	3.71	NM	--	NM	--
GM-94-MW-8D	10.69	NM	--	6.53	4.16	NM	--	8.53	2.16	6.83	3.86	NM	--	NM	--
2D	8.18	NM	--	NM	--	NM	--	6.09	2.09	4.22	3.96	NM	--	NM	--
GM95-MW-4S	11.13	NM	--	6.7	4.43	NM	--	8.53	2.6	6.8	4.33	NM	--	NM	--
GM95-MW-4I	11.27	NM	--	6.8	4.47	NM	--	8.95	2.32	7.1	4.17	NM	--	NM	--
GM95-MW-4D	11.1	NM	--	6.64	4.46	NM	--	8.79	2.31	6.95	4.15	NM	--	NM	--
GM95-MW-5S	11.13	NM	--	NM	--	NM	--	8.84	2.29	6.61	4.52	NM	--	NM	--
GM95-MW-5I	10.46	NM	--	NM	--	NM	--	8.2	2.26	6.1	4.36	NM	--	NM	--
GM95-MW-6S	14.56	NM	--	NM	--	NM	--	12.9	1.66	9.97	4.59	NM	--	NM	--
GM95-MW-6I	14.3	NM	--	NM	--	NM	--	12.91	1.39	10.32	3.98	NM	--	NM	--
GM95-MW-6D	14.19	NM	--	NM	--	NM	--	13.02	1.17	10.61	3.58	NM	--	NM	--
SG Moss	3.96	NM	--	NM	--	NM	--	2.46	1.5	NM	--	NM	--	NM	--
Moss South	5.25	NM	--	NM	--	NM	--	0.78	4.47	NM	--	NM	--	NM	--

LNAPL = LNAPL detected in well.

NM = Not measured.

NI = Not installed.

4/19/01 Chemical Leaman Tank Line wells water level measurements collected by Environ.

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Table 2-23. Analytical Parameters for Ground Water Sampling. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Activity and Date	Sample Designation	Matrix	Number of Sample Locations	Analytes
Round 1 Sampling; July, 1999	MW-1C, MW-2C, MW-3A through MW-12B, MW-14A through MW-16B, S-1A through S-4, S-6, S-11C, EPA-107, EPA-108.	Groundwater	38	TCL-VOC, TCL-SVOC (BN+AE), TAL-Metals, Dissolved Fe, Methane, Ethane, Ethene, COD, TSS, TDS, Sulfate/Sulfide, Nitrate/Nitrite, Ammonia, Alkalinity, TKN, Orthophosphate silica, Volatile fatty acids, Chloride, DO*, pH*, Conductivity*, Temperature*, Turbidity*, ORP*,
Round 2 Sampling; January, 2000	MW-4A through MW-5B, MW-7A through MW-8B, MW-10B, MW-11B, MW-14B, MW-16B, MW-17I through MW-33D, S-2C, S-3C, S-11C, S-4.	Groundwater	40	TCL VOC, TCL-SVOC (BNs), TAL-Metals, TDS, TSS, Alkalinity, TOC, Sulfate/Sulfide, Nitrate/Nitrite, Ammonia, TKN, Silica, COD, Hardness, Organic Acids, Orthophosphate, Methane, Ethane, Ethene, Chloride, DO*, pH*, Conductivity*, Temperature*, Turbidity*, ORP*.
Round 3 Sampling; October-November, 2000	MW-1A, MW-4A, MW-5B, MW-7A through MW-8B, MW-10B through MW-12B, MW-14B, MW-16B through MW-23D, MW-25S through MW-27I, MW-32I through MW-35D, S-2C through S-3C, S-11C, S-4.	Groundwater	35	TCL VOC, Natural Attenuation Parameters, Temperature*, DO*, ORP*, Cond*, pH*, Turbidity*.
Round 4 Sampling; April-May, 2001	MW-4A, MW-5B, MW-7A through MW-9B, MW-11B, MW-12B, MW-16B through MW-19D, MW-22D through MW-23D, MW-26S through MW-26D, MW-32I through MW-36S, S-11C, S-4.	Groundwater	27	TCL VOC, Natural Attenuation Parameters, PLFA, Temperature*, DO*, ORP*, Cond*, pH*, Turbidity*.

* = Measured in the field.
TCL = Target Compound List
VOC = Volatile Organic Compounds
SVOC = Semi Volatile Organic Compounds
TSS = Total Suspended Solids
TDS = Total Dissolved Solids
DO = Dissolved Oxygen
BN = Base Neutrals
TOC = Total Organic Carbon
COD = Chemical Oxygen Demand
TAL = Target Analyte List
ORP = Oxygen Reduction Potential
Cond = Specific Conductivity

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Table 2-24. Summary of Homeowner Well Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	FC	HT	JCAC	DBEN	HMR1	HMR2	HMR3	HMR4
Sample Date	3/17/1999	6/11/99	9/12/00	9/13/00	9/30/99	9/30/99	9/30/99	9/30/99
Sample ID	FC/RW/AQ	HT/RW/AQ	JCAC/RW/AQ	DBEN/RW/AQ	HMR1/GW	HMR2/GW	HMR3/GW	HMR4/GW
VOLATILE ORGANIC COMPOUNDS (ug/l)								
1,1,1,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,1-Trichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,2,2-Tetrachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1,2-Trichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1-Dichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1-Dichloroethene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1-Dichloropropene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2,3-Trichlorobenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2,4-Trichlorobenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dibromo-3-Chloropropane (DBCP)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dichloropropane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,3,5-Trimethylbenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,3-Dichlorobenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,3-Dichloropropane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,4-Dichlorobenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,2-Dichloropropane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Butanone	NA	NA	2.0 U	2.0 U	NA	NA	NA	NA
2-Chlorotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2-Hexanone	NA	NA	0.6 U	0.6 U	NA	NA	NA	NA
2-Nitropropane	NA	NA	9.0 U	9.0 U	NA	NA	NA	NA
2-Phenylbutane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-Chlorotoluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Methyl-2-pentanone	NA	NA	0.6 U	0.6 U	NA	NA	NA	NA
Acetone	2.0 U	6.6	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acrylonitrile	NA	NA	2.0 U	2.0 U	NA	NA	NA	NA
Benzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzene, (1-methylethyl)-	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzene, propyl-	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromobenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromodichloromethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromoform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bromomethane/ Methyl bromide	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Carbon disulfide	NA	NA	0.4 U	0.4 U	NA	NA	NA	NA
Carbon tetrachloride	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
CFC-11	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

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Table 2-24. Summary of Homeowner Well Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	FC	HT	JCAC	DBEN	HMR1	HMR2	HMR3	HMR4
Sample Date	3/17/1999	6/11/99	9/12/00	9/13/00	9/30/99	9/30/99	9/30/99	9/30/99
Sample ID	FC/RW/AQ	HT/RW/AQ	JCAC/RW/AQ	DBEN/RW/AQ	HMR1/GW	HMR2/GW	HMR3/GW	HMR4/GW
CFC-12	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroacetonitrile	NA	NA	7.0 U	7.0 U	NA	NA	NA	NA
Chlorobenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chlorobromomethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chloromethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
cis-1,3-Dichloropropene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Cymene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibromochloromethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibromomethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Ethyl ether	NA	NA	0.2 U	0.2 U	NA	NA	NA	NA
Ethyl Methacrylate	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA
Ethylbenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Hexachlorobutadiene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachloroethane	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA
Methyl Acrylate	NA	NA	0.5 U	0.5 U	NA	NA	NA	NA
Methyl Methacrylate	NA	NA	0.2 U	0.2 U	NA	NA	NA	NA
Methyl t-butyl ether	NA	NA	0.1 U	0.3 J	NA	NA	NA	NA
Methylacrylonitrile	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA
Methylene chloride	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
N-Butyl Chloride	NA	NA	0.2 U	0.2 U	NA	NA	NA	NA
n-Butylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Naphthalene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nitrobenzene	NA	NA	5.0 U	5.0 U	NA	NA	NA	NA
o-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pentachloroethane	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA
Styrene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
tert-Butylbenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Tetrachloroethene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Tetrahydrofuran	NA	NA	2.0 U	2.0 U	NA	NA	NA	NA
Toluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
trans-1,2-Dichloroethene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
trans-1,3-Dichloropropene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Trans-1,4-Dichlorobutene	NA	NA	0.8 U	0.8 U	NA	NA	NA	NA
Trichloroethene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Vinyl chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes (Total)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

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Table 2-24. Summary of Homeowner Well Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	FC	HT	JCAC	DBEN	HMR1	HMR2	HMR3	HMR4
Sample Date	3/17/1999	6/11/99	9/12/00	9/13/00	9/30/99	9/30/99	9/30/99	9/30/99
Sample ID	FC/RW/AQ	HT/RW/AQ	JCAC/RW/AQ	DBEN/RW/AQ	HMR1/GW	HMR2/GW	HMR3/GW	HMR4/GW
Conventional Parameters (mg/l)								
Chloride (titrimetric)	7.5	7.5	NA	NA	NA	NA	NA	NA
Fecal Coliform	1 U	1 U	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen	NA	2.8	NA	NA	NA	NA	NA	NA
Nitrite Nitrogen	NA	0.015 U	NA	NA	NA	NA	NA	NA

NA = Not analyzed.
U = Compound not detected with minimum detection limit.

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Table 2-25. Summary of Gaventa Pond Surface Water Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	GVT-1	GVT-2	GVT-3
Sample Date	6/15/99	6/15/99	6/22/99
Depth (feet below water surface)	8	3.5	3.5
SEMIVOLATILE ORGANIC COMPOUNDS			
(all results in ug/l)			
1,2,4-Trichlorobenzene	1 U	1 U	1 U
1,2-Dichlorobenzene	1 U	1 U	1 U
1,3-Dichlorobenzene	1 U	1 U	1 U
1,4-Dichlorobenzene	1 U	1 U	1 U
2,2'-Oxybis(1-chloropropane)	1 U	1 U	1 U
2,4,5-Trichlorophenol	2 U	2 U	2 U
2,4,6-Trichlorophenol	2 U	2 U	2 U
2,4-Dichlorophenol	1 U	1 U	1 U
2,4-Dimethylphenol	1 U	1 U	1 U
2,4-Dinitrophenol	14 U	15 U	14 U
2,4-Dinitrotoluene	1 U	1 U	1 U
2,6-Dinitrotoluene	2 U	2 U	2 U
2-Chloronapthalene	1 U	1 U	1 U
2-Chlorophenol	1 U	1 U	1 U
2-Methylnapthalene	1 U	1 U	1 U
2-Methylphenol	1 U	1 U	1 U
2-Nitroaniline	2 U	2 U	2 U
2-Nitrophenol	1 U	1 U	1 U
3,3'-Dichlorobenzidine	2 U	2 U	2 U
3-Nitroaniline	2 U	2 U	2 U
4,6-Dinitro-2-methylphenol	5 U	5 U	5 U
4-Bromophenyl phenyl ether	2 U	2 U	2 U
4-Chloro-3-methylphenol	1 U	1 U	1 U
4-Chloroaniline	1 U	1 U	1 U
4-Chlorophenyl phenyl ether	1 U	1 U	1 U
4-Methylphenol	3 U	3 U	3 U
4-Nitroaniline	2 U	2 U	2 U
4-Nitrophenol	10 U	10 U	10 U
Acenaphthene	1 U	1 U	1 U
Acenaphthylene	1 U	1 U	1 U
Anthracene	1 U	1 U	1 U
Benzo(a)anthracene	1 U	1 U	1 U
Benzo(a)pyrene	1 U	1 U	1 U
Benzo(b)fluoranthene	1 U	1 U	1 U
Benzo(g,h,i)perylene	1 U	1 U	1 U
Benzo(k)fluoranthene	1 U	1 U	1 U
bis(2-Chloroethoxy)methane	1 U	1 U	1 U
bis(2-Chloroethyl)ether	1 U	1 U	1 U
bis(2-Ethylhexyl)phthalate	2 U	2 U	2 U
Butyl benzyl phthalate	2 U	2 U	2 U
Carbazole	1 U	1 U	1 U
Chrysene	1 U	1 U	1 U
Di-n-butyl phthalate	2 U	2 U	2 U
Di-n-octyl phthalate	2 U	2 U	2 U
Dibenz(a,h)anthracene	1 U	1 U	1 U
Dibenzofuran	1 U	1 U	1 U
Diethyl phthalate	2 U	2 U	2 U
Dimethyl phthalate	2 U	2 U	2 U
Fluoranthene	1 U	1 U	1 U
Fluorene	1 U	1 U	1 U
Hexachlorobenzene	2 U	2 U	2 U
Hexachlorobutadiene	2 U	2 U	2 U

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Table 2-25. Summary of Gaventa Pond Surface Water Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	GVT-1	GVT-2	GVT-3
Sample Date	6/15/99	6/15/99	6/22/99
Depth (feet below water surface)	8	3.5	3.5
Hexachlorocyclopentadiene	5 U	5 U	5 U
Hexachloroethane	1 U	1 U	1 U
Indeno(1,2,3-cd)pyrene	1 U	1 U	1 U
Isophorone	1 U	1 U	1 U
n-Nitrosodiphenylamine	1 U	1 U	1 U
n-Nitrosodipropylamine	1 U	1 U	1 U
Naphthalene	1 U	1 U	1 U
Nitrobenzene	1 U	1 U	1 U
Pentachlorophenol	3 U	3 U	3 U
Phenanthrene	1 U	1 U	1 U
PHENOL	1 U	1 U	1 U
Pyrene	1 U	1 U	1 U
METALS			
(all results in ug/l)			
Aluminum	63.2 B	52 B	63.1 B
Antimony	25 U	25 U	25 U
Arsenic	7 U	7 U	7 U
Barium	29.1 B	30.5 B	29.3 B
Beryllium	1.7 U	1.7 U	1.7 U
Cadmium	1.7 U	1.7 U	1.7 U
Calcium	9160 U	8880 U	8670 U
Chromium	5.4 U	5.4 U	5.4 U
Cobalt	5.5 U	5.5 U	5.5 U
Copper	5.8 U	5.8 U	5.8 U
Iron	16 U	16 U	16 U
Lead	6.5 U	6.5 U	6.5 U
Magnesium	4580	4750	4640
Manganese	5.9 B	6.2 B	7.7 B
Mercury	0.042 U	0.042 U	0.15 U
Nickel	5.4 U	5.4 U	5.4 U
Potassium	2810	2880	2840
Selenium	5.9 U	5.9 U	5.9 U
Silver	5.7 U	5.7 U	5.7 U
Sodium	6260	6430	6350
Thallium	9.7 U	9.7 U	9.7 U
Vanadium	2.8 U	2.8 U	2.8 U
Zinc	7.3 B	3.7 B	7.2 B
GENERAL CHEMISTRY			
(all results in mg/l)			
Total Dissolved Solids	79	82	92
Total Hardness	46.7	43.3	41.7
Total Organic Carbon	5.1	5	5
Total Suspended Solids	3.7 U	4 U	4 U
Alkalinity to pH 4.5	6	6	6
Alkalinity to pH 8.3	0.37 U	0.4 U	0.4 U

B = Detected in associated field blank.
U = Compound not detected above laboratory method detection limit.

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Table 2-26. Comparison of Ecological Survey Periods and ERA/RI Field Investigation Activities. BROS Phase 2 RI/FS; Logan Township, New Jersey.

	Survey Periods[1]													
	1999						2000						2001	
Receptor Group	**2/3 – 2/11**	**5/17 – 6/2**	**6/14 – 6/24**	**8/31**	**9/7 – 9/9**	**12/20 – 12/23**	**2/29 – 3/1**	**4/18 - 4/21**	**6/19 - 6/23**	**8/1 - 8/3**	**12/5 –12/13**	**12/12 – 12/17**	**5/30 – 5/31**	**6/12**
Avian[2]	✓	✓	✓	✓	✓				✓	✓				
Amphibian		✓								✓				
Aquatic Invertebrate		✓	✓											
Fish		✓	✓				✓	✓		✓				
Small Mammal		✓			✓	✓						✓		
Large Mammal	✓	✓	✓	✓	✓	✓			✓	✓				
Terrestrial Invertebrate					✓				✓				✓	✓
Wetland Delineation	✓													
ERA/RI Task[3]														
Cover type – Vegetative Evaluation	✓	✓	✓			✓		✓	✓					
Vegetation Survey									✓					
LTCS Phase I Sediment Sampling			✓	✓										
LTCS Phase II Sediment Sampling														
LTCS Phase II Sediment Sampling II											✓			
Cedar Swamp Sediment Sampling I						✓								
Cedar Swamp Sediment Sampling II							✓							
Cedar Swamp Sediment Sampling III								✓						
Cedar Swamp Phase II Sediment Sampling											✓			
Screening HRA Fish Collections										✓				
Confirmation Fish Collections													✓	✓
Small Mammal Collections												✓		

Notes:

1. ERA field survey activities through 9/9/1999 were performed by O'Brien & Gere; survey activities after this period were performed by Ogden Environmental and Northern Ecological Associates
2. Quantitative aspect of avian survey conducted 5/17/99 to 6/2/99.
3. Fauna species observed during these activities were recorded and incorporated into the "observed species" tables presented in Technical Memorandum No. 4 (Ogden, 2000a).

Table 3-1. Vertical Flow Gradients for Monitoring Well Clusters. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Well Cluster	Aquifer Monitored							Change In Head(1)	Vertical Hydraulic Gradient	Vertical Flow Direction
		Top WT	Mid-WT	Bottom WT	Top UMPRM	Mid-UMPRM	Bottom UMPRM	LMPRM			
Within Water Table Aquifer											
9/23/1999	MW-6A/EPA-103	5.1	5.07						0.03	9.37E-04	DOWN
	S-3A/S-3B	5.36	4.78						0.58	2.32E-02	DOWN
	S-4/EPA-102	5.05	5.09						-0.04	-2.35E-03	UP
	MW-11A/MW-11A(D)	4.86		3.51					1.35	2.65E-02	DOWN
	S-1A/S-1B		4.63	4.55					0.08	1.14E-02	DOWN
1/3/2000	MW-6A/EPA-103	3.56	3.55						0.01	3.13E-04	DOWN
	S-3A/S-3B	3.65	3.54						0.11	4.40E-03	DOWN
	S-4/EPA-102	4.02	4.08						-0.06	-3.53E-03	UP
	MW-11A/MW-11A(D)	4.34		3.03					1.31	2.57E-02	DOWN
	S-1A/S-1B		4.21	4.25					-0.04	-5.71E-03	UP
11/6/2000	MW-6A/EPA-103	2.3	1.27						1.03	3.22E-02	DOWN
	S-3A/S-3B	2.41	2.35						0.06	2.40E-03	DOWN
	S-4/EPA-102	2.56	2.44						0.12	7.06E-03	DOWN
	MW-11A/MW-11A(D)	3.58		1.09					2.49	4.88E-02	DOWN
	S-1A/S-1B		3.01	2.83					0.18	2.57E-02	DOWN
4/19/2001	MW-6A/EPA-103	3.77	3.79						-0.02	-6.25E-04	UP
	S-3A/S-3B	4.04	3.85						0.19	7.60E-03	DOWN
	S-4/EPA-102	4.19	4.2						-0.01	-5.88E-04	UP
	MW-11A/MW-11A(D)	4.43		3.32					1.11	2.18E-02	DOWN
	S-1A/S-1B		4.35	4.29					0.06	8.57E-03	DOWN
Between Water Table and Upper Middle PRM Aquifers											
9/23/1999	MW-23S/MW-23I	7.58			6.88				0.7	1.56E-02	DOWN
	MW-26S/MW-26I	3.65			4.2				-0.55	-1.62E-02	UP
	MW-27S/MW-27I	5.78			4.31				1.47	3.20E-02	DOWN
	S-2A/S-2B	4.82			4.34				0.48	1.92E-02	DOWN
	MW-22S/MW-22I	NI				NI			--	--	
	MW-4A/MW-4D	4.91					1.35		3.56	3.96E-02	DOWN
	MW-7A/MW-7B	4.78					4.41		0.37	7.87E-03	DOWN
	MW-8A/MW-8B	5.03					4.41		0.62	8.27E-03	DOWN
	MW-9A/MW-9B	4.27					4.6		-0.33	-4.71E-03	UP
	MW-10A/MW-10B	4.82					3.35		1.47	1.40E-02	DOWN
	MW-12A/MW-12B	4.62					3.73		0.89	7.48E-03	DOWN
	S-4/MW-5B	5.05					4.38		0.67	8.27E-03	DOWN
	EPA-104S/EPA-104D		5.31			4.57			0.74	2.64E-02	DOWN
	EPA-103/MW-6B		5.07				4.27		0.8	1.78E-02	DOWN
	S-3B/S-3C		4.78				4.37		0.41	1.03E-02	DOWN
	S-9/MW-20D		4.84				NM		--	--	
	S-1B/S-1C			4.55		4.39			0.16	2.67E-02	DOWN
	MW-11A(D)/MW-11B			3.51			3.62		-0.11	-1.93E-03	UP
	MW-14A/MW-14B			-2.9			-3.97		1.07	1.43E-02	DOWN
	MW-15A/MW15B			-2.78			-4.36		1.58	2.23E-02	DOWN
	MW-16A/MW-16B			-4.33			-4.57		0.24	3.87E-03	DOWN
	MW-32I/MW-32D			NI			NI		--	--	

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Table 3-1. Vertical Flow Gradients for Monitoring Well Clusters. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Well Cluster	Aquifer Monitored							Change In Head(1)	Vertical Hydraulic Gradient	Vertical Flow Direction
		Top WT	Mid-WT	Bottom WT	Top UMPRM	Mid-UMPRM	Bottom UMPRM	LMPRM			
1/3/2000	MW-23S/MW-23I	4.56			3.43				1.13	2.51E-02	DOWN
	MW-26S/MW-26I	4.63			3.41				1.22	3.59E-02	DOWN
	MW-27S/MW-27I	5.79			3.49				2.3	5.00E-02	DOWN
	S-2A/S-2B	3.64			3.4				0.24	9.60E-03	DOWN
	MW-22S/MW-22I	4.83				3.31			1.52	1.95E-02	DOWN
	MW-4A/MW-4D	4.21					3.4		0.81	9.00E-03	DOWN
	MW-7A/MW-7B	3.59					3.3		0.29	6.17E-03	DOWN
	MW-8A/MW-8B	3.56					3.46		0.1	1.33E-03	DOWN
	MW-9A/MW-9B	3.81					3.46		0.35	5.00E-03	DOWN
	MW-10A/MW-10B	3.98					2.81		1.17	1.11E-02	DOWN
	MW-12A/MW-12B	4.22					3.16		1.06	8.91E-03	DOWN
	S-4/MW-5B	4.02					3.56		0.46	5.68E-03	DOWN
	EPA-104S/EPA-104D		3.5			3.34			0.16	5.71E-03	DOWN
	EPA-103/MW-6B		3.55				3.27		0.28	6.22E-03	DOWN
	S-3B/S-3C		3.54				3.45		0.09	2.25E-03	DOWN
	S-9/MW-20D		3.63				3.47		0.16	3.14E-03	DOWN
	S-1B/S-1C			4.25		3.89			0.36	6.00E-02	DOWN
	MW-11A(D)/MW-11B			3.03			3.09		-0.06	-1.05E-03	UP
	MW-14A/MW-14B			-2.19			-3.37		1.18	1.57E-02	DOWN
	MW-15A/MW15B			-2.24			-3.61		1.37	1.93E-02	DOWN
	MW-16A/MW-16B			-3.47			-3.79		0.32	5.16E-03	DOWN
	MW-32I/MW-32D			NI			NI		--	--	
11/6/2000	MW-23S/MW-23I	3.49			1.88				1.61	3.58E-02	DOWN
	MW-26S/MW-26I	3.54			2.29				1.25	3.68E-02	DOWN
	MW-27S/MW-27I	4.35			2.17				2.18	4.74E-02	DOWN
	S-2A/S-2B	2.42			2.09				0.33	1.32E-02	DOWN
	MW-22S/MW-22I	3.91				1.36			2.55	3.27E-02	DOWN
	MW-4A/MW-4D	2.69					1.8		0.89	9.89E-03	DOWN
	MW-7A/MW-7B	2.39					2.12		0.27	5.74E-03	DOWN
	MW-8A/MW-8B	2.19					1.11		1.08	1.44E-02	DOWN
	MW-9A/MW-9B	2.79					2.01		0.78	1.11E-02	DOWN
	MW-10A/MW-10B	1.93					0.73		1.2	1.14E-02	DOWN
	MW-12A/MW-12B	2.49					1.35		1.14	9.58E-03	DOWN
	S-4/MW-5B	2.56					2		0.56	6.91E-03	DOWN
	EPA-104S/EPA-104D		2.39			4.42			-2.03	-7.25E-02	UP
	EPA-103/MW-6B		1.27				1.92		-0.65	-1.44E-02	UP
	S-3B/S-3C		2.35				2.22		0.13	3.25E-03	DOWN
	S-9/MW-20D		2.41				1.96		0.45	8.82E-03	DOWN
	S-1B/S-1C			2.83		2.41			0.42	7.00E-02	DOWN
	MW-11A(D)/MW-11B			1.09			1.37		-0.28	-4.91E-03	UP
	MW-14A/MW-14B			-4.66			-5.59		0.93	1.24E-02	DOWN
	MW-15A/MW15B			-4.64			-5.92		1.28	1.80E-02	DOWN
	MW-16A/MW-16B			-5.89			-6.22		0.33	5.32E-03	DOWN
	MW-32I/MW-32D			NI			NI		--	--	

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Table 3-1. Vertical Flow Gradients for Monitoring Well Clusters. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Well Cluster	Aquifer Monitored							Change In Head(1)	Vertical Hydraulic Gradient	Vertical Flow Direction
		Top WT	Mid-WT	Bottom WT	Top UMPRM	Mid-UMPRM	Bottom UMPRM	LMPRM			
4/19/2001	MW-23S/MW-23I	4.47			3.63				0.84	1.87E-02	DOWN
	MW-26S/MW-26I	5.29			3.69				1.6	4.71E-02	DOWN
	MW-27S/MW-27I	7.04			3.78				3.26	7.09E-02	DOWN
	S-2A/S-2B	4.03			3.7				0.33	1.32E-02	DOWN
	MW-22S/MW-22I	4.59				2.46			2.13	2.73E-02	DOWN
	MW-4A/MW-4D	4.39					3.67		0.72	8.00E-03	DOWN
	MW-7A/MW-7B	4.05					3.43		0.62	1.32E-02	DOWN
	MW-8A/MW-8B	2.94					3.65		-0.71	-9.47E-03	UP
	MW-9A/MW-9B	3.74					3.65		0.09	1.29E-03	DOWN
	MW-10A/MW-10B	4.28					3.18		1.1	1.05E-02	DOWN
	MW-12A/MW-12B	4.23					2.46		1.77	1.49E-02	DOWN
	S-4/MW-5B	4.19					3.74		0.45	5.56E-03	DOWN
	EPA-104S/EPA-104D		3.17			3.68			-0.51	-1.82E-02	UP
	EPA-103/MW-6B		3.79				3.37		0.42	9.33E-03	DOWN
	S-3B/S-3C		3.85				3.68		0.17	4.25E-03	DOWN
	S-9/MW-20D		3.79				3.59		0.2	3.92E-03	DOWN
	S-1B/S-1C			4.29		4.07			0.22	3.67E-02	DOWN
	MW-11A(D)/MW-11B			3.32			3.36		-0.04	-7.02E-04	UP
	MW-14A/MW-14B			-1.59			-2.6		1.01	1.35E-02	DOWN
	MW-15A/MW15B			-1.48			-2.81		1.33	1.87E-02	DOWN
	MW-16A/MW-16B			-3.34			-2.94		-0.4	-6.45E-03	UP
	MW-32I/MW-32D			3.94			3.52		0.42	6.46E-03	DOWN
Between Water Table and LMPRM Aquifer											
9/23/1999	MW-1A/MW-1C	4.97						3.69	1.28	1.11E-02	DOWN
	MW-3A/MW-3C	6.09						4.66	1.43	1.25E-02	DOWN
1/3/2000	MW-1A/MW-1C	4.87						3.2	1.67	1.45E-02	DOWN
	MW-3A/MW-3C	5.66						2.8	2.86	2.51E-02	DOWN
11/6/2000	MW-1A/MW-1C	3.89						1.64	2.25	1.96E-02	DOWN
	MW-3A/MW-3C	Dry						2.28	--	--	
4/19/2001	MW-1A/MW-1C	4.9						3.49	1.41	1.23E-02	DOWN
	MW-3A/MW-3C	6.05						2.97	3.08	2.70E-02	DOWN
Within UMPRM Aquifer											
9/23/1999	MW-23I/MW-23D				6.88		6.75		0.13	3.17E-03	DOWN
	MW-26I/MW-26D				4.2		3.66		0.54	9.64E-03	DOWN
	MW-27I/MW-27D				4.31		4.31		0	--	
	S-2B/S-2C				4.34		4.27		0.07	1.46E-03	DOWN
	MW-17I/MW-17D					NI	1.47		--	--	
	MW-22I/MW-22D					NI	NI		--	--	
	S-11B/S-11C					4.02	3.73		0.29	2.07E-02	DOWN
1/3/2000	MW-23I/MW-23D				3.43		2.94		0.49	1.20E-02	DOWN
	MW-26I/MW-26D				3.41		2.96		0.45	8.04E-03	DOWN
	MW-27I/MW-27D				3.49		3.51		-0.02	-4.88E-04	UP
	S-2B/S-2C				3.4		3.34		0.06	1.25E-03	DOWN
	MW-17I/MW-17D					1.38	1.35		0.03	3.00E-03	DOWN
	MW-22I/MW-22D					3.31	2.89		0.42	1.40E-02	DOWN
	S-11B/S-11C					3.37	3.07		0.3	2.14E-02	DOWN

302771

Table 3-1. Vertical Flow Gradients for Monitoring Well Clusters. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Date	Well Cluster	Aquifer Monitored							Change In Head(1)	Vertical Hydraulic Gradient	Vertical Flow Direction
		Top WT	Mid-WT	Bottom WT	Top UMPRM	Mid-UMPRM	Bottom UMPRM	LMPRM			
11/6/2000	MW-23I/MW-23D				1.88		1.66		0.22	5.37E-03	DOWN
	MW-26I/MW-26D				2.29		1.62		0.67	1.20E-02	DOWN
	MW-27I/MW-27D				2.17		2.17		0	--	
	S-2B/S-2C				2.09		2.02		0.07	1.46E-03	DOWN
	MW-17I/MW-17D					NM	-0.98		--	--	
	MW-22I/MW-22D					1.36	0.89		0.47	1.57E-02	DOWN
	S-11B/S-11C					1.87	1.65		0.22	1.57E-02	DOWN
4/19/2001	MW-23I/MW-23D				3.63		3.46		0.17	4.15E-03	DOWN
	MW-26I/MW-26D				3.69		3.26		0.43	7.68E-03	DOWN
	MW-27I/MW-27D				3.78		3.76		0.02	4.88E-04	DOWN
	S-2B/S-2C				3.7		3.61		0.09	1.88E-03	DOWN
	MW-17I/MW-17D					1.9	1.75		0.15	1.50E-02	DOWN
	MW-22I/MW-22D					2.46	3.15		-0.69	-2.30E-02	UP
	S-11B/S-11C					3.66	3.36		0.3	2.14E-02	DOWN
Between UMPRM and LMPRM Aquifers											
9/23/1999	EPA-104D/MW-3C					4.57		4.66	-0.09	-1.17E-03	UP
	MW-4D/MW-4C						1.35	3.2	-1.85	-4.02E-02	UP
	S-11C/MW-1C						3.73	3.69	0.04	1.48E-03	DOWN
1/3/2000	EPA-104D/MW-3C					3.34		2.8	0.54	7.01E-03	DOWN
	MW-4D/MW-4C						3.4	2.78	0.62	1.35E-02	DOWN
	S-11C/MW-1C						3.07	3.2	-0.13	-4.81E-03	UP
11/6/2000	EPA-104D/MW-3C					4.42		2.28	2.14	2.78E-02	DOWN
	MW-4D/MW-4C						1.8	1.15	0.65	1.41E-02	DOWN
	S-11C/MW-1C						1.65	1.64	0.01	3.70E-04	DOWN
4/19/2001	EPA-104D/MW-3C					3.68		2.97	0.71	9.22E-03	DOWN
	MW-4D/MW-4C						3.67	3.08	0.59	1.28E-02	DOWN
	S-11C/MW-1C						3.36	3.49	-0.13	-4.81E-03	UP

Ground water elevation in feet relative to mean sea level.

(1) Change in head elevation between shallow and deeper wells. Where two numbers are present it represents the change between the first and second wells/second and third wells.

WT = Water Table Aquifer.

PRM = Potomac Raritan Magothy aquifer.

LM = Lower middle.

NM = Not measured.

T = Top.

B = Base.

NI = Not installed.

302772

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-10A	L-10A	L-10A	L-10A	L-10B	L-10B	L-10B	L-10B	L-11A	L-11A	L-11A	L-11A
Sample Date	8/16/99	8/16/99	8/16/99	8/16/99	8/17/99	8/17/99	8/17/99	8/18/99	8/6/99	8/9/99	8/9/99	8/9/99
Sample ID	8-9	14-15	38-39	54-55	7-8	14-15	32-33	54-55	9-10	22-23	42-43	54-55
Chemical Name												
VOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,1,1-Trichloroethane	7600	210 U	120 U	160 U	440 J	610 U	170 U	160 U	140 U	120 U	160 U	120 U
1,1,2,2-Tetrachloroethane	120 U	210 U	120 U	160 U	140. J	610 U	170 U	160 U	140 U	120 U	160 U	120 U
1,1,2-Trichloroethane	240 U	420 U	230 U	310 U	270 U	1200 U	350 U	320 U	280 U	250 U	320 U	240 U
1,1-Dichloroethane	1000	210 U	120 U	160 U	130 U	610 U	170 U	160 U	180 J	120 U	160 U	120 U
1,1-Dichloroethene	570 J	420 U	230 U	310 U	270 U	1200 U	350 U	320 U	280 U	250 U	320 U	240 U
1,2-Dichloroethane	240 U	420 U	230 U	310 U	270 U	1200 U	350 U	320 U	280 U	250 U	320 U	240 U
1,2-Dichloropropane	360 U	630 U	350 U	470 U	400 U	1800 U	520 U	470 U	430 U	370 U	480 U	360 U
2-Butanone	840 U	3200	810 U	1100 U	940 U	4200 U	1200 U	1100 U	1000 U	870 U	1100 U	840 U
2-Hexanone	360 U	630 U	350 U	470 U	400 U	1800 U	520 U	470 U	430 U	370 U	480 U	360 U
4-Methyl-2-pentanone	360 U	630 U	350 U	470 U	400 U	6600	520 U	470 U	430 U	370 U	480 U	360 U
Acetone	840 U	24000	810 U	1100 U	940 U	25000	1200 U	1100 U	1000 U	870 U	1100 U	840 U
Benzene	9400	210 U	120 U	160 U	400 J	1100 J	170 U	160 U	7800	120 U	2700	120 J
Bromodichloromethane	240 U	420 U	230 U	310 U	270 U	1200 U	350 U	320. U	280. U	240. U	320. U	240. U
Bromoform	120 U	210 U	120 U	160 U	130 U	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Bromomethane/ Methyl bromide	360 U	630 U	350 U	470 U	400 U	1800 U	520 U	470 U	430 U	370 U	480 U	360 U
Carbon disulfide	18000	630 U	350 U	470 U	400 U	26000	520 U	470 U	430 U	370 U	480 U	360 U
Carbon tetrachloride	400 J	210 U	120 U	160 U	130 U	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Chlorobenzene	400 J	210 U	120 U	160 U	140 J	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Chloroethane	360 U	630 U	350 U	470 U	400 U	1800 U	520 U	470 U	430 U	370 U	480 U	360 U
Chloroform	2400	210 U	120 U	160 U	130 U	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Chloromethane	240 U	420 U	230 U	310 U	270 U	1200 U	350 U	320 U	280 U	250 U	320 U	240 U
cis-1,2-Dichloroethene	32000	420 U	230 U	310 U	1500	1200 U	350 U	570 J	280 U	250 U	320 U	240 U
cis-1,3-Dichloropropene	120 U	210 U	120 U	160 U	130 U	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Dibromochloromethane	120 U	210 U	120 U	160 U	130 U	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Ethylbenzene	13000	210 U	120 U	160 U	16000	610 U	170 U	160 U	1000	120 U	350 J	120 U
Methylene chloride	1900	420 U	230 U	310 U	270 U	2600 J	350 U	320 U	280 U	250 U	320 U	240 U
Styrene	120 U	210 U	120 U	160 U	130 U	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Tetrachloroethene	6800	210 U	120 U	160 U	990	610 U	170 U	160 U	170 J	120 U	160 U	120 U
Toluene	30000	210 U	120 U	160 U	1100	1200 J	170 U	160 U	140 U	120 U	1500	120 U
trans-1,2-Dichloroethene	240 U	420 U	230 U	310 U	270 U	1200 U	350 U	320 U	280 U	250 U	320 U	240 U
trans-1,3-Dichloropropene	120 U	210 U	120 U	160 U	130 U	610 U	170 U	160 U	140 U	120 U	160 U	120 U
Trichloroethene	83000 D	210 U	120 U	160 U	130 U	2500 J	170 U	420 J	140 U	120 U	300 J	120 U
Vinyl chloride	350 J	420 U	230 U	310 U	270 U	1200 U	350 U	320 U	280 U	250 U	320 U	240 U
Xylenes (Total)	75000	210 U	120 U	160 U	58000	610 U	200 J	160 U	3600	120 U	1600	120 U
Total TICs												

302773

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-10A	L-10A	L-10A	L-10A	L-10B	L-10B	L-10B	L-10B	L-11A	L-11A	L-11A	L-11A
Sample Date	8/16/99	8/16/99	8/16/99	8/16/99	8/17/99	8/17/99	8/17/99	8/18/99	8/6/99	8/9/99	8/9/99	8/9/99
Sample ID	8-9	14-15	38-39	54-55	7-8	14-15	32-33	54-55	9-10	22-23	42-43	54-55
Chemical Name												
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,2,4-Trichlorobenzene	37 U	48 U	37 U	40 U	110 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
1,2-Dichlorobenzene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
1,3-Dichlorobenzene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
1,4-Dichlorobenzene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
2,2'-Oxybis(1-chloropropane)	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
2,4,5-Trichlorophenol	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
2,4,6-Trichlorophenol	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
2,4-Dichlorophenol	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
2,4-Dimethylphenol	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
2,4-Dinitrophenol	740 U	950 U	730 U	790 U	780 U	770 U	810 U	790 U	260 U	280 U	280 U	270 U
2,4-Dinitrotoluene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	77 U	81 U	81 U	77 U
2,6-Dinitrotoluene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
2-Chloronapthalene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
2-Chlorophenol	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
2-Methylnapthalene	600	48 U	37 U	40 U	420	38 U	41 U	40 U	38 U	41 U	41 U	38 U
2-Methylphenol	37 U	48 U	37 U	40 U	39 U	51 J	41 U	40 U	38 U	41 U	41 U	38 U
2-Nitroaniline	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	38 U	41 U	41 U	38 U
2-Nitrophenol	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
3,3'-Dichlorobenzidine	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
3-Nitroaniline	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
4,6-Dinitro-2-methylphenol	190 U	240 U	180 U	200 U	190 U	190 U	200 U	200 U	190 U	200 U	200 U	190 U
4-Bromophenyl phenyl ether	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	77 U	81 U	81 U	77 U
4-Chloro-3-methylphenol	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
4-Chloroaniline	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	38 U	41 U	41 U	38 U
4-Chlorophenyl phenyl ether	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
4-Methylphenol	74 U	95 U	73 U	79 U	78 U	230 J	81 U	79 U	77 U	81 U	81 U	77 U
4-Nitroaniline	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
4-Nitrophenol	190 U	240 U	180 U	200 U	190 U	190 U	200 U	200 U	190 U	200 U	200 U	190 U
Acenaphthene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Acenaphthylene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Anthracene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Benzo(a)anthracene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Benzo(a)pyrene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Benzo(b)fluoranthene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Benzo(g,h,i)perylene	37 U	48 U	37 U	40 U	40 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Benzo(k)fluoranthene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U

302774

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-10A	L-10A	L-10A	L-10A	L-10B	L-10B	L-10B	L-10B	L-11A	L-11A	L-11A	L-11A
Sample Date	8/16/99	8/16/99	8/16/99	8/16/99	8/17/99	8/17/99	8/17/99	8/18/99	8/6/99	8/9/99	8/9/99	8/9/99
Sample ID	8-9	14-15	38-39	54-55	7-8	14-15	32-33	54-55	9-10	22-23	42-43	54-55
Chemical Name												
bis(2-Chloroethoxy)methane	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
bis(2-Chloroethyl)ether	37 U	48 U	37 U	40 U	39 U	91 J	41 U	40 U	38 U	41 U	50 J	38 U
bis(2-Ethylhexyl)phthalate	230 J	95 U	73 U	79 U	720	77 U	81 U	79 U	77 U	81 U	81 U	77 U
Butyl benzyl phthalate	110 J	95 U	73 U	79 U	130 J	77 U	81 U	79 U	280 J	81 U	81 U	77 U
Carbazole	37 U	95 U	73 U	79 U	39 U	38 U	41 U	40 U	77 U	81 U	81 U	77 U
Chrysene	41 J	48 U	37 U	40 U	59 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Dibenz(a,h)anthracene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Dibenzofuran	37 U	48 U	37 U	40 U	41 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Diethyl phthalate	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
Dimethyl phthalate	74 U	95 U	73 U	79 U	140 J	77 U	81 U	79 U	77 U	81 U	81 U	77 U
Di-n-butyl phthalate	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
Di-n-octyl phthalate	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
Fluoranthene	75 J	48 U	37 U	40 U	72 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Fluorene	60 J	48 U	37 U	40 U	58 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Hexachlorobenzene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Hexachlorobutadiene	74 U	95 U	73 U	79 U	78 U	77 U	81 U	79 U	77 U	81 U	81 U	77 U
Hexachlorocyclopentadiene	190 U	240 U	180 U	200 U	190 U	190 U	200 U	200 U	190 U	200 U	200 U	190 U
Hexachloroethane	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Indeno(1,2,3-cd)pyrene	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Isophorone	270 J	920	37 U	40 U	390	11000	100 J	110 J	38 U	41 U	41 U	38 U
Naphthalene	240 J	48 U	37 U	40 U	160 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Nitrobenzene	37 U	48 U	37 U	40 U	560	38 U	41 U	40 U	38 U	41 U	41 U	38 U
n-Nitrosodiphenylamine	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
n-Nitrosodipropylamine	37 U	48 U	37 U	40 U	39 U	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Pentachlorophenol	190 U	240 U	180 U	200 U	190 U	190 U	200 U	200 U	190 U	200 U	200 U	190 U
Phenanthrene	380	48 U	37 U	40 U	330 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Phenol	74 U	1000	73 U	440	410	960	81 U	79 U	110 J	81 U	81 U	77 U
Pyrene	89 J	48 U	37 U	40 U	160 J	38 U	41 U	40 U	38 U	41 U	41 U	38 U
Total TICs												
METALS (mg/kg)												
Aluminum	9860	25200 *	685 *	683 *	8340	1500 *	903 *	514 *	4530 *	1970	1260	1350
Antimony	3.0 U	3.9 UN	3.0 UN	3.2 UN	3.1 U	3.1 UN	3.3 UN	3.2 UN	3.1 U	3.3 U	3.3 U	3.1 U
Arsenic	2.7	12.7 *	0.43 U*	0.46 U*	3.8	1.7 *	0.47 U*	0.46 U*	3.4	2.3	0.48 U	0.87 B
Barium	32.0	67.9	4.3 B	6.1 B	28.5	9.1 B	4.6 B	2.5 B	21.1	11.0 B	3.4 B	3.6 B
Beryllium	0.31 B	1.8	0.16 U	0.18 U	0.30 B	0.17 U	0.18 U	0.18 U	0.34 B	0.18 U	0.18 U	0.17 U
Cadmium	0.18 U	0.86 BN	0.17 UN	0.19 UN	0.19 U	0.18 UN	0.19 UN	0.19 UN	0.18 U	0.19 UN	0.20 UN	0.18 UN

302775

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-10A	L-10A	L-10A	L-10A	L-10B	L-10B	L-10B	L-10B	L-11A	L-11A	L-11A	L-11A
Sample Date	8/16/99	8/16/99	8/16/99	8/16/99	8/17/99	8/17/99	8/17/99	8/18/99	8/6/99	8/9/99	8/9/99	8/9/99
Sample ID	8-9	14-15	38-39	54-55	7-8	14-15	32-33	54-55	9-10	22-23	42-43	54-55
Chemical Name												
Calcium	267	745	78.8	184	208	207	86.8	67.9	235	231	79.1	76.9
Chromium	17.9	50.6 N	4.2 BN	4.5 BN	19.0	3.9 BN	2.7 BN	3.2 BN	12.2	5.7	6.1	7.4
Cobalt	5.5 B	7.3	1.1 U	1.2 U	2.3 B	1.1 U	1.2 U	1.2 U	4.2 B	1.2 U	1.2 U	1.1 U
Copper	7.2	18.2 *	0.84 B*	0.76 B*	8.2	2.2 B*	0.82 B*	0.34 B*	4.6 B	3.7 B	0.79 B	0.92 B
Iron	9400	41300	606	742	8500	1330	587	547	8790	2850	989	1040
Lead	15.0	15.0	3.7	7.7	20.1	8.6	1.8	1.3	10.3	4.4	3.2	1.7
Magnesium	1360 N	2130 N*	38.5 N*	68.3 N*	699 N	135 N*	62.0 N*	40.1 N*	765 N	177 *	69.9 *	59.0 *
Manganese	52.6	150	2.8	6.5	32.9	14.3	4.9	4.6	62.0	12.4	11.0	5.7
Mercury	0.016 B	0.050 BN	0.0053 UN	0.0056 UN	0.014 B	0.0053 UN	0.0059 UN	0.0055 UN	0.0095 BN	0.0059 U	0.0059 U	0.0056 U
Nickel	10.7	16.4	1.1 U	1.1 U	39.3	1.7 B	1.2 U	1.1 U	4.7 B	1.2 U	1.2 U	1.1 U
Potassium	1030	2330 N*	119 N*	99.6 N*	1020	168 N*	140 N*	60.4 N*	736 N*	416 *	115 *	106 *
Selenium	0.46 UN	0.59 U	0.45 U	0.48 U	0.48 UN	0.47 U	0.50 U	0.48 U	0.47 U	0.49 U	0.50 U	0.47 U
Silver	0.87 U	1.1 U	0.85 U	0.91 U	0.91 U	0.89 U	0.94 U	0.91 U	0.89 U	0.94 U	0.95 U	0.89 U
Sodium	647	275 N	122 N	116 BN	343	172 N	146 N	89.8 BN	88.0 B	286	43.8 B	75.6 B
Thallium	0.90 B	2.6 B	0.74 U	0.80 U	1.1 B	0.78 U	0.82 U	0.79 U	1.1 B	0.82 U	0.83 U	0.78 U
Vanadium	21.0	126 N*	3.5 N*	4.4 N*	30.6	4.3 N*	2.5 N*	2.9 N*	17.4 *	16.0	9.5	13.7
Zinc	34.4	62.3 N*	13.1 N*	3.0 BN*	33.6	5.9 BN*	5.8 BN*	1.9 BN*	16.9	6.1 B	3.7 B	2.3 B
POLYCHLORINATED BIPHENYLS (ug/kg)												
Aroclor-1016	37 U	47 U	3.6 U	3.9 U	38. U	3.8 U	4.0 U	3.9 U	190 U	4.0 U	4.0 U	3.8 U
Aroclor-1221	87 U	11 U	8.6 U	9.3 U	91. U	9.0 U	9.5 U	9.3 U	450 U	9.5 U	9.5 U	9.0 U
Aroclor-1232	100 U	13 U	10. U	11 U	110 U	11 U	11 U	11 U	530 U	11 U	11 U	11 U
Aroclor-1242	78 U	10 U	7.7 U	8.4 U	82. U	8.1 U	8.5 U	8.3 U	4400	8.5 U	8.5 U	8.1 U
Aroclor-1248	88 U	11 U	8.7 U	9.4 U	820	9.1 U	9.6 U	9.4 U	450 U	9.6 U	9.6 U	9.1 U
Aroclor-1254	1400	47 U	3.6 U	15 J	38. U	59	13 J	3.9 U	190 U	4.0 U	4.0 U	3.8 U
Aroclor-1260	610	47 U	5.2 JP	14 J	1700	56	21	29	13000	100	73	31
PETROLEUM HYDROCARBONS (mg/kg)												
PHC as Diesel Fuel	23000	31	14	24	6300	1600	75	15	16000	69	57	13
PHC as Gasoline	530	1.3 J	0.22 U	1.5	74.	9.0 J	0.59 J	0.27 J	51	0.61 J	11. J	0.54 J
#6 Fuel Oil	3000 U	20 U	20 U	50 U	1000 U	NA	100 U	40 U	10000 U	10 U	10 U	10 U
10W-40 Motor Oil	32000	20 U	20 U	47	12000	2200	140	30 J	29000	60	270	30 J
Diesel/#2 Fuel	20000 U	17	16	20 U	6000 U	1000 U	90 U	8 U	8000 U	40 U	90 U	20 U
Gasoline	700 U	20 U	3 U	4 U	300 U	30 U	4 U	4 U	300 U	4 U	4 U	3 U
Kerosene	700 U	4 U	3 U	4 U	300 U	30 U	4 U	4 U	300 U	4 U	4 U	3 U
Mineral Spirits	700 U	4 U	3 U	4 U	300 U	30 U	4 U	4 U	300 U	4 U	4 U	3 U

302776

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-10A	L-10A	L-10A	L-10A	L-10B	L-10B	L-10B	L-10B	L-11A	L-11A	L-11A	L-11A
Sample Date	8/16/99	8/16/99	8/16/99	8/16/99	8/17/99	8/17/99	8/17/99	8/18/99	8/6/99	8/9/99	8/9/99	8/9/99
Sample ID	8-9	14-15	38-39	54-55	7-8	14-15	32-33	54-55	9-10	22-23	42-43	54-55
Chemical Name												
GENERAL CHEMISTRY												
pH (S.U.)	7.30	3.73	5.32	5.54	6.84	2.68	4.52	4.38	6.95	7.98	7.31	6.36
Total Organic Carbon (mg/kg)	720	1010	14 U	16 U	1160	2280	276	120	3380	540	190	69
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	200	258	150	231	48	436	274	293	228	234	228	232

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302777

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	MW-32S	MW-32S
Sample Date	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	8/4/99	8/4/99	8/5/99	8/6/99	9/3/99	9/3/99
Sample ID	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47	64-65	111-112	113-114	8-9	12-13
Chemical Name												
VOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,1,1-Trichloroethane	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	31000	20000
1,1,2,2-Tetrachloroethane	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	820 U	570 U
1,1,2-Trichloroethane	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	1600 U	1100 U
1,1-Dichloroethane	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	3200 J	3100
1,1-Dichloroethene	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	1600 U	1100 U
1,2-Dichloroethane	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	1700 J	1800 J
1,2-Dichloropropane	NA	NA	440 U	420 U	410 U	440 U	360 U	560 U	380 U	410 U	2500 U	1700 U
2-Butanone	NA	NA	1000 U	980 U	960 U	1100 J	830 U	1300 U	880 U	950 U	5800 U	4000 U
2-Hexanone	NA	NA	440 U	420 U	410 U	440 U	360 U	560 U	380 U	410 U	2500 U	1700 U
4-Methyl-2-pentanone	NA	NA	440 U	420 U	410 U	990 J	360 U	1300 J	380 U	410 U	2500 U	7000
Acetone	NA	NA	1000 U	980 U	960 U	5000	830 U	1300 U	880 U	950 U	5800 U	4000 U
Benzene	NA	NA	740	140 U	190 J	300 J	120 U	180 U	130 U	140 U	49000	42000
Bromodichloromethane	NA	NA	290 U	280 U	270 U	290 U	240 U	370. U	250. U	270. U	1600 U	1100. U
Bromoform	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	820 U	570 U
Bromomethane/ Methyl bromide	NA	NA	440 U	420 U	410 U	440 U	360 U	560 U	380 U	410 U	2500 U	1700 U
Carbon disulfide	NA	NA	440 U	420 U	410 U	440 U	360 U	560 U	380 U	410 U	2500 U	1700 U
Carbon tetrachloride	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	820 U	570 U
Chlorobenzene	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	7100	570 U
Chloroethane	NA	NA	440 U	420 U	410 U	440 U	360 U	560 U	380 U	410 U	2500 U	1700 U
Chloroform	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	4000 J	4600
Chloromethane	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	1600 U	1100 U
cis-1,2-Dichloroethene	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	170000	39000
cis-1,3-Dichloropropene	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	820 U	570 U
Dibromochloromethane	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	820 U	570 U
Ethylbenzene	NA	NA	230 J	140 U	140 U	150 U	120 U	180 U	130 U	140 U	470000 D	260000 D
Methylene chloride	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	1600 U	1100 U
Styrene	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	820 U	570 U
Tetrachloroethene	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	36000	28000
Toluene	NA	NA	760	420 J	140 U	420 J	120 U	200 J	130 U	140 U	830000 D	420000 D
trans-1,2-Dichloroethene	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	1800 J	1100 U
trans-1,3-Dichloropropene	NA	NA	140 U	140 U	140 U	150 U	120 U	180 U	130 U	140 U	820 U	570 U
Trichloroethene	NA	NA	150 J	220 J	140 U	150 U	120 U	180 U	130 U	140 U	390000 D	250000 D
Vinyl chloride	NA	NA	290 U	280 U	270 U	290 U	240 U	370 U	250 U	270 U	1600 U	1100 U
Xylenes (Total)	NA	NA	510 J	260 J	140 U	150 U	120 U	180 U	130 U	140 U	2400000 D	1300000 D
Total TICs												

302778

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	MW-32S	MW-32S
Sample Date	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	8/4/99	8/4/99	8/5/99	8/6/99	9/3/99	9/3/99
Sample ID	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47	64-65	111-112	113-114	8-9	12-13
Chemical Name												
1,2,4-Trichlorobenzene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	700	700 J
1,2-Dichlorobenzene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	3000	3300
1,3-Dichlorobenzene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
1,4-Dichlorobenzene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	250 J	74 U
2,2'-Oxybis(1-chloropropane)	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
2,4,5-Trichlorophenol	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
2,4,6-Trichlorophenol	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
2,4-Dichlorophenol	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	230 J	150 U
2,4-Dimethylphenol	NA	NA	82 U	78 U	81 U	88 J	76 U	82 U	76 U	77 U	140 U	150 U
2,4-Dinitrophenol	NA	NA	290 U	270 U	280 U	260 U	260 U	290 U	260 U	260 U	1400 U	1500 U
2,4-Dinitrotoluene	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	70 U	74 U
2,6-Dinitrotoluene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
2-Chloronapthalene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
2-Chlorophenol	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
2-Methylnapthalene	NA	NA	800	210 J	210 J	37 U	37 U	41 U	37 U	38 U	24000	22000
2-Methylphenol	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	270 J	74 U
2-Nitroaniline	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	140 U	150 U
2-Nitrophenol	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	74 U
3,3'-Dichlorobenzidine	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
3-Nitroaniline	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
4,6-Dinitro-2-methylphenol	NA	NA	200 U	200 U	200 U	180 U	190 U	210 U	190 U	190 U	350 U	370 U
4-Bromophenyl phenyl ether	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	70 U	74 U
4-Chloro-3-methylphenol	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
4-Chloroaniline	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	6700	5000
4-Chlorophenyl phenyl ether	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
4-Methylphenol	NA	NA	82 U	78 U	81 U	88 J	76 U	83 J	76 U	77 U	470 J	150 U
4-Nitroaniline	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
4-Nitrophenol	NA	NA	200 U	200 U	200 U	180 U	190 U	210 U	190 U	190 U	350 U	370 U
Acenaphthene	NA	NA	89 J	39 U	41 U	37 U	37 U	41 U	37 U	38 U	690 J	450 J
Acenaphthylene	NA	NA	320 J	62 J	57 J	37 U	37 U	41 U	37 U	38 U	360 J	74 U
Anthracene	NA	NA	120 J	39 J	41 J	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Benzo(a)anthracene	NA	NA	74 J	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Benzo(a)pyrene	NA	NA	58 J	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	120 J
Benzo(b)fluoranthene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	310 J
Benzo(g,h,i)perylene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	170 J
Benzo(k)fluoranthene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U

302779

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	MW-32S	MW-32S
Sample Date	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	8/4/99	8/4/99	8/5/99	8/6/99	9/3/99	9/3/99
Sample ID	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47	64-65	111-112	113-114	8-9	12-13
Chemical Name												
bis(2-Chloroethoxy)methane	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
bis(2-Chloroethyl)ether	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
bis(2-Ethylhexyl)phthalate	NA	NA	130 J	130 J	140 J	74 U	76 U	82 U	76 U	77 U	140 U	150 U
Butyl benzyl phthalate	NA	NA	94 J	78 U	81 U	74 U	280 J	82 U	280 J	280 J	140 U	150 U
Carbazole	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	70 U	74 U
Chrysene	NA	NA	82 J	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Dibenz(a,h)anthracene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Dibenzofuran	NA	NA	46 J	39 U	41 U	37 U	37 U	41 U	37 U	38 U	830	74 U
Diethyl phthalate	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
Dimethyl phthalate	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
Di-n-butyl phthalate	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	410 J
Di-n-octyl phthalate	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	460 J	150 U
Fluoranthene	NA	NA	130 J	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	460 J
Fluorene	NA	NA	180 J	52 J	53 J	37 U	37 U	41 U	37 U	38 U	1300	1100
Hexachlorobenzene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Hexachlorobutadiene	NA	NA	82 U	78 U	81 U	74 U	76 U	82 U	76 U	77 U	140 U	150 U
Hexachlorocyclopentadiene	NA	NA	200 U	200 U	200 U	180 U	190 U	210 U	190 U	190 U	350 U	370 U
Hexachloroethane	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Indeno(1,2,3-cd)pyrene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Isophorone	NA	NA	120 J	84 J	54 J	37 U	37 U	41 U	37 U	38 U	1100	1400
Naphthalene	NA	NA	950	230 J	200 J	37 U	37 U	41 U	37 U	38 U	16000	16000
Nitrobenzene	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
n-Nitrosodiphenylamine	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
n-Nitrosodipropylamine	NA	NA	41 U	39 U	41 U	37 U	37 U	41 U	37 U	38 U	70 U	74 U
Pentachlorophenol	NA	NA	200 U	200 U	200 U	180 U	190 U	210 U	190 U	190 U	350 U	370 U
Phenanthrene	NA	NA	520	160 J	160 J	37 U	37 U	41 U	37 U	38 U	70 U	4900
Phenol	NA	NA	84 J	110 J	81 U	270 J	76 U	110 J	76 U	77 U	140 U	150 U
Pyrene	NA	NA	250 J	77 J	83 J	37 U	37 U	41 U	37 U	38 U	70 U	1200
Total TICs												
Aluminum	NA	NA	4140	938	674	658	517 *	1220 *	952 *	2890 *	7220	7100
Antimony	NA	NA	3.3 U	3.2 U	3.2 U	3.0 U	3.0 U	3.3 U	3.0 U	3.1 U	2.8 U	3.0 U
Arsenic	NA	NA	2.7	1.9	0.76 B	0.75 B	0.43 U	0.48 U	1.3	3.6	2.3	3.1
Barium	NA	NA	15.6 *	9.2 B*	7.0 B*	3.0 B*	2.2 B	4.3 B	2.0 B	9.2 B	27.1	31.3
Beryllium	NA	NA	0.26 B	0.18 B	0.18 U	0.17 U	0.17 U	0.18 U	0.17 U	0.57 B	0.36 B	0.50 B
Cadmium	NA	NA	0.52 B	0.19 U	0.19 U	0.18 U	0.18 U	0.20 U	0.18 U	0.18 U	0.17 U	0.18 U

302780

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	MW-32S	MW-32S
Sample Date	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	8/4/99	8/4/99	8/5/99	8/6/99	9/3/99	9/3/99
Sample ID	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47	64-65	111-112	113-114	8-9	12-13
Chemical Name												
Calcium	NA	NA	105	195	193	68.3	142	90.7	76.8	323	378 N	293 N
Chromium	NA	NA	9.9 N	9.6 N	5.4 N	7.6 N	3.4 B	6.9	11.3	40.8	15.3	17.5
Cobalt	NA	NA	2.7 B	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.3 B	1.3 B
Copper	NA	NA	3.1 B	3.2 B	1.8 B	2.1 B	0.86 B	1.6 B	4.5	37.1	6.6	7.8
Iron	NA	NA	7490	2270	992	1130	599	896	2090	45900	7330	7030
Lead	NA	NA	9.3 *	11.1 *	11.8 *	1.4 *	1.1 B	2.2	1.4	0.72 B	7.3	11.9
Magnesium	NA	NA	567 N	77.4 N	59.2 N	53.9 N	73.2 N	70.2 N	28.5 N	106 N	643	475
Manganese	NA	NA	29.8 *	7.9 *	6.5 *	5.1 *	5.2	13.6	5.4	4.1	31.7	27.8
Mercury	NA	NA	0.0079 B	0.0077 B	0.0056 U	0.0054 U	0.0055 UN	0.0060 UN	0.010 BN	0.0055 UN	0.0079 BN	0.017 BN
Nickel	NA	NA	3.8 B	1.4 B	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.7 B	3.9 B	3.0 B
Potassium	NA	NA	368 N	169 N	130 N	97.5 N	45.8 BN*	92.6 N*	34.7 UN*	88.1 N*	1030 N	988 N
Selenium	NA	NA	0.50 U	0.48 U	0.49 U	0.46 U	0.45 U	0.50 U	0.46 U	2.6	0.43 U	0.45 U
Silver	NA	NA	0.95 U	0.91 U	0.94 U	0.87 U	0.86 U	0.96 U	0.87 U	0.89 U	0.81 U	0.86 U
Sodium	NA	NA	141	241	261	73.5 B	166	175	48.3 B	24.2 B	185	197
Thallium	NA	NA	0.83 U	0.79 U	0.82 U	0.76 U	0.75 U	0.84 U	0.76 U	5.6	0.71 U	0.75 U
Vanadium	NA	NA	14.0 *	11.6 *	10.2 *	27.9 *	6.9 *	22.3 *	31.3 *	104 *	21.6	23.2
Zinc	NA	NA	14.4 E	5.6 BEP	5.4 BEP	3.4 BEP	3.5 B	7.4 B	2.5 B	10.7 B	35.8	283
Aroclor-1016	NA	NA	4.1 U	3.9 U	4.0 U	3.7 U	3.7 U	4.1 U	3.7 U	3.8 U	170 U	36. U
Aroclor-1221	NA	NA	4.1 U	3.9 U	4.0 U	3.7 U	8.8 U	9.6 U	8.8 U	8.9 U	410 U	86. U
Aroclor-1232	NA	NA	4.1 U	3.9 U	4.0 U	3.7 U	11. U	11. U	11. U	11. U	490 U	100 U
Aroclor-1242	NA	NA	4.1 U	3.9 U	4.0 U	3.7 U	7.9 U	8.6 U	7.9 U	8.0 U	2400	1400
Aroclor-1248	NA	NA	140	42	49	3.7 U	8.9 U	9.7 U	8.9 U	9.0 U	410 U	87 U
Aroclor-1254	NA	NA	4.1 U	3.9 U	4.0 U	3.7 U	3.7 U	4.1 U	3.7 U	3.8 U	170 U	36 U
Aroclor-1260	NA	NA	170	50	61	3.7 U	3.7 U	4.1 U	3.7 U	3.8 U	4700	2600
PHC as Diesel Fuel	NA	NA	43	18	27	63 J	45 U	72 J	45 U	46 U	NA	NA
PHC as Gasoline	NA	NA	6.8	0.37 J	1.3	0.22 ND	0.23 U	0.25 U	0.23 U	0.23 U	NA	NA
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302781

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	L-6	MW-32S	MW-32S
Sample Date	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	7/22/99	8/4/99	8/4/99	8/5/99	8/6/99	9/3/99	9/3/99
Sample ID	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47	64-65	111-112	113-114	8-9	12-13
Chemical Name												
pH (S.U.)	11.7	7.64	5.86	6.02	6.39	5.88	8.16	5.82	4.25	4.65	NA	NA
Total Organic Carbon (mg/kg)	1580	111	990	292	297	153	155	89	68	184	NA	NA
Cation Exchange Capacity (mequi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	34	119	-10	66	75	183	208	264	223	340	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302782

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-32S	P-36	P-36	P-36	P-36	P-36	P-37	P-37	P-37
Sample Date	9/3/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99
Sample ID	19.5-20	0-0.17	0.17-1	4-5	13-14	33-34	13-14	33-34	28-29
Chemical Name									
VOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,1,1-Trichloroethane	150. U	160 U	140 U	8300	6000	130 U	12000	390 J	150 U
1,1,2,2-Tetrachloroethane	150. U	160 U	140 U	300 U	140 U	130 U	700 U	140 U	150 U
1,1,2-Trichloroethane	310. U	310 U	280 U	610 U	280 U	260 U	1400 U	280 U	300 U
1,1-Dichloroethane	150. U	160 U	140 U	820 J	280 J	130 U	700 U	140 U	150 U
1,1-Dichloroethene	310. U	310 U	280 U	610 U	290 J	260 U	1400 U	280 U	300 U
1,2-Dichloroethane	310. U	310 U	280 U	1200 J	280 U	260 U	3000 J	280 U	300 U
1,2-Dichloropropane	460. U	460 U	430 U	910 U	430 U	390 U	2100 U	410 U	450 U
2-Butanone	1100. U	1100 U	1000 U	2100 U	1000 U	920 U	8200	960 U	1000 U
2-Hexanone	460. U	460 U	430 U	910 U	430 U	390 U	2100 U	410 U	450 U
4-Methyl-2-pentanone	460. U	460 U	430 U	5000	2200	390 U	7700	410 U	450 U
Acetone	1100. U	1100 U	1000 U	2100 U	3200	920 U	120000	3000	2700 J
Benzene	150. U	160 U	140 U	8400	8100	250 J	9700	240 J	150 U
Bromodichloromethane	310. U	310 U	280 U	610 U	280 U	260 U	1400 U	280 U	300 U
Bromoform	150. U	160 U	140 U	300 U	140 U	130 U	700 U	140 U	150 U
Bromomethane/ Methyl bromide	460. U	460 U	430 U	910 U	430 U	390 U	2100 U	410 U	450 U
Carbon disulfide	460. U	460 U	430 U	910 U	430 U	390 U	5800	410 U	450 U
Carbon tetrachloride	150. U	160 U	140 U	4800	140 U	130 U	12000	200 J	150 U
Chlorobenzene	150. U	160 U	140 U	880 J	1100	130 U	700 U	140 U	150 U
Chloroethane	460. U	460 U	430 U	910 U	430 U	390 U	2100 U	410 U	450 U
Chloroform	150. U	160 U	140 U	2100	840	130 U	1300 J	140 U	150 U
Chloromethane	310. U	310 U	280 U	610 U	280 U	260 U	1400 U	280 U	300 U
cis-1,2-Dichloroethene	5300	310 U	280 U	1500 J	43000 D	3400	1400 U	280 J	300 U
cis-1,3-Dichloropropene	150. U	160 U	140 U	300 U	140 U	130 U	700 U	140 U	150 U
Dibromochloromethane	150. U	160 U	140 U	300 U	140 U	130 U	700 U	140 U	150 U
Ethylbenzene	150. U	160 U	140 U	25000	35000	290 J	26000	710	150 U
Methylene chloride	310. U	310 U	280 U	4600	1200	260 U	3700	280 U	300 U
Styrene	150. U	160 U	140 U	300 U	140 U	130 U	700 U	140 U	150 U
Tetrachloroethene	150. U	160 U	140 U	28000	5400	130 U	31000	640 J	150 U
Toluene	290 J	160 U	140 U	76000	72000 D	740	85000	2100	330 J
trans-1,2-Dichloroethene	310. U	310 U	280 U	610 U	330 J	260 U	1400 U	280 U	300 U
trans-1,3-Dichloropropene	150. U	160 U	140 U	300 U	140 U	130 U	700 U	140 U	150 U
Trichloroethene	230 J	200 J	1200	160000 D	32000	920	100000	2700	430 J
Vinyl chloride	310. U	310 U	280 U	610 U	280 U	260 U	1400 U	280 U	300 U
Xylenes (Total)	280 J	160 U	140 U	130000	180000 D	1400	120000	3600	570 J
Total TICs									

302783

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-32S	P-36	P-36	P-36	P-36	P-36	P-37	P-37	P-37
Sample Date	9/3/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99
Sample ID	19.5-20	0-0.17	0.17-1	4-5	13-14	33-34	13-14	33-34	28-29
Chemical Name									
1,2,4-Trichlorobenzene	39 U	42 U	38 U	1900 J	290 J	38 U	2600 J	180 J	250 J
1,2-Dichlorobenzene	39 U	42 U	38 U	7300	740	61 J	15000	880	1200
1,3-Dichlorobenzene	39 U	42 U	38 U	380 U	43 U	38 U	460 J	37 U	39 U
1,4-Dichlorobenzene	39 U	42 U	38 U	420 J	43 U	38 U	1200 J	67 J	95 J
2,2'-Oxybis(1-chloropropane)	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
2,4,5-Trichlorophenol	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
2,4,6-Trichlorophenol	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
2,4-Dichlorophenol	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
2,4-Dimethylphenol	79 U	83 U	76 U	2800 J	270 J	77 U	770 U	93 J	220 J
2,4-Dinitrophenol	790 U	830 U	760 U	7600 U	850 U	770 U	7700 U	750 U	780 U
2,4-Dinitrotoluene	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
2,6-Dinitrotoluene	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
2-Chloronapthalene	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
2-Chlorophenol	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
2-Methylnapthalene	39 U	42 U	38 U	27000	5100	400	58000	5100	6800 D
2-Methylphenol	39 U	42 U	38 U	780 J	140 J	38 U	380 U	37 U	39 U
2-Nitroaniline	39 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
2-Nitrophenol	39 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
3,3'-Dichlorobenzidine	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
3-Nitroaniline	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
4,6-Dinitro-2-methylphenol	200 U	210 U	190 U	1900 U	210 U	190 U	1900 U	190 U	200 U
4-Bromophenyl phenyl ether	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
4-Chloro-3-methylphenol	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
4-Chloroaniline	670	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
4-Chlorophenyl phenyl ether	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
4-Methylphenol	79 U	83 U	76 U	2200 J	300 J	77 U	2500 J	130 J	190 J
4-Nitroaniline	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
4-Nitrophenol	200 U	210 U	190 U	1900 U	210 U	190 U	1900 U	190 U	200 U
Acenaphthene	39 U	42 U	38 U	1200 J	170 J	38 U	810 J	68 J	91 J
Acenaphthylene	39 U	42 U	38 U	400 J	43 U	38 U	380 U	46 J	52 J
Anthracene	39 U	42 U	38 U	810 J	43 U	38 U	380 U	72 J	91 J
Benzo(a)anthracene	39 U	89 J	38 U	470 J	58 J	38 U	1200 J	130 J	190 J
Benzo(a)pyrene	39 U	77 J	38 U	380 U	43 U	38 U	380 U	85 J	110 J
Benzo(b)fluoranthene	39 U	110 J	38 U	380 U	43 U	38 U	380 U	170 J	210 J
Benzo(g,h,i)perylene	39 U	46 J	38 U	380 U	43 U	38 U	2600 J	250 J	280 J
Benzo(k)fluoranthene	39 U	49 J	38 U	380 U	43 U	38 U	380 U	37 U	39 U

302784

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-32S	P-36	P-36	P-36	P-36	P-36	P-37	P-37	P-37
Sample Date	9/3/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99
Sample ID	19.5-20	0-0.17	0.17-1	4-5	13-14	33-34	13-14	33-34	28-29
Chemical Name									
bis(2-Chloroethoxy)methane	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
bis(2-Chloroethyl)ether	39 U	42 U	38 U	380 U	43 U	38 U	2200 J	110 J	160 J
bis(2-Ethylhexyl)phthalate	79 U	130 J	76 U	4100	400 J	210 J	1300 J	450	320 J
Butyl benzyl phthalate	79 U	83 U	76 U	800 J	130 J	77 U	770 U	190 J	250 J
Carbazole	39 U	42 U	38 U	760 U	85 U	77 U	770 U	75 U	78 U
Chrysene	39 U	79 J	38 U	620 J	100 J	38 U	2100 J	210 J	310 J
Dibenz(a,h)anthracene	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
Dibenzofuran	39 U	42 U	38 U	870 J	150 J	38 U	1500 J	150 J	210 J
Diethyl phthalate	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
Dimethyl phthalate	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
Di-n-butyl phthalate	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
Di-n-octyl phthalate	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
Fluoranthene	39 U	110 J	38 U	930 J	170 J	41 J	3100 J	370 J	490
Fluorene	39 U	42 U	38 U	2100 J	320 J	42 J	3000 J	270 J	380 J
Hexachlorobenzene	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
Hexachlorobutadiene	79 U	83 U	76 U	760 U	85 U	77 U	770 U	75 U	78 U
Hexachlorocyclopentadiene	200 U	210 U	190 U	1900 U	210 U	190 U	1900 U	190 U	200 U
Hexachloroethane	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
Indeno(1,2,3-cd)pyrene	39 U	50 J	38 U	380 U	43 U	38 U	950 J	98 J	120 J
Isophorone	65 J	42 U	38 U	24000	3400	490	380 U	37 U	39 U
Naphthalene	39 U	42 U	38 U	19000	3000	290 J	58000	4700	6700 D
Nitrobenzene	39 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
n-Nitrosodiphenylamine	39 U	42 U	38 U	3100 J	43 U	38 U	380 U	290 J	370 J
n-Nitrosodipropylamine	79 U	42 U	38 U	380 U	43 U	38 U	380 U	37 U	39 U
Pentachlorophenol	200 U	210 U	190 U	1900 U	210 U	190 U	1900 U	190 U	200 U
Phenanthrene	39 U	51 J	38 U	7200	1200	150 J	17000	1400	2000
Phenol	79 U	83 U	76 U	2200 J	530	77 J	18000	790	830
Pyrene	39 U	88 J	38 U	3100 J	380 J	74 J	3100 J	350 J	470
Total TICs									
Aluminum	3280	10300	12200	5510	5780	968	2400	665	948
Antimony	3.2 U	3.4 U	3.0 U	3.1 U	3.4 U	3.1 U	3.1 U	3.0 U	3.1 U
Arsenic	3.7	7.7	20.0	3.7	2.3	1.2	2.8	0.99 B	0.89 B
Barium	22.9	48.4	30.9	265	88.9	28.4	5310	424	649
Beryllium	0.22 B	0.53 B	1.3	0.19 B	0.19 U	0.17 U	0.17 U	0.17 U	0.17 U
Cadmium	0.19 U	0.20 U	0.18 U	0.18 U	0.20 U	0.18 U	0.94 B	0.18 U	0.19 U

302785

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-32S	P-36	P-36	P-36	P-36	P-36	P-37	P-37	P-37
Sample Date	9/3/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99
Sample ID	19.5-20	0-0.17	0.17-1	4-5	13-14	33-34	13-14	33-34	28-29
Chemical Name									
Calcium	66.2 N	1800	89.8	542	430	158	698	259	318
Chromium	26.1	31.5	140	29.3	17.2	6.0	23.7	4.2 B	6.6
Cobalt	1.2 U	6.9	2.8 B	1.7 B	1.3 U	1.1 U	2.9 B	1.1 U	1.2 U
Copper	13.9	11.6	4.3 B	7.5	5.7	1.8 B	77.9	8.2	14.0
Iron	6250	20800	29100	9000	4540	1560	4040	1260	1920
Lead	7.4	30.4	5.9	537	156	54.2	14500	861	1300
Magnesium	78.6	3280 N	1850 N	809 N	340 N	106 N	277 N	141 N	183 N
Manganese	7.9	530	26.1	42.7	22.2	9.5	39.0	16.0	27.0
Mercury	0.0057 UN	0.091 B	0.0055 U	0.023 B	0.012 B	0.0055 U	0.13	0.011 B	0.023 B
Nickel	1.1 U	14.7	7.9	3.9 B	1.6 B	1.1 U	5.7 B	1.1 U	1.7 B
Potassium	683 N	1780	4790	701	832	165	495	122	182
Selenium	0.48 U	0.51 UN	1.3 N	0.47 UN	0.52 UN	0.47 UN	0.47 UN	0.46 UN	0.48 UN
Silver	0.91 U	0.98 U	0.88 U	0.89 U	1.0 U	0.90 U	0.89 U	0.87 U	0.91 U
Sodium	109 B	182	63.1 B	166	235	145	214	109 B	114 B
Thallium	0.79 U	1.3 B	1.4 B	0.78 U	0.87 U	0.78 U	0.78 U	0.76 U	0.79 U
Vanadium	34.9	28.3	109	21.3	17.5	8.5	6.2	1.9 B	3.2
Zinc	10.7 B	68.4	39.8	49.8	17.4	7.9 B	568	46.3	77.2
Aroclor-1016	3.9 U	4.1 U	3.8 U	190 U	21 U	7.6 U	38 U	19 U	19 U
Aroclor-1221	9.2 U	9.8 U	8.9 U	450 U	50 U	18 U	89 U	44 U	46 U
Aroclor-1232	11 U	12 U	11 U	530 U	60 U	21 U	110 U	52 U	55 U
Aroclor-1242	8.3 U	8.8 U	8.0 U	400 U	45 U	16 U	1400	260	480
Aroclor-1248	9.3 U	9.9 U	9.0 U	2930	220	67	90 U	45 U	47 U
Aroclor-1254	3.9 U	4.1 U	3.8 U	190 U	21 U	7.6 U	38 U	19 U	19 U
Aroclor-1260	3.9 U	62	4.8 JP	8130	760	160	1900	340	540
PHC as Diesel Fuel	NA	19	11	12000	4300	1200	10000	250	3200
PHC as Gasoline	NA	0.25 U	0.23 U	1800	43	1.8	990	12	19
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA

302786

Table 4-1. Analytical Results for Soil Samples Collected from AOC Soil-1, Hot Spot 1. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-32S	P-36	P-36	P-36	P-36	P-36	P-37	P-37	P-37
Sample Date	9/3/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99
Sample ID	19.5-20	0-0.17	0.17-1	4-5	13-14	33-34	13-14	33-34	28-29
Chemical Name									
pH (S.U.)	NA	5.60	3.31	4.53	5.24	5.75	1.79	2.43	2.13
Total Organic Carbon (mg/kg)	NA	4040	359	2900	2300	540	3800	860	1180
Cation Exchange Capacity (mequiv	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	345	542	271	240	147	450	425	459

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302787

Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-12B	L-12B	L-12B	L-13A	L-13A	L-13A	L-13A	L-13B	P-44
Sample Date	8/30/99	8/30/99	8/30/99	7/30/99	7/30/99	8/2/99	8/2/99	8/3/99	6/9/99
Sample Depth	24-25	45-46	10-11	15-16	18-19	48-50	58-60	28-29	5-5.5
Chemical Name									
VOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,1,1-Trichloroethane	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
1,1,2,2-Tetrachloroethane	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
1,1,2-Trichloroethane	840 U	270 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
1,1-Dichloroethane	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
1,1-Dichloroethene	840 U	270 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
1,2-Dichloroethane	840 U	270 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
1,2-Dichloropropane	1200 U	410 U	440 U	390 U	1300 U	440 U	410 U	460 U	3 ND
2-Butanone	2900 U	960 U	1000 U	910 U	3000 U	1000 U	950 U	1100 U	14
2-Hexanone	1200 U	410 U	440 U	390 U	1300 U	440 U	410 U	460 U	3 ND
4-Methyl-2-pentanone	1200 U	410 U	440 U	390 U	1300 U	440 U	410 U	460 U	3 ND
Acetone	2900 U	960 U	1000 U	910 U	3000 U	1000 U	950 U	1100 U	89
Benzene	840 J	140 U	240 J	130 U	3100	140 U	140 U	150 U	1 ND
Bromodichloromethane	830 U	280 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
Bromoform	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Bromomethane/ Methyl bromide	1200 U	410 U	440 U	390 U	1300 U	440 U	410 U	460 U	3 ND
Carbon disulfide	1200 U	410 U	440 U	390 U	1300 U	440 U	410 U	460 U	3 ND
Carbon tetrachloride	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Chlorobenzene	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Chloroethane	1200 U	410 U	440 U	390 U	1300 U	440 U	410 U	460 U	3 ND
Chloroform	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Chloromethane	840 U	270 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
cis-1,2-Dichloroethene	1500 J	270 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
cis-1,3-Dichloropropene	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Dibromochloromethane	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Ethylbenzene	420 U	140 U	820	130 U	430 U	140 U	140 U	150 U	1 ND
Methylene chloride	840 U	270 U	290 U	260 U	860 U	290 U	270 U	310 U	4 J
Styrene	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Tetrachloroethene	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Toluene	420 U	140 U	450 J	130 U	820 J	140 U	140 U	150 U	1 ND
trans-1,2-Dichloroethene	840 U	270 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
trans-1,3-Dichloropropene	420 U	140 U	150 U	130 U	430 U	140 U	140 U	150 U	1 ND
Trichloroethene	420 U	140 U	150 U	160 J	430 U	140 U	140 U	150 U	1 ND
Vinyl chloride	840 U	270 U	290 U	260 U	860 U	290 U	270 U	310 U	2 ND
Xylenes (Total)	420 U	140 U	2600	130 U	430 U	140 U	140 U	150 U	34

302788

Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-12B	L-12B	L-12B	L-13A	L-13A	L-13A	L-13A	L-13B	P-44
Sample Date	8/30/99	8/30/99	8/30/99	7/30/99	7/30/99	8/2/99	8/2/99	8/3/99	6/9/99
Sample Depth	24-25	45-46	10-11	15-16	18-19	48-50	58-60	28-29	5-5.5
Chemical Name									
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,2,4-Trichlorobenzene	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
1,2-Dichlorobenzene	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
1,3-Dichlorobenzene	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
1,4-Dichlorobenzene	100 U	42 U	39 U	67 J	120 U	36 U	38 U	41 U	37 U
2,2'-Oxybis(1-chloropropane)	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
2,4,5-Trichlorophenol	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
2,4,6-Trichlorophenol	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
2,4-Dichlorophenol	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
2,4-Dimethylphenol	210 U	84 U	88 J	76 U	250 J	74 U	77 U	84 U	73 U
2,4-Dinitrophenol	2100 U	840 U	780 U	260 U	820 U	250 U	260 U	290 U	260 U
2,4-Dinitrotoluene	100 U	42 U	39 U	76 U	240 U	74 U	77 U	84 U	73 U
2,6-Dinitrotoluene	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
2-Chloronapthalene	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
2-Chlorophenol	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
2-Methylnapthalene	230 J	42 U	1500	550	190 J	36 U	38 U	41 U	350 J
2-Methylphenol	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
2-Nitroaniline	210 U	84 U	78 U	38 U	120 U	36 U	38 U	41 U	37 U
2-Nitrophenol	210 U	42 U	39 U	76 U	240 U	74 U	77 U	84 U	73 U
3,3'-Dichlorobenzidine	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
3-Nitroaniline	210 U	84 U	78 U	76 U	530 J	74 U	77 U	84 U	73 U
4,6-Dinitro-2-methylphenol	520 U	210 U	200 U	190 U	600 U	190 U	190 U	210 U	180 U
4-Bromophenyl phenyl ether	100 U	42 U	39 U	76 U	240 U	74 U	77 U	84 U	73 U
4-Chloro-3-methylphenol	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
4-Chloroaniline	210 U	42 U	78 U	38 U	120 U	36 U	38 U	41 U	37 U
4-Chlorophenyl phenyl ether	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
4-Methylphenol	210 U	84 U	290 J	76 U	240 U	74 U	77 U	84 U	73 U
4-Nitroaniline	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
4-Nitrophenol	520 U	210 U	200 U	190 U	600 U	190 U	190 U	210 U	180 U
Acenaphthene	100 U	42 U	520	48 J	120 U	36 U	38 U	41 U	110 J
Acenaphthylene	100 U	42 U	150 J	38 U	120 U	36 U	38 U	41 U	37 U
Anthracene	100 U	42 U	790	39 J	120 U	36 U	38 U	41 U	37 U
Benzo(a)anthracene	100 U	42 U	1500	48 J	120 U	51 J	38 U	41 U	100 J
Benzo(a)pyrene	100 U	42 U	1100	38 J	120 U	41 J	38 U	41 U	54 J
Benzo(b)fluoranthene	100 U	42 U	1600	69 J	120 U	36 U	38 U	41 U	50 J
Benzo(g,h,i)perylene	100 U	42 U	640	39 J	120 U	36 U	38 U	41 U	58 J
Benzo(k)fluoranthene	100 U	42 U	550	38 U	120 U	38 J	38 U	41 U	37 U

302789

Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-12B	L-12B	L-12B	L-13A	L-13A	L-13A	L-13A	L-13B	P-44
Sample Date	8/30/99	8/30/99	8/30/99	7/30/99	7/30/99	8/2/99	8/2/99	8/3/99	6/9/99
Sample Depth	24-25	45-46	10-11	15-16	18-19	48-50	58-60	28-29	5-5.5
Chemical Name									
bis(2-Chloroethoxy)methane	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
bis(2-Chloroethyl)ether	2300	42 U	39 U	38 U	240 J	36 U	38 U	41 U	37 U
bis(2-Ethylhexyl)phthalate	210 U	84 U	350 J	280 J	240 U	120 J	110 J	84 U	73 U
Butyl benzyl phthalate	250 J	84 U	950	320 J	1100 J	74 U	77 U	84 U	73 U
Carbazole	210 U	42 U	150 J	76 U	240 U	74 U	77 U	84 U	73 U
Chrysene	100 U	42 U	1800	68 J	120 U	50 J	38 U	41 U	280 J
Di-n-butyl phthalate	100 U	42 U	230 J	38 U	120 U	36 U	38 U	41 U	37 U
Di-n-octyl phthalate	100 U	42 U	270 J	66 J	120 U	36 U	38 U	41 U	58 J
Dibenz(a,h)anthracene	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
Dibenzofuran	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
Diethyl phthalate	210 U	84 U	83 J	76 U	240 U	74 U	77 U	84 U	73 U
Dimethyl phthalate	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
Fluoranthene	120 J	42 U	2500	150 J	120 U	110 J	38 U	41 U	87 J
Fluorene	100 U	42 U	930	160 J	120 U	36 U	38 U	41 U	170 J
Hexachlorobenzene	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
Hexachlorobutadiene	210 U	84 U	78 U	76 U	240 U	74 U	77 U	84 U	73 U
Hexachlorocyclopentadiene	520 U	210 U	200 U	190 U	600 U	190 U	190 U	210 U	180 U
Hexachloroethane	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
Indeno(1,2,3-cd)pyrene	100 U	42 U	680	38 J	120 U	36 U	38 U	41 U	37 U
Isophorone	100 U	42 U	65 J	38 U	120 U	36 U	38 U	41 U	37 U
n-Nitrosodiphenylamine	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
n-Nitrosodipropylamine	100 U	42 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
Nitrobenzene	100 U	84 U	39 U	38 U	120 U	36 U	38 U	41 U	37 U
Pentachlorophenol	520 U	210 U	200 U	190 U	600 U	190 U	190 U	210 U	180 U
Phenanthrene	290 J	42 U	3800	370 J	120 U	110 J	38 U	41 U	430
Phenol	210 U	84 U	190 J	76 U	240 U	74 U	77 U	84 U	73 U
Pyrene	190 J	42 U	2900	390	830 J	90 J	38 U	41 U	340 J
METALS (mg/kg)									
Aluminum	6550 *	1300	6290	849 *	4470 *	515 *	420 *	8540 *	4180
Antimony	8.4 U	3.4 U	3.2 U	3.1 U	9.6 U	2.9 U	3.1 U	3.4 U	3.00 U
Arsenic	3.8	0.49 U	3.8	0.74 B	5.1	0.43 U	0.45 U	3.8	3.0
Barium	97.8 *	5.2 B	86.7	4.4 B	98.5	3.6 B	3.3 B	46.0	12.7
Beryllium	0.93 B	0.19 U	0.30 B	0.17 U	0.63 B	0.16 U	0.17 U	1.5	0.23 B
Cadmium	0.50 U	0.20 U	0.19 U	0.18 U	0.57 U	0.17 U	0.18 U	0.20 U	0.18 U
Calcium	2290 N*	123 N	8290 N	716	3820	316	293	155	135
Chromium	23.8 N*	7.4	41.9	7.9	13.0 B	4.1 B	3.5 B	25.8	20.5

302790

Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-12B	L-12B	L-12B	L-13A	L-13A	L-13A	L-13A	L-13B	P-44
Sample Date	8/30/99	8/30/99	8/30/99	7/30/99	7/30/99	8/2/99	8/2/99	8/3/99	6/9/99
Sample Depth	24-25	45-46	10-11	15-16	18-19	48-50	58-60	28-29	5-5.5
Chemical Name									
Cobalt	5.7 B	1.3 U	3.3 B	1.1 U	5.0 B	1.1 U	1.1 U	15.3	2.1 B
Copper	7.6 B	1.2 B	22.9	0.92 B	5.7 B	0.92 B	0.95 B	24.2	4.1 B
Iron	8150 *	688	10300	1950	7200	749	750	1330	7880
Lead	18.3 *	2.4	218	3.5	11.3	2.3	3.1	13.6	5.0
Magnesium	1950 N*	54.8	1730	186 N	2970 N	104 N	109 N	306 N	744
Manganese	195 N*	7.4	99.0	8.7	119	7.8	9.3	7.9	81.6
Nickel	0.034 B	0.0060 UN	0.10 BN	0.0055 UN	0.073 BN	0.0053 UN	0.0063 CV	0.023 BN	0.016 B
Potassium	12.9 B	1.2 U	6.9	2.3 B	10 B	1.1 U	1.1 U	25.4	4.7 B
Selenium	837 N*	109 N	901 N	125 N*	642 N*	77.9 N*	53.8 BN*	1590 N*	725 N*
Silver	1.3 U	0.51 U	0.48 U	0.47 U	1.5 U	0.45 U	0.47 U	0.51 U	0.45 U
Sodium	2.4 U	0.98 U	0.92 U	0.89 U	2.8 U	0.85 U	0.89 U	0.97 U	0.86 U
Thallium	449	54.3 B	226	149	608	121	127	113 B	17.60 U
Vanadium	2.6 B	0.85 U	0.80 U	0.78 U	2.8 B	0.74 U	0.91 B	0.84 U	0.75 U
Zinc	20.8 *	10.9	23.3	3.9 *	15.0 *	3.1 *	3.1 *	44.8 *	11.0
Mercury	54.2 *	4.0 B	70.4	52.1	51.7	3.2 B	3.8 B	85.6	17.3
POLYCHLORINATED BIPHENYLS (ug/kg)									
Aroclor-1016	10. U	4.1 U	39. U	38. U	12. U	3.6 U	3.8 U	4.1 U	360.00 U
Aroclor-1221	24. U	9.8 U	92. U	89. U	28. U	8.6 U	8.9 U	9.8 U	360.00 U
Aroclor-1232	29. U	12. U	110. U	110. U	33. U	10. U	11. U	12. U	360.00 U
Aroclor-1242	22. U	8.8 U	82. U	290	25. U	7.7 U	8.0 U	8.8 U	360.00 U
Aroclor-1248	25. U	9.9 U	93. U	90. U	28. U	8.7 U	9.0 U	9.9 U	360.00 U
Aroclor-1254	91	10 J	1800	38. U	12. U	3.6 U	3.8 U	4.1 U	4900
Aroclor-1260	10. U	6.9 J	1000	900	60 J	24	24	6.8 J	360.00 U
PETROLEUM HYDROCARBONS (mg/kg)									
PHC as Diesel Fuel	360	53 J	8100	1800	1800	28	14	76 J	1800
PHC as Gasoline	12 U	0.25 U	120	43	14 U	0.22 U	0.23 U	0.25 U	NA
#6 Fuel Oil	700 U	20 U	100 U	100 U	400 U	30 U	30 U	20 U	NA
10W-40 Motor Oil	800 J	20 U	11000	3100	400 U	57	30 J	20 U	NA
Gasoline	200 U	4 U	400 U	30 U	100 U	3 U	3 U	4 U	NA
Kerosene	200 U	4 U	400 U	30 U	100 U	3 U	3 U	4 U	NA
Mineral Spirits	200 U	4 U	400 U	30 U	100 U	3 U	3 U	4 U	NA
PHC as Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	120

302791

Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-12B	L-12B	L-12B	L-13A	L-13A	L-13A	L-13A	L-13B	P-44
Sample Date	8/30/99	8/30/99	8/30/99	7/30/99	7/30/99	8/2/99	8/2/99	8/3/99	6/9/99
Sample Depth	24-25	45-46	10-11	15-16	18-19	48-50	58-60	28-29	5-5.5
Chemical Name									
GENERAL CHEMISTRY									
ph (SU)	5.23	6.31	1.08	9.07	6.46	8.88	9.14	4.62	6.28
Total Organic Carbon (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	1100
Total Organic Carbon (Quad) (mg/kg	37300	380	3470	700	33800	237	217	1400	NA
Cation Exchange Capacity (mequiv/1	474	167	262	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	304	198	11	39	236	169	172	274	234

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302792

Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-44	P-44	N-10	N-10	N-10	N-11	N-11	N-11
Sample Date	6/9/99	6/9/99	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00
Sample Depth	17-17.5	24-24.5	3.5-4	9.5-10	15-15.5	11.5-12	15.5-16	9.5-10
Chemical Name								
VOLATILE ORGANIC COMPOU								
1,1,1-Trichloroethane	25 ND	1 ND	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	25 ND	1 ND	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	51 ND	2 ND	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	25 ND	1 ND	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	51 ND	2 ND	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	51 ND	2 ND	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	76 ND	4 ND	NA	NA	NA	NA	NA	NA
2-Butanone	180 ND	10 J	NA	NA	NA	NA	NA	NA
2-Hexanone	76 ND	4 ND	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	76 ND	4 ND	NA	NA	NA	NA	NA	NA
Acetone	180 ND	76	NA	NA	NA	NA	NA	NA
Benzene	130 J	6	NA	NA	NA	NA	NA	NA
Bromodichloromethane	51 ND	2 ND	NA	NA	NA	NA	NA	NA
Bromoform	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	76 ND	4 ND	NA	NA	NA	NA	NA	NA
Carbon disulfide	76 ND	4 ND	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Chlorobenzene	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Chloroethane	76 ND	4 ND	NA	NA	NA	NA	NA	NA
Chloroform	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Chloromethane	51 ND	2 ND	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	110 J	15	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Dibromochloromethane	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Ethylbenzene	310	7	NA	NA	NA	NA	NA	NA
Methylene chloride	150	3 J	NA	NA	NA	NA	NA	NA
Styrene	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Tetrachloroethene	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Toluene	750	12	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	51 ND	2 ND	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Trichloroethene	25 ND	1 ND	NA	NA	NA	NA	NA	NA
Vinyl chloride	51 ND	2 ND	NA	NA	NA	NA	NA	NA
Xylenes (Total)	3000	46	NA	NA	NA	NA	NA	NA

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Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-44	P-44	N-10	N-10	N-10	N-11	N-11	N-11
Sample Date	6/9/99	6/9/99	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00
Sample Depth	17-17.5	24-24.5	3.5-4	9.5-10	15-15.5	11.5-12	15.5-16	9.5-10
Chemical Name								
SEMIVOLATILE ORGANIC COM								
1,2,4-Trichlorobenzene	170 U	40 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	170 U	40 U	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	170 U	40 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	170 U	40 U	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	170 U	40 U	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	330 U	80 U	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	330 U	80 U	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	330 U	80 U	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	330 U	80 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	1200 U	280 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	330 U	80 U	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	170 U	40 U	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	170 U	40 U	NA	NA	NA	NA	NA	NA
2-Chlorophenol	170 U	40 U	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	2500	40 U	NA	NA	NA	NA	NA	NA
2-Methylphenol	170 U	40 U	NA	NA	NA	NA	NA	NA
2-Nitroaniline	170 U	40 U	NA	NA	NA	NA	NA	NA
2-Nitrophenol	330 U	80 U	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	330 U	80 U	NA	NA	NA	NA	NA	NA
3-Nitroaniline	330 U	80 U	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	830 U	200 U	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	330 U	80 U	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	330 U	80 U	NA	NA	NA	NA	NA	NA
4-Chloroaniline	170 U	40 U	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	170 U	40 U	NA	NA	NA	NA	NA	NA
4-Methylphenol	330 U	80 U	NA	NA	NA	NA	NA	NA
4-Nitroaniline	330 U	80 U	NA	NA	NA	NA	NA	NA
4-Nitrophenol	830 U	200 U	NA	NA	NA	NA	NA	NA
Acenaphthene	360 J	40 U	NA	NA	NA	NA	NA	NA
Acenaphthylene	170 U	40 U	NA	NA	NA	NA	NA	NA
Anthracene	680 J	40 U	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	250 J	40 U	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	180 J	40 U	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	170 U	40 U	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	170 U	40 U	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	170 U	40 U	NA	NA	NA	NA	NA	NA

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Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-44	P-44	N-10	N-10	N-10	N-11	N-11	N-11
Sample Date	6/9/99	6/9/99	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00
Sample Depth	17-17.5	24-24.5	3.5-4	9.5-10	15-15.5	11.5-12	15.5-16	9.5-10
Chemical Name								
bis(2-Chloroethoxy)methane	330 U	80 U	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	170 U	40 U	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	3000	80 U	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	11000	98 J	NA	NA	NA	NA	NA	NA
Carbazole	330 U	80 U	NA	NA	NA	NA	NA	NA
Chrysene	820 J	40 U	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	170 U	40 U	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	300 J	40 U	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	330 U	320 J	NA	NA	NA	NA	NA	NA
Dibenzofuran	330 U	80 U	NA	NA	NA	NA	NA	NA
Diethyl phthalate	530 J	80 U	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	330 U	80 U	NA	NA	NA	NA	NA	NA
Fluoranthene	800 J	40 U	NA	NA	NA	NA	NA	NA
Fluorene	950 J	40 U	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	170 U	40 U	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	330 U	80 U	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	830 U	200 U	NA	NA	NA	NA	NA	NA
Hexachloroethane	170 U	40 U	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	170 U	40 U	NA	NA	NA	NA	NA	NA
Isophorone	170 U	40 U	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	170 U	40 U	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	170 U	40 U	NA	NA	NA	NA	NA	NA
Nitrobenzene	170 U	40 U	NA	NA	NA	NA	NA	NA
Pentachlorophenol	830 U	200 U	NA	NA	NA	NA	NA	NA
Phenanthrene	4200	40 U	NA	NA	NA	NA	NA	NA
Phenol	1800	80 U	NA	NA	NA	NA	NA	NA
Pyrene	1000 J	40 U	NA	NA	NA	NA	NA	NA
METALS (mg/kg)								
Aluminum	3370	3210	NA	NA	NA	NA	NA	NA
Antimony	13.40 U	3.20 U	NA	NA	NA	NA	NA	NA
Arsenic	4.4 B	1.4	NA	NA	NA	NA	NA	NA
Barium	221	14.1	NA	NA	NA	NA	NA	NA
Beryllium	0.74 U	0.19 B	NA	NA	NA	NA	NA	NA
Cadmium	0.79 U	0.19 U	NA	NA	NA	NA	NA	NA
Calcium	4180	137	NA	NA	NA	NA	NA	NA
Chromium	21.0	12.5	NA	NA	NA	NA	NA	NA

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Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-44	P-44	N-10	N-10	N-10	N-11	N-11	N-11
Sample Date	6/9/99	6/9/99	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00
Sample Depth	17-17.5	24-24.5	3.5-4	9.5-10	15-15.5	11.5-12	15.5-16	9.5-10
Chemical Name								
Cobalt	5.00 U	1.20 U	NA	NA	NA	NA	NA	NA
Copper	15.4 B	3.9 B	NA	NA	NA	NA	NA	NA
Iron	7670	3330	NA	NA	NA	NA	NA	NA
Lead	191	5.8	NA	NA	NA	NA	NA	NA
Magnesium	1540	202	NA	NA	NA	NA	NA	NA
Manganese	167	16.4	NA	NA	NA	NA	NA	NA
Nickel	0.077 B	0.0064 B	NA	NA	NA	NA	NA	NA
Potassium	9.2 B	1.7 B	NA	NA	NA	NA	NA	NA
Selenium	535 N*	531 N*	NA	NA	NA	NA	NA	NA
Silver	2.00 U	0.49 U	NA	NA	NA	NA	NA	NA
Sodium	3.90 U	0.94 U	NA	NA	NA	NA	NA	NA
Thallium	741	169	NA	NA	NA	NA	NA	NA
Vanadium	3.40 U	0.82 U	NA	NA	NA	NA	NA	NA
Zinc	14.2	20.3	NA	NA	NA	NA	NA	NA
Mercury	74.9	28.5	NA	NA	NA	NA	NA	NA
POLYCHLORINATED BIPHENY								
Aroclor-1016	170.00 U	4.00 U	NA	NA	NA	NA	NA	NA
Aroclor-1221	170.00 U	4.00 U	NA	NA	NA	NA	NA	NA
Aroclor-1232	170.00 U	4.00 U	NA	NA	NA	NA	NA	NA
Aroclor-1242	170.00 U	4.00 U	NA	NA	NA	NA	NA	NA
Aroclor-1248	2700	4.00 U	NA	NA	NA	NA	NA	NA
Aroclor-1254	4000	45	NA	NA	NA	NA	NA	NA
Aroclor-1260	1900	16 J	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS								
PHC as Diesel Fuel	940	18	7700	300	29000	1700	2700	1300
PHC as Gasoline	NA	NA	150	49	11 J	16	13 J	41 U
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA
PHC as Gasoline	18	0.24 ND	NA	NA	NA	NA	NA	NA

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Table 4-2. Analytical Results for Soil Samples Collected from AOC-Debris/Fill Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-44	P-44	N-10	N-10	N-10	N-11	N-11	N-11
Sample Date	6/9/99	6/9/99	10/10/00	10/10/00	10/10/00	10/11/00	10/11/00	10/11/00
Sample Depth	17-17.5	24-24.5	3.5-4	9.5-10	15-15.5	11.5-12	15.5-16	9.5-10
Chemical Name								
GENERAL CHEMISTRY								
ph (SU)	5.66	6.34	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	58000	880	NA	NA	NA	NA	NA	NA
Total Organic Carbon (Quad) (mg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/1	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	304	128	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not witl
* = Duplicate analysis not within cont
P = Concentration difference between
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but

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Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-14B	L-14B	L-14B	L-14B	MW-4D	MW-4D	MW-4D	MW-4D
Sample Date	9/1/99	9/1/99	9/1/99	9/1/99	6/8/99	6/11/99	6/11/99	6/15/99
Sample Depth	58-59	53-54	19-20	1-2	29-30	53-53.5	42-42.5	115-116
Chemical Name								
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,1,1-Trichloroethane	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
1,1,2,2-Tetrachloroethane	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
1,1,2-Trichloroethane	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
1,1-Dichloroethane	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
1,1-Dichloroethene	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
1,2-Dichloroethane	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
1,2-Dichloropropane	NA	390 U	380 U	370 U	3 U	430 U	440 U	390 U
2-Butanone	NA	910 U	900 U	860 U	8 U	1000 U	1000 U	910 U
2-Hexanone	NA	390 U	380 U	370 U	3 U	430 U	440 U	390 U
4-Methyl-2-pentanone	NA	390 U	380 U	370 U	3 U	430 U	440 U	390 U
Acetone	NA	910 U	900 U	860 U	8 U	1000 U	1000 U	910 U
Benzene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Bromodichloromethane	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
Bromoform	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Bromomethane/ Methyl bromide	NA	390 U	380 U	370 U	3 U	430 U	440 U	390 U
Carbon disulfide	NA	390 U	380 U	370 U	3 U	430 U	440 U	390 U
Carbon tetrachloride	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Chlorobenzene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Chloroethane	NA	390 U	380 U	370 U	3 U	430 U	440 U	390 U
Chloroform	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Chloromethane	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
cis-1,2-Dichloroethene	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
cis-1,3-Dichloropropene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Dibromochloromethane	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Ethylbenzene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Methylene chloride	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
Styrene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Tetrachloroethene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Toluene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
trans-1,2-Dichloroethene	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
trans-1,3-Dichloropropene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Trichloroethene	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U
Vinyl chloride	NA	260 U	260 U	240 U	2 U	280 U	300 U	260 U
Xylenes (Total)	NA	130 U	130 U	120 U	1 U	140 U	150 U	130 U

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Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-14B	L-14B	L-14B	L-14B	MW-4D	MW-4D	MW-4D	MW-4D
Sample Date	9/1/99	9/1/99	9/1/99	9/1/99	6/8/99	6/11/99	6/11/99	6/15/99
Sample Depth	58-59	53-54	19-20	1-2	29-30	53-53.5	42-42.5	115-116
Chemical Name								
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-Trichlorobenzene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
1,2-Dichlorobenzene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
1,3-Dichlorobenzene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
1,4-Dichlorobenzene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
2,2'-Oxybis(1-chloropropane)	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
2,4,5-Trichlorophenol	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
2,4,6-Trichlorophenol	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
2,4-Dichlorophenol	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
2,4-Dimethylphenol	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
2,4-Dinitrophenol	820 U	760 U	770 U	700 U	270 U	270 U	290 U	270 U
2,4-Dinitrotoluene	41 U	38 U	39 U	35 U	78 U	78 U	83 U	77 U
2,6-Dinitrotoluene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
2-Chloronapthalene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
2-Chlorophenol	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
2-Methylnapthalene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
2-Methylphenol	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
2-Nitroaniline	82 U	76 U	77 U	70 U	39 U	39 U	42 U	38 U
2-Nitrophenol	82 U	76 U	39 U	35 U	78 U	78 U	83 U	77 U
3,3'-Dichlorobenzidine	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
3-Nitroaniline	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
4,6-Dinitro-2-methylphenol	210 U	190 U	190 U	180 U	190 U	190 U	210 U	190 U
4-Bromophenyl phenyl ether	41 U	38 U	39 U	35 U	78 U	78 U	83 U	77 U
4-Chloro-3-methylphenol	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
4-Chloroaniline	82 U	76 U	77 U	35 U	39 U	39 U	42 U	38 U
4-Chlorophenyl phenyl ether	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
4-Methylphenol	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
4-Nitroaniline	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
4-Nitrophenol	210 U	190 U	190 U	180 U	190 U	190 U	210 U	190 U
Acenaphthene	41 U	38 U	39 J	35 U	39 U	39 U	42 U	38 U
Acenaphthylene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Anthracene	41 U	38 U	71 J	35 U	39 U	39 U	42 U	38 U
Benzo(a)anthracene	41 U	38 U	52 J	35 U	39 U	39 U	42 U	38 U
Benzo(a)pyrene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Benzo(b)fluoranthene	41 U	38 U	42 J	35 U	39 U	39 U	42 U	38 U
Benzo(g,h,i)perylene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U

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Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-14B	L-14B	L-14B	L-14B	MW-4D	MW-4D	MW-4D	MW-4D
Sample Date	9/1/99	9/1/99	9/1/99	9/1/99	6/8/99	6/11/99	6/11/99	6/15/99
Sample Depth	58-59	53-54	19-20	1-2	29-30	53-53.5	42-42.5	115-116
Chemical Name								
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
Benzo(k)fluoranthene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
bis(2-Chloroethoxy)methane	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
bis(2-Chloroethyl)ether	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
bis(2-Ethylhexyl)phthalate	82 U	76 U	77 U	70 U	78 U	78 U	280 J	77 U
Butyl benzyl phthalate	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
Carbazole	41 U	38 U	39 U	35 U	78 U	78 U	83 U	77 U
Chrysene	41 U	38 U	52 J	35 U	39 U	39 U	42 U	38 U
Di-n-butyl phthalate	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
Di-n-octyl phthalate	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
Dibenz(a,h)anthracene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Dibenzofuran	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Diethyl phthalate	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
Dimethyl phthalate	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
Fluoranthene	41 U	38 U	140 J	35 U	39 U	39 U	42 U	38 U
Fluorene	41 U	38 U	67 J	35 U	39 U	39 U	42 U	38 U
Hexachlorobenzene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Hexachlorobutadiene	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
Hexachlorocyclopentadiene	210 U	190 U	190 U	180 U	190 U	190 U	210 U	190 U
Hexachloroethane	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Indeno(1,2,3-cd)pyrene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Isophorone	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
n-Nitrosodiphenylamine	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
n-Nitrosodipropylamine	41 U	38 U	39 U	70 U	39 U	39 U	42 U	38 U
Nitrobenzene	41 U	38 U	39 U	35 U	39 U	39 U	42 U	38 U
Pentachlorphenol	210 U	190 U	190 U	180 U	190 U	190 U	210 U	190 U
Phenanthrene	41 U	38 U	250 J	35 U	39 U	39 U	42 U	38 U
Phenol	82 U	76 U	77 U	70 U	78 U	78 U	83 U	77 U
Pyrene	41 U	38 U	110 J	38 J	39 U	39 U	42 U	38 U
METALS (mg/kg)								
Aluminum	3,790	473	4,120	1,430	2,920	1640	609	2,040
Antimony	3.3 U	3.1 U	3.1 U	2.8 U	3.1 U	3.1 U	3.4 U	3.1 U
Arsenic	4.4	0.49 B	2.6	1.8	1.7	1.3	0.59 B	0.45 U
Barium	14.3	2.1 B	22.9	8.9 B	12.0	4.8 B	3.8 B	13.7
Beryllium	0.70	0.17 U	0.28 B	0.16 U	0.24 B	0.17 U	0.19 U	0.17 U
Cadmium	0.19 U	0.18 U	0.18 U	0.17 U	0.19 U	0.22 B	0.20 U	0.18 U

302800

Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-14B	L-14B	L-14B	L-14B	MW-4D	MW-4D	MW-4D	MW-4D
Sample Date	9/1/99	9/1/99	9/1/99	9/1/99	6/8/99	6/11/99	6/11/99	6/15/99
Sample Depth	58-59	53-54	19-20	1-2	29-30	53-53.5	42-42.5	115-116
Chemical Name								
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
Calcium	233	46.8	258	325	121 *	101 *	170 *	168 *
Chromium	*59.8*	*1.8 B*	*9.4*	*6.0*	*6.1*	*10.0*	*3.9 B*	*13.5*
Cobalt	2.1 B	1.1 U	1.1 U	1.0 U	1.2 U	1.2 U	1.2 U	1.2 U
Copper	11.4	0.36 B	8.1	4.7	2.5 B	1.7 B	0.96 B	1.5 B
Iron	34,100	879	6,490	5,380	3,980	4,160	554	1,040
Lead	1.9	0.86 B	6.3	14.1	2.9	1.1 B	1.3	1.3
Magnesium	99.0 N	17.6 BN	331 N	290 N	307 N	43.0 N	45.0 N	76.1 N
Manganese	19.8	5.6	24.6	21.9	21.2	5.4	4.2	7.9
Nickel	4.6 B	1.1 U	1.9 B	1.9 B	2.0 B	1.1 U	1.2 U	1.1 U
Potassium	226 N	35.3 UN	663 N	221 N	470 N	36.0 UN	78.2 N	121 N
Selenium	1.2	0.47 U	0.47 U	0.42 U	0.47 U	0.48 U	0.51 U	0.47 U
Silver	0.94 U	0.89 U	0.90 U	0.81 U	0.90 U	0.91 U	0.98 U	0.90 U
Sodium	49.6 B	26.5 B	58.7 B	16.6 U	18.5 U	34.1 B	20.0 U	25.3 B
Thallium	2.1 B	0.77 U	0.78 U	0.70 U	0.79 U	0.79 U	0.85 U	0.78 U
Vanadium	140	7.9	18.1	10.0	10	24.1	14.2	19.3
Zinc	13.8	1.0 U	7.4 B	10.4	7.1 B	2.7 B	3.3 B	3.0 B
Mercury	0.0059 UN*	0.0054 UN*	0.013 BN*	0.042 BN*	0.0056 U	0.0056 U	0.0060 U	0.0056 U
POLYCHLORINATED BIPHENYLS (ug/kg)								
Aroclor-1016	4.1 U	3.8 U	3.8 U	3.5 U	3.8 U	3.8 U	4.1 U	3.8 U
Aroclor-1221	9.6 U	8.9 U	9.0 U	8.2 U	3.8 U	3.8 U	4.1 U	3.8 U
Aroclor-1232	11 U	11 U	11 U	9.8 U	3.8 U	3.8 U	4.1 U	3.8 U
Aroclor-1242	8.6 U	8.0 U	8.1 U	7.4 U	3.8 U	3.8 U	4.1 U	3.8 U
Aroclor-1248	9.7 U	9.0 U	9.2 U	8.3 U	3.8 U	3.8 U	4.1 U	3.8 U
Aroclor-1254	4.1 U	3.8 U	3.8 U	3.5 U	3.8 U	3.8 U	4.1 U	3.8 U
Aroclor-1260	4.1 U	13 J	3.8 U	14 J	3.8 U	3.8 U	4.1 U	3.8 U
PETROLEUM HYDROCARBONS (mg/kg)								
PHC as Diesel Fuel	4.9 U	4.6 U	7.9 J	4.2 U	NA	4.6 ND	NA	4.6 ND
PHC as Gasoline	0.25 U	0.23 U	0.23 U	0.21 U	NA	0.23 ND	NA	0.23 ND
#6 Fuel Oil	10 U	10 U	30 U	10 U	NA	NA	NA	NA
10W-40 Motor Oil	*10 U*	*10 U*	*30 J*	*10 U*	NA	NA	NA	NA
Gasoline	4 U	3 U	3 U	3 U	NA	NA	NA	NA
Kerosene	4 U	3 U	3 U	3 U	NA	NA	NA	NA
Mineral Spirits	4 U	3 U	3 U	3 U	NA	NA	NA	NA

302801

Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-14B	L-14B	L-14B	L-14B	MW-4D	MW-4D	MW-4D	MW-4D
Sample Date	9/1/99	9/1/99	9/1/99	9/1/99	6/8/99	6/11/99	6/11/99	6/15/99
Sample Depth	58-59	53-54	19-20	1-2	29-30	53-53.5	42-42.5	115-116
Chemical Name								
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
GENERAL CHEMISTRY								
pH (S.U.)	5.19	5.61	5.75	7.77	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	700	40 J	640	530	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	13.8	13.2	31.6	2.7	NA	NA	NA	NA
ORP Observed (mv)	283	212	288	260	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302802

Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-4D	N-6	N-6	N-6	N-6	N-7	N-7
Sample Date	6/15/99	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00	10/10/00
Sample Depth	111-112	9-9.5	6.5-7	4.5-5	10.5-11	9.5-10	7.5-8
Chemical Name							
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
1,1,1-Trichloroethane	140 U	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	140 U	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	270 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	140 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	270 U	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	270 U	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	410 U	NA	NA	NA	NA	NA	NA
2-Butanone	960 U	NA	NA	NA	NA	NA	NA
2-Hexanone	410 U	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	410 U	NA	NA	NA	NA	NA	NA
Acetone	960 U	NA	NA	NA	NA	NA	NA
Benzene	140 U	NA	NA	NA	NA	NA	NA
Bromodichloromethane	270 U	NA	NA	NA	NA	NA	NA
Bromoform	140 U	NA	NA	NA	NA	NA	NA
Bromomethane/ Methyl bromide	410 U	NA	NA	NA	NA	NA	NA
Carbon disulfide	410 U	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	140 U	NA	NA	NA	NA	NA	NA
Chlorobenzene	140 U	NA	NA	NA	NA	NA	NA
Chloroethane	410 U	NA	NA	NA	NA	NA	NA
Chloroform	140 U	NA	NA	NA	NA	NA	NA
Chloromethane	270 U	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	270 U	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	140 U	NA	NA	NA	NA	NA	NA
Dibromochloromethane	140 U	NA	NA	NA	NA	NA	NA
Ethylbenzene	140 U	NA	NA	NA	NA	NA	NA
Methylene chloride	270 U	NA	NA	NA	NA	NA	NA
Styrene	140 U	NA	NA	NA	NA	NA	NA
Tetrachloroethene	140 U	NA	NA	NA	NA	NA	NA
Toluene	140 U	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	270 U	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	140 U	NA	NA	NA	NA	NA	NA
Trichloroethene	140 U	NA	NA	NA	NA	NA	NA
Vinyl chloride	270 U	NA	NA	NA	NA	NA	NA
Xylenes (Total)	140 U	NA	NA	NA	NA	NA	NA

302803

Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-4D	N-6	N-6	N-6	N-6	N-7	N-7
Sample Date	6/15/99	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00	10/10/00
Sample Depth	111-112	9-9.5	6.5-7	4.5-5	10.5-11	9.5-10	7.5-8
Chemical Name							
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
SEMIVOLATILE ORGANIC COMPOUNDS (u							
1,2,4-Trichlorobenzene	39 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	39 U	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	39 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	39 U	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	39 U	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	78 U	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	78 U	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	78 U	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	78 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	270 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	78 U	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	39 U	NA	NA	NA	NA	NA	NA
2-Chloronapthalene	39 U	NA	NA	NA	NA	NA	NA
2-Chlorophenol	39 U	NA	NA	NA	NA	NA	NA
2-Methylnapthalene	39 U	NA	NA	NA	NA	NA	NA
2-Methylphenol	39 U	NA	NA	NA	NA	NA	NA
2-Nitroaniline	39 U	NA	NA	NA	NA	NA	NA
2-Nitrophenol	78 U	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	78 U	NA	NA	NA	NA	NA	NA
3-Nitroaniline	78 U	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	190 U	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	78 U	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	78 U	NA	NA	NA	NA	NA	NA
4-Chloroaniline	39 U	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	39 U	NA	NA	NA	NA	NA	NA
4-Methylphenol	78 U	NA	NA	NA	NA	NA	NA
4-Nitroaniline	78 U	NA	NA	NA	NA	NA	NA
4-Nitrophenol	190 U	NA	NA	NA	NA	NA	NA
Acenaphthene	39 U	NA	NA	NA	NA	NA	NA
Acenaphthylene	39 U	NA	NA	NA	NA	NA	NA
Anthracene	39 U	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	39 U	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	39 U	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	39 U	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	39 U	NA	NA	NA	NA	NA	NA

302804

Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-4D	N-6	N-6	N-6	N-6	N-7	N-7
Sample Date	6/15/99	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00	10/10/00
Sample Depth	111-112	9-9.5	6.5-7	4.5-5	10.5-11	9.5-10	7.5-8
Chemical Name							
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
Benzo(k)fluoranthene	39 U	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	78 U	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	84 J	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	78 U	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	78 U	NA	NA	NA	NA	NA	NA
Carbazole	78 U	NA	NA	NA	NA	NA	NA
Chrysene	39 U	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	78 U	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	78 U	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	39 U	NA	NA	NA	NA	NA	NA
Dibenzofuran	39 U	NA	NA	NA	NA	NA	NA
Diethyl phthalate	78 U	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	78 U	NA	NA	NA	NA	NA	NA
Fluoranthene	39 U	NA	NA	NA	NA	NA	NA
Fluorene	39 U	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	39 U	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	78 U	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	190 U	NA	NA	NA	NA	NA	NA
Hexachloroethane	39 U	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	39 U	NA	NA	NA	NA	NA	NA
Isophorone	39 U	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	39 U	NA	NA	NA	NA	NA	NA
n-Nitrosodipropylamine	39 U	NA	NA	NA	NA	NA	NA
Nitrobenzene	39 U	NA	NA	NA	NA	NA	NA
Pentachlorphenol	190 U	NA	NA	NA	NA	NA	NA
Phenanthrene	39 U	NA	NA	NA	NA	NA	NA
Phenol	78 U	NA	NA	NA	NA	NA	NA
Pyrene	39 U	NA	NA	NA	NA	NA	NA
METALS (mg/kg)							
Aluminum	3,400	NA	NA	NA	NA	NA	NA
Antimony	3.1 U	NA	NA	NA	NA	NA	NA
Arsenic	0.71 B	NA	NA	NA	NA	NA	NA
Barium	12.6	NA	NA	NA	NA	NA	NA
Beryllium	0.17 U	NA	NA	NA	NA	NA	NA
Cadmium	0.19 U	NA	NA	NA	NA	NA	NA

302805

Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-4D	N-6	N-6	N-6	N-6	N-7	N-7
Sample Date	6/15/99	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00	10/10/00
Sample Depth	111-112	9-9.5	6.5-7	4.5-5	10.5-11	9.5-10	7.5-8
Chemical Name							
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
Calcium	66.7 *	NA	NA	NA	NA	NA	NA
Chromium	18.6	NA	NA	NA	NA	NA	NA
Cobalt	1.2 U	NA	NA	NA	NA	NA	NA
Copper	2.5 B	NA	NA	NA	NA	NA	NA
Iron	1,640	NA	NA	NA	NA	NA	NA
Lead	4.4	NA	NA	NA	NA	NA	NA
Magnesium	64.5 N	NA	NA	NA	NA	NA	NA
Manganese	9.6	NA	NA	NA	NA	NA	NA
Nickel	1.1 U	NA	NA	NA	NA	NA	NA
Potassium	278 N	NA	NA	NA	NA	NA	NA
Selenium	0.48 U	NA	NA	NA	NA	NA	NA
Silver	0.91 U	NA	NA	NA	NA	NA	NA
Sodium	48.8 B	NA	NA	NA	NA	NA	NA
Thallium	0.79 U	NA	NA	NA	NA	NA	NA
Vanadium	56.4	NA	NA	NA	NA	NA	NA
Zinc	5.4 B	NA	NA	NA	NA	NA	NA
Mercury	0.0056 U	NA	NA	NA	NA	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)							
Aroclor-1016	3.8 U	NA	NA	NA	NA	NA	NA
Aroclor-1221	3.8 U	NA	NA	NA	NA	NA	NA
Aroclor-1232	3.8 U	NA	NA	NA	NA	NA	NA
Aroclor-1242	3.8 U	NA	NA	NA	NA	NA	NA
Aroclor-1248	3.8 U	NA	NA	NA	NA	NA	NA
Aroclor-1254	3.8 U	NA	NA	NA	NA	NA	NA
Aroclor-1260	3.8 U	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (mg/kg)							
PHC as Diesel Fuel	4.7 ND	11,000	18,000	18,000	13,000	7,800	7,900
PHC as Gasoline	0.23 ND	83	110	72	77	29	10
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA

302806

Table 4-3. Analytical Results for Soil Samples Collected from AOC Soil-4, South Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-4D	N-6	N-6	N-6	N-6	N-7	N-7
Sample Date	6/15/99	9/25/00	9/25/00	9/25/00	9/25/00	10/10/00	10/10/00
Sample Depth	111-112	9-9.5	6.5-7	4.5-5	10.5-11	9.5-10	7.5-8
Chemical Name							
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
GENERAL CHEMISTRY							
pH (S.U.)	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/kg)	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control L

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302807

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 1 of 20

Location ID	L-1	L-1	L-1	L-1	L-4	L-4	L-4	L-4	L-4
Sample Date	8/18/1999	8/18/1999	8/18/1999	8/19/1999	9/9/1999	9/9/1999	9/9/1999	9/10/1999	9/14/1999
Sample ID	4-5	24-25	36-37	44-45	9.5-10	16.5-17	49.5-50	56-56.5	69-70
Chemical Name									
VOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,1,1-Trichloroethane	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
1,1,2,2-Tetrachloroethane	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
1,1,2-Trichloroethane	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
1,1-Dichloroethane	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
1,1-Dichloroethene	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
1,2-Dichloroethane	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
1,2-Dichloropropane	NA	980 U	400 U	440 U	NA	950 U	450 U	420 U	370 U
2-Butanone	NA	2300 U	940 U	1000 U	NA	2200 U	1000 U	990 U	870 U
2-Hexanone	NA	980 U	400 U	440 U	NA	950 U	450 U	420 U	370 U
4-Methyl-2-pentanone	NA	980 U	400 U	440 U	NA	950 U	450 U	420 U	370 U
Acetone	NA	2800 J	940 U	1000 U	NA	2200 U	1000 U	990 U	870 U
Benzene	NA	1000 J	130 U	150 U	NA	3100	150 U	140 U	120 U
Bromodichloromethane	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
Bromoform	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Bromomethane/ Methyl bromide	NA	980 U	400 U	440 U	NA	950 U	450 U	420 U	370 U
Carbon disulfide	NA	980 U	400 U	440 U	NA	950 U	450 U	420 U	370 U
Carbon tetrachloride	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Chlorobenzene	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Chloroethane	NA	980 U	400 U	440 U	NA	950 U	450 U	420 U	370 U
Chloroform	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Chloromethane	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
cis-1,2-Dichloroethene	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
cis-1,3-Dichloropropene	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Dibromochloromethane	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Ethylbenzene	NA	330 U	130 U	150 U	NA	450 J	150 U	140 U	120 U
Methylene chloride	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
Styrene	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Tetrachloroethene	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Toluene	NA	330 U	130 U	150 U	NA	1600	150 U	140 U	120 U
trans-1,2-Dichloroethene	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
trans-1,3-Dichloropropene	NA	330 U	130 U	150 U	NA	320 U	150 U	140 U	120 U
Trichloroethene	NA	330 U	130 U	150 U	NA	430 J	150 U	140 U	120 U
Vinyl chloride	NA	650 U	270 U	290 U	NA	630 U	300 U	280 U	250 U
Xylenes (Total)	NA	330 U	130 U	150 U	NA	2100	150 U	140 U	120 U

302808

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 2 of 20

Location ID	L-1	L-1	L-1	L-1	L-4	L-4	L-4	L-4	L-4
Sample Date	8/18/1999	8/18/1999	8/18/1999	8/19/1999	9/9/1999	9/9/1999	9/9/1999	9/10/1999	9/14/1999
Sample ID	4-5	24-25	36-37	44-45	9.5-10	16.5-17	49.5-50	56-56.5	69-70
Chemical Name									
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,2,4-Trichlorobenzene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
1,2-Dichlorobenzene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
1,3-Dichlorobenzene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
1,4-Dichlorobenzene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
2,2'-Oxybis(1-chloropropane)	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
2,4,5-Trichlorophenol	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
2,4,6-Trichlorophenol	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
2,4-Dichlorophenol	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
2,4-Dimethylphenol	NA	160 U	82 U	77 U	NA	1200 J	84 U	79 U	73 U
2,4-Dinitrophenol	NA	560 U	820 U	770 U	NA	3600 U	840 U	790 U	730 U
2,4-Dinitrotoluene	NA	160 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
2,6-Dinitrotoluene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
2-Chloronapthalene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
2-Chlorophenol	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
2-Methylnapthalene	NA	220 J	41 U	38 U	NA	670 J	42 U	63 J	36 U
2-Methylphenol	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
2-Nitroaniline	NA	80 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
2-Nitrophenol	NA	160 U	82 U	77 U	NA	180 U	42 U	40 U	36 U
3,3'-Dichlorobenzidine	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
3-Nitroaniline	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
4,6-Dinitro-2-methylphenol	NA	410 U	200 U	190 U	NA	900 U	210 U	200 U	180 U
4-Bromophenyl phenyl ether	NA	160 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
4-Chloro-3-methylphenol	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
4-Chloroaniline	NA	80 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
4-Chlorophenyl phenyl ether	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
4-Methylphenol	NA	160 U	82 U	77 U	NA	380 J	84 U	79 U	73 U
4-Nitroaniline	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
4-Nitrophenol	NA	410 U	200 U	190 U	NA	900 U	210 U	200 U	180 U
Acenaphthene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Acenaphthylene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Anthracene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Benzo(a)anthracene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Benzo(a)pyrene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Benzo(b)fluoranthene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Benzo(g,h,i)perylene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Benzo(k)fluoranthene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
bis(2-Chloroethoxy)methane	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U

302809

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 3 of 20

Location ID	L-1	L-1	L-1	L-1	L-4	L-4	L-4	L-4	L-4
Sample Date	8/18/1999	8/18/1999	8/18/1999	8/19/1999	9/9/1999	9/9/1999	9/9/1999	9/10/1999	9/14/1999
Sample ID	4-5	24-25	36-37	44-45	9.5-10	16.5-17	49.5-50	56-56.5	69-70
Chemical Name									
bis(2-Chloroethyl)ether	NA	130 J	41 U	38 U	NA	790 J	42 U	51 J	36 U
bis(2-Ethylhexyl)phthalate	NA	820	82 U	77 U	NA	360 U	84 U	84 J	73 U
Butyl benzyl phthalate	NA	480 J	82 U	280 J	NA	360 U	84 U	79 U	73 U
Carbazole	NA	160 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Chrysene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Dibenz(a,h)anthracene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Dibenzofuran	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Diethyl phthalate	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
Dimethyl phthalate	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
Di-n-butyl phthalate	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
Di-n-octyl phthalate	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
Fluoranthene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Fluorene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Hexachlorobenzene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Hexachlorobutadiene	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
Hexachlorocyclopentadiene	NA	410 U	200 U	190 U	NA	900 U	210 U	200 U	180 U
Hexachloroethane	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Indeno(1,2,3-cd)pyrene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Isophorone	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Naphthalene	NA	140 J	41 U	38 U	NA	530 J	42 U	40 U	36 U
Nitrobenzene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
n-Nitrosodiphenylamine	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
n-Nitrosodipropylamine	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
Pentachlorophenol	NA	410 U	200 U	190 U	NA	900 U	210 U	200 U	180 U
Phenanthrene	NA	100 J	41 U	38 U	NA	390 J	42 U	52 J	36 U
Phenol	NA	160 U	82 U	77 U	NA	360 U	84 U	79 U	73 U
Pyrene	NA	80 U	41 U	38 U	NA	180 U	42 U	40 U	36 U
METALS (mg/kg)									
Aluminum	NA	10100	3530 *	379 *	NA	14700	3050 *	3220 *	275 *
Antimony	NA	6.5 U	3.3 U	3.1 U	NA	7.3 U	3.4 U	3.2 U	2.9 U
Arsenic	NA	9.5	2.4	0.45 U	NA	8	2.5	8.3	1.5
Barium	NA	87.9	12.4 *	2.1 B*	NA	118	11.9 B	24	2 B
Beryllium	NA	0.57 B	0.25 B	0.17 U	NA	1 B	0.28 B	0.36 B	0.16 U
Cadmium	NA	0.39 U	0.2 U	0.18 U	NA	0.43 U	0.32 B	0.32 B	0.17 U
Calcium	NA	1710	118 N*	51.2 N*	NA	3110 N	332	237	54.1
Chromium	NA	22.7	9.8 N*	2.6 BN*	NA	36.5	23.6	28.3	3.7 B
Cobalt	NA	6.8 B	1.2 U	1.1 U	NA	9.6 B	1.3 U	2.2 B	1.1 U

302810

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 4 of 20

Location ID	L-1	L-1	L-1	L-1	L-4	L-4	L-4	L-4	L-4
Sample Date	8/18/1999	8/18/1999	8/18/1999	8/19/1999	9/9/1999	9/9/1999	9/9/1999	9/10/1999	9/14/1999
Sample ID	4-5	24-25	36-37	44-45	9.5-10	16.5-17	49.5-50	56-56.5	69-70
Chemical Name									
Copper	NA	7.8 B	2 B	0.4 B	NA	11.2	5.9	5.3	1.5 B
Iron	NA	12900	4310 *	390 *	NA	26600	9580	8560	2810
Lead	NA	25.6	2.8 *	1.6 *	NA	57.8	4.2	8.4	0.43 U
Magnesium	NA	1880 N	321 N*	27.5 BN*	NA	4180	237 N	183 N	18.9 BN
Manganese	NA	152	20.6 N*	6.7 N*	NA	406	6.8	19.2	3
Mercury	NA	0.039 B	0.0065 B	0.0056 U	NA	0.041 BN	0.0061 U	0.0057 U	0.0053 U
Nickel	NA	12.1	2.8 B	1.1 U	NA	20.4	1.2 U	1.5 B	1 U
Potassium	NA	943	475 N*	35.6 UN*	NA	2030 N	199 N*	416 N*	33.4 UN*
Selenium	NA	0.99 UN	0.5 U	0.47 U	NA	1.1 U	1.1 B	0.78 B	0.77 B
Silver	NA	1.9 U	0.95 U	0.9 U	NA	2.1 U	0.99 U	0.92 U	0.84 U
Sodium	NA	1120	121 B	94.8 B	NA	5860	93.7 B	83.2 B	68.2 B
Thallium	NA	1.6 U	0.83 U	0.78 U	NA	1.8 U	2.3 B	1.4 B	0.73 U
Vanadium	NA	27.7	13.5 *	3.7 *	NA	42.9	36.2	35.7	9.4
Zinc	NA	42	19.6 *	2.4 B*	NA	58.6	3.4 B	9 B	2.6 B
POLYCHLORINATED BIPHENYLS (ug/kg)									
Aroclor-1016	NA	8 U	4 U	3.8 U	NA	8.9 U	4.2 U	3.9 U	3.6 U
Aroclor-1221	NA	19 U	9.5 U	9 U	NA	21 U	9.9 U	9.3 U	8.5 U
Aroclor-1232	NA	22 U	11 U	11 U	NA	25 U	12 U	11 U	10 U
Aroclor-1242	NA	110	8.6 U	8 U	NA	230	8.8 U	20 J	7.6 U
Aroclor-1248	NA	19 U	9.7 U	9.1 U	NA	21 U	10 U	9.4 U	8.6 U
Aroclor-1254	NA	8 U	4 U	3.8 U	NA	8.9 U	4.2 U	3.9 U	3.6 U
Aroclor-1260	NA	170	4 U	3.8 U	NA	540	30	37	3.6 U
PETROLEUM HYDROCARBONS (mg/kg)									
PHC as Diesel Fuel	NA	470	4.9 U	4.6 U	NA	880	25	25	6.1 J
PHC as Gasoline	NA	4.8 U	0.24 U	0.23 U	NA	3.8 J	0.25 U	0.24 U	0.22 U
#6 Fuel Oil	NA	300 U	10 U	10 U	NA	800 U	40 U	40 U	10 U
10W-40 Motor Oil	NA	300 U	10 U	10 U	NA	800 U	39	46	10 U
Diesel/#2 Fuel	NA	1400	4 U	3 U	NA	3300	40 U	40 U	3 U
Gasoline	NA	70 U	4 U	3 U	NA	80 U	4 U	4 U	3 U
Kerosene	NA	70 U	4 U	3 U	NA	80 U	4 U	4 U	3 U
Mineral Spirits	NA	70 U	4 U	3 U	NA	80 U	4 U	4 U	3 U

302811

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 5 of 20

Location ID	L-1	L-1	L-1	L-1	L-4	L-4	L-4	L-4	L-4
Sample Date	8/18/1999	8/18/1999	8/18/1999	8/19/1999	9/9/1999	9/9/1999	9/9/1999	9/10/1999	9/14/1999
Sample ID	4-5	24-25	36-37	44-45	9.5-10	16.5-17	49.5-50	56-56.5	69-70
Chemical Name									
GENERAL CHEMISTRY									
pH (S.U.)	5.64	5.54	6.6	7.57	8.19	5.72	5.45	4.75	6.77
Total Organic Carbon (mg/kg)	810	7600	367	176	160	40400	350	170	76
Cation Exchange Capacity (mequiv/100g)	34.7	105	NA	NA	18.5	86.7	14.2	26.3	12.2
ORP Observed (mv)	302	330	154	302	199	239	257	303	234

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302812

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 6 of 20

Location ID	L-4	L-4	L-6	L-6	L-6	L-6	L-6	L-6	L-6
Sample Date	9/15/1999	9/15/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	8/4/1999
Sample ID	109.5-110	113.5-114	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47
Chemical Name									
VOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,1,1-Trichloroethane	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
1,1,2,2-Tetrachloroethane	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
1,1,2-Trichloroethane	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
1,1-Dichloroethane	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
1,1-Dichloroethene	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
1,2-Dichloroethane	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
1,2-Dichloropropane	500 U	400 U	NA	NA	440 U	420 U	410 U	440 U	360 U
2-Butanone	1200 U	920 U	NA	NA	1000 U	980 U	960 U	1100 J	830 U
2-Hexanone	500 U	400 U	NA	NA	440 U	420 U	410 U	440 U	360 U
4-Methyl-2-pentanone	500 U	400 U	NA	NA	440 U	420 U	410 U	990 J	360 U
Acetone	3400	920 U	NA	NA	1000 U	980 U	960 U	5000	830 U
Benzene	170 U	130 U	NA	NA	740	140 U	190 J	300 J	120 U
Bromodichloromethane	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
Bromoform	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Bromomethane/ Methyl bromide	500 U	400 U	NA	NA	440 U	420 U	410 U	440 U	360 U
Carbon disulfide	500 U	400 U	NA	NA	440 U	420 U	410 U	440 U	360 U
Carbon tetrachloride	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Chlorobenzene	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Chloroethane	500 U	400 U	NA	NA	440 U	420 U	410 U	440 U	360 U
Chloroform	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Chloromethane	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
cis-1,2-Dichloroethene	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
cis-1,3-Dichloropropene	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Dibromochloromethane	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Ethylbenzene	170 U	130 U	NA	NA	230 J	140 U	140 U	150 U	120 U
Methylene chloride	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
Styrene	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Tetrachloroethene	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Toluene	170 U	130 U	NA	NA	760	420 J	140 U	420 J	120 U
trans-1,2-Dichloroethene	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
trans-1,3-Dichloropropene	170 U	130 U	NA	NA	140 U	140 U	140 U	150 U	120 U
Trichloroethene	170 U	130 U	NA	NA	150 J	220 J	140 U	150 U	120 U
Vinyl chloride	330 U	260 U	NA	NA	290 U	280 U	270 U	290 U	240 U
Xylenes (Total)	170 U	130 U	NA	NA	510 J	260 J	140 U	150 U	120 U

302813

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 7 of 20

Location ID	L-4	L-4	L-6	L-6	L-6	L-6	L-6	L-6	L-6
Sample Date	9/15/1999	9/15/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	8/4/1999
Sample ID	109.5-110	113.5-114	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47
Chemical Name									
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,2,4-Trichlorobenzene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
1,2-Dichlorobenzene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
1,3-Dichlorobenzene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
1,4-Dichlorobenzene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
2,2'-Oxybis(1-chloropropane)	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
2,4,5-Trichlorophenol	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
2,4,6-Trichlorophenol	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
2,4-Dichlorophenol	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
2,4-Dimethylphenol	76 U	80 U	NA	NA	82 U	78 U	81 U	88 J	76 U
2,4-Dinitrophenol	760 U	800 U	NA	NA	290 U	270 U	280 U	260 U	260 U
2,4-Dinitrotoluene	38 U	40 U	NA	NA	82 U	78 U	81 U	74 U	76 U
2,6-Dinitrotoluene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
2-Chloronapthalene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
2-Chlorophenol	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
2-Methylnapthalene	38 U	40 U	NA	NA	800	210 J	210 J	37 U	37 U
2-Methylphenol	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
2-Nitroaniline	76 U	80 U	NA	NA	41 U	39 U	41 U	37 U	37 U
2-Nitrophenol	38 U	40 U	NA	NA	82 U	78 U	81 U	74 U	76 U
3,3'-Dichlorobenzidine	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
3-Nitroaniline	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
4,6-Dinitro-2-methylphenol	190 U	200 U	NA	NA	200 U	200 U	200 U	180 U	190 U
4-Bromophenyl phenyl ether	38 U	40 U	NA	NA	82 U	78 U	81 U	74 U	76 U
4-Chloro-3-methylphenol	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
4-Chloroaniline	76 U	80 U	NA	NA	41 U	39 U	41 U	37 U	37 U
4-Chlorophenyl phenyl ether	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
4-Methylphenol	76 U	80 U	NA	NA	82 U	78 U	81 U	88 J	76 U
4-Nitroaniline	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
4-Nitrophenol	190 U	200 U	NA	NA	200 U	200 U	200 U	180 U	190 U
Acenaphthene	38 U	40 U	NA	NA	89 J	39 U	41 U	37 U	37 U
Acenaphthylene	38 U	40 U	NA	NA	320 J	62 J	57 J	37 U	37 U
Anthracene	38 U	40 U	NA	NA	120 J	39 J	41 J	37 U	37 U
Benzo(a)anthracene	38 U	40 U	NA	NA	74 J	39 U	41 U	37 U	37 U
Benzo(a)pyrene	38 U	40 U	NA	NA	58 J	39 U	41 U	37 U	37 U
Benzo(b)fluoranthene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
Benzo(g,h,i)perylene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
Benzo(k)fluoranthene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
bis(2-Chloroethoxy)methane	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U

302814

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-4	L-4	L-6	L-6	L-6	L-6	L-6	L-6	L-6
Sample Date	9/15/1999	9/15/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	8/4/1999
Sample ID	109.5-110	113.5-114	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47
Chemical Name									
bis(2-Chloroethyl)ether	110 J	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
bis(2-Ethylhexyl)phthalate	76 U	80 U	NA	NA	130 J	130 J	140 J	74 U	76 U
Butyl benzyl phthalate	76 U	80 U	NA	NA	94 J	78 U	81 U	74 U	280 J
Carbazole	38 U	40 U	NA	NA	82 U	78 U	81 U	74 U	76 U
Chrysene	38 U	40 U	NA	NA	82 J	39 U	41 U	37 U	37 U
Dibenz(a,h)anthracene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
Dibenzofuran	38 U	40 U	NA	NA	46 J	39 U	41 U	37 U	37 U
Diethyl phthalate	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
Dimethyl phthalate	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
Di-n-butyl phthalate	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
Di-n-octyl phthalate	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
Fluoranthene	38 U	40 U	NA	NA	130 J	39 U	41 U	37 U	37 U
Fluorene	38 U	40 U	NA	NA	180 J	52 J	53 J	37 U	37 U
Hexachlorobenzene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
Hexachlorobutadiene	76 U	80 U	NA	NA	82 U	78 U	81 U	74 U	76 U
Hexachlorocyclopentadiene	190 U	200 U	NA	NA	200 U	200 U	200 U	180 U	190 U
Hexachloroethane	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
Indeno(1,2,3-cd)pyrene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
Isophorone	39 J	40 U	NA	NA	120 J	84 J	54 J	37 U	37 U
Naphthalene	38 U	40 U	NA	NA	950	230 J	200 J	37 U	37 U
Nitrobenzene	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
n-Nitrosodiphenylamine	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
n-Nitrosodipropylamine	38 U	40 U	NA	NA	41 U	39 U	41 U	37 U	37 U
Pentachlorophenol	190 U	200 U	NA	NA	200 U	200 U	200 U	180 U	190 U
Phenanthrene	38 U	40 U	NA	NA	520	160 J	160 J	37 U	37 U
Phenol	80 J	80 U	NA	NA	84 J	110 J	81 U	270 J	76 U
Pyrene	38 U	40 U	NA	NA	250 J	77 J	83 J	37 U	37 U
METALS (mg/kg)									
Aluminum	2270 *	2920 *	NA	NA	4140	938	674	658	517 *
Antimony	3.1 U	3.2 U	NA	NA	3.3 U	3.2 U	3.2 U	3 U	3 U
Arsenic	0.9 B	1 B	NA	NA	2.7	1.9	0.76 B	0.75 B	0.43 U
Barium	5.6 B	21.7	NA	NA	15.6 *	9.2 B*	7 B*	3 B*	2.2 B
Beryllium	0.17 U	0.35 B	NA	NA	0.26 B	0.18 B	0.18 U	0.17 U	0.17 U
Cadmium	0.18 U	0.44 B	NA	NA	0.52 B	0.19 U	0.19 U	0.18 U	0.18 U
Calcium	79.8	344	NA	NA	105	195	193	68.3	142
Chromium	10.6	21.7	NA	NA	9.9 N	9.6 N	5.4 N	7.6 N	3.4 B
Cobalt	1.1 U	1.2 U	NA	NA	2.7 B	1.2 U	1.2 U	1.1 U	1.1 U

302815

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey. Page 9 of 20

Location ID	L-4	L-4	L-6	L-6	L-6	L-6	L-6	L-6	L-6
Sample Date	9/15/1999	9/15/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	8/4/1999
Sample ID	109.5-110	113.5-114	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47
Chemical Name									
Copper	1 B	3 B	NA	NA	3.1 B	3.2 B	1.8 B	2.1 B	0.86 B
Iron	865	13500	NA	NA	7490	2270	992	1130	599
Lead	1.3	2.9	NA	NA	9.3 *	11.1 *	11.8 *	1.4 *	1.1 B
Magnesium	41.8 N	159 N	NA	NA	567 N	77.4 N	59.2 N	53.9 N	73.2 N
Manganese	4.9	7.4	NA	NA	29.8 *	7.9 *	6.5 *	5.1 *	5.2
Mercury	0.012 B	0.0058 U	NA	NA	0.0079 B	0.0077 B	0.0056 U	0.0054 U	0.0055 UN
Nickel	1.1 U	1.2 U	NA	NA	3.8 B	1.4 B	1.2 U	1.1 U	1.1 U
Potassium	116 N*	254 N*	NA	NA	368 N	169 N	130 N	97.5 N	45.8 BN*
Selenium	0.83 B	0.49 U	NA	NA	0.5 U	0.48 U	0.49 U	0.46 U	0.45 U
Silver	0.89 U	0.93 U	NA	NA	0.95 U	0.91 U	0.94 U	0.87 U	0.86 U
Sodium	52.6 B	65.5 B	NA	NA	141	241	261	73.5 B	166
Thallium	0.85 B	1.9 B	NA	NA	0.83 U	0.79 U	0.82 U	0.76 U	0.75 U
Vanadium	15.6	89.5	NA	NA	14 *	11.6 *	10.2 *	27.9 *	6.9 *
Zinc	4.8 B	6.4 B	NA	NA	14.4 E	5.6 BEP	5.4 BEP	3.4 BEP	3.5 B
POLYCHLORINATED BIPHENYLS (ug/kg)									
Aroclor-1016	3.8 U	3.9 U	NA	NA	4.1 U	3.9 U	4 U	3.7 U	3.7 U
Aroclor-1221	8.9 U	9.3 U	NA	NA	4.1 U	3.9 U	4 U	3.7 U	8.8 U
Aroclor-1232	11 U	11 U	NA	NA	4.1 U	3.9 U	4 U	3.7 U	11 U
Aroclor-1242	8 U	8.4 U	NA	NA	4.1 U	3.9 U	4 U	3.7 U	7.9 U
Aroclor-1248	9.1 U	9.4 U	NA	NA	140	42	49	3.7 U	8.9 U
Aroclor-1254	3.8 U	3.9 U	NA	NA	4.1 U	3.9 U	4 U	3.7 U	3.7 U
Aroclor-1260	3.8 U	3.9 U	NA	NA	170	50	61	3.7 U	3.7 U
PETROLEUM HYDROCARBONS (mg/kg)									
PHC as Diesel Fuel	16	4.8 U	NA	NA	43	18	27	6.3 J	4.5 U
PHC as Gasoline	0.23 U	0.24 U	NA	NA	6.8	0.37 J	1.3	0.22 ND	0.23 U
#6 Fuel Oil	10 U	10 U	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	30 U	10 U	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	24	4 U	NA	NA	NA	NA	NA	NA	NA
Gasoline	3 U	4 U	NA	NA	NA	NA	NA	NA	NA
Kerosene	3 U	4 U	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	3 U	4 U	NA	NA	NA	NA	NA	NA	NA

302816

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey

Location ID	L-4	L-4	L-6	L-6	L-6	L-6	L-6	L-6	L-6
Sample Date	9/15/1999	9/15/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	8/4/1999
Sample ID	109.5-110	113.5-114	5-6	11-12	17-18	31-32	38-39	41.5-42.5	46-47
Chemical Name									
GENERAL CHEMISTRY									
pH (S.U.)	3.96	4.72	11.7	7.64	5.86	6.02	6.39	5.88	8.16
Total Organic Carbon (mg/kg)	130	290	1580	111	990	292	297	153	155
Cation Exchange Capacity (mequiv/100g)	47.9	15.1	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	259	262	34	119	-10	66	75	183	208

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302817

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey

Location ID	L-6	L-6	L-6	L-8	L-8	L-8	L-8	L-8	L-8
Sample Date	8/4/1999	8/5/1999	8/6/1999	8/12/1999	8/12/1999	8/12/1999	9/27/2000	8/12/1999	8/13/1999
Sample ID	64-65	111-112	113-114	6-6.5	8-8.5	29-30	30-30.5	31-32	58-59
Chemical Name									
VOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,1,1-Trichloroethane	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
1,1,2,2-Tetrachloroethane	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
1,1,2-Trichloroethane	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
1,1-Dichloroethane	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
1,1-Dichloroethene	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
1,2-Dichloroethane	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
1,2-Dichloropropane	560 U	380 U	410 U	NA	NA	870 U	NA	440 U	410 U
2-Butanone	1300 U	880 U	950 U	NA	NA	2000 U	NA	1000 U	960 U
2-Hexanone	560 U	380 U	410 U	NA	NA	870 U	NA	440 U	410 U
4-Methyl-2-pentanone	1300 J	380 U	410 U	NA	NA	870 U	NA	440 U	410 U
Acetone	1300 U	880 U	950 U	NA	NA	2000 U	NA	1000 U	960 U
Benzene	180 U	130 U	140 U	NA	NA	2200	NA	150 U	140 U
Bromodichloromethane	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
Bromoform	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Bromomethane/ Methyl bromide	560 U	380 U	410 U	NA	NA	870 U	NA	440 U	410 U
Carbon disulfide	560 U	380 U	410 U	NA	NA	870 U	NA	440 U	410 U
Carbon tetrachloride	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Chlorobenzene	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Chloroethane	560 U	380 U	410 U	NA	NA	870 U	NA	440 U	410 U
Chloroform	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Chloromethane	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
cis-1,2-Dichloroethene	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
cis-1,3-Dichloropropene	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Dibromochloromethane	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Ethylbenzene	180 U	130 U	140 U	NA	NA	1100 J	NA	150 U	140 U
Methylene chloride	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
Styrene	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Tetrachloroethene	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Toluene	200 J	130 U	140 U	NA	NA	5200	NA	150 U	140 U
trans-1,2-Dichloroethene	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
trans-1,3-Dichloropropene	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Trichloroethene	180 U	130 U	140 U	NA	NA	290 U	NA	150 U	140 U
Vinyl chloride	370 U	250 U	270 U	NA	NA	580 U	NA	300 U	270 U
Xylenes (Total)	180 U	130 U	140 U	NA	NA	5300	NA	150 U	140 U

302818

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey

Location ID	L-6	L-6	L-6	L-8	L-8	L-8	L-8	L-8	L-8
Sample Date	8/4/1999	8/5/1999	8/6/1999	8/12/1999	8/12/1999	8/12/1999	9/27/2000	8/12/1999	8/13/1999
Sample ID	64-65	111-112	113-114	6-6.5	8-8.5	29-30	30-30.5	31-32	58-59
Chemical Name									
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,2,4-Trichlorobenzene	41 U	37 U	38 U	NA	NA	560 J	NA	38 U	37 U
1,2-Dichlorobenzene	41 U	37 U	38 U	NA	NA	210 J	NA	38 U	37 U
1,3-Dichlorobenzene	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
1,4-Dichlorobenzene	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
2,2'-Oxybis(1-chloropropane)	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
2,4,5-Trichlorophenol	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
2,4,6-Trichlorophenol	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
2,4-Dichlorophenol	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
2,4-Dimethylphenol	82 U	76 U	77 U	NA	NA	760 J	NA	77 U	75 U
2,4-Dinitrophenol	290 U	260 U	260 U	NA	NA	560 U	NA	270 U	750 U
2,4-Dinitrotoluene	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	37 U
2,6-Dinitrotoluene	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
2-Chloronapthalene	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
2-Chlorophenol	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
2-Methylnapthalene	41 U	37 U	38 U	NA	NA	10000	NA	38 U	37 U
2-Methylphenol	41 U	37 U	38 U	NA	NA	120 J	NA	38 U	37 U
2-Nitroaniline	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	75 U
2-Nitrophenol	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
3,3'-Dichlorobenzidine	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
3-Nitroaniline	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
4,6-Dinitro-2-methylphenol	210 U	190 U	190 U	NA	NA	400 U	NA	200 U	190 U
4-Bromophenyl phenyl ether	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	37 U
4-Chloro-3-methylphenol	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
4-Chloroaniline	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	75 U
4-Chlorophenyl phenyl ether	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
4-Methylphenol	83 J	76 U	77 U	NA	NA	370 J	NA	77 U	75 U
4-Nitroaniline	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
4-Nitrophenol	210 U	190 U	190 U	NA	NA	400 U	NA	200 U	190 U
Acenaphthene	41 U	37 U	38 U	NA	NA	500 J	NA	38 U	37 U
Acenaphthylene	41 U	37 U	38 U	NA	NA	1500	NA	38 U	37 U
Anthracene	41 U	37 U	38 U	NA	NA	1700	NA	38 U	37 U
Benzo(a)anthracene	41 U	37 U	38 U	NA	NA	900	NA	38 U	37 U
Benzo(a)pyrene	41 U	37 U	38 U	NA	NA	670 J	NA	38 U	37 U
Benzo(b)fluoranthene	41 U	37 U	38 U	NA	NA	490 J	NA	38 U	37 U
Benzo(g,h,i)perylene	41 U	37 U	38 U	NA	NA	350 J	NA	38 U	37 U
Benzo(k)fluoranthene	41 U	37 U	38 U	NA	NA	210 J	NA	38 U	37 U
bis(2-Chloroethoxy)methane	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U

302819

Location ID	L-6	L-6	L-6	L-8	L-8	L-8	L-8	L-8	L-8
Sample Date	8/4/1999	8/5/1999	8/6/1999	8/12/1999	8/12/1999	8/12/1999	9/27/2000	8/12/1999	8/13/1999
Sample ID	64-65	111-112	113-114	6-6.5	8-8.5	29-30	30-30.5	31-32	58-59
Chemical Name									
bis(2-Chloroethyl)ether	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
bis(2-Ethylhexyl)phthalate	82 U	76 U	77 U	NA	NA	860	NA	77 U	260 J
Butyl benzyl phthalate	82 U	280 J	280 J	NA	NA	910	NA	77 U	75 U
Carbazole	82 U	76 U	77 U	NA	NA	160 J	NA	77 U	37 U
Chrysene	41 U	37 U	38 U	NA	NA	1000	NA	38 U	37 U
Dibenz(a,h)anthracene	41 U	37 U	38 U	NA	NA	110 J	NA	38 U	37 U
Dibenzofuran	41 U	37 U	38 U	NA	NA	510 J	NA	38 U	37 U
Diethyl phthalate	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
Dimethyl phthalate	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
Di-n-butyl phthalate	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
Di-n-octyl phthalate	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
Fluoranthene	41 U	37 U	38 U	NA	NA	1600	NA	38 U	37 U
Fluorene	41 U	37 U	38 U	NA	NA	2300	NA	38 U	37 U
Hexachlorobenzene	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
Hexachlorobutadiene	82 U	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
Hexachlorocyclopentadiene	210 U	190 U	190 U	NA	NA	400 U	NA	200 U	190 U
Hexachloroethane	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
Indeno(1,2,3-cd)pyrene	41 U	37 U	38 U	NA	NA	320 J	NA	38 U	37 U
Isophorone	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
Naphthalene	41 U	37 U	38 U	NA	NA	12000	NA	38 U	37 U
Nitrobenzene	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
n-Nitrosodiphenylamine	41 U	37 U	38 U	NA	NA	700 J	NA	38 U	37 U
n-Nitrosodipropylamine	41 U	37 U	38 U	NA	NA	80 U	NA	38 U	37 U
Pentachlorophenol	210 U	190 U	190 U	NA	NA	400 U	NA	200 U	190 U
Phenanthrene	41 U	37 U	38 U	NA	NA	6300	NA	38 U	37 U
Phenol	110 J	76 U	77 U	NA	NA	160 U	NA	77 U	75 U
Pyrene	41 U	37 U	38 U	NA	NA	3000	NA	38 U	37 U
METALS (mg/kg)									
Aluminum	1220 *	952 *	2890 *	NA	NA	23800	NA	2360	1770
Antimony	3.3 U	3 U	3.1 U	NA	NA	6.5 U	NA	3.1 U	3 U
Arsenic	0.48 U	1.3	3.6	NA	NA	6	NA	2.2	0.76 B
Barium	4.3 B	2 B	9.2 B	NA	NA	186	NA	10.6 B	6 B
Beryllium	0.18 U	0.17 U	0.57 B	NA	NA	1.1 B	NA	0.17 U	0.17 U
Cadmium	0.2 U	0.18 U	0.18 U	NA	NA	0.38 UN	NA	0.18 U	0.18 U
Calcium	90.7	76.8	323	NA	NA	2370	NA	155	71.5
Chromium	6.9	11.3	40.8	NA	NA	75.5	NA	9.9	12.9
Cobalt	1.2 U	1.1 U	1.1 U	NA	NA	11 B	NA	1.1 U	1.1 U

302820

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey

Location ID	L-6	L-6	L-6	L-8	L-8	L-8	L-8	L-8	L-8
Sample Date	8/4/1999	8/5/1999	8/6/1999	8/12/1999	8/12/1999	8/12/1999	9/27/2000	8/12/1999	8/13/1999
Sample ID	64-65	111-112	113-114	6-6.5	8-8.5	29-30	30-30.5	31-32	58-59
Chemical Name									
Copper	1.6 B	4.5	37.1	NA	NA	15.2	NA	4.5 B	0.83 B
Iron	896	2090	45900	NA	NA	27700	NA	5070	1750
Lead	2.2	1.4	0.72 B	NA	NA	277	NA	3.9	3.9
Magnesium	70.2 N	28.5 N	106 N	NA	NA	5140 *	NA	196 N	75.1 N
Manganese	13.6	5.4	4.1	NA	NA	258	NA	46.5	4.5
Mercury	0.006 UN	0.01 BN	0.0055 UN	NA	NA	0.058 B	NA	0.0056 U	0.0054 U
Nickel	1.2 U	1.1 U	1.7 B	NA	NA	25.3	NA	1.2 B	1.1 U
Potassium	92.6 N*	34.7 UN*	88.1 N*	NA	NA	3340 *	NA	359	110
Selenium	0.5 U	0.46 U	2.6	NA	NA	0.99 U	NA	0.47 UN	0.46 UN
Silver	0.96 U	0.87 U	0.89 U	NA	NA	1.9 U	NA	0.89 U	0.87 U
Sodium	175	48.3 B	24.2 B	NA	NA	5670	NA	152	74.3 B
Thallium	0.84 U	0.76 U	5.6	NA	NA	2.1 B	NA	0.78 U	0.76 U
Vanadium	22.3 *	31.3 *	104 *	NA	NA	138	NA	13.5	20.9
Zinc	7.4 B	2.5 B	10.7 B	NA	NA	111	NA	6 B	3.5 B
POLYCHLORINATED BIPHENYLS (ug/kg)									
Aroclor-1016	4.1 U	3.7 U	3.8 U	NA	NA	7.9 U	NA	3.8 U	3.7 U
Aroclor-1221	9.6 U	8.8 U	8.9 U	NA	NA	19 U	NA	9 U	8.7 U
Aroclor-1232	11 U	11 U	11 U	NA	NA	22 U	NA	11 U	10 U
Aroclor-1242	8.6 U	7.9 U	8 U	NA	NA	17 U	NA	8.1 U	7.8 U
Aroclor-1248	9.7 U	8.9 U	9 U	NA	NA	19 U	NA	9.1 U	8.8 U
Aroclor-1254	4.1 U	3.7 U	3.8 U	NA	NA	7.9 U	NA	34	3.7 U
Aroclor-1260	4.1 U	3.7 U	3.8 U	NA	NA	310	NA	16 J	3.7 U
PETROLEUM HYDROCARBONS (mg/kg)									
PHC as Diesel Fuel	7.2 J	4.5 U	4.6 U	NA	NA	210	NA	17	4.5 U
PHC as Gasoline	0.25 U	0.23 U	0.23 U	NA	NA	33 J	NA	0.23 U	0.22 U
#6 Fuel Oil	NA	NA	NA	NA	NA	500 U	NA	NA	10 U
10W-40 Motor Oil	NA	NA	NA	NA	NA	530	NA	NA	10 U
Diesel/#2 Fuel	NA	NA	NA	NA	NA	500 U	NA	NA	3 U
Gasoline	NA	NA	NA	NA	NA	7 U	NA	NA	3 U
Kerosene	NA	NA	NA	NA	NA	7 U	NA	NA	3 U
Mineral Spirits	NA	NA	NA	NA	NA	7 U	NA	NA	3 U

302821

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey

Location ID	L-6	L-6	L-6	L-8	L-8	L-8	L-8	L-8	L-8
Sample Date	8/4/1999	8/5/1999	8/6/1999	8/12/1999	8/12/1999	8/12/1999	9/27/2000	8/12/1999	8/13/1999
Sample ID	64-65	111-112	113-114	6-6.5	8-8.5	29-30	30-30.5	31-32	58-59
Chemical Name									
GENERAL CHEMISTRY									
pH (S.U.)	5.82	4.25	4.65	8.26	9.63	8.64	NA	NA	NA
Total Organic Carbon (mg/kg)	89	68	184	1140	303	6330	20600	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	0.367	2.62	NA	NA	NA	NA
ORP Observed (mv)	264	223	340	272	258	186	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302822

Location ID	P-37	P-37	P-37	P-37	P-37	P-37
Sample Date	8/17/1999	8/17/1999	8/17/1999	10/9/2000	10/9/2000	10/9/2000
Sample ID	13-14	28-29	33-34	6-7	11.5-12	13-14
Chemical Name						
VOLATILE ORGANIC COMPOUNDS (ug/kg)						
1,1,1-Trichloroethane	12000	150 U	390 J	NA	NA	NA
1,1,2,2-Tetrachloroethane	700 U	150 U	140 U	NA	NA	NA
1,1,2-Trichloroethane	1400 U	300 U	280 U	NA	NA	NA
1,1-Dichloroethane	700 U	150 U	140 U	NA	NA	NA
1,1-Dichloroethene	1400 U	300 U	280 U	NA	NA	NA
1,2-Dichloroethane	3000 J	300 U	280 U	NA	NA	NA
1,2-Dichloropropane	2100 U	450 U	410 U	NA	NA	NA
2-Butanone	8200	1000 U	960 U	NA	NA	NA
2-Hexanone	2100 U	450 U	410 U	NA	NA	NA
4-Methyl-2-pentanone	7700	450 U	410 U	NA	NA	NA
Acetone	120000	2700 J	3000	NA	NA	NA
Benzene	9700	150 U	240 J	NA	NA	NA
Bromodichloromethane	1400 U	300 U	280 U	NA	NA	NA
Bromoform	700 U	150 U	140 U	NA	NA	NA
Bromomethane/ Methyl bromide	2100 U	450 U	410 U	NA	NA	NA
Carbon disulfide	5800	450 U	410 U	NA	NA	NA
Carbon tetrachloride	12000	150 U	200 J	NA	NA	NA
Chlorobenzene	700 U	150 U	140 U	NA	NA	NA
Chloroethane	2100 U	450 U	410 U	NA	NA	NA
Chloroform	1300 J	150 U	140 U	NA	NA	NA
Chloromethane	1400 U	300 U	280 U	NA	NA	NA
cis-1,2-Dichloroethene	1400 U	300 U	280 J	NA	NA	NA
cis-1,3-Dichloropropene	700 U	150 U	140 U	NA	NA	NA
Dibromochloromethane	700 U	150 U	140 U	NA	NA	NA
Ethylbenzene	26000	150 U	710	NA	NA	NA
Methylene chloride	3700	300 U	280 U	NA	NA	NA
Styrene	700 U	150 U	140 U	NA	NA	NA
Tetrachloroethene	31000	150 U	640 J	NA	NA	NA
Toluene	85000	330 J	2100	NA	NA	NA
trans-1,2-Dichloroethene	1400 U	300 U	280 U	NA	NA	NA
trans-1,3-Dichloropropene	700 U	150 U	140 U	NA	NA	NA
Trichloroethene	100000	430 J	2700	NA	NA	NA
Vinyl chloride	1400 U	300 U	280 U	NA	NA	NA
Xylenes (Total)	120000	570 J	3600	NA	NA	NA

302823

Table 4-4. Analytical Results for Soil Samples Collected from AOC-BP Ash, Incinerator Ash. BROS Phase 2 RI/FS; Logan Township, New Jersey

Location ID	P-37	P-37	P-37	P-37	P-37	P-37
Sample Date	8/17/1999	8/17/1999	8/17/1999	10/9/2000	10/9/2000	10/9/2000
Sample ID	13-14	28-29	33-34	6-7	11.5-12	13-14
Chemical Name						
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)						
1,2,4-Trichlorobenzene	2600 J	250 J	180 J	NA	NA	NA
1,2-Dichlorobenzene	15000	1200	880	NA	NA	NA
1,3-Dichlorobenzene	460 J	39 U	37 U	NA	NA	NA
1,4-Dichlorobenzene	1200 J	95 J	67 J	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	380 U	39 U	37 U	NA	NA	NA
2,4,5-Trichlorophenol	770 U	78 U	75 U	NA	NA	NA
2,4,6-Trichlorophenol	770 U	78 U	75 U	NA	NA	NA
2,4-Dichlorophenol	770 U	78 U	75 U	NA	NA	NA
2,4-Dimethylphenol	770 U	220 J	93 J	NA	NA	NA
2,4-Dinitrophenol	7700 U	780 U	750 U	NA	NA	NA
2,4-Dinitrotoluene	380 U	39 U	37 U	NA	NA	NA
2,6-Dinitrotoluene	380 U	39 U	37 U	NA	NA	NA
2-Chloronapthalene	380 U	39 U	37 U	NA	NA	NA
2-Chlorophenol	380 U	39 U	37 U	NA	NA	NA
2-Methylnapthalene	58000	6800 D	5100	NA	NA	NA
2-Methylphenol	380 U	39 U	37 U	NA	NA	NA
2-Nitroaniline	770 U	78 U	75 U	NA	NA	NA
2-Nitrophenol	770 U	78 U	75 U	NA	NA	NA
3,3'-Dichlorobenzidine	770 U	78 U	75 U	NA	NA	NA
3-Nitroaniline	770 U	78 U	75 U	NA	NA	NA
4,6-Dinitro-2-methylphenol	1900 U	200 U	190 U	NA	NA	NA
4-Bromophenyl phenyl ether	380 U	39 U	37 U	NA	NA	NA
4-Chloro-3-methylphenol	770 U	78 U	75 U	NA	NA	NA
4-Chloroaniline	770 U	78 U	75 U	NA	NA	NA
4-Chlorophenyl phenyl ether	380 U	39 U	37 U	NA	NA	NA
4-Methylphenol	2500 J	190 J	130 J	NA	NA	NA
4-Nitroaniline	770 U	78 U	75 U	NA	NA	NA
4-Nitrophenol	1900 U	200 U	190 U	NA	NA	NA
Acenaphthene	810 J	91 J	68 J	NA	NA	NA
Acenaphthylene	380 U	52 J	46 J	NA	NA	NA
Anthracene	380 U	91 J	72 J	NA	NA	NA
Benzo(a)anthracene	1200 J	190 J	130 J	NA	NA	NA
Benzo(a)pyrene	380 U	110 J	85 J	NA	NA	NA
Benzo(b)fluoranthene	380 U	210 J	170 J	NA	NA	NA
Benzo(g,h,i)perylene	2600 J	280 J	250 J	NA	NA	NA
Benzo(k)fluoranthene	380 U	39 U	37 U	NA	NA	NA
bis(2-Chloroethoxy)methane	770 U	78 U	75 U	NA	NA	NA

302824

Location ID	P-37	P-37	P-37	P-37	P-37	P-37
Sample Date	8/17/1999	8/17/1999	8/17/1999	10/9/2000	10/9/2000	10/9/2000
Sample ID	13-14	28-29	33-34	6-7	11.5-12	13-14
Chemical Name						
bis(2-Chloroethyl)ether	2200 J	160 J	110 J	NA	NA	NA
bis(2-Ethylhexyl)phthalate	1300 J	320 J	450	NA	NA	NA
Butyl benzyl phthalate	770 U	250 J	190 J	NA	NA	NA
Carbazole	770 U	78 U	75 U	NA	NA	NA
Chrysene	2100 J	310 J	210 J	NA	NA	NA
Dibenz(a,h)anthracene	380 U	39 U	37 U	NA	NA	NA
Dibenzofuran	1500 J	210 J	150 J	NA	NA	NA
Diethyl phthalate	770 U	78 U	75 U	NA	NA	NA
Dimethyl phthalate	770 U	78 U	75 U	NA	NA	NA
Di-n-butyl phthalate	770 U	78 U	75 U	NA	NA	NA
Di-n-octyl phthalate	770 U	78 U	75 U	NA	NA	NA
Fluoranthene	3100 J	490	370 J	NA	NA	NA
Fluorene	3000 J	380 J	270 J	NA	NA	NA
Hexachlorobenzene	380 U	39 U	37 U	NA	NA	NA
Hexachlorobutadiene	770 U	78 U	75 U	NA	NA	NA
Hexachlorocyclopentadiene	1900 U	200 U	190 U	NA	NA	NA
Hexachloroethane	380 U	39 U	37 U	NA	NA	NA
Indeno(1,2,3-cd)pyrene	950 J	120 J	98 J	NA	NA	NA
Isophorone	380 U	39 U	37 U	NA	NA	NA
Naphthalene	58000	6700 D	4700	NA	NA	NA
Nitrobenzene	380 U	39 U	37 U	NA	NA	NA
n-Nitrosodiphenylamine	380 U	370 J	290 J	NA	NA	NA
n-Nitrosodipropylamine	380 U	39 U	37 U	NA	NA	NA
Pentachlorophenol	1900 U	200 U	190 U	NA	NA	NA
Phenanthrene	17000	2000	1400	NA	NA	NA
Phenol	18000	830	790	NA	NA	NA
Pyrene	3100 J	470	350 J	NA	NA	NA
METALS (mg/kg)						
Aluminum	2400	948	665	NA	NA	NA
Antimony	3.1 U	3.1 U	3 U	NA	NA	NA
Arsenic	2.8	0.89 B	0.99 B	NA	NA	NA
Barium	5310	649	424	NA	NA	NA
Beryllium	0.17 U	0.17 U	0.17 U	NA	NA	NA
Cadmium	0.94 B	0.19 U	0.18 U	NA	NA	NA
Calcium	698	318	259	NA	NA	NA
Chromium	23.7	6.6	4.2 B	NA	NA	NA
Cobalt	2.9 B	1.2 U	1.1 U	NA	NA	NA

302825

Location ID	P-37	P-37	P-37	P-37	P-37	P-37
Sample Date	8/17/1999	8/17/1999	8/17/1999	10/9/2000	10/9/2000	10/9/2000
Sample ID	13-14	28-29	33-34	6-7	11.5-12	13-14
Chemical Name						
Copper	77.9	14	8.2	NA	NA	NA
Iron	4040	1920	1260	NA	NA	NA
Lead	14500	1300	861	NA	NA	NA
Magnesium	277 N	183 N	141 N	NA	NA	NA
Manganese	39	27	16	NA	NA	NA
Mercury	0.13	0.023 B	0.011 B	NA	NA	NA
Nickel	5.7 B	1.7 B	1.1 U	NA	NA	NA
Potassium	495	182	122	NA	NA	NA
Selenium	0.47 UN	0.48 UN	0.46 UN	NA	NA	NA
Silver	0.89 U	0.91 U	0.87 U	NA	NA	NA
Sodium	214	114 B	109 B	NA	NA	NA
Thallium	0.78 U	0.79 U	0.76 U	NA	NA	NA
Vanadium	6.2	3.2	1.9 B	NA	NA	NA
Zinc	568	77.2	46.3	NA	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	38 U	19 U	19 U	NA	NA	NA
Aroclor-1221	89 U	46 U	44 U	NA	NA	NA
Aroclor-1232	110 U	55 U	52 U	NA	NA	NA
Aroclor-1242	1400	480	260	NA	NA	NA
Aroclor-1248	90 U	47 U	45 U	NA	NA	NA
Aroclor-1254	38 U	19 U	19 U	NA	NA	NA
Aroclor-1260	1900	540	340	NA	NA	NA
PETROLEUM HYDROCARBONS (mg/kg)						
PHC as Diesel Fuel	10000	3200	250	NA	NA	NA
PHC as Gasoline	990	19	12	NA	NA	NA
#6 Fuel Oil	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA

302826

Location ID	P-37	P-37	P-37	P-37	P-37	P-37
Sample Date	8/17/1999	8/17/1999	8/17/1999	10/9/2000	10/9/2000	10/9/2000
Sample ID	13-14	28-29	33-34	6-7	11.5-12	13-14
Chemical Name						
GENERAL CHEMISTRY						
pH (S.U.)	1.79	2.13	2.43	NA	NA	NA
Total Organic Carbon (mg/kg)	3800	1180	860	3500	NA	710
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	450	459	425	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302827

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	B-1	B-1	L-15B	L-15B	L-15B	L-16B	L-16B	L-16B	N-2	N-2
Sample Date	10/9/2000	10/9/2000	9/9/1999	9/9/1999	9/9/1999	8/31/1999	8/31/1999	8/31/1999	10/4/2000	10/4/2000
Sample ID	7.5-8.5	10.5-11	38-39	42-43	55-56	13-14	34-35	38-39	12.5-13	13-13.5
Chemical Name										
VOLATILE ORGANIC COMPOUNDS (ug/kg)										
1,1,1-Trichloroethane	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
1,1,2-Trichloroethane	NA	NA	270 U	340 U	300 U	27000 U	280 U	300 U	NA	NA
1,1-Dichloroethane	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
1,1-Dichloroethene	NA	NA	270 U	340 U	300 U	2700 U	280 U	300 U	NA	NA
1,2-Dichloroethane	NA	NA	270 U	340 U	300 U	2700 U	280 U	300 U	NA	NA
1,2-Dichloropropane	NA	NA	410 U	510 U	440 U	4100 U	420 U	460 U	NA	NA
2-Butanone	NA	NA	950 U	1200 U	1000 U	9500 U	980 U	1100 U	NA	NA
2-Hexanone	NA	NA	410 U	510 U	440 U	41000 U	420 U	460 U	NA	NA
4-Methyl-2-pentanone	NA	NA	410 U	510 U	440 U	41000 U	420 U	460 U	NA	NA
Acetone	NA	NA	950 U	1200 U	1000 U	9500 U	980 U	1100 U	NA	NA
Benzene	NA	NA	140 U	170 U	150 U	1400 J	140 U	150 U	NA	NA
Bromodichloromethane	NA	NA	270 U	340 U	290 U	27000 U	280 U	300 U	NA	NA
Bromoform	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
Bromomethane/ Methyl bromide	NA	NA	410 U	510 U	440 U	4100 U	420 U	460 U	NA	NA
Carbon disulfide	NA	NA	410 U	510 U	440 U	4100 U	420 U	460 U	NA	NA
Carbon tetrachloride	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
Chlorobenzene	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
Chloroethane	NA	NA	410 U	510 U	440 U	4100 U	420 U	460 U	NA	NA
Chloroform	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
Chloromethane	NA	NA	270 U	340 U	300 U	2700 U	280 U	300 U	NA	NA
cis-1,2-Dichloroethene	NA	NA	270 U	340 U	300 U	27000 U	280 U	300 U	NA	NA
cis-1,3-Dichloropropene	NA	NA	140 U	170 U	150 U	14000 U	140 U	150 U	NA	NA
Dibromochloromethane	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
Ethylbenzene	NA	NA	140 U	170 U	150 U	19000	140 U	150 U	NA	NA
Methylene chloride	NA	NA	270 U	340 U	300 U	2700 U	280 U	300 U	NA	NA
Styrene	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
Tetrachloroethene	NA	NA	140 U	170 U	150 U	14000 U	140 U	150 U	NA	NA
Toluene	NA	NA	140 U	170 U	150 U	1600000 D	140 U	150 U	NA	NA
trans-1,2-Dichloroethene	NA	NA	270 U	340 U	300 U	2700 U	280 U	300 U	NA	NA
trans-1,3-Dichloropropene	NA	NA	140 U	170 U	150 U	14000 U	140 U	150 U	NA	NA
Trichloroethene	NA	NA	140 U	170 U	150 U	1400 U	140 U	150 U	NA	NA
Vinyl chloride	NA	NA	270 U	340 U	300 U	2700 U	280 U	300 U	NA	NA
Xylenes (Total)	NA	NA	140 U	170 U	150 U	84000	140 U	150 U	NA	NA

302828

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	B-1	B-1	L-15B	L-15B	L-15B	L-16B	L-16B	L-16B	N-2	N-2
Sample Date	10/9/2000	10/9/2000	9/9/1999	9/9/1999	9/9/1999	8/31/1999	8/31/1999	8/31/1999	10/4/2000	10/4/2000
Sample ID	7.5-8.5	10.5-11	38-39	42-43	55-56	13-14	34-35	38-39	12.5-13	13-13.5
Chemical Name										
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)										
1,2,4-Trichlorobenzene	NA	NA	39 U	39 U	41 U	1500 J	38 U	39 U	NA	NA
1,2-Dichlorobenzene	NA	NA	39 U	39 U	41 U	1600 J	38 U	39 U	NA	NA
1,3-Dichlorobenzene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
1,4-Dichlorobenzene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
2,2'-Oxybis(1-chloropropane)	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
2,4,5-Trichlorophenol	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
2,4,6-Trichlorophenol	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
2,4-Dichlorophenol	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
2,4-Dimethylphenol	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
2,4-Dinitrophenol	NA	NA	770 U	790 U	810 U	7800 U	760 U	780 U	NA	NA
2,4-Dinitrotoluene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
2,6-Dinitrotoluene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
2-Chloronapthalene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
2-CHLOROPHENOL	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
2-Methylnapthalene	NA	NA	39 U	39 U	41 U	28000	38 U	39 U	NA	NA
2-Methylphenol	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
2-Nitroaniline	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
2-Nitrophenol	NA	NA	39 U	39 U	41 U	780 U	76 U	78 U	NA	NA
3,3'-Dichlorobenzidine	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
3-Nitroaniline	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	190 U	200 U	200 U	2000 U	190 U	200 U	NA	NA
4-Bromophenyl phenyl ether	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
4-Chloro-3-methylphenol	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
4-Chloroaniline	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
4-Chlorophenyl phenyl ether	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
4-Methylphenol	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
4-Nitroaniline	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
4-Nitrophenol	NA	NA	190 U	200 U	200 U	2000 U	190 U	200 U	NA	NA
Acenaphthene	NA	NA	39 U	39 U	41 U	760 J	38 U	39 U	NA	NA
Acenaphthylene	NA	NA	39 U	39 U	41 U	510 J	38 U	39 U	NA	NA
Anthracene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Benzo(a)anthracene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Benzo(a)pyrene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Benzo(b)fluoranthene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Benzo(g,h,i)perylene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Benzo(k)fluoranthene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA

302829

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	B-1	B-1	L-15B	L-15B	L-15B	L-16B	L-16B	L-16B	N-2	N-2
Sample Date	10/9/2000	10/9/2000	9/9/1999	9/9/1999	9/9/1999	8/31/1999	8/31/1999	8/31/1999	10/4/2000	10/4/2000
Sample ID	7.5-8.5	10.5-11	38-39	42-43	55-56	13-14	34-35	38-39	12.5-13	13-13.5
Chemical Name										
bis(2-Chloroethoxy)methane	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
bis(2-Chloroethyl)ether	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	77 U	79 U	81 U	13000	76 U	78 U	NA	NA
Butyl benzyl phthalate	NA	NA	77 U	79 U	81 U	3300 J	76 U	78 U	NA	NA
Carbazole	NA	NA	39 U	39 U	41 U	780 U	76 U	78 U	NA	NA
Chrysene	NA	NA	39 U	39 U	41 U	540 J	38 U	39 U	NA	NA
Dibenz(a,h)anthracene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Dibenzofuran	NA	NA	39 U	39 U	41 U	1500 J	38 U	39 U	NA	NA
Diethyl phthalate	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
Dimethyl phthalate	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
Di-n-butyl phthalate	NA	NA	77 U	79 U	81 U	1600 J	76 U	78 U	NA	NA
Di-n-octyl phthalate	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
Fluoranthene	NA	NA	39 U	39 U	41 U	1400 J	38 U	39 U	NA	NA
Fluorene	NA	NA	39 U	39 U	41 U	2600 J	38 U	39 U	NA	NA
Hexachlorobenzene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Hexachlorobutadiene	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
Hexachlorocyclopentadiene	NA	NA	190 U	200 U	200 U	2000 U	190 U	200 U	NA	NA
Hexachloroethane	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Isophorone	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Naphthalene	NA	NA	39 U	39 U	41 U	8000	38 U	39 U	NA	NA
Nitrobenzene	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
n-Nitrosodiphenylamine	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
n-Nitrosodipropylamine	NA	NA	39 U	39 U	41 U	390 U	38 U	39 U	NA	NA
Pentachlorophenol	NA	NA	190 U	200 U	200 U	2000 U	190 U	200 U	NA	NA
Phenanthrene	NA	NA	39 U	39 U	41 U	8600	38 U	39 U	NA	NA
Phenol	NA	NA	77 U	79 U	81 U	780 U	76 U	78 U	NA	NA
Pyrene	NA	NA	39 U	39 U	41 U	1500 J	38 U	39 U	NA	NA
										NA
METALS (mg/kg)										NA
Aluminum	NA	NA	537 *	2350 *	1560 *	409	344	2740	NA	NA
Antimony	NA	NA	3.1 U	3.2 U	3.3 U	3.1 U	3 U	3.1 U	NA	NA
Arsenic	NA	NA	0.95 B	2.1	1.9	1.1 B	1.4	0.87 B	NA	NA
Barium	NA	NA	3.2 B	8.7 B	6.4 B	43	4 B	15.6	NA	NA
Beryllium	NA	NA	0.17 U	0.18 U	0.19 B	0.17 U	0.17 U	0.17 U	NA	NA
Cadmium	NA	NA	0.19 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	NA	NA
Calcium	NA	NA	96	231	167	29.6 B	150	191	NA	NA

302830

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	B-1	B-1	L-15B	L-15B	L-15B	L-16B	L-16B	L-16B	N-2	N-2
Sample Date	10/9/2000	10/9/2000	9/9/1999	9/9/1999	9/9/1999	8/31/1999	8/31/1999	8/31/1999	10/4/2000	10/4/2000
Sample ID	7.5-8.5	10.5-11	38-39	42-43	55-56	13-14	34-35	38-39	12.5-13	13-13.5
Chemical Name										
Chromium	NA	NA	2.6 B	8.3	9.5	7	3.5 B	7.2	NA	NA
Cobalt	NA	NA	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	NA	NA
Copper	NA	NA	1.5 B	3.2 B	4.7 B	0.46 B	1.7 B	1.4 B	NA	NA
Iron	NA	NA	994	2640	4070	591	1680	949	NA	NA
Lead	NA	NA	0.55 B	1.3	1.2 B	45.1	1.2	3.6	NA	NA
Magnesium	NA	NA	51.1 N	125 N	88.3 N	25 BN	45 N	127 N	NA	NA
Manganese	NA	NA	4.1	5.5	5.3	2.5	8.1	6.4	NA	NA
Mercury	NA	NA	0.0056 U	0.016 B	0.0059 U	0.0055 UN*	0.0053 UN*	0.0056 UN*	NA	NA
Nickel	NA	NA	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	NA	NA
Potassium	NA	NA	126 N*	155 N*	119 N*	99.2 N	73.8 N	129 N	NA	NA
Selenium	NA	NA	0.56 B	0.76 B	0.62 B	0.47 U	0.46 U	0.48 U	NA	NA
Silver	NA	NA	0.9 U	0.92 U	0.95 U	0.9 U	0.87 U	0.91 U	NA	NA
Sodium	NA	NA	132	56 B	67 B	18.5 U	192	62.3 B	NA	NA
Thallium	NA	NA	0.82 B	0.86 B	0.83 U	0.78 U	0.76 U	0.79 U	NA	NA
Vanadium	NA	NA	6.5	15.5	35.1	2.3 B	8.8	16.3	NA	NA
Zinc	NA	NA	3.4 B	3.7 B	3.7 B	2.4 B	2.4 B	1.8 B	NA	NA
POLYCHLORINATED BIPHENYLS (ug/kg)										
Aroclor-1016	NA	NA	3.8 U	3.9 U	4 U	390 U	3.7 U	3.9 U	NA	370
Aroclor-1221	NA	NA	9 U	9.2 U	9.5 U	920 U	8.9 U	9.1 U	NA	520
Aroclor-1232	NA	NA	11 U	11 U	11 U	1100 U	11 U	11 U	NA	770
Aroclor-1242	NA	NA	8.1 U	8.3 U	8.5 U	37000	28	8.2 U	NA	370
Aroclor-1248	NA	NA	9.2 U	9.3 U	9.6 U	930 U	9 U	9.3 U	NA	400
Aroclor-1254	NA	NA	3.8 U	3.9 U	4 U	390 U	3.7 U	3.9 U	NA	370
Aroclor-1260	NA	NA	11 J	3.9 U	4.9 J	13000	26	4.8 J	NA	17000
PETROLEUM HYDROCARBONS (mg/kg)										
PHC as Diesel Fuel	NA	NA	47	13	12	20000	30	4.7 U	21000	NA
PHC as Gasoline	NA	NA	0.23 U	0.24 U	0.24 U	2700	0.23 U	0.31 J	1700	NA
#6 Fuel Oil	NA	NA	30 U	40 U	10 U	40000 U	60 U	10 U	NA	NA
10W-40 Motor Oil	NA	NA	76	20 J	20 J	34000	50	10 U	NA	NA
Diesel/#2 Fuel	NA	NA	50 U	20 U	9 U	10000 U	50 U	4 U	NA	NA
Gasoline	NA	NA	3 U	4 U	4 U	700 U	3 U	4 U	NA	NA
Kerosene	NA	NA	3 U	4 U	4 U	700 U	3 U	4 U	NA	NA
Mineral Spirits	NA	NA	3 U	4 U	4 U	700 U	3 U	4 U	NA	NA

302831

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	B-1	B-1	L-15B	L-15B	L-15B	L-16B	L-16B	L-16B	N-2	N-2
Sample Date	10/9/2000	10/9/2000	9/9/1999	9/9/1999	9/9/1999	8/31/1999	8/31/1999	8/31/1999	10/4/2000	10/4/2000
Sample ID	7.5-8.5	10.5-11	38-39	42-43	55-56	13-14	34-35	38-39	12.5-13	13-13.5
Chemical Name										
GENERAL CHEMISTRY										
pH (S.U.)	NA	NA	5.59	4.41	4.46	5.83	NA	5.68	NA	NA
Total Organic Carbon (mg/kg)	3200	NA	180	130	190	1410	NA	62	NA	NA
Cation Exchange Capacity (mequiv/100	NA	NA	18	22.1	18.5	21.8	NA	13	NA	NA
ORP Observed (mv)	NA	NA	245	320	320	182	NA	196	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302832

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	N-4	N-4	N-4	P-20	P-20	P-20	P-21	P-21	P-21
Sample Date	9/26/2000	9/26/2000	9/26/2000	6/9/1999	6/10/1999	6/10/1999	6/14/1999	6/14/1999	6/14/1999
Sample ID	8.5-9	10.5-11	36-36.5	15-15.5	24-25	34-35	5-5.5	15.5-16	25.5-26
Chemical Name									
VOLATILE ORGANIC COMPOUNI									
1,1,1-Trichloroethane	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
1,1,2,2-Tetrachloroethane	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
1,1,2-Trichloroethane	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
1,1-Dichloroethane	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
1,1-Dichloroethene	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
1,2-Dichloroethane	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
1,2-Dichloropropane	NA	NA	NA	18 N	3 N	4 N	410 U	430 U	440 U
2-Butanone	NA	NA	NA	41 N	8 N	9 N	960 U	1000 U	1000 U
2-Hexanone	NA	NA	NA	18 N	3 N	4 N	410 U	430 U	440 U
4-Methyl-2-pentanone	NA	NA	NA	18 N	3 N	4 N	410 U	430 U	440 U
Acetone	NA	NA	NA	41 N	8 N	9 N	960 U	1000 U	1000 U
Benzene	NA	NA	NA	190	1 N	1 N	140 U	140 U	150 U
Bromodichloromethane	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
Bromoform	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Bromomethane/ Methyl bromide	NA	NA	NA	18 N	3 N	4 N	410 U	430 U	440 U
Carbon disulfide	NA	NA	NA	18 N	3 N	4 N	410 U	430 U	440 U
Carbon tetrachloride	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Chlorobenzene	NA	NA	NA	77	1 N	1 N	140 U	140 U	150 U
Chloroethane	NA	NA	NA	18 N	3 N	4 N	410 U	430 U	440 U
Chloroform	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Chloromethane	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
cis-1,2-Dichloroethene	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
cis-1,3-Dichloropropene	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Dibromochloromethane	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Ethylbenzene	NA	NA	NA	3100	8	13	140 U	140 U	150 U
Methylene chloride	NA	NA	NA	52	2 N	3 J	270 U	290 U	290 U
Styrene	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Tetrachloroethene	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Toluene	NA	NA	NA	120	1 N	1 N	140 U	140 U	150 U
trans-1,2-Dichloroethene	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
trans-1,3-Dichloropropene	NA	NA	NA	6 N	1 N	1 N	140 U	140 U	150 U
Trichloroethene	NA	NA	NA	20 J	1 N	1 N	140 U	140 U	150 U
Vinyl chloride	NA	NA	NA	12 N	2 N	2 N	270 U	290 U	290 U
Xylenes (Total)	NA	NA	NA	17000	14	20	140 U	140 U	150 U

302833

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	N-4	N-4	N-4	P-20	P-20	P-20	P-21	P-21	P-21
Sample Date	9/26/2000	9/26/2000	9/26/2000	6/9/1999	6/10/1999	6/10/1999	6/14/1999	6/14/1999	6/14/1999
Sample ID	8.5-9	10.5-11	36-36.5	15-15.5	24-25	34-35	5-5.5	15.5-16	25.5-26
Chemical Name									
SEMIVOLATILE ORGANIC COMP									
1,2,4-Trichlorobenzene	NA	NA	NA	330 J	38 U	41 U	35 U	41 U	40 U
1,2-Dichlorobenzene	NA	NA	NA	110 J	38 U	41 U	35 U	41 U	40 U
1,3-Dichlorobenzene	NA	NA	NA	120 J	38 U	41 U	35 U	41 U	40 U
1,4-Dichlorobenzene	NA	NA	NA	550	38 U	41 U	35 U	41 U	40 U
2,2'-Oxybis(1-chloropropane)	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
2,4,5-Trichlorophenol	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
2,4,6-Trichlorophenol	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
2,4-Dichlorophenol	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
2,4-Dimethylphenol	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
2,4-Dinitrophenol	NA	NA	NA	350 J	270 U	280 U	240 U	240 U	230 U
2,4-Dinitrotoluene	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
2,6-Dinitrotoluene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
2-Chloronapthalene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
2-CHLOROPHENOL	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
2-Methylnapthalene	NA	NA	NA	7500 D	49 J	41 U	35 U	41 U	40 U
2-Methylphenol	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
2-Nitroaniline	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
2-Nitrophenol	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
3,3'-Dichlorobenzidine	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
3-Nitroaniline	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	200 U	190 U	200 U	170 U	210 U	200 U
4-Bromophenyl phenyl ether	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
4-Chloro-3-methylphenol	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
4-Chloroaniline	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
4-Chlorophenyl phenyl ether	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
4-Methylphenol	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
4-Nitroaniline	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
4-Nitrophenol	NA	NA	NA	200 U	190 U	200 U	170 U	210 U	200 U
Acenaphthene	NA	NA	NA	400	38 U	41 U	35 U	41 U	40 U
Acenaphthylene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Anthracene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Benzo(a)anthracene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Benzo(a)pyrene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Benzo(b)fluoranthene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Benzo(g,h,i)perylene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Benzo(k)fluoranthene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U

302834

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	N-4	N-4	N-4	P-20	P-20	P-20	P-21	P-21	P-21
Sample Date	9/26/2000	9/26/2000	9/26/2000	6/9/1999	6/10/1999	6/10/1999	6/14/1999	6/14/1999	6/14/1999
Sample ID	8.5-9	10.5-11	36-36.5	15-15.5	24-25	34-35	5-5.5	15.5-16	25.5-26
Chemical Name									
bis(2-Chloroethoxy)methane	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
bis(2-Chloroethyl)ether	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
bis(2-Ethylhexyl)phthalate	NA	NA	NA	1000	180 J	81 U	97 J	82 U	80 U
Butyl benzyl phthalate	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
Carbazole	NA	NA	NA	78 U	77 U	81 U	69 U	41 U	40 U
Chrysene	NA	NA	NA	360 J	38 U	41 U	35 U	41 U	40 U
Dibenz(a,h)anthracene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Dibenzofuran	NA	NA	NA	400	38 U	41 U	35 U	41 U	40 U
Diethyl phthalate	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
Dimethyl phthalate	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
Di-n-butyl phthalate	NA	NA	NA	280 J	77 U	81 U	69 U	82 U	80 U
Di-n-octyl phthalate	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
Fluoranthene	NA	NA	NA	260 J	38 U	41 U	35 U	41 U	40 U
Fluorene	NA	NA	NA	980	38 U	41 U	35 U	41 U	40 U
Hexachlorobenzene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Hexachlorobutadiene	NA	NA	NA	78 U	77 U	81 U	69 U	82 U	80 U
Hexachlorocyclopentadiene	NA	NA	NA	200 U	190 U	200 U	170 U	210 U	200 U
Hexachloroethane	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Indeno(1,2,3-cd)pyrene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Isophorone	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Naphthalene	NA	NA	NA	2000	38 U	41 U	35 U	41 U	40 U
Nitrobenzene	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
n-Nitrosodiphenylamine	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
n-Nitrosodipropylamine	NA	NA	NA	39 U	38 U	41 U	35 U	41 U	40 U
Pentachlorophenol	NA	NA	NA	200 U	190 U	200 U	170 U	210 U	200 U
Phenanthrene	NA	NA	NA	2900	110 J	41 U	35 U	41 U	40 U
Phenol	NA	NA	NA	240 J	77 U	81 U	69 U	82 U	80 U
Pyrene	NA	NA	NA	830	38 U	41 U	35 U	41 U	40 U
METALS (mg/kg)									
Aluminum	NA	NA	NA	969	322	311	4450	140 *	670 *
Antimony	NA	NA	NA	3.2 U	3.1 U	3.3 U	2.8 U	3.3 U	3.2 U
Arsenic	NA	NA	NA	1.9	0.68 B	0.48 U	2.4	0.48 U	0.47 U
Barium	NA	NA	NA	9.1 B	3.3 B	2.9 B	18.8	1.6 B	4.4 B
Beryllium	NA	NA	NA	0.18 U	0.17 U	0.18 U	0.26 B	0.18 U	0.18 U
Cadmium	NA	NA	NA	0.19 U	0.18 U	0.2 U	0.47 B	0.2 U	0.19 U
Calcium	NA	NA	NA	86.9	158	92.7	2810	55.5 N*	180 N*

302835

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	N-4	N-4	N-4	P-20	P-20	P-20	P-21	P-21	P-21
Sample Date	9/26/2000	9/26/2000	9/26/2000	6/9/1999	6/10/1999	6/10/1999	6/14/1999	6/14/1999	6/14/1999
Sample ID	8.5-9	10.5-11	36-36.5	15-15.5	24-25	34-35	5-5.5	15.5-16	25.5-26
Chemical Name									
Chromium	NA	NA	NA	4.5 B	3.9 B	2.6 B	11.5	1.1 B	3.1 B
Cobalt	NA	NA	NA	1.2 U	1.1 U	1.2 U	3 B	1.2 U	1.2 U
Copper	NA	NA	NA	1.5 B	0.85 B	0.96 B	4.5	0.9 B	1.7 B
Iron	NA	NA	NA	5140	3680	541	8320	390	1000
Lead	NA	NA	NA	5.7	1.6	0.85 B	6.6	0.71 B	2.2
Magnesium	NA	NA	NA	87.5	83.3	55	1730	20 BN*	110 N*
Manganese	NA	NA	NA	8.7	30.4	3.7	50.3	4.2 N	8.1 N
Mercury	NA	NA	NA	0.0057 U	0.0055 U	0.0059 U	0.0086 B	0.006 U	0.0058 U
Nickel	NA	NA	NA	1.1 U	1.1 U	1.2 U	5.6	1.2 U	1.2 U
Potassium	NA	NA	NA	181 N*	35.5 UN*	72.5 N*	737 N*	39.1 BN*	150 N*
Selenium	NA	NA	NA	0.48 U	0.47 U	0.5 U	0.43 U	0.5 U	0.49 U
Silver	NA	NA	NA	0.92 U	0.89 U	0.96 U	0.82 U	0.95 U	0.93 U
Sodium	NA	NA	NA	45.6 B	56.6 B	132	102 B	38.8 BN*	100 BN*
Thallium	NA	NA	NA	0.9 B	0.78 U	0.83 U	0.71 U	0.83 U	0.81 U
Vanadium	NA	NA	NA	10.5	2.4	1.7 B	15.1	1.8 B	6.6
Zinc	NA	NA	NA	10.9 B	7 B	2.9 B	16	2.3 B	2.9 B
POLYCHLORINATED BIPHENYLS									
Aroclor-1016	NA	NA	NA	390 U	38 U	4 U	3.5 U	4.1 U	4 U
Aroclor-1221	NA	NA	NA	390 U	38 U	4 U	3.5 U	4.1 U	4 U
Aroclor-1232	NA	NA	NA	390 U	38 U	4 U	3.5 U	4.1 U	4 U
Aroclor-1242	NA	NA	NA	390 U	38 U	4 U	3.5 U	4.1 U	4 U
Aroclor-1248	NA	NA	NA	5600	270	4 U	3.5 U	4.1 U	4 U
Aroclor-1254	NA	NA	NA	390 U	38 U	4 U	3.5 U	4.1 U	4 U
Aroclor-1260	NA	NA	NA	9900	460	83	36	4.1 U	4 U
PETROLEUM HYDROCARBONS (									
PHC as Diesel Fuel	17000	23000	69	27000	130	150	4.2	5	5
PHC as Gasoline	72	87	0.24	140	0.71 J	1.2 J	0.21	0.2	0.2
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel/#2 Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA	NA

302836

Table 4-5. Analytical Results for Soil Samples Collected from the West Side Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	N-4	N-4	N-4	P-20	P-20	P-20	P-21	P-21	P-21
Sample Date	9/26/2000	9/26/2000	9/26/2000	6/9/1999	6/10/1999	6/10/1999	6/14/1999	6/14/1999	6/14/1999
Sample ID	8.5-9	10.5-11	36-36.5	15-15.5	24-25	34-35	5-5.5	15.5-16	25.5-26
Chemical Name									
GENERAL CHEMISTRY									
pH (S.U.)	NA	NA	NA	7.93	7.87	7.74	8.09	7	8
Total Organic Carbon (mg/kg)	NA	NA	NA	2350	326	184	740	35 J	44 J
Cation Exchange Capacity (mequiv/10(	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	NA	NA	NA	208	193	185	178	200	200

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not withi
* = Duplicate analysis not within contro
P = Concentration difference between p
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but >

302837

Table 4-6. Analytical Results for Soil Samples Collected from AOC Soil-2, Swale Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-30	P-30	P-30	P-31	P-31	P-31	P-31	P-31	P-33	P-33	P-33
Sample Date	8/19/99	8/19/99	8/19/99	8/20/99	8/20/99	8/20/99	8/20/99	8/20/99	8/23/99	8/23/99	8/23/99
Sample ID	5-6	28-29	14-15	5-6	23-24	0.17-1	18-19	0-0.17	9-10	38-39	28-29
Chemical Name											
VOLATILE ORGANIC COMPOUNDS (ug/kg)											
1,1,1-Trichloroethane	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
1,1,2,2-Tetrachloroethane	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
1,1,2-Trichloroethane	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	300 U	250 U	270 U
1,1-Dichloroethane	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	300 U	250 U	270 U
1,1-Dichloroethene	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	150 U	130 U	130 U
1,2-Dichloroethane	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	300 U	250 U	270 U
1,2-Dichloropropane	350 U	380 U	400 U	450 U	380 U	380 U	370 U	400 U	440 U	380 U	400 U
2-Butanone	810 U	880 U	940 U	1000 U	880 U	890 U	870 U	930 U	1000 U	890 U	940 U
2-Hexanone	350 U	380 U	400 U	450 U	380 U	380 U	370 U	400 U	440 U	380 U	400 U
4-Methyl-2-pentanone	350 U	380 U	400 U	450 U	380 U	380 U	370 U	400 U	440 U	380 U	400 U
Acetone	810 U	880 U	940 U	1000 U	880 U	890 U	870 U	930 U	1000 U	890 U	940 U
Benzene	270 J	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Bromodichloromethane	230. U	250. U	270. U	300. U	250. U	260. U	250. U	270. U	290. U	250. U	270. U
Bromoform	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Bromomethane/ Methyl bromide	350 U	380 U	400 U	450 U	380 U	380 U	370 U	400 U	440 U	380 U	400 U
Carbon disulfide	350 U	380 U	400 U	450 U	380 U	380 U	370 U	400 U	440 U	380 U	400 U
Carbon tetrachloride	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Chlorobenzene	2200	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Chloroethane	350 U	380 U	400 U	450 U	380 U	380 U	370 U	400 U	440 U	380 U	400 U
Chloroform	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Chloromethane	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	300 U	250 U	270 U
cis-1,2-Dichloroethene	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	300 U	250 U	270 U
cis-1,3-Dichloropropene	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Dibromochloromethane	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Ethylbenzene	2300	120 U	130 U	380 J	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Methylene chloride	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	300 U	250 U	270 U
Styrene	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Tetrachloroethene	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Toluene	18000	220 J	220 J	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
trans-1,2-Dichloroethene	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	300 U	250 U	270 U
trans-1,3-Dichloropropene	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Trichloroethene	120 U	120 U	130 U	150 U	120 U	130 U	120 U	130 U	150 U	130 U	130 U
Vinyl chloride	230 U	250 U	270 U	300 U	250 U	250 U	250 U	260 U	300 U	250 U	270 U
Xylenes (Total)	14000	190 J	130 U	360 J	120 U	130 U	120 U	130 U	150 U	130 U	130 U

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Table 4-6. Analytical Results for Soil Samples Collected from AOC Soil-2, Swale Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-30	P-30	P-30	P-31	P-31	P-31	P-31	P-31	P-33	P-33	P-33
Sample Date	8/19/99	8/19/99	8/19/99	8/20/99	8/20/99	8/20/99	8/20/99	8/20/99	8/23/99	8/23/99	8/23/99
Sample ID	5-6	28-29	14-15	5-6	23-24	0.17-1	18-19	0-0.17	9-10	38-39	28-29
Chemical Name											
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)											
1,2,4-Trichlorobenzene	130 J	37 U	39 U	39 U	35 U	190 J	39 U	34 U	45 U	38 U	39 U
1,2-Dichlorobenzene	470	37 U	39 U	270 J	35 U	2100	49 J	34 U	45 U	38 U	39 U
1,3-Dichlorobenzene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
1,4-Dichlorobenzene	67 J	37 U	39 U	39 U	35 U	130 J	39 U	34 U	45 U	38 U	39 U
2,2'-Oxybis(1-chloropropane)	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
2,4,5-TRICHLOROPHENOL	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
2,4,6-Trichlorophenol	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
2,4-DICHLOROPHENOL	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
2,4-DIMETHYLPHENOL	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
2,4-DINITROPHENOL	720 U	750 U	780 U	780 U	710 U	1400 U	770 U	690 U	910 U	760 U	780 U
2,4-Dinitrotoluene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
2,6-Dinitrotoluene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
2-Chloronapthalene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
2-CHLOROPHENOL	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
2-Methylnapthalene	4900	37 U	39 U	39 U	35 U	5900	230 J	34 U	45 U	38 U	39 U
2-Methylphenol	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
2-Nitroaniline	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
2-NITROPHENOL	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
3,3'-Dichlorobenzidine	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
3-Nitroaniline	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
4,6-Dinitro-2-methylphenol	180 U	190 U	190 U	190 U	180 U	340 U	190 U	170 U	230 U	190 U	190 U
4-Bromophenyl phenyl ether	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
4-Chloro-3-methylphenol	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
4-Chloroaniline	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
4-Chlorophenyl phenyl ether	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
4-Methylphenol	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
4-Nitroaniline	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
4-Nitrophenol	180 U	190 U	190 U	190 U	180 U	340 U	190 U	170 U	230 U	190 U	190 U
Acenaphthene	180 J	37 U	39 U	72 J	35 U	830	39 U	34 U	45 U	38 U	39 U
Acenaphthylene	100 J	37 U	39 U	42 J	35 U	230 J	39 U	34 U	45 U	38 U	39 U
Anthracene	96 J	37 U	39 U	53 J	35 U	69 U	39 U	120 J	45 U	38 U	39 U
Benzo(a)anthracene	65 J	37 U	39 U	52 J	35 U	69 U	39 U	430	45 U	38 U	39 U
Benzo(a)pyrene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	340 J	45 U	38 U	39 U
Benzo(b)fluoranthene	46 J	37 U	39 U	48 J	35 U	69 U	39 U	410	45 U	38 U	39 U
Benzo(g,h,i)perylene	39 J	37 U	39 U	39 U	35 U	69 U	39 U	180 J	45 U	38 U	39 U
Benzo(k)fluoranthene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	180 J	45 U	38 U	39 U
bis(2-Chloroethoxy)methane	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
bis(2-Chloroethyl)ether	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U

302839

Table 4-6. Analytical Results for Soil Samples Collected from AOC Soil-2, Swale Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-30	P-30	P-30	P-31	P-31	P-31	P-31	P-31	P-33	P-33	P-33
Sample Date	8/19/99	8/19/99	8/19/99	8/20/99	8/20/99	8/20/99	8/20/99	8/20/99	8/23/99	8/23/99	8/23/99
Sample ID	5-6	28-29	14-15	5-6	23-24	0.17-1	18-19	0-0.17	9-10	38-39	28-29
Chemical Name											
bis(2-Ethylhexyl)phthalate	860	150 J	78 U	350 J	79 J	140 U	250 J	69 U	91 U	76 U	100 J
Butyl benzyl phthalate	15000	420	330 J	78 U	260 J	140 U	300 J	69 U	91 U	76 U	78 U
Carbazole	36 U	37 U	39 U	39 U	35 U	69 U	39 U	69 U	45 U	38 U	78 U
Chrysene	120 J	37 U	39 U	75 J	35 U	69 U	49 J	400	45 U	38 U	39 U
Dibenz(a,h)anthracene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	74 J	45 U	38 U	39 U
Dibenzofuran	190 J	37 U	39 U	70 J	35 U	69 U	39 U	34 U	45 U	38 U	39 U
Diethyl phthalate	120 J	75 U	78 U	78 U	71 U	540 J	77 U	69 U	91 U	76 U	78 U
Dimethyl phthalate	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
Di-n-butyl phthalate	1800	75 U	78 U	78 U	71 U	470 J	77 U	69 U	91 U	76 U	78 U
Di-n-octyl phthalate	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
Fluoranthene	95 J	37 U	39 U	74 J	35 U	730	39 U	800	45 U	38 U	39 U
Fluorene	420	37 U	39 U	190 J	35 U	1500	59 J	34 U	45 U	38 U	39 U
Hexachlorobenzene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
Hexachlorobutadiene	72 U	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
Hexachlorocyclopentadiene	180 U	190 U	190 U	190 U	180 U	340 U	190 U	170 U	230 U	190 U	190 U
Hexachloroethane	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
Indeno(1,2,3-cd)pyrene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	220 J	45 U	38 U	39 U
Isophorone	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
Naphthalene	2800	37 U	39 U	39 U	35 U	1300	56 J	34 U	45 U	38 U	39 U
Nitrobenzene	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
n-Nitrosodiphenylamine	870	37 U	39 U	390	35 U	69 U	160 J	34 U	45 U	38 U	39 U
n-Nitrosodipropylamine	36 U	37 U	39 U	39 U	35 U	69 U	39 U	34 U	45 U	38 U	39 U
PENTACHLOROPHENOL	180 U	190 U	190 U	190 U	180 U	340 U	190 U	170 U	230 U	190 U	190 U
Phenanthrene	1000	37 U	39 U	470	35 U	4100	130 J	330 J	45 U	38 U	39 U
PHENOL	120 J	75 U	78 U	78 U	71 U	140 U	77 U	69 U	91 U	76 U	78 U
Pyrene	370	37 U	39 U	370 J	230 J	1500	340 J	570	45 U	38 U	39 U
METALS (mg/kg)											
Aluminum	4040 *	1450 *	3720 *	3710 *	732 *	1530 *	1440 *	5850 *	6700 *	566 *	448 *
Antimony	2.9 U	3.0 U	3.1 U	3.1 U	2.8 U	2.8 UN	3.1 U	2.8 UN	3.6 U	3.1 U	3.1 U
Arsenic	1.6	0.90 B	1.4	0.95 B	0.41 U	1.7 *	0.88 B	5.7 *	3.6	0.45 U	0.45 U
Barium	22.5 *	7.1 B*	13.6 *	25.8 *	3.7 B*	67.9	7.1 B*	40.9	24.1 *	3.6 B*	3.6 B*
Beryllium	0.26 B	0.17 U	0.25 B	0.21 B	0.16 U	0.16 U	0.17 U	0.36 B	0.31 B	0.17 U	0.17 U
Cadmium	0.17 U	0.18 U	0.19 U	0.19 U	0.17 U	0.21 BN	0.18 U	0.48 BN	0.22 U	0.18 U	0.19 U
Calcium	140 N*	98.2 N*	77.1 N*	128 N*	73.6 N*	235	155 N*	2690	71.7 N*	100 N*	176 N*
Chromium	6.5 N*	4.2 BN*	10.2 N*	5.6 N*	3.6 BN*	6.7 N	3.2 BN*	21.4 N	12.5 N*	7.7 N*	3.1 BN*
Cobalt	1.1 B	1.1 U	1.2 U	1.2 U	1.1 U	1.0 U	1.1 U	4.4 B	3.3 B	1.1 U	1.2 U
Copper	2.4 B	3.2 B	4.6 B	1.8 B	0.90 B	4.7 *	1.1 B	10.4 *	5.6	2.3 B	0.75 B
Iron	3320 *	1680 *	3520 *	3110 *	1310 *	4700	1540 *	13400	11200 *	703 *	1220 *

302840

Table 4-6. Analytical Results for Soil Samples Collected from AOC Soil-2, Swale Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-30	P-30	P-30	P-31	P-31	P-31	P-31	P-31	P-33	P-33	P-33
Sample Date	8/19/99	8/19/99	8/19/99	8/20/99	8/20/99	8/20/99	8/20/99	8/20/99	8/23/99	8/23/99	8/23/99
Sample ID	5-6	28-29	14-15	5-6	23-24	0.17-1	18-19	0-0.17	9-10	38-39	28-29
Chemical Name											
Lead	32.4 *	2.3 *	4.0 *	5.4 *	1.1 *	244	5.0 *	45.7	5.4 *	1.5 *	1.8 *
Magnesium	287 N*	70.8 N*	214 N*	305 N*	50.9 N*	174 N*	141 N*	2840 N*	604 N*	48.8 N*	67.1 N*
Manganese	23.3 N*	5.1 N*	7.8 N*	24.2 N*	5.5 N*	11.3	10.7 N*	344	34.8 N*	11.0 N*	8.1 N*
Mercury	0.019 B	0.0054 U	0.0056 U	0.0070 B	0.0051 U	0.0089 BN	0.0056 U	0.079 BN	0.0091 B	0.0055 U	0.0056 U
Nickel	2.7 B	1.1 U	1.4 B	3.0 B	1.0 U	3.3 B	1.1 U	9.5	5.2 B	1.1 U	1.1 U
Potassium	240 N*	276 N*	653 N*	164 N*	119 N*	269 N*	209 N*	956 N*	1090 N*	35.5 UN*	42.3 BN*
Selenium	0.44 U	0.46 U	0.48 U	0.48 U	0.43 U	0.42 U	0.47 U	0.42 U	0.55 U	0.47 U	0.48 U
Silver	0.84 U	0.87 U	0.91 U	0.91 U	0.82 U	0.81 U	0.90 U	0.80 U	1.1 U	0.89 U	0.91 U
Sodium	70.9 B	54.5 B	47.6 B	65.7 B	87.9 B	73.6 BN*	106 B	103 N	87.4 B	99.6 B	146
Thallium	0.74 U	0.76 U	0.79 U	0.79 U	0.72 U	0.70 U	0.78 U	0.70 U	0.92 U	0.78 U	0.79 U
Vanadium	9.7 *	9.6 *	27.4 *	7.0 *	3.4 *	19.1 N*	4.8 *	20.2 N*	20.0 *	14.5 *	2.7 *
Zinc	18.3 *	2.4 B*	7.1 B*	10.3 B*	2.1 B*	60.3 N*	4.2 B*	48.5 N*	13.2 B*	2.6 B*	4.0 B*
POLYCHLORINATED BIPHENYLS (ug/kg)											
Aroclor-1016	36 U	3.7 U	3.8 U	3.8 U	3.5 U	34 U	3.8 U	6.8 U	4.5 U	3.8 U	3.8 U
Aroclor-1221	84 U	8.7 U	9.1 U	9.1 U	8.3 U	81 U	9.0 U	16 U	11 U	8.9 U	9.1 U
Aroclor-1232	100 U	10. U	11 U	11 U	9.9 U	96 U	11 U	19 U	13 U	11 U	11 U
Aroclor-1242	76 U	7.8 U	8.2 U	8.1 U	7.5 U	72 U	8.1 U	14 U	9.5 U	8.0 U	8.2 U
Aroclor-1248	2600 D	34	9.2 U	160	44	1200	36	16 U	11 U	9.0 U	9.2 U
Aroclor-1254	36 U	3.7 U	3.8 U	3.8 U	3.5 U	34 U	3.8 U	200	4.5 U	3.8 U	3.8 U
Aroclor-1260	410 D	10 J	3.8 U	150	16 J	720	21	250	4.5 U	3.8 U	3.8 U
PETROLEUM HYDROCARBONS (mg/kg)											
PHC as Diesel Fuel	2600	68	22	6400	14	400.	94.	16.	5.4 U	4.6 U	20.
PHC as Gasoline	270	11	0.23 U	58	0.21 U	2.1 U	0.23 U	0.21 U	1.5	0.23 U	0.93 U
GENERAL CHEMISTRY											
pH (S.U.)	6.33	6.13	5.61	6.91	7.35	7.10	6.99	6.11	5.73	6.05	8.92
Total Organic Carbon (mg/kg)	3000	275	783	1560	167	2100	370	2230	520	56 J	52 J
Cation Exchange Capacity (mequiv/10(	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	339	319	317	310	286	202	275	255	308	217	252

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

302841

Table 4-6. Analytical Results for Soil Samples Collected from AOC Soil-2, Swale Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-30	P-30	P-30	P-31	P-31	P-31	P-31	P-31	P-33	P-33	P-33
Sample Date	8/19/99	8/19/99	8/19/99	8/20/99	8/20/99	8/20/99	8/20/99	8/20/99	8/23/99	8/23/99	8/23/99
Sample ID	5-6	28-29	14-15	5-6	23-24	0.17-1	18-19	0-0.17	9-10	38-39	28-29
Chemical Name											

B = (Inorganic) Value is <CRDL, but > = IDL.

302842

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-1	L-1	L-1	L-1	P-23	P-23	P-23	P-23	P-24
Sample Date	8/18/99	8/18/99	8/18/99	8/19/99	6/10/99	6/10/99	6/10/99	10/6/00	6/10/99
Sample Depth	36-37	4-5	24-25	44-45	9-9.5	12.5-13	24-24.5	12-12.5	22-22.5
Chemical Name									
VOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,1,1-Trichloroethane	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
1,1,2,2-Tetrachloroethane	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
1,1,2-Trichloroethane	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
1,1-Dichloroethane	130 U	NA	330 U	150 U	200 J	160 U	350 U	NA	130 U
1,1-Dichloroethene	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
1,2-Dichloroethane	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
1,2-Dichloropropane	400 U	NA	980 U	440 U	560 U	490 U	1000 U	NA	380 U
2-Butanone	940 U	NA	2300 U	1000 U	1300 U	1200 U	2400 U	NA	890 U
2-Hexanone	400 U	NA	980 U	440 U	560 U	490 U	1000 U	NA	380 U
4-Methyl-2-pentanone	400 U	NA	980 U	440 U	560 U	490 U	1000 U	NA	380 U
Acetone	940 U	NA	2800 J	1000 U	1300 U	1200 U	2400 U	NA	890 U
Benzene	130 U	NA	1000 J	150 U	10000	3200	350 U	NA	130 U
Bromodichloromethane	270. U	NA	650 U	290. U	380 U	330 U	690 U	NA	250 U
Bromoform	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Bromomethane/ Methyl bromide	400 U	NA	980 U	440 U	560 U	490 U	1000 U	NA	380 U
Carbon disulfide	400 U	NA	980 U	440 U	560 U	490 U	1000 U	NA	380 U
Carbon tetrachloride	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Chlorobenzene	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Chloroethane	400 U	NA	980 U	440 U	560 U	490 U	1000 U	NA	380 U
Chloroform	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Chloromethane	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
cis-1,2-Dichloroethene	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
cis-1,3-Dichloropropene	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Dibromochloromethane	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Ethylbenzene	130 U	NA	330 U	150 U	8000	3200	350 U	NA	130 U
Methylene chloride	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
Styrene	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Tetrachloroethene	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Toluene	130 U	NA	330 U	150 U	3200	3400	350 U	NA	130 U
trans-1,2-Dichloroethene	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
trans-1,3-Dichloropropene	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Trichloroethene	130 U	NA	330 U	150 U	190 U	160 U	350 U	NA	130 U
Vinyl chloride	270 U	NA	650 U	290 U	380 U	330 U	690 U	NA	250 U
Xylenes (Total)	130 U	NA	330 U	150 U	51000	19000	350 U	NA	130 U

302843

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-1	L-1	L-1	L-1	P-23	P-23	P-23	P-23	P-24
Sample Date	8/18/99	8/18/99	8/18/99	8/19/99	6/10/99	6/10/99	6/10/99	10/6/00	6/10/99
Sample Depth	36-37	4-5	24-25	44-45	9-9.5	12.5-13	24-24.5	12-12.5	22-22.5
Chemical Name									
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)									
1,2,4-Trichlorobenzene	41. U	NA	80. U	38. U	2700	210 J	88 U	NA	130 J
1,2-Dichlorobenzene	41. U	NA	80. U	38. U	780 J	42 J	88 U	NA	38 U
1,3-Dichlorobenzene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
1,4-Dichlorobenzene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
2,2'-Oxybis(1-chloropropane)	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
2,4,5-Trichlorophenol	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
2,4,6-Trichlorophenol	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
2,4-Dichlorophenol	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
2,4-Dimethylphenol	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
2,4-Dinitrophenol	820. U	NA	560. U	770. U	980 U	270 U	610 U	NA	260 U
2,4-Dinitrotoluene	41. U	NA	160. U	38. U	280 U	78 U	180 U	NA	76 U
2,6-Dinitrotoluene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
2-Chloronapthalene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
2-Chlorophenol	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
2-Methylnapthalene	41. U	NA	220. J	38. U	81000 D	10000 D	600 J	NA	1400
2-Methylphenol	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
2-Nitroaniline	82. U	NA	80. U	77. U	140 U	39 U	88 U	NA	38 U
2-Nitrophenol	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
3,3'-Dichlorobenzidine	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
3-Nitroaniline	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
4,6-Dinitro-2-methylphenol	200. U	NA	410. U	190. U	700 U	190 U	440 U	NA	190 U
4-Bromophenyl phenyl ether	41. U	NA	160. U	38. U	280 U	78 U	180 U	NA	76 U
4-Chloro-3-methylphenol	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
4-Chloroaniline	82. U	NA	80. U	77. U	140 U	39 U	88 U	NA	38 U
4-Chlorophenyl phenyl ether	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
4-Methylphenol	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
4-Nitroaniline	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
4-Nitrophenol	200. U	NA	410. U	190. U	700 U	190 U	440 U	NA	190 U
Acenaphthene	41. U	NA	80. U	38. U	5400	880	88 U	NA	110 J
Acenaphthylene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
Anthracene	41. U	NA	80. U	38. U	5200	390	88 U	NA	72 J
Benzo(a)anthracene	41. U	NA	80. U	38. U	3300	340 J	88 U	NA	70 J
Benzo(a)pyrene	41. U	NA	80. U	38. U	1300 J	220 J	88 U	NA	38 U
Benzo(b)fluoranthene	41. U	NA	80. U	38. U	1900	270 J	88 U	NA	38 U
Benzo(g,h,i)perylene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
Benzo(k)fluoranthene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U

302844

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-1	L-1	L-1	L-1	P-23	P-23	P-23	P-23	P-24
Sample Date	8/18/99	8/18/99	8/18/99	8/19/99	6/10/99	6/10/99	6/10/99	10/6/00	6/10/99
Sample Depth	36-37	4-5	24-25	44-45	9-9.5	12.5-13	24-24.5	12-12.5	22-22.5
Chemical Name									
bis(2-Chloroethoxy)methane	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
bis(2-Chloroethyl)ether	41. U	NA	130. J	38. U	140 U	39 U	88 U	NA	38 U
bis(2-Ethylhexyl)phthalate	82. U	NA	820.	77. U	3900	390	180 U	NA	520
Butyl benzyl phthalate	82. U	NA	480. J	280. J	280 U	220 J	180 U	NA	130 J
Carbazole	41. U	NA	160. U	38. U	280 U	350 J	180 U	NA	76 U
Chrysene	41. U	NA	80. U	38. U	140 U	400	88 U	NA	120 J
Di-n-butyl phthalate	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
Di-n-octyl phthalate	41. U	NA	80. U	38. U	4000	470	88 U	NA	92 J
Dibenz(a,h)anthracene	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
Dibenzofuran	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
Diethyl phthalate	82. U	NA	160. U	77. U	1200 J	120 J	180 U	NA	76 U
Dimethyl phthalate	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
Fluoranthene	41. U	NA	80. U	38. U	4200	890	100 J	NA	180 J
Fluorene	41. U	NA	80. U	38. U	10000	1200	95 J	NA	210 J
Hexachlorobenzene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
Hexachlorobutadiene	82. U	NA	160. U	77. U	280 U	78 U	180 U	NA	76 U
Hexachlorocyclopentadiene	200. U	NA	410. U	190. U	700 U	190 U	440 U	NA	190 U
Hexachloroethane	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
Indeno(1,2,3-cd)pyrene	41. U	NA	80. U	38. U	140 U	100 J	88 U	NA	38 U
Isophorone	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
n-Nitrosodiphenylamine	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
n-Nitrosodipropylamine	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
Nitrobenzene	41. U	NA	80. U	38. U	140 U	39 U	88 U	NA	38 U
Pentachlorophenol	200. U	NA	410. U	190. U	700 U	190 U	440 U	NA	190 U
Phenanthrene	41. U	NA	100. J	38. U	37000 D	4500	280 J	NA	790
Phenol	82. U	NA	160. U	77. U	280 U	81 J	210 J	NA	76 U
Pyrene	41. U	NA	80. U	38. U	13000	1200	100 J	NA	220 J
METALS (mg/kg)									
Aluminum	3530 *	NA	10100	379 *	1050	2430	7740	NA	868
Antimony	3.3 U	NA	6.5 U	3.1 U	2.80 U	3.10 U	7.10 U	NA	3.10 U
Arsenic	2.4	NA	9.5	0.45 U	0.98 B	1.9	7.8	NA	0.84 B
Barium	12.4 *	NA	87.9	2.1 B*	53.0	26.2	60.8	NA	4.9 B
Beryllium	0.25 B	NA	0.57 B	0.17 U	0.16 U	0.22 B	0.45 B	NA	0.17 U
Cadmium	0.20 U	NA	0.39 U	0.18 U	0.17 U	0.18 U	0.42 U	NA	0.18 U
Calcium	118 N*	NA	1710	51.2 N*	96.6	1260	1220	NA	330
Chromium	9.8 N*	NA	22.7	2.6 BN*	13.5	7.5	14.4	NA	4.9

302845

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-1	L-1	L-1	L-1	P-23	P-23	P-23	P-23	P-24
Sample Date	8/18/99	8/18/99	8/18/99	8/19/99	6/10/99	6/10/99	6/10/99	10/6/00	6/10/99
Sample Depth	36-37	4-5	24-25	44-45	9-9.5	12.5-13	24-24.5	12-12.5	22-22.5
Chemical Name									
Cobalt	1.2 U	NA	6.8 B	1.1 U	1.00 U	1.2 B	3.7 B	NA	1.10 U
Copper	2.0 B	NA	7.8 B	0.40 B	1.7 B	2.4 B	8.4 B	NA	0.80 B
Iron	4310 *	NA	12900	390 *	1810	3810	10600	NA	1490
Lead	2.8 *	NA	25.6	1.6 *	31.0	14.7	16.7	NA	2.1
Magnesium	321 N*	NA	1880 N	27.5 BN*	170	754	1250	NA	176
Manganese	20.6 N*	NA	152	6.7 N*	8.0	73.2	70.6	NA	36.4
Mercury	0.0065 B	NA	0.039 B	0.0056 U	5.1e-03 U	0.0083 B	0.067 B	NA	5.5e-03 U
Nickel	2.8 B	NA	12.1	1.1 U	1.3 B	2.8 B	7.6 B	NA	1.10 U
Potassium	475 N*	NA	943	35.6 UN*	201 N*	364 N*	648 N*	NA	149 N*
Selenium	0.50 U	NA	0.99 UN	0.47 U	0.43 U	0.47 U	1.10 U	NA	0.46 U
Silver	0.95 U	NA	1.9 U	0.90 U	0.82 U	0.90 U	2.10 U	NA	0.88 U
Sodium	121 B	NA	1120	94.8 B	16.70 U	942	681	NA	125
Thallium	0.83 U	NA	1.6 U	0.78 U	0.71 U	0.79 U	1.80 U	NA	0.77 U
Vanadium	13.5 *	NA	27.7	3.7 *	3.8	4.5	20.0	NA	3.3
Zinc	19.6 *	NA	42.0	2.4 B*	19.9	20.6	34.8	NA	4.1 B
POLYCHLORINATED BIPHENYLS (ug/kg)									
Aroclor-1016	4.0 U	NA	8.0 U	3.8 U	1700 U	190 U	8.80 U	NA	75 U
Aroclor-1221	9.5 U	NA	19. U	9.0 U	1700 U	190 U	8.80 U	NA	75 U
Aroclor-1232	11. U	NA	22. U	11. U	1700 U	190 U	8.80 U	NA	75 U
Aroclor-1242	8.6 U	NA	110	8.0 U	1700 U	190 U	8.80 U	NA	75 U
Aroclor-1248	9.7 U	NA	19. U	9.1 U	1700 U	190 U	46	NA	690
Aroclor-1254	4.0 U	NA	8.0 U	3.8 U	1700 U	190 U	8.80 U	NA	75 U
Aroclor-1260	4.0 U	NA	170	3.8 U	19000	2000	80	NA	1600
PETROLEUM HYDROCARBONS (mg/kg)									
PHC as Diesel Fuel	4.9 U	NA	470.	4.6 U	37000.	1700.	550.	NA	1800.
PHC as Gasoline	0.24 U	NA	4.8 U	0.23 U	350.	28.	11.00 ND	NA	24.
#6 Fuel Oil	10. U	NA	300. U	10. U	NA	NA	NA	NA	NA
10W-40 Motor Oil	10. U	NA	300. U	10. U	NA	NA	NA	NA	NA
Gasoline	4. U	NA	70. U	3. U	NA	NA	NA	NA	NA
Kerosene	4. U	NA	70. U	3. U	NA	NA	NA	NA	NA
Mineral Spirits	4. U	NA	70. U	3. U	NA	NA	NA	NA	NA

302846

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	L-1	L-1	L-1	L-1	P-23	P-23	P-23	P-23	P-24
Sample Date	8/18/99	8/18/99	8/18/99	8/19/99	6/10/99	6/10/99	6/10/99	10/6/00	6/10/99
Sample Depth	36-37	4-5	24-25	44-45	9-9.5	12.5-13	24-24.5	12-12.5	22-22.5
Chemical Name									
GENERAL CHEMISTRY									
pH (S.U.)	6.60	5.64	5.54	7.57	6.87	8.39	6.38	NA	8.91
Total Organic Carbon (mg/kg)	NA	NA	NA	NA	3310.	3300.	21100.	NA	870.
Total Organic Carbon (Quad)	367.	810.	7600.	176.	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	34.7	105.	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	154.	302	330.	302.	193.	116.	296.	NA	192.

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302847

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-24	P-24	PB-3	PB-3	PB-3	PB-4	PB-4	PB-4
Sample Date	6/10/99	6/10/99	6/21/99	6/21/99	6/21/99	6/18/99	6/18/99	6/18/99
Sample Depth	35.5-36	10-10.5	3-4	6-7	9-10	9.5-10	5-5.5	6-7
Chemical Name								
VOLATILE ORGANIC COMPOUNDS								
1,1,1-Trichloroethane	160 U	130.00 U	130 U	120 U	140 U	230 J	130 U	130 U
1,1,2,2-Tetrachloroethane	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
1,1,2-Trichloroethane	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
1,1-Dichloroethane	160 U	3300	130 U	120 U	140 U	550 J	130 U	130 U
1,1-Dichloroethene	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
1,2-Dichloroethane	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
1,2-Dichloropropane	480 U	380.00 U	400 U	370 U	410 U	470 U	390 U	380 U
2-Butanone	1100 U	880.00 U	920 U	860 U	950 U	1100 U	910 U	900 U
2-Hexanone	480 U	380.00 U	400 U	370 U	410 U	470 U	390 U	380 U
4-Methyl-2-pentanone	480 U	380.00 U	400 U	370 U	410 U	470 U	390 U	380 U
Acetone	1100 U	880.00 U	920 U	860 U	950 U	1100 U	910 U	900 U
Benzene	160 U	3700	130 U	1600	460 J	1300	220 J	140 J
Bromodichloromethane	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
Bromoform	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Bromomethane/ Methyl bromide	480 U	380.00 U	400 U	370 U	410 U	470 U	390 U	380 U
Carbon disulfide	480 U	380.00 U	400 U	370 U	410 U	470 U	390 U	380 U
Carbon tetrachloride	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Chlorobenzene	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Chloroethane	480 U	3800	400 U	370 U	410 U	470 U	390 U	380 U
Chloroform	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Chloromethane	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
cis-1,2-Dichloroethene	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
cis-1,3-Dichloropropene	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Dibromochloromethane	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Ethylbenzene	160 U	12000	180 J	1200	400 J	46000	23000	4700
Methylene chloride	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
Styrene	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Tetrachloroethene	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Toluene	160 U	9800	130 U	300 J	140 U	8300	3100	1700
trans-1,2-Dichloroethene	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
trans-1,3-Dichloropropene	160 U	130.00 U	130 U	120 U	140 U	160 U	130 U	130 U
Trichloroethene	160 U	130.00 U	130 U	120 U	140 U	220 J	130 U	130 U
Vinyl chloride	320 U	250.00 U	260 U	250 U	270 U	310 U	260 U	260 U
Xylenes (Total)	160 U	56000	810	9200	3900	170000 D	64000	12000

302848

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-24	P-24	PB-3	PB-3	PB-3	PB-4	PB-4	PB-4
Sample Date	6/10/99	6/10/99	6/21/99	6/21/99	6/21/99	6/18/99	6/18/99	6/18/99
Sample Depth	35.5-36	10-10.5	3-4	6-7	9-10	9.5-10	5-5.5	6-7
Chemical Name								
SEMIVOLATILE ORGANIC COMPO								
1,2,4-Trichlorobenzene	42 U	840	350	720	810	1300	1200	3600
1,2-Dichlorobenzene	42 U	150 J	35 U	37 J	71 U	160 J	96 J	440 J
1,3-Dichlorobenzene	42 U	51 J	35 U	50 J	76 J	74 J	62 J	220 J
1,4-Dichlorobenzene	42 U	36 U	35 U	35 U	92 J	240 J	170 J	730
2,2'-Oxybis(1-chloropropane)	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
2,4,5-Trichlorophenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
2,4,6-Trichlorophenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
2,4-Dichlorophenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
2,4-Dimethylphenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
2,4-Dinitrophenol	290 U	250 U	240 U	240 U	500 U	260 U	240 U	490 U
2,4-Dinitrotoluene	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
2,6-Dinitrotoluene	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
2-Chloronapthalene	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
2-Chlorophenol	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
2-Methylnapthalene	42 U	6900 D	3300	7600 D	9800	5800	4200	20000 D
2-Methylphenol	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
2-Nitroaniline	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
2-Nitrophenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
3,3'-Dichlorobenzidine	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
3-Nitroaniline	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
4,6-Dinitro-2-methylphenol	210 U	180 U	180 U	180 U	350 U	190 U	180 U	350 U
4-Bromophenyl phenyl ether	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
4-Chloro-3-methylphenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
4-Chloroaniline	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
4-Chlorophenyl phenyl ether	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
4-Methylphenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
4-Nitroaniline	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
4-Nitrophenol	210 U	180 U	180 U	180 U	350 U	190 U	180 U	350 U
Acenaphthene	42 U	470	360	1300	860	38 U	35 U	1500
Acenaphthylene	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
Anthracene	42 U	36 U	130 J	35 U	71 U	150 J	110 J	630 J
Benzo(a)anthracene	42 U	480	220 J	850	980	120 J	250 J	460 J
Benzo(a)pyrene	42 U	170 J	97 J	250 J	280 J	38 U	35 U	70 U
Benzo(b)fluoranthene	42 U	220 J	190 J	520	540 J	38 U	35 U	70 U
Benzo(g,h,i)perylene	42 U	36 U	82 J	35 U	280 J	38 U	35 U	70 U
Benzo(k)fluoranthene	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U

302849

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-24	P-24	PB-3	PB-3	PB-3	PB-4	PB-4	PB-4
Sample Date	6/10/99	6/10/99	6/21/99	6/21/99	6/21/99	6/18/99	6/18/99	6/18/99
Sample Depth	35.5-36	10-10.5	3-4	6-7	9-10	9.5-10	5-5.5	6-7
Chemical Name								
bis(2-Chloroethoxy)methane	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
bis(2-Chloroethyl)ether	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
bis(2-Ethylhexyl)phthalate	83 U	1600	250 J	590	710 J	1200	1200	3600
Butyl benzyl phthalate	83 U	72 U	70 U	530	140 U	76 U	70 U	140 U
Carbazole	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
Chrysene	42 U	36 U	190 J	380	380 J	190 J	35 U	430 J
Di-n-butyl phthalate	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
Di-n-octyl phthalate	42 U	360	35 U	35 U	71 U	270 J	35 U	940
Dibenz(a,h)anthracene	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
Dibenzofuran	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
Diethyl phthalate	83 U	200 J	70 U	70 U	160 J	96 J	70 U	140 U
Dimethyl phthalate	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
Fluoranthene	42 U	550	560	930	1200	280 J	220 J	750
Fluorene	42 U	930	400	1500	1700	580	570	2300
Hexachlorobenzene	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
Hexachlorobutadiene	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
Hexachlorocyclopentadiene	210 U	180 U	180 U	180 U	350 U	190 U	180 U	350 U
Hexachloroethane	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
Indeno(1,2,3-cd)pyrene	42 U	49 J	86 J	240 J	280 J	38 U	35 U	70 U
Isophorone	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
n-Nitrosodiphenylamine	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
n-Nitrosodipropylamine	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
Nitrobenzene	42 U	36 U	35 U	35 U	71 U	38 U	35 U	70 U
Pentachlorophenol	210 U	180 U	180 U	180 U	350 U	190 U	180 U	350 U
Phenanthrene	42 U	3500	2000	5000 D	6300	2000	1500	6500
Phenol	83 U	72 U	70 U	70 U	140 U	76 U	70 U	140 U
Pyrene	42 U	1700	990	1700	2000	340 J	250 J	1300
METALS (mg/kg)								
Aluminum	334	900	2090	1350	817	834	1390	1760
Antimony	3.40 U	2.90 U	2.8 U	2.8 U	2.9 U	3.1 U	2.8 U	2.8 U
Arsenic	0.49 U	0.55 B	1.1	0.89 B	0.71 B	0.59 B	0.96 B	1.2
Barium	2.8 B	9.4 B	11.2	16.7	11.9	3.7 B	5.9 B	20.0
Beryllium	0.19 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U
Cadmium	0.20 U	0.17 U	0.17 U	0.17 U	0.17 U	0.18 U	0.17 U	0.17 U
Calcium	64.2	142	458 N*	356 N*	66.3 N*	53.5 N*	105 N*	980 N*
Chromium	1.7 B	6.2	6.3 N	5.9 N	3.1 BN	3.7 BN	5.0 N	14.8 N

302850

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-24	P-24	PB-3	PB-3	PB-3	PB-4	PB-4	PB-4
Sample Date	6/10/99	6/10/99	6/21/99	6/21/99	6/21/99	6/18/99	6/18/99	6/18/99
Sample Depth	35.5-36	10-10.5	3-4	6-7	9-10	9.5-10	5-5.5	6-7
Chemical Name								
Cobalt	1.30 U	1.10 U	1.0 U	1.0 U	1.1 U	1.1 U	1.2 B	1.0 U
Copper	0.61 B	0.65 B	1.6 BN	1.7 BN	0.89 BN	0.75 BN	1.2 BN	2.8 BN
Iron	429	1630	3080	3060	1690	1310	2880	4470
Lead	0.58 B	5.2	3.2	6.6	5.2	2.0	2.8	18.5
Magnesium	50.8	149	527	238	138	126	190	514
Manganese	5.5	30.1	20.9	13.3	7.6	5.6	14.6	197
Mercury	6.0e-03 U	5.2e-03 U	0.0050 U	0.010 B	0.0051 U	0.0055 U	0.0051 U	0.0050 U
Nickel	1.20 U	1.00 U	2.3 B	1.7 B	1.2 B	1.2 B	1.7 B	2.5 B
Potassium	80.8 N*	191 N*	368 N	214 N	89.4 N	140 N	214 N	287 N
Selenium	0.52 U	0.43 U	0.43 U	0.43 U	0.44 U	0.46 U	0.43 U	0.43 U
Silver	0.98 U	0.82 U	0.82 U	0.82 U	0.83 U	0.88 U	0.81 U	0.81 U
Sodium	31.9 B	16.90 U	55.1 B	30.1 B	31.5 B	18.1 U	16.7 U	16.6 U
Thallium	0.86 U	0.72 U	0.71 U	0.71 U	0.72 U	0.77 U	0.80 B	0.71 U
Vanadium	2.3 B	3.6	7.2	6.5	3.8	3.1	5.4	11.4
Zinc	1.7 B	3.2 B	7.5 B	6.6 B	4.7 B	3.4 B	5.1 B	11.6
POLYCHLORINATED BIPHENYLS (								
Aroclor-1016	4.20 U	360 U	170. U	170. U	180. U	190. U	170. U	170. U
Aroclor-1221	4.20 U	360 U	170. U	170. U	180. U	190. U	170. U	170. U
Aroclor-1232	4.20 U	360 U	170. U	170. U	180. U	190. U	170. U	170. U
Aroclor-1242	4.20 U	360 U	170. U	170. U	180. U	190. U	170. U	170. U
Aroclor-1248	4.20 U	4200	490 J	1500	1400 P	2500 P	2800 P	4000 P
Aroclor-1254	4.20 U	360 U	170. U	170. U	180. U	190. U	170. U	170. U
Aroclor-1260	4.20 U	10000	1900	6800	6800 P	7000 P	8400	12000 P
PETROLEUM HYDROCARBONS (m								
PHC as Diesel Fuel	38.	18000.	1400.	18000.	21000.	9600.	11000.	14000.
PHC as Gasoline	0.31 J	110.	220.	98.	57.	670.	1200.	1300.
#6 Fuel Oil	NA	NA	NA	NA	NA	NA	NA	NA
10W-40 Motor Oil	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene	NA	NA	NA	NA	NA	NA	NA	NA
Mineral Spirits	NA	NA	NA	NA	NA	NA	NA	NA

302851

Table 4-7. Analytical Results for Soil Samples Collected from AOC-HotSpot2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-24	P-24	PB-3	PB-3	PB-3	PB-4	PB-4	PB-4
Sample Date	6/10/99	6/10/99	6/21/99	6/21/99	6/21/99	6/18/99	6/18/99	6/18/99
Sample Depth	35.5-36	10-10.5	3-4	6-7	9-10	9.5-10	5-5.5	6-7
Chemical Name								
GENERAL CHEMISTRY								
pH (S.U.)	7.96	7.79	6.87	8.17	7.60	7.13	6.44	7.04
Total Organic Carbon (mg/kg)	181.	1890.	2370.	1630.	1590.	2100.	900.	1810.
Total Organic Carbon (Quad)	NA	NA	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity (mequiv/100g)	NA	NA	NA	NA	NA	NA	NA	NA
ORP Observed (mv)	174.	169.	223.	188.	150.	185.	232.	190.

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within C
* = Duplicate analysis not within control li
P = Concentration difference between prin
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = 1

302852

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-35	P-35	P-35	P-38	P-38	P-38	P-39	P-39	P-39	P-40	P-40	P-40
Sample Date	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/16/99	8/16/99	8/16/99	8/18/99	8/18/99	8/18/99
Sample ID	23-24	8-9	19-20	14-15	29-30	3-4	21-22	26-27	39-40	24-25	1-3	19-20
Chemical Name												
VOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,1,1-Trichloroethane	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
1,1,2,2-Tetrachloroethane	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
1,1,2-Trichloroethane	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
1,1-Dichloroethane	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
1,1-Dichloroethene	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
1,2-Dichloroethane	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
1,2-Dichloropropane	430 U	430 U	430 U	400 U	480 U	470 U	440 U	480 U	410 U	360 U	380 U	440 U
2-Butanone	1000 U	1000 U	1000 U	940 U	1100 U	1100 U	1000 U	1100 U	950 U	850 U	880 U	1000 U
2-Hexanone	430 U	430 U	430 U	400 U	480 U	470 U	440 U	480 U	410 U	360 U	380 U	440 U
4-Methyl-2-pentanone	430 U	430 U	430 U	400 U	480 U	470 U	440 U	480 U	410 U	360 U	380 U	440 U
Acetone	1000 U	1000 U	1000 U	940 U	1100 U	1100 U	2300 J	1100 U	950 U	850 U	880 U	1000 U
Benzene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Bromodichloromethane	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240. U	250. U	300. U
Bromoform	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Bromomethane/ Methyl bromide	430 U	430 U	430 U	400 U	480 U	470 U	440 U	480 U	410 U	360 U	380 U	440 U
Carbon disulfide	430 U	430 U	430 U	400 U	480 U	470 U	440 U	480 U	410 U	360 U	380 U	440 U
Carbon tetrachloride	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Chlorobenzene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Chloroethane	430 U	430 U	430 U	400 U	480 U	470 U	440 U	480 U	410 U	360 U	380 U	440 U
Chloroform	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Chloromethane	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
cis-1,2-Dichloroethene	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
cis-1,3-Dichloropropene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Dibromochloromethane	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Ethylbenzene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Methylene chloride	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
Styrene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Tetrachloroethene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Toluene	700 J	140 U	140 U	130 U	160 U	160 U	140 U	160 U	1400	120 U	120 U	150 U
trans-1,2-Dichloroethene	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
trans-1,3-Dichloropropene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Trichloroethene	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Vinyl chloride	290 U	290 U	290 U	270 U	320 U	310 U	290 U	320 U	270 U	240 U	250 U	300 U
Xylenes (Total)	140 U	140 U	140 U	130 U	160 U	160 U	140 U	160 U	140 U	120 U	120 U	150 U
Total TICs												

302853

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-35	P-35	P-35	P-38	P-38	P-38	P-39	P-39	P-39	P-40	P-40	P-40
Sample Date	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/16/99	8/16/99	8/16/99	8/18/99	8/18/99	8/18/99
Sample ID	23-24	8-9	19-20	14-15	29-30	3-4	21-22	26-27	39-40	24-25	1-3	19-20
Chemical Name												
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)												
1,2,4-Trichlorobenzene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
1,2-Dichlorobenzene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
1,3-Dichlorobenzene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
1,4-Dichlorobenzene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2,2'-Oxybis(1-chloropropane)	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2,4,5-Trichlorophenol	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
2,4,6-Trichlorophenol	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
2,4-Dichlorophenol	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
2,4-Dimethylphenol	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
2,4-Dinitrophenol	790 U	770 U	820 U	740 U	810 U	830 U	320 U	340 U	330 U	740 U	720 U	810 U
2,4-Dinitrotoluene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2,6-Dinitrotoluene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2-Chloronapthalene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2-Chlorophenol	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2-Methylnapthalene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2-Methylphenol	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
2-Nitroaniline	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
2-Nitrophenol	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
3,3'-Dichlorobenzidine	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
3-Nitroaniline	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
4,6-Dinitro-2-methylphenol	200 U	190 U	200 U	190 U	200 U	210 U	190 U	200 U	200 U	180 U	180 U	200 U
4-Bromophenyl phenyl ether	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
4-Chloro-3-methylphenol	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
4-Chloroaniline	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
4-Chlorophenyl phenyl ether	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
4-Methylphenol	79 U	77 U	82 U	74 U	81 U	110 J	76 U	81 U	80 U	74 U	72 U	81 U
4-Nitroaniline	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
4-Nitrophenol	200 U	190 U	200 U	190 U	200 U	210 U	190 U	200 U	200 U	180 U	180 U	200 U
Acenaphthene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Acenaphthylene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Anthracene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Benzo(a)anthracene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Benzo(a)pyrene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Benzo(b)fluoranthene	40 U	38 U	41 U	37 U	40 U	67 J	38 U	40 U	40 U	37 U	36 U	41 U
Benzo(g,h,i)perylene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U

302854

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-35	P-35	P-35	P-38	P-38	P-38	P-39	P-39	P-39	P-40	P-40	P-40
Sample Date	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/16/99	8/16/99	8/16/99	8/18/99	8/18/99	8/18/99
Sample ID	23-24	8-9	19-20	14-15	29-30	3-4	21-22	26-27	39-40	24-25	1-3	19-20
Chemical Name												
Benzo(k)fluoranthene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
bis(2-Chloroethoxy)methane	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
bis(2-Chloroethyl)ether	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
bis(2-Ethylhexyl)phthalate	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Butyl benzyl phthalate	79 U	77 U	82 U	160 J	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Carbazole	79 U	38 U	82 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Chrysene	40 U	38 U	41 U	37 U	40 U	48 J	38 U	40 U	40 U	37 U	36 U	41 U
Dibenz(a,h)anthracene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Dibenzofuran	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Diethyl phthalate	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Dimethyl phthalate	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Di-n-butyl phthalate	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Di-n-octyl phthalate	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Fluoranthene	40 U	38 U	41 U	37 U	40 U	57 J	38 U	40 U	40 U	37 U	36 U	41 U
Fluorene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Hexachlorobenzene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Hexachlorobutadiene	79 U	77 U	82 U	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Hexachlorocyclopentadiene	200 U	190 U	200 U	190 U	200 U	210 U	190 U	200 U	200 U	180 U	180 U	200 U
Hexachloroethane	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Indeno(1,2,3-cd)pyrene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Isophorone	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Naphthalene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Nitrobenzene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
n-Nitrosodiphenylamine	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
n-Nitrosodipropylamine	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Pentachlorophenol	200 U	190 U	200 U	190 U	200 U	210 U	190 U	200 U	200 U	180 U	180 U	200 U
Phenanthrene	40 U	38 U	41 U	37 U	40 U	41 U	38 U	40 U	40 U	37 U	36 U	41 U
Phenol	79 U	77 U	970	74 U	81 U	83 U	76 U	81 U	80 U	74 U	72 U	81 U
Pyrene	40 U	38 U	41 U	37 U	40 U	66 J	38 U	40 U	40 U	37 U	36 U	41 U
METALS (mg/kg)												
Aluminum	3390 *	4510 *	1550 *	3260 *	1530 *	2650 *	769	1440	3000	2290 *	949	1510 *
Antimony	3.1 UN	3.0 UN	3.3 UN	3.0 UN	3.3 UN	3.3 UN	3.1 U	3.2 U	3.2 U	3.0 U	2.9 U	3.3 U
Arsenic	1.8 *	2.5 *	0.48 U*	5.8 *	0.87 B*	2.5 *	0.65 B	0.71 B	0.98 B	2.3	1.1	1.5
Barium	22.0	24.7	5.8 B	24.1	5.9 B	20.8	3.2 B	5.9 B	13.5	8.9 B*	4.5 B	6.8 B*
Beryllium	0.26 B	0.25 B	0.19 U	0.33 B	0.18 U	0.18 U	0.17 U	0.18 U	0.18 B	0.17 U	0.16 U	0.18 U

302855

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-35	P-35	P-35	P-38	P-38	P-38	P-39	P-39	P-39	P-40	P-40	P-40
Sample Date	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/16/99	8/16/99	8/16/99	8/18/99	8/18/99	8/18/99
Sample ID	23-24	8-9	19-20	14-15	29-30	3-4	21-22	26-27	39-40	24-25	1-3	19-20
Chemical Name												
Cadmium	0.18 UN	0.23 BN	0.20 UN	0.45 BN	0.19 UN	0.21 BN	0.18 UN	0.19 UN	0.19 UN	0.18 U	0.17 U	0.19 U
Calcium	172	273	43.7	546	62.2	557	71.7	158	263	30.9 BN*	74.2	56.6 N*
Chromium	9.6 N	11.2 N	6.7 N	20.7 N	4.6 BN	5.4 N	4.8	5.2	9.3	8.6 N*	5.8	4.9 N*
Cobalt	1.2 U	2.2 B	1.2 U	1.1 B	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U
Copper	7.9 *	5.2 *	1.6 B*	8.5 *	2.0 B*	6.1 *	3.3 B	2.4 B	13.7	3.3 B	1.6 B	1.7 B
Iron	2160	8170	1710	15500	2450	3730	2380	2860	1540	1380 *	1370	2820 *
Lead	4.5	11.2	1.9	9.0	1.5	29.3	1.4	3.3	1.7	3.3 *	2.7	1.9 *
Magnesium	212 N*	765 N*	83.8 N*	224 N*	96.7 N*	266 N*	60.4 *	177 *	166 *	85.5 N*	86.9 N	115 N*
Manganese	8.7	35.9	4.4	49.1	6.6	92.8	7.3	17.0	10.7	3.6 N*	6.5	7.5 N*
Mercury	0.0055 UN	0.0066 BN	0.0058 UN	0.011 BN	0.0057 UN	0.073 BN	0.0055 U	0.0058 U	0.0058 U	0.0090 B	0.0052 U	0.0059 U
Nickel	1.3 B	5.1 B	1.2 U	2.1 B	1.2 U	3.1 B	1.1 U	1.2 U	1.2 U	1.1 U	1.0 U	1.2 U
Potassium	515 N*	694 N*	267 N*	564 N*	208 N*	262 N*	162 *	250 *	447 *	462 N*	151	198 N*
Selenium	0.47 U	0.46 U	0.51 U	0.45 U	0.50 U	0.50 U	0.47 U	0.49 U	0.49 U	0.45 U	0.44 UN	0.50 U
Silver	0.90 U	0.88 U	0.96 U	0.86 U	0.94 U	0.95 U	0.89 U	0.93 U	0.93 U	0.86 U	0.84 U	0.94 U
Sodium	122 N	149 N	181 N	95.2 BN	63.9 BN	19.5 UN	76.7 B	147	19.1 U	42.1 B	26.3 B	40.1 B
Thallium	0.79 U	0.77 U	0.84 U	0.75 U	0.82 U	0.83 U	0.78 U	0.81 U	0.81 U	0.75 U	0.74 U	0.82 U
Vanadium	29.1 N*	15.2 N*	12.5 N*	38.7 N*	12.5 N*	11.7 N*	8.9	8.7	22.6	11.8 *	6.9	8.7 *
Zinc	3.6 BN*	14.5 N*	2.7 BN*	8.9 BN*	3.8 BN*	18.0 N*	3.3 B	4.2 B	4.0 B	3.0 B*	5.5 B	7.8 B*
POLYCHLORINATED BIPHENYLS (ug/kg)												
Aroclor-1016	3.9 U	3.8 U	4.1 U	3.7 U	4.0 U	4.1 U	3.8 U	4.0 U	3.9 U	3.6 U	3.6 U	4.0 U
Aroclor-1221	9.3 U	9.0 U	9.6 U	8.7 U	9.4 U	9.7 U	8.9 U	9.4 U	9.3 U	8.6 U	8.4 U	9.5 U
Aroclor-1232	11. U	11. U	11. U	10. U	11. U	12. U	11. U	11. U	11. U	10. U	10. U	11. U
Aroclor-1242	8.3 U	8.1 U	8.6 U	7.8 U	8.5 U	8.7 U	8.0 U	8.5 U	8.4 U	7.7 U	7.6 U	8.5 U
Aroclor-1248	9.4 U	9.1 U	9.8 U	8.8 U	9.5 U	9.8 U	9.0 U	9.6 U	9.4 U	8.7 U	27	9.6 U
Aroclor-1254	3.9 U	100	4.1 U	3.7 U	4.0 U	4.1 U	3.8 U	4.0 U	3.9 U	3.6 U	3.6 U	4.0 U
Aroclor-1260	3.9 U	65	7.6 JP	22	4.0 U	30	3.8 U	4.8 JP	3.9 U	3.6 U	15 J	4.0 U
PETROLEUM HYDROCARBONS (mg/kg)												
PHC as Diesel Fuel	4.8 U	79	5.9 J	350	20	130	4.6 U	9.3	4.8 U	4.4 U	4.3 U	5.7 J
PHCas Gasoline	0.24 U	0.26 J	0.25 U	0.89 U	0.24 U	5.0 U	0.23 U	0.24 U	1.5	0.22 U	0.22 U	0.24 U
PHC as Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

302856

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-35	P-35	P-35	P-38	P-38	P-38	P-39	P-39	P-39	P-40	P-40	P-40
Sample Date	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/17/99	8/16/99	8/16/99	8/16/99	8/18/99	8/18/99	8/18/99
Sample ID	23-24	8-9	19-20	14-15	29-30	3-4	21-22	26-27	39-40	24-25	1-3	19-20
Chemical Name												
GENERAL CHEMISTRY												
pH (S.U.)	5.06	5.34	5.68	5.82	4.79	6.26	6.21	6.18	4.87	5.43	5.62	5.64
Total Organic Carbon (Quad) (mg/kg)	340	1140	170	143	298	352	158	193	164	207	219	550
ORP Observed (mv)	299	306	256	264	259	312	176	191	296	368	341	318

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-41	P-41	P-42	P-42	P-42	P-43	P-43	P-43	PB-5	PB-5	PB-5
Sample Date	8/16/99	8/16/99	8/5/99	8/5/99	8/5/99	6/8/99	6/8/99	6/9/99	6/18/99	6/18/99	6/18/99
Sample ID	7-8	13-14	10-11	24-25	34-35	18-18.5	4-4.5	31-31.5	9-10	3-4	6-7
Chemical Name											
VOLATILE ORGANIC COMPOUNDS (ug/kg)											
1,1,1-Trichloroethane	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
1,1,2,2-Tetrachloroethane	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
1,1,2-Trichloroethane	240 U	260 U	300 U	260 U	300 U	3 ND	11 ND	2 ND	320 U	270 U	240 U
1,1-Dichloroethane	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
1,1-Dichloroethene	240 U	260 U	300 U	260 U	300 U	3 ND	11 ND	2 ND	320 U	270 U	240 U
1,2-Dichloroethane	240 U	260 U	300 U	260 U	300 U	3 ND	11 ND	2 ND	320 U	270 U	240 U
1,2-Dichloropropane	350 U	380 U	450 U	400 U	450 U	5 ND	17 ND	4 ND	480 U	400 U	360 U
2-Butanone	820 U	900 U	1000 U	930 U	1000 U	11 ND	40 ND	8 ND	1100 U	940 U	830 U
2-Hexanone	350 U	380 U	450 U	400 U	450 U	5 ND	17 ND	4 ND	480 U	400 U	360 U
4-Methyl-2-pentanone	350 U	380 U	450 U	400 U	450 U	5 ND	17 ND	4 ND	480 U	400 U	360 U
Acetone	820 U	900 U	1000 U	930 U	1000 U	14 J	270	32	1100 U	940 U	830 U
Benzene	120 U	130 U	150 U	130 U	150 U	6 J	6 ND	1 ND	160 U	130 U	120 U
Bromodichloromethane	240 U	260 U	300. U	260. U	300. U	3 ND	11 ND	2 ND	320 U	270 U	240 U
Bromoform	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Bromomethane/ Methyl bromide	350 U	380 U	450 U	400 U	450 U	5 ND	17 ND	4 ND	480 U	400 U	360 U
Carbon disulfide	350 U	380 U	450 U	400 U	450 U	5 ND	17 ND	4 ND	480 U	400 U	360 U
Carbon tetrachloride	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Chlorobenzene	120 U	130 U	150 U	130 U	150 U	2 ND	26 J	1 ND	160 U	130 U	120 U
Chloroethane	350 U	380 U	450 U	400 U	450 U	5 ND	17 ND	4 ND	480 U	400 U	360 U
Chloroform	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Chloromethane	240 U	260 U	300 U	260 U	300 U	3 ND	11 ND	2 ND	320 U	270 U	240 U
cis-1,2-Dichloroethene	240 U	260 U	300 U	260 U	300 U	3 ND	11 ND	2 ND	320 U	270 U	240 U
cis-1,3-Dichloropropene	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Dibromochloromethane	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Ethylbenzene	120 U	130 U	150 U	130 U	150 U	3 J	12 J	1 ND	160 U	130 U	120 U
Methylene chloride	240 U	260 U	300 U	260 U	300 U	3 ND	49	3 J	320 U	270 U	240 U
Styrene	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Tetrachloroethene	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Toluene	120 U	130 U	150 U	130 U	150 U	2 J	7 J	1 ND	160 U	130 U	120 U
trans-1,2-Dichloroethene	240 U	260 U	300 U	260 U	300 U	3 ND	11 ND	2 ND	320 U	270 U	240 U
trans-1,3-Dichloropropene	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Trichloroethene	120 U	130 U	150 U	130 U	150 U	2 ND	6 ND	1 ND	160 U	130 U	120 U
Vinyl chloride	240 U	260 U	300 U	260 U	300 U	3 ND	11 ND	2 ND	320 U	270 U	240 U
Xylenes (Total)	120 U	130 U	150 U	130 U	150 U	29	360	1 ND	160 U	280 J	120 U
Total TICs											

302858

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-41	P-41	P-42	P-42	P-42	P-43	P-43	P-43	PB-5	PB-5	PB-5
Sample Date	8/16/99	8/16/99	8/5/99	8/5/99	8/5/99	6/8/99	6/8/99	6/9/99	6/18/99	6/18/99	6/18/99
Sample ID	7-8	13-14	10-11	24-25	34-35	18-18.5	4-4.5	31-31.5	9-10	3-4	6-7
Chemical Name											
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)											
1,2,4-Trichlorobenzene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
1,2-Dichlorobenzene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
1,3-Dichlorobenzene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
1,4-Dichlorobenzene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
2,2'-Oxybis(1-chloropropane)	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
2,4,5-Trichlorophenol	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
2,4,6-Trichlorophenol	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
2,4-Dichlorophenol	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
2,4-Dimethylphenol	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
2,4-Dinitrophenol	300 U	320 U	270 U	270 U	290 U	100 U	260 U	280 U	240 U	230 U	210 U
2,4-Dinitrotoluene	36 U	39 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
2,6-Dinitrotoluene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
2-Chloronapthalene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
2-Chlorophenol	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
2-Methylnapthalene	36 U	39 U	38 U	39 U	41 U	180 J	38 J	40 U	40 U	40 U	36 U
2-Methylphenol	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
2-Nitroaniline	71 U	78 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
2-Nitrophenol	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
3,3'-Dichlorobenzidine	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
3-Nitroaniline	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
4,6-Dinitro-2-methylphenol	180 U	190 U	200 U	200 U	210 U	260 U	190 U	200 U	200 U	200 U	180 U
4-Bromophenyl phenyl ether	36 U	39 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
4-Chloro-3-methylphenol	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
4-Chloroaniline	71 U	78 U	77 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
4-Chlorophenyl phenyl ether	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
4-Methylphenol	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
4-Nitroaniline	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
4-Nitrophenol	180 U	190 U	200 U	200 U	210 U	260 U	190 U	200 U	200 U	200 U	180 U
Acenaphthene	36 U	39 U	38 U	39 U	41 U	52 U	220 J	40 U	40 U	40 U	36 U
Acenaphthylene	36 U	39 U	38 U	39 U	41 U	52 U	86 J	40 U	40 U	40 U	36 U
Anthracene	36 U	39 U	63 J	39 U	41 U	52 U	150 J	40 U	40 U	40 U	36 U
Benzo(a)anthracene	36 U	39 U	67 J	39 U	41 U	52 U	180 J	40 U	40 U	40 U	36 U
Benzo(a)pyrene	36 U	39 U	120 J	39 U	41 U	52 U	220 J	40 U	40 U	40 U	36 U
Benzo(b)fluoranthene	36 U	39 U	100 J	39 U	41 U	52 U	210 J	40 U	40 U	40 U	36 U
Benzo(g,h,i)perylene	36 U	39 U	120 J	39 U	41 U	52 U	150 J	40 U	40 U	40 U	36 U

302859

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-41	P-41	P-42	P-42	P-42	P-43	P-43	P-43	PB-5	PB-5	PB-5
Sample Date	8/16/99	8/16/99	8/5/99	8/5/99	8/5/99	6/8/99	6/8/99	6/9/99	6/18/99	6/18/99	6/18/99
Sample ID	7-8	13-14	10-11	24-25	34-35	18-18.5	4-4.5	31-31.5	9-10	3-4	6-7
Chemical Name											
Benzo(k)fluoranthene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
bis(2-Chloroethoxy)methane	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
bis(2-Chloroethyl)ether	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
bis(2-Ethylhexyl)phthalate	130 J	78 U	160 J	79 U	84 U	380 J	1000	80 U	81 U	79 U	73 U
Butyl benzyl phthalate	71 U	78 U	77 U	79 U	84 U	480 J	76 U	80 U	81 U	79 U	73 U
Carbazole	36 U	39 U	77 U	79 U	84 U	100 U	76 U	80 U	40 U	40 U	36 U
Chrysene	37 J	39 U	220 J	39 U	41 U	59 J	270 J	40 U	40 U	40 U	36 U
Dibenz(a,h)anthracene	36 U	39 U	44 J	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
Dibenzofuran	36 U	39 U	38 U	39 U	41 U	52 U	61 J	40 U	40 U	40 U	36 U
Diethyl phthalate	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
Dimethyl phthalate	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
Di-n-butyl phthalate	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
Di-n-octyl phthalate	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
Fluoranthene	36 U	39 U	80 J	39 U	41 U	68 J	330 J	40 U	40 U	40 U	36 U
Fluorene	36 U	39 U	38 U	39 U	41 U	86 J	290 J	40 U	40 U	40 U	36 U
Hexachlorobenzene	36 U	39 U	38 U	39 U	41 U	5200 U	38 U	40 U	40 U	40 U	36 U
Hexachlorobutadiene	71 U	78 U	77 U	79 U	84 U	100 U	76 U	80 U	81 U	79 U	73 U
Hexachlorocyclopentadiene	180 U	190 U	200 U	200 U	210 U	260 U	190 U	200 U	200 U	200 U	180 U
Hexachloroethane	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
Indeno(1,2,3-cd)pyrene	36 U	39 U	87 J	39 U	41 U	52 U	130 J	40 U	40 U	40 U	36 U
Isophorone	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
Naphthalene	36 U	39 U	38 U	39 U	41 U	150 J	38 U	40 U	40 U	40 U	36 U
Nitrobenzene	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
n-Nitrosodiphenylamine	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
n-Nitrosodipropylamine	36 U	39 U	38 U	39 U	41 U	52 U	38 U	40 U	40 U	40 U	36 U
Pentachlorophenol	180 U	190 U	200 U	200 U	210 U	260 U	190 U	200 U	200 U	200 U	180 U
Phenanthrene	39 J	39 U	45 J	39 U	41 U	190 J	650	40 U	40 U	40 U	36 U
Phenol	71 U	78 U	77 U	79 U	84 U	100 U	91 J	80 U	81 U	79 U	73 U
Pyrene	43 J	39 U	490	39 U	41 U	180 J	630	40 U	40 U	40 U	36 U
METALS (mg/kg)											
Aluminum	6330	8890	7080 *	2330 *	2310 *	8570	5600	683	3300 *	3200 *	3600 *
Antimony	2.9 U	3.2 U	3.1 U	3.2 U	3.4 U	4.10 U	3.00 U	3.20 U	3.2 U	3.2 U	2.9 U
Arsenic	3.3	3.4	3.9	3.1	0.49 U	4.9	3.7	0.47 U	2.1	2	2.3
Barium	64.1	48.5	90.8	13.4	8.9 B	43.8	62.8	3.2 B	13	24	16.3
Beryllium	0.22 B	0.94	0.32 B	0.25 B	0.19 U	0.67 B	0.26 B	0.18 U	0.18 U	0.21 B	0.17 B

302860

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-41	P-41	P-42	P-42	P-42	P-43	P-43	P-43	PB-5	PB-5	PB-5
Sample Date	8/16/99	8/16/99	8/5/99	8/5/99	8/5/99	6/8/99	6/8/99	6/9/99	6/18/99	6/18/99	6/18/99
Sample ID	7-8	13-14	10-11	24-25	34-35	18-18.5	4-4.5	31-31.5	9-10	3-4	6-7
Chemical Name											
Cadmium	0.17 UN	0.19 UN	0.18 U	0.19 U	0.20 U	0.24 U	0.18 U	0.19 U	0.19 U	0.19 U	0.17 U
Calcium	5370	231	1790	125	287	289	1790	85.1	280 N*	910 N*	320 N*
Chromium	24.4	22.9	20.8	43.1	9.4	20.1	14.1	3.9 B	8.6	8.4	10.6
Cobalt	3.6 B	1.7 B	3.6 B	1.2 U	1.3 U	1.50 U	2.4 B	1.20 U	2.6 B	2 B	2.1 B
Copper	10.4	14.0	15.8	17.8	1.4 B	14.6	7.9	1.2 B	3.6 B	3.9 B	3.9 B
Iron	13500	3660	14000	893	609	7550	9160	1380	7000	5300	6600
Lead	41.5	12.7	91.6	8.8	2.6	19.6	50.0	2.5	1.8	4.5	3.4
Magnesium	2920 *	576 *	1850 N	102 N	94.4 N	513	1530	65.1	540 N*	680 N*	660 N*
Manganese	74.1	10.4	69.8	3.1	9.5	14.2	69.9	5.2	28.9 N	37.5 N	29.3 N
Mercury	0.019 B	0.012 B	0.039 BN	0.35 N	0.0061 UN	7.5e-03 U	0.047 B	5.8e-03 U	0.0058 U	0.0079 B	0.0053 U
Nickel	9.6	4.6 B	8.8	1.1 U	1.2 U	3.2 B	5.9	1.20 U	4.8 B	4.5 B	4.6 B
Potassium	1310 *	1190 *	1380 N*	644 N*	222 N*	1420 N*	674 N*	75.1 N*	400 N*	260 N*	370 N*
Selenium	0.43 U	0.48 U	0.47 U	0.48 U	0.52 U	0.67 B	0.46 U	0.49 U	0.49 U	0.49 U	0.44 U
Silver	0.83 U	0.91 U	0.89 U	0.91 U	0.98 U	1.20 U	0.88 U	0.94 U	0.94 U	0.93 U	0.84 U
Sodium	17.0 U	18.7 U	141	51.2 B	103 B	113 B	18.10 U	19.7 B	93.7 BN*	46.5 BN*	47.4 BN*
Thallium	0.72 U	0.89 B	1.8 B	0.80 U	0.85 U	1.00 U	0.97 B	0.82 U	0.82 U	1.4 B	0.74 U
Vanadium	21.0	20.7	30.2 *	48.6 *	14.1 *	38.7	20.3	10.2	10.2	9.6	12.1
Zinc	23.1	11.1 B	35.8	3.7 B	5.3 B	66.9	54.5	15.6	14.5	14.6	13
POLYCHLORINATED BIPHENYLS (ug/kg)											
Aroclor-1016	18. U	3.9 U	38. U	3.9 U	4.1 U	5.10 U	380 U	4 U	4 U	3.9 U	3.6 U
Aroclor-1221	42. U	9.1 U	90. U	9.1 U	9.8 U	5.10 U	380 U	4 U	4 U	3.9 U	3.6 U
Aroclor-1232	50. U	11. U	110. U	11. U	12. U	5.10 U	380 U	4 U	4 U	3.9 U	3.6 U
Aroclor-1242	37. U	8.2 U	81. U	8.2 U	8.8 U	5.10 U	380 U	4 U	4 U	3.9 U	3.6 U
Aroclor-1248	42. U	9.2 U	91. U	9.3 U	9.9 U	160	380 U	25	4 U	3.9 U	3.6 U
Aroclor-1254	18. U	3.9 U	38. U	3.9 U	4.1 U	150	4900	26	4 U	3.9 U	3.6 U
Aroclor-1260	430	12 J	590	3.9 U	4.1 U	100	2400	12 J	7.7 J	7.3 J	35
PETROLEUM HYDROCARBONS (mg/kg)											
PHC as Diesel Fuel	13	4.7 U	3400	160	5.0 U	640	16000.	7.8 J	21	370	4 ND
PHCas Gasoline	0.21 U	0.23 U	5.1	0.77 J	0.25 U	NA	NA	NA	NA	NA	NA
PHC as Gasoline	NA	NA	NA	NA	NA	0.35 J	23.	0.24 ND	0.2 ND	2	0.2 ND

302861

Table 4-8. Analytical Results for Soil Samples Collected from AOC-BP, BROS Property. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	P-41	P-41	P-42	P-42	P-42	P-43	P-43	P-43	PB-5	PB-5	PB-5
Sample Date	8/16/99	8/16/99	8/5/99	8/5/99	8/5/99	6/8/99	6/8/99	6/9/99	6/18/99	6/18/99	6/18/99
Sample ID	7-8	13-14	10-11	24-25	34-35	18-18.5	4-4.5	31-31.5	9-10	3-4	6-7
Chemical Name											
GENERAL CHEMISTRY											
pH (S.U.)	8.66	4.87	6.38	5.13	5.66	5.54	7.10	5.97	7	6	6
Total Organic Carbon (Quad) (mg/kg)	950	1400	2970	733	59 J	1690	2370	245	300	1600	540
ORP Observed (mv)	116	251	311	387	303	186	141	233	200	210	210

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

302862

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-17D	MW-17D	MW-18D	MW-18D	MW-18D	MW-19D	MW-19D	MW-20D	MW-20D	MW-20D
Sample Date	7/19/1999	7/19/1999	6/22/1999	6/22/1999	6/22/1999	7/28/1999	7/28/1999	10/5/1999	10/5/1999	10/5/1999
Sample ID	0-0.5	1.5-2.0	0-0.5	1.5-2.0	2-2.5	0-0.5	1.5-2.0	0-0.5	1.5-2.0	23-24
Chemical Name										
VOLATILE ORGANIC COMPOUNDS (ug/kg)										
1,1,1-Trichloroethane	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
1,1,2,2-Tetrachloroethane	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
1,1,2-Trichloroethane	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
1,1-Dichloroethane	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
1,1-Dichloroethene	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
1,2-Dichloroethane	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
1,2-Dichloropropane	400 U	340 U	340 U	370 U	320 U	350 U	340 U	NA	390 U	410 U
2-Butanone	940 U	800 U	790 U	870 U	740 U	810 U	790 U	NA	900 U	950 U
2-Hexanone	400 U	340 U	340 U	370 U	320 U	350 U	340 U	NA	390 U	410 U
4-Methyl-2-pentanone	400 U	340 U	340 U	370 U	320 U	350 U	340 U	NA	390 U	410 U
Acetone	940 U	800 U	790 U	870 U	740 U	810 U	790 U	NA	900 U	950 U
Benzene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Bromodichloromethane	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
Bromoform	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Bromomethane/ Methyl bromide	400 U	340 U	340 U	370 U	320 U	350 U	340 U	NA	390 U	410 U
Carbon disulfide	400 U	340 U	340 U	370 U	320 U	350 U	340 U	NA	390 U	410 U
Carbon tetrachloride	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Chlorobenzene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Chloroethane	400 U	340 U	340 U	370 U	320 U	350 U	340 U	NA	390 U	410 U
Chloroform	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Chloromethane	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
cis-1,2-Dichloroethene	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
cis-1,3-Dichloropropene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Dibromochloromethane	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Ethylbenzene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Methylene chloride	270 U	230 U	220 U	250 U	210 U	330 J	220 U	NA	260 U	270 U
Styrene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Tetrachloroethene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Toluene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
trans-1,2-Dichloroethene	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
trans-1,3-Dichloropropene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Trichloroethene	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U
Vinyl chloride	270 U	230 U	220 U	250 U	210 U	230 U	220 U	NA	260 U	270 U
Xylenes (Total)	140 U	110 U	110 U	120 U	110 U	120 U	110 U	NA	130 U	140 U

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Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-17D	MW-17D	MW-18D	MW-18D	MW-18D	MW-19D	MW-19D	MW-20D	MW-20D	MW-20D
Sample Date	7/19/1999	7/19/1999	6/22/1999	6/22/1999	6/22/1999	7/28/1999	7/28/1999	10/5/1999	10/5/1999	10/5/1999
Sample ID	0-0.5	1.5-2.0	0-0.5	1.5-2.0	2-2.5	0-0.5	1.5-2.0	0-0.5	1.5-2.0	23-24
Chemical Name										
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)										
1,2,4-Trichlorobenzene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
1,2-Dichlorobenzene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
1,3-Dichlorobenzene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
1,4-Dichlorobenzene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
2,2'-Oxybis(1-chloropropane)	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
2,4,5-TRICHLOROPHENOL	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
2,4,6-Trichlorophenol	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
2,4-DICHLOROPHENOL	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
2,4-DIMETHYLPHENOL	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
2,4-DINITROPHENOL	240 ND	240 ND	240 U	240 U	240 U	250 U	240 U	750 U	740 U	NA
2,4-Dinitrotoluene	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	37 U	36 U	NA
2,6-Dinitrotoluene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
2-Chloronapthalene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
2-CHLOROPHENOL	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
2-Methylnapthalene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
2-Methylphenol	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
2-Nitroaniline	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	75 U	74 U	NA
2-NITROPHENOL	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	37 U	36 U	NA
3,3'-Dichlorobenzidine	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
3-Nitroaniline	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
4,6-Dinitro-2-methylphenol	180 ND	180 ND	180 U	170 U	170 U	180 U	180 U	190 U	190 U	NA
4-Bromophenyl phenyl ether	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	37 U	36 U	NA
4-Chloro-3-methylphenol	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
4-Chloroaniline	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	75 U	74 U	NA
4-Chlorophenyl phenyl ether	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
4-Methylphenol	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
4-Nitroaniline	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
4-Nitrophenol	180 ND	180 ND	180 U	170 U	170 U	180 U	180 U	190 U	190 U	NA
Acenaphthene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Acenaphthylene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Anthracene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Benzo(a)anthracene	35 ND	35 ND	70 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
Benzo(a)pyrene	35 ND	35 ND	50 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
Benzo(b)fluoranthene	41 J	35 ND	110 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
Benzo(g,h,i)perylene	35 ND	35 ND	46 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
Benzo(k)fluoranthene	35 ND	35 ND	38 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
bis(2-Chloroethoxy)methane	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA

302864

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-17D	MW-17D	MW-18D	MW-18D	MW-18D	MW-19D	MW-19D	MW-20D	MW-20D	MW-20D
Sample Date	7/19/1999	7/19/1999	6/22/1999	6/22/1999	6/22/1999	7/28/1999	7/28/1999	10/5/1999	10/5/1999	10/5/1999
Sample ID	0-0.5	1.5-2.0	0-0.5	1.5-2.0	2-2.5	0-0.5	1.5-2.0	0-0.5	1.5-2.0	23-24
Chemical Name										
bis(2-Chloroethyl)ether	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
bis(2-Ethylhexyl)phthalate	71 ND	70 ND	180 J	220 J	280 J	72 U	69 U	75 U	74 U	NA
Butyl benzyl phthalate	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Carbazole	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Chrysene	35 ND	35 ND	82 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
Dibenz(a,h)anthracene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Dibenzofuran	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Diethyl phthalate	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Dimethyl phthalate	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Di-n-butyl phthalate	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Di-n-octyl phthalate	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Fluoranthene	56 J	35 ND	110 J	34 U	34 U	36 U	34 U	42 J	36 U	NA
Fluorene	35 ND	35 ND	160 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
Hexachlorobenzene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Hexachlorobutadiene	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Hexachlorocyclopentadiene	180 ND	180 ND	180 U	170 U	170 U	180 U	180 U	190 U	190 U	NA
Hexachloroethane	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Indeno(1,2,3-cd)pyrene	35 ND	35 ND	50 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
Isophorone	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Naphthalene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
Nitrobenzene	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
n-Nitrosodiphenylamine	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
n-Nitrosodipropylamine	35 ND	35 ND	35 U	34 U	34 U	36 U	34 U	37 U	36 U	NA
PENTACHLOROPHENOL	180 ND	180 ND	180 U	170 U	170 U	180 U	180 U	190 U	190 U	NA
Phenanthrene	35 ND	35 ND	89 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
PHENOL	71 ND	70 ND	70 U	68 U	69 U	72 U	69 U	75 U	74 U	NA
Pyrene	46 J	35 ND	110 J	34 U	34 U	36 U	34 U	37 U	36 U	NA
METALS (mg/kg)										
Aluminum	5610	4090	2950	3610	2330	3540 *	2850 *	4940	4510	NA
Antimony	2.9 U	2.8 U	2.8 U	2.7 U	2.7 U	2.9 U	2.8 U	3 U	2.9 U	NA
Arsenic	13.8	4.2	2.8	2.1	1.9	4.1	4	6.9	2.3	NA
Barium	17.7 *	22.2 *	19.1	12.9	9.7 B	16	13.2	36.6	30.7	NA
Beryllium	0.46 B	0.26 B	0.22 B	0.2 B	0.17 B	0.2 B	0.17 B	0.35 B	0.29 B	NA
Cadmium	0.71 B	0.7 B	0.35 B	0.29 B	0.22 B	0.17 U	0.16 U	0.18 U	0.17 U	NA
Calcium	77.8	35.8	177 *	122 *	108 *	176	147	206	131	NA
Chromium	9.8 N	9.8 N	6.7	6.5	5.3	7.8	7.1	8.3	9	NA
Cobalt	1.6 B	2.1 B	1.4 B	1.7 B	1.3 B	1.9 B	1.6 B	1.7 B	1.8 B	NA

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Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-17D	MW-17D	MW-18D	MW-18D	MW-18D	MW-19D	MW-19D	MW-20D	MW-20D	MW-20D
Sample Date	7/19/1999	7/19/1999	6/22/1999	6/22/1999	6/22/1999	7/28/1999	7/28/1999	10/5/1999	10/5/1999	10/5/1999
Sample ID	0-0.5	1.5-2.0	0-0.5	1.5-2.0	2-2.5	0-0.5	1.5-2.0	0-0.5	1.5-2.0	23-24
Chemical Name										
Copper	10	3.5 B	4.4	2.5 B	2 B	2.9 B	2.6 B	8.7	2.9 B	NA
Iron	8490	9480	5260	5440	4730	6490	5490	7790	7570	NA
Lead	50.4 *	4.5 *	16.2	3.8	3.5	2.3	1.8	25.8	3.9	NA
Magnesium	463 N	483 N	376 N	444 N	327 N	508 N	428 N	525 N	563 N	NA
Manganese	36.3 *	47.9 *	76.9	66	47.2	38.4	38.9	63.8	54.8	NA
Nickel	4.3 B	3.7 B	3.1 B	3.3 B	2.5 B	4.1 B	3.7 B	4.5 B	4.1 B	NA
Potassium	190 N	228 N	198 N	340 N	182 N	416 N*	330 N*	166	169	NA
Selenium	0.68 B	0.42 U	0.43 U	0.42 U	0.42 U	0.44 U	0.42 U	0.72 B	0.44 U	NA
Silver	0.83 U	0.8 U	0.82 U	0.79 U	0.79 U	0.84 U	0.8 U	0.87 U	0.83 U	NA
Sodium	47.9 B	44.8 B	30.9 B	16.2 U	23 B	17.3 U	16.3 U	118	126	NA
Thallium	0.72 U	0.7 U	0.71 U	0.69 U	0.69 U	1.5 B	1.1 B	1.1 B	0.83 B	NA
Vanadium	21.2 *	15.9 *	9.5	8.9	7	10.6 *	8.8 *	14.6	11.1	NA
Zinc	19.1 E	14 E	17.9	16.7	12	12	11.7	22.7	15	NA
Mercury	0.087 B	0.011 B	0.031 B	0.0053 B	0.0062 B	0.0052 UN	0.011 BN	0.072 B	0.0071 B	NA
POLYCHLRORINATED BIPHENYLS (ug/kg)										
Aroclor-1016	3.5 U	3.5 U	3.5 U	3.4 U	3.4 U	3.6 U	3.4 U	3.7 U	3.6 U	NA
Aroclor-1221	3.5 U	3.5 U	3.5 U	3.4 U	3.4 U	8.4 U	8 U	8.8 U	8.6 U	NA
Aroclor-1232	3.5 U	3.5 U	3.5 U	3.4 U	3.4 U	10 U	9.6 U	10 U	10 U	NA
Aroclor-1242	3.5 U	3.5 U	3.5 U	3.4 U	3.4 U	7.6 U	7.2 U	7.9 U	7.7 U	NA
Aroclor-1248	3.5 U	3.5 U	3.5 U	3.4 U	3.4 U	8.5 U	8.1 U	8.9 U	8.7 U	NA
Aroclor-1254	3.5 U	3.5 U	3.5 U	3.4 U	3.4 U	4.1 J	4.2 J	3.7 U	3.6 U	NA
Aroclor-1260	7.6 J	3.5 U	7.6 JP	3.4 U	3.4 U	3.6 U	3.4 U	3.7 U	3.6 U	NA
PETROLEUM HYDROCARBONS (mg/kg)										
PHC as Diesel Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHC as Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

302866

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D
Sample Date	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/7/1999	10/7/1999	10/7/1999	10/7/1999
Sample ID	39-40	43-44	47-48	57-58	67-68	77-78	89-90	99-100	109-110	110-111
Chemical Name										
VOLATILE ORGANIC COMPOUNDS (u										
1,1,1-Trichloroethane	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
1,1,2,2-Tetrachloroethane	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
1,1,2-Trichloroethane	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
1,1-Dichloroethane	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
1,1-Dichloroethene	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
1,2-Dichloroethane	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
1,2-Dichloropropane	480 U	420 U	360 U	400 U	440 U	360 U	410 U	460 U	500 U	450 U
2-Butanone	1100 U	980 U	850 U	950 U	1000 U	830 U	950 U	1100 U	1200 U	1000 U
2-Hexanone	480 U	420 U	360 U	400 U	440 U	360 U	410 U	460 U	500 U	450 U
4-Methyl-2-pentanone	480 U	420 U	360 U	400 U	440 U	360 U	410 U	460 U	500 U	450 U
Acetone	1100 U	980 U	850 U	950 U	1000 U	830 U	950 U	1100 U	1200 U	1000 U
Benzene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Bromodichloromethane	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
Bromoform	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Bromomethane/ Methyl bromide	480 U	420 U	360 U	400 U	440 U	360 U	410 U	460 U	500 U	450 U
Carbon disulfide	480 U	420 U	360 U	400 U	440 U	360 U	410 U	460 U	500 U	450 U
Carbon tetrachloride	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Chlorobenzene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Chloroethane	480 U	420 U	360 U	400 U	440 U	360 U	410 U	460 U	500 U	450 U
Chloroform	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Chloromethane	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
cis-1,2-Dichloroethene	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
cis-1,3-Dichloropropene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Dibromochloromethane	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Ethylbenzene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Methylene chloride	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
Styrene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Tetrachloroethene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Toluene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
trans-1,2-Dichloroethene	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
trans-1,3-Dichloropropene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Trichloroethene	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U
Vinyl chloride	320 U	280 U	240 U	270 U	290 U	240 U	270 U	300 U	340 U	300 U
Xylenes (Total)	160 U	140 U	120 U	140 U	150 U	120 U	140 U	150 U	170 U	150 U

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Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D
Sample Date	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/7/1999	10/7/1999	10/7/1999	10/7/1999
Sample ID	39-40	43-44	47-48	57-58	67-68	77-78	89-90	99-100	109-110	110-111
Chemical Name										
SEMIVOLATILE ORGANIC COMPOUI										
1,2,4-Trichlorobenzene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
1,2-Dichlorobenzene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
1,3-Dichlorobenzene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
1,4-Dichlorobenzene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
2,2'-Oxybis(1-chloropropane)	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
2,4,5-TRICHLOROPHENOL	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
2,4,6-Trichlorophenol	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
2,4-DICHLOROPHENOL	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
2,4-DIMETHYLPHENOL	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
2,4-DINITROPHENOL	NA	830 U	760 U	NA	NA	760 U	NA	NA	NA	830 U
2,4-Dinitrotoluene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
2,6-Dinitrotoluene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
2-Chloronapthalene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
2-CHLOROPHENOL	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
2-Methylnapthalene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	56 J
2-Methylphenol	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
2-Nitroaniline	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
2-NITROPHENOL	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
3,3'-Dichlorobenzidine	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
3-Nitroaniline	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
4,6-Dinitro-2-methylphenol	NA	210 U	190 U	NA	NA	190 U	NA	NA	NA	210 U
4-Bromophenyl phenyl ether	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
4-Chloro-3-methylphenol	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
4-Chloroaniline	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
4-Chlorophenyl phenyl ether	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
4-Methylphenol	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
4-Nitroaniline	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
4-Nitrophenol	NA	210 U	190 U	NA	NA	190 U	NA	NA	NA	210 U
Acenaphthene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Acenaphthylene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Anthracene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Benzo(a)anthracene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Benzo(a)pyrene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Benzo(b)fluoranthene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Benzo(g,h,i)perylene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Benzo(k)fluoranthene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
bis(2-Chloroethoxy)methane	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U

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Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D
Sample Date	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/7/1999	10/7/1999	10/7/1999	10/7/1999
Sample ID	39-40	43-44	47-48	57-58	67-68	77-78	89-90	99-100	109-110	110-111
Chemical Name										
bis(2-Chloroethyl)ether	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
bis(2-Ethylhexyl)phthalate	NA	110 J	76 U	NA	NA	150 JB	NA	NA	NA	180 JB
Butyl benzyl phthalate	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	660
Carbazole	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
Chrysene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Dibenz(a,h)anthracene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Dibenzofuran	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Diethyl phthalate	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
Dimethyl phthalate	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
Di-n-butyl phthalate	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
Di-n-octyl phthalate	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
Fluoranthene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Fluorene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Hexachlorobenzene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Hexachlorobutadiene	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
Hexachlorocyclopentadiene	NA	210 U	190 U	NA	NA	190 U	NA	NA	NA	210 U
Hexachloroethane	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Indeno(1,2,3-cd)pyrene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Isophorone	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Naphthalene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
Nitrobenzene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
n-Nitrosodiphenylamine	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
n-Nitrosodipropylamine	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
PENTACHLOROPHENOL	NA	210 U	190 U	NA	NA	190 U	NA	NA	NA	210 U
Phenanthrene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
PHENOL	NA	83 U	76 U	NA	NA	76 U	NA	NA	NA	83 U
Pyrene	NA	41 U	38 U	NA	NA	38 U	NA	NA	NA	41 U
METALS (mg/kg)										
Aluminum	NA	406	291	NA	NA	504	NA	NA	NA	1420
Antimony	NA	3.3 U	3 U	NA	NA	3.1 U	NA	NA	NA	3.4 U
Arsenic	NA	0.47 U	0.92 B	NA	NA	0.57 B	NA	NA	NA	0.66 B
Barium	NA	2.5 B	2 B	NA	NA	2.7 B	NA	NA	NA	5.8 B
Beryllium	NA	0.18 U	0.17 U	NA	NA	0.17 U	NA	NA	NA	0.19 U
Cadmium	NA	0.19 U	0.18 U	NA	NA	0.18 U	NA	NA	NA	0.2 U
Calcium	NA	219	30.5 B	NA	NA	146	NA	NA	NA	177
Chromium	NA	2.8 B	3.5 B	NA	NA	4.5 B	NA	NA	NA	15.5
Cobalt	NA	1.2 U	1.1 U	NA	NA	1.1 U	NA	NA	NA	1.2 U

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Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D	MW-20D
Sample Date	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/7/1999	10/7/1999	10/7/1999	10/7/1999
Sample ID	39-40	43-44	47-48	57-58	67-68	77-78	89-90	99-100	109-110	110-111
Chemical Name										
Copper	NA	1.4 B	1.8 B	NA	NA	2.1 B	NA	NA	NA	2.3 B
Iron	NA	1310	1620	NA	NA	1320	NA	NA	NA	2050
Lead	NA	1.5	0.67 B	NA	NA	0.88 B	NA	NA	NA	1.5
Magnesium	NA	73 N	19.1 BN	NA	NA	47.4 N	NA	NA	NA	63.2 N
Manganese	NA	16.9	2.2 B	NA	NA	5.1	NA	NA	NA	6.9
Nickel	NA	1.2 U	1.1 U	NA	NA	1.1 U	NA	NA	NA	1.2 U
Potassium	NA	37.6 U	34.9 U	NA	NA	43.6 B	NA	NA	NA	54 B
Selenium	NA	0.5 U	0.46 U	NA	NA	0.47 U	NA	NA	NA	0.51 U
Silver	NA	0.95 U	0.88 U	NA	NA	0.89 U	NA	NA	NA	0.97 U
Sodium	NA	203	38.2 B	NA	NA	87.7 B	NA	NA	NA	128
Thallium	NA	0.83 U	0.8 B	NA	NA	0.77 U	NA	NA	NA	0.84 U
Vanadium	NA	5	7	NA	NA	8.5	NA	NA	NA	31.9
Zinc	NA	9.9 B	2.7 B	NA	NA	2.5 B	NA	NA	NA	2.7 B
Mercury	NA	0.0059 U	0.0053 U	NA	NA	0.0055 U	NA	NA	NA	0.006 U
POLYCHLRORINATED BIPHENYLS (u										
Aroclor-1016	NA	4.1 U	3.8 U	NA	NA	3.8 U	NA	NA	NA	4.1 U
Aroclor-1221	NA	9.7 U	8.9 U	NA	NA	8.9 U	NA	NA	NA	9.7 U
Aroclor-1232	NA	12 U	11 U	NA	NA	11 U	NA	NA	NA	12 U
Aroclor-1242	NA	8.7 U	8 U	NA	NA	8 U	NA	NA	NA	8.7 U
Aroclor-1248	NA	9.8 U	9 U	NA	NA	9 U	NA	NA	NA	9.8 U
Aroclor-1254	NA	4.1 U	3.8 U	NA	NA	3.8 U	NA	NA	NA	4.1 U
Aroclor-1260	NA	4.1 U	3.8 U	NA	NA	3.8 U	NA	NA	NA	4.1 U
PETROLEUM HYDROCARBONS (mg/k;										
PHC as Diesel Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHC as Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within Cor
* = Duplicate analysis not within control limi
P = Concentration difference between primar
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = IDI

302870

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	10/7/1999	11/24/1999	11/24/1999	11/29/1999	12/2/1999	12/2/1999	12/2/1999	11/8/1999	11/9/1999	11/11/1999
Sample ID	114-115	3-4	19-20	58-59	82-82.5	120-120.5	124-125	2.5-3.0	49-50	133.5-134
Chemical Name										
VOLATILE ORGANIC COMPOUNDS (u										
1,1,1-Trichloroethane	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
1,1,2,2-Tetrachloroethane	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
1,1,2-Trichloroethane	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
1,1-Dichloroethane	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
1,1-Dichloroethene	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
1,2-Dichloroethane	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
1,2-Dichloropropane	440 U	410 U	360 U	420 U	420 U	420 U	450 U	870 U	430 U	410 U
2-Butanone	1000 U	970 U	830 U	980 U	970 U	990 U	1100 U	2000 U	1000 U	960 U
2-Hexanone	440 U	410 U	360 U	420 U	420 U	420 U	450 U	870 U	430 U	410 U
4-Methyl-2-pentanone	440 U	410 U	360 U	420 U	420 U	420 U	450 U	870 U	430 U	410 U
Acetone	1000 U	970 U	830 U	980 U	970 U	990 U	1100 U	2000 U	1000 U	960 U
Benzene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Bromodichloromethane	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
Bromoform	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Bromomethane/ Methyl bromide	440 U	410 U	360 U	420 U	420 U	420 U	450 U	870 U	430 U	410 U
Carbon disulfide	440 U	410 U	360 U	420 U	420 U	420 U	450 U	870 U	430 U	410 U
Carbon tetrachloride	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Chlorobenzene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Chloroethane	440 U	410 U	360 U	420 U	420 U	420 U	450 U	870 U	430 U	410 U
Chloroform	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Chloromethane	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
cis-1,2-Dichloroethene	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
cis-1,3-Dichloropropene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Dibromochloromethane	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Ethylbenzene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Methylene chloride	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
Styrene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Tetrachloroethene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Toluene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
trans-1,2-Dichloroethene	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
trans-1,3-Dichloropropene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Trichloroethene	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U
Vinyl chloride	300 U	280 U	240 U	280 U	280 U	280 U	300 U	580 U	290 U	280 U
Xylenes (Total)	150 U	140 U	120 U	140 U	140 U	140 U	150 U	290 U	140 U	140 U

302871

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	10/7/1999	11/24/1999	11/24/1999	11/29/1999	12/2/1999	12/2/1999	12/2/1999	11/8/1999	11/9/1999	11/11/1999
Sample ID	114-115	3-4	19-20	58-59	82-82.5	120-120.5	124-125	2.5-3.0	49-50	133.5-134
Chemical Name										
SEMIVOLATILE ORGANIC COMPOUN										
1,2,4-Trichlorobenzene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
1,2-Dichlorobenzene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
1,3-Dichlorobenzene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
1,4-Dichlorobenzene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2,2'-Oxybis(1-chloropropane)	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2,4,5-TRICHLOROPHENOL	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
2,4,6-Trichlorophenol	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
2,4-DICHLOROPHENOL	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
2,4-DIMETHYLPHENOL	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
2,4-DINITROPHENOL	810 U	760 U	790 U	770 U	780 U	820 U	850 U	1600 U	800 U	790 U
2,4-Dinitrotoluene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2,6-Dinitrotoluene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2-Chloronapthalene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2-CHLOROPHENOL	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2-Methylnapthalene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2-Methylphenol	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
2-Nitroaniline	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
2-NITROPHENOL	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
3,3'-Dichlorobenzidine	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
3-Nitroaniline	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
4,6-Dinitro-2-methylphenol	200 U	380 U	390 U	200 U	200 U	210 U	220 U	410 U	200 U	200 U
4-Bromophenyl phenyl ether	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
4-Chloro-3-methylphenol	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
4-Chloroaniline	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
4-Chlorophenyl phenyl ether	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
4-Methylphenol	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
4-Nitroaniline	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
4-Nitrophenol	200 U	190 U	200 U	200 U	200 U	210 U	220 U	410 U	200 U	200 U
Acenaphthene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Acenaphthylene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Anthracene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Benzo(a)anthracene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Benzo(a)pyrene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Benzo(b)fluoranthene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Benzo(g,h,i)perylene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Benzo(k)fluoranthene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
bis(2-Chloroethoxy)methane	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U

302872

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	10/7/1999	11/24/1999	11/24/1999	11/29/1999	12/2/1999	12/2/1999	12/2/1999	11/8/1999	11/9/1999	11/11/1999
Sample ID	114-115	3-4	19-20	58-59	82-82.5	120-120.5	124-125	2.5-3.0	49-50	133.5-134
Chemical Name										
bis(2-Chloroethyl)ether	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
bis(2-Ethylhexyl)phthalate	81 U	76 U	79 U	95 JB	110 J	82 U	85 U	160 U	170 JB	79 U
Butyl benzyl phthalate	81 U	76 U	79 U	77 U	78 U	82 U	85 U	290 J	80 U	79 U
Carbazole	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
Chrysene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Dibenz(a,h)anthracene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Dibenzofuran	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Diethyl phthalate	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
Dimethyl phthalate	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
Di-n-butyl phthalate	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
Di-n-octyl phthalate	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
Fluoranthene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Fluorene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Hexachlorobenzene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Hexachlorobutadiene	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
Hexachlorocyclopentadiene	200 U	190 U	200 U	200 U	200 U	210 U	220 U	410 U	200 U	200 U
Hexachloroethane	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Indeno(1,2,3-cd)pyrene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Isophorone	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Naphthalene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
Nitrobenzene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
n-Nitrosodiphenylamine	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
n-Nitrosodipropylamine	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
PENTACHLOROPHENOL	200 U	380 U	390 U	200 U	200 U	210 U	220 U	410 U	200 U	200 U
Phenanthrene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
PHENOL	81 U	76 U	79 U	77 U	78 U	82 U	85 U	160 U	80 U	79 U
Pyrene	40 U	37 U	39 U	38 U	38 U	40 U	42 U	80 U	39 U	39 U
METALS (mg/kg)										
Aluminum	1900	4320	3090	301	3760	2990	4010	3550	191	1830
Antimony	3.2 U	1.6 U	1.7 U	1.7 U	1.7 U	1.8 U	1.9 U	3.6 U	1.8 U	1.8 U
Arsenic	0.46 U	2.3	16.6	0.5 B	1.8	5.2 B	5.6	7.6	0.47 B	0.29 U
Barium	12.5	10.7 B	10.7 B	2.5 B	17.9	12.1 B	8.1 B	74.5	2.7 B	9.6 B
Beryllium	0.18 U	0.18 B	0.71	0.15 U	0.24 B	0.16 U	0.4 B	0.55 B	0.15 U	0.23 B
Cadmium	0.19 U	0.22 U	0.23 U	0.23 U	0.23 U	0.25 U	0.7 B	0.48 U	0.24 U	0.23 U
Calcium	218	110	249	494	205	438	331	1880	466	143
Chromium	17.2	9.3 N	24.9 N	4 BN	17.4 N	65.5 N	128 N	7.8 B	3.4 B	5.9
Cobalt	1.2 U	0.98 B	2 B	0.72 U	1.9 B	2.3 B	0.8 U	3 B	0.75 U	0.74 U

302873

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-20D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	10/7/1999	11/24/1999	11/24/1999	11/29/1999	12/2/1999	12/2/1999	12/2/1999	11/8/1999	11/9/1999	11/11/1999
Sample ID	114-115	3-4	19-20	58-59	82-82.5	120-120.5	124-125	2.5-3.0	49-50	133.5-134
Chemical Name										
Copper	2.2 B	2.3 B	6.1	1.4 B	43	35.3	6.7	7 B	0.74 B	1.8 B
Iron	936	6800	28500	919	761	43100	69100	5680	590	1040
Lead	1.3	2.7	3.5	0.69 B	3.5	6.5 U	4.9	16 *	0.9 B*	1.3 *
Magnesium	83.5 N	432 N	449 N	43.9 N	120 N	101 N	109 N	650 N	44.7 N	55.1 N
Manganese	6.6	14.7	31.1	5.8	8.7	7.5	6.5	69.3	6.9	8.6
Nickel	1.2 U	2.3 B	3.9 B	1.9 U	3.5 B	2.1 U	2.5 B	7.4 B	2 U	2 U
Potassium	166	520 N	1140 N	58.6 N	495 N	96.3 N	70 N	270	26.2 U	102
Selenium	0.49 U	0.5 U	0.53 U	0.52 U	0.53 U	5.6 U	0.59 U	1.6 B	0.55 U	0.54 U
Silver	0.93 U	0.25 U	0.27 U	0.26 U	0.27 U	2.8 U	0.29 U	0.55 U	0.27 U	0.27 U
Sodium	182	39.8 B	71 B	73.7 B	68.5 B	83.7 B	49.5 B	17.8 U	168	49.8 B
Thallium	0.81 U	0.69 U	1.3 B	0.72 U	0.73 U	8.7 B	1.2 B	1.5 U	0.75 U	0.74 U
Vanadium	32.2	13.2	57.4	6.5	29	174	233	14.2	2 B	17.6
Zinc	3.4 B	7.7 B	23.5	2.1 U	7.8 B	14.5	4.4 B	29.8	2.1 U	3.1 B
Mercury	0.01 B	0.0028 U	0.0029 U	0.0029 U	0.0037 B	0.0098 B	0.0032 U	0.023 B	0.003 U	0.0028 U
POLYCHLRORINATED BIPHENYLS (u										
Aroclor-1016	4 U	3.7 U	3.9 U	3.8 U	3.8 U	4 U	4.2 U	8 U	3.9 U	3.9 U
Aroclor-1221	9.4 U	8.8 U	9.2 U	9 U	9.1 U	9.6 U	9.9 U	19 U	9.3 U	9.2 U
Aroclor-1232	11 U	10 U	11 U	11 U	11 U	11 U	12 U	23 U	11 U	11 U
Aroclor-1242	8.4 U	7.9 U	8.2 U	8.1 U	8.1 U	8.6 U	8.9 U	17 U	8.3 U	8.3 U
Aroclor-1248	9.5 U	8.9 U	9.3 U	9.1 U	9.2 U	9.7 U	10 U	19 U	9.4 U	9.3 U
Aroclor-1254	4 U	3.7 U	3.9 U	3.8 U	3.8 U	4 U	4.2 U	8 U	3.9 U	3.9 U
Aroclor-1260	4 U	3.7 U	3.9 U	3.8 U	3.8 U	4 U	4.2 U	8 U	3.9 U	3.9 U
PETROLEUM HYDROCARBONS (mg/k										
PHC as Diesel Fuel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHC as Gasoline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within Cor
* = Duplicate analysis not within control limi
P = Concentration difference between primar
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = IDI

302874

Location ID	MW-22D	MW-22I	MW-33D	MW-33D	N-16	N-16	N-17
Sample Date	11/11/1999	11/19/1999	8/19/1999	8/19/1999	10/17/2000	10/17/2000	10/18/2000
Sample ID	137-13.7	98-99	0-0.5	1.5-2.0	4-5	11-12	10-11
Chemical Name							
VOLATILE ORGANIC COMPOUNDS (u							
1,1,1-Trichloroethane	130 U	NA	130 U	120 U	NA	NA	NA
1,1,2,2-Tetrachloroethane	130 U	NA	130 U	120 U	NA	NA	NA
1,1,2-Trichloroethane	260 U	NA	260 U	250 U	NA	NA	NA
1,1-Dichloroethane	130 U	NA	130 U	120 U	NA	NA	NA
1,1-Dichloroethene	260 U	NA	260 U	250 U	NA	NA	NA
1,2-Dichloroethane	260 U	NA	260 U	250 U	NA	NA	NA
1,2-Dichloropropane	400 U	NA	400 U	380 U	NA	NA	NA
2-Butanone	930 U	NA	920 U	880 U	NA	NA	NA
2-Hexanone	400 U	NA	400 U	380 U	NA	NA	NA
4-Methyl-2-pentanone	400 U	NA	400 U	380 U	NA	NA	NA
Acetone	930 U	NA	920 U	880 U	NA	NA	NA
Benzene	130 U	NA	130 U	120 U	NA	NA	NA
Bromodichloromethane	260 U	NA	260 U	250 U	NA	NA	NA
Bromoform	130 U	NA	130 U	120 U	NA	NA	NA
Bromomethane/ Methyl bromide	400 U	NA	400 U	380 U	NA	NA	NA
Carbon disulfide	400 U	NA	400 U	380 U	NA	NA	NA
Carbon tetrachloride	130 U	NA	130 U	120 U	NA	NA	NA
Chlorobenzene	130 U	NA	130 U	120 U	NA	NA	NA
Chloroethane	400 U	NA	400 U	380 U	NA	NA	NA
Chloroform	130 U	NA	130 U	120 U	NA	NA	NA
Chloromethane	260 U	NA	260 U	250 U	NA	NA	NA
cis-1,2-Dichloroethene	260 U	NA	260 U	250 U	NA	NA	NA
cis-1,3-Dichloropropene	130 U	NA	130 U	120 U	NA	NA	NA
Dibromochloromethane	130 U	NA	130 U	120 U	NA	NA	NA
Ethylbenzene	130 U	NA	130 U	120 U	NA	NA	NA
Methylene chloride	260 U	NA	260 U	250 U	NA	NA	NA
Styrene	130 U	NA	130 U	120 U	NA	NA	NA
Tetrachloroethene	130 U	NA	130 U	120 U	NA	NA	NA
Toluene	130 U	NA	130 U	120 U	NA	NA	NA
trans-1,2-Dichloroethene	260 U	NA	260 U	250 U	NA	NA	NA
trans-1,3-Dichloropropene	130 U	NA	130 U	120 U	NA	NA	NA
Trichloroethene	130 U	NA	130 U	120 U	NA	NA	NA
Vinyl chloride	260 U	NA	260 U	250 U	NA	NA	NA
Xylenes (Total)	130 U	NA	130 U	120 U	NA	NA	NA

302875

Location ID	MW-22D	MW-22I	MW-33D	MW-33D	N-16	N-16	N-17
Sample Date	11/11/1999	11/19/1999	8/19/1999	8/19/1999	10/17/2000	10/17/2000	10/18/2000
Sample ID	137-13.7	98-99	0-0.5	1.5-2.0	4-5	11-12	10-11
Chemical Name							
SEMIVOLATILE ORGANIC COMPOUI							
1,2,4-Trichlorobenzene	40 U	39 U	35 U	35 U	NA	NA	NA
1,2-Dichlorobenzene	40 U	39 U	35 U	35 U	NA	NA	NA
1,3-Dichlorobenzene	40 U	39 U	35 U	35 U	NA	NA	NA
1,4-Dichlorobenzene	40 U	39 U	35 U	35 U	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	40 U	39 U	35 U	35 U	NA	NA	NA
2,4,5-TRICHLOROPHENOL	82 U	80 U	71 U	71 U	NA	NA	NA
2,4,6-Trichlorophenol	82 U	80 U	71 U	71 U	NA	NA	NA
2,4-DICHLOROPHENOL	82 U	80 U	71 U	71 U	NA	NA	NA
2,4-DIMETHYLPHENOL	82 U	80 U	71 U	71 U	NA	NA	NA
2,4-DINITROPHENOL	820 U	800 U	240 U	240 U	NA	NA	NA
2,4-Dinitrotoluene	40 U	39 U	71 U	71 U	NA	NA	NA
2,6-Dinitrotoluene	40 U	39 U	35 U	35 U	NA	NA	NA
2-Chloronapthalene	40 U	39 U	35 U	35 U	NA	NA	NA
2-CHLOROPHENOL	40 U	39 U	35 U	35 U	NA	NA	NA
2-Methylnapthalene	40 U	39 U	35 U	35 U	NA	NA	NA
2-Methylphenol	40 U	39 U	35 U	35 U	NA	NA	NA
2-Nitroaniline	82 U	80 U	35 U	35 U	NA	NA	NA
2-NITROPHENOL	40 U	39 U	71 U	71 U	NA	NA	NA
3,3'-Dichlorobenzidine	82 U	80 U	71 U	71 U	NA	NA	NA
3-Nitroaniline	82 U	80 U	71 U	71 U	NA	NA	NA
4,6-Dinitro-2-methylphenol	210 U	200 U	180 U	180 U	NA	NA	NA
4-Bromophenyl phenyl ether	40 U	39 U	71 U	71 U	NA	NA	NA
4-Chloro-3-methylphenol	82 U	80 U	71 U	71 U	NA	NA	NA
4-Chloroaniline	82 U	80 U	35 U	35 U	NA	NA	NA
4-Chlorophenyl phenyl ether	40 U	39 U	35 U	35 U	NA	NA	NA
4-Methylphenol	82 U	80 U	71 U	71 U	NA	NA	NA
4-Nitroaniline	82 U	80 U	71 U	71 U	NA	NA	NA
4-Nitrophenol	210 U	200 U	180 U	180 U	NA	NA	NA
Acenaphthene	40 U	39 U	35 U	35 U	NA	NA	NA
Acenaphthylene	40 U	39 U	35 U	35 U	NA	NA	NA
Anthracene	40 U	39 U	35 U	35 U	NA	NA	NA
Benzo(a)anthracene	40 U	39 U	35 U	35 U	NA	NA	NA
Benzo(a)pyrene	40 U	39 U	35 U	35 U	NA	NA	NA
Benzo(b)fluoranthene	40 U	39 U	35 U	35 U	NA	NA	NA
Benzo(g,h,i)perylene	40 U	39 U	35 U	35 U	NA	NA	NA
Benzo(k)fluoranthene	40 U	39 U	35 U	35 U	NA	NA	NA
bis(2-Chloroethoxy)methane	82 U	80 U	71 U	71 U	NA	NA	NA

302876

Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-22D	MW-22I	MW-33D	MW-33D	N-16	N-16	N-17
Sample Date	11/11/1999	11/19/1999	8/19/1999	8/19/1999	10/17/2000	10/17/2000	10/18/2000
Sample ID	137-13.7	98-99	0-0.5	1.5-2.0	4-5	11-12	10-11
Chemical Name							
bis(2-Chloroethyl)ether	40 U	39 U	35 U	35 U	NA	NA	NA
bis(2-Ethylhexyl)phthalate	84 JB	95 J	71 U	71 U	NA	NA	NA
Butyl benzyl phthalate	82 U	80 U	71 U	71 U	NA	NA	NA
Carbazole	82 U	80 U	71 U	71 U	NA	NA	NA
Chrysene	40 U	39 U	35 U	35 U	NA	NA	NA
Dibenz(a,h)anthracene	40 U	39 U	35 U	35 U	NA	NA	NA
Dibenzofuran	40 U	39 U	35 U	35 U	NA	NA	NA
Diethyl phthalate	82 U	80 U	71 U	71 U	NA	NA	NA
Dimethyl phthalate	82 U	80 U	71 U	71 U	NA	NA	NA
Di-n-butyl phthalate	82 U	80 U	71 U	71 U	NA	NA	NA
Di-n-octyl phthalate	120 J	80 U	71 U	71 U	NA	NA	NA
Fluoranthene	40 U	39 U	35 U	35 U	NA	NA	NA
Fluorene	40 U	39 U	35 U	35 U	NA	NA	NA
Hexachlorobenzene	40 U	39 U	35 U	35 U	NA	NA	NA
Hexachlorobutadiene	82 U	80 U	71 U	71 U	NA	NA	NA
Hexachlorocyclopentadiene	210 U	200 U	180 U	180 U	NA	NA	NA
Hexachloroethane	40 U	39 U	35 U	35 U	NA	NA	NA
Indeno(1,2,3-cd)pyrene	40 U	39 U	35 U	35 U	NA	NA	NA
Isophorone	40 U	39 U	35 U	35 U	NA	NA	NA
Naphthalene	40 U	39 U	35 U	35 U	NA	NA	NA
Nitrobenzene	40 U	39 U	35 U	35 U	NA	NA	NA
n-Nitrosodiphenylamine	40 U	39 U	35 U	35 U	NA	NA	NA
n-Nitrosodipropylamine	40 U	39 U	35 U	35 U	NA	NA	NA
PENTACHLOROPHENOL	210 U	200 U	180 U	180 U	NA	NA	NA
Phenanthrene	40 U	39 U	35 U	35 U	NA	NA	NA
PHENOL	82 U	80 U	71 U	71 U	NA	NA	NA
Pyrene	40 U	39 U	35 U	35 U	NA	NA	NA
METALS (mg/kg)							
Aluminum	4070	519	5150	4550	NA	NA	NA
Antimony	1.8 U	1.8 U	2.9 U	2.9 U	NA	NA	NA
Arsenic	1.4	0.3 U	9.7	5.2	NA	NA	NA
Barium	28.9	5 B	10.3 B	12.3	NA	NA	NA
Beryllium	1.9	0.15 U	0.83	0.27 B	NA	NA	NA
Cadmium	6.9	0.24 U	0.17 UN	0.17 UN	NA	NA	NA
Calcium	460	1180	216	70.7	NA	NA	NA
Chromium	95.7	5.2	50.8	10.2	NA	NA	NA
Cobalt	3.3 B	0.75 U	4.1 B	2.8 B	NA	NA	NA

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Table 4-9. Analytical Results for Soil Samples Collected from AOC-BKG, Background. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	MW-22D	MW-22I	MW-33D	MW-33D	N-16	N-16	N-17
Sample Date	11/11/1999	11/19/1999	8/19/1999	8/19/1999	10/17/2000	10/17/2000	10/18/2000
Sample ID	137-13.7	98-99	0-0.5	1.5-2.0	4-5	11-12	10-11
Chemical Name							
Copper	19.5	2.4 B	3 B	3.5 B	NA	NA	NA
Iron	55700	1300	30200	11600	NA	NA	NA
Lead	3.2 *	1.8 *	7.3	4	NA	NA	NA
Magnesium	146 N	134 N	868 *	505 *	NA	NA	NA
Manganese	30	12.9	52.2	53.2	NA	NA	NA
Nickel	8.4	2 U	11.3	3.1 B	NA	NA	NA
Potassium	216	55.4 B	2400 *	1060 *	NA	NA	NA
Selenium	0.56 U	0.55 U	1.1	0.44 U	NA	NA	NA
Silver	0.28 U	0.27 U	0.83 U	0.83 U	NA	NA	NA
Sodium	41.3 B	265	17 U	17 U	NA	NA	NA
Thallium	2.7	0.75 U	0.72 U	0.72 U	NA	NA	NA
Vanadium	141	9.4	61.2	21.4	NA	NA	NA
Zinc	24.1	3.9 B	31.3	13.3	NA	NA	NA
Mercury	0.0029 U	0.003 U	0.015 B	0.0065 B	NA	NA	NA
POLYCHLRORINATED BIPHENYLS (u							
Aroclor-1016	4 U	3.9 U	3.5 U	3.5 U	3.4 U	NA	3.5 U
Aroclor-1221	9.6 U	9.3 U	8.3 U	8.3 U	4.8 U	NA	5 U
Aroclor-1232	11 U	11 U	9.9 U	9.9 U	7.1 U	NA	7.3 U
Aroclor-1242	8.6 U	8.3 U	7.5 U	7.4 U	3.4 U	NA	3.5 U
Aroclor-1248	9.7 U	9.4 U	8.4 U	8.4 U	3.7 U	NA	3.8 U
Aroclor-1254	4 U	3.9 U	3.5 U	3.5 U	4.6 J	NA	3.5 U
Aroclor-1260	4 U	3.9 U	3.5 U	3.5 U	3.4 U	NA	3.5 U
PETROLEUM HYDROCARBONS (mg/k							
PHC as Diesel Fuel	NA	NA	NA	NA	NA	4.1 U	NA
PHC as Gasoline	NA	NA	NA	NA	NA	0.21 U	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within Cor
* = Duplicate analysis not within control limi
P = Concentration difference between primar
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = IDI

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Table 4-10. Summary of the Product Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Parameter	Location ID	MW-32S	RW-5-1[2]	RW-5-2[2]	MW-13A	P-5	RW-1-1[1]	RW-1-2[1]
	Sample Date	5/11/00	4/25/2002	4/25/2002	5/11/00	5/11/00	4/25/2002	4/25/2002
	Collected By	Roux	USEPA	USEPA	Roux	Roux	USEPA	USEPA
Volatile Organic Compounds (mg/kg)								
BTEX								
Benzene		120	33	38	0.5 U	2 J	26	30
Toluene		1,500 D	1,100	800	0.5 U	2 J	34	30
Ethylbenzene		640	550	30 U	1 J	5	11	14
Xylenes (Total)		4,400 D	1,200	30 U	1 J	24	70	93
Chlorinated VOCs								
1,1,1-Trichloroethane		58	30 U	30 U	0.5 U	0.5 U	6 U	6 U
1,1-Dichloroethane		8 J	30 U	30 U	0.5 U	0.5 U	6 U	6 U
Chlorobenzene		14	30 U	410	0.5 U	0.5 U	6 U	6 U
Chloroform		7 J	30 U	2,280	0.5 U	0.5 U	6 U	6 U
cis-1,2-Dichloroethene		900 D	30 U	30 U	1 U	1 U	6 U	6 U
trans-1,2-Dichloroethene		5 J	30 U	30 U	1 U	1 U	6 U	6 U
Trichloroethene		360	30 U	30 U	0.5 U	0.5 U	6 U	6 U
Polychlorinated Biphenyls (mg/kg)								
Aroclor-1242		39	50 U	50 U	36	120	5 U	5 U
Aroclor-1260		79	1,500	1,600	27	290	340	360
Petroleum Hydrocarbons (mg/kg)								
GRO		45,000	11,000	35,000	3,500	2,100	1,000	720
DRO		430,000	350,000	390,000	380,000	390,000	86,000	83,000
Semivolatile Organic Compounds (mg/kg)								
bis (2-chloroethyl) ether		NA	200 U	200 U	NA	NA	200 U	200 U

Notes:

All results in mg/kg (parts per million).

(1) Located South of Pepper Building

(2) Located Adjacent to MW-32S

GRO = Gasoline Range Organic Compounds.

DRO = Diesel Range Organic Compounds.

U = Compound not detected.

J = Estimated Concentration.

D = Sample Dilution required.

NA = Not Analyzed

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Table 4-11. Summary of Select Organic Compounds in Ground Water Samples from the Water Table Aquifer in the MW-32S LNAPL Area.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location Sample Date Round Parameter	NJDEP Ground Water Quality Standard	MW-32S NAPL 5/11/2001 (ROUX)	MW-32S 1/14/00 R-2	MW-32I 5/3/01 R-4	MW-30S 1/10/00 R-2	MW-31S 1/14/00 R-2	MW-8A 5/1/2001 R-4	MW-9A 4/7/1999 R-1	MW-25S 10/27/2000 R-3	MW-29S 1/13/2000 R-2	MW-26S 5/3/01 R-4
Volatile Organic Compounds (ug/l)											
BTEX											
Benzene	1	120,000	**950**	**520**	**37**	1 J	1 U	1 U	1 U	1 U	**280**
Toluene	1,000	1,500,000 D	**2700**	45	83	2 U	1 U	2 U	1 U	2 U	520 D
Ethylbenzene	700	640,000	700	310	190	3 J	1 U	2 U	1 U	2 U	59
Xylenes (Total)	40	4,400,000 D	**3300**	**190**	**210**	2 J	1 U	1 U	1 U	1 U	**230**
Chlorinated VOCs											
1,1,1-Trichloroethane	30	58,000	**180**	17	1 U	1 U	1 U	1 U	1 U	1 U	**51**
1,1-Dichloroethane	70	8,100 J	**320**	**140**	8	2 U	1 U	1 U	1 U	2 U	**93**
Chlorobenzene	4	14,000	**41 J**	**120**	**280**	1 U	1 U	1 U	1 U	1 U	4 J
Chloroform	6	7,400 J	**100**	**25**	1 U	1 U	1 U	1 U	1 U	1 U	**15**
cis-1,2-Dichloroethene	10	900,000 D	**17000 D**	**5800 D**	2 U	3 J	1 U	2 U	1 U	1 U	**420 D**
trans-1,2-Dichloroethene	100	5,300 J	80 J	48	2 U	2 U	1 U	2 U	1 U	2 U	3 J
Trichloroethene	1	360,000	**650**	**13**	1 U	1 U	1 U	1 U	1 U	1 U	**430 D**
Semivolatile Organic Compounds (ug/l)											
bis (2-chloroethyl) ether (R2)	10	NA	**26**	NA	1 U	1 U	1 U	0.9 U	1 U	1 J	**1800**

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
J = Estimated Value.
D= Compound quantitated on a diluted sample.
(R2) = Round 2 Data for bis (2-chloroethyl) ether

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Table 4-12. Summary of Select Organic Compounds in Ground Water Samples From the Water Table Aquifer in the Pepper Building LNAPL Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	NJDEP	P-5 NAPL	MW-24S	MW-27S	S-3A	MW-28S	MW-6A	MW-3A	S-4
Sample Date	Ground Water	5/11/2001	1/11/00	1/10/00	11/1/2000	1/6/2000	7/12/1999	7/13/1999	10/31/2000
Round	Quality Standard	(Roux)	R-2	R-2	R-3	R-2	R-1	R-1	R-3
Parameter									
Volatile Organic Compounds (ug/l)									
BTEX									
Benzene	1	1,600 J	**2 J**	**26**	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	2,200 J	2 U	4 U	1 U	2 U	2 U	1 U	1 U
Ethylbenzene	700	4,500	2 U	4 U	1 U	2 U	2 U	1 U	1 U
Xylenes (Total)	40	24,000	1 J	8 J	1 U	1 U	1 U	1 U	1 U
Chlorinated VOCs									
1,1,1-Trichloroethane	30	500 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	70	500 U	2 U	4 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	4	500 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U
Chloroform	6	500 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	10	1,000 U	2 U	4 J	1 U	2 U	2 U	1 U	1 U
trans-1,2-Dichloroethene	100	1,000 U	2 U	4 U	1 U	2 U	2 U	1 U	1 U
Trichloroethene	1	500 U	1 U	3 J	1 U	1 U	1 U	1 U	1 U
Semivolatile Organic Compounds (ug/l)									
bis (2-chloroethyl) ether (R2)	10	NA	1 U	1 U	NA	0.9 U	1 U	1 U	0.9 U

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

J = Estimated Value.

D= Compound quantitated on a diluted sample.

(R2) = Round 2 Data for bis (2-chloroethyl) ether

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Table 4-13. Summary of Select Organic Compounds in Ground Water Samples from Wells Downgradient of the MW-32S LNAPL Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	NJDEP	MW-32S NAPL	MW-32S	MW-32I	MW-26S	MW-26I	MW-26D	S-11C	MW-23D	MW-22D	MW-11B	MW-17D
Sample Date	Ground Water	5/11/2001	1/14/00	5/3/01	5/3/01	5/4/2001	5/4/01	5/4/01	5/4/01	5/3/01	5/2/01	5/2/01
Round	Quality Standard	(ROUX)	R-2	R-4	R-4	R-4	R-4	R-4	R-4	R-4	R-4	R-4
Parameter												
Volatile Organic Compounds (ug/l)												
BTEX												
Benzene	1	120,000	**950**	**520**	**280**	**390 D**	**510**	**520**	**480**	**21**	**13**	**36**
Toluene	1,000	1,500,000 D	**2700**	45	520 D	20	**2000 D**	**1500**	**1300**	1 U	1 U	1 U
Ethylbenzene	700	640,000	700	310	59	72	220	400	220	6	1 U	1 U
Xylenes (Total)	40	4,400,000 D	**3300**	**190**	30	**74**	**690 D**	**1200**	**670**	1 J	1 U	2 J
Chlorinated VOCs												
1,1,1-Trichloroethane	30	58,000	**180**	17	**51**	1 U	11	**58**	19 J	1 U	1 U	1 U
1,1-Dichloroethane	70	8,100 J	**320**	**140**	**93**	7	60	54	35 J	8	3 J	7
Chlorobenzene	4	14,000	**41 J**	**120**	4 J	**8**	**32**	**67**	**35 J**	**5**	1 U	1 U
Chloroform	6	7,400 J	**100**	**25**	**15**	1 U	**29**	**60**	**32 J**	1 U	1 U	**13**
cis-1,2-Dichloroethene	10	900,000 D	**17000 D**	**5800 D**	**420 D**	2 J	**1100 D**	**1000**	**750**	**52**	**21**	**56**
trans-1,2-Dichloroethene	100	5,300 J	80 J	48	3 J	1 J	9 J	15 J	10 U	7	1 U	1 U
Trichloroethene	1	360,000	**650**	**13**	**430 D**	1U	**1600 D**	**5300 D**	**2200**	**240**	**52**	**54**
Semivolatile Organic Compounds (ug/l)												
bis (2-chloroethyl) ether (R2)	10	NA	**26**	NA	**1,800**	**6,000 D**	**1200 D**	**540 D**	**1800 D**	**490 D**	**370 D**	**480 D**

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

J = Estimated Value.

D= Compound quantitated on a diluted sample.

(R2) = Round 2 Data for bis (2-chloroethyl) ether

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Table 4-14. Summary of Select Organic Compounds in Ground Water Samples From Wells Downgradient of the Pepper Building LNAPL Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location Sample Date Round Parameter	NJDEP Ground Water Quality Standard	P-5 NAPL 5/11/2001 (Roux)	MW-24S 1/11/00 R-2	MW-27S 1/10/00 R-2	MW-27I 1/3/2000 R-3	MW-27D 1/10/2000 R-2	MW-4D 1/7/00 R-2	MW-12B 5/2/2001 R-4	MW-11B 5/2/01 R-4	MW-17D 5/2/01 R-4
Volatile Organic Compounds (ug/l)										
BTEX										
Benzene	1	1,600 J	**2 J**	**26**	**54**	**54**	**130**	**8**	**13**	**36**
Toluene	1,000	2,200 J	2 U	4 U	1 U	12	6	1 U	1 U	1 U
Ethylbenzene	700	4,500	2 U	4 U	1 U	2 J	5 J	1 U	1 U	1 U
Xylenes (Total)	40	24,000	1 J	8 J	1 U	8	8	1 U	1 U	2 J
Chlorinated VOCs										
1,1,1-Trichloroethane	30	500 U	1 U	2 U	25	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	70	500 U	2 U	4 U	14	13	49	3 J	3 J	7
Chlorobenzene	4	500 U	1 U	2 U	3 J	**14**	**6**	1 U	1 U	1 U
Chloroform	6	500 U	1 U	2 U	1 U	6	1 U	1 U	**1 U**	**13**
cis-1,2-Dichloroethene	10	1,000 U	2 U	4 J	**130**	**70**	**140**	8	**21**	**56**
trans-1,2-Dichloroethene	100	1,000 U	2 U	4 U	1 J	2 U	2 U	1 U	1 U	1 U
Trichloroethene	1	500 U	1 U	**3 J**	**42**	**44**	**240**	**19**	**52**	**54**
Semivolatile Organic Compounds (ug/l)										
bis (2-chloroethyl) ether (R2)	10	NA	1 U	1 U	**140**	**3,800 D**	**1500 D**	**180 D (R1)**	**370 D**	**480 D**

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
J = Estimated Value.
D= Compound quantitated on a diluted sample.
(R1) = Round 1 Data for bis (2-chloroethyl) ether
(R2) = Round 2 Data for bis (2-chloroethyl) ether

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Table 4-15. Select Analytical Results for Soil Samples from Lagoon Residuals Compared to the NJDEP IGWSCC.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID Sample Date Sample Depth	NJDEP Impact To Ground Water Soil Cleanup Criteria	L-8 8/12/99 29-30	L-12A 7/26/99 9-10	L-13A 7/30/1999 18-19	MW-26D 7/8/1999 21-22	MW-26D 7/8/1999 19-20
Volatile Organic Compounds						
BTEX						
Benzene	1	**2.2**	**1.2 J**	**3.1**	**11**	**19**
Toluene	500	5.2	25	0.8 J	47	120 D
Ethylbenzene	100	1.1 J	4.2	0.4 U	12	22
Xylenes (Total)	10	5.3	**24**	0.4 U	**55**	**100**
Chlorinated VOCs						
1,1,1-Trichloroethane	50	0.29 U	590 U	0.4 U	0.26 U	6.6
1,1-Dichloroethane	10	0.29 U	590 U	0.4 U	0.26 U	0.4 J
Chlorobenzene	1	0.29 U	590 U	0.4 U	0.26 U	0.6 J
Chloroform	1	0.29 U	590 U	0.4 U	0.26 U	0.8 J
cis-1,2-Dichloroethene	1	0.58 U	1.2 U	0.9 U	**2.4**	**7.7**
trans-1,2-Dichloroethene	50	0.58 U	1.2 U	0.9 U	0.5 U	0.4 U
Trichloroethene	1	0.29 U	0.8 J	0.4 U	0.5 U	**48**
Polychlorinated Biphenyls						
Aroclor-1242	50	0.1 U	0.2 U	0.1 U	NA	16
Aroclor-1260	50	0.3	6.2	0.1 J	NA	15.3
Petroleum Hydrocarbons						
DRO	10,000	210.	10000.	1800	5600	**11000**
GRO	10,000	33. J	190. ND	43	290	200
Semivolatile Organic Compounds						
bis(2-Chloroethyl)ether	10	0.1 U	0.8 U	0.2 J	6.4	5.6

Notes:
All results in mg/kg (parts per million).
GRO = Gasoline Range Organic Compounds.
DRO = Diesel Range Organic Compounds.
U = Compound not detected.
J = Estimated Concentration.
D = Sample Dilution required.
NA = Not Analyzed

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Table 4-16. Drainage Swale Surface Water Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	DS-1/SW	
Sample Date	3/22/2001	
Parameter	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)		
Alkalinity to pH 8.3	NA	NA
Alkalinity to pH 4.5	NA	NA
Total Suspended Solids	NA	NA
Total Dissolved Solids	NA	NA
Total Hardness	NA	NA
Kjeldahl Nitrogen	NA	NA
Nitrite Nitrogen	NA	NA
Nitrate Nitrogen	NA	NA
Ammonia Nitrogen	NA	NA
Sulfide	NA	NA
Total Organic Carbon	NA	NA
Chloride	NA	NA
Sulfate	NA	NA
Volatile Organic Compounds (µg/l)		
Benzene	--	NA
Acetone	--	NA
Toluene	--	NA
Total TICs	ND	NA
Total Petroleum Hydrocarbons (mg/l)		
TPH-DRO	0.52	NA
THP-GRO	--	NA
Semivolatile Organic Compounds (µg/l)		
Phenol	--	NA
bis(2-chloroethyl) ether	--	NA
bis (2-Ethylhexyl) phthalate	--	NA
4-Methylphenol	--	NA
Isophorone	--	NA
2,4 Dimethylphenol	--	NA
Total TICs	ND	NA
Polychlorinated Biphenyls (µg/l)		
Aroclor 1248	--	NA
Aroclor 1254	--	NA
Aroclor 1260	--	NA
Total PCBs	--	NA
Target Analyte List Metals (µg/l)		
Aluminum	6,170 N*	27 B
Arsenic	10.7 *	31.7
Barium	210 N*	25.8 B
Calcium	17,100 *	13,300
Chromium	20.8 BN*	--
Copper		8.9 B
Iron	12,500 *	--
Lead	300 N*	--
Magnesium	7,450 N*	4,340
Manganese	366 N*	--
Nickel	12 BN*	--
Potassium	4,410 N*	2,810
Selenium	3.8 B	4.1 B
Sodium	27,200	292 N
Thallium	--	--
Vanadium	34.5 N*	--
Zinc	513 N*	162

See Table 7 for notes and qualifiers

Table 4-17. Analytical Results for Test Pit Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-A-1	TP-A-2	TP-A-3	TP-A-4	TP-A-5	TP-A-6	TP-B-1
Sample Date	11/6/00	11/6/00	11/7/00	11/7/00	11/8/00	11/10/00	11/3/00
Parameter							
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
1,1,1-Trichloroethane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
1,1,2,2-Tetrachloroethane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
1,1,2-Trichloroethane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
1,1-Dichloroethane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
1,1-Dichloroethene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
1,2-Dichloroethane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
1,2-Dichloropropane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
2-Butanone	570 U	520 U	530 U	610 U	560 U	580 U	5,400 U
2-Hexanone	430 U	390 U	400 U	460 U	420 U	430 U	4,000 U
4-Methyl-2-pentanone	430 U	390 U	400 U	460 U	420 U	430 U	4,000 U
Acetone	1,000 U	920 U	920 U	1,100 U	980 U	1,000 U	9,400 U
Benzene	140 U	130 U	130 U	150 U	140 U	140 U	7,600
Bromodichloromethane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Bromoform	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Bromomethane	290 U	260 U	260 U	310 U	280 U	290 U	2,700 U
Carbon disulfide	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Carbon tetrachloride	140 U	130 U	130 U	150 U	140 U	140 J	1,300 U
Chlorobenzene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Chloroethane	290 U	260 U	260 U	310 U	280 U	290 U	2,700 U
Chloroform	140 U	130 U	130 U	150 U	140 U	360 J	1,300 U
Chloromethane	290 U	260 U	260 U	310 U	280 U	290 U	2,700 U
cis-1,2-Dichloroethene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
cis-1,3-Dichloropropene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Dibromochloromethane	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Ethylbenzene	140 U	130 U	130 U	330 J	140 U	450 J	1,300 U
Methylene chloride	290 U	260 U	260 U	310 U	280 U	290 U	2,700 U
Styrene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Tetrachloroethene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Toluene	140 U	130 U	130 U	150 U	140 U	140 U	85,000
trans-1,2-Dichloroethene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
trans-1,3-Dichloropropene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Trichloroethene	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Vinyl chloride	140 U	130 U	130 U	150 U	140 U	140 U	1,300 U
Xylenes (Total)	140 U	130 U	250 J	1,400	140 U	3,700	1,300 U

302886

Location ID	TP-A-1	TP-A-2	TP-A-3	TP-A-4	TP-A-5	TP-A-6	TP-B-1
Sample Date	11/6/00	11/6/00	11/7/00	11/7/00	11/8/00	11/10/00	11/3/00
Parameter							
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)							
1,2,4-Trichlorobenzene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
1,2-Dichlorobenzene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
1,3-Dichlorobenzene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
1,4-Dichlorobenzene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
2,2'-Oxybis(1-chloropropane)	39 U	38 U	40 U	200 U	40 U	40 U	770 U
2,4,5-Trichlorophenol	78 U	76 U	79 U	400 U	79 U	79 U	1500 U
2,4,6-Trichlorophenol	78 U	76 U	79 U	400 U	79 U	79 U	1500 U
2,4-Dichlorophenol	78 U	76 U	79 U	400 U	79 U	79 U	1500 U
2,4-Dimethylphenol	78 U	76 U	79 U	400 U	79 U	79 U	1500 U
2,4-Dinitrophenol	780 U	760 U	790 U	4,000 U	790 U	790 U	15,000 U
2,4-Dinitrotoluene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
2,6-Dinitrotoluene	39 U	38 U	40 U	200 U	40 U	40 U	78,000
2-Chloronapthalene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
2-Chlorophenol	39 U	38 U	40 U	200 U	40 U	40 U	770 U
2-Methylnapthalene	370 J	670	1,200	2,400	40 U	450	770 U
2-Methylphenol	39 U	38 U	40 U	200 U	40 U	40 U	770 U
2-Nitroaniline	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
2-Nitrophenol	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
3,3'-Dichlorobenzidine	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
3-Nitroaniline	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
4,6-Dinitro-2-methylphenol	190 U	190 U	200 U	1,000 U	200 U	200 U	3,800 U
4-Bromophenyl phenyl ether	39 U	38 U	40 U	200 U	40 U	40 U	770 U
4-Chloro-3-methylphenol	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
4-Chloroaniline	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
4-Chlorophenyl phenyl ether	39 U	38 U	40 U	200 U	40 U	40 U	770 U
4-Methylphenol	80 J	76 U	79 U	400 U	79 U	79 U	1,700 J
4-Nitroaniline	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
4-Nitrophenol	190 U	190 U	200 U	1,000 U	200 U	200 U	3,800 U
Acenaphthene	210 J	10,000 D	280 J	330 J	40 U	120 J	770 U
Acenaphthylene	270 J	140 J	40 U	200 U	40 U	40 U	770 U
Anthracene	780	23,000 D	330 J	350 J	40 U	76 J	770 U
Benzo(a)anthracene	2,200	36,000 D	660	570 J	53 J	110 J	770 U
Benzo(a)pyrene	2,200	30,000 D	390 J	640 J	44 J	98 J	770 U
Benzo(b)fluoranthene	2,500	40,000 D	370 J	630 J	52 J	110 J	770 U
Benzo(g,h,i)perylene	1,300	13,000 D	330 J	400 J	40 U	110 J	770 U
Benzo(k)fluoranthene	1,300	16,000 D	110 J	270 J	40 U	40 U	770 U
bis(2-Chloroethoxy)methane	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U

302887

Location ID	TP-A-1	TP-A-2	TP-A-3	TP-A-4	TP-A-5	TP-A-6	TP-B-1
Sample Date	11/6/00	11/6/00	11/7/00	11/7/00	11/8/00	11/10/00	11/3/00
Parameter							
bis(2-Chloroethyl)ether	39 U	38 U	40 U	200 U	40 U	40 U	770 U
bis(2-Ethylhexyl)phthalate	770	4,900	410	400 U	79 U	520	1,500 U
Butyl benzyl phthalate	78 U	76 U	320 J	400 U	79 U	79 U	1,500 U
Carbazole	750	3,200	79 U	400 U	79 U	79 U	1,500 U
Chrysene	2,300	36,000 D	1,300	1,000 J	42 J	180 J	770 U
Di-n-butyl phthalate	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
Di-n-octyl phthalate	210 J	76 U	79 U	400 U	79 U	79 U	1,500 U
Dibenz(a,h)anthracene	400	4,300	110 J	200 U	40 U	40 U	770 U
Dibenzofuran	630	3,900	200 J	200 U	40 U	59 J	770 U
Diethyl phthalate	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
Dimethyl phthalate	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
Fluoranthene	5,800	78,000 D	590	980 J	81 J	110 J	770 U
Fluorene	1,200	12,000 D	570	560 J	40 U	160 J	770 U
Hexachlorobenzene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
Hexachlorobutadiene	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
Hexachlorocyclopentadiene	190 U	190 U	200 U	1,000 U	200 U	200 U	3,800 U
Hexachloroethane	39 U	38 U	40 U	200 U	40 U	40 U	770 U
Indeno(1,2,3-cd)pyrene	1,400	17,000 D	160 J	310 J	40 U	51 J	770 U
Isophorone	39 U	38 U	40 U	200 U	40 U	40 U	770 U
n-Nitrosodiphenylamine	39 U	250 J	1,200	1,300 J	40 U	40 U	920 J
n-Nitrosodipropylamine	39 U	38 U	40 U	200 U	40 U	40 U	770 U
Naphthalene	830	570	210 J	550 J	40 U	220 J	770 U
Nitrobenzene	39 U	38 U	40 U	200 U	40 U	40 U	770 U
Pentachlorophenol	190 U	190 U	200 U	1,000 U	200 U	200 U	3,800 U
Phenanthrene	6,600 E	60,000 E	1,200	1,900 J	40 U	610	840 J
Phenol	78 U	76 U	79 U	400 U	79 U	79 U	1,500 U
Pyrene	4,500	56,000 E	1,900	1,300 J	73 J	350 J	4,200 J
POLYCHLORINATED BIPHENYLS (ug/kg)							
Aroclor-1016	77 U	38 U	200 U	200 U	20 U	390 U	38 U
Aroclor-1221	110 U	53 U	280 U	290 U	28 U	560 U	54 U
Aroclor-1232	160 U	78 U	410 U	420 U	41 U	820 U	79 U
Aroclor-1242	77 U	1,100	200 U	200 U	20 U	390 U	38 U
Aroclor-1248	1,800	41 U	210 U	220 U	21 U	430 U	510
Aroclor-1254	77 U	320	9,200	7,400	690	3,600	470
Aroclor-1260	230 J	38 U	200 U	200 U	20 U	390 U	310
Total PCBs	2,030 J	1,420	9,200	7,400	690	3,600	1,290

302888

Table 4-17. Analytical Results for Test Pit Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-A-1	TP-A-2	TP-A-3	TP-A-4	TP-A-5	TP-A-6	TP-B-1
Sample Date	11/6/00	11/6/00	11/7/00	11/7/00	11/8/00	11/10/00	11/3/00
Parameter							
METALS (mg/kg)							
Aluminum	4,320	3,760	4650	5,170	3,310	5,140	4040
Antimony	130	5.4 B	2.6 U	2.6 U	2.6 U	2.5 U	2.5 U
Arsenic	47.7	7.3	3.6	3.5	4.2	4.8	3.0
Barium	34.9	30.9	20.5	59.9	12.0	24.8	16.4
Beryllium	0.21 U	0.20 U	0.23 B	0.25 B	0.21 U	0.27 B	0.20 B
Cadmium	8.6	0.25 U	0.26 U	0.26 U	0.26 U	0.25 U	0.25 U
Calcium	1,030 E*N	1,850 E*N	830 E*N	934 E*N	590 E*N	639 E*N	208 E*N
Chromium	14.8	12.3	51.0	38.9	12.8	33.7	11.8
Cobalt	1.3 B	1.6 B	2.5 B	2.2 B	2.0 B	2.3 B	1.8 B
Copper	32.0	7.0	6.4	7.5	5.5	7.6	9.6
Iron	9,950	6,570	7,870	7,980	8,830	7,500	8,460
Lead	11,900	980	28.6	38.3	11.2	19.4	20.7
Magnesium	494 N	637 N	842 N	892 N	717 N	775 N	543 N
Manganese	51.1	40.2	63.0	62.6	63.9	66.0	39.0
Nickel	10.5	4.1 B	5.4 B	5.3 B	5.0 B	5.8	3.7 B
Potassium	441 N	431 N	637 N	653 N	549 N	602 N	586 N
Selenium	0.93 B	0.46 U	0.48 U	0.49 U	0.48 U	0.47 U	0.46 U
Silver	0.35 U	0.35 U	0.36 U	0.37 U	0.36 U	0.36 U	0.35 U
Sodium	35.6 B	31.3 U	32.9 U	62.0 B	32.5 U	32.3 U	44.3 B
Thallium	0.95 U	0.93 U	0.97 U	1.0 U	0.96 U	0.96 U	0.94 U
Vanadium	14.2	17.5	13.3	16.7	9.3	14.3	12.3
Zinc	71.0	51.8	32.4	53.8	21.3	77.8	34.7
Mercury	0.10 B	0.10 B	0.099 B	0.095 B	0.041 B	0.059 B	0.020 B

U = Compound not detected.
J = Estimated value.
B = Analyte was also detected in the blank.
D = Compound quantitated on a diluted sample.
E = Estimated due to interference.
N = Spike sample not within control limits.
P = Concentration on difference between primary and confirmation columns >25%.
* = Duplicate analysis not within control limits.

302889

Table 4-17. Analytical Results for Test Pit Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	AREA-B	TP-C-1	TP-D-1	TP-E-1	TP-F-1	TP-F-2	TP-H-1
Sample Date	10/30/00	11/1/00	11/9/00	10/31/00	10/25/00	10/26/00	10/27/00
Parameter							
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
1,1,1-Trichloroethane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
1,1,2,2-Tetrachloroethane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
1,1,2-Trichloroethane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
1,1-Dichloroethane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
1,1-Dichloroethene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
1,2-Dichloroethane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
1,2-Dichloropropane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
2-Butanone	5,300 U	520 U	6,900 U	630 U	530 U	510 U	510 U
2-Hexanone	4,000 U	390 U	5,200 U	470 U	390 U	380 U	390 U
4-Methyl-2-pentanone	4,000 U	390 U	5,200 U	470 U	390 U	380 U	390 U
Acetone	9,300 U	900 U	12,000 U	1100 U	920 U	900 U	900 U
Benzene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Bromodichloromethane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Bromoform	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Bromomethane	2,700 U	260 U	3,500 U	320 U	260 U	260 U	260 U
Carbon disulfide	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Carbon tetrachloride	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Chlorobenzene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Chloroethane	2,700 U	260 U	3,500 U	320 U	260 U	260 U	260 U
Chloroform	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Chloromethane	2,700 U	260 U	3,500 U	320 U	260 U	260 U	260 U
cis-1,2-Dichloroethene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
cis-1,3-Dichloropropene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Dibromochloromethane	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Ethylbenzene	1,300 U	200 J	2,800 J	160 U	130 U	510 J	130 U
Methylene chloride	2,700 U	260 U	1,700 U	320 U	260 U	260 U	260 U
Styrene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Tetrachloroethene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Toluene	1,300 U	240 J	3,600 J	160 U	130 U	180 J	130 U
trans-1,2-Dichloroethene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
trans-1,3-Dichloropropene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Trichloroethene	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Vinyl chloride	1,300 U	130 U	1,700 U	160 U	130 U	130 U	130 U
Xylenes (Total)	1,300 U	1,000	30,000	160 U	130 U	2,600	130 U

302890

Location ID	AREA-B	TP-C-1	TP-D-1	TP-E-1	TP-F-1	TP-F-2	TP-H-1
Sample Date	10/30/00	11/1/00	11/9/00	10/31/00	10/25/00	10/26/00	10/27/00
Parameter							
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)							
1,2,4-Trichlorobenzene	7,200 U	73 J	630 J	4,600 U	110	550	35 U
1,2-Dichlorobenzene	7,200 U	38 U	500 U	4,600 U	35 U	120 J	35 U
1,3-Dichlorobenzene	7,200 U	38 U	500 U	4,600 U	35 U	53 J	35 U
1,4-Dichlorobenzene	7,200 U	38 U	500 U	4,600 U	35 U	110 J	35 U
2,2'-Oxybis(1-chloropropane)	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
2,4,5-Trichlorophenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
2,4,6-Trichlorophenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
2,4-Dichlorophenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
2,4-Dimethylphenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
2,4-Dinitrophenol	140,000 U	770 U	10,000 U	91,000 U	700 U	700 U	740 U
2,4-Dinitrotoluene	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
2,6-Dinitrotoluene	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
2-Chloronapthalene	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
2-Chlorophenol	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
2-Methylnapthalene	7,200 U	270 J	330,000 D	9,300 J	35 U	5,900 D	35 U
2-Methylphenol	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
2-Nitroaniline	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
2-Nitrophenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
3,3'-Dichlorobenzidine	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
3-Nitroaniline	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
4,6-Dinitro-2-methylphenol	36,000 U	190 U	2,500 U	23,000 U	180 U	180 U	180 U
4-Bromophenyl phenyl ether	72,000 U	38 U	500 U	4,600 U	35 U	35 U	35 U
4-Chloro-3-methylphenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
4-Chloroaniline	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
4-Chlorophenyl phenyl ether	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
4-Methylphenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
4-Nitroaniline	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
4-Nitrophenol	36,000 U	190 U	2,500 U	23,000 U	180 U	180 U	180 U
Acenaphthene	7,200 U	58 J	77,000 D	17,000 J	35 U	480	35 U
Acenaphthylene	7,200 U	38 U	14,000	4,600 U	35 U	35 U	35 U
Anthracene	7,200 U	110 J	19,000	35,000 J	35 U	35 U	35 U
Benzo(a)anthracene	7,200 U	87 J	3,300 J	51,000	35 U	35 U	35 U
Benzo(a)pyrene	7,200 U	41 J	2,000 J	37,000 J	35 U	35 U	35 U
Benzo(b)fluoranthene	7,200 U	80 J	1,600 J	46,000	35 U	35 U	35 U
Benzo(g,h,i)perylene	7,200 U	150 J	1,000 J	17,000 J	60	35 U	35 U
Benzo(k)fluoranthene	7,200 U	38 U	500 U	16,000 J	35 U	35 U	35 U
bis(2-Chloroethoxy)methane	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U

302891

Table 4-17. Analytical Results for Test Pit Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	AREA-B	TP-C-1	TP-D-1	TP-E-1	TP-F-1	TP-F-2	TP-H-1
Sample Date	10/30/00	11/1/00	11/9/00	10/31/00	10/25/00	10/26/00	10/27/00
Parameter							
bis(2-Chloroethyl)ether	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
bis(2-Ethylhexyl)phthalate	14,000 U	350 J	1,000 U	9,100 U	410	720	71 U
Butyl benzyl phthalate	14,000 U	77 U	1,000 U	230,000	70 U	70 U	71 U
Carbazole	14,000 U	77 U	1,000 U	16,000 J	70 U	70 U	71 U
Chrysene	7,200 U	190 J	5,600	46,000	35 U	310 J	35 U
Di-n-butyl phthalate	14,000 U	77 U	1,000 U	9,100 U	76	310 J	71 U
Di-n-octyl phthalate	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
Dibenz(a,h)anthracene	7,200 U	38 U	500 U	6,400 J	35 U	35 U	35 U
Dibenzofuran	7,200 U	60 J	34,000	14,000 J	35 U	380	35 U
Diethyl phthalate	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
Dimethyl phthalate	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
Fluoranthene	7,200 U	160 J	500 U	100,000	53	310 J	35 U
Fluorene	7,200 U	190 J	86,000 D	24,000 J	52	890	35 U
Hexachlorobenzene	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
Hexachlorobutadiene	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
Hexachlorocyclopentadiene	36,000 U	190 U	2,500 U	2,300 U	180 U	180 U	180 U
Hexachloroethane	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
Indeno(1,2,3-cd)pyrene	7,200 U	38 U	500 U	21,000 J	35 U	35 U	35 U
Isophorone	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
n-Nitrosodiphenylamine	7,200 U	410	500 U	4,600 U	35 U	35 U	35 U
n-Nitrosodipropylamine	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
Naphthalene	7,200 U	120 J	26,000	18,000 J	35 U	1,700 D	210
Nitrobenzene	7,200 U	38 U	500 U	4,600 U	35 U	35 U	35 U
Pentachlorophenol	36,000 U	190 U	2,500 U	23,000 U	180 U	180 U	180 U
Phenanthrene	7,200 U	620	320,000 D	120,000	36 U	2,600	35 U
Phenol	14,000 U	77 U	1,000 U	9,100 U	70 U	70 U	71 U
Pyrene	7,200 U	270 J	40,000	87,000	160	540	35 U
POLYCHLORINATED BIPHENYLS (ug/kg)							
Aroclor-1016	36 U	38 U	1,200 U	4.6 U	35 U	350 U	3.5 U
Aroclor-1221	51 U	54 U	1,700 U	6.5 U	49 U	490 U	5.0 U
Aroclor-1232	75 U	79 U	2,500 U	9.6 U	73 U	730 U	7.3 U
Aroclor-1242	36 U	38 U	1,200 U	4.6 U	540	2,900	3.5 U
Aroclor-1248	95 J	780	1,300 U	38	38 U	380 U	3.8 U
Aroclor-1254	63 JP	38 U	1,200 U	100	35 U	350 U	3.5 U
Aroclor-1260	36 U	1,400	1,200 U	56 P	1,200	7,600	3.5 U
Total PCBs	158 JP	2,180	--	194 P	1,740	10,500	--

302892

Table 4-17. Analytical Results for Test Pit Soil Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	AREA-B	TP-C-1	TP-D-1	TP-E-1	TP-F-1	TP-F-2	TP-H-1
Sample Date	10/30/00	11/1/00	11/9/00	10/31/00	10/25/00	10/26/00	10/27/00
Parameter							
METALS (mg/kg)							
Aluminum	2,240	6,060	3,400	6,910	1170	2,580	1360
Antimony	2.3	2.5 U	3.2 U	2.9 U	2.3	2.3 U	2.3 U
Arsenic	1.6	2.7	4.0	8.8	0.53	1.9	0.69
Barium	10.1 B	13.4	13,100	167	6.8	15.6	6.2
Beryllium	0.19 E*N	0.26 B	0.26 U	0.34 B	0.19	0.19 B	0.19 B
Cadmium	0.23 E*N	0.25 U	0.51 B	0.37 B	0.23	0.23 U	0.23 U
Calcium	494 E*N	208 E*N	5,140 E*N	3,870 E*N	89.7	186 E*N	97.9 E*N
Chromium	3.9 B	16.1	20.0	25.6	2.5	7.7	3.7
Cobalt	0.48 B	1.4 B	5.0 B	3.8 B	1.6	0.91 B	0.60
Copper	8.1	3.2 B	21.0	46.1	1.2	2.2 B	4.0
Iron	1,540	8,940	6,710	50,500	2,150	6,050	3,280
Lead	43.2	7.4	88.5	1,420	3.5	7.1	4.0
Magnesium	185	608 N	788 N	1610 N	124	252 N	167 N
Manganese	14.1	29.5	56.2	271	10.3	19.3	15.6
Nickel	5.2 B	3.0 B	8.5	6.1 B	0.82	1.3 B	1.4 B
Potassium	206 N	1,480 N	460 N	1,220 N	289	588 N	262 N
Selenium	1.0	0.46 U	0.69 B	0.95 B	0.43	0.42 U	0.43 U
Silver	0.33 U	0.35 U	0.45 U	0.41 U	0.32	0.32 U	0.32 U
Sodium	30.4 B	31.5 U	141 B	87.9 B	29.1	29.0 U	29.3 U
Thallium	0.88 U	0.93 U	1.2 U	1.1 U	0.86	0.86 U	0.87 U
Vanadium	9.5	45.5	15.5	34.0	4.6	20.8	5.8
Zinc	29.7	14.9	254	110	4.5	6.7 B	12.1
Mercury	0.048 B	0.0072 B	0.10 B	0.067 BN	0.0034	0.0035 B	0.0035

U = Compound not detected.
J = Estimated value.
B = Analyte was also detected in the blank.
D = Compound quantitated on a diluted sample.
E = Estimated due to interference.
N = Spike sample not within control limits.
P = Concentration on difference between primary and confirmation columns >25%.
* = Duplicate analysis not within control limits.

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Table 4-18. Analytical Results for Test Pit Ground Water Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-A-1	TP-A-2	TP-B-1	TP-C-1	TP-E-1	TP-H-1
Sample Date	7/11/2000	7/11/2000	3/11/2000	2/11/2000	10-31-01	10-27-00
Parameter						
VOLATILE ORGANIC COMPOUNDS (ug/l)						
1,1,1-Trichloroethane	2 J	1 U	2 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	2 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	2 U	1 U	1 U	1 U
1,1-Dichloroethane	22	1 U	2 U	1 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	2 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	2 U	1 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	2 U	1 U	1 U	1 U
2-Butanone	3 U	3 U	200 U	21	3 U	3 U
2-Hexanone	3 U	3 U	6 U	18	3 U	3 U
4-Methyl-2-pentanone	3 U	3 U	44	5 J	3 U	3 U
Acetone	6 U	6 J	1,900 D	60	6 U	6 U
Benzene	1 U	1 U	800 D	56	1 U	1 U
Bromodichloromethane	1 U	1 U	2 U	1 U	1 U	1 U
Bromoform	1 U	1 U	2 U	1 U	1 U	1 U
Bromomethane/ Methyl bromide	2 U	2 U	4 U	2 U	2 U	2 U
Carbon disulfide	1 U	1 U	2 U	1 U	1 U	1 U
Carbon tetrachloride	1 U	1 U	2 U	1 U	1 U	1 U
Chlorobenzene	1 J	1 U	2 U	1 U	1 U	1 U
Chloroethane	11	2 U	4 U	100	2 U	2 U
Chloroform	1 U	1 U	2 U	1 U	1 U	1 U
Chloromethane	2 U	2 U	4 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	10	1 U	2 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	2 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	2 U	1 U	1 U	1 U
Ethylbenzene	2 J	1 U	2 J	10	1 U	1 U
Methylene chloride	2 U	2 U	4 U	2 U	2 U	2 U
Styrene	1 U	1 U	2 J	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	2 U	1 U	1 U	1 U
Toluene	6	1 U	2,300 D	11	1 U	1 U
trans-1,2-Dichloroethene	2 J	1 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	1 U	1 U	2 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	2 U	1 U	1 U	1 U
Vinyl chloride	5	1 U	2 U	1 U	1 U	1 U
Xylenes (Total)	2 J	1 U	20	45	1 U	1 U

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Table 4-18. Analytical Results for Test Pit Ground Water Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-A-1	TP-A-2	TP-B-1	TP-C-1	TP-E-1	TP-H-1
Sample Date	7/11/2000	7/11/2000	3/11/2000	2/11/2000	10-31-01	10-27-00
Parameter						
SEMIVOLATILE ORGANIC COMPOUNDS (ug/l)						
1,2,4-Trichlorobenzene	1 U	1 U	54 U	18 J	1 U	1 U
1,2-Dichlorobenzene	1 U	1 U	54 U	10 U	1 U	1 U
1,3-Dichlorobenzene	1 U	1 U	54 U	10 U	1 U	1 U
1,4-Dichlorobenzene	1 U	1 U	54 U	10 U	1 U	1 U
2,2'-Oxybis(1-chloropropane)	1 U	1 U	54 U	10 U	1 U	1 U
2,4,5-Trichlorophenol	2 U	2 U	110 U	21 U	2 U	2 U
2,4,6-Trichlorophenol	2 U	2 U	110 U	21 U	2 U	2 U
2,4-Dichlorophenol	1 U	1 U	1,100 U	10 U	1 U	1 U
2,4-Dimethylphenol	1 U	1 U	54 U	84 J	19 U	1 U
2,4-Dinitrophenol	20 U	20 U	1,100 U	210 U	1 U	20 U
2,4-Dinitrotoluene	1 U	1 U	30,000 D	10 U	1 U	1 U
2,6-Dinitrotoluene	2 U	2 U	110 U	21 U	2 U	2 U
2-Chloronapthalene	2 U	1 U	54 U	10 U	1 U	2 U
2-Chlorophenol	1 U	1 U	54 U	10 U	1 U	1 U
2-Methylnapthalene	1 U	4 J	65 J	150	1 U	1 U
2-Methylphenol	1 U	1 U	54 U	10 U	1 U	1 U
2-Nitroaniline	2 U	2 U	110 U	21 U	2 U	2 U
2-Nitrophenol	1 U	1 U	54 U	10 U	1 U	1 U
3,3'-Dichlorobenzidine	2 U	2 U	110 U	21 U	2 U	2 U
3-Nitroaniline	2 U	2 U	110 U	21 U	2 U	2 U
4-Bromophenyl phenyl ether	2 U	2 U	110 U	21 U	2 U	2 U
4-Chloro-3-methylphenol	1 U	1 U	54 U	10 U	1 U	1 U
4-Chloroaniline	8 J	1 U	54 U	10 U	1 U	1 U
4-Chlorophenyl phenyl ether	1 U	1 U	54 U	10 U	1 U	1 U
4-Methylphenol	3 U	3 U	160 U	31 U	3 U	3 U
4-Nitroaniline	2 U	2 U	110 U	21 U	2 U	2 U
4-Nitrophenol	10 U	10 U	540 U	21 U	10 U	10 U
4, 6-Dinitro- 2-methlyphenol	5 U	5 U	270 U	51 U	5 U	5 U
Acenaphthene	2 J	13	54 U	18 J	1 U	1 U
Acenaphthylene	1 U	1 U	54 U	10 U	1 J	1 U
Anthracene	1 U	6 J	54 U	20 J	1 U	1 U
Benzo(a)anthracene	1 U	4 J	54 U	26 J	1 J	1 U
Benzo(a)pyrene	1 U	4 J	54 U	10 U	1 U	1 U
Benzo(b)fluoranthene	1 U	4 J	54 U	10 U	2 J	1 U
Benzo(g,h,i)perylene	1 U	2 J	54 U	10 U	1 U	1 U
Benzo(k)fluoranthene	1 U	2 J	54 U	10 U	1 U	1 U
bis(2-Chloroethoxy)methane	1 U	1 U	54 U	10 U	1 U	1 U

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Table 4-18. Analytical Results for Test Pit Ground Water Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID Sample Date Parameter	TP-A-1 7/11/2000	TP-A-2 7/11/2000	TP-B-1 3/11/2000	TP-C-1 2/11/2000	TP-E-1 10-31-01	TP-H-1 10-27-00
bis(2-Chloroethyl)ether	1 U	1 U	54 U	17 J	1 U	1 U
bis(2-Ethylhexyl)phthalate	2 U	2 U	110 U	21 U	2 U	2 U
Butyl benzyl phthalate	2 U	2 U	110 U	21 U	2 U	2 U
Carbazole	3 U	6 J	160 U	31 U	3 U	3 U
Chrysene	1 U	5 J	54 U	47 J	2 J	1 U
Di-n-butyl phthalate	2 U	2 U	110 U	21 U	2 U	1 U
Di-n-octyl phthalate	2 U	2 U	110 U	21 U	2 U	2 U
Dibenz(a,h)anthracene	1 U	1 U	54 U	10 U	1 U	1 U
Dibenzofuran	1 J	8 J	54 U	18 J	1 U	1 U
Diethyl phthalate	2 U	2 U	110 U	21 U	2 U	2 U
Dimethyl phthalate	2 U	2 U	110 U	21 U	2 U	2 U
Fluoranthene	1 U	12	54 U	42 J	3 J	1 U
Fluorene	2 J	12	54 U	48 J	3 J	1 U
Hexachlorobenzene	2 U	2 U	110 U	21 U	2 U	2 U
Hexachlorobutadiene	2 U	2 U	110 U	21 U	2 U	2 U
Hexachlorocyclopentadiene	5 U	5 U	270 U	51 U	5 U	5 U
Hexachloroethane	1 U	1 U	54 U	10 U	1 U	1 U
Indeno(1,2,3-cd)pyrene	1 U	2 J	54 U	10 U	1 U	1 U
Isophorone	1 U	1 U	3,600	10 U	1 U	1 U
Naphthalene	1 U	15	54 U	47 J	1 U	1 U
n-Nitrosodiphenylamine	1 U	1 U	54 U	10 U	1 U	1 U
n-Nitrosodipropylamine	1 U	1 U	1,900	10 U	1 U	1 U
Nitrobenzene	1 U	1 U	54 U	10 U	1 U	1 U
Petachlorophenol	3 U	3 U	160 U	31 U	3 U	3 U
Phenanthrene	1 U	25	54 U	180	2 J	1 U
Phenol	1 U	1 U	710	10 U	1 U	1 U
Pyrene	1 U	11	54 U	140	3 J	1 U
POLYCHLORINATED BIPHENYLS (ug/l)						
Aroclor-1016	0.96 U	0.96 U	NA	10 U	0.095 U	0.5 U
Aroclor-1221	0.96 U	0.96 U	NA	10 U	0.095 U	0.5 U
Aroclor-1232	0.96 U	0.96 U	NA	10 U	0.095 U	0.5 U
Aroclor-1242	26	67	NA	10 U	0.095 U	0.5 U
Aroclor-1248	0.96 U	0.96 U	NA	120	0.095 U	0.5 U
Aroclor-1254	0.96 U	0.96 U	NA	10 U	0.095 U	0.5 U
Aroclor-1260	0.96 U	2.3 J	NA	210	0.095 U	0.5 U
TOTAL PCBs	26	69.3 J	NA	330	--	--

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Table 4-18. Analytical Results for Test Pit Ground Water Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID Sample Date Parameter	TP-A-1 7/11/2000	TP-A-2 7/11/2000	TP-B-1 3/11/2000	TP-C-1 2/11/2000	TP-E-1 10-31-01	TP-H-1 10-27-00
METALS (ug/l)						
Aluminum	1,710	15,400	NA	20,700	29,000	108,000
Antimony	154 B	36.1 B	NA	70 U	14 U	70 U
Arsenic	51.6	44.4	NA	146	69	119
Barium	282	509	NA	7360	644	1,180
Beryllium	1.9 U	1.9 U	NA	26.8 B	4 B	25.3 B
Cadmium	10.3	3.6 U	NA	33.4 B	6.6 B	18 U
Calcium	158,000	149,000	NA	139,000	128,000	31,300
Chromium	6.6 U	37.5	NA	654	217	314
Cobalt	7.1 U	15.4 B	NA	107 B	51.1	141 B
Copper	39.2	71.4	NA	318	154	621
Iron	757,000	50,000	NA	901,000	176,000	451,000
Lead	2,180	3,370	NA	2,050	2,330	457
Magnesium	27,600	50,800	NA	77,900	81,600	23,200
Manganese	1,060	1,070	NA	6,170	758	3,950
Mercury	0.12 U	1.2	NA	1.2 U	0.67	1.2 U
Nickel	9.4 B	19.6 B	NA	174 B	43	108 B
Potassium	9,080	13,000	NA	69,200	10,300	19,000
Selenium	3.5 U	3.5 U	NA	36.2 B	10.3	54
Silver	3.6 U	3.6 U	NA	18 U	3.6 U	18 U
Sodium	12,000	9,720	NA	75,200	7,210	1460 U
Thallium	9.5 U	9.5 U	NA	47.5 U	9.5 U	47.5 U
Vanadium	14.6 B	66.1	NA	2,450	291	1,170
Zinc	92.6	2140	NA	5,820	802	541

-- = No NJDEP Ground Water Quality standard established.
NA = Not analyzed
U = Compound not detected.
J = Estimated value.
B = Analyte was also detected in the blank.
D = Compound quantitated on a diluted sample.
Bold indicates the result exceeds NJDEP Ground Water Quality Criteria.

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Table 4-19. Analytical Results for Test Pit Soil Waste Characterization Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-A-1	TP-A-2	TP-A-3	TP-A-4	TP-A-5	TP-A-6	AREA-B	TP-B-1
Sample Date	11/6/00	11/6/00	11/7/00	11/7/00	11/8/00	11/10/00	10/30/00	11/3/00
Parameter								
TCLP VOLATILE ORGANIC COMPOUNDS (mg/l)								
1,1-Dichloroethene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	0.015 U	0.015 U	0.015 U	0.015 U	0.018 J	0.015 U	0.015 U	0.021 U
Benzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.100 U
Carbon tetrachloride	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chlorobenzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloroform	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.012 J	0.005 U	0.005 U
Tetrachloroethene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Trichloroethene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
TCLP SEMIVOLATILE ORGANIC COMPOUNDS (mg/l)								
1,4-Dichlorobenzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2,4,5-Trichlorophenol	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
2,4,6-Trichlorophenol	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
2,4-Dinitrotoluene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2-Methylphenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
4-Methylphenol	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Hexachlorobenzene	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Hexachlorobutadiene	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Hexachloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Nitrobenzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Pentachlorophenol	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Pyridine	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
METALS (mg/l)								
Arsenic	0.0559 J	0.0397 J	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U
Barium	0.344	0.293	0.423	0.376	0.311	0.192	0.137	0.156
Cadmium	0.129	0.0037 J	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U
Chromium	0.0066 U	0.0066 U	0.0276 J	0.0127 J	0.0161 J	0.0170 J	0.0066 U	0.0066 U
Lead	**386.**	**12.5**	0.271	0.110	0.110	0.0453 J	0.0681 J	0.104
Selenium	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U
Silver	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U
Mercury	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U

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Table 4-19. Analytical Results for Test Pit Soil Waste Characterization Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-A-1	TP-A-2	TP-A-3	TP-A-4	TP-A-5	TP-A-6	AREA-B	TP-B-1
Sample Date	11/6/00	11/6/00	11/7/00	11/7/00	11/8/00	11/10/00	10/30/00	11/3/00
Parameter								
POLYCHLORINATED BIPHENYLS (ug/kg)								
Aroclor-1016	75 U	19 U	190 U	190 U	39 U	450 U	19 U	38 U
Aroclor-1221	110 U	27 U	270 U	270 U	55 U	640 U	27 U	55 U
Aroclor-1232	160 U	40 U	390 U	400 U	81 U	950 U	40 U	80 U
Aroclor-1242	75 U	1100	400 JP	190 U	39 U	450 U	19 U	38 U
Aroclor-1248	3000 U	21 U	200 U	210 U	42 U	490 U	21 U	800
Aroclor-1254	75 U	210 P	9000	7300	1300	3800	100	820
Aroclor-1260	310 J	19 U	190 U	190 U	39 U	450 U	73 JP	460
Total PCBs	310 J	1310 P	9400 JP	7300	1300	3800	194 JP	3080
GENERAL CHEMISTRY (mg/kg unless indicated)								
Cyanide (Reactivity)	100. U	100. U	96. U	98. U	98. U	97. U	97. U	100. U
Sulfide (Reactivity)	39. U	39. U	39. U	39. U	39. U	39. U	39. U	39. U
Tetra-hexa dioxin/furan	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
Ignitability	Not ignitable	Not ignitable	Not ignitable	Not ignitable	Not ignitable	Not ignitable	Not ignitable	Not ignitable
Corrosivity	Not corrosive	Not corrosive	Not corrosive	Not corrosive	Not corrosive	Not corrosive	Not corrosive	Not corrosive
pH (S.U.)	7.10	7.66	7.96	7.40	7.91	6.90	4.55	5.12

-- No Federal Waste Characterization limit established.
NA - Compound not analyzed.
U - Compound not detected.
J - Estimated Value.
P - Concentration difference between primary and confirmation columns > 25%.
E - Estimated due to interference.
N - Spike sample not within control limits.
[1]TSCA maximum limit for total PCBs.
[2]Soil and waste characterization sample collected from the same location, as such PCBs were analyzed only for the soil sample. Those results will also be used to characterize potential wastes.
[3]Surface soil sample collected from stained soils present in Area B.
Bold = Indicates sample exceeds TSCA limits or Federal Regulatory Standards for waste characterization.

302899

Table 4-19. Analytical Results for Test Pit Soil Waste Characterization Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-C-1	TP-D-1	TP-E-1	TP-E-1	TP-F-1	TP-F-2	TP-H-1
Sample Date	11/1/00	11/9/00	10/31/00	10/31/00	10/25/00	10/26/00	10/27/00
Parameter							
TCLP VOLATILE ORGANIC COMPOUNDS (mg/l)							
1,1-Dichloroethene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	0.015 U	0.033 J	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U
Benzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chlorobenzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloroform	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Tetrachloroethene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Trichloroethene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
TCLP SEMIVOLATILE ORGANIC COMPOUNDS (mg/l)							
1,4-Dichlorobenzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2,4,5-Trichlorophenol	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
2,4,6-Trichlorophenol	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
2,4-Dinitrotoluene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2-Methylphenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
4-Methylphenol	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Hexachlorobenzene	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Hexachlorobutadiene	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Hexachloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Nitrobenzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Pentachlorophenol	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Pyridine	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
METALS (mg/l)							
Arsenic	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U
Barium	0.279	153.	0.728	0.728	0.136	0.222	0.0854
Cadmium	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U
Chromium	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U
Lead	0.0971 J	0.0523 J	4.63	4.63	0.0530 J	0.0400 J	0.0381
Selenium	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U	0.0600 U
Silver	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0063 U	0.0036 U
Mercury	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U

302900

Table 4-19. Analytical Results for Test Pit Soil Waste Characterization Samples. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-C-1	TP-D-1	TP-E-1	TP-E-1	TP-F-1	TP-F-2	TP-H-1
Sample Date	11/1/00	11/9/00	10/31/00	10/31/00	10/25/00	10/26/00	10/27/00
Parameter							
POLYCHLORINATED BIPHENYLS (ug/kg)							
Aroclor-1016	38 U	98 U	4.3 U	4.3 U	35 U	350 U	3.5 U
Aroclor-1221	55 U	140 U	6.2 U	6.2 U	49 U	490 U	5 U
Aroclor-1232	80 U	210 U	9.1 U	9.1 U	73 U	730 U	7.3 U
Aroclor-1242	38 U	98 U	4.3 U	4.3 U	540	2,900	3.5 U
Aroclor-1248	640	110 U	4.7 U	4.7 U	38 U	380 U	3.8 U
Aroclor-1254	38 U	98 U	48	48	35 U	350 U	3.5 U
Aroclor-1260	1000	98 U	20 JP	20 JP	1,200	7,600	3.5 U
Total PCBs	1640	--	68 JP	68 JP	1,740	10,500	--
GENERAL CHEMISTRY (mg/kg unless indicated)							
Cyanide (Reactivity)	99. U	98. U	99. U	99. U	100. U	99. U	99. U
Sulfide (Reactivity)	39. U	39. U	39. U	39. U	39. U	39. U	39. U
Tetra-hexa dioxin/furan	0 U	0 U	0 U	0 U	0 U	0 U	0 U
Ignitability	Not ignitable	Not ignitable	Not ignitable	Not ignitable	Not ignitable	Not ignitable	Not ignitable
Corrosivity	Not corrosive	Not corrosive	Not corrosive	Not corrosive	Not corrosive	Not corrosive	Not corrosive
pH (S.U.)	6.23	7.38	7.05	7.05	6.77	6.95	12.6

-- No Federal Waste Characterization limit established.
NA - Compound not analyzed.
U - Compound not detected.
J - Estimated Value.
P - Concentration difference between primary and confirmation columns > 25%.
E - Estimated due to interference.
N - Spike sample not within control limits.
[1]TSCA maximum limit for total PCBs.
[2]Soil and waste characterization sample collected from the same location, as such PCBs were analyzed only for the soil sample. Those results will also be used to characterize potential wastes.
[3]Surface soil sample collected from stained soils present in Area B.
Bold = Indicates sample exceeds TSCA limits or Federal Regulatory Standards for waste characterization.

302901

Table 4-20. Analytical Results for Test Pit Water Waste Characterization Sampling.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	AREA-E	TP-A-1	TP-A-2	TP-A-3	TP-A-4
Sample Date	10/30/00	11/6/00	11/6/00	11/7/00	11/7/00
Sample ID	AREA-E/SO/0-0.5/WC	TP-A-1/SO/WC	TP-A-2/SO/WC	TP-A-3/SO/WC	TP-A-4/SO/WC
Parameter					
Metals (mg/l)					
Arsenic	0.0320	0.0559	0.0397	0.0320	0.0320
Barium	0.137	0.344	0.293	0.423	0.376
Cadmium	0.0036	0.129	0.0037	0.0036	0.0036
Chromium	0.0066	0.0066	0.0066	0.0276	0.0127
Lead	0.0681	386.	12.5	0.271	0.110
Selenium	0.0600	0.0600	0.0600	0.0600	0.0600
Silver	0.0036	0.0036	0.0036	0.0036	0.0036
Mercury	0.00012	0.00012	0.00012	0.00012	0.00012
Polychlorinated Biphenyls (ug/kg)					
Aroclor-1016	19	75	19	190	190
Aroclor-1221	27	110	27	270	270
Aroclor-1232	40	160	40	390	400
Aroclor-1242	19	75	1100	400	190
Aroclor-1248	21	3000	21	200	210
Aroclor-1254	100	75	210	9000	7300
Aroclor-1260	73	310	19	190	190
Volatile Organic Compounds (mg/l)					
1,1-Dichloroethene	0.005	0.005	0.005	0.005	0.005
1,2-Dichloroethane	0.005	0.005	0.005	0.005	0.005
2-Butanone	0.015	0.015	0.015	0.015	0.015
Benzene	0.005	0.005	0.005	0.005	0.005
Carbon tetrachloride	0.005	0.005	0.005	0.005	0.005
Chlorobenzene	0.005	0.005	0.005	0.005	0.005
Chloroform	0.005	0.005	0.005	0.005	0.005
Tetrachloroethene	0.005	0.005	0.005	0.005	0.005
Trichloroethene	0.005	0.005	0.005	0.005	0.005
Vinyl chloride	0.005	0.005	0.005	0.005	0.005
SemiVolatile Organic Compounds (ug/l)					
1,4-Dichlorobenzene	2	2	2	2	2
2,4,5-TRICHLOROPHENOL	4	4	4	4	4
2,4,6-Trichlorophenol	4	4	4	4	4
2,4-Dinitrotoluene	2	2	2	2	2
2-Methylphenol	2	2	2	2	2
4-Methylphenol	6	6	6	6	6
Hexachlorobenzene	4	4	4	4	4
Hexachlorobutadiene	4	4	4	4	4
Hexachloroethane	2	2	2	2	2
Nitrobenzene	2	2	2	2	2
PENTACHLOROPHENOL	6	6	6	6	6
PYRIDINE	4	4	4	4	4
General Chemistry (mg/kg unless indicated)					
Moisture & by wt.	13.6	12.2	13.1	12.0	13.2
Cyanide (Reactivity)	97.	100.	100.	96.	98.
Sulfide (Reactivity)	39.	39.	39.	39.	39.
Reactivity [1]					
Ignatability [2]					
Corrosivity [3]					
pH (S.U.)	4.55	7.10	7.66	7.96	7.40

[1] Positive results indicate material is considered reactive hazardous and hazardous

[2] Positve result indicate material spontaneously combusted when exposed to air or water, friction or when exposed to flam in a closed cup apparatus

302902

Table 4-20. Analytical Results for Test Pit Water Waste Characterization Sampling. BROS Phase 2 RI/FS; Logan Township, New Jersey.

[3] Positive result indicates material has a pH equal to or less than 2 and equal to or greater than 12.5

302903

Table 4-20. Analytical Results for Test Pit Water Waste Characterization Sampling.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-A-6	TP-B-1	TP-C-1	TP-D-1	TP-E-1
Sample Date	11/10/00	11/3/00	11/1/00	11/9/00	10/31/00
Sample ID	TP-A-6/SO/WC	TP-B-1/SO/WC	TP-C-1/SO/WC	TP-D-1/SO/WC	TP-E-1/SO/WC
Parameter					
Metals (mg/l)					
Arsenic	0.0320	0.0320	0.0320	0.0320	0.0320
Barium	0.192	0.156	0.279	153.	0.728
Cadmium	0.0036	0.0036	0.0036	0.0036	0.0036
Chromium	0.0170	0.0066	0.0066	0.0066	0.0066
Lead	0.0453	0.104	0.0971	0.0523	4.63
Selenium	0.0600	0.0600	0.0600	0.0600	0.0600
Silver	0.0036	0.0036	0.0036	0.0036	0.0036
Mercury	0.00012	0.00012	0.00012	0.00012	0.00012
Polychlorinated Biphenyls (ug/kg)					
Aroclor-1016	450	38	38	98	4.3
Aroclor-1221	640	55	55	140	6.2
Aroclor-1232	950	80	80	210	9.1
Aroclor-1242	450	38	38	98	4.3
Aroclor-1248	490	800	640	110	4.7
Aroclor-1254	3800	820	38	98	48
Aroclor-1260	450	460	1000	98	20
Volatile Organic Compounds (mg/l)					
1,1-Dichloroethene	0.005	0.005	0.005	0.005	0.005
1,2-Dichloroethane	0.005	0.005	0.005	0.005	0.005
2-Butanone	0.015	0.021	0.015	0.033	0.015
Benzene	0.005	0.100	0.005	0.005	0.005
Carbon tetrachloride	0.005	0.005	0.005	0.005	0.005
Chlorobenzene	0.005	0.005	0.005	0.005	0.005
Chloroform	0.012	0.005	0.005	0.005	0.005
Tetrachloroethene	0.005	0.005	0.005	0.005	0.005
Trichloroethene	0.005	0.005	0.005	0.005	0.005
Vinyl chloride	0.005	0.005	0.005	0.005	0.005
SemiVolatile Organic Compounds (ug/l)					
1,4-Dichlorobenzene	2	2	2	2	2
2,4,5-TRICHLOROPHENOL	4	4	4	4	4
2,4,6-Trichlorophenol	4	4	4	4	4
2,4-Dinitrotoluene	2	2	2	2	2
2-Methylphenol	2	2	2	2	2
4-Methylphenol	6	6	6	6	6
Hexachlorobenzene	4	4	4	4	4
Hexachlorobutadiene	4	4	4	4	4
Hexachloroethane	2	2	2	2	2
Nitrobenzene	2	2	2	2	2
PENTACHLOROPHENOL	6	6	6	6	6
PYRIDINE	4	4	4	4	4
General Chemistry (mg/kg unless indicated)					
Moisture & by wt.	27.0	14.2	13.8	15.8	23.8
Cyanide (Reactivity)	97.	100.	99.	98.	99.
Sulfide (Reactivity)	39.	39.	39.	39.	39.
Reactivity [1]					
Ignatability [2]					
Corrosivity [3]					
pH (S.U.)	6.90	5.12	6.23	7.38	7.05

[1] Positive results indicate material is considered reactive hazardous and hazardous

[2] Positve result indicate material spontaneously combusted when exposed to air or water, friction or when exposed to flam in a closed cup apparatus

302904

[3] Positive result indicates material has a pH equal to or less than 2 and equal to or greater than 12.5

302905

Table 4-20. Analytical Results for Test Pit Water Waste Characterization Sampling.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	TP-F-1	TP-F-2	TP-H-1
Sample Date	10/25/00	10/26/00	10/27/00
Sample ID	TP-F-1/SO/WC	TP-F-2/SO/WC	TP-H-1/SO/WC
Parameter			
Metals (mg/l)			
Arsenic	0.0320	0.0320	0.0320
Barium	0.136	0.222	0.0854
Cadmium	0.0036	0.0036	0.0036
Chromium	0.0066	0.0066	0.0066
Lead	0.0530	0.0400	0.0381
Selenium	0.0600	0.0600	0.0600
Silver	0.0036	0.0063	0.0036
Mercury	0.00012	0.00012	0.00012
Polychlorinated Biphenyls (ug/kg)			
Aroclor-1016			
Aroclor-1221			
Aroclor-1232			
Aroclor-1242			
Aroclor-1248			
Aroclor-1254			
Aroclor-1260			
Volatile Organic Compounds (mg/l)			
1,1-Dichloroethene	0.005	0.005	0.005
1,2-Dichloroethane	0.005	0.005	0.005
2-Butanone	0.015	0.015	0.015
Benzene	0.005	0.005	0.005
Carbon tetrachloride	0.005	0.005	0.005
Chlorobenzene	0.005	0.005	0.005
Chloroform	0.005	0.005	0.005
Tetrachloroethene	0.005	0.005	0.005
Trichloroethene	0.005	0.005	0.005
Vinyl chloride	0.005	0.005	0.005
SemiVolatile Organic Compounds (ug/l)			
1,4-Dichlorobenzene	2	2	
2,4,5-TRICHLOROPHENOL	4	4	
2,4,6-Trichlorophenol	4	4	
2,4-Dinitrotoluene	2	2	
2-Methylphenol	2	2	
4-Methylphenol	6	6	
Hexachlorobenzene	4	4	
Hexachlorobutadiene	4	4	
Hexachloroethane	2	2	
Nitrobenzene	2	2	
PENTACHLOROPHENOL	6	6	
PYRIDINE	4	4	
General Chemistry (mg/kg unless indicated)			
Moisture & by wt.	4.68	4.45	5.47
Cyanide (Reactivity)	100.	99.	99.
Sulfide (Reactivity)	39.	39.	39.
Reactivity [1]			
Ignatability [2]			
Corrosivity [3]			
pH (S.U.)	6.77	6.95	12.6

[1] Positive results indicate material is considered reactive hazardous and hazardous

[2] Positve result indicate material spontaneously combusted when exposed to air or water, friction or when exposed to flam in a closed cup apparatus

302906

[3] Positive result indicates material has a pH equal to or less than 2 and equal to or greater than 12.5

Table 4-21. Summary of Analytical Results for Peach Samples. BROS Phase 2 RI/FS;Logan Township, New Jersey.

	SA-1/TP	SA-3/TP	SA-8/TP	SA-9/TP	SA-11/TP	SA-13/TP	SA-23/TP	SA-26/TP	SA-28/TP
Volatile Organic Compounds (µg/kg)									
Benzene	29 U	36 U	21 U	33 U	45 U	36 U	22 U	42 U	36 U
Toluene	29 U	36 U	21 U	33 U	45 U	36 U	22 U	42 U	36 U
Xylenes	29 U	36 U	21 U	33 U	45 U	36 U	22 U	42 U	36 U
Ethylbenzene	29 U	36 U	21 U	33 U	45 U	36 U	22 U	42 U	36 U
Polychlorinated Biphenyls (µg/kg)									
Aroclor 1242	5.8 U	7.6 U	4.1 U	6.6 U	9 U	7.1 U	4.3 U	8.3 U	7.1 U
Aroclor 1248	6.4 U	8.3 U	4.5 U	7.2 U	9.8 U	7.7 U	4.7 U	9 U	7.7 U
Aroclor 1254	5.8 U	7.6 U	4.1 U	6.6 U	9 U	7.1 U	4.3 U	8.3 U	7.1 U
Aroclor 1260	5.8 U	7.6 U	4.1 U	6.6 U	9 U	7.1 U	4.3 U	8.3 U	7.1 U
Total PCBs	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Semivolatile Organic Compounds (µg/kg)									
Naphthalene	590 U	710 U	420 U	670 U	910 U	710 U	430 U	830 U	710 U
2-Methylnapthalene	590 U	710 U	420 U	670 U	910 U	710 U	430 U	830 U	710 U
Bis(2-ethylhexyl)phthalate	1200 U	1400 U	830 U	1300 U	1800 U	1400 U	870 U	1700 U	1900 J
Metals (mg/kg)									
Lead	0.8 U	0.8 U	0.81 U	0.8 U	0.79 U	0.8 U	0.81 U	0.8 U	0.8 U

Notes:
U = compound was not detected.
J = estimated concentration.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.

302908

Table 4-21. Summary of Analytical Results for Peach Samples. BROS Phase 2 RI/FS;Logan Township, New Jersey.

	BG-2/TP	BG-3/TP	BG-4/TP	BG-7/TP	BG-10/TP	BG-11/TP	BG-13/TP	BG-15/TP	BG-16/TP
Volatile Organic Compounds (µg/k									
Benzene	45 U	33 U	36 U	26 U	50 U	29 U	45 U	33 U	33 U
Toluene	45 U	33 U	36 U	26 U	50 U	29 U	45 U	33 U	33 U
Xylenes	45 U	33 U	36 U	26 U	50 U	29 U	45 U	33 U	33 U
Ethylbenzene	45 U	33 U	36 U	26 U	50 U	29 U	45 U	33 U	33 U
Polychlorinated Biphenyls (µg/kg)									
Aroclor 1242	9 U	6.6 U	7.1 U	5.2 U	9.9 U	5.8 U	9 U	6.6 U	6.6 U
Aroclor 1248	9.8 U	7.2 U	7.7 U	5.7 U	11 U	6.4 U	9.8 U	7.2 U	7.2 U
Aroclor 1254	9 U	6.6 U	7.1 U	5.2 U	9.9 U	5.8 U	9 U	6.6 U	6.6 U
Aroclor 1260	9 U	6.6 U	7.1 U	5.2 U	9.9 U	5.8 U	9 U	6.6 U	6.6 U
Total PCBs	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Semivolatile Organic Compounds (µ									
Naphthalene	910 U	670 U	710 U	530 U	1000 U	590 U	910 U	670 U	670 U
2-Methylnapthalene	910 U	670 U	710 U	530 U	1000 U	590 U	910 U	670 U	670 U
Bis(2-ethylhexyl)phthalate	1800 U	1300 U	1400 U	1100 U	2000 U	1200 U	1800 U	1300 U	1300 U
Metals (mg/kg)									
Lead	0.82 U	0.82 U	0.82 U	0.79 U	0.8 U	0.79 U	0.81 U	0.81 U	0.8 U

Notes:
U = compound was not detected.
J = estimated concentration.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.

302909

Table 4-22. Swindell Pond Sediment Sampling Results. BROS Phase 2 RI/FS.; Logan Township, New Jersey.

Sample Identification	SWD-1	SWD-2	SWD-3
Sample Depth	0" - 6"	0" - 6"	0" - 6"
Analyte			
INORGANIC (mg/kg)			
Arsenic	21.4	20.6	2.3
Chromium	15.1	37.5	8.6
Copper	9.7	30	4.8 B
Lead	9.3	43.2	6.2
Zinc	30.6	136	25.8
% SOLIDS	68.9	19	68.2
PESTICIDES (µg/kg)			
alpha BHC		7.1 U	
gamma BHC		7.1 U	
beta BHC		7.1 U	
delta BHC		7.1 U	
Heptachlor		7.1 U	
Aldrin		7.1 U	
Heptachlor epoxide		7.1 U	
gamma chlordane		7.1 U	
alpha chlordane		7.1 U	
4,4' DDE		18 JP	
Endosulfan I		7.1 U	
Dieldrin		14 U	
Endrin		14 U	
4,4'DDD		51 JP	
Endosulfan II		14 U	
4,4' DDT		14 JP	
Endrin aldehyde		14 U	
Methoxychlor		71 U	
Mirex		35 U	
Endosulfan sulfate		14 U	
Endrin ketone		14 U	
Aroclor 1221		350 U	
Aroclor 1232		350 U	
Aroclor 1016		350 U	
Aroclor 1248		350 U	
Aroclor 1242		350 U	
Aroclor 1254		350 U	
Aroclor 1260		350 U	
Toxaphene		710 U	

U = Compound was not detected.
J = Estimated due to interference.
P = Concentration difference between primary and confirmation columns >25%.
B = Value is < CRDL, but ≥ IDL.

Table 4-23. Swindell Pond Surface Water Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Identification Analyte	SWD-1	SWD-2	SWD-3
INORGANIC (µg/ℓ)			
Aluminum	87.5 B	112 B	87.1 B
Antimony	25.0 U	25 U	25 U
Arsenic	7.0 U	7.0 U	7.0 U
Barium	43.4 B	51.9 B	45.2 B
Beryllium	1.7 U	1.7 U	1.7 U
Cadmium	1.7 U	1.7 U	1.7 U
Calcium	12300	12500	12700
Chromium	5.4 U	5.4 U	5.4 U
Cobalt	5.5 U	5.5 U	5.5 U
Copper	5.8 U	5.8 U	5.8 U
Iron	213	461	222
Lead	6.5 U	6.5 U	6.5 U
Magnesium	6130	6190	6310
Manganese	27.9	103	39.6
Mercury	0.078 B	0.10 B	0.042 U
Nickel	5.4 U	5.4 U	5.4 U
Potassium	3610	3630	3750
Selenium	5.9 U	5.9 U	5.9 U
Silver	5.7 U	5.7 U	5.7 U
Sodium	7510	7550	7940
Thallium	9.7 U	9.7 U	9.7 U
Vanadium	2.8 U	2.8 U	2.8 U
Zinc	3.9 B	8.2 B	3.2 B
Hardness			
SVOCs	all U	all U	all U

U = Compound was not detected.
B = Value is < CRDL, but ≥ IDL.

302911

Table 4-24. Gaventa Pond Sediment Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Identification Sample Depth Analyte	GVT-1 0" - 6"	GVT-2 0" - 6"	GVT-3 0" - 6"
INORGANIC (mg/kg)			
Aluminum	5440	1040	832
Antimony	6.3 U	3.4 U	3.5 U
Arsenic	5.3	0.69 B	0.53 B
Barium	30.7	5.1 B	3.6 B
Beryllium	0.40 B	0.19 U	0.20 U
Cadmium	0.37 U	0.20 U	0.21 U
Calcium	627	111	84.2
Chromium	13.5	3.8 B	4.0 B
Cobalt	3.9 B	1.3 U	1.3 U
Copper	11.5	2.1 B	1.4 B
Iron	13700	2950	2270
Lead	12.3	2	1.6
Magnesium	658 N	201	134
Manganese	142	16.1	6.8
Mercury	0.017 B	0.0061 U	0.0073 B
Nickel	6.5 B	1.7 B	1.3 U
Potassium	648	128	108
Selenium	0.95 U	0.52 U	0.54 U
Silver	1.8 U	0.99 U	1.0 U
Sodium	139 B	51.7 B	50.6 B
Thallium	1.6 U	0.87 U	0.89 U
Vanadium	30.2	4.7	3.8
Zinc	38.2	7.6 B	6.1 B
ORGANICS (µg/kg)			
Chloromethane	7 U	3 U	2 U
Vinyl chloride	7 U	3 U	2 U
Bromomethane	11 U	4 U	4 U
Chloroethane	11 U	4 U	4 U
1,1 Dichloroethene	7 U	3 U	2 U
Acetone	260	14 J	24 J
Carbon Disulfide	20	4 U	4 U
Methylene chloride	7 U	4 J	4 J
trans 1,2 Dichloroethene	7 U	3 U	2 U
1,1 Dichloroethane	4 U	1 U	1 U
cis 1,2 Dichloroethene	7 U	3 U	2 U
2 Butanone	33 J	9 U	9 U
Chloroform	4 U	1 U	1 U
1,1,1, Trichlorethane	4 U	1 U	1 U
Carbon tetrachloride	4 U	1 U	1 U
Benzene	4 J	1 U	1 U
1,2 Dichloroethane	7 U	3 U	2 U
Trichloroethene	4 U	1 U	1 U
1,2 Dichloropropane	11 U	4 U	4 U
Bromodichloromethane	7 U	3 U	2 U
cis 1,3 Dichloropropene	4 U	1 U	1 U
4 Methyl 2 Pentanone	11 U	4 U	4 U
Toluene	4 U	1U	1 U

Table 4-24. Gaventa Pond Sediment Sampling Results. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Identification Sample Depth Analyte	GVT-1 0" - 6"	GVT-2 0" - 6"	GVT-3 0" - 6"
trans 1,3 Dichloropropene	4 U	1 U	1 U
1,1,2 Trichloroethane	7 U	3 U	2 U
Tetrachloroethene	4 U	1 U	1 U
2 Hexanone	11 U	4 U	4 U
Dibromochloromethane	4 U	1 U	1 U
Chlorobenzene	4 U	1 U	1 U
Ethylbenzene	4 U	1 U	1 U
Xylene (total)	4 U	1 U	1 U
Styrene	4 U	1 U	1 U
Bromoform	4 U	1 U	1 U
1,1,2,2 Tetrachloroethane	4 U	1 U	1 U
alpha BHC	3.2 U		
gamma BHC	3.2 U		
beta BHC	3.2 U		
delta BHC	3.2 U		
Heptachlor	3.2 U		
Aldrin	3.2 U		
Heptachlor epoxide	3.2 U		
gamma chlordane	3.2 U		
alpha chlordane	3.2 U		
4,4' DDE	6.2 U		
Endosulfan I	3.2 U		
Dieldrin	6.2 U		
Endrin	6.2 U		
4,4'DDD	8.3 JP		
Endosulfan II	6.2 U		
4,4' DDT	11 J		
Endrin Aldehyde	6.2 U		
Methoxychlor	32 U		
Mirex			
Endosulfan sulfate	6.2 U		
Endrin ketone	6.2 U		
Aroclor 1221	160 U		4.4 U
Aroclor 1232	160 U		4.4 U
Aroclor 1016	160 U		4.4 U
Aroclor 1248	160 U		4.4 U
Aroclor 1242	160 U		4.4 U
Aroclor 1254	160 U		4.4 U
Aroclor 1260	160 U		13 J
Toxaphene	320 U		
SVOCs	all U	all U	all U

U = Compound was not detected.
J = Estimated due to interference.
P = Concentration difference between primary and confirmation columns >25%.
B = Value is < CRDL, but ≥ IDL.

302913

Table 4-25. Summary of Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from the Reference Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	RA-1	RA-2	RA-2	RA-3	RA-3	RA-4	RA-4	RA-5
Sample Depth [1]	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-6"
Sample Date	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00
Parameter (ug/Kg)								
1,1,1-Trichloroethane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
1,1,2,2-Tetrachloroethane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
1,1,2-Trichloroethane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
1,1-Dichloroethane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
1,1-Dichloroethene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
1,2-Dichloroethane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
1,2-Dichloropropane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
2-Butanone	14 U	100	20 U	460	510	21 U	12 U	10 U
2-Hexanone	11 U	31 U	15 U	34 U	25 U	16 U	9 U	7 U
4-Methyl-2-pentanone	11 U	31 U	15 U	34 U	25 U	16 U	9 U	7 U
Acetone	110	810	95 J	1100	1200	220	56 J	63
Benzene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Bromodichloromethane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Bromoform	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Bromomethane/ Methyl bromide	7 U	20 U	10 U	23 U	17 U	10 U	6 U	5 U
Carbon disulfide	12 J	93	10 J	45 J	44	19 J	10 J	9 J
Carbon tetrachloride	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Chlorobenzene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Chloroethane	7 U	20 U	10 U	23 U	17 U	10 U	6 U	5 U
Chloroform	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Chloromethane	7 U	20 U	10 U	23 U	17 U	10 U	6 U	5 U
cis-1,2-Dichloroethene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
cis-1,3-Dichloropropene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Dibromochloromethane	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Ethylbenzene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Methylene chloride	9 JB	25 JB	11 JB	23 U	24 JB	11 JB	6 JB	6 JB
Styrene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Tetrachloroethene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Toluene	4 U	810	10 J	800	570	66	3 U	2 U
trans-1,2-Dichloroethene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
trans-1,3-Dichloropropene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Trichloroethene	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Vinyl chloride	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Xylenes (Total)	4 U	10 U	5 U	11 U	8 U	5 U	3 U	2 U
Total TICs	980	1839	33	948	54	205	16	180

302914

Table 4-26. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from the Reference Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	RA-1	RA-2	RA-2	RA-3	RA-3	RA-4	RA-4	RA-5
Sample Depth [1]	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-6"
Sample Date	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00
Parameter (ug/Kg)								
1,2,4-Trichlorobenzene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
1,2-Dichlorobenzene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
1,3-Dichlorobenzene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
1,4-Dichlorobenzene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
2,2'-Oxybis(1-chloropropane)	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
2,4-Dinitrotoluene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
2,6-Dinitrotoluene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
2-Chloronapthalene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
2-Methylnapthalene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
2-Nitroaniline	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
3,3'-Dichlorobenzidine	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
3-Nitroaniline	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
4-Bromophenyl phenyl ether	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
4-Chloroaniline	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
4-Chlorophenyl phenyl ether	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
4-Nitroaniline	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Acenaphthene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Acenaphthylene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Anthracene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Benzo(a)anthracene	79 J	110 J	76 U	83 U	74 U	74 U	63 U	65 U
Benzo(a)pyrene	94 J	140 J	76 U	83 U	74 U	74 U	63 U	65 U
Benzo(b)fluoranthene	130 J	210 J	88 J	83 U	88 J	74 U	63 U	65 U
Benzo(g,h,i)perylene	130 J	140 J	76 U	83 U	74 U	74 U	63 U	65 U
Benzo(k)fluoranthene	76 U	95 J	76 U	83 U	74 U	74 U	63 U	65 U
bis(2-Chloroethoxy)methane	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
bis(2-Chloroethyl)ether	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
bis(2-Ethylhexyl)phthalate	160 J	480 J	150 U	220 J	470 J	230 J	130 U	160 J
Butyl benzyl phthalate	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Carbazole	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Chrysene	140 J	160 J	89 J	83 U	80 J	74 U	63 U	65 U
Di-n-butyl phthalate	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Di-n-octyl phthalate	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Dibenz(a,h)anthracene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Dibenzofuran	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Diethyl phthalate	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Dimethyl phthalate	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Fluoranthene	180 J	250 J	130 J	83 U	100 J	74 U	63 U	65 U
Fluorene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U

302915

Table 4-26. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from the Reference Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	RA-1	RA-2	RA-2	RA-3	RA-3	RA-4	RA-4	RA-5
Sample Depth [1]	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-6"
Sample Date	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00
Parameter (ug/Kg)								
Hexachlorobenzene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Hexachlorobutadiene	150 U	170 U	150 U	170 U	150 U	150 U	130 U	130 U
Hexachlorocyclopentadiene	380 U	420 U	380 U	420 U	370 U	370 U	310 U	330 U
Hexachloroethane	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Indeno(1,2,3-cd)pyrene	87 J	140 J	76 U	83 U	74 U	74 U	63 U	65 U
Isophorone	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
n-Nitrosodiphenylamine	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
n-Nitrosodipropylamine	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Nitrobenzene	76 U	83 U	76 U	83 U	74 U	74 U	63 U	65 U
Phenanthrene	130 J	140 J	80 J	83 U	74 U	74 U	63 U	65 U
Pyrene	180 J	200 J	110 J	83 U	100 J	74 U	63 U	65 U
Total TICs	89100	249400	59080	202200	1369620	44790	26490	46970

302916

Table 4-27. Summary of Pesticide Results for Round 1 Confirmatory Sediment Samples from the Reference Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	RA-5
Sample Depth [1]	0-6"
Sample Date	6/30/00
Parameter (ug/Kg)	
4,4'-DDD	210 P
4,4'-DDE	100 P
4,4'-DDT	82 P
Aldrin	1.3 U
Alpha BHC	1.3 U
Alpha Chlordane	5.7 J
Beta BHC	1.3 U
Delta BHC	1.3 U
Dieldrin	2.5 U
Endosulfan I	1.3 U
Endosulfan II	2.5 U
Endosulfan sulfate	2.5 U
Endrin	2.5 U
Endrin aldehyde	2.5 U
Endrin ketone	2.5 U
Gamma BHC - Lindane	1.3 U
Gamma Chlordane	1.3 U
Heptachlor	1.3 U
Heptachlor epoxide	1.3 U
Methoxychlor	13 U
Toxaphene	130 U

Table 4-28. Summary of Polychlorinated Biphenyl Results for Round 1 Confirmatory Sediment Samples from the Reference Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	RA-1	RA-2	RA-2	RA-3	RA-3	RA-4	RA-4	RA-5
Sample Depth [1]	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-6"
Sample Date	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00
Parameter (ug/Kg)								
Aroclor-1016	10 U	22 U	10 U	22 U	19 U	12 U	8.3 U	65 U
Aroclor-1221	14 U	31 U	14 U	31 U	28 U	17 U	12 U	150 U
Aroclor-1232	21 U	46 U	21 U	46 U	41 U	26 U	17 U	65 U
Aroclor-1242	10 U	22 U	10 U	22 U	19 U	12 U	8.3 U	65 U
Aroclor-1248	11 U	24 U	11 U	24 U	21 U	13 U	9.0 U	65 U
Aroclor-1254	18 J	34 JP	36 JP	56 JP	41 JP	12 U	21 JP	65 U
Aroclor-1260	24 JP	55 J	21 JP	22 JP	19 JP	17 J	16 J	65 U

302918

Table 4-29. Summary of Target Analyte List Metals Results for Round 1 Confirmatory Sediment Samples from the Reference Area. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	RA-1	RA-2	RA-2	RA-3	RA-3	RA-4	RA-4	RA-5
Sample Depth [1]	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-6"
Sample Date	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00	6/30/00
Parameter (mg/Kg)								
Aluminum	17200 *	18200 *	21700 *	12200 *	12900 *	24300 *	21700 *	16500 *
Antimony	6.6 U	14.0 U	6.7 U	14.3 U	12.4 U	7.9 U	5.4 U	4.2 U
Arsenic	25.0	28.3	15.6	10.1	13.3	13.4	13.6	8.9
Barium	150	164	155	328	260	163	156	116
Beryllium	1.3 B	1.3 B	1.3 B	2.6 B	2.6 B	1.6 B	1.6	1.1
Cadmium	0.66 U	1.4 U	0.67 U	2.1 B	1.8 B	0.79 U	0.54 U	0.42 U
Calcium	2990 EN	5310 EN	3440 EN	14500 EN	10600 EN	2910 EN	1890 EN	2460 EN
Chromium	40.7 N	37.3 N	43.3 N	20.1 BN	20.5 BN	42.6 N	42.6 N	37.3 N
Cobalt	12.5 B	10.5 B	8.1 B	19.1 B	17.0 B	11.4 B	11.1 B	10.2
Copper	30.8	54.0	25.9	42.1	35.3	31.1	23.4	14.9
Iron	31200	33400	25600	14100	11600	24100	26500	26100
Lead	113	92.6	67.5	73.1	81.3	71.2	73.2	29.4
Magnesium	3510 EN	3290 EN	3950 EN	2820 EN	2410 EN	3750 EN	3800 EN	4130 EN
Manganese	189 E	136 E	123 E	124 E	83.1 E	169 E	146 E	236 E
Mercury	0.11 B	0.30 B	0.21 B	0.14 B	0.16 B	0.15 B	0.15 B	0.098 B
Nickel	23.9	27.1 B	25.6	42.9	43.3	28.1	25.2	20.2
Potassium	1460 N*	2180 N*	2500 N*	1140 N*	1140 N*	1880 N*	1440 N*	1600 N*
Selenium	1.5 B	2.6 U	1.2 U	3.3 B	3.9 B	1.5 U	1.0 U	0.80 B
Silver	0.93 U	2.0 U	0.94 U	2.0 U	1.7 U	1.1 U	0.77 U	0.59 U
Sodium	249 B	511 B	259 B	310 B	338 B	313 B	199 B	81.2 B
Thallium	2.5 U	5.3 U	2.5 U	5.4 U	4.7 U	3.0 U	4.1 B	3.7 B
Vanadium	60.4	64.1	63.6	56.2	55.0	62.7	59.2	44.9
Zinc	152 E	138 E	112 E	342 E	263 E	144 E	119 E	94.6 E

302919

Table 4-30. Summary of Surface Water Results From Reference Areas. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RA-1		RA-2		RA-3		RA-4		RA-5	
Sample Date	5/9/2000				5/9/2000		5/11/2000			
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	50.8	NA	68.9	NA	38.2	NA	69.3	NA	61.4	NA
Total Suspended Solids	NA	NA	NA	NA	NA	NA	96	NA	12	NA
Total Dissolved Solids	NA	NA	NA	NA	NA	NA	152	NA	163	NA
Total Hardness	NA	NA	NA	NA	NA	NA	86.3	NA	77.5	NA
Kjeldahl Nitrogen	NA	NA	NA	NA	NA	NA	3.7J	NA	1.64J	NA
Nitrite Nitrogen	NA	NA	NA	NA	NA	NA	--	NA	0.026J	NA
Nitrate Nitrogen	NA	NA	NA	NA	NA	NA	--	NA	0.038J	NA
Ammonia Nitrogen	NA	NA	NA	NA	NA	NA	0.56	NA	0.59	NA
Sulfide	NA	NA	NA	NA	NA	NA	0.0980J	NA	--	NA
Total Organic Carbon	8.7	8.3	51.5	54.9	26.6	23.3	21.9	21.1	13.3	13.6
Chloride	NA	NA	NA	NA	NA	NA	23.3	NA	23.3	NA
Sulfate	NA	NA	NA	NA	NA	NA	5.4	NA	15.5	NA
Volatile Organic Compounds (µg/l)										
Acetone	--	NA	--	NA	--	NA	10J	NA	--	NA
Toluene	--	NA	--	NA	6	NA	16	NA	--	NA
Total TICs	--	NA	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	--	NA	0.33	NA	0.23	NA	0.27	NA	0.14	NA
THP-GRO	--	NA	--	NA	--	NA	36J	NA	--	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	--	--	6J	2J	--	7J	--	--	--	--
4-Methylphenol	--	--	18	10J	3J	110	--	--	--	--
bis(2-Ethylhexyl) phthalate	--	--	27	--	--	--	--	--	--	--
Total TICs	592JABX	497JBX	861JBX	884JBX	334JBX	1,406JBX	61J	749J	37J	5J
Polychlorinated Biphenyls (µg/l)										
Aroclor 1248	--	--	--	--	--	--	--	--	--	0.070P
Aroclor 1254	--	--	0.088J	--	0.12J	--	--	--	--	0.068P
Aroclor 1260	--	--	--	--	--	--	--	--	--	0.025J
Total PCBs	--	--	0.088J	--	0.12J	--	--	--	--	0.163JP
Target Analyte List Metals (µg/l)										
Aluminum	--	--	1,030	--	335	251	4,940	--	280	126B
Arsenic	7.5B	--	21.9	14.2	--	--	8.7B	--	6.8B	--

302920

Table 4-30. Summary of Surface Water Results From Reference Areas. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	RA-1		RA-2		RA-3		RA-4		RA-5	
Sample Date	5/9/2000				5/9/2000		5/11/2000			
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
Barium	55.3B	50.6*	236	40.2B	103	99.4	130	46.2B	330	347*
Calcium	20,300	21,600	20,600	20,800	20,300	19,200	20,500	13,900	18,800	19,600
Chromium	--	--	--	--	--	--	10.6B	--	--	--
Cobalt	--	--	--	--	12.3B	10.2	15.2B	--	--	--
Copper	--	--	7.5B	--	--	--	10.8B	--	--	--
Iron	3,010	591	27,300	15,200	6,080	5,730	21,900	4,390	6,940	6,300
Lead	--	--	10.7	--	--	--	22.7	--	--	--
Magnesium	7,880	8,040	7,850	7,850	8,390	7,950	8,540	5,560	6,710	6,810
Manganese	247	248	244	241	309	238	1,640	966	242	254
Nickel	--	--	--	--	6.8B	6.8B	13.3B	7.5B	--	--
Potassium	4,230	3,850	5,220	4,320	4,940	6,350	5,020	3,350	4,780	4,200
Selenium	--	--	--	--	--	--	--	--	7.3B	--
Sodium	13,600	13,500	14,400	12,100	7,570E	7,630	12,000E	9,120	13,900	14,300
Thallium	10.8B	--	11.1B	--	--	--	--	--	17.8B	--
Vanadium	--	--	7.0B	4.1B	3.8B	3.7B	17.2B	--	--	--
Zinc	7.0B	6.7B	46.9	--	27.0	10.8B	78.7	19.7B	5.3B	164

302921

Table 4-31. Summary of Detected Compounds in Surface From Little Timber Creek Swamp Southeast of I-295.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	LTC-212		LTC-213		LTC-215		LTC-214		LTC-216	
Sample Date	4/19/2000		4/19/2000		4/20/2000		4/19/2000		4/20/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	21.1	NA	16.2	NA	1.1	NA	19.3	NA	23.0	NA
Total Suspended Solids	15	NA	NA	NA	NA	NA	--	NA	NA	NA
Total Dissolved Solids	99	NA	NA	NA	NA	NA	94	NA	NA	NA
Total Hardness	59.1	NA	NA	NA	NA	NA	52.1	NA	NA	NA
Kjeldahl Nitrogen	--	NA	NA	NA	NA	NA	--	NA	NA	NA
Nitrite Nitrogen	--	NA	NA	NA	NA	NA	--	NA	NA	NA
Nitrate Nitrogen	1.16	NA	NA	NA	NA	NA	0.65	NA	NA	NA
Ammonia Nitrogen	--	NA	NA	NA	NA	NA	--	NA	NA	NA
Sulfide	--	NA	NA	NA	NA	NA	0.0190 J	NA	NA	NA
Total Organic Carbon	5.8	5.5	6.8	7.0	9.7	8.3	6.8	6.3	4.0	3.8
Chloride	20.7	NA	NA	NA	NA	NA	18.9	NA	NA	NA
Sulfate	22.4	NA	NA	NA	NA	NA	18.0	NA	NA	NA
Volatile Organic Compounds (µg/l)										
Benzene	--	NA	--	NA	--	NA	--	NA	--	NA
Acetone	10 J	NA	--	NA	--	NA	--	NA	--	NA
Toluene	--	NA	--	NA	--	NA	--	NA	--	NA
1,1-Dichloroethene	2 J	NA	--	NA	--	NA	--	NA	--	NA
Total TICs	--	NA	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	--	NA	--	NA	--	NA	--	NA	--	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	--	--	--	--	--	--	2 J	--	--	--
bis(2-Ethylhexyl) phthalate	--	--	--	--	--	--	8 J	--	--	--
bis(2-chloroethyl) ether	--	--	--	--	--	--	--	--	--	--
Total TICs	--	14JBX	10JBX	28JBX	12J	68J	30JBX	20JBX	--	60J
Polychlorinated Biphenyls (µg/l)										
Total PCBs	--	--	--	--	--	--	--	--	--	--
Target Analyte List Metals (µg/l)										
Aluminum	261	--	198 B	--	431*	274	386	--	--	--
Arsenic	5.2B	--	--	--	--	--	--	--	--	--
Barium	56.3B	49.4 B	51.1 B	46.6 B	58.0 B	53.6 B	68.1 B	47.4 B	54.0 B	54.6 B
Calcium	12,200	12,200	9,750	10,300	4,230	3,980	10,400	10,500	15,500	14,800
Cobalt	--	--	--	--	6.7 B	--	--	--	--	--
Copper	--	--	--	--	3.5 B	--	--	--	--	--
Iron	1,850N*	178	1,080N*	200	1,460*	1,050	4,070N*	228	230*	102
Lead	--	--	--	--	--	--	--	--	--	--
Magnesium	6,100	6,140	4,990	5,500	3,180	3,080	5,210	5,640	6,980	6,870
Manganese	63.9*	33.5	94.8*	51.0	127*	136	132*	37.5	28.9*	31.6
Nickel	--	--	--	28.7 B	8.7 B	7.6 B	--	--	--	--
Potassium	3,750	3,600	3,200	3,220	2,150	2,380	3,530	3,240	3,760	3,890
Sodium	7,370	7,260	6,450	6,620	7,290	6,950E	6,750	6,780	8,020E	8,060E
Thallium	--	--	--	--	9.4 B	--	--	--	--	--
Vanadium	--	--	--	--	--	--	4.2 B	--	--	--
Zinc	15.7B	--	9.2 B	4.7 B	32.2	29.1	19.5 B	--	5.7 B	5.0 B

See Table 7 for notes and qualifiers

302922

Table 4-32. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between I-295 and Route 130.
BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	LTC-228/GW		LTC-224/SW		WMW-1A		WMW-1B		WMW-5A	
Sample Date	4/26/2000		4/25/2000		5/8/2000		5/8/2000		5/5/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	--	NA	--	NA	-	NA	-	NA	-	NA
Alkalinity to pH 4.5	23.6	NA	21.5	NA	137	NA	132	NA	34.9	NA
Total Suspended Solids	31	NA	--	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	95	NA	96	NA	NA	NA	NA	NA	NA	NA
Total Hardness	50.5	NA	51.7	NA	NA	NA	NA	NA	NA	NA
Kjeldahl Nitrogen	0.68 J	NA	--	NA	NA	NA	NA	NA	NA	NA
Nitrite Nitrogen	--	NA	--	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen	0.11	NA	--	NA	NA	NA	NA	NA	NA	NA
Ammonia Nitrogen	--	NA	--	NA	NA	NA	NA	NA	NA	NA
Sulfide	0.0240 J	NA	0.0420 J	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	7.2	6.8	7.6	6.8	20.8	22.8	21.6	17.5	9.7	9.5
Chloride	20.1	NA	19.9	NA	NA	NA	NA	NA	NA	NA
Sulfate	15.8	NA	18.1	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds (µg/l)										
Benzene	--	NA	--	NA	-	NA	-	NA	-	NA
Acetone	--	NA	--	NA	6 J	NA	16 J	NA	-	NA
Toluene	--	NA	--	NA	3 J	NA	4 J	NA	-	NA
Total TICs	--	NA	--	NA	-	NA	-	NA		NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	--	NA	0.22	NA	2.8	NA	1.6	NA	0.15	NA
THP-GRO	--	NA	--	NA	-	NA	-	NA	-	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	--	--	--	--	3 J	5 J	17	10	-	-
bis(2-chloroethyl) ether	--	--	--	--	2 J	2 J	6 J	6 J	-	-
bis (2-Ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	4 J	4 J	7 J	5 J	-	-
Isophorone	--	--	--	--	-	-	2 J	3 J	-	-
2,4 Dimethylphenol	--	--	--	--	1 J	1 J	-	-	-	-
Total TICs	37 JBX	--	178 JBA	90 J	231 JBX	318 JBX	452 JBX	435 JBX	5 J	18 J
Polychlorinated Biphenyls (µg/l)										
Aroclor 1248	--	--	--	--	0.14 J	-	0.082 JP	-	-	-
Aroclor 1254	--	--	--	0.031 J	0.14 J	-	0.060 J	-	0.058 J	-
Aroclor 1260	--	--	--	--	0.073 JP	-	-	-	-	-
Total PCBs	--	--	--	0.031 J	0.353 JP	-	0.142 JP	-	0.058 J	-
Target Analyte List Metals (µg/l)										
Aluminum	--	--	--	--	2150	280	105 B	91.3 B	97.1 B	-
Arsenic	--	--	--	--	-	-	-	-	-	-
Barium	50.1 B	49.6 B	51.2 B	49 B	349	844*	261	253*	56.7 B	53.5 B*
Calcium	11,300	11,000	11,200	10,800	17,500	17,200	21,100	20,800	10,700	10,700
Chromium	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	10 B	5.5 B	-	-	-	-
Iron	929 *	415	677 *	555	9,540	4,970	4,410	4,440	2,340	2,240
Lead	--	--	--	--	65.5	-	-	-	-	-
Magnesium	5,660	5,550	5,540	5,430	9,130	8,180	6,490	6,820	5,240	5,220
Manganese	41.5 *	31.4	32.3 *	46.5	387	319	298	312	86	87.6
Nickel	--	--	--	--	9 B	-	-	-	-	-
Potassium	3,610	3,790	3,750	3,790	12,500	11,000	13,100	11,700	5,260	4,370
Selenium	--	--	--	--	-	-	-	-	-	-
Sodium	7,480 E	7,390 E	7,670 E	7,280 E	44,100	49,600	99,900	95,700	8,380	8,410
Thallium	--	--	13.3 B	--	12.6 B	-	12.5 B	-	11.8 B	-
Vanadium	--	--	--	--	13.6 B	-	-	-	-	-
Zinc	--	5.1 B	--	--	42	186	-	143	-	-

See Table 7 for notes and qualifiers

302923

Table 4-32. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between I-295 and Route 130.
BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	WMW-5B		LTC-230/SW		WMW-2A		WMW-2B		LTC-232/SW	
Sample Date	5/5/2000		4/27/2000		5/5/2000		5/5/2000		4/28/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	-	NA	--	NA	-	NA	-	NA	--	NA
Alkalinity to pH 4.5	77.7	NA	42.2	NA	348	NA	247	NA	17.2	NA
Total Suspended Solids	NA	NA	NA	NA	69	NA	18	NA	NA	NA
Total Dissolved Solids	NA	NA	NA	NA	426	NA	311	NA	NA	NA
Total Hardness	NA	NA	NA	NA	309	NA	256	NA	NA	NA
Kjeldahl Nitrogen	NA	NA	NA	NA	5.3 J	NA	4.1	NA	NA	NA
Nitrite Nitrogen	NA	NA	NA	NA	0.018 J	NA	-	NA	NA	NA
Nitrate Nitrogen	NA	NA	NA	NA	-	NA	-	NA	NA	NA
Ammonia Nitrogen	NA	NA	NA	NA	2.21	NA	1.9	NA	NA	NA
Sulfide	NA	NA	NA	NA	0.1	NA	0.13	NA	NA	NA
Total Organic Carbon	14.8	14.1	7.8	8.2	18.6	19.2	14.1	14.5	7.8	6.9
Chloride	NA	NA	NA	NA	1.9	NA	12.7	NA	NA	NA
Sulfate	NA	NA	NA	NA	-	NA	-	NA	NA	NA
Volatile Organic Compounds (µg/l)										
Benzene	-	NA	--	NA	-	NA	2 J	NA	--	NA
Acetone	-	NA	--	NA	17 J	NA	-	NA	--	NA
Toluene	4 J	NA	--	NA	-	NA	-	NA	--	NA
Total TICs		NA	--	NA	-	NA	-	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	0.56	NA	0.25	NA	2.7	NA	0.75	NA	--	NA
THP-GRO	-	NA	--	NA	-	NA	-	NA	--	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	1 J	-	--	--	-	-	-	1 J	--	--
bis(2-chloroethyl) ether	-	-	--	--	-	-	2 J	2 J	--	--
bis (2-Ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	-	-	--	--	-	-	-	-	--	--
Isophorone	-	-	--	--	-	-	-	-	--	--
2,4 Dimethylphenol	-	-	--	--	-	-	-	-	--	--
Total TICs	8 J	4 JX	45 JXB	--	300 J	235 J	36 J	104 JX	43 JB	4 J
Polychlorinated Biphenyls (µg/l)										
Aroclor 1248	-	-	0.19 JP	--	0.22 J	-	-	-	--	--
Aroclor 1254	0.06 J	0.054 J	--	--	0.19 JP	-	-	-	0.019 J	0.042 J
Aroclor 1260	-	-	--	--	0.18 JB	-	-	-	0.015 J	--
Total PCBs	0.06 J	0.054 J	0.19 JP	--	0.59JP	-	-	-	0.034 J	0.042 J
Target Analyte List Metals (µg/l)										
Aluminum	137 B	84.2 B	--	--	-	-	-	-	--	--
Arsenic	-	-	--	--	-	-	-	-	--	--
Barium	327	289 *	58.4 B	65.1 B	249	433 *	332	315 *	--	44.9 B
Calcium	15,600	14,700	16,200	20,800	81,700	81,100	60,200	59,500	--	11,000
Chromium	--	--	--	--	--	--	--	--	--	--
Copper	-	-	--	--	-	-	-	-	--	8.8 B
Iron	4,390	3,730	2,900	3,810	30,000	31,000	13,300	12,700	1,470	398
Lead	-	-	--	--	-	-	-	-	--	--
Magnesium	7,030	7,110	5,930	6,270	18,400	18,000	17,800	17,500	--	5,360
Manganese	227	234	133	144	631	640	765	754	353	104
Nickel	-	-	--	--	-	-	-	-	--	--
Potassium	13,000	10,700	3,980	4,040	38,000	33,200	7,670	6,790	--	4,130
Selenium	4.5 B	-	--	--	-	-	-	-	--	--
Sodium	15,200	14,900	7,320	7,120	265,000	24,900	9,560	9,320	--	8,140
Thallium	-	-	--	--	14.9 B	-	12.4 B	-	--	--
Vanadium	-	-	--	--	-	-	-	-	--	--
Zinc	-	170	7.3 B	9.2 B	-	164	-	-	15.1 B	15.5 B

See Table 7 for notes and qualifiers

302924

Table 4-32. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between I-295 and Route 130.
BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	WMW-6A		WMW-6B		LTC-236/SW		LTC-237/SW		LTC-222/SW	
Sample Date	5/8/2000		5/8/2000		5/3/2000		5/3/2000		4/24/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	-	NA	-	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	78.9	NA	59.1	NA	28.7	NA	20.5	NA	41.8	NA
Total Suspended Solids	NA	NA	NA	NA	NA	NA	6.8 J	NA	NA	NA
Total Dissolved Solids	NA	NA	NA	NA	NA	NA	106	NA	NA	NA
Total Hardness	NA	NA	NA	NA	NA	NA	55.0	NA	NA	NA
Kjeldahl Nitrogen	NA	NA	NA	NA	NA	NA	0.78 J	NA	NA	NA
Nitrite Nitrogen	NA	NA	NA	NA	NA	NA	--	NA	NA	NA
Nitrate Nitrogen	NA	NA	NA	NA	NA	NA	0.055 J	NA	NA	NA
Ammonia Nitrogen	NA	NA	NA	NA	NA	NA	0.035 J	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	--	NA	NA	NA
Total Organic Carbon	29.2	28.8	20.9	19.6	7.0	5.9	6.9	6.1	13.2	8.3
Chloride	NA	NA	NA	NA	NA	NA	20.4	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA	19.9	NA	NA	NA
Volatile Organic Compounds (µg/l)										
Benzene	-	NA	-	NA	--	NA	--	NA	--	NA
Acetone	8 J	NA	-	NA	--	NA	--	NA	--	NA
Toluene	-	NA	-	NA	--	NA	--	NA	--	NA
Total TICs	-	NA	-	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	0.31	NA	0.2	NA	--	NA	--	NA	0.34	NA
THP-GRO	-	NA	-	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	8 J	6 J	-	-	--	--	--	--	--	--
bis(2-chloroethyl) ether	-	-	-	-	--	--	--	--	--	--
bis (2-Ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	4 J	5J	-	-	--	--	--	--	--	--
Isophorone	-	-	-	-	--	--	--	--	--	--
2,4 Dimethylphenol	-	-	-	-	--	--	--	--	--	--
Total TICs	303 JBX	286 JBX	278 JBX	249 JBX	32 JAB	255 JAB	65 JXAB	33 JAB	114 J	136 J
Polychlorinated Biphenyls (µg/l)										
Aroclor 1248	-	-	-	-	--	--	--	--	--	--
Aroclor 1254	-	-	-	-	--	--	--	--	--	--
Aroclor 1260	-	-	-	-	--	--	--	--	--	--
Total PCBs	-	-	-	-	--	--	--	--	--	--
Target Analyte List Metals (µg/l)										
Aluminum	278	259	-	92.3 B	132 B	--	--	--	893 *	--
Arsenic	-	-	-	-	--	--	--	--	8.8 B	--
Barium	283	805*	530	315*	59.6 B	56.6 B*	46.5 B	51.1 B	106	55.6 B
Calcium	14,800	15,000	9,290	9,500	13,900	15,000	10,900	13,100	17,400	15,100
Chromium	--	--	--	--	--	--	--	--	--	--
Copper	-	-	-	-	--	--	--	--	4.2 B	--
Iron	6,330	5,070	2,810	2,840	1,380	476	486	240	21200 *	666
Lead	-	-	-	-	--	--	--	--	37.8 *	--
Magnesium	5,140	4,990	8,130	8,290	6,590	6,960	5,430	6,300	6,170	5,770
Manganese	144	132	141	147	103	109	70.5	83.0	551 *	133
Nickel	-	6.6	-	-	--	--	--	--	--	--
Potassium	13,700	11,100	5,700	5,160	4,200	3,440	3,910	4,110	3,950	3,790
Selenium	-	-	-	-	--	--	--	--	--	--
Sodium	14,400	19,300	8,470	9,720	8,050	7,860	7,320	7,940	7,680 E	7,250 E
Thallium	-	-	13.4	-	11.8 B	--	--	--	--	--
Vanadium	-	-	-	-	--	--	--	--	10.8 B	--
Zinc	5 B	192	-	158	--	5.4 B	--	--	36.1	4.8 B

See Table 7 for notes and qualifiers

302925

Table 4-32. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between I-295 and Route 130.
BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	LTC-221/SW		LTC-223/SW		LTC-217/SW		LTC-225/SW		WMW-3A	
Sample Date	4/24/2000		4/25/2000		4/26/2000		4/25/2000		5/4/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA	-	NA
Alkalinity to pH 4.5	21.1	NA	23.7	NA	19.1	NA	22	NA	43.2	NA
Total Suspended Solids	--	NA	NA	NA	8.4 J	NA	NA	NA	120	NA
Total Dissolved Solids	101	NA	NA	NA	92	NA	NA	NA	169	NA
Total Hardness	50.9	NA	NA	NA	54.5	NA	NA	NA	50.4	NA
Kjeldahl Nitrogen	--	NA	NA	NA	1.07 J	NA	NA	NA	1.95 J	NA
Nitrite Nitrogen	--	NA	NA	NA	--	NA	NA	NA	0.016	NA
Nitrate Nitrogen	--	NA	NA	NA	--	NA	NA	NA	-	NA
Ammonia Nitrogen	--	NA	NA	NA	--	NA	NA	NA	0.74	NA
Sulfide	0.0100 J	NA	NA	NA	0.0745 J	NA	NA	NA	0.38	NA
Total Organic Carbon	6.7	6.1	6.5	7.7	18.4	8.6	7.2	5.8	13.4	14.3
Chloride	19.9	NA	NA	NA	19.9	NA	NA	NA	22.2	NA
Sulfate	18.7	NA	NA	NA	15.8	NA	NA	NA	-	NA
Volatile Organic Compounds (µg/l)										
Benzene	--	NA	--	NA	--	NA	--	NA	-	NA
Acetone	--	NA	--	NA	--	NA	--	NA	-	NA
Toluene	--	NA	--	NA	--	NA	--	NA	-	NA
Total TICs	--	NA	--	NA	--	NA	--	NA	-	NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	0.14	NA	--	NA	--	NA	--	NA	-	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA	-	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	--	--	--	--	--	--	--	--	-	-
bis(2-chloroethyl) ether	--	--	--	--	--	--	--	--	-	-
bis (2-Ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	--	--	--	-	-
Isophorone	--	--	--	--	--	--	--	--	-	-
2,4 Dimethylphenol	--	--	--	--	--	--	--	--	-	-
Total TICs	11 J	19 J	203 JAB	11 J	42 JBX	47 JA	232 JBA	420 J	91 JB	33 J
Polychlorinated Biphenyls (µg/l)										
Aroclor 1248	--	--	--	--	--	--	--	--	-	-
Aroclor 1254	0.012 JP	--	0.11 J	--	--	0.026 J	--	--	0.19 J	-
Aroclor 1260	--	--	--	--	--	--	--	--	-	-
Total PCBs	0.012 JP	--	0.11 J	--	--	0.026 J	--	--	0.19 J	-
Target Analyte List Metals (µg/l)										
Aluminum	--	--	--	--	498 *	--	--	--	2,240	199 B
Arsenic	--	--	--	--	6.9 B	--	--	--	5.3 B	-
Barium	51.9 B	48 B	54 B	51.7 B	83.8 B	49.6 B	55.2 B	53.9 B	288	218 *
Calcium	11,600	11,100	11,600	10,500	11,100	10,000	12,000	11,800	11,400	12,000
Chromium	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	--	--	--	5.8 B	4.1 B
Iron	769 *	211	609 *	725	5750 *	1,420	924 *	164	7,970	6,800
Lead	10 B *	--	--	--	--	--	--	--	13.1	-
Magnesium	5,550	5,460	5,680	5,320	5,410	5,090	5,830	5,920	4,780	4,930
Manganese	20 *	17.4	58.7 *	104	210 *	120	38 *	28	141	160
Nickel	--	--	--	--	--	--	--	--	-	11.1 B
Potassium	3,630	3,780	3,800	3,920	4,290	3,830	3,790	3,970	12,600	10,900
Selenium	6.2 B	--	--	--	--	--	--	--	-	-
Sodium	7,640 E	7,410 E	7,760 E	7,270 E	7,640 E	7,170 E	7,510 E	7,550 E	10,200	11,500
Thallium	--	--	--	--	--	--	--	--	10 B	-
Vanadium	--	--	--	--	6.1 B	--	--	--	12.9 B	4.3 B
Zinc	6.4 B	--	5.8 B	--	12.5 B	--	5.5 B	5.1 B	11.6 B	184

See Table 7 for notes and qualifiers

302926

Table 4-32. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between I-295 and Route 130.
BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	WMW-3B		LTC-227/SW		LTC-229/SW		LTC-235/SW		WMW-4A	
Sample Date	5/4/2000		4/26/2000		4/27/2000		5/2/2000		5/4/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	-	NA	--	NA	--	NA	--	NA	-	NA
Alkalinity to pH 4.5	97.5	NA	26.1	NA	24.1	NA	28.1	NA	32.2	NA
Total Suspended Solids	-	NA	NA	NA	NA	NA	NA	NA	-	NA
Total Dissolved Solids	278	NA	NA	NA	NA	NA	NA	NA	118	NA
Total Hardness	163	NA	NA	NA	NA	NA	NA	NA	61.3	NA
Kjeldahl Nitrogen	2.3	NA	NA	NA	NA	NA	NA	NA	0.92 J	NA
Nitrite Nitrogen	0.022 J	NA	NA	NA	NA	NA	NA	NA	-	NA
Nitrate Nitrogen	-	NA	NA	NA	NA	NA	NA	NA	-	NA
Ammonia Nitrogen	1.71	NA	NA	NA	NA	NA	NA	NA	0.38	NA
Sulfide	0.5	NA	NA	NA	NA	NA	NA	NA	0.42	NA
Total Organic Carbon	14.7	15.7	5.9	5.7	8.7	8.1	6.2	5.7	10.5	9.2
Chloride	22.8	NA	NA	NA	NA	NA	NA	NA	21.8	NA
Sulfate	56	NA	NA	NA	NA	NA	NA	NA	10.8	NA
Volatile Organic Compounds (µg/l)										
Benzene	-	NA	--	NA	--	NA	--	NA	-	NA
Acetone	-	NA	--	NA	--	NA	--	NA	-	NA
Toluene	-	NA	--	NA	--	NA	--	NA	-	NA
Total TICs	-	NA	--	NA	--	NA	--	NA	-	NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	0.15	NA	--	NA	--	NA	--	NA	-	NA
THP-GRO	-	NA	--	NA	--	NA	--	NA	-	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	1 J	-	--	--	--	--	--	--	-	-
bis(2-chloroethyl) ether	-	-	--	--	--	--	--	--	-	-
bis (2-Ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	-	-	--	--	--	--	--	--	-	-
Isophorone	-	-	--	--	--	--	--	--	-	-
2,4 Dimethylphenol	-	-	--	--	--	--	--	--	-	-
Total TICs	20 JBX	41 J	10 JBX	82 J	66 JX	4 JB	7 JB	289 JBX	11 JBX	45 J
Polychlorinated Biphenyls (µg/l)										
Aroclor 1248	-	-	--	--	--	--	--	--	-	-
Aroclor 1254	-	-	--	--	--	--	--	--	-	-
Aroclor 1260	-	-	--	--	--	--	--	--	-	-
Total PCBs	-	-	--	--	--	--	--	--	-	-
Target Analyte List Metals (µg/l)										
Aluminum	124 B	110 B	--	--	--	--	--	--	205	79.9 B
Arsenic	-	-	--	--	--	--	--	--	-	-
Barium	246	263 *	51.1 B	51 B	47.3 B	46.9 B	52.6 B	55.3 B	264	56.1 B*
Calcium	35,200	36,800	12,500	11,700	10,200	10,900	13,700	15,100	11,700	11,800
Chromium	--	--	--	--	--	--	--	--	--	--
Copper	-	-	--	--	--	--	--	11.0 B	4.7 B	-
Iron	4,700	3,430	398 *	168	1,070	944	766	198	4,810	4,080
Lead	-	-	--	--	--	--	8.1 B	--	-	-
Magnesium	156,000	13,500	6,050	5,890	5,160	5,360	6,700	7,110	5,350	5,510
Manganese	455	416	17.7 *	15.9	260	263	79.8	73.9	162	153
Nickel	12500	-	--	--	--	--	6.6 B	--	7.5 B	-
Potassium	9,950	12,400	3,660	3,820	3,860	3,980	4,000	4,540	4,630	3,960
Selenium	-	-	--	--	--	--	--	--	-	-
Sodium	-	11,900	7,580 E	7,580 E	7,110	7,360	7,850	9,130	7,930	8,020
Thallium	-	-	--	--	--	--	--	--	13.7 B	-
Vanadium	-	-	--	--	--	--	--	--	-	-
Zinc	-	213	7.0 B	--	8.4 B	5.7 B	22.2 B	11.5 B	-	-

See Table 7 for notes and qualifiers

302927

Table 4-32. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between I-295 and Route 130.
BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	WMW-4B		LTC-231/SW		LTC-234/SW		LTC-233/SW		LTC-226/SW	
Sample Date	5/4/2000		4/27/2000		4/28/2000		4/28/2000		4/26/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)										
Alkalinity to pH 8.3	-	NA	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	44.9	NA	25.6	NA	24.8	NA	24.7	NA	21.9	NA
Total Suspended Solids	-	NA	10.4 J	NA	NA	NA	42	NA	12	NA
Total Dissolved Solids	139	NA	113	NA	NA	NA	115	NA	94	NA
Total Hardness	72.5	NA	62.8	NA	NA	NA	67.0	NA	52.5	NA
Kjeldahl Nitrogen	1.26 J	NA	0.85 J	NA	NA	NA	4.0 J	NA	1.23 J	NA
Nitrite Nitrogen	0.023 J	NA	--	NA	NA	NA	--	NA	--	NA
Nitrate Nitrogen	-	NA	0.38	NA	NA	NA	0.68	NA	--	NA
Ammonia Nitrogen	0.83	NA	--	NA	NA	NA	--	NA	--	NA
Sulfide	0.84	NA	--	NA	NA	NA	0.19	NA	0.0650 J	NA
Total Organic Carbon	11.5	11.4	5.4	5.3	4.9	4.8	7.0	1.6	11.3	11
Chloride	23.8	NA	21.7	NA	NA	NA	21.1	NA	20	NA
Sulfate	12.1	NA	20.5	NA	NA	NA	19.4	NA	15.6	NA
Volatile Organic Compounds (µg/l)										
Benzene	-	NA	--	NA	--	NA	--	NA	--	NA
Acetone	-	NA	--	NA	--	NA	--	NA	--	NA
Toluene	-	NA	--	NA	--	NA	--	NA	--	NA
Total TICs	-	NA	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)										
TPH-DRO	0.12	NA	--	NA	--	NA	--	NA	--	NA
THP-GRO	-	NA	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)										
Phenol	-	2 J	--	--	--	--	--	--	--	53
bis(2-chloroethyl) ether	-	-	--	--	--	--	--	--	--	--
bis (2-Ethylhexyl) phthalate	--	--	--	--	--	--	4 J	--	--	--
4-Methylphenol	-	-	--	--	--	--	--	--	--	--
Isophorone	-	-	--	--	--	--	--	--	--	--
2,4 Dimethylphenol	-	-	--	--	--	--	--	--	--	--
Total TICs	6 JB	-	9 JB	--	32 JB	140 J	56 JXB	--	28 JBX	86 J
Polychlorinated Biphenyls (µg/l)										
Aroclor 1248	-	-	--	--	--	--	--	--	--	--
Aroclor 1254	-	0.072 J	--	--	--	0.023J	0.021 J	0.046 J	0.014 J	--
Aroclor 1260	-	-	--	--	--	--	0.011 JP	--	--	--
Total PCBs	-	0.072 J	--	--	--	0.023J	0.032JP	0.046 J	0.014 J	--
Target Analyte List Metals (µg/l)										
Aluminum	146 B	-	--	--	--	--	815	--	110 B	100 B
Arsenic	-	-	--	--	--	--	--	--	--	--
Barium	75.9 B	75.0 B*	53.4 B	54.8 B	52.2 B	54.1 B	339	54.2 B	52.5 B	51 B
Calcium	15,200	15,700	12,300	13,500	12,700	13,500	14,100	13,600	10,700	9,770
Chromium	--	--	--	--	--	--	--	--	--	--
Copper	-	-	--	7.4 B	--	6.4 B	--	9.7 B	--	--
Iron	1,920	1,790	571	327	721	362	3,680	355	1,270	1,010
Lead	-	-	--	--	--	--	17.5	--	--	--
Magnesium	6,540	6,870	6,210	6,540	6,280	6,510	6,890	6,550	5,250	4,970
Manganese	218	223	39.5	36.3	59.2	70.9	148	50.4	86.9	72.4
Nickel	-	-	--	--	--	--	--	--	--	--
Potassium	7,660	7,210	3,940	4,510	3,740	4,180	4,720	4,320	3,630	3,720
Selenium	-	-	--	--	--	--	--	--	--	--
Sodium	8,260	8,380	7,770	8,690	7,810	8,480	9,860	8,820	7,420 E	7,200 E
Thallium	-	-	--	--	--	--	--	--	--	--
Vanadium	-	-	--	--	--	--	6.0 B	--	--	--
Zinc	-	-	6.5 B	11.2 B	6.5 B	8.7 B	21.2 B	12.5 B	5.3 B	--

See Table 7 for notes and qualifiers

302928

Table 4-32. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between I-295 and Route 130. BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	LTC-218/SW		LTC-220/SW		LTC-238/SW		LTC-219/SW	
Sample Date	4/21/2000		4/20/2000		5/2/2000		4/21/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)								
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	15.1	NA	14.3	NA	18.4	NA	16.4	NA
Total Suspended Solids	16	NA	NA	NA	NA	NA	12	NA
Total Dissolved Solids	95	NA	NA	NA	NA	NA	96	NA
Total Hardness	47.1	NA	NA	NA	NA	NA	48.5	NA
Kjeldahl Nitrogen	0.88 J	NA	NA	NA	NA	NA	0.84 J	NA
Nitrite Nitrogen	--	NA	NA	NA	NA	NA	0.016 J	NA
Nitrate Nitrogen	0.076 J	NA	NA	NA	NA	NA	0.17	NA
Ammonia Nitrogen	--	NA	NA	NA	NA	NA	--	NA
Sulfide	0.0220 J	NA	NA	NA	NA	NA	--	NA
Total Organic Carbon	10.3	9.4	26.5	31.2	7.0	6.5	9.3	9.6
Chloride	20.1	NA	NA	NA	NA	NA	20.5	NA
Sulfate	16.4	NA	NA	NA	NA	NA	16.9	NA
Volatile Organic Compounds (µg/l)								
Benzene	--	NA	--	NA	--	NA	--	NA
Acetone	--	NA	--	NA	--	NA	--	NA
Toluene	--	NA	--	NA	--	NA	--	NA
Total TICs	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)								
TPH-DRO	--	NA	0.14	NA	--	NA	--	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)								
Phenol	--	--	--	--	--	--	--	--
bis(2-chloroethyl) ether	--	--	--	--	--	--	--	--
bis (2-Ethylhexyl) phthalate	--	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	--	--	--
Isophorone	--	--	--	--	--	--	--	--
2,4 Dimethylphenol	--	--	--	--	--	--	--	--
Total TICs	21 J	8 J	32 J	175 JX	6 JB	289 JXB	18 J	6 J
Polychlorinated Biphenyls (µg/l)								
Aroclor 1248	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	0.084	0.020 J	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--
Total PCBs	--	--	0.084	0.020 J	--	--	--	--
Target Analyte List Metals (µg/l)								
Aluminum	--	--	316*	339	--	--	117 B*	--
Arsenic	--	--	--	--	--	--	--	--
Barium	46 B	47.5 B	44.6 B	42.0 B	41.3 B	43.5 B	49.2 B	46.8 B
Calcium	9,800	9,750	8,250	7,300	10,100	11,300	10,300	9,670
Chromium	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	8.7 B	--	--
Iron	773*	375	2010*	1,360	397	191	809*	317
Lead	--	--	--	--	--	--	--	--
Magnesium	4,810	4,970	3,750	3,420	5,090	5,480	5,170	4,940
Manganese	44.6*	36.8	129*	96.8	55.5	37.0	54.8*	40.1
Nickel	--	--	--	--	--	--	--	--
Potassium	3,570	3,880	3,280	3,310	3,890	4,050	4,020	3,820
Selenium	5.1 B	--	--	--	--	--	--	--
Sodium	7,320 E	7,280 E	7,140 E	7,080 E	6,950	8,090	7,270 E	7,080 E
Thallium	--	--	10.2 B	--	--	--	--	--
Vanadium	--	--	3.6 B	--	--	--	--	--
Zinc	5.1 B	5.2 B	6.1 B	8.8 B	6.3 B	11.5 B	--	5.4 B

See Table 7 for notes and qualifiers

302929

Table 4-33. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between Route 44 and Route 130.

BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	LTC-205		LTC-206		LTC-207		LTC-208		LTC-204		LTC-209	
Sample Date	4/18/2000		4/18/2000		4/18/2000		4/18/2000		4/18/2000		4/19/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)												
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	23.7	NA	23.0	NA	23.0	NA	21.8	NA	22.1	NA	21.9	NA
Total Suspended Solids	30	NA	NA	NA	--	NA	NA	NA	--	NA	--	NA
Total Dissolved Solids	101	NA	NA	NA	95	NA	NA	NA	108	NA	96	NA
Total Hardness	52.5	NA	NA	NA	52.3	NA	NA	NA	48.7	NA	50.3	NA
Kjeldahl Nitrogen	--	NA	NA	NA	--	NA	NA	NA	0.75 J	NA	0.85 J	NA
Nitrite Nitrogen	--	NA	NA	NA	--	NA	NA	NA	--	NA	0.026 J	NA
Nitrate Nitrogen	0.14	NA	NA	NA	0.27	NA	NA	NA	0.044 J	NA	0.16	NA
Ammonia Nitrogen	--	NA	NA	NA	--	NA	NA	NA	--	NA	--	NA
Sulfide	0.21	NA	NA	NA	--	NA	NA	NA	--	NA	--	NA
Total Organic Carbon	9.9	9.0	8.4	8.3	8.2	7.9	8.9	8.6	16.9	21.9	8.3	7.4
Chloride	19.5	NA	NA	NA	19.1	NA	NA	NA	24.3	NA	19.3	NA
Sulfate	14.4	NA	NA	NA	15.1	NA	NA	NA	11.8	NA	15.3	NA
Volatile Organic Compounds (µg/l)												
Benzene	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Acetone	--	NA	--	NA	9 J	NA	--	NA	--	NA	--	NA
Toluene	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Total TICs	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)												
TPH-DRO	0.21	NA	0.25	NA	--	NA	--	NA	0.15	NA	--	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)												
Phenol	--	2 J	--	61	--	5 J	--	--	--	--	--	1 J
bis(2-Ethylhexyl) phthalate	--	--	4 J	--	--	--	2 J	--	--	--	--	--
bis(2-chloroethyl) ether	--	--	--	--	--	16	--	--	--	--	--	--
Total TICs	54J	136JBX	49J	56JBX	12J	262	18JXB	67JXB	32JBX	12JBX	28JBX	118JBX
Polychlorinated Biphenyls (µg/l)												
Aroclor 1248	--	--	0.13 P	--	--	--	--	--	--	--	--	--
Aroclor 1254	0.18	0.21 P	0.15	--	0.051	--	0.017 JP	--	--	--	--	--
Aroclor 1260	0.16	--	0.14	--	0.038 J	--	0.013 J	--	--	--	--	--
Total PCBs	0.34	0.21 P	.042P	--	0.089J	--	0.03JP	--	--	--	--	--
Target Analyte List Metals (µg/l)												
Aluminum	1100	--	2,340	--	83.1 B	--	124 B	--	123 B	108 B	--	--
Arsenic	9.5 B	--	32.5	--	--	--	5.2 B	--	--	--	--	--
Barium	104	52B	209	50.6B	51.0 B	50.9B	52.2B	50.6 B	51.2B	50.6 B	50.3 B	50.7B
Calcium	11,600	10,900	13,100	10,700	10,900	10,900	10,700	10,500	9,880	9,560	10,200	10,500
Chromium	11.1 B	--	23.5 B	--	--	--	--	--	--	--	--	--
Copper	5.4 B	--	12.1 B	--	--	--	--	--	--	--	--	--
Iron	10,300N*	886	29,400N*	1,100	884N*	427	1,260N*	524	1,930N*	1,540	1,360N*	638
Lead	81.3	--	318	--	--	--	--	--	--	--	--	--
Magnesium	5,510	5,600	5,760	5,600	5,400	5,680	5,340	5,550	4,840	4,820	5,200	5,540
Manganese	120	80.1	134*	38.6	43.2*	44.3	56.4*	47.2	76.9*	81.8	44.2*	53.2
Nickel	--	--	8.9 B	--	--	--	--	--	--	--	--	--
Potassium	3,940	3,680	4,140	3,690	3,690	3,580	3,700	3,550	3,840	3,720	3,710	3,770
Sodium	6,930	6,910	7,050	6,940	7,090	6,770	7,030	6,810	8,720	9,070	7,290	7,390
Thallium	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	20.1	--	61.9	--	--	--	--	--	--	--	--	--
Zinc	25.7	5.3 B	55.8	--	5.9 B	--	7.3 B	5.0 B	5.2 B	5.8 B	5.9 B	--

See Table 7 for notes and qualifiers

302930

Table 4-33. Summary of Detected Compounds in Surface Water From Little Timber Creek Swamp Between Route 44 and Route 130.

BROS Phase 2 RI/FS; Logan Township, New Jersey

Sample ID	LTC-203		LTC-202		LTC-210		LTC-201		LTC-200		LTC-211	
Sample Date	4/18/2000		4/17/2000		4/19/2000		4/17/2000		4/17/2000		4/19/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemistry Parameters (mg/L)												
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	22.8	NA	21.4	NA	21.0	NA	24.7	NA	23.3	NA	24.5	NA
Total Suspended Solids	NA	NA	6.8 J	NA	8.0 J	NA	NA	NA	NA	NA	32	NA
Total Dissolved Solids	NA	NA	106	NA	106	NA	NA	NA	NA	NA	209	NA
Total Hardness	NA	NA	45.8	NA	49.9	NA	NA	NA	NA	NA	53	NA
Kjeldahl Nitrogen	NA	NA	1.19 J	NA	0.94 J	NA	NA	NA	NA	NA	6.2	NA
Nitrite Nitrogen	NA	NA	--	NA	0.017 J	NA	NA	NA	NA	NA	--	NA
Nitrate Nitrogen	NA	NA	--	NA	0.057 J	NA	NA	NA	NA	NA	--	NA
Ammonia Nitrogen	NA	NA	--	NA	--	NA	NA	NA	NA	NA	0.066 J	NA
Sulfide	NA	NA	0.0260 J	NA	0.0100 J	NA	NA	NA	NA	NA	0.0770 J	NA
Total Organic Carbon	13.1	12.9	13.4	12.8	10.0	9.6	14.0	14.2	12.5	12.4	30.9	24.9
Chloride	NA	NA	21.1	NA	24.7	NA	NA	NA	NA	NA	68.3	NA
Sulfate	NA	NA	12.8	NA	13.9	NA	NA	NA	NA	NA	4.9 J	NA
Volatile Organic Compounds (µg/l)												
Benzene	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Acetone	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Toluene	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Total TICs	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)												
TPH-DRO	0.14	NA	0.17	NA	0.15	NA	0.22	NA	0.16	NA	0.24	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg												
Phenol	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--	3 J	3 J
bis(2-chloroethyl) ether	--	--	--	--	--	--	--	--	--	--	--	--
Total TICs	16JX	123JBX	115JBX	298JBX	8JBX	13JBX	15JBX	389JBX	4 J	235JBX	50JBX	323JBX
Polychlorinated Biphenyls (µg/l)												
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	.013 JP	--	0.054	--	0.050 JP	--	0.030 JP	--	0.067	--	.074 P	--
Aroclor 1260	--	--	0.040 J	--	0.024 JP	--	0.024 J	--	0.017 J	--	0.024 JP	--
Total PCBs	0.013	--	0.094J	--	0.074	--	0.054JP	--	0.084J	--	0.098JP	--
Target Analyte List Metals (µg/l)												
Aluminum	103 B	--	141 B	--	--	--	80.6 B	87.4 B	--	--	311	169 B
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--
Barium	49.1 B	52.3 B	48.0 B	49.0 B	48.6B	48.9 B	50.7 B	54.9 B	53.1 B	52.6 B	49.2	42.7 B
Calcium	9,680	10,400	9,000	9,460	9,160	9,340	9,630	10,200	10,200	10,200	10,500	9,780
Chromium	--	--	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	--	--	--	--	--	--	--
Iron	1,580N*	959	1,560N*	606	2,270N*	1,120	970N*	1,120	1,490N*	711	13,700N*	3,550
Lead	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	4,750	5,330	4,520	4,980	4,690	5,060	4,740	5,200	4,990	5,180	3,850	4,130
Manganese	64.7*	60.7	72.8*	68.2	75.1*	64.2	66.5*	72.4	63.9*	56.2	145*	133
Nickel	--	--	--	--	--	--	--	--	--	--	--	--
Potassium	3,680	3,790	3,740	3,860	3,640	3,570	3,700	3,820	4,000	3,870	2,830	2,840
Sodium	8,010	8,280	8,470	8,920	11,100	10,600	8,100	8,410	8,690	8,330	39,400	31,900
Thallium	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	--	--	--	--	--	--	--	--	--	--	4.7 B	--
Zinc	7.6 B	5.1 B	6.4 B	5.3 B	5.2 B	--	8.5 B	4.8 B	9.4 B	--	10.5 B	7.5 B

See Table 7 for notes and qualifiers

302931

Table 4-34. Summary of Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-202	LTC-202	LTC-205	LTC-205	LTC-207	LTC-207	LTC-209	LTC-209	LTC-210	LTC-210	LTC-211	LTC-211
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/26/00	6/26/00	6/26/00	6/26/00	6/27/00	6/27/00	6/27/00	6/27/00	6/26/00	6/26/00
Parameter (ug/Kg)												
1,1,1-Trichloroethane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
1,1,2,2-Tetrachloroethane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
1,1,2-Trichloroethane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
1,1-Dichloroethane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
1,1-Dichloroethene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
1,2-Dichloroethane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
1,2-Dichloropropane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
2-Butanone	74 U	58 J	160	19 U	250	240	120 J	76 U	490	34 J	100 U	82 U
2-Hexanone	56 U	38 U	43 U	14 U	37 U	30 U	53 U	57 U	35 U	13 U	78 U	62 U
4-Methyl-2-pentanone	56 U	38 U	43 U	14 U	37 U	30 U	53 U	57 U	35 U	13 U	78 U	62 U
Acetone	580	480	1000	110	1400	1200	1200	710	2100	230	650	660
Benzene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Bromodichloromethane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Bromoform	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Bromomethane/ Methyl bromide	37 U	25 U	29 U	10 U	24 U	20 U	36 U	38 U	24 U	8 U	52 U	41 U
Carbon disulfide	55 J	33 J	130	11 J	55 J	50	65 J	38 J	87	8 J	74 J	120
Carbon tetrachloride	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Chlorobenzene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Chloroethane	37 U	25 U	29 U	10 U	24 U	20 U	36 U	38 U	24 U	8 U	52 U	41 U
Chloroform	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Chloromethane	37 U	25 U	29 U	10 U	24 U	20 U	36 U	38 U	24 U	8 U	52 U	41 U
cis-1,2-Dichloroethene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
cis-1,3-Dichloropropene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Dibromochloromethane	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Ethylbenzene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Methylene chloride	120	88	36 J	10 U	24 J	21 J	180	130	99	25	52 U	41 U
Styrene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Tetrachloroethene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Toluene	19 J	12 U	3400	8 J	1400	98	290	32 J	1600	160	26 U	84 J
trans-1,2-Dichloroethene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
trans-1,3-Dichloropropene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Trichloroethene	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Vinyl chloride	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 U	4 U	26 U	20 U
Xylenes (Total)	18 U	12 U	14 U	5 U	12 U	10 U	18 U	19 U	12 J	4 U	26 U	20 U
Total TICs	3440	200	1291	384	2599	16960	1290	550	769	174	1680	1880

302932

Table 4-34. Summary of Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-212	LTC-212	LTC-214	LTC-214	LTC-216	LTC-216	LTC-218	LTC-218	LTC-219	LTC-219	LTC-228	LTC-228
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/28/00	6/28/00	6/28/00	6/28/00	6/27/00	6/27/00
Parameter (ug/Kg)												
1,1,1-Trichloroethane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
1,1,2,2-Tetrachloroethane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
1,1,2-Trichloroethane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
1,1-Dichloroethane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
1,1-Dichloroethene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
1,2-Dichloroethane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
1,2-Dichloropropane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
2-Butanone	27 U	20 U	180 J	130 J	42 U	41 U	4100	110	730	150	250	96
2-Hexanone	21 U	15 U	67 U	57 U	31 U	31 U	99 J	31 U	36 U	26 U	31 U	13 U
4-Methyl-2-pentanone	21 U	15 U	67 U	57 U	31 U	31 U	36 U	31 U	36 U	26 U	31 U	13 U
Acetone	260	190	1500	1100	490	600	7100. U	840	2600	880	1600	660
Benzene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Bromodichloromethane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Bromoform	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Bromomethane/ Methyl bromide	14 U	10 U	45 U	38 U	21 U	21 U	24 U	21 U	24 U	18 U	21 U	9 U
Carbon disulfide	37	29	160	110	48 J	64	61	16 J	37 J	15 J	46 J	27
Carbon tetrachloride	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Chlorobenzene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Chloroethane	14 U	10 U	45 U	38 U	21 U	21 U	24 U	21 U	24 U	18 U	21 U	9 U
Chloroform	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Chloromethane	14 U	10 U	45 U	38 U	21 U	21 U	24 U	21 U	24 U	18 U	21 U	9 U
cis-1,2-Dichloroethene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
cis-1,3-Dichloropropene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Dibromochloromethane	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Ethylbenzene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 J	10 U	4 U
Methylene chloride	14 J	10 U	47 J	39 J	26 J	26 J	52 J	38 J	71	28 J	100	45
Styrene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Tetrachloroethene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Toluene	7 U	5 U	230	180	19 J	10 U	3400	120	1000	220	860	1200
trans-1,2-Dichloroethene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
trans-1,3-Dichloropropene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Trichloroethene	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Vinyl chloride	7 U	5 U	22 U	19 U	10 U	10 U	12 U	10 U	12 U	9 U	10 U	4 U
Xylenes (Total)	7 U	5 U	22 U	19 U	10 U	10 U	32 J	17 J	33 J	15 J	10 U	4 U
Total TICs	771	171	420	1820	1350	1163	2882	550	937	442	6240	7494

302933

Table 4-34. Summary of Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-229	LTC-229	LTC-231	LTC-231	LTC-227	LTC-227	LTC-234	LTC-234	LTC-237	LTC-237
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/28/00	6/28/00	6/27/00	6/27/00	6/28/00	6/28/00	6/28/00	6/28/00
Parameter (ug/Kg)										
1,1,1-Trichloroethane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
1,1,2,2-Tetrachloroethane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
1,1,2-Trichloroethane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
1,1-Dichloroethane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
1,1-Dichloroethene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
1,2-Dichloroethane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
1,2-Dichloropropane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
2-Butanone	140	39 J	56 J	55 J	18 U	14 U	72 J	40 J	130 J	52 U
2-Hexanone	10 U	23 U	19 U	22 U	14 U	10 U	30 U	23 U	43 U	39 U
4-Methyl-2-pentanone	10 U	23 U	19 U	22 U	14 U	10 U	30 U	23 U	43 U	39 U
Acetone	730	280	450	480	97	66 J	540	310	3600	1000
Benzene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Bromodichloromethane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Bromoform	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Bromomethane/ Methyl bromide	7 U	15 U	12 U	14 U	9 U	7 U	20 U	15 U	29 U	26 U
Carbon disulfide	9 J	9 J	11 J	18 J	5 U	4 J	34 J	13 J	28 J	30 J
Carbon tetrachloride	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Chlorobenzene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Chloroethane	7 U	15 U	12 U	14 U	9 U	7 U	20 U	15 U	29 U	26 U
Chloroform	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Chloromethane	7 U	15 U	12 U	14 U	9 U	7 U	20 U	15 U	29 U	26 U
cis-1,2-Dichloroethene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
cis-1,3-Dichloropropene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Dibromochloromethane	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Ethylbenzene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Methylene chloride	14 J	22 J	29 J	52	20 J	11 J	30 J	21 J	54 J	55 J
Styrene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Tetrachloroethene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Toluene	370	22 J	200	60	14 J	3 U	160	24 J	260	66
trans-1,2-Dichloroethene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
trans-1,3-Dichloropropene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Trichloroethene	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Vinyl chloride	3 U	8 U	6 U	7 U	5 U	3 U	10 U	8 U	14 U	13 U
Xylenes (Total)	3 U	8 U	6 U	7 U	7 J	3 U	10 U	8 U	14 J	14 J
Total TICs	237	100	220	437	100	22	1191	207	440	680

302934

Table 4-35. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-202	LTC-202	LTC-205	LTC-205	LTC-207	LTC-207	LTC-209	LTC-209	LTC-210	LTC-210	LTC-211	LTC-211
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/26/00	6/26/00	6/26/00	6/26/00	6/27/00	6/27/00	6/27/00	6/27/00	6/26/00	6/26/00
Parameter (ug/Kg)												
1,2,4-Trichlorobenzene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
1,2-Dichlorobenzene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
1,3-Dichlorobenzene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
1,4-Dichlorobenzene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
2,2'-Oxybis(1-chloropropane)	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
2,4-Dinitrotoluene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
2,6-Dinitrotoluene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
2-Chloronapthalene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
2-Methylnapthalene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
2-Nitroaniline	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
3,3'-Dichlorobenzidine	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
3-Nitroaniline	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
4-Bromophenyl phenyl ether	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
4-Chloroaniline	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
4-Chlorophenyl phenyl ether	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
4-Nitroaniline	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
Acenaphthene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Acenaphthylene	74 U	190 J	2000 J	750 J	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Anthracene	74 U	420 J	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Benzo(a)anthracene	87 J	170 J	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Benzo(a)pyrene	98 J	210 J	900 J	1000 J	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Benzo(b)fluoranthene	200 J	550 J	940 J	1400 J	800 J	7400 U	100 J	74 U	60 U	99 J	74 U	74 U
Benzo(g,h,i)perylene	180 J	180 J	3000 J	1200 J	910 J	7400 U	150 J	74 U	60 U	78 U	150 J	74 U
Benzo(k)fluoranthene	76 J	140 J	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
bis(2-Chloroethoxy)methane	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
bis(2-Chloroethyl)ether	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
bis(2-Ethylhexyl)phthalate	150 U	460 J	1500 U	2800 J	5500 J	63000 J	150 U	150 U	120 U	160 U	150 J	470 J
Butyl benzyl phthalate	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 J	120 U	160 U	150 U	150 U
Carbazole	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
Chrysene	170 J	660	970 J	990 J	840 J	11000 J	74 U	74 U	60 U	78 U	74 U	74 U
Di-n-butyl phthalate	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
Di-n-octyl phthalate	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
Dibenz(a,h)anthracene	74 U	81 J	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Dibenzofuran	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Diethyl phthalate	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
Dimethyl phthalate	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
Fluoranthene	170 J	230 J	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	100 J	74 U	74 U
Fluorene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U

302935

Table 4-35. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-202	LTC-202	LTC-205	LTC-205	LTC-207	LTC-207	LTC-209	LTC-209	LTC-210	LTC-210	LTC-211	LTC-211
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/26/00	6/26/00	6/26/00	6/26/00	6/27/00	6/27/00	6/27/00	6/27/00	6/26/00	6/26/00
Parameter (ug/Kg)												
Hexachlorobenzene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Hexachlorobutadiene	150 U	130 U	1500 U	1500 U	1300 U	15000 U	150 U	150 U	120 U	160 U	150 U	150 U
Hexachlorocyclopentadiene	370 U	320 U	3800 U	3700 U	3200 U	37000 U	370 U	370 U	300 U	390 U	370 U	370 U
Hexachloroethane	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Indeno(1,2,3-cd)pyrene	120 J	290 J	2400 J	1200 J	760 J	7400 U	140 J	74 U	60 U	78 U	74 U	74 U
Isophorone	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
n-Nitrosodiphenylamine	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
n-Nitrosodipropylamine	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Nitrobenzene	74 U	64 U	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Phenanthrene	74 U	110 J	760 U	740 U	640 U	7400 U	74 U	74 U	60 U	78 U	74 U	74 U
Pyrene	170 J	390 J	760 U	740 U	1400 J	22000 J	81 J	74 U	60 U	100 J	250 J	74 U
Total TICs	75940	113200	297600	317900	202200	2404000	77400	1151420	116110	145800	98700	105500

302936

Table 4-35. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-212	LTC-212	LTC-214	LTC-214	LTC-216	LTC-216	LTC-218	LTC-218	LTC-219	LTC-219	LTC-227	LTC-227
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/28/00	6/28/00	6/28/00	6/28/00	6/27/00	6/27/00
Parameter (ug/Kg)												
1,2,4-Trichlorobenzene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
1,2-Dichlorobenzene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
1,3-Dichlorobenzene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
1,4-Dichlorobenzene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
2,2'-Oxybis(1-chloropropane)	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
2,4-Dinitrotoluene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
2,6-Dinitrotoluene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
2-Chloronapthalene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
2-Methylnapthalene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
2-Nitroaniline	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
3,3'-Dichlorobenzidine	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
3-Nitroaniline	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
4-Bromophenyl phenyl ether	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
4-Chloroaniline	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
4-Chlorophenyl phenyl ether	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
4-Nitroaniline	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
Acenaphthene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Acenaphthylene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Anthracene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Benzo(a)anthracene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	140 J	60 U	120 J	68 U	83 U
Benzo(a)pyrene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	160 J	60 U	140 J	68 U	83 U
Benzo(b)fluoranthene	83 U	69 U	95 U	83 U	78 J	74 U	83 U	270 J	60 U	210 J	68 U	83 U
Benzo(g,h,i)perylene	83 U	69 U	95 U	130 J	150 J	74 U	83 U	140 J	60 U	130 J	190 J	150 J
Benzo(k)fluoranthene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	97 J	60 U	77 J	68 U	83 U
bis(2-Chloroethoxy)methane	170 U	140 U	190 U	170 U	160 U	150 U	170 J	160 U	120 U	150 U	140 U	170 U
bis(2-Chloroethyl)ether	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
bis(2-Ethylhexyl)phthalate	170 U	140 U	410 J	280 J	160 U	150 U	210 J	760 J	190 J	180 J	350 J	550 J
Butyl benzyl phthalate	170 U	140 U	190 U	170 U	160 U	150 U	920	720 J	120 U	160 J	250 J	190 J
Carbazole	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
Chrysene	83 U	69 U	95 U	83 U	84 J	74 U	110 J	170 J	60 U	190 J	68 U	83 U
Di-n-butyl phthalate	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
Di-n-octyl phthalate	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
Dibenz(a,h)anthracene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Dibenzofuran	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Diethyl phthalate	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
Dimethyl phthalate	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
Fluoranthene	83 U	98 J	95 U	83 U	90 J	74 U	100 J	330 J	73 J	270 J	68 U	83 U
Fluorene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U

302937

Table 4-35. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-212	LTC-212	LTC-214	LTC-214	LTC-216	LTC-216	LTC-218	LTC-218	LTC-219	LTC-219	LTC-227	LTC-227
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/28/00	6/28/00	6/28/00	6/28/00	6/27/00	6/27/00
Parameter (ug/Kg)												
Hexachlorobenzene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Hexachlorobutadiene	170 U	140 U	190 U	170 U	160 U	150 U	170 U	160 U	120 U	150 U	140 U	170 U
Hexachlorocyclopentadiene	420 U	350 U	480 U	420 U	390 U	370 U	420 U	390 U	300 U	370 U	340 U	420 U
Hexachloroethane	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Indeno(1,2,3-cd)pyrene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	160 J	60 U	150 J	95 J	100 J
Isophorone	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
n-Nitrosodiphenylamine	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
n-Nitrosodipropylamine	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Nitrobenzene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	78 U	60 U	74 U	68 U	83 U
Phenanthrene	83 U	69 U	95 U	83 U	78 U	74 U	83 U	190 J	60 U	160 J	76 J	83 U
Pyrene	83 U	88 J	95 U	83 U	92 J	74 U	90 J	300 J	61 J	240 J	120 J	180 J
Total TICs	172800	163300	113440	75390	146700	130100	168000	188000	100500	176300	100700	111000

302938

Table 4-35. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-228	LTC-228	LTC-229	LTC-229	LTC-231	LTC-231	LTC-234	LTC-234	LTC-237	LTC-237
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/27/00	6/27/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00
Parameter (ug/Kg)										
1,2,4-Trichlorobenzene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
1,2-Dichlorobenzene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
1,3-Dichlorobenzene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
1,4-Dichlorobenzene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
2,2'-Oxybis(1-chloropropane)	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
2,4-Dinitrotoluene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
2,6-Dinitrotoluene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
2-Chloronapthalene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
2-Methylnapthalene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
2-Nitroaniline	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
3,3'-Dichlorobenzidine	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
3-Nitroaniline	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
4-Bromophenyl phenyl ether	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
4-Chloroaniline	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
4-Chlorophenyl phenyl ether	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
4-Nitroaniline	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Acenaphthene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Acenaphthylene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Anthracene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Benzo(a)anthracene	590 U	2600 U	720 U	140 J	67 U	140 J	78 U	83 U	76 U	69 U
Benzo(a)pyrene	6000	4000 J	720 U	150 J	67 U	160 J	78 U	83 U	76 U	69 U
Benzo(b)fluoranthene	590 U	2600 U	720 U	240 J	82 J	250 J	78 U	110 J	120 J	69 U
Benzo(g,h,i)perylene	2900 J	3000 J	1100 J	190 J	67 U	140 J	78 U	90 J	76 U	69 U
Benzo(k)fluoranthene	4100 J	2600 U	720 U	88 J	67 U	87 J	78 U	83 U	76 U	69 U
bis(2-Chloroethoxy)methane	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
bis(2-Chloroethyl)ether	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
bis(2-Ethylhexyl)phthalate	47000	41000	14000	170 U	130 U	160 U	440 J	210 J	150 U	170 J
Butyl benzyl phthalate	24000	12000 J	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Carbazole	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Chrysene	11000	6600 J	3600 J	280 J	75 J	190 J	78 U	100 J	77 J	69 U
Di-n-butyl phthalate	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Di-n-octyl phthalate	6100	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Dibenz(a,h)anthracene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Dibenzofuran	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Diethyl phthalate	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Dimethyl phthalate	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Fluoranthene	590 U	2600 U	720 U	250 J	95 J	310 J	78 U	130 J	140 J	75 J
Fluorene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U

302939

Table 4-35. Summary of Semi-Volatile Organic Compound Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-228	LTC-228	LTC-229	LTC-229	LTC-231	LTC-231	LTC-234	LTC-234	LTC-237	LTC-237
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/27/00	6/27/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00
Parameter (ug/Kg)										
Hexachlorobenzene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Hexachlorobutadiene	1200 U	5300 U	1400 U	170 U	130 U	160 U	160 U	170 U	150 U	140 U
Hexachlorocyclopentadiene	2900 U	13000 U	3600 U	420 U	330 U	400 U	390 U	420 U	380 U	350 U
Hexachloroethane	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Indeno(1,2,3-cd)pyrene	1000 J	2600 U	780 J	130 J	67 U	160 J	78 U	83 U	76 U	69 U
Isophorone	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
n-Nitrosodiphenylamine	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
n-Nitrosodipropylamine	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Nitrobenzene	590 U	2600 U	720 U	83 U	67 U	79 U	78 U	83 U	76 U	69 U
Phenanthrene	590 U	2600 U	720 U	190 J	67 U	190 J	78 U	84 J	76 U	69 U
Pyrene	8700	4400 J	3400 J	360 J	97 J	280 J	78 U	130 J	140 J	70 J
Total TICs	640000	1796000	759000	96400	107400	127400	83900	136700	109800	77400

302940

Table 4-36. Summary of Polychlorinated Biphenyl Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID Sample Depth [1] Sample Date Parameter (ug/Kg)	LTC-202 0-1" 6/27/00	LTC-202 0-6" 6/27/00	LTC-205 0-1" 6/26/00	LTC-205 0-6" 6/26/00	LTC-207 0-1" 6/26/00	LTC-207 0-6" 6/26/00	LTC-209 0-1" 6/27/00	LTC-209 0-6" 6/27/00	LTC-210 0-1" 6/27/00	LTC-210 0-6" 6/27/00	LTC-211 0-1" 6/26/00	LTC-211 0-6" 6/26/00
Aroclor-1016	370 U	130 U	280 U	120 U	510 U	2100 U	370 U	180 U	240 U	100 U	370 U	370 U
Aroclor-1221	870 U	180 U	390 U	170 U	720 U	2900 U	520 U	260 U	560 U	240 U	870 U	870 U
Aroclor-1232	370 U	270 U	580 U	250 U	1100 U	4300 U	770 U	380 U	240 U	100 U	370 U	370 U
Aroclor-1242	370 U	130 U	280 U	120 U	510 U	2100 U	370 U	180 U	240 U	100 U	370 U	370 U
Aroclor-1248	370 U	440 J	410 J	3500 P	25000 P	140000	400 U	200 U	240 U	100 U	370 U	370 U
Aroclor-1254	3300	5700	8300	9900	30000	130000	17000	4400	1800	1300	370 U	370 U
Aroclor-1260	4300	6800	10000 P	6500	28000	120000	15000 P	3200	1200	760	370 U	370 U

302941

Table 4-36. Summary of Polychlorinated Biphenyl Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-212	LTC-212	LTC-214	LTC-214	LTC-216	LTC-216	LTC-218	LTC-218	LTC-219	LTC-219	LTC-227	LTC-227
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/28/00	6/28/00	6/28/00	6/28/00	6/27/00	6/27/00
Parameter (ug/Kg)												
Aroclor-1016	17 U	14 U	47 U	41 U	21 U	19 U	22 U	21 U	240 U	190 U	180 U	170 U
Aroclor-1221	24 U	20 U	67 U	59 U	29 U	28 U	31 U	29 U	560 U	460 U	420 U	390 U
Aroclor-1232	35 U	29 U	99 U	86 U	43 U	41 U	46 U	43 U	240 U	190 U	180 U	170 U
Aroclor-1242	17 U	14 U	47 U	41 U	21 U	19 U	22 U	21 U	240 U	190 U	180 U	170 U
Aroclor-1248	18 U	15 U	51 U	45 U	23 U	21 U	24 U	23 U	240 U	190 U	180 U	170 U
Aroclor-1254	33 J	47 JP	47 U	60 JP	21 U	26 J	120 P	160 P	240 U	190 U	10000	5700
Aroclor-1260	32 J	51 J	70 J	61 J	26 J	33 J	130	180	380 J	190 U	12000	5600

302942

Table 4-36. Summary of Polychlorinated Biphenyl Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-228	LTC-228	LTC-229	LTC-229	LTC-231	LTC-231	LTC-234	LTC-234	LTC-237	LTC-237
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/27/00	6/27/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00
Parameter (ug/Kg)										
Aroclor-1016	1900 U	2200 U	720 U	83 U	13 U	16 U	210 U	170 U	300 U	280 U
Aroclor-1221	2800 U	3100 U	1000 U	120 U	19 U	22 U	490 U	390 U	710 U	650 U
Aroclor-1232	4100 U	4500 U	1500 U	170 U	28 U	33 U	210 U	170 U	300 U	280 U
Aroclor-1242	1900 U	2200 U	720 U	83 U	13 U	16 U	210 U	170 U	300 U	280 U
Aroclor-1248	52000	50000	34000 P	90 U	14 U	17 U	210 U	170 U	300 U	280 U
Aroclor-1254	58000	46000	39000	1700	150 P	180 P	210 U	170 U	1000 J	1300 J
Aroclor-1260	58000	43000	44000	3300	200 P	240	210 U	170 U	1600 P	1300 J

302943

Table 4-37. Summary of Pesticide Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-202	LTC-210	LTC-210	LTC-211	LTC-211	LTC-219	LTC-219	LTC-227	LTC-227	LTC-234	LTC-234	LTC-237	LTC-237
Sample Depth [1]	0-1"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/27/00	6/26/00	6/26/00	6/28/00	6/28/00	6/27/00	6/27/00	6/28/00	6/28/00	6/28/00	6/28/00
Parameter (ug/Kg)													
4,4'-DDD	14 U	9.3 U	4.1 U	14 U	14 U	9.3 U	39 J	7.0 U	6.5 U	26 J	130 P	29 JP	200
4,4'-DDE	74 U	59 U	44 U	14 U	14 U	47 J	44	410 U	240 U	30 J	72 P	61 P	90
4,4'-DDT	500 U	9.3 U	4.1 U	23 J	18 J	40 J	18 JP	7.0 U	6.5 U	18 J	20 JP	140	150
Aldrin	7.4 U	4.8 U	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	3.4 U	4.2 U	3.4 U	6.1 U	5.6 U
Alpha BHC	7.4 U	4.8 U	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	3.4 U	4.2 U	3.4 U	6.1 U	5.6 U
Alpha Chlordane	7.4 U	24 U	10 U	7.4 U	7.4 U	11 J	3.9 U	18 U	17 U	4.2 U	3.4 U	6.1 U	5.6 U
Beta BHC	7.4 U	7.4 JP	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	5.5 JP	5.9 JP	5.5 JP	5.1 JP	7.4 JP	5.6 U
Delta BHC	7.4 U	4.8 U	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	3.4 U	4.2 U	3.4 U	6.1 U	5.6 U
Dieldrin	74 U	9.3 U	4.1 U	14 U	14 U	16 J	7.6 U	110 U	58 U	8.1 U	11 JP	12 U	11 U
Endosulfan I	7.4 U	4.8 U	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	3.4 U	4.2 U	3.4 U	6.1 U	5.6 U
Endosulfan II	14 U	48 U	21 U	14 U	14 U	9.3 U	7.6 U	62 U	34 U	8.1 U	6.5 U	12 U	11 U
Endosulfan sulfate	14 U	48 U	4.1 U	40 JP	23 JP	14 JP	7.8 JP	36 U	6.5 U	8.1 U	6.5 U	12 U	11 U
Endrin	14 U	48 U	21 U	14 U	14 U	9.3 U	7.6 U	200 U	95 U	8.1 U	6.5 U	12 U	11 U
Endrin aldehyde	14 U	48 U	22 U	14 U	14 U	9.3 U	7.6 U	350 U	160 U	8.1 U	6.5 U	12 U	11 U
Endrin ketone	14 U	9.3 U	4.1 U	14 U	14 U	9.3 U	7.6 U	7.0 U	6.5 U	8.1 U	6.5 U	12 U	11 U
Gamma BHC - Lindane	7.4 U	4.8 U	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	3.4 U	4.2 U	3.4 U	6.1 U	5.6 U
Gamma Chlordane	7.4 U	4.8 U	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	3.4 U	4.2 U	3.4 U	6.1 U	5.6 U
Heptachlor	7.4 U	4.8 U	2.1 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	3.4 U	4.2 U	3.4 U	6.1 U	5.6 U
Heptachlor epoxide	37 U	24 U	10 U	7.4 U	7.4 U	4.8 U	3.9 U	3.6 U	30 U	4.2 U	3.4 U	6.1 U	6.9 JP
Methoxychlor	74 U	48 U	21 U	74 U	74 U	48 U	39 U	36 U	34 U	42 U	34 U	61 U	56 U
Toxaphene	740 U	480 U	210 U	740 U	740 U	480 U	390 U	360 U	340 U	420 U	340 U	610 U	560 U

302944

Table 4-38. Summary of Target Analyte List Metals Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-202	LTC-202	LTC-205	LTC-205	LTC-207	LTC-207	LTC-209	LTC-209	LTC-210	LTC-210	LTC-211	LTC-211
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/26/00	6/26/00	6/26/00	6/26/00	6/27/00	6/27/00	6/27/00	6/27/00	6/26/00	6/26/00
Parameter (mg/Kg)												
Aluminum	19800 *	18000 *	9770 *	13900 *	8570 *	8260 *	13300 *	10500 *	5630 *	14800 *	6470 *	5780 *
Antimony	24.5 U	16.3 U	19.3 U	7.6 U	16.9 U	12.9 U	23.8 U	24.0 U	15.0 U	6.7 U	24.0 U	23.5 U
Arsenic	23.7	25.2	34.7	15.4	48.6	32.6	15.3	18.2	13.7	7.9	23.4	18.1
Barium	374	398	336	252	422	1580	302	297	246	183	165	135
Beryllium	2.0 U	1.3 U	1.6 U	1.1 B	1.4 U	1.1 U	1.9 U	2.0 U	1.2 U	0.97 B	2.0 U	1.9 U
Cadmium	2.5 U	3.5 B	1.9 U	2.1 B	2.0 B	3.8 B	2.7 B	4.5 B	1.5 U	0.67 U	2.4 U	2.4 U
Calcium	9050	6890	8520	3230	4980	2800 E	9620	10700	10000 E	2940 E	7840	6530
Chromium	140	215	102	298	88.3	380	159	138	18.7 B	42.2	18.8 B	15.2 B
Cobalt	6.4 B	6.9 B	4.5 B	6.7 B	6.1 B	3.7 B	4.9 U	5.1 B	4.0 B	3.5 B	4.9 U	4.8 U
Copper	42.6 B	48.8	39.9	36.2	37.8	80.2	60.3	56.2	32.2	30.6	40.1 B	30.0 B
Iron	38600	29200	26400	19500	52800	34100	14900	12900	14800	14100	23300	19800
Lead	404	590	566	512	1010	4060	542	368	152 *	131 *	173	131
Magnesium	2590	2210	2020	1660	1270	961	2490	2510	1950	1840	1510	1250
Manganese	140	140	143	85.7	161	80.4	155	172	134	59.6	89.8	71.0
Mercury	0.59 B	0.63 B	0.25 B	0.28 B	0.42 B	0.88	1.6	0.62 B	0.29 B	0.22 B	0.11 B	0.10 B
Nickel	29.8 B	32.2 B	22.5 B	24.6	18.6 B	20.5 B	30.2 B	32.5 B	20.5 B	13.9 B	21.0 B	15.6 B
Potassium	2050 *	1690 *	1120 *	1610 *	750 *	698 *	1150 *	847 *	751	1780	843 *	745 *
Selenium	4.6 U	3.0 U	5.8 B	1.4 U	5.9 B	4.7 B	4.4 U	4.5 U	2.8 U	2.2 B	4.5 U	4.4 U
Silver	3.5 U	2.3 U	2.7 U	1.1 U	2.4 U	1.8 U	3.3 U	3.4 U	2.1 U	0.94 U	3.4 U	3.3 U
Sodium	550 B	521 B	492 B	270 B	393 B	319 B	627 B	600 B	463 B	210 B	1380	1240
Thallium	9.2 U	6.2 U	7.3 U	2.9 U	6.4 U	4.9 U	9.0 U	9.1 U	5.6 U	2.5 U	9.1 U	8.9 U
Vanadium	127	138	134	113	140	141	106	87.2	70.0	73.4	58.8	46.8
Zinc	178	284	107	300	112	152	224	464	168	83.6	140	92.3 B

302945

Table 4-38. Summary of Target Analyte List Metals Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-212	LTC-212	LTC-214	LTC-214	LTC-216	LTC-216	LTC-218	LTC-218	LTC-219	LTC-219	LTC-227	LTC-227
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/26/00	6/28/00	6/28/00	6/28/00	6/28/00	6/27/00	6/27/00
Parameter (mg/Kg)												
Aluminum	9790 *	10600 *	13200 *	10100 *	21200 *	26300 *	24700 *	59000 *	14000 *	67800 *	26800 *	26800 *
Antimony	10.6 U	9.1 U	32.5 U	28.6 U	13.2 U	13.0 U	14.4 U	13.0 U	15.6 U	12.8 U	5.9 U	5.5 U
Arsenic	25.6	10.6	18.5	21.8	41.1	43.8	10.4	18.5	9.3	16.7	8.3	8.8
Barium	240	167	312	272	369	375	348	725	303	582	627	225
Beryllium	1.2 B	1.0 B	2.7 U	2.3 U	1.9 B	2.2 B	1.2 U	3.0	1.3 U	3.3	1.3 B	1.5
Cadmium	1.1 U	0.91 U	3.3 U	2.9 U	1.7 B	1.8 B	1.4 U	1.3 U	1.6 U	1.3 U	0.59 U	0.55 U
Calcium	7980	6500	14200	11500	5470	5080	8750 E	10000 E	13200 E	9190 E	3460 E	3400 E
Chromium	17.3 B	18.1	21.5 B	16.7 B	30.4	35.2	35.5	119	21.1 B	101	72.4	53.8
Cobalt	9.5 B	5.5 B	11.9 B	14.7 B	50.4	50.9	5.7 B	18.7 B	5.1 B	13.0 B	5.1 B	5.9 B
Copper	52.8	32.0	37.7 B	31.4 B	31.4	33.5	54.1	55.9	40.8	90.7	42.4	28.5
Iron	26200	25200	21000	18900	71100	56300	13800	50800	11000	32200	19700	24800
Lead	87.5	95.0	114	102	79.9	97.7	233 *	182 *	132 *	288 *	1250 *	99.8 *
Magnesium	1830	1770	3100	2630	2320	2720	3230	12900	2930	7450	2740	3650
Manganese	576	208	206	241	1200	1050	116	381	137	208	82.9	110
Mercury	0.18 B	0.32 B	0.20 B	0.13 B	0.19 B	0.22 B	0.38 B	0.51 B	0.31 B	0.93	0.29	0.17 B
Nickel	23.0 B	19.9 B	36.6 B	38.2 B	50.1	58.8	35.9	64.0	28.8 B	54.4	21.0	19.7
Potassium	644 *	794 *	1260 *	833 *	1840 *	2190 *	2470	6000	1530	6950	3120	3220
Selenium	2.0 U	1.7 U	6.1 U	5.3 U	3.1 B	2.4 U	5.9 B	5.9 B	3.9 B	6.1	1.1 U	1.0 U
Silver	1.5 U	1.3 U	4.6 U	4.0 U	1.9 U	1.8 U	2.0 U	1.8 U	2.2 U	1.8 U	0.84 U	0.77 U
Sodium	1660	278 B	800 B	511 B	350 B	367 B	409 B	679	459 B	550 B	139 B	139 B
Thallium	4.0 U	3.4 U	12.3 U	10.8 U	5.0 U	4.9 U	5.4 U	4.9 U	5.9 U	4.8 U	2.2 U	2.6 B
Vanadium	38.3	34.9	64.2	57.5	64.7	80.0	93.7	157	68.7	147	111	107
Zinc	16000	595	170	157	297	301	146	266	140	253	91.0	88.9

302946

Table 4-38. Summary of Target Analyte List Metals Results for Round 1 Confirmatory Sediment Samples from Little Timber Creek Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-228	LTC-228	LTC-229	LTC-229	LTC-231	LTC-231	LTC-234	LTC-234	LTC-237	LTC-237
Sample Depth [1]	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"	0-1"	0-6"
Sample Date	6/27/00	6/27/00	6/27/00	6/27/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00	6/28/00
Parameter (mg/Kg)										
Aluminum	6390 *	2340 *	8540 *	25900 *	27500 *	42100 *	24800 *	30600 *	10900 *	34500 *
Antimony	12.9 U	5.5 U	4.7 U	10.4 U	8.5 U	10.2 U	13.4 U	10.5 U	18.9 U	17.9 U
Arsenic	16.0	6.5	4.4	10.2	15.2	14.9	16.2	11.1	11.8	39.3
Barium	2890	1080	706	366	268	385	368	304	285	435
Beryllium	1.1 U	0.45 U	0.49 B	1.3 B	1.4 B	2.0 B	1.9 B	1.6 B	1.5 U	1.5 U
Cadmium	13.2	3.5 B	1.7 B	1.0 U	0.92 B	1.0 U	1.3 U	1.0 U	1.9 U	8.2 B
Calcium	5650	2490	2980 E	6440 E	8510 E	7780 E	8670 E	6060 E	12200 E	6930 E
Chromium	519	186	63.8	51.0	35.3	57.9	40.0	43.5	22.8 B	289
Cobalt	3.7 B	1.6 B	2.0 B	5.5 B	6.3 B	9.5 B	7.6 B	6.7 B	4.0 B	30.3 B
Copper	153	57.2	39.1	32.6	44.1	66.4	47.0	44.1	39.0	76.9
Iron	7500	2640	5060	15600	16100	24000	20600	18100	9190	29800
Lead	14200	6360	2260 *	385 *	187 *	243 *	190 *	172 *	126 *	314 *
Magnesium	1480	580	1190	3710	3300	5360	3300	3530	2710	4070
Manganese	79.8	32.5	44.4	121	146	191	181	134	213	168
Mercury	1.2	0.31	0.44	0.40 B	0.38 B	0.74	0.18 B	0.43 B	0.12 B	0.49 B
Nickel	29.3	12.9	13.6	24.4	32.3	43.5	33.8	31.6	21.7 B	56.4
Potassium	602 *	192 *	716	2190	2640	3910	2240	2940	1110	3830
Selenium	2.4 U	1.0 U	1.7 B	2.2 B	3.9	1.9 U	4.5 B	2.8 B	3.5 U	5.7 B
Silver	3.2 B	1.1 B	0.66 U	1.5 U	1.2 U	1.4 U	1.9 U	1.5 U	2.7 U	2.5 U
Sodium	413 B	104 B	103 B	192 B	377 B	385 B	441 B	289 B	505 B	396 B
Thallium	4.9 U	2.1 U	1.8 U	3.9 U	3.2 U	3.9 U	5.1 U	4.0 U	7.1 U	6.7 U
Vanadium	132	56.3	50.1	56.1	89.4	100	92.2	99.0	53.2	135
Zinc	500	346	115	109	138	185	151	138	65.2 B	355

302947

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	CS-401	CS-402	CS-403	CS-6	CS-83
Sample Date	12/7/00	12/6/00	12/7/00	12/11/00	12/6/00
Sample ID	CS-401/0-0.5/SED/R2C	CS-402/SED/0-0.5/R2C	CS-403/0-0.5/SED/R2C	CS-6/0-0.5/SED/R2C	CS-83/SED/0-0.5/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)					
Aroclor-1016	110 U	10 U	19 UJ	83 UJ	11 U
Aroclor-1221	160 U	14 U	28 UJ	120 UJ	16 U
Aroclor-1232	230 U	21 U	41 UJ	170 UJ	24 U
Aroclor-1242	110 U	10 U	19 UJ	83 UJ	11 U
Aroclor-1248	120 U	170	21 UJ	940 J	150
Aroclor-1254	2200	190 P	430 J	83 UJ	120 P
Aroclor-1260	1700 P	220	590 J	1200 J	130
Total PCBs	3900 P	580 P	1020 J	2140 J	400 P
METALS (mg/kg)					
Cadmium	2.0 B	4.8 B	1.4 BJ	1.1 UJ	3.8 B
Chromium	67.4	132	27.3 J	53.6 J	62.5
Cobalt	4.3 B	22.4	3.1 BJ	6.9 BJ	15.0 B
Copper	46.2	105	27.8 J	20.5 J	60.9
Lead	237	177	103 J	72.1 J	85.1
Mercury	0.64 B	0.64	0.32 BJ	0.14 BJ	0.34
Nickel	27.3 B	49.4	19.2 BJ	16.3 BJ	29.6
Vanadium	74.9	86.8	30.9 *J	51.5 J	50.4
Zinc	215	568	114 J	138 J	422
GENERAL CHEMISTRY (mg/kg)					
TOC Solids/Sludges Combustion	277000.	NS	NS	NS	NS
Total Organic Carbon	NS	26000.	114000 J	24000 J	28000.
Total Organic Carbon (L/K)	NS	280000	535000	353000	69000

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and confirmation columns > 25%
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control limits
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302948

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-100	LTC-102	LTC-204	LTC-207	LTC-208	LTC-208
Sample Date	12/13/00	12/13/00	12/7/00	12/11/00	12/11/00	12/11/00
Sample ID	LTC-100/0-.5/SED/R2C	LTC-102/0-.5/SED/R2C	LTC-204/0-.5/SED/R2C	LTC-207/2-2.5/SEDR2C	LTC-208/0-.5/SED/R2C	LTC-208/2-2.5SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	NS	NS	130 UJ	17 UJ	80 UJ	83 UJ
Aroclor-1221	NS	NS	180 UJ	24 UJ	110 UJ	120 UJ
Aroclor-1232	NS	NS	270 UJ	35 UJ	170 UJ	170 UJ
Aroclor-1242	NS	NS	130 UJ	17 UJ	80 UJ	83 UJ
Aroclor-1248	NS	NS	140 UJ	730 J	2300 J	700 J
Aroclor-1254	NS	NS	5500 J	17 UJ	80 UJ	83 UJ
Aroclor-1260	NS	NS	6100 J	710 J	3500 J	1400 J
Total PCBs	NS	NS	11600 J	1440 J	5800 J	2100 J
METALS (mg/kg)						
Cadmium	NS	NS	2.1 BJ	NS	NS	NS
Chromium	NS	NS	80.2 J	NS	NS	NS
Cobalt	NS	NS	5.3 BJ	NS	NS	NS
Copper	NS	NS	27.6 BJ	NS	NS	NS
Lead	NS	NS	357 J	NS	NS	NS
Mercury	0.15 BNJ	0.17 BNJ	0.25 BJ	NS	NS	NS
Nickel	NS	NS	22.4 BJ	NS	NS	NS
Vanadium	NS	NS	74.4 *J	NS	NS	NS
Zinc	NS	NS	144 J	NS	NS	NS
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	43400 J	NS
Total Organic Carbon	NS	NS	48000 J	34000 J	NS	30000 J
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302949

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-215	LTC-221	LTC-222	LTC-30	LTC-301	LTC-302
Sample Date	12/13/00	12/7/00	12/6/00	12/12/00	12/11/00	12/8/00
Sample ID	LTC-215/0-.5/SED/R2C	LTC-221/0-.5/SED/R2C	LTC-222/SED/0-.5/R2C	LTC-30/2-2.5/SED/R2C	LTC-301/0-.5/SED/R2C	LTC-302/0-.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	NS	4.2 U	7. U	180 UJ	21 UJ	18 UJ
Aroclor-1221	NS	6. U	10 U	260 UJ	29 UJ	26 UJ
Aroclor-1232	NS	8.8 U	15 U	380 UJ	43 UJ	38 UJ
Aroclor-1242	NS	4.2 U	7. U	180 UJ	21 UJ	18 UJ
Aroclor-1248	NS	74 P	70	5100 J	23 UJ	270 J
Aroclor-1254	NS	4.2 U	310	180 UJ	21 UJ	1100 J
Aroclor-1260	NS	83	340	8200 J	480 J	1000 J
Total PCBs	NS	157 P	720	13300 J	480 J	2370 J
METALS (mg/kg)						
Cadmium	NS	0.28 U	0.74 B	1.4 BJ	1.4 UJ	8.2 BJ
Chromium	NS	5.7	26.3	47.0 J	24.1 J	504 J
Cobalt	NS	1.5 B	3.9 B	5.6 BJ	5.2 BJ	5.8 BJ
Copper	NS	4.6 B	12.6	35.8 J	33.6 J	36.2 J
Lead	NS	9.0	176	649 J	141 J	301 J
Mercury	0.15 BNJ	0.18	0.047 B	0.31 BNJ	0.19 BNJ	0.45 BJ
Nickel	NS	2.9 B	8.2 B	26.2 BJ	23.8 BJ	29.9 J
Vanadium	NS	7.1	29.0	58.4 J	52.7 J	77.6 J
Zinc	NS	11.6 B	67.2	165 J	90.3 J	471 J
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	NS	378000 J
Total Organic Carbon	NS	1300 U	10600 J	87000 J	35000 J	NS
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302950

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-303	LTC-304	LTC-305	LTC-306	LTC-307	LTC-308
Sample Date	12/12/00	12/12/00	12/8/00	12/12/00	12/11/00	12/11/00
Sample ID	LTC-303/2-2.5SED/R2C	LTC-304/0-.5/SED/R2C	LTC-305/0-.5/SED/R2C	LTC-306/0-.5SEDR2C	LTC-307/0-.5/SED/R2C	LTC-308/0-.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	2400 UJ	610 UJ	3.9 U	19 UJ	15 UJ	4.9 U
Aroclor-1221	3500 UJ	870 UJ	5.6 U	28 UJ	21 UJ	6.9 U
Aroclor-1232	5100 UJ	1300 UJ	8.2 U	41 UJ	31 UJ	10 U
Aroclor-1242	2400 UJ	610 UJ	3.9 U	19 UJ	15 UJ	4.9 U
Aroclor-1248	67000 PJ	36000 J	4.3 U	21 UJ	16 UJ	5.3 U
Aroclor-1254	2400 UJ	610 UJ	25	19 UJ	15 UJ	4.9 U
Aroclor-1260	62000 J	35000 J	46	340 J	140 J	4.9 U
Total PCBs	129000 PJ	71000 J	71	340 J	140 J	ND
METALS (mg/kg)						
Cadmium	1.8 BJ	1.7 BJ	0.43 B	1.3 UJ	1.0 UJ	0.32 U
Chromium	162 J	137 J	14.1	46.4 J	45.0 J	7.4
Cobalt	1.7 BJ	2.5 BJ	2.4 B	8.9 BJ	8.1 BJ	0.78 B
Copper	30.4 J	56.4 J	9.0	40.5 J	52.9 J	11.1
Lead	3300 J	2340 J	134	153 J	184 J	99.0
Mercury	0.40 NJ	0.43 NJ	0.079 B	0.40 BNJ	0.42 BNJ	0.15 N
Nickel	12.3 BJ	20.2 J	6.9	33.7 J	41.0 J	3.9 B
Vanadium	49.2 J	81.6 J	16.8	83.6 J	82.7 J	27.2
Zinc	132 J	155 J	74.2	179 J	165 J	19.2
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	5500	NS	NS	NS
Total Organic Carbon	41900 J	35200	NS	104000 J	45000 J	31300
Total Organic Carbon (L/K)	NS	NS	NS	69000	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302951

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-309	LTC-309	LTC-31	LTC-310	LTC-311	LTC-312
Sample Date	12/12/00	12/13/00	12/11/00	12/11/00	12/7/00	12/8/00
Sample ID	LTC-309/0-.5/SED/R2C	LTC-309/0-.5SEDR2C	LTC-31/2-2.5/SED/R2C	LTC-310/0-.5/SED/R2C	LTC-311/0-.5/SED/R2C	LTC-312/0-.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	7.2 UJ	5.2 UJ	30 UJ	17 UJ	17 U	6.7 UJ
Aroclor-1221	10 UJ	7.5 UJ	43 UJ	24 UJ	24 U	9.6 UJ
Aroclor-1232	15 UJ	11 UJ	63 UJ	35 UJ	35 U	14 UJ
Aroclor-1242	7.2 UJ	5.2 UJ	30 UJ	17 UJ	17 U	6.7 UJ
Aroclor-1248	7.8 UJ	5.7 UJ	33 UJ	18 UJ	18 U	7.3 UJ
Aroclor-1254	7.2 UJ	5.2 UJ	30 UJ	17 UJ	17 U	17 J
Aroclor-1260	44 J	7.7 J	30 UJ	140 J	94 P	39 PJ
Total PCBs	44 J	7.7 J	ND	140 J	94 P	56 JP
METALS (mg/kg)						
Cadmium	0.80 BJ	0.35 UJ	2.0 UJ	1.1 UJ	1.1 U	0.71 BJ
Chromium	21.9 J	10.1 J	12.6 BJ	28.9 J	32.0	36.5 J
Cobalt	5.4 BJ	2.0 BJ	4.8 BJ	6.6 BJ	4.9 B	3.8 BJ
Copper	19.1 J	5.9 BJ	24.3 BJ	58.6 J	33.7	22.6 J
Lead	88.0 *J	23.4 *J	114 J	256 J	139	62.7 J
Mercury	0.25 NJ	0.067 BNJ	0.23 BNJ	0.61 NJ	0.44 B	0.14 BJ
Nickel	18.1 J	7.3 BJ	21.6 BJ	28.2 J	22.6 B	15.4 J
Vanadium	40.6 J	16.5 J	41.2 J	52.5 J	58.2	76.1 J
Zinc	83.9 J	33.6 J	175 J	143 J	99.4	69.3 J
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	159000.	26400 J
Total Organic Carbon	41100 J	5200 J	31000 J	66000 J	NS	NS
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302952

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-313	LTC-314	LTC-315	LTC-316	LTC-317	LTC-318
Sample Date	12/8/00	12/8/00	12/7/00	12/8/00	12/7/00	12/7/00
Sample ID	LTC-313/0-.5/SED/R2C	LTC-314/0-.5/SED/R2C	LTC-315/0-.5/SED/R2C	LTC-316/0-.5/SED/R2C	LTC-317/0-.5/SED/R2C	LTC-318/0-.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	21 UJ	8. UJ	10 UJ	12 U	5.8 U	5.6 U
Aroclor-1221	29 UJ	11 UJ	14 UJ	17 U	8.2 U	8. U
Aroclor-1232	43 UJ	17 UJ	21 UJ	25 U	12 U	12 U
Aroclor-1242	21 UJ	8. UJ	10 UJ	12 U	5.8 U	5.6 U
Aroclor-1248	23 UJ	28 JP	11 UJ	17 J	6.3 U	6.1 U
Aroclor-1254	45 J	97 PJ	37 J	25 J	5.8 U	5.6 U
Aroclor-1260	31 JP	73 J	90 J	27 J	96	13 J
Total PCBs	76 JP	198 JP	127 J	69 J	96	13 J
METALS (mg/kg)						
Cadmium	1.4 UJ	0.92 BJ	0.66 UJ	0.77 U	0.38 U	0.37 U
Chromium	27.1 J	22.6 J	30.9 J	61.7	16.6	38.3
Cobalt	4.4 BJ	2.9 BJ	3.2 BJ	8.1 B	1.4 B	3.3 B
Copper	47.4 J	38.0 J	20.4 J	31.5	9.8	24.5
Lead	202 J	163 J	76.0 J	102	87.9	34.8
Mercury	0.59 BJ	0.52 J	0.23 BJ	0.38	0.10 B	0.047 B
Nickel	22.7 BJ	16.4 J	15.8 J	27.5	5.8 B	9.4
Vanadium	73.9 *J	59.3 *J	60.5 *J	76.8 *	23.1	77.5
Zinc	103 J	49.8 J	52.8 J	121	33.1	38.3
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	NS	18300.
Total Organic Carbon	46000 J	79400 J	25100 J	25600.	14300.	NS
Total Organic Carbon (L/K)	NS	NS	NS	NS	386000	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302953

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-319	LTC-320	LTC-321	LTC-322	LTC-323	LTC-324
Sample Date	12/8/00	12/8/00	12/11/00	12/11/00	12/11/00	12/11/00
Sample ID	LTC-319/0-.5/SED/R2C	LTC-320/0-.5/SED/R2C	LTC-321/0-.5/SED/R2C	LTC-322/0-.5/SED/R2C	LTC-323/0-.5/SED/R2C	LTC-324/0-.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	66 U	7.5 UJ	3.7 U	73 UJ	28 U	77 UJ
Aroclor-1221	94 U	11 U	5.3 U	100 U	41 U	110 UJ
Aroclor-1232	140 U	16 U	7.8 U	150 U	59 U	160 UJ
Aroclor-1242	66 U	7.5 U	3.7 U	73 U	28 U	77 UJ
Aroclor-1248	2600	20 JP	4. U	680 JP	250 P	880 JP
Aroclor-1254	2800	86 JP	3.7 U	73 UJ	28 U	77 UJ
Aroclor-1260	3200 P	84 JP	3.7 U	2300 J	490	1500 J
Total PCBs	8600 P	190 JP	ND	2980 JP	740 P	2380 J
METALS (mg/kg)						
Cadmium	2.9 B	0.92 BJ	0.86 B	0.61 BJ	0.38 U	0.49 UJ
Chromium	107	55.1 J	8.5	42.0 J	36.3	53.5 J
Cobalt	5.6 B	6.1 BJ	2.8 B	3.2 BJ	2.9 B	4.6 BJ
Copper	27.4	30.8 J	4.9	14.9 J	21.7	19.8 J
Lead	215	75.4 J	8.6	119 J	106	45.2 J
Mercury	0.15 B	0.23 J	0.0073 B	0.20 BJ	0.14 B	0.092 BJ
Nickel	18.8	20.9 J	16.6	13.2 J	11.2	15.5 J
Vanadium	107	117 J	11.3	51.4 J	69.3	77.4 J
Zinc	127	94.6 J	36.6	71.1 J	56.2	84.7 J
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	151000.	86100 J	5150	89100 J	91200	43800 J
Total Organic Carbon	NS	NS	NS	NS	NS	NS
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302954

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-325	LTC-326	LTC-327	LTC-328	LTC-329	LTC-330
Sample Date	12/11/00	12/11/00	12/7/00	12/7/00	12/7/00	12/7/00
Sample ID	LTC-325/0-.5/SED/R2C	LTC-326/0-.5/SED/R2C	LTC-327/0-.5/SED/R2C	LTC-328/0-.5/SED/R2C	LTC-329/0-.5/SED/R2C	LTC-330/0-.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	41 UJ	31 U	17 UJ	33 U	24 UJ	14 UJ
Aroclor-1221	59 UJ	44 U	24 UJ	47 U	34 UJ	20 UJ
Aroclor-1232	86 UJ	65 U	35 UJ	69 U	49 UJ	30 UJ
Aroclor-1242	41 UJ	31 U	17 UJ	33 U	24 UJ	14 UJ
Aroclor-1248	780 J	150 JP	18 UJ	36 U	26 UJ	16 UJ
Aroclor-1254	41 UJ	31 U	850 JP	670	83 JP	30 J
Aroclor-1260	1800 J	420	610 J	670	120 J	61 J
Total PCBs	2580 J	570	1460 J	1340	203 JP	91 J
METALS (mg/kg)						
Cadmium	0.54 UJ	0.40 U	1.1 UJ	2.6 B	1.7 BJ	0.92 U
Chromium	44.0 J	43.3	20.8 J	117	27.7 J	21.9
Cobalt	2.6 BJ	4.5 B	2.4 BJ	11.9 B	6.1 BJ	3.4 B
Copper	17.3 J	22.9	19.7 BJ	67.6	35.5 J	27.0
Lead	57.3 J	42.7	95.9 J	333	202 J	121
Mercury	0.090 BJ	0.097 B	0.28 BJ	1.0 B	0.52 BJ	0.51
Nickel	10.1 BJ	14.5	13.8 BJ	47.8 B	22.3 BJ	16.3 B
Vanadium	75.1 J	86.5	35.9 *J	199 *	55.7 *J	50.5 *
Zinc	48.9 J	104	105 J	252	173 J	71.3
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	52600 J	22600	NS	NS	NS	NS
Total Organic Carbon	NS	NS	23000 J	50000.	76000 J	53900 J
Total Organic Carbon (L/K)	NS	NS	432000	367000	NS	643000

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302955

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-331	LTC-332	LTC-333	LTC-334	LTC-335	LTC-336
Sample Date	12/7/00	12/7/00	12/7/00	12/7/00	12/7/00	12/12/00
Sample ID	LTC-331/0-.5SEDR2C	LTC-332/0-.5/SED/R2C	LTC-333/0-.5/SED/R2C	LTC-334/0-.5/SED/R2C	LTC-335/0-.5/SED/R2C	LTC-336/0-.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	4.1 U	30 UJ	33 UJ	21 UJ	17 U	24 UJ
Aroclor-1221	5.9 U	43 UJ	47 UJ	29 UJ	25 U	34 UJ
Aroclor-1232	8.6 U	63 UJ	69 UJ	43 UJ	36 U	49 UJ
Aroclor-1242	4.1 U	30 UJ	33 UJ	21 UJ	17 U	24 UJ
Aroclor-1248	4.5 U	33 UJ	36 UJ	23 UJ	19 U	26 UJ
Aroclor-1254	7.3 NJ	840 J	56 J	600 JP	17 U	24 UJ
Aroclor-1260	20 J	850 J	110 J	620 J	420	130 J
Total PCBs	27.3 NJ	1690 J	166 J	1220 JP	420	130J
METALS (mg/kg)						
Cadmium	0.28 U	1.9 UJ	2.1 UJ	1.6 BJ	1.2 U	1.5 UJ
Chromium	8.1	29.5 BJ	30.0 BJ	31.9 J	50.3	38.4 J
Cobalt	0.61 B	4.0 UJ	7.3 BJ	3.8 BJ	4.6 B	6.6 BJ
Copper	3.7 B	37.6 J	52.3 J	32.1 J	49.0	45.1 J
Lead	9.8	207 J	271 J	183 J	216	199 *J
Mercury	0.034 B	0.71 BJ	0.87 BJ	0.58 BJ	0.47 B	0.36 BNJ
Nickel	2.3 B	20.1 BJ	37.1 BJ	24.6 BJ	24.2 B	31.3 BJ
Vanadium	14.0 *	55.8 *J	90.6 *J	51.2 *J	125	69.8 J
Zinc	9.0 B	133 J	204 J	191 J	94.4	140 J
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	NS	NS
Total Organic Carbon	2880	37000 J	122000 J	34000 J	38000	74000 J
Total Organic Carbon (L/K)	239000	505000	492000	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302956

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-34	LTC-38	LTC-40	LTC-40	LTC-42	LTC-43
Sample Date	12/11/00	12/11/00	12/11/00	12/11/00	12/11/00	12/11/00
Sample ID	LTC-34/2-2.5/SED/R2C	LTC-38/0-0.5/SED/R2C	LTC-40/0-0.5/SED/R2C	LTC-40/2-2.5/SED/R2C	LTC-42/0-0.5/SED/R2C	LTC-43/0-0.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	30 UJ	14 UJ	39 UJ	55 UJ	110 UJ	40 UJ
Aroclor-1221	43 UJ	20 UJ	56 UJ	78 UJ	160 UJ	57 UJ
Aroclor-1232	63 UJ	29 UJ	82 UJ	120 UJ	230 UJ	84 UJ
Aroclor-1242	30 UJ	14 UJ	39 UJ	55 UJ	110 UJ	40 UJ
Aroclor-1248	33 UJ	15 UJ	270 JP	580 JP	1800 JP	360 JP
Aroclor-1254	30 UJ	14 UJ	39 UJ	55 UJ	110 UJ	40 UJ
Aroclor-1260	30 UJ	290 J	650 J	980 J	2500 J	1000 J
Total PCBs	ND	290 J	920 JP	1560 JP	4300 JP	1360 JP
METALS (mg/kg)						
Cadmium	3.4 BJ	0.91 UJ	0.64 BJ	0.72 UJ	NS	0.52 UJ
Chromium	214 J	24.9 J	54.9 J	57.2 J	NS	53.2 J
Cobalt	7.4 BJ	4.8 BJ	5.9 BJ	5.8 BJ	NS	4.5 BJ
Copper	45.7 J	32.6 J	29.5 J	33.5 J	NS	28.7 J
Lead	167 J	159 J	88.1 J	130 J	NS	69.7 J
Mercury	0.35 BNJ	0.28 BNJ	0.14 BJ	0.22 BJ	NS	0.15 BJ
Nickel	30.6 BJ	22.0 J	19.4 J	21.7 J	NS	16.5 J
Vanadium	67.4 J	49.1 J	104 J	90.0 J	NS	95.7 J
Zinc	333 J	115 J	139 J	142 J	NS	137 J
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	76100 J	73400 J	NS	108000 J
Total Organic Carbon	105000 J	58000 J	NS	NS	23000 J	NS
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302957

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-45	LTC-50	LTC-50	LTC-51	LTC-52	LTC-53
Sample Date	12/11/00	12/11/00	12/11/00	12/11/00	12/5/00	12/7/00
Sample ID	LTC-45/0-0.5/SED/R2C	LTC-50/0-0.5/SED/R2C	LTC-50/2-2.5/SED/R2C	LTC-51/0-0.5/SED/R2C	LTC52/0-0.5/SED/R2C	LTC-53/0-0.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	920 UJ	830 UJ	250 UJ	9.7 U	6.6 U	130 U
Aroclor-1221	1300 UJ	1200 UJ	360 UJ	14 U	9.4 U	180 U
Aroclor-1232	1900 UJ	1700 UJ	530 UJ	20 U	14 U	270 U
Aroclor-1242	920 UJ	830 UJ	250 UJ	9.7 U	6.6 U	130 U
Aroclor-1248	23000 J	56000 J	19000 J	11 U	84	140 U
Aroclor-1254	920 UJ	830 UJ	250 UJ	9.7 U	180 P	2900 P
Aroclor-1260	19000 J	43000 J	14000 J	160	94	2800
Total PCBs	42000 J	99000 J	33000 J	160	358 P	5700 P
METALS (mg/kg)						
Cadmium	NS	3.4 BJ	1.6 BJ	1.9 B	1.1 B	1.8 B
Chromium	NS	273 J	207 J	76.2	41.5	68.7
Cobalt	NS	3.2 BJ	3.8 BJ	21.0	10.3	5.2 B
Copper	NS	52.6 J	50.4 J	55.6	19.6	49.5
Lead	NS	2250 J	596 J	101	31.5	366
Mercury	NS	0.76 NJ	0.29 BNJ	0.39 N	0.11 B	0.35 B
Nickel	NS	21.5 BJ	20.4 J	34.4	17.1	19.7 B
Vanadium	NS	119 J	115 J	67.7	72.1	82.3
Zinc	NS	222 J	203 J	337	74.7	159
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	12300 J	122000.
Total Organic Carbon	12200 J	33000 J	31500 J	33000 J	NS	NS
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302958

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-54	LTC-54	LTC-59	LTC-68	LTC-72	LTC-78
Sample Date	12/11/00	12/11/00	12/6/00	12/7/00	12/7/00	12/7/00
Sample ID	LTC-54/0-0.5/SED/R2C	LTC-54/2-2.5/SED/R2C	LTC-59/SED/0-0.5/R2C	LTC-68/0-0.5/SED/R2C	LTC-72/2-2.5/SED/R2C	LTC-78/0-0.5/SED/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	100 UJ	170 UJ	37 U	3.9 U	22 U	24 UJ
Aroclor-1221	150 UJ	240 UJ	52 U	5.5 U	31 U	34 UJ
Aroclor-1232	220 UJ	350 UJ	77 U	8.1 U	46 U	49 UJ
Aroclor-1242	100 UJ	170 UJ	37 U	3.9 U	22 U	24 UJ
Aroclor-1248	2500 J	2400 J	280	4.2 U	24 U	26 UJ
Aroclor-1254	100 UJ	170 UJ	1200	7.7 JP	22 U	170 J
Aroclor-1260	5500 J	5600 J	1500	20	56 JP	270 J
Total PCBs	8000 J	8000 J	2980	27.7 JP	56 JP	440J
METALS (mg/kg)						
Cadmium	NS	NS	2.6 B	0.33 B	1.4 U	1.5 UJ
Chromium	NS	NS	104	10.7	23.2 B	46.0 J
Cobalt	NS	NS	7.3 B	2.0 B	4.6 B	6.1 BJ
Copper	NS	NS	71.6	6.2	28.4	46.1 J
Lead	NS	NS	416	35.2	93.0	241 J
Mercury	NS	NS	1.0 B	0.044 B	0.12 B	0.69 BJ
Nickel	NS	NS	37.2 B	4.1 B	19.2 B	29.0 BJ
Vanadium	NS	NS	82.8	12.0 *	43.4	82.2 *J
Zinc	NS	NS	332	73.9	99.3	123 J
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	116000.	NS
Total Organic Carbon	34000.	70000.	110000.	3000. J	NS	46000 J
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302959

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-78	LTC-79	LTC-80	LTC-82	LTC-88	LTC-88
Sample Date	12/7/00	12/6/00	12/7/00	12/11/00	12/5/00	12/6/00
Sample ID	LTC-78/2-2.5/SED/R2C	LTC-79/SED/0-0.5/R2C	LTC-80/0-0.5/SED/R2C	LTC-82/0-0.5/SED/R2C	LTC88/0-.5/SED/R2C	LTC-88/SED/2-2.5/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)						
Aroclor-1016	33 UJ	130 U	16 UJ	4. U	33 U	41 U
Aroclor-1221	47 UJ	180 U	22 UJ	5.7 U	47 U	59 U
Aroclor-1232	69 UJ	270 U	33 UJ	8.3 U	69 U	86 U
Aroclor-1242	33 UJ	130 U	16 UJ	4. U	33 U	41 U
Aroclor-1248	36 UJ	3900	17 UJ	4.3 U	860 P	350
Aroclor-1254	33 UJ	5200 P	310 J	4. U	1900	400 P
Aroclor-1260	33 UJ	4600	460 J	4. U	1200	270
Total PCBs	ND	13700 P	770 J	ND	3960	1020 P
METALS (mg/kg)						
Cadmium	2.2 UJ	1.9 B	1.9 BJ	NS	3.0 B	2.6 U
Chromium	16.7 BJ	265	43.7 J	NS	78.6	19.9 B
Cobalt	9.1 BJ	4.7 B	4.9 BJ	NS	6.3 B	5.2 U
Copper	19.0 BJ	42.8	50.8 J	NS	71.0	17.7 B
Lead	74.2 J	1230	242 J	NS	434	74.4
Mercury	0.099 BJ	0.35 B	0.67 J	NS	0.98 B	0.15 B
Nickel	18.6 BJ	28.1 B	24.7 J	NS	35.6 B	13.6 B
Vanadium	33.5 *J	116	69.7 *J	NS	101	24.0
Zinc	91.2 BJ	147	283 J	NS	311	154
GENERAL CHEMISTRY (mg/kg)						
TOC Solids/Sludges Combustion	NS	NS	NS	NS	210000	NS
Total Organic Carbon	118000 J	40000.	46000 J	570	NS	86000
Total Organic Carbon (L/K)	NS	NS	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302960

Table 4-39. Round Two Confirmatory Sediment Sampling in Little Timber Creek and Cedar Swamp; BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	LTC-89	LTC-90	LTC-94	LTC-95
Sample Date	12/7/00	12/5/00	12/5/00	12/5/00
Sample ID	LTC-89/0-0.5/SED/R2C	LTC90/0-0.5/SED/R2C	LTC-94/SED/0-0.5/R2C	LTC-95/SED/0-0.5/R2C
POLYCHLORINATED BIPHENYLS (ug/kg)				
Aroclor-1016	25 UJ	97 U	4.9 U	70 U
Aroclor-1221	36 UJ	140 U	7. U	100 U
Aroclor-1232	53 UJ	200 U	10 U	150 U
Aroclor-1242	25 UJ	97 U	4.9 U	70 U
Aroclor-1248	28 UJ	340 J	5.4 U	77 U
Aroclor-1254	38 J	2600	4.9 U	1100
Aroclor-1260	59 J	2300 P	4.9 U	1200 P
Total PCBs	97 J	5240 JP	ND	2300 P
METALS (mg/kg)				
Cadmium	1.7 UJ	2.0 B	0.33 U	1.0 B
Chromium	14.2 BJ	77.2	14.2	59.6
Cobalt	4.8 BJ	4.9 B	2.9 B	5.1 B
Copper	33.4 J	38.3	5.8 B	18.4
Lead	111 J	255	8.7	89.1
Mercury	0.39 BJ	0.53 B	0.076 B	0.12 B
Nickel	20.2 BJ	27.4 B	5.9 B	12.6
Vanadium	54.2 *J	64.7	23.8	62.5
Zinc	162 J	221	25.4	107
GENERAL CHEMISTRY (mg/kg)				
TOC Solids/Sludges Combustion	NS	68000.	NS	33500.
Total Organic Carbon	38000 J	NS	58100.	NS
Total Organic Carbon (L/K)	NS	NS	NS	NS

B = (Inorganic) Value is < CRDL, but >= IDL
J = Estimated Value
P = Concentration difference between primary and
* = Duplicate analysis not within control limits
N = (Inorganic) Spike sample not within control lin
U = Compound was not detected
ND = Compound was not detected
NS = Compound was sampled but not analyzed
L/K = Lloyd Kahn Method.

302961

Table 4-40. Summary of Detected Compounds in Surface Water From CS-I. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS-200		CS-13		CS-15		CS-18	
Sample Date	4/17/2000		5/2/2000		5/1/2000		5/1/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemestry Parameters (mg/L)								
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	23.8	NA	72.2	NA	30.2	NA	30.2	NA
Total Suspended Solids	--	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	106	NA	NA	NA	NA	NA	NA	NA
Total Hardness	47.1	NA	NA	NA	NA	NA	NA	NA
Kjeldahl Nitrogen	1.25J	NA	NA	NA	NA	NA	NA	NA
Nitrite Nitrogen	0.015J	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen	--	NA	NA	NA	NA	NA	NA	NA
Ammonia Nitrogen	--	NA	NA	NA	NA	NA	NA	NA
Sulfide	0.0240J	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	12.7	12.2	10.9	10.8	12.9	12.2	9.3	9.2
Chloride	20.8	NA	NA	NA	NA	NA	NA	NA
Sulfate	12.1	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds (µg/l)								
All Volatile Organic Compounds	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)								
TPH-DRO	0.18	NA	0.11	NA	0.28	NA	0.20	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)								
Phenol	--	NA	--	NA	--	--	--	--
bis(2-Ethylhexyl) phthalate	--	NA	3J	NA	--	--	--	--
2-Methylnapthalene	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--
Total TICs	202BJX	4JXB	24JXB	268JXB	13JB	288JXB	39JXB	299JXB
Polychlorinated Biphenyls (µg/l)								
Aroclor 1254	0.027JP	--	0.014J	--	0.024J	--	--	--
Aroclor 1260	0.013J	--	--	--	--	--	--	--
Total PCBs	0.040JP	--	0.014J	--	0.024J	--	--	--
Target Analyte List Metals (µg/l)								
Aluminum	--	--	--	--	201	--	2,160	--
Arsenic	--	--	--	--	--	--	--	--
Barium	50.3B	51.7B	35.9B	38.3B	308	35.6B	346	27.1B
Calcium	9,700	10,200	11,100	12,100	9,050	8,910	15,500	10,500
Chromium	--	--	--	--	--	--	--	--
Cobalt	--	--	--	--	--	--	--	--
Copper	--	--	--	6.8B	--	7.6B	16.8B	9.4B
Iron	1420N*	757	722	401	702	339	5,050	145
Lead	--	--	--	--	--	--	49.7	--
Magnesium	4,740	5,090	6,430	6,850	5,130	5,130	6,450	5,290
Manganese	55.6*	55.6	92.1	96.6	50.9	35.1	160	25.0
Nickel	--	--	--	--	--	--	10.7B	--
Potassium	3,770	3,850	3,420	4,030	3,280	3,380	3,250	2,830
Sodium	8,470	8,550	28,400	32,200	22,800	23,100	19,500	19,600
Vanadium	--	--	--	--	--	--	22.5	--
Zinc	8.0B	5.4B	9.4B	10.4B	148	11.9B	256	10.0B

See Table 7 for notes and qualifiers

302962

Table 4-40. Summary of Detected Compounds in Surface Water From CS-I. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS-42		CS-44		CS-55	
Sample Date	4/27/2000		4/26/2000		5/2/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemestry Parameters (mg/L)						
Alkalinity to pH 8.3	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	38.9	NA	31.7	NA	55.0	NA
Total Suspended Solids	303	NA	10.4J	NA	1,050	NA
Total Dissolved Solids	126	NA	125	NA	127	NA
Total Hardness	74.2	NA	58.9	NA	69.3	NA
Kjeldahl Nitrogen	3.9J	NA	0.80J	NA	7.2	NA
Nitrite Nitrogen	--	NA	0.035J	NA	0.022J	NA
Nitrate Nitrogen	0.42	NA	0.81	NA	0.043J	NA
Ammonia Nitrogen	--	NA	--	NA	0.17	NA
Sulfide	--	NA	--	NA	0.0430J	NA
Total Organic Carbon	9.1	6	7.1	8.2	9.7	8.3
Chloride	27.1	NA	23.8	NA	24.4	NA
Sulfate	22.0	NA	18.3	NA	16.0J	NA
Volatile Organic Compounds (µg/l)						
All Volatile Organic Compounds	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)						
TPH-DRO	--	NA	--	NA	0.33	NA
THP-GRO	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)						
Phenol	--	11	--	--	--	--
bis(2-Ethylhexyl) phthalate	--	--	--	--	--	--
2-Methylnapthalene	--	--	--	--	2J	--
Phenanthrene	--	--	--	--	1J	--
Total TICs	39JBX	33J	--	26J	213JXB	412JXB
Polychlorinated Biphenyls (µg/l)						
Aroclor 1254	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--
Total PCBs	--	--	--	--	--	--
Target Analyte List Metals (µg/l)						
Aluminum	10,500	--	166B*	--	788	--
Arsenic	8.6B	--	--	--	--	--
Barium	196	24.0	28.5B	26.3B	53.5B	30.0B
Calcium	17,200	14,300	14,300	14,000	15,800	76,300
Chromium	43.5	--	--	--	--	--
Cobalt	13.9B	--	--	--	--	--
Copper	38.1	9.8B	--	15.0B	7.8B	--
Iron	24,200	329	1030*	227	2,440	252
Lead	71.0	--	--	--	--	--
Magnesium	9,330	6,040	5,570	5,530	6,670	6,930
Manganese	2,750	127	101*	89.6	858	317
Nickel	27.8B	--	--	--	--	--
Potassium	4,230	2,710	2,070	2,130	1,840	2,030
Sodium	16,300	17,800	13,900E	13,900E	16,500	20,400
Vanadium	39.9	--	--	--	4.6B	--
Zinc	521	16.4B	22.8B	13.3B	45.5	9.5B

See Table 7 for notes and qualifiers

302963

Table 4-41. Summary of Surface Water Results From Cedar Swamp; Area CS-I. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS-200		CS-13		CS-15		CS-18	
Sample Date	4/17/2000		5/2/2000		5/1/2000		5/1/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemestry Parameters (mg/L)								
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	23.8	NA	72.2	NA	30.2	NA	30.2	NA
Total Suspended Solids	--	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	106	NA	NA	NA	NA	NA	NA	NA
Total Hardness	47.1	NA	NA	NA	NA	NA	NA	NA
Kjeldahl Nitrogen	1.25J	NA	NA	NA	NA	NA	NA	NA
Nitrite Nitrogen	0.015J	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen	--	NA	NA	NA	NA	NA	NA	NA
Ammonia Nitrogen	--	NA	NA	NA	NA	NA	NA	NA
Sulfide	0.0240J	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	12.7	12.2	10.9	10.8	12.9	12.2	9.3	9.2
Chloride	20.8	NA	NA	NA	NA	NA	NA	NA
Sulfate	12.1	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds (µg/l)								
All Volatile Organic Compounds	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)								
TPH-DRO	0.18	NA	0.11	NA	0.28	NA	0.20	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)								
Phenol	--	NA	--	NA	--	--	--	--
bis(2-Ethylhexyl) phthalate	--	NA	3J	NA	--	--	--	--
2-Methylnapthalene	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--
Total TICs	202BJX	4JXB	24JXB	268JXB	13JB	288JXB	39JXB	299JXB
Polychlorinated Biphenyls (µg/l)								
Aroclor 1254	0.027JP	--	0.014J	--	0.024J	--	--	--
Aroclor 1260	0.013J	--	--	--	--	--	--	--
Total PCBs	0.040JP	--	0.014J	--	0.024J	--	--	--
Target Analyte List Metals (µg/l)								
Aluminum	--	--	--	--	201	--	2,160	--
Arsenic	--	--	--	--	--	--	--	--
Barium	50.3B	51.7B	35.9B	38.3B	308	35.6B	346	27.1B
Calcium	9,700	10,200	11,100	12,100	9,050	8,910	15,500	10,500

302964

Table 4-41. Summary of Surface Water Results From Cedar Swamp; Area CS-I. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS-200		CS-13		CS-15		CS-18	
Sample Date	4/17/2000		5/2/2000		5/1/2000		5/1/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
Chromium	--	--	--	--	--	--	--	--
Cobalt	--	--	--	--	--	--	--	--
Copper	--	--	--	6.8B	--	7.6B	16.8B	9.4B
Iron	1420N*	757	722	401	702	339	5,050	145
Lead	--	--	--	--	--	--	49.7	--
Magnesium	4,740	5,090	6,430	6,850	5,130	5,130	6,450	5,290
Manganese	55.6*	55.6	92.1	96.6	50.9	35.1	160	25.0
Nickel	--	--	--	--	--	--	10.7B	--
Potassium	3,770	3,850	3,420	4,030	3,280	3,380	3,250	2,830
Sodium	8,470	8,550	28,400	32,200	22,800	23,100	19,500	19,600
Vanadium	--	--	--	--	--	--	22.5	--
Zinc	8.0B	5.4B	9.4B	10.4B	148	11.9B	256	10.0B

302965

Table 4-41. Summary of Surface Water Results From Cedar Swamp; Area CS-I. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS-42		CS-44		CS-55	
Sample Date	4/27/2000		4/26/2000		5/2/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemestry Parameters (mg						
Alkalinity to pH 8.3	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	38.9	NA	31.7	NA	55.0	NA
Total Suspended Solids	303	NA	10.4J	NA	1,050	NA
Total Dissolved Solids	126	NA	125	NA	127	NA
Total Hardness	74.2	NA	58.9	NA	69.3	NA
Kjeldahl Nitrogen	3.9J	NA	0.80J	NA	7.2	NA
Nitrite Nitrogen	--	NA	0.035J	NA	0.022J	NA
Nitrate Nitrogen	0.42	NA	0.81	NA	0.043J	NA
Ammonia Nitrogen	--	NA	--	NA	0.17	NA
Sulfide	--	NA	--	NA	0.0430J	NA
Total Organic Carbon	9.1	6	7.1	8.2	9.7	8.3
Chloride	27.1	NA	23.8	NA	24.4	NA
Sulfate	22.0	NA	18.3	NA	16.0J	NA
Volatile Organic Compounds (µg/l)						
All Volatile Organic Compounds	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg						
TPH-DRO	--	NA	--	NA	0.33	NA
THP-GRO	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µ						
Phenol	--	11	--	--	--	--
bis(2-Ethylhexyl) phthalate	--	--	--	--	--	--
2-Methylnapthalene	--	--	--	--	2J	--
Phenanthrene	--	--	--	--	1J	--
Total TICs	39JBX	33J	--	26J	213JXB	412JXB
Polychlorinated Biphenyls (µg/l)						
Aroclor 1254	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--
Total PCBs	--	--	--	--	--	--
Target Analyte List Metals (µg/l)						
Aluminum	10,500	--	166B*	--	788	--
Arsenic	8.6B	--	--	--	--	--
Barium	196	24.0	28.5B	26.3B	53.5B	30.0B
Calcium	17,200	14,300	14,300	14,000	15,800	76,300

302966

Table 4-41. Summary of Surface Water Results From Cedar Swamp; Area CS-I. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS-42		CS-44		CS-55	
Sample Date	4/27/2000		4/26/2000		5/2/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
Chromium	43.5	--	--	--	--	--
Cobalt	13.9B	--	--	--	--	--
Copper	38.1	9.8B	--	15.0B	7.8B	--
Iron	24,200	329	1030*	227	2,440	252
Lead	71.0	--	--	--	--	--
Magnesium	9,330	6,040	5,570	5,530	6,670	6,930
Manganese	2,750	127	101*	89.6	858	317
Nickel	27.8B	--	--	--	--	--
Potassium	4,230	2,710	2,070	2,130	1,840	2,030
Sodium	16,300	17,800	13,900E	13,900E	16,500	20,400
Vanadium	39.9	--	--	--	4.6B	--
Zinc	521	16.4B	22.8B	13.3B	45.5	9.5B

302967

Table 4-42. Summary of Surface Water Results From Cedar Swamp; Area CS-II. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS-56		CS-83		CS-82		CS-62	
Sample Date	5/2/2000		4/26/2000		4/27/2000		4/26/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemestry Parameters (mg/L)								
Alkalinity to pH 8.3	--	NA	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	45.9	NA	32.4	NA	26.2	NA	34.8	NA
Total Suspended Solids	NA	NA	NA	NA	NA	NA	18	NA
Total Dissolved Solids	NA	NA	NA	NA	NA	NA	127	NA
Total Hardness	NA	NA	NA	NA	NA	NA	62.7	NA
Kjeldahl Nitrogen	NA	NA	NA	NA	NA	NA	0.85J	NA
Nitrite Nitrogen	NA	NA	NA	NA	NA	NA	0.037J	NA
Nitrate Nitrogen	NA	NA	NA	NA	NA	NA	0.81	NA
Ammonia Nitrogen	NA	NA	NA	NA	NA	NA	--	NA
Sulfide	NA	NA	NA	NA	NA	NA	--	NA
Total Organic Carbon	8.9	7.9	6.8	6.1	12.8	12.4	6.7	6.2
Chloride	NA	NA	NA	NA	NA	NA	26.1	NA
Sulfate	NA	NA	NA	NA	NA	NA	20.4	NA
Volatile Organic Compounds (µg/l)								
All Volatile Organic Compounds	--	NA	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)								
TPH-DRO	0.18	NA	--	NA	--	NA	--	NA
THP-GRO	--	NA	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (µg/l)								
All Semivolatile Organic Compounds	ALL SEMIVOLATILE ORGANIC COMPOUNDS WERI							
Total TICs	42JBX	315JXB	--	62J	--	50JB	4J	258JX
Polychlorinated Biphenyls (µg/l)								
Aroclor 1254	--	--	--	--	--	0.062	--	--
Total PCBs	--	--	--	--	--	0.062	--	--
Target Analyte List Metals (µg/l)								
Aluminum	225	--	201 *	--	--	--	311	--
Barium	35.2B	22.8B	28.7B	24.8B	46.9B	46.3B	28.0B	23.8
Calcium	15,400	14,800	14,800	14,200	9,770	10,400	15,100	14,900
Copper	--	7.4B	--	--	--	8.0B	--	4.8B
Iron	1,150	280	1130 *	253	1,500	918	1,330	287
Magnesium	6,720	6,500	5,810	5,610	5,100	5,230	6,130	6,060
Manganese	208	71.2	109 *	90.7	67.5	58.9	146	130
Potassium	1,900	1,810	2,110	2,050	3,720	3,980	2,120	2,070
Sodium	21,700	22,000	14,400E	14,100E	12,600	13,300	15,500E	15,700E
Zinc	14.2B	--	22.1B	14.3B	13.0B	11.9B	26.7	16.0B

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Table 4-42. Summary of Surface Water Results From Cedar Swamp; Area CS-II. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample ID	CS--65		CS-77		CS-80	
Sample Date	4/26/2000		5/1/2000		5/1/2000	
Parameter	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL	DISSOLVED
General Chemestry Parameters (mg/L)						
Alkalinity to pH 8.3	--	NA	--	NA	--	NA
Alkalinity to pH 4.5	34.7	NA	35.2	NA	33.8	NA
Total Suspended Solids	14	NA	NA	NA	NA	NA
Total Dissolved Solids	124	NA	NA	NA	NA	NA
Total Hardness	64.1	NA	NA	NA	NA	NA
Kjeldahl Nitrogen	0.72J	NA	NA	NA	NA	NA
Nitrite Nitrogen	0.039J	NA	NA	NA	NA	NA
Nitrate Nitrogen	0.88	NA	NA	NA	NA	NA
Ammonia Nitrogen	--	NA	NA	NA	NA	NA
Sulfide	--	NA	NA	NA	NA	NA
Total Organic Carbon	5.8	5.2	5.1	5.8	4.3	3.9
Chloride	23.5	NA	NA	NA	NA	NA
Sulfate	19.5	NA	NA	NA	NA	NA
Volatile Organic Compounds (ug/l)						
All Volatile Organic Compounds	--	NA	--	NA	--	NA
Total Petroleum Hydrocarbons (mg/l)						
TPH-DRO	--	NA	--	NA	--	NA
THP-GRO	--	NA	--	NA	--	NA
Semivolatile Organic Compounds (ug/l)						
All Semivolatile Organic Compounds	E ANALYZED. NO ANALYTES DETECTED.					
Total TICs	--	27J	9JB	287JXB	--	271JXB
Polychlorinated Biphenyls (ug/l)						
Aroclor 1254	--	--	--	--	--	--
Total PCBs	--	--	--	--	--	--
Target Analyte List Metals (ug/l)						
Aluminum	198B*	--	158B	--	152B	--
Barium	26.2B	22.9B	40.5B	24.8B	24.6B	23.7B
Calcium	14,700	14,600	8,860	16,200	13,500	14,500
Copper	--	--	--	13.9B	--	10.5B
Iron	982 *	139	842	168	686	87.6B
Magnesium	5,650	5,630	5,110	5,470	4,640	4,840
Manganese	105 *	93.4	117	101	94.9	75.1
Potassium	1,900	1,870	2,960	2,370	1,710	2,150
Sodium	14,200E	14500E	21,900	15,200	12,600	13,900
Zinc	20.1B	14.5B	22.4B	25.0	18.3B	14.6B

302969

Table 4-43. Summary of Results for Round 1 Confirmatory Sediment Samples from Cedar Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	CS-201	CS-202	CS-203
Sample Depth [1]	0-6"	0-6"	0-6"
Sample Date	6/29/00	6/29/00	6/29/00
Parameter (ug/Kg)			
Volatile Organic Compounds			
1,1,1-Trichloroethane	2 U	2 U	5 U
1,1,2,2-Tetrachloroethane	2 U	2 U	5 U
1,1,2-Trichloroethane	2 U	2 U	5 U
1,1-Dichloroethane	2 U	2 U	5 U
1,1-Dichloroethene	2 U	2 U	5 U
1,2-Dichloroethane	2 U	2 U	5 U
1,2-Dichloropropane	2 U	2 U	5 U
2-Butanone	6 U	12 J	42 J
2-Hexanone	4 U	6 U	16 U
4-Methyl-2-pentanone	4 U	6 U	16 U
Acetone	20 J	110	360
Benzene	2 U	2 U	5 U
Bromodichloromethane	2 U	2 U	5 U
Bromoform	2 U	2 U	5 U
Bromomethane/ Methyl bromide	3 U	4 U	11 U
Carbon disulfide	3 J	13	22 J
Carbon tetrachloride	2 U	2 U	5 U
Chlorobenzene	2 U	2 U	5 U
Chloroethane	3 U	4 U	11 U
Chloroform	2 U	2 U	5 U
Chloromethane	3 U	4 U	11 U
cis-1,2-Dichloroethene	2 U	2 U	5 U
cis-1,3-Dichloropropene	2 U	2 U	5 U
Dibromochloromethane	2 U	2 U	5 U
Ethylbenzene	2 U	2 U	5 U
Methylene chloride	5 J	6 J	17 J
Styrene	2 U	2 U	5 U
Tetrachloroethene	2 U	2 U	5 U
Toluene	2 J	4 J	10 J
trans-1,2-Dichloroethene	2 U	2 U	5 U
trans-1,3-Dichloropropene	2 U	2 U	5 U
Trichloroethene	2 U	2 U	5 U
Vinyl chloride	2 U	2 U	5 U
Xylenes (Total)	2 U	3 J	6 J
Total TICs	9	933	269
Semi-Volatile Organic Compounds			
1,2,4-Trichlorobenzene	52 U	65 U	74 U
1,2-Dichlorobenzene	52 U	65 U	74 U
1,3-Dichlorobenzene	52 U	65 U	74 U
1,4-Dichlorobenzene	52 U	65 U	74 U
2,2'-Oxybis(1-chloropropane)	52 U	65 U	74 U
2,4-Dinitrotoluene	52 U	65 U	74 U
2,6-Dinitrotoluene	52 U	65 U	74 U
2-Chloronapthalene	52 U	65 U	74 U
2-Methylnapthalene	52 U	65 U	74 U
2-Nitroaniline	100 U	130 U	150 U

302970

Table 4-43. Summary of Results for Round 1 Confirmatory Sediment Samples from Cedar Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	CS-201	CS-202	CS-203
Sample Depth [1]	0-6"	0-6"	0-6"
Sample Date	6/29/00	6/29/00	6/29/00
Parameter (ug/Kg)			
3,3'-Dichlorobenzidine	100 U	130 U	150 U
3-Nitroaniline	100 U	130 U	150 U
4-Bromophenyl phenyl ether	52 U	65 U	74 U
4-Chloroaniline	100 U	130 U	150 U
4-Chlorophenyl phenyl ether	52 U	65 U	74 U
4-Nitroaniline	100 U	130 U	150 U
Acenaphthene	52 U	65 U	74 U
Acenaphthylene	52 U	65 U	74 U
Anthracene	52 U	65 U	130 J
Benzo(a)anthracene	56 J	72 J	400 J
Benzo(a)pyrene	57 J	65 U	140 J
Benzo(b)fluoranthene	82 J	68 J	230 J
Benzo(g,h,i)perylene	52 U	65 U	81 J
Benzo(k)fluoranthene	52 U	65 U	120 J
bis(2-Chloroethoxy)methane	100 U	130 U	150 U
bis(2-Chloroethyl)ether	52 U	65 U	74 U
bis(2-Ethylhexyl)phthalate	230 J	320 J	1600
Butyl benzyl phthalate	100 U	130 U	150 U
Carbazole	100 U	130 U	150 U
Chrysene	78 J	110 J	420 J
Di-n-butyl phthalate	100 U	130 U	150 U
Di-n-octyl phthalate	100 U	130 U	150 U
Dibenz(a,h)anthracene	52 U	65 U	74 U
Dibenzofuran	52 U	65 U	74 U
Diethyl phthalate	100 U	130 U	150 U
Dimethyl phthalate	100 U	130 U	150 U
Fluoranthene	83 J	100 J	2700
Fluorene	52 U	65 U	74 U
Hexachlorobenzene	52 U	65 U	74 U
Hexachlorobutadiene	100 U	130 U	150 U
Hexachlorocyclopentadiene	260 U	330 U	370 U
Hexachloroethane	52 U	65 U	74 U
Indeno(1,2,3-cd)pyrene	52 U	65 U	78 J
Isophorone	52 U	65 U	74 U
n-Nitrosodiphenylamine	52 U	65 U	74 U
n-Nitrosodipropylamine	52 U	65 U	74 U
Nitrobenzene	52 U	65 U	74 U
Phenanthrene	52 U	110 J	130 J
Pyrene	110 J	180 J	2200
Total TICs	18000	91790	93200
Polychlorinated Biphenyls			
Aroclor-1016	26 U	32 U	12 U
Aroclor-1221	61 U	76 U	17 U
Aroclor-1232	26 U	32 U	26 U
Aroclor-1242	26 U	32 U	12 U
Aroclor-1248	26 U	32 U	180 P
Aroclor-1254	96 JP	62 J	190 P

302971

Table 4-43. Summary of Results for Round 1 Confirmatory Sediment Samples from Cedar Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	CS-201	CS-202	CS-203
Sample Depth [1]	0-6"	0-6"	0-6"
Sample Date	6/29/00	6/29/00	6/29/00
Parameter (ug/Kg)			
Aroclor-1260	56 J	180 P	210

302972

Table 4-43. Summary of Results for Round 1 Confirmatory Sediment Samples from Cedar Swamp. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Location ID	CS-201	CS-202	CS-203
Sample Depth [1]	0-6"	0-6"	0-6"
Sample Date	6/29/00	6/29/00	6/29/00
Parameter (ug/Kg)			
Pesticide			
4,4'-DDD	9.3	16	
4,4'-DDE	32	23 P	
4,4'-DDT	1.0 U	1.5 JP	
Aldrin	0.52 U	0.66 U	
Alpha BHC	0.52 U	0.66 U	
Alpha Chlordane	0.52 U	0.66 U	
Beta BHC	0.52 U	0.66 U	
Delta BHC	0.52 U	0.66 U	
Dieldrin	1.0 U	1.3 U	
Endosulfan I	0.52 U	0.66 U	
Endosulfan II	1.0 U	2.0 JP	
Endosulfan sulfate	1.0 U	1.3 U	
Endrin	1.0 U	1.3 U	
Endrin aldehyde	1.8 JP	5.7 J	
Endrin ketone	1.0 U	1.3 U	
Gamma BHC - Lindane	0.96 J	0.66 U	
Gamma Chlordane	0.52 U	0.66 U	
Heptachlor	0.52 U	0.66 U	
Heptachlor epoxide	0.52 U	0.66 U	
Methoxychlor	5.2 U	6.6 U	
Toxaphene	52 U	66 U	
Target Analyte Metals			
Aluminum	2640 *	2160 *	11100 *
Antimony	3.4 U	4.2 U	8.1 U
Arsenic	5.3	5.9	24.3
Barium	26.6	27.5	126
Beryllium	0.28 U	0.34 U	0.97 B
Cadmium	0.45 B	0.42 U	1.5 B
Calcium	737 EN	1070 EN	3680 EN
Chromium	13.4 N	10.3 N	48.2 N
Cobalt	3.2 B	2.8 B	13.3 B
Copper	11.2	8.8	42.4
Iron	7060	5940	23600
Lead	19.8	24.6	82.5
Magnesium	744 EN	643 EN	2660 EN
Manganese	106 E	83.4 E	305 E
Mercury	0.057 B	0.069 B	0.22 B
Nickel	5.8 B	4.8 B	22.3
Potassium	274 N*	194 N*	972 N*
Selenium	0.82 B	0.79 U	2.0 B
Silver	0.48 U	0.59 U	1.1 U
Sodium	76.0 B	100 B	287 B
Thallium	1.3 U	1.6 U	3.1 U
Vanadium	13.5	13.2	55.3
Zinc	66.1 E	46.5 E	223 E

302973

Table 4-44. Analytical Results for Ground Water Samples from Monitoring Wells Not in an Area of Concern.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1C	MW-2C	MW-3C	MW-4C	MW-33D	MW-33D	MW33D
Sample Date	7/13/99	7/13/99	7/12/99	7/19/99	1/6/00	10/26/00	6/11/01
Round	R-1	R-1	R-1	R-1	R-2	R-3	R-4
Parameter							
VOLATILE ORGANIC COMPOUNDS *(ug/l)*							
Acetone	6 U	6 U	6 U	6 UJ	8 J	6 U	7 J
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromomethane/ Methyl bromide	3 U	3 U	3 U	3 U	3 U	2 U	2 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Carbon disulfide	3 U	3 U	3 U	3 U	3 U	1 U	1 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	3 U	3 U	3 U	3 U	3 U	2 UJ	2 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	3 U	3 U	3 U	3 U	3 U	2 U	2 U
cis-1,2-Dichloroethene	2 U	2 U	2 U	2 U	2 J	3 J	2 J
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	2 U	2 U	2 U	1 U	1 U
1,1-Dichloroethane	1 U	1 U	1 U	2 U	2 U	1 U	1 U
1,1-Dichloroethene	2 U	2 U	2 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	2 U	2 U	2 U	2 U	2 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	2 U	2 U	2 U	2 U	2 U	1 U	1 U
2-Hexanone	7 U	7 U	7 U	7 U	7 U	3 U	3 UJ
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	5 U	5 U	5 U	5 U	3 U	3 UJ
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	2 U	2 U	1 U	1 U
Toluene	2 U	2 U	2 U	2 U	2 U	1 U	1 U
trans-1,2-Dichloroethene	2 U	2 U	2 U	2 U	2 U	1 U	1 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	8	10	5
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	2 U	2 U	2 U	2 U	2 U	1 U	1 U
Vinyl chloride	2 U	2 U	2 U	2 U	2 U	1 U	1 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total TICs	ND	ND	ND	ND	ND	ND	ND

302974

Table 4-44. Analytical Results for Ground Water Samples from Monitoring Wells Not in an Area of Concern.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1C	MW-2C	MW-3C	MW-4C	MW-33D	MW-33D	MW33D
Sample Date	7/13/99	7/13/99	7/12/99	7/19/99	1/6/00	10/26/00	6/11/01
Round	R-1	R-1	R-1	R-1	R-2	R-3	R-4
Parameter							
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*							
Acenaphthene	1 U	1 U	1 U	1 U	1 U	NA	NA
Acenaphthylene	1 U	1 U	1 U	1 U	1 U	NA	NA
Anthracene	1 U	1 U	1 U	1 U	1 U	NA	NA
Benzo(a)anthracene	1 U	1 U	1 U	1 U	1 U	NA	NA
Benzo(a)pyrene	1 U	1 U	1 U	1 U	1 U	NA	NA
Benzo(b)fluoranthene	1 U	1 U	1 U	1 U	1 U	NA	NA
Benzo(g,h,i)perylene	1 U	1 U	1 U	1 U	1 U	NA	NA
Benzo(k)fluoranthene	1 U	1 U	1 U	1 U	1 U	NA	NA
bis(2-Chloroethoxy)methane	1 U	1 U	1 U	1 U	1 U	NA	NA
bis(2-Chloroethyl)ether	1 U	1 U	1 U	1 U	1 U	NA	NA
bis(2-Ethylhexyl)phthalate	8 J	2 U	2 U	2 U	2 U	NA	NA
4-Bromophenyl phenyl ether	2 U	2 U	2 U	2 U	2 U	NA	NA
Butyl benzyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA
Carbazole	2 U	2 U	2 U	2 U	3 U	NA	NA
2-Chloronaphthalene	1 U	1 U	1 U	1 U	1 U	NA	NA
2-Chlorophenol	1 U	1 U	1 U	1 U	NA	NA	NA
4-Chloro-3-methylphenol	1 U	1 U	1 U	1 U	NA	NA	NA
4-Chloroaniline	1 U	1 U	1 U	1 U	1 U	NA	NA
4-Chlorophenyl phenyl ether	1 U	1 U	1 U	1 U	1 U	NA	NA
Chrysene	1 U	1 U	1 U	1 U	1 U	NA	NA
Dibenz(a,h)anthracene	1 U	1 U	1 U	1 U	1 U	NA	NA
Dibenzofuran	1 U	1 U	1 U	1 U	1 U	NA	NA
1,3-Dichlorobenzene	1 U	1 U	1 U	1 U	1 U	NA	NA
1,2-Dichlorobenzene	1 U	1 U	1 U	1 U	1 U	NA	NA
1,4-Dichlorobenzene	1 U	1 U	1 U	1 U	1 U	NA	NA
2,4-Dichlorophenol	1 U	1 U	1 U	1 U	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	2 U	2 U	2 U	NA	NA
Diethyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA
Dimethyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA
2,4-Dimethylphenol	1 U	1 U	1 U	1 U	NA	NA	NA
2,4-Dinitrophenol	14 U	14 U	14 U	14 U	NA	NA	NA
2,4-Dinitrotoluene	1 U	1 U	1 U	1 U	1 U	NA	NA
2,6-Dinitrotoluene	2 U	2 U	2 U	2 U	2 U	NA	NA
4,6-Dinitro-2-methylphenol	5 U	5 U	5 U	5 U	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA

302975

Table 4-44. Analytical Results for Ground Water Samples from Monitoring Wells Not in an Area of Concern.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1C	MW-2C	MW-3C	MW-4C	MW-33D	MW-33D	MW33D
Sample Date	7/13/99	7/13/99	7/12/99	7/19/99	1/6/00	10/26/00	6/11/01
Round	R-1	R-1	R-1	R-1	R-2	R-3	R-4
Parameter							
Di-n-octyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA
Fluoranthene	1 U	1 U	1 U	1 U	1 U	NA	NA
Fluorene	3 J	1 U	1 U	1 U	1 U	NA	NA
Hexachlorobenzene	2 U	2 U	2 U	2 U	2 U	NA	NA
Hexachlorobutadiene	2 U	2 U	2 U	2 U	2 U	NA	NA
Hexachlorocyclopentadiene	5 U	5 U	5 U	5 U	5 U	NA	NA
Hexachloroethane	1 U	1 U	1 U	1 U	1 U	NA	NA
Indeno(1,2,3-cd)pyrene	1 U	1 U	1 U	1 U	1 U	NA	NA
Isophorone	1 U	1 U	1 U	1 U	1 U	NA	NA
2-Methylnaphthalene	1 U	1 U	1 U	1 U	1 U	NA	NA
2-Methylphenol	1 U	1 U	1 U	1 U	NA	NA	NA
4-Methylphenol	3 U	3 U	3 U	3 U	NA	NA	NA
n-Nitrosodiphenylamine	1 U	1 U	1 U	1 U	1 U	NA	NA
n-Nitrosodipropylamine	1 U	1 U	1 U	1 U	1 U	NA	NA
Naphthalene	1 U	1 U	1 U	1 U	NA	NA	NA
Nitrobenzene	1 U	1 U	1 U	1 U	1 U	NA	NA
2-Nitroaniline	2 U	2 U	2 U	2 U	2 U	NA	NA
2-Nitrophenol	1 U	1 U	1 U	1 U	NA	NA	NA
3-Nitroaniline	2 U	2 U	2 U	2 U	2 U	NA	NA
4-Nitroaniline	2 U	2 U	2 U	2 U	2 U	NA	NA
4-Nitrophenol	10 U	10 U	10 U	10 U	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	1 U	1 U	1 U	1 U	NA	NA
Pentachlorophenol	3 U	3 U	3 U	3 U	NA	NA	NA
Phenanthrene	1 U	1 U	1 U	1 U	1 U	NA	NA
Phenol	1 U	1 U	1 U	1 U	NA	NA	NA
Pyrene	1 U	1 U	1 U	1 U	1 U	NA	NA
1,2,4-Trichlorobenzene	1 U	1 U	1 U	1 U	1 U	NA	NA
2,4,5-Trichlorophenol	2 U	2 U	2 U	2 U	NA	NA	NA
2,4,6-Trichlorophenol	2 U	2 U	2 U	2 U	NA	NA	NA
Total TICs	ND	7 J	ND	ND	ND	NA	NA
METALS *(ug/l)*							
Aluminum (Dissolved)							
Aluminum (Total)	60.7 BN*	124 BN*	796 N*	NA	100 B*	NA	76.7 B
Antimony	25.0 U	25.0 U	25.0 U	NA	29.0 U	NA	204
Arsenic	7.0 U	7.0 U	7.0 U	NA	5.0 U	NA	NA

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Table 4-44. Analytical Results for Ground Water Samples from Monitoring Wells Not in an Area of Concern.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1C	MW-2C	MW-3C	MW-4C	MW-33D	MW-33D	MW33D
Sample Date	7/13/99	7/13/99	7/12/99	7/19/99	1/6/00	10/26/00	6/11/01
Round	R-1	R-1	R-1	R-1	R-2	R-3	R-4
Parameter							
Barium	41.3 B	102	30.9 B	NA	561	NA	NA
Beryllium	1.7 U	1.7 U	1.7 U	NA	1.9 U	NA	NA
Cadmium	1.7 U	1.7 U	1.7 U	NA	3.6 U	NA	NA
Calcium	24000	11400	28800	NA	50100 E*	NA	NA
Chromium	5.4 U	6.9 B	12.8 B	NA	9.8 U	NA	NA
Cobalt	5.5 U	5.5 U	5.5 U	NA	6.6 U	NA	NA
Copper	5.8 U	5.8 U	5.8 U	NA	3.5 U	NA	NA
Iron (Dissolved)	1140	9940	16.5 B	NA	NS	NA	37.6 U
Iron (Total)	1750 N*	10500 N*	4020 N*	NA	1190	NA	354
Lead	6.5 U	6.5 U	8.6 B	NA	7.9 U	NA	NA
Magnesium	1670	3240	1610	NA	869	NA	NA
Manganese (Dissolved)	NA	NA	NA	NA	NA	NA	0.62 U
Manganese (Total)	72.2	158	37.1	NA	77.1 *	NA	18.1
Nickel	5.4 U	7.5 B	8.0 B	NA	6.6 U	NA	NA
Potassium	4300	17900	4810	NA	35100 *	NA	NA
Selenium	5.9 U	5.9 U	5.9 U	NA	4.4 U	NA	NA
Silver	5.7 U	5.7 U	5.7 U	NA	5.6 U	NA	NA
Sodium	6470	13900	6810	NA	21600	NA	NA
Thallium	9.7 J	9.7J	9.7 J	NA	9.2 U	NA	NA
Vanadium	2.8 U	2.8 U	63.5	NA	12.5 B	NA	NA
Zinc	11.7 B	11.2 B	10.9 B	NA	8.1 B	NA	NA
Mercury	0.042 J	0.042 J	0.042 J	NA	0.10 U	NA	NA
ORGANIC ACIDS *(ug/l)*							
Acetic Acid	2000 U	2000 U	2000 U	NA	2000 U	NA	NA
Butyric Acid	2000 U	2000 U	2000 U	NA	2000 U	NA	NA
Citric Acid	1000 U	1000 U	1000 U	NA	1000 U	NA	NA
Formic Acid	2000 U	2000 U	2000 U	NA	2000 U	NA	NA
Oxalic Acid	40 U	40 U	40 U	NA	220	NA	NA
Propionic Acid	2000 U	2000 U	2000 U	NA	5000 U	NA	NA
Pyruvic Acid	120 U	120 U	120 U	NA	120 U	NA	NA
Quinic Acid	1000 U	1000 U	1000 U	NA	1000 U	NA	NA
Succinic Acid	1000 U	1000 U	1000 U	NA	1000 U	NA	NA
Tartaric Acid	1000 U	4000 U	1000 U	NA	3600	NA	NA

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Table 4-44. Analytical Results for Ground Water Samples from Monitoring Wells Not in an Area of Concern.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1C	MW-2C	MW-3C	MW-4C	MW-33D	MW-33D	MW33D
Sample Date	7/13/99	7/13/99	7/12/99	7/19/99	1/6/00	10/26/00	6/11/01
Round	R-1	R-1	R-1	R-1	R-2	R-3	R-4
Parameter							
GENERAL CHEMISTRY *(units in mg/l unless noted)*							
Total Organic Carbon (Quad)	0.70 U	0.68 U	1.1	NA	1.8	NA	NA
Total Hardness	65.2	44.0	77.0	NA	129	NA	NA
Total Dissolved Solids	110	120	136	NA	232	NA	NA
Total Suspended Solids	NS	NS	NS	NA	47	NA	NA
Alkalinity to pH 4.5	60.5	65.7	74.5	NA	116	NA	NA
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	NA	72.4	NA	NA
Chloride (titrimetric)	7.1	18.2	4.9	NA	7.2	NA	NA
Ammonia Nitrogen	0.12	0.20	0.020 U	NA	0.16	NA	NA
Kjeldahl Nitrogen	0.43 J	0.57 U	0.40 U	NA	0.70 J	NA	NA
Nitrate Nitrogen	0.030 U	0.030 U	0.041 J	NA	0.030 U	NA	NA
Nitrite Nitrogen	0.015 U	0.018 J	0.043 J	NA	0.015 U	NA	NA
Ortho-Phosphate as P	0.043	0.0063 J	0.093	NA	0.061	NA	NA
Silica (as SiO2)	14.5	8.98	21.2	NA	12.7	NA	NA
Sulfate (turbidimetric)	11.3	2.0 J	7.3 J	NA	3.6 J	NA	NA
Sulfide	0.0090 U	0.0090 U	0.0560 J	NA	0.0090 U	NA	NA
Chemical Oxygen Demand	12.4 J	12.4 J	27.3 J	NA	11.8 J	NA	NA
Ethane *(ug/l)*	1. U	1. U	1. U	NA	1. U	NA	NA
Ethene *(ug/l)*	1. U	1. U	1. U	NA	1. U	NA	NA
Methane *(ug/l)*	6.1	2. U	1. J	NA	51	NA	NA
Carbon Dioxide	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within Control Limits.
* = Duplicate analysis not within control limits.
P = Concentration difference between primary and confirmation columns >25%.
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = IDL.
E = Estimated due to interference (inorganic qualifier).
D= Compound quantitated on a diluted sample.
ND = Tentatively Identified Compounds (TICs) not detected

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1A	MW-23S	MW-23S	MW-24S	MW-24S	MW-25S	MW-25S	MW-26S	MW-26S
Sample Date	10/31/2000	1/13/00	5/2/01	1/11/00	11/30/2000	1/13/00	10/27/00	1/12/00	5/3/01
Round	R-3	R-2	R-4	R-2	R-3	R-2	R-3	R-2	R-4
Parameter									
VOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acetone	68	6 U	6 UJ	6 U	6 U	6 U	6 U	6600	2400 DJ
Benzene	17	4 J	3 J	2 J	1 J	1 U	1 U	400	280
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U
Bromoform	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	5 U	1 UJ
Bromomethane/ Methyl bromide	2 U	3 U	2 U	3 U	2 U	3 U	2 U	15 U	2 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U	1300	510
Carbon disulfide	1 U	3 U	1 U	3 U	1 U	3 U	1 U	130	130
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	4 J
Chloroethane	2 U	3 U	2 U	3 U	2 U	3 U	2 U	94	59
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 J	15
Chloromethane	2 U	3 U	2 U	3 U	2 U	3 U	2 U	15 U	6
cis-1,2-Dichloroethene	1 U	2 U	1 U	2 U	1 U	2 U	1 U	420	420 D
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U
Dibromochloromethane	1 U	2 U	1 U	2 U	1 U	2 U	1 U	10 U	1 U
1,1-Dichloroethane	1 U	2 U	1 U	2 U	1 U	2 U	1 U	92	93
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 J
1,2-Dichloroethane	1 U	6	5 J	2 U	1 U	2 U	1 U	150	140
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 J	7
Ethylbenzene	2 J	2 U	1 U	2 U	1 J	2 U	1 U	64	59
2-Hexanone	3 U	7 U	3 UJ	7 U	3 U	7 U	3 U	61	21 J
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	310	170
4-Methyl-2-pentanone	3 U	5 U	3 UJ	5 U	3 U	5 U	3 U	820	350 J
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 J	1 U	1 U	1 U	35	32
1,1,2,2-Tetrachloroethane	1 U	2 U	1 U	2 U	1 U	2 U	1 U	10 U	1 U
Toluene	5 J	2 U	1 U	2 U	1 U	2 U	1 U	740	520 D
trans-1,2-Dichloroethene	1 U	2 U	1 U	2 U	1 U	2 U	1 U	10 U	3 J
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	550	430 D
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	74	51
1,1,2-Trichloroethane	1 U	2 U	1 U	2 U	1 U	2 U	1 U	10 U	3 J
Vinyl chloride	1 U	2 U	1 U	2 U	1 U	2 U	1 U	25	26
Xylenes (Total)	27	1 U	1 U	1 J	3 J	1 U	1 U	310	230
Total TICs	30 J	ND	11 J	6 J	6 J	ND	ND	6401 J	1509 J

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1A	MW-23S	MW-23S	MW-24S	MW-24S	MW-25S	MW-25S	MW-26S	MW-26S
Sample Date	10/31/2000	1/13/00	5/2/01	1/11/00	11/30/2000	1/13/00	10/27/00	1/12/00	5/3/01
Round	R-3	R-2	R-4	R-2	R-3	R-2	R-3	R-2	R-4
Parameter									
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acenaphthene	1 U	2 J	NA	1 U	1 U	1 U	NA	3 J	NA
Acenaphthylene	1 U	1 U	NA	1 U	1 U	1 U	NA	12	NA
Anthracene	1 U	1 U	NA	1 U	1 U	1 U	NA	7 J	NA
Benzo(a)anthracene	1 U	1 U	NA	1 U	1 U	1 U	NA	3 J	NA
Benzo(a)pyrene	1 U	1 U	NA	1 U	1 U	1 U	NA	3 J	NA
Benzo(b)fluoranthene	1 U	1 U	NA	1 U	1 U	1 U	NA	2 J	NA
Benzo(g,h,i)perylene	1 U	1 U	NA	1 U	1 U	1 U	NA	2 J	NA
Benzo(k)fluoranthene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
bis(2-Chloroethoxy)methane	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
bis(2-Chloroethyl)ether	5 J	350 D	NA	1 U	5 J	1 U	NA	1800	NA
bis(2-Ethylhexyl)phthalate	2 U	4 J	NA	2 U	3 J	3 J	NA	18	NA
4-Bromophenyl phenyl ether	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
Butyl benzyl phthalate	2 U	2 U	NA	2 U	2 JB	2 U	NA	14	NA
Carbazole	3 U	3 U	NA	3 U	3 U	3 U	NA	3 U	NA
2-Chloronaphthalene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
2-Chlorophenol	1 U	NA	NA	NA	1 U	NA	NA	NA	NA
4-Chloro-3-methylphenol	1 U	NA	NA	NA	1 U	NA	NA	NA	NA
4-Chloroaniline	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
4-Chlorophenyl phenyl ether	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
Chrysene	1 U	1 U	NA	1 U	1 U	1 U	NA	4 J	NA
Dibenz(a,h)anthracene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
Dibenzofuran	1 U	1 J	NA	1 U	1 U	1 U	NA	3 J	NA
1,3-Dichlorobenzene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
1,2-Dichlorobenzene	1 U	1 U	NA	1 U	14	1 U	NA	8 J	NA
1,4-Dichlorobenzene	1 U	1 U	NA	1 U	2 J	1 U	NA	1 J	NA
2,4-Dichlorophenol	1 U	NA	NA	NA	20 U	NA	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
Diethyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
Dimethyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
2,4-Dimethylphenol	1 U	NA	NA	NA	1 U	NA	NA	NA	NA
2,4-Dinitrophenol	21 U	NA	NA	NA	21 U	NA	NA	NA	NA
2,4-Dinitrotoluene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
2,6-Dinitrotoluene	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
4,6-Dinitro-2-methylphenol	5 U	NA	NA	NA	5 U	NA	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	3 J	NA
Di-n-octyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
Fluoranthene	1 U	4 J	NA	1 U	1 U	1 U	NA	8 J	NA
Fluorene	1 U	2 J	NA	1 U	1 J	1 U	NA	12	NA
Hexachlorobenzene	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
Hexachlorobutadiene	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
Hexachlorocyclopentadiene	5 U	5 U	NA	5 U	5 U	5 U	NA	6 U	NA
Hexachloroethane	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1A	MW-23S	MW-23S	MW-24S	MW-24S	MW-25S	MW-25S	MW-26S	MW-26S
Sample Date	10/31/2000	1/13/00	5/2/01	1/11/00	11/30/2000	1/13/00	10/27/00	1/12/00	5/3/01
Round	R-3	R-2	R-4	R-2	R-3	R-2	R-3	R-2	R-4
Parameter									
Indeno(1,2,3-cd)pyrene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 J	NA
Isophorone	1 U	1 U	NA	1 U	1 U	1 U	NA	390 D	NA
2-Methylnaphthalene	1 U	1 U	NA	1 U	1 J	1 U	NA	120	NA
2-Methylphenol	1 U	NA	NA	NA	1 U	NA	NA	NA	NA
4-Methylphenol	3 U	NA	NA	NA	3 U	NA	NA	NA	NA
n-Nitrosodiphenylamine	1 U	1 U	NA	1 J	1 U	1 U	NA	1 U	NA
n-Nitrosodipropylamine	1 U	1 U	NA	1 U	3 J	1 U	NA	1 U	NA
Naphthalene	1 U	NA	NA	NA	1 U	NA	NA	NA	NA
Nitrobenzene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
2-Nitroaniline	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
2-Nitrophenol	1 U	NA	NA	NA	1 U	NA	NA	NA	NA
3-Nitroaniline	3 J	2 U	NA	2 U	3 J	2 U	NA	2 U	NA
4-Nitroaniline	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	NA
4-Nitrophenol	10 U	NA	NA	NA	10 U	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	NA
Pentachlorophenol	3 U	NA	NA	NA	3 U	NA	NA	NA	NA
Phenanthrene	1 U	9 J	NA	1 U	1 U	1 U	NA	36	NA
Phenol	1 U	NA	NA	NA	1 U	NA	NA	NA	NA
Pyrene	1 U	3 J	NA	1 U	1 U	1 U	NA	11 J	NA
1,2,4-Trichlorobenzene	1 U	1 U	NA	3 J	1 U	1 U	NA	6 J	NA
2,4,5-Trichlorophenol	2 U	NA	NA	NA	2 U	NA	NA	NA	NA
2,4,6-Trichlorophenol	2 U	NA	NA	NA	2 U	NA	NA	NA	NA
Total TICs	323 J	4074 J	NA	11 J	304 J	ND	NA	ND	NA
METALS *(ug/l)*									
Aluminum (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	118000
Aluminum (Total)	*82.0 B*	*1470 **	*5430*	*77.0 U**	*65.6 B*	*202000 **	NA	*505000 **	*117000 J*
Antimony	14.0 U	29.0 U	NA	29.0 U	14.0 U	145 U	NA	145 U	NA
Arsenic	8.0 B	5.0 U	NA	5.0 U	5.0 U	536	NA	24.4	NA
Barium	205	132	NA	55.0 B	87.7 B	1200	NA	101	NA
Beryllium	1.9 U	1.9 U	NA	1.9 U	1.9 U	16.0 B	NA	59.2	NA
Cadmium	3.6 U	3.6 U	NA	3.6 U	3.6 U	18.0 U	NA	18.0 U	NA
Calcium	150000	3780	NA	49200	54300	86800	NA	278000	NA
Chromium	6.6 U	9.8 U	NA	9.8 U	6.6 U	1090	NA	581	NA
Cobalt	7.1 U	14.4 B	NA	6.6 U	7.1 U	104 B	NA	275	NA
Copper	2.7 U	3.5 U	NA	3.5 U	2.7 U	508	NA	31.2	NA
Iron (Dissolved)	NA	NS	NA	NA	NA	NA	NA	3900000	1660000
Iron (Total)	39500	11400	33700	11700	26700	665000	NA	3840000	1650000
Lead	9.8 U	7.9 U	NA	7.9 U	9.8 U	790	NA	427	NA
Magnesium	66000	10100	NA	7910	7380	38000	NA	317000	NA
Manganese (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	25400
Manganese (Total)	1280	103	134	172	201	1730	NA	43900	26800
Nickel	8.4 U	19.7 B	NA	6.6 U	8.4 U	204 B	NA	2080	NA

302981

Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1A	MW-23S	MW-23S	MW-24S	MW-24S	MW-25S	MW-25S	MW-26S	MW-26S
Sample Date	10/31/2000	1/13/00	5/2/01	1/11/00	11/30/2000	1/13/00	10/27/00	1/12/00	5/3/01
Round	R-3	R-2	R-4	R-2	R-3	R-2	R-3	R-2	R-4
Parameter									
Potassium	11300	1890	NA	3760	4380	40000	NA	96500	NA
Selenium	3.5 U	4.4 U	NA	4.4 U	3.5 U	22.0 U	NA	332	NA
Silver	3.6 U	5.6 U	NA	5.6 U	3.6 U	28.0 U	NA	28.0 U	NA
Sodium	51500	8390 E*	NA	1830 E*	1940	18600 E*	NA	544000 E*	NA
Thallium	9.5 U	9.2 U	NA	9.2 U	9.5 U	97.4 B	NA	387	NA
Vanadium	2.6 U	3.4 U	NA	3.4 U	2.7 B	2700	NA	496	NA
Zinc	8.6 U	85.2	NA	6.9 B	8.6 U	695	NA	1640	NA
Mercury	0.12 UN	0.10 U	NA	0.10 U	0.12 UN	1.6 B	NA	0.10 U	NA
ORGANIC ACIDS *(ug/l)*									
Acetic Acid	NA	2000 U	NA	2000 U	NA	2000 U	NA	51000	13000
Butyric Acid	NA	2000 U	NA	2000 U	NA	2000 U	NA	28000	9300
Citric Acid	NA	1000 U	NA	3600	NA	1000 U	NA	1000 U	1000 U
Formic Acid	NA	2000 U	NA	2000 U	NA	2000 U	NA	2000 U	2000 U
Oxalic Acid	NA	1000 U	NA	1300	NA	4000 U	NA	190000 U	4000 U
Propionic Acid	NA	2000 U	NA	5000 U	NA	5000 U	NA	9600	2000 U
Pyruvic Acid	NA	120 U	NA	120 U	NA	120 U	NA	120 U	120 U
Quinic Acid	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U	1000 U
Succinic Acid	NA	1000 U	NA	1000 U	NA	1000 U	NA	10000	1000 U
Tartaric Acid	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U	18000
GENERAL CHEMISTRY *(units in mg/l unless noted)*									
Total Organic Carbon (Quad)	52.9	17.4	NA	12.5	37.1	17.8	NA	278	139
Total Hardness	704	47.7	NA	146	165	420	NA	3220	NA
Total Dissolved Solids	850	149	NA	224	67	416	NA	18700	12200
Total Suspended Solids	93	11	NA	19	203	36000	NA	2870	NA
Alkalinity to pH 4.5	NA	0.37 U	NA	132	NA	78.6	NA	0.37 U	0.41 U
Alkalinity to pH 8.3	NA	0.37 U	NA	0.37 U	NA	0.37 U	NA	0.37 U	0.41 U
Chloride (titrimetric)	NA	13.2	NA	3.2	NA	17.6	NA	310	212
Ammonia Nitrogen	NA	0.066 J	NA	0.45	NA	1.23	NA	56.0	28.7
Kjeldahl Nitrogen	NA	0.63 U	NA	1.29 J	NA	5.8 J	NA	55	NA
Nitrate Nitrogen	NA	0.030 U	NA	0.030 U	NA	0.078 J	NA	0.15 U	0.40 U
Nitrite Nitrogen	NA	0.025 J	NA	0.015 U	NA	0.032 J	NA	0.76	0.258
Ortho-Phosphate as P	NA	0.0030 U	NA	0.049	NA	0.0030 U	NA	8.9	NA
Silica (as SiO2)	NA	21.6	NA	14.2	NA	12.2	NA	126	NA
Sulfate (turbidimetric)	NA	60	NA	20.9	NA	300 U	NA	12200	6600
Sulfide	NA	0.0260 J	NA	0.57	NA	0.86 J	NA	2.2	NA
Chemical Oxygen Demand	NA	63	NA	43.7 J	NA	300	NA	2060	NA
Ethane *(ug/l)*	NA	1 J	NA	3 J	NA	1 U	NA	13	18
Ethene *(ug/l)*	NA	1 U	NA	1 U	NA	1 U	NA	14	28
Methane *(ug/l)*	NA	1200	NA	6200	NA	13	NA	580	910
Carbon Dioxide	NA	NA	NA	NA	NA	NA	NA	NA	950000

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-1A	MW-23S	MW-23S	MW-24S	MW-24S	MW-25S	MW-25S	MW-26S	MW-26S
Sample Date	10/31/2000	1/13/00	5/2/01	1/11/00	11/30/2000	1/13/00	10/27/00	1/12/00	5/3/01
Round	R-3	R-2	R-4	R-2	R-3	R-2	R-3	R-2	R-4
Parameter									
POLYCHLORINATED BIPHENYLS *(ug/l)*									
Aroclor 1016	0.10 U	NA	NA	NA	0.11 U	NA	NA	NA	NA
Aroclor 1221	0.10 U	NA	NA	NA	0.11 U	NA	NA	NA	NA
Aroclor 1232	0.10 U	NA	NA	NA	0.11 U	NA	NA	NA	NA
Aroclor 1242	0.14 J	NA	NA	NA	2.6	NA	NA	NA	NA
Aroclor 1248	0.10 U	NA	NA	NA	0.11 U	NA	NA	NA	NA
Aroclor 1254	0.10 U	NA	NA	NA	0.11 U	NA	NA	NA	NA
Aroclor 1260	0.32 J	NA	NA	NA	12	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within Control Limits
* = Duplicate analysis not within control limits.
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = IDL.
E = Estimated due to interference (inorganic qualifier).
D= Compound quantitated on a diluted sample.
ND = Tentatively Identified Compounds (TICs) not detected

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

MW-27S	Sample Location	MW-28S	MW-29S	MW-30S	MW-31S	MW-32S	MW-36S	MW-36S	P-5	S-3A	S-11A	WMW-2B
1/10/00	Sample Date	1/6/00	1/13/00	1/10/00	1/14/00	1/14/00	10/31/00	5/1/01	11/30/2000	11/1/00	11/3/00	11/3/00
R-2	Round	R-2	R-2	R-2	R-2	R-2	R-3	R-4	R-3	R-3	R-3	R-3
	Parameter											
	VOLATILE ORGANIC COMPOUNDS *(ug/l)*											
12 U	Acetone	6 U	8 J	12 J	6 U	180 J	6 U	6 UJ	14 J	6 U	26	6 U
26	Benzene	1 U	1 U	37	1 J	950	8	2 J	26	1 U	10	1 U
2 U	Bromodichloromethane	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U
2 U	Bromoform	1 U	1 U	1 U	1 U	20 U	1 U	1 UJ	1 U	1 U	1 U	1 U
6 U	Bromomethane/ Methyl bromide	3 U	3 U	3 U	3 U	60 U	2 U	2 U	2 U	2 U	2 U	2 U
6 U	2-Butanone	3 U	8 J	6 J	3 U	60 U	3 U	3 U	3 U	3 U	3 U	3 U
6 U	Carbon disulfide	3 U	3 U	3 U	3 U	60 U	1 U	1 U	1 U	1 U	1 U	1 U
2 U	Carbon tetrachloride	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U
2 U	Chlorobenzene	1 U	1 U	280	1 U	41 J	1 U	1 U	2 J	1 U	2 J	1 U
6 U	Chloroethane	3 U	3 U	3 U	3 U	60 U	2 U	2 U	2 J	2 U	2 J	2 U
2 U	Chloroform	1 U	1 U	1 U	1 U	100	1 U	1 U	1 U	1 U	1 U	1 U
6 U	Chloromethane	3 U	3 U	3 U	3 U	60 U	2 U	2 U	2 U	2 U	2 U	2 U
4 J	cis-1,2-Dichloroethene	2 U	2 U	2 U	3 J	17000 D	1 U	1 U	1 J	1 U	1 J	1 U
2 U	cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U
4 U	Dibromochloromethane	2 U	2 U	2 U	2 U	40 U	1 U	1 U	1 U	1 U	1 U	1 U
4 U	1,1-Dichloroethane	2 U	2 U	8	2 U	320	1 U	1 U	3 J	1 U	3 J	1 U
2 U	1,1-Dichloroethene	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U
4 U	1,2-Dichloroethane	2 U	2 U	2 U	2 U	100	1 U	1 U	1 U	1 U	1 U	1 U
2 U	1,2-Dichloropropane	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U
4 U	Ethylbenzene	2 U	2 U	190	3 J	700	1 U	1 U	16	1 U	16	1 U
14 U	2-Hexanone	7 U	7 U	7 U	7 U	140 U	3 U	3 UJ	3 U	3 U	2 J	3 U
4 U	Methylene chloride	2 U	2 U	2 U	2 U	40 U	2 U	2 U	2 U	2 U	2 U	2 U
10 U	4-Methyl-2-pentanone	5 U	5 U	5 U	5 U	270	3 U	3 UJ	3 U	3 U	3 U	3 U
2 U	Styrene	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U
3 J	Tetrachloroethene	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 J	1 U	1 J	1 U
4 U	1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	2 U	40 U	1 U	1 U	1 U	1 U	1 U	1 U
4 U	Toluene	2 U	2 U	83	2 U	2700	16	2 J	2 J	1 U	7	1 U
4 U	trans-1,2-Dichloroethene	2 U	2 U	2 U	2 U	80 J	1 U	1 U	1 U	1 U	1 U	1 U
2 U	trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U
3 J	Trichloroethene	1 U	1 U	1 U	1 U	650	1 U	1 U	1 U	1 U	1 U	1 U
2 U	1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	180	1 U	1 U	1 U	1 U	1 U	1 U
4 U	1,1,2-Trichloroethane	2 U	2 U	2 U	2 U	40 U	1 U	1 U	1 U	1 U	1 U	1 U
4 U	Vinyl chloride	2 U	2 U	2 U	2 U	240	1 U	1 U	1 J	1 U	1 J	1 U
8 J	Xylenes (Total)	1 U	1 U	210	2 J	3300	4 J	1 U	33	1 U	19	1 U
ND	Total TICs	ND	ND	644 J	146 J	110 J	6 J	ND	134 J	ND	ND	ND

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

MW-27S	Sample Location	MW-28S	MW-29S	MW-30S	MW-31S	MW-32S	MW-36S	MW-36S	P-5	S-3A	S-11A	WMW-2B
1/10/00	Sample Date	1/6/00	1/13/00	1/10/00	1/14/00	1/14/00	10/31/00	5/1/01	11/30/2000	11/1/00	11/3/00	11/3/00
R-2	Round	R-2	R-2	R-2	R-2	R-2	R-3	R-4	R-3	R-3	R-3	R-3
	Parameter											
	SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*											
1 U	Acenaphthene	0.9 U	1 U	1 U	6 J	1 J	NA	NA	1 J	NA	0.9 U	NA
1 U	Acenaphthylene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Anthracene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Benzo(a)anthracene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Benzo(a)pyrene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Benzo(b)fluoranthene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Benzo(g,h,i)perylene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Benzo(k)fluoranthene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	bis(2-Chloroethoxy)methane	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	bis(2-Chloroethyl)ether	0.9 U	1 J	1 U	1 U	26	NA	NA	5 J	NA	38	NA
2 U	bis(2-Ethylhexyl)phthalate	2 U	5 J	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
2 U	4-Bromophenyl phenyl ether	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
2 U	Butyl benzyl phthalate	2 U	2 U	2 U	2 U	2 J	NA	NA	4 JB	NA	2 JB	NA
3 U	Carbazole	3 U	3 U	3 U	3 U	3 U	NA	NA	3 U	NA	2 U	NA
1 U	2-Chloronaphthalene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
NA	2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	1 U	NA	0.9 U	NA
NA	4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	1 U	NA	0.9 U	NA
1 U	4-Chloroaniline	0.9 U	1 U	1 U	1 U	2400 D	NA	NA	1 U	NA	0.9 U	NA
1 U	4-Chlorophenyl phenyl ether	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Chrysene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Dibenz(a,h)anthracene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Dibenzofuran	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	1,3-Dichlorobenzene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
2 J	1,2-Dichlorobenzene	0.9 U	1 U	6 J	2 J	19	NA	NA	2 J	NA	0.9 U	NA
1 U	1,4-Dichlorobenzene	0.9 U	1 U	1 U	1 U	2 J	NA	NA	2 J	NA	0.9 U	NA
NA	2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	20 U	NA	0.9 U	NA
2 U	3,3'-Dichlorobenzidine	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
2 U	Diethyl phthalate	2 U	2 U	2 U	2 U	2 J	NA	NA	2 U	NA	2 U	NA
2 U	Dimethyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
NA	2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	150	NA	1 J	NA
NA	2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	21 U	NA	19 U	NA
1 U	2,4-Dinitrotoluene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
2 U	2,6-Dinitrotoluene	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
NA	4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	5 U	NA	5 U	NA
2 U	Di-n-butyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA	2 JB	NA	2 U	NA
2 U	Di-n-octyl phthalate	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
1 U	Fluoranthene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 J	NA	0.9 U	NA
1 U	Fluorene	0.9 U	1 U	1 J	1 U	1 U	NA	NA	3 J	NA	1 J	NA
2 U	Hexachlorobenzene	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
2 U	Hexachlorobutadiene	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
5 U	Hexachlorocyclopentadiene	5 U	5 U	5 U	5 U	5 U	NA	NA	5 U	NA	5 U	NA
1 U	Hexachloroethane	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

MW-27S	Sample Location	MW-28S	MW-29S	MW-30S	MW-31S	MW-32S	MW-36S	MW-36S	P-5	S-3A	S-11A	WMW-2B
1/10/00	Sample Date	1/6/00	1/13/00	1/10/00	1/14/00	1/14/00	10/31/00	5/1/01	11/30/2000	11/1/00	11/3/00	11/3/00
R-2	Round	R-2	R-2	R-2	R-2	R-2	R-3	R-4	R-3	R-3	R-3	R-3
	Parameter											
1 U	Indeno(1,2,3-cd)pyrene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	Isophorone	0.9 U	1 U	1 U	1 U	25	NA	NA	1 U	NA	0.9 U	NA
1 U	2-Methylnaphthalene	0.9 U	1 U	1 J	1 U	20	NA	NA	1 J	NA	0.9 U	NA
NA	2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	1 J	NA	0.9 U	NA
NA	4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	8 J	NA	3 U	NA
1 U	n-Nitrosodiphenylamine	0.9 U	1 U	7 J	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
1 U	n-Nitrosodipropylamine	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
NA	Naphthalene	NA	NA	NA	NA	NA	NA	NA	2 J	NA	0.9 U	NA
1 U	Nitrobenzene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
2 U	2-Nitroaniline	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
NA	2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	1 U	NA	0.9 U	NA
2 U	3-Nitroaniline	2 U	2 U	2 U	2 U	2 U	NA	NA	3 J	NA	2 U	NA
2 U	4-Nitroaniline	2 U	2 U	2 U	2 U	2 U	NA	NA	2 U	NA	2 U	NA
NA	4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	11 U	NA	9 U	NA
1 U	2,2'-Oxybis(1-chloropropane)	0.9 U	1 U	1 U	1 U	1 U	NA	NA	1 U	NA	0.9 U	NA
NA	Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	3 U	NA	3 U	NA
1 U	Phenanthrene	0.9 U	1 U	1 U	1 U	2 J	NA	NA	5 J	NA	0.9 U	NA
NA	Phenol	NA	NA	NA	NA	NA	NA	NA	2 J	NA	0.9 U	NA
1 U	Pyrene	0.9 U	1 U	1 U	1 U	1 U	NA	NA	3 J	NA	0.9 U	NA
2 J	1,2,4-Trichlorobenzene	0.9 U	1 U	1 U	1 U	2 J	NA	NA	5 J	NA	0.9 U	NA
NA	2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	2 U	NA	2 U	NA
NA	2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	2 U	NA	2 U	NA
122 J	Total TICs	ND	367 J	874 J	194 J	3468 J	NA	NA	1677 J	NA	ND	NA
	METALS *(ug/l)*											
NA	Aluminum (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5700 *	Aluminum (Total)	77.0 U*	1640 *	461 *	214 E	508 E	NA	413	12200	NA	35.8 B	NA
29.0 U	Antimony	29.0 U	29.0 U	29.0 U	29.0 U	29.0 U	NA	NA	14.0 U	NA	14.0 U	NA
13.0	Arsenic	5.0 U	5.0 U	50.0 U	21.7	19.9	NA	NA	43.4	NA	5.0 U	NA
24.6 B	Barium	67.5 B	152	37.1 B	31.0 B	58.9 B	NA	NA	87.1 B	NA	210	NA
1.9 U	Beryllium	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	NA	NA	4.3 B	NA	1.9 U	NA
3.6 U	Cadmium	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	NA	NA	3.6 U	NA	3.6 U	NA
4150	Calcium	60900 E*	64900	53700	20400 E	87500 E	NA	NA	41500	NA	139000	NA
92.7	Chromium	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	NA	NA	213	NA	6.6 U	NA
6.6 U	Cobalt	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	NA	NA	7.2 B	NA	7.1 U	NA
10.6 B	Copper	3.5 U	5.5 B	3.5 U	3.5 U	3.5 U	NA	NA	24.3 B	NA	2.7 U	NA
1070	Iron (Dissolved)	NS	21200	NS	NS	NS	NA	NA	NA	NA	NA	NA
6360	Iron (Total)	25.2 B	8070	12600	35200	109000	NA	13300	74500	NA	61900	NA
26.8	Lead	7.9 U	7.9 U	9.1 B	7.9 U	7.9 U	NA	NA	85.8	NA	9.8 U	NA
785	Magnesium	20300	14300	9210	4560 E	35300 E	NA	NA	12000	NA	36000	NA
NA	Manganese (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30.4	Manganese (Total)	608 *	879	527	231 E	2240 E	NA	245	1600	NA	2410	NA
8.8 B	Nickel	6.6 U	19.5 B	6.6 U	6.6 U	6.6 U	NA	NA	37.9 B	NA	8.4 U	NA

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

MW-27S	Sample Location	MW-28S	MW-29S	MW-30S	MW-31S	MW-32S	MW-36S	MW-36S	P-5	S-3A	S-11A	WMW-2B
1/10/00	Sample Date	1/6/00	1/13/00	1/10/00	1/14/00	1/14/00	10/31/00	5/1/01	11/30/2000	11/1/00	11/3/00	11/3/00
R-2	Round	R-2	R-2	R-2	R-2	R-2	R-3	R-4	R-3	R-3	R-3	R-3
	Parameter											
39500	Potassium	13900 *	7150	4690	3000	9930	NA	NA	20900	NA	8440	NA
4.4 U	Selenium	4.5 B	4.4 U	4.4 U	4.4 U	4.4 U	NA	NA	3.5 U	NA	3.5 U	NA
5.6 U	Silver	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	NA	NA	3.6 U	NA	3.6 U	NA
405000 E*	Sodium	18200	54100 E*	139000 E*	109000	426000	NA	NA	343000	NA	18500	NA
9.2 U	Thallium	9.2 U	9.2 U	9.2 U	9.2 U	9.2 U	NA	NA	9.5 U	NA	9.5 U	NA
142	Vanadium	3.4 U	7.5 B	3.4 U	4.0 BE	3.4 UE	NA	NA	196	NA	2.6 U	NA
152	Zinc	13.8 B	710	7.1 B	10.4 BE	173 E	NA	NA	1110	NA	76.4	NA
0.10 U	Mercury	0.10 U	0.10 U	0.10 U	0.10 UN	0.10 UN	NA	NA	0.12 UN	NA	0.12 UN	NA
	ORGANIC ACIDS *(ug/l)*											
2000 U	Acetic Acid	2000 U	2000 U	2000 U	2000 U	2000 U	NA	NA	NA	NA	NA	NA
2000 U	Butyric Acid	2000 U	2000 U	2000 U	2000 U	2000 U	NA	NA	NA	NA	NA	NA
1000 U	Citric Acid	1000 U	1000 U	1000 U	1000 U	4500	NA	NA	NA	NA	NA	NA
2000 U	Formic Acid	2000 U	2000 U	2000 U	2000 U	2000 U	NA	NA	NA	NA	NA	NA
7300 U	Oxalic Acid	180	4700	2600 U	5200 U	23000 U	NA	NA	NA	NA	NA	NA
5000 U	Propionic Acid	5000 U	2000 U	2000 U	5000 U	5000 U	NA	NA	NA	NA	NA	NA
120 U	Pyruvic Acid	120 U	120 U	120 U	120 U	120 U	NA	NA	NA	NA	NA	NA
1000 U	Quinic Acid	1000 U	1000 U	1000 U	1000 U	1000 U	NA	NA	NA	NA	NA	NA
1000 U	Succinic Acid	1000 U	1000 U	1000 U	1000 U	1000 U	NA	NA	NA	NA	NA	NA
1000 U	Tartaric Acid	1000 U	1000 U	11000 B	1000 U	1000 U	NA	NA	NA	NA	NA	NA
	GENERAL CHEMISTRY *(units in mg/l unless noted)*											
32.7	Total Organic Carbon (Quad)	7.9	20.9	72.3	38.5	93	NA	NA	126	NA	27.9	NA
33	Total Hardness	247	218	175	76	386	NA	NA	175	NA	524	NA
1550	Total Dissolved Solids	353	373	704	475	1760	NA	NA	1770	NA	78	NA
7.6 J	Total Suspended Solids	3.7 U	91	48	12.	153	NA	NA	1150	NA	561	NA
407	Alkalinity to pH 4.5	115	282	451	121	457	NA	NA	NA	NA	NA	NA
0.37 U	Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	NA	NA	NA	NA	NA	NA
36.4	Chloride (titrimetric)	25.5	2.5	34.0	25.5	123	NA	NA	NA	NA	NA	NA
4.28	Ammonia Nitrogen	0.020 U	2.09	2.05	1.64	6.45	NA	NA	NA	NA	NA	NA
6.5 J	Kjeldahl Nitrogen	0.98 J	4.6 J	21	3.2 U	10	NA	NA	NA	NA	NA	NA
0.030 U	Nitrate Nitrogen	5.90	0.030 U	0.030 U	0.030 U	0.030 U	NA	NA	NA	NA	NA	NA
0.041 J	Nitrite Nitrogen	0.088	0.061	0.016 J	0.064	0.098	NA	NA	NA	NA	NA	NA
6.09	Ortho-Phosphate as P	0.063	0.032	0.0035 J	0.082	0.039	NA	NA	NA	NA	NA	NA
15.6	Silica (as SiO2)	5.24	21.2	7.11	21.4	14.3	NA	NA	NA	NA	NA	NA
470	Sulfate (turbidimetric)	99	28	46	124	590	NA	NA	NA	NA	NA	NA
3.39	Sulfide	0.0100 J	0.0160 J	0.13	0.20	0.0990 J	NA	NA	NA	NA	NA	NA
154	Chemical Oxygen Demand	24.5 J	146.	229	125	395	NA	NA	NA	NA	NA	NA
12	Ethane *(ug/l)*	1 U	2 J	8.1	3 J	18	NA	NA	NA	NA	NA	NA
1 U	Ethene *(ug/l)*	1 U	1 U	1. J	1 U	85	NA	NA	NA	NA	NA	NA
6900	Methane *(ug/l)*	2 U	4400	14000	3000	5700	NA	NA	NA	NA	NA	NA
NA	Carbon Dioxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 4-45. Analytical Results for Ground Water Samples for Area of Concern 1A. BROS Phase 2 RI/FS; Logan Township, New Jersey.

MW-27S	Sample Location	MW-28S	MW-29S	MW-30S	MW-31S	MW-32S	MW-36S	MW-36S	P-5	S-3A	S-11A	WMW-2B
1/10/00	Sample Date	1/6/00	1/13/00	1/10/00	1/14/00	1/14/00	10/31/00	5/1/01	11/30/2000	11/1/00	11/3/00	11/3/00
R-2	Round	R-2	R-2	R-2	R-2	R-2	R-3	R-4	R-3	R-3	R-3	R-3
	Parameter											
	POLYCHLORINATED BIPHENYLS *(ug/l)*											
NA	Aroclor 1016	NA	NA	NA	NA	NA	NA	NA	5 U	NA	0.095 U	NA
NA	Aroclor 1221	NA	NA	NA	NA	NA	NA	NA	5 U	NA	0.095 U	NA
NA	Aroclor 1232	NA	NA	NA	NA	NA	NA	NA	5 U	NA	0.095 U	NA
NA	Aroclor 1242	NA	NA	NA	NA	NA	NA	NA	74	NA	0.50 P	NA
NA	Aroclor 1248	NA	NA	NA	NA	NA	NA	NA	5 U	NA	0.095 U	NA
NA	Aroclor 1254	NA	NA	NA	NA	NA	NA	NA	5 U	NA	0.095 U	NA
NA	Aroclor 1260	NA	NA	NA	NA	NA	NA	NA	190	NA	0.47 J	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within Control Limits
* = Duplicate analysis not within control limits.
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = IDL.
E = Estimated due to interference (inorganic qualifier).
D= Compound quantitated on a diluted sample.
ND = Tentatively Identified Compounds (TICs) not detected

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Table 4-46. Analytical Results for Ground Water Samples for Areas of Concern 1B, 1C, and 1D.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-3A	MW4A	MW-4A	MW-4A	MW-4A	MW-12A	S-1A	S-1B	MW-13A
Sample Date	7/12/99	7/14/99	1/7/00	10/31/00	4/30/01	7/16/99	7/14/99	7/15/99	11/30/2000
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-1	R-1	R-3
AOC	AOC-1b	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1d
Parameter									
VOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acetone	6 U	6 U	6 U	6 UJ	6 UJ	6 U	6 U	6 U	6 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	14
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Bromomethane/ Methyl bromide	3 U	3 U	3 U	2 U	2 U	3 U	3 U	3 U	2 U
2-Butanone	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U
Carbon disulfide	3 U	3 U	3 U	1 U	1 U	3 U	3 U	3 U	1 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 J
Chloroethane	3 U	3 U	3 U	2 U	2 U	3 U	3 U	3 U	4 J
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	3 U	3 U	3 U	2 U	2 U	3 U	3 U	3 U	2 U
cis-1,2-Dichloroethene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
1,1-Dichloroethane	1 U	1 U	2 U	1 U	1 U	1 U	1 U	2 U	10
1,1-Dichloroethene	2 U	2 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U
1,2-Dichloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
2-Hexanone	7 U	7 U	7 U	3 UJ	3 UJ	7 U	7 U	7 U	3 U
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	5 U	5 U	3 UJ	3 UJ	5 U	5 U	5 U	3 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 J
1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
Toluene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
trans-1,2-Dichloroethene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
Vinyl chloride	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	1 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	19
Total TICs	ND	6 J	ND	ND	ND	5 J	ND	ND	30 J

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Table 4-46. Analytical Results for Ground Water Samples for Areas of Concern 1B, 1C, and 1D.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-3A	MW4A	MW-4A	MW-4A	MW-4A	MW-12A	S-1A	S-1B	MW-13A
Sample Date	7/12/99	7/14/99	1/7/00	10/31/00	4/30/01	7/16/99	7/14/99	7/15/99	11/30/2000
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-1	R-1	R-3
AOC	AOC-1b	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1d
Parameter									
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acenaphthene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Acenaphthylene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Anthracene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(a)anthracene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(a)pyrene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(b)fluoranthene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Benzo(k)fluoranthene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
bis(2-Chloroethoxy)methane	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	5 J
bis(2-Ethylhexyl)phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
4-Bromophenyl phenyl ether	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
Butyl benzyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
Carbazole	2 U	2 U	3 U	NA	NA	2 U	2 U	2 U	3 U
2-Chloronaphthalene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
2-Chlorophenol	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	1 U
4-Chloro-3-methylphenol	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	1 U
4-Chloroaniline	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
4-Chlorophenyl phenyl ether	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Chrysene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Dibenz(a,h)anthracene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Dibenzofuran	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	14
1,4-Dichlorobenzene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	2 J
2,4-Dichlorophenol	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	20 U
3,3'-Dichlorobenzidine	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
Diethyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
Dimethyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
2,4-Dimethylphenol	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	1 U
2,4-Dinitrophenol	15 U	14 U	NA	NA	NA	14 U	14 U	15 U	21 U
2,4-Dinitrotoluene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
2,6-Dinitrotoluene	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
4,6-Dinitro-2-methylphenol	5 U	5 U	NA	NA	NA	5 U	5 U	5 U	5 U
Di-n-butyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
Di-n-octyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U

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Table 4-46. Analytical Results for Ground Water Samples for Areas of Concern 1B, 1C, and 1D.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-3A	MW4A	MW-4A	MW-4A	MW-4A	MW-12A	S-1A	S-1B	MW-13A
Sample Date	7/12/99	7/14/99	1/7/00	10/31/00	4/30/01	7/16/99	7/14/99	7/15/99	11/30/2000
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-1	R-1	R-3
AOC	AOC-1b	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1d
Parameter									
Fluoranthene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Fluorene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Hexachlorobenzene	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
Hexachlorobutadiene	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
Hexachlorocyclopentadiene	5 U	5 U	5 U	NA	NA	5 U	5 U	5 U	5 U
Hexachloroethane	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Indeno(1,2,3-cd)pyrene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Isophorone	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
2-Methylnaphthalene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 J
2-Methylphenol	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	1 U
4-Methylphenol	3 U	3 U	NA	NA	NA	3 U	3 U	3 U	3 U
n-Nitrosodiphenylamine	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
n-Nitrosodipropylamine	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Naphthalene	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	7 J
Nitrobenzene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
2-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
2-Nitrophenol	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	1 U
3-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	3 J
4-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	2 U	2 U
4-Nitrophenol	10 U	10 U	NA	NA	NA	10 U	10 U	10 U	10 U
2,2'-Oxybis(1-chloropropane)	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Pentachlorophenol	3 U	3 U	NA	NA	NA	3 U	3 U	3 U	3 U
Phenanthrene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
Phenol	1 U	1 U	NA	NA	NA	1 U	1 U	1 U	1 U
Pyrene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	2 U	2 U	NA	NA	NA	2 U	2 U	2 U	2 U
2,4,6-Trichlorophenol	2 U	2 U	NA	NA	NA	2 U	2 U	2 U	2 U
Total TICs	ND	ND	ND	NA	NA	ND	ND	ND	
METALS *(ug/l)*									
Aluminum (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum (Total)	855 J	52.0 U	77.0 U*	NA	35.7 B	52.0 U	52.0 U	52.0 U	308
Antimony	25.0 U	25.0 U	29.0 U	NA	NA	25.0 U	25.0 U	25.0 U	14.0 U
Arsenic	7.0 U	14.3	9.1 B	NA	NA	15.1	7.0 U	7.0 U	20.5
Barium	29.8 B	54.6 B	54.5 B	NA	NA	17.5 B	46.0 B	31.5 B	51.3 B
Beryllium	1.7 U	1.7 U	1.9 U	NA	NA	1.7 U	1.7 U	1.7 U	1.9 U

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Table 4-46. Analytical Results for Ground Water Samples for Areas of Concern 1B, 1C, and 1D.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-3A	MW4A	MW-4A	MW-4A	MW-4A	MW-12A	S-1A	S-1B	MW-13A
Sample Date	7/12/99	7/14/99	1/7/00	10/31/00	4/30/01	7/16/99	7/14/99	7/15/99	11/30/2000
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-1	R-1	R-3
AOC	AOC-1b	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1d
Parameter									
Cadmium	1.7 U	1.7 U	3.6 U	NA	NA	1.7 U	1.7 U	1.7 U	3.6 U
Calcium	15100	15200	18300 E*	NA	NA	7750	19200	9210	7600
Chromium	5.4 U	5.4 U	9.8 U	NA	NA	5.4 U	5.4 U	5.4 U	6.6 U
Cobalt	5.5 U	15.5 B	14.4 B	NA	NA	7.4 B	5.5 U	10.6 B	7.1 U
Copper	5.8 U	5.8 U	7.7 B	NA	NA	5.8 U	5.8 U	5.8 U	2.7 U
Iron (Dissolved)	100	40300	NS	NA	NA	67300	58200	5330	NA
Iron (Total)	1680 J	38500	36400	NA	57200	65400	57900	8930	52000
Lead	6.5 U	6.5 U	7.9 U	NA	NA	6.5 U	6.5 U	11.0	9.8 U
Magnesium	3880	6250	6170	NA	NA	6540	12100	6320	2440
Manganese (Dissolved)	NA	NA	NA	NA	NA	NA	NA		NA
Manganese (Total)	174	1800	2000 *	NA	2910	666	2490	626	463
Nickel	7.6 B	5.4 U	6.6 U	NA	NA	5.4 U	5.4 U	5.4 U	8.4 U
Potassium	3330	2310	2920 *	NA	NA	2040	2930	2730	2680
Selenium	5.9 U	5.9 U	4.4 U	NA	NA	5.9 U	5.9 U	5.9 U	3.5 U
Silver	5.7 U	5.7 U	5.6 U	NA	NA	5.7 U	5.7 U	5.7 U	3.6 U
Sodium	8560	21400 E	27200	NA	NA	3650 E	7130 E	5220 J	37600
Thallium	13.3 J	9.7 J	9.2 U	NA	NA	14.2 B	9.7 U	9.7 U	9.5 U
Vanadium	2.8 U	2.8 U	5.0 B	NA	NA	2.8 U	2.8 U	2.8 U	3.6 B
Zinc	21.6 J	48.6 N*	6.4 B	NA	NA	11.5 BN*	286 N*	1510 J	159
Mercury	0.042 J	0.042 J	0.10 U	NA	NA	0.042 U	0.042 U	0.042 U	0.12 UN
ORGANIC ACIDS *(ug/l)*									
Acetic Acid	2000 U	NA	2000 U	NA	NA	2000 U	NA	NA	NA
Butyric Acid	2000 U	NA	2000 U	NA	NA	2000 U	NA	NA	NA
Citric Acid	1000 U	NA	5900	NA	NA	1000 U	NA	NA	NA
Formic Acid	2000 U	NA	2000 U	NA	NA	2000 U	NA	NA	NA
Oxalic Acid	40 U	NA	60000 U	NA	NA	40 U	NA	NA	NA
Propionic Acid	2000 U	NA	5000 U	NA	NA	2000 U	NA	NA	NA
Pyruvic Acid	120 U	NA	120 U	NA	NA	100 U	NA	NA	NA
Quinic Acid	1000 U	NA	1000 U	NA	NA	1000 U	NA	NA	NA
Succinic Acid	1000 U	NA	1000 U	NA	NA	1000 U	NA	NA	NA
Tartaric Acid	1000 U	NA	1000 U	NA	NA	1000 U	NA	NA	NA

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Table 4-46. Analytical Results for Ground Water Samples for Areas of Concern 1B, 1C, and 1D.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-3A	MW4A	MW-4A	MW-4A	MW-4A	MW-12A	S-1A	S-1B	MW-13A
Sample Date	7/12/99	7/14/99	1/7/00	10/31/00	4/30/01	7/16/99	7/14/99	7/15/99	11/30/2000
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-1	R-1	R-3
AOC	AOC-1b	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1c	AOC-1d
Parameter									
GENERAL CHEMISTRY *(units in mg/l unless noted)*									
Total Organic Carbon (Quad)	1.2	7.3	7.9	NA	NA	8.0	7.6	1.7 U	NA
Total Hardness	56.0	78	75	NA	NA	61.5	180	55.0	NA
Total Dissolved Solids	108	201	215	NA	NA	130.	185	91	NA
Total Suspended Solids	NS	12	21	NA	NA	38	57	13	NA
Alkalinity to pH 4.5	22.6	101	61.8	NA	NA	94.8	98.6	22.3	NA
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	NA	NA	0.37 U	0.37 U	0.37 U	NA
Chloride (titrimetric)	6.5	4.6	6.2	NA	NA	13.3	10.2	18.5	NA
Ammonia Nitrogen	0.028 J	0.64	0.74	NA	NA	1.24	1.11	0.46	NA
Kjeldahl Nitrogen	0.41 J	1.3	1.21 J	NA	NA	2.0 U	1.8 U	0.89 U	NA
Nitrate Nitrogen	0.076 J	0.030 U	0.030 U	NA	NA	NA	0.030 U	NA	NA
Nitrite Nitrogen	0.015 J	0.081	0.065	NA	NA	0.112	0.109	0.015 U	NA
Ortho-Phosphate as P	0.027	0.0127 J	0.0129 J	NA	NA	0.0187 J	0.0038 J	0.0157 J	NA
Silica (as SiO2)	7.85	16.0	9.59	NA	NA	6.43	2.97	2.57	NA
Sulfate (turbidimetric)	43	51	74	NA	NA	6.0 U	10.9 J	18	NA
Sulfide	0.0090 U	0.0090 U	0.0490 J	NA	NA	0.0400 U	0.41	1.16	NA
Chemical Oxygen Demand	16.6 J	35.8 J	30.9 J	NA	NA	44.3 U	40.2 J	16.6 U	NA
Ethane *(ug/l)*	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	NA
Ethene *(ug/l)*	1 U	1 U	1 U	NA	NA	1 U	1 U	1 U	NA
Methane *(ug/l)*	1 U	1200	1000	NA	NA	2200	520	23	NA
Carbon Dioxide	NA	NA	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.
U = Compound was not detected.
N = (Inorganic) Spike Sample not within Control Limits.
* = Duplicate analysis not within control limits.
J = Estimated Value.
B = (Inorganic) Value is <CRDL, but > = IDL.
E = Estimated due to interference (inorganic qualifier).
D= Compound quantitated on a diluted sample.
ND = Tentatively Identified Compounds (TICs) not detected

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Table 4-47. Analytical Results for Ground Water Samples for Area of Concern 2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23I	MW-23I	MW-23I	MW-26I	MW-26I	MW-26I	MW-27I	MW-27I	MW-32I	MW-32I
Sample Date	1/13/00	11/1/00	5/4/01	1/12/00	11/1/00	5/4/01	1/7/00	10/31/00	11/21/00	5/3/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-3	R-4
Parameter										
VOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acetone	6 U	6 U	6 UJ	21 B	6. U	21 J	6 J	6 U	18 J	15 UJ
Benzene	2 J	3 J	1 J	450	430	390 D	54	54	620 D	520
Bromodichloromethane	1 U	1 U	1 U	1 U	1U	1 U	1 U	1 U	1 U	3 U
Bromoform	1 U	1 U	1 UJ	1 U	1U	1 UJ	1 U	1 U	1 U	3 UJ
Bromomethane/ Methyl bromide	3 U	2 U	2 U	3 U	2 U	2 U	3 U	2 U	2 U	5 U
2-Butanone	3 U	3 U	3 UJ	5 J	3 U	4 J	3 U	3 U	32	8 UJ
Carbon disulfide	3 U	1 U	1 U	3 U	1U	1 U	3 U	1 U	1 J	3 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1U	1 U	1 U	1 U	1 U	3 U
Chlorobenzene	1 U	1 U	1 U	9	7	8	2 J	3 J	120	120
Chloroethane	3 U	2 U	2 U	5 J	4 J	3 J	3 U	2 U	2 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	33	25
Chloromethane	3 U	2 U	2 U	3 U	2 U	2 U	3 U	2 U	2 U	5 UJ
cis-1,2-Dichloroethene	2 U	1 U	1 U	2 J	1 J	2 J	170	130	7300 D	5800 D
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3 U
Dibromochloromethane	2 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U	3 U
1,1-Dichloroethane	2 U	1 U	1 U	7	7	7	14	14	180	140
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1U	1 U	1 U	1 J	19	13
1,2-Dichloroethane	2 U	1 U	1 U	2 U	1U	1 U	5 J	6	56	3 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1U	1 U	1 U	1 J	4 J	3 U
Ethylbenzene	2 U	1 U	1 U	90	73	72	2 U	1 U	330 D	310
2-Hexanone	7 U	3 U	3 UJ	7 U	3 U	3 UJ	7 U	3 U	3 U	8 U
Methylene chloride	2 U	2 U	2 U	2 U	2U	2 U	2 U	2 U	2 U	5 U
4-Methyl-2-pentanone	5 U	3 U	3 UJ	5 U	3 U	3 UJ	5 U	3 U	4 J	8 UJ
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3 U
Tetrachloroethene	1 U	1 U	1 U	2 J	1 U	1 U	1 U	1 U	10	7 J
1,1,2,2-Tetrachloroethane	2 U	1 U	1 U	2 U	1U	1 U	2 U	1 U	1 U	3 U
Toluene	2 U	1 U	1 U	270	80	20	2 U	1 U	200	45
trans-1,2-Dichloroethene	2 U	1 U	1 U	2 U	1 U	1 J	2 U	1 J	76	48
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3 U
Trichloroethene	1 U	1 U	1 U	3 J	1 U	1 U	23	42	44	13
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1U	1 U	1 U	2 J	37	17
1,1,2-Trichloroethane	2 U	1 U	1 U	2 U	1U	1 U	2 U	1 U	2 J	3 U
Vinyl chloride	2 U	1 U	1 U	2 U	1 U	1 U	75	48	130	94
Xylenes (Total)	1 U	1 U	1 U	230	100	74	2 J	3 J	710	190
Total TICs	ND	ND	ND	378 J	ND	4459 J	ND	ND	180 J	802 J

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Table 4-47. Analytical Results for Ground Water Samples for Area of Concern 2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23I	MW-23I	MW-23I	MW-26I	MW-26I	MW-26I	MW-27I	MW-27I	MW-32I	MW-32I
Sample Date	1/13/00	11/1/00	5/4/01	1/12/00	11/1/00	5/4/01	1/7/00	10/31/00	11/21/00	5/3/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-3	R-4
Parameter										
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acenaphthene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Acenaphthylene	1 U	NA	NA	1 J	NA	NA	0.9 U	NA	NA	NA
Anthracene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Benzo(a)anthracene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Benzo(a)pyrene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Benzo(b)fluoranthene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Benzo(g,h,i)perylene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Benzo(k)fluoranthene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
bis(2-Chloroethoxy)methane	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
bis(2-Chloroethyl)ether	20	NA	NA	6000 D	NA	NA	140	NA	NA	NA
bis(2-Ethylhexyl)phthalate	4 J	NA	NA	3 J	NA	NA	2 U	NA	NA	NA
4-Bromophenyl phenyl ether	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
Butyl benzyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
Carbazole	3 U	NA	NA	3 U	NA	NA	3 U	NA	NA	NA
2-Chloronaphthalene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
4-Chlorophenyl phenyl ether	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Chrysene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Dibenz(a,h)anthracene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Dibenzofuran	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
1,3-Dichlorobenzene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
1,2-Dichlorobenzene	1 U	NA	NA	5 J	NA	NA	0.9 U	NA	NA	NA
1,4-Dichlorobenzene	1 U	NA	NA	1 J	NA	NA	0.9 U	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
Diethyl phthalate	2 U	NA	NA	6 J	NA	NA	2 J	NA	NA	NA
Dimethyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
2,6-Dinitrotoluene	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA

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Table 4-47. Analytical Results for Ground Water Samples for Area of Concern 2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23I	MW-23I	MW-23I	MW-26I	MW-26I	MW-26I	MW-27I	MW-27I	MW-32I	MW-32I
Sample Date	1/13/00	11/1/00	5/4/01	1/12/00	11/1/00	5/4/01	1/7/00	10/31/00	11/21/00	5/3/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-3	R-4
Parameter										
Di-n-octyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
Fluoranthene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Fluorene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Hexachlorobenzene	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
Hexachlorobutadiene	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
Hexachlorocyclopentadiene	6 U	NA	NA	5 U	NA	NA	5 U	NA	NA	NA
Hexachloroethane	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Isophorone	1 U	NA	NA	6 J	NA	NA	2 J	NA	NA	NA
2-Methylnaphthalene	1 U	NA	NA	11	NA	NA	0.9 U	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
n-Nitrosodipropylamine	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
2-Nitroaniline	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
4-Nitroaniline	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	1 U	NA	NA	2 J	NA	NA	0.9 U	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
1,2,4-Trichlorobenzene	1 U	NA	NA	1 U	NA	NA	0.9 U	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TICs	199 J	NA	NA	4845	NA	NA	347 J	NA	NA	NA
METALS *(ug/l)*										
Aluminum (Dissolved)	NA	NA	31.9 U	NA	NA	31.9 U	NA	NA	NA	31.9 U
Aluminum (Total)	179 B*	NA	1290 J	380 *	NA	31.9 UJ	218 *	NA	NA	31.9 UJ
Antimony	29.0 U	NA	NA	29.0 U	NA	NA	29.0 U	NA	NA	NA
Arsenic	5.2 B	NA	NA	40.5	NA	NA	7.5 B	NA	NA	NA

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Table 4-47. Analytical Results for Ground Water Samples for Area of Concern 2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23I	MW-23I	MW-23I	MW-26I	MW-26I	MW-26I	MW-27I	MW-27I	MW-32I	MW-32I
Sample Date	1/13/00	11/1/00	5/4/01	1/12/00	11/1/00	5/4/01	1/7/00	10/31/00	11/21/00	5/3/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-3	R-4
Parameter										
Barium	23.2 B	NA	NA	54.9 B	NA	NA	29.3 B	NA	NA	NA
Beryllium	1.9 U	NA	NA	1.9 U	NA	NA	1.9 U	NA	NA	NA
Cadmium	3.6 U	NA	NA	3.6 U	NA	NA	3.6 U	NA	NA	NA
Calcium	13400	NA	NA	16300	NA	NA	19500 E*	NA	NA	NA
Chromium	9.8 U	NA	NA	9.8 U	NA	NA	21.3 B	NA	NA	NA
Cobalt	6.6 U	NA	NA	6.6 U	NA	NA	30.6 B	NA	NA	NA
Copper	3.5 U	NA	NA	3.5 U	NA	NA	3.5 U	NA	NA	NA
Iron (Dissolved)	NS	NA	28900	144000	NA	172000	35100	NA	NA	387000
Iron (Total)	41200	NA	38000	150000	NA	172000	37200	NA	NA	370000
Lead	7.9 U	NA	NA	8.3 B	NA	NA	7.9 U	NA	NA	NA
Magnesium	14400	NA	NA	14800	NA	NA	16300	NA	NA	NA
Manganese (Dissolved)	NA	NA	201	NA	NA	598	NA	NA	NA	6160
Manganese (Total)	287	NA	214	334	NA	554	1160 *	NA	NA	5610
Nickel	6.6 U	NA	NA	6.6 U	NA	NA	40.2 B	NA	NA	NA
Potassium	4670	NA	NA	27600	NA	NA	13200 *	NA	NA	NA
Selenium	4.4 U	NA	NA	4.4 U	NA	NA	4.4 U	NA	NA	NA
Silver	5.6 U	NA	NA	5.6 U	NA	NA	5.6 U	NA	NA	NA
Sodium	8680 E*	NA	NA	81600 E*	NA	NA	28900	NA	NA	NA
Thallium	9.2 U	NA	NA	17.3 B	NA	NA	9.2 U	NA	NA	NA
Vanadium	3.4 U	NA	NA	25.7	NA	NA	6.5 B	NA	NA	NA
Zinc	9.7 B	NA	NA	14.3 B	NA	NA	2240	NA	NA	NA
Mercury	0.10 U	NA	NA	0.10 U	NA	NA	0.10 U	NA	NA	NA
ORGANIC ACIDS *(ug/l)*										
Acetic Acid	2000 U	NA	2000 U	2000 U	NA	2000 U	2000 U	NA	NA	2000 U
Butyric Acid	2000 U	NA	2000 U	2000 U	NA	2000 U	2000 U	NA	NA	10000
Citric Acid	1000 U	NA	1000 U	1000 U	NA	1000 U	1000 U	NA	NA	1000 U
Formic Acid	2000 U	NA	2000 U	2000 U	NA	2000 U	2000 U	NA	NA	2000 U
Oxalic Acid	850	NA	40 U	17000 U	NA	2000 U	4900 U	NA	NA	2000 U
Propionic Acid	2000 U	NA	2000 U	28000	NA	29000	5000 U	NA	NA	7800
Pyruvic Acid	120 U	NA	120 U	120 U	NA	120 U	120 U	NA	NA	120 U
Quinic Acid	1000 U	NA	1000 U	1000 U	NA	1000 U	1000 U	NA	NA	1000 U
Succinic Acid	1000 U	NA	1000 U	1000 U	NA	1000 U	1000 U	NA	NA	1000 U
Tartaric Acid	1000 U	NA	1000 U	1000 U	NA	11000	1000 U	NA	NA	12000

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Table 4-47. Analytical Results for Ground Water Samples for Area of Concern 2. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23I	MW-23I	MW-23I	MW-26I	MW-26I	MW-26I	MW-27I	MW-27I	MW-32I	MW-32I
Sample Date	1/13/00	11/1/00	5/4/01	1/12/00	11/1/00	5/4/01	1/7/00	10/31/00	11/21/00	5/3/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-3	R-4
Parameter										
GENERAL CHEMISTRY *(units in mg/l unless noted)*										
Total Organic Carbon (Quad)	6.7	NA	4.3	103	NA	92	13.4	NA	NA	90
Total Hardness	98	NA	NA	171	NA	NA	123	NA	NA	NA
Total Dissolved Solids	146	NA	101	537	NA	731	338	NA	NA	2660
Total Suspended Solids	137	NA	NA	155	NA	NA	18	NA	NA	NA
Alkalinity to pH 4.5	70.8	NA	23.5	167	NA	219	46.4	NA	NA	171
Alkalinity to pH 8.3	0.37 U	NA	0.41 U	0.37 U	NA	0.41 U	0.37 U	NA	NA	0.41 U
Chloride (titrimetric)	20.4	NA	20.8	121	NA	124	38.9	NA	NA	150
Ammonia Nitrogen	0.51	NA	0.53 J	10.7	NA	12.3	3.00	NA	NA	9.32
Kjeldahl Nitrogen	0.86 J	NA	NA	13	NA	NA	3.7	NA	NA	NA
Nitrate Nitrogen	0.030 U	NA	0.20 UJ	0.15 U	NA	0.20 U	0.030 U	NA	NA	0.20 U
Nitrite Nitrogen	0.084	NA	0.054 J	0.163	NA	0.156	0.067	NA	NA	0.231
Ortho-Phosphate as P	0.0030 U	NA	NA	0.0030 U	NA	NA	0.035	NA	NA	NA
Silica (as SiO2)	6.16	NA	NA	6.78	NA	NA	10.0	NA	NA	NA
Sulfate (turbidimetric)	10.8 J	NA	26	7.5 U	NA	179	137	NA	NA	1390
Sulfide	0.0220 J	NA	NA	0.34	NA	NA	0.0190 J	NA	NA	NA
Chemical Oxygen Demand	33.0 J	NA	NA	412	NA	NA	63	NA	NA	NA
Ethane *(ug/l)*	7.3	NA	4 J	230	NA	160	170	NA	NA	37J
Ethene *(ug/l)*	1 U	NA	1 U	61	NA	13	61	NA	NA	42J
Methane *(ug/l)*	1100	NA	250	46000	NA	38000	5200	NA	NA	22000
Carbon Dioxide	NA	NA	56000	NA	NA	440000	NA	NA	NA	560000

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

ND = Tentatively Identified Compounds (TICs) not detected

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Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-4D	MW-5B	MW-5B	MW-5B	MW-5B	MW-6B	MW-7B	MW-7B	MW-23D	MW-23D
Sample Date	1/7/00	7/12/99	1/6/00	10/31/00	5/2/01	7/12/99	7/9/99	10/25/00	1/13/00	11/2/00
Round	R-2	R-1	R-2	R-3	R-4	R-1	R-1	R-3	R-2	R-3
Parameter										
VOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acetone	11 J	6 U	7 J	6 UJ	6 UJ	6 U	6 UJ	6 U	32000 D	37000J
Benzene	130	35	30	31	21	1 U	14	18	960	540
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U
Bromoform	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	10 U	10 U
Bromomethane/ Methyl bromide	3 U	3 U	3 U	2 U	2 U	3 U	3 U	2 U	30 U	20 U
2-Butanone	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	5100	3100J
Carbon disulfide	3 U	3 U	3 U	1 U	1 U	3 U	3 U	1 U	2000	1,200
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 UJ
Chlorobenzene	6	24	21	19	16	1 U	1 U	1 U	80	41 J
Chloroethane	3 U	3 U	3 U	2 U	2 U	3 U	3 U	2 U	30 U	20 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	68	36 J
Chloromethane	3 U	3 U	3 U	2 U	2 U	3 U	3 U	2 U	30 U	20 U
cis-1,2-Dichloroethene	140	68	58	56	41	3 J	6	8	1700	940
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U
Dibromochloromethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	20 U	10 U
1,1-Dichloroethane	49	9	7	7	5 J	1 U	3 J	3 J	82	44 J
1,1-Dichloroethene	5 J	2 J	1 J	2 J	1 J	2 U	1 U	1 U	69	37 J
1,2-Dichloroethane	27	11	7	11	6	2 U	3 J	3 J	470	250
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	34 J	24 J
Ethylbenzene	5 J	2 U	2 U	1 U	1 U	2 U	2 U	1 U	440	240
2-Hexanone	7 U	7 U	7 U	3 UJ	3 UJ	7 U	7 U	3 U	70 U	30 UJ
Methylene chloride	4 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2400	1,300
4-Methyl-2-pentanone	5 U	5 U	5 U	3 UJ	3 UJ	5 U	5 U	3 U	3900 JD	5300J
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U
Tetrachloroethene	20	18	18	16	12	1 J	1 U	1 U	59	35 J
1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	140	82
Toluene	6	2 U	2 U	1 U	1 U	2 U	2 U	1 U	2900	1.6
trans-1,2-Dichloroethene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	24 J	12 J
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U
Trichloroethene	240	280	220	220	160	19	1 U	1 U	2800 D	3200 D
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	42 J	26 J
1,1,2-Trichloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	26 J	14 J
Vinyl chloride	93	39	30	31	23	2 U	3 J	4 J	74	42 J
Xylenes (Total)	8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1400	820
Total TICs	29 J	44 J	49 J	55 J	ND	ND	ND	ND	3684 J	230 J

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Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-4D	MW-5B	MW-5B	MW-5B	MW-5B	MW-6B	MW-7B	MW-7B	MW-23D	MW-23D
Sample Date	1/7/00	7/12/99	1/6/00	10/31/00	5/2/01	7/12/99	7/9/99	10/25/00	1/13/00	11/2/00
Round	R-2	R-1	R-2	R-3	R-4	R-1	R-1	R-3	R-2	R-3
Parameter										
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acenaphthene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Acenaphthylene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Anthracene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Benzo(a)anthracene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Benzo(a)pyrene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Benzo(b)fluoranthene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Benzo(g,h,i)perylene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Benzo(k)fluoranthene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
bis(2-Chloroethoxy)methane	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
bis(2-Chloroethyl)ether	1500 D	99	160 D	NA	NA	3 J	5 J	NA	1800 D	NA
bis(2-Ethylhexyl)phthalate	2 U	3 N	2 U	NA	NA	2 U	2 U	NA	2 U	NA
4-Bromophenyl phenyl ether	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
Butyl benzyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
Carbazole	3 U	2 U	3 U	NA	NA	2 U	2 U	NA	3 U	NA
2-Chloronaphthalene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
2-Chlorophenol	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
4-Chloro-3-methylphenol	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
4-Chloroaniline	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	17	NA
4-Chlorophenyl phenyl ether	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Chrysene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Dibenz(a,h)anthracene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Dibenzofuran	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
1,3-Dichlorobenzene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
1,2-Dichlorobenzene	1 J	0.9 U	1 U	NA	NA	1 U	1 U	NA	33	NA
1,4-Dichlorobenzene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	3 J	NA
2,4-Dichlorophenol	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
Diethyl phthalate	4 J	2 U	2 U	NA	NA	2 U	2 U	NA	7 J	NA
Dimethyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	3 J	NA
2,4-Dimethylphenol	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
2,4-Dinitrophenol	NA	14 U	NA	NA	NA	14 U	15 U	NA	NA	NA
2,4-Dinitrotoluene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
2,6-Dinitrotoluene	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
4,6-Dinitro-2-methylphenol	NA	5 U	NA	NA	NA	5 U	5 U	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-4D	MW-5B	MW-5B	MW-5B	MW-5B	MW-6B	MW-7B	MW-7B	MW-23D	MW-23D
Sample Date	1/7/00	7/12/99	1/6/00	10/31/00	5/2/01	7/12/99	7/9/99	10/25/00	1/13/00	11/2/00
Round	R-2	R-1	R-2	R-3	R-4	R-1	R-1	R-3	R-2	R-3
Parameter										
Di-n-octyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
Fluoranthene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Fluorene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Hexachlorobenzene	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
Hexachlorobutadiene	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
Hexachlorocyclopentadiene	5 U	5 U	5 U	NA	NA	5 U	5 U	NA	5 U	NA
Hexachloroethane	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Indeno(1,2,3-cd)pyrene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Isophorone	19	0.9 U	1 U	NA	NA	1 U	1 U	NA	1500 D	NA
2-Methylnaphthalene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	4 J	NA
2-Methylphenol	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
4-Methylphenol	NA	3 U	NA	NA	NA	3 U	3 U	NA	NA	NA
n-Nitrosodiphenylamine	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
n-Nitrosodipropylamine	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Naphthalene	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
Nitrobenzene	1 J	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
2-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
2-Nitrophenol	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
3-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
4-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	2 U	NA
4-Nitrophenol	NA	9 U	NA	NA	NA	10 U	10 U	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Pentachlorophenol	NA	3 U	NA	NA	NA	3 U	3 U	NA	NA	NA
Phenanthrene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
Phenol	NA	0.9 U	NA	NA	NA	1 U	1 U	NA	NA	NA
Pyrene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
1,2,4-Trichlorobenzene	1 U	0.9 U	1 U	NA	NA	1 U	1 U	NA	1 U	NA
2,4,5-Trichlorophenol	NA	2 U	NA	NA	NA	2 U	2 U	NA	NA	NA
2.4.6-Trichlorophenol	NA	2 U	NA	NA	NA	2 U	2 U	NA	NA	NA
Total TICs	1005 J	389 J	499 J	NA	NA	9 J	83 J	NA	4205	NA
METALS *(ug/l)*										
Aluminum (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum (Total)	7950 *	152 BN*	77.0 U*	NA	88.6 B	262 N*	53.7 BN*	NA	361000 *	NA
Antimony	29.0 U	25.0 U	29.0 U	NA	NA	25.0 U	25.0 U	NA	145 U	NA
Arsenic	5.0 U	7.0 U	5.0 U	NA	NA	7.0 U	7.0 U	NA	5.0 U	NA

303001

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-4D	MW-5B	MW-5B	MW-5B	MW-5B	MW-6B	MW-7B	MW-7B	MW-23D	MW-23D
Sample Date	1/7/00	7/12/99	1/6/00	10/31/00	5/2/01	7/12/99	7/9/99	10/25/00	1/13/00	11/2/00
Round	R-2	R-1	R-2	R-3	R-4	R-1	R-1	R-3	R-2	R-3
Parameter										
Barium	34.2 B	91.0 B	94.7 B	NA	NA	90.5 B	58.5 B	NA	68.1 B	NA
Beryllium	3.5 B	1.7 U	1.9 U	NA	NA	1.7 U	1.7 U	NA	20.6 B	NA
Cadmium	3.6 U	1.7 U	3.6 U	NA	NA	1.7 U	1.7 U	NA	18.0 U	NA
Calcium	36700 E*	7370	7580 E*	NA	NA	11800	3770	NA	106000	NA
Chromium	38.5	7.8 B	9.8 U	NA	NA	5.4 U	5.4 U	NA	661	NA
Cobalt	31.1 B	7.4 B	8.3 B	NA	NA	13.4 B	8.5 B	NA	77.6	NA
Copper	11.0 B	5.8 U	3.5 U	NA	NA	5.8 U	5.8 U	NA	46.4	NA
Iron (Dissolved)	NS	1040	NS	NA	NA	90.3 B	785	495	NS	637000
Iron (Total)	74500	1140 N*	627	NA	198	375 N*	807 N*	549	704000	735000
Lead	7.9 U	6.5 U	7.9 U	NA	NA	6.5 U	6.5 U	NA	39.5 U	NA
Magnesium	19200	3630	3620	NA	NA	9890	2230	NA	63400	NA
Manganese (Dissolved)	NA	NA	NA	NA	NA	NA	NA	213	NA	5220J
Manganese (Total)	1220 *	143	135 *	NA	112	836	183	216	4660	4160J
Nickel	70.1	21.1 B	19.8 B	NA	NA	22.2 B	8.8 B	NA	254	NA
Potassium	8660 *	2670	2920 *	NA	NA	6970	2290	NA	52800	NA
Selenium	4.4 U	5.9 U	4.4 U	NA	NA	5.9 U	5.9 U	NA	22.0 U	NA
Silver	5.6 U	5.7 U	5.6 U	NA	NA	5.7 U	5.7 U	NA	5.6 U	NA
Sodium	83400	20600	22200	NA	NA	6020	29200	NA	130000 E*	NA
Thallium	9.2 U	9.7 U	9.2 U	NA	NA	9.7 U	9.7 U	NA	70.4 B	NA
Vanadium	148	2.8 U	3.4 U	NA	NA	2.8 U	2.8 U	NA	2080	NA
Zinc	488	49.3	53.4	NA	NA	36.6	24.2 B	NA	5320	NA
Mercury	0.10 U	0.042 U	0.10 U	NA	NA	0.042 U	0.042 U	NA	0.10 U	NA
ORGANIC ACIDS *(ug/l)*										
Acetic Acid	2000 U	NA	2000 U	NA	NA	NA	NA	2000 U	60000	61000
Butyric Acid	2000 U	NA	2000 U	NA	NA	NA	NA	2000 U	12000	14000
Citric Acid	1000 U	NA	1000 U	NA	NA	NA	NA	1000 UJ	1000 U	100000 UJ
Formic Acid	2000 U	NA	2000 U	NA	NA	NA	NA	2000 U	3500 J	4200 J
Oxalic Acid	11000 U	NA	40 U	NA	NA	NA	NA	200 U	32000 U	4000 U
Propionic Acid	5000 U	NA	5000 U	NA	NA	NA	NA	10000 U	23000	18000
Pyruvic Acid	120 U	NA	120 U	NA	NA	NA	NA	120 U	120 U	120 U
Quinic Acid	1000 U	NA	1000 U	NA	NA	NA	NA	1000 U	1000 U	1000 U
Succinic Acid	1000 U	NA	1000 U	NA	NA	NA	NA	1000 U	1000 U	1000 U
Tartaric Acid	10000 U	NA	1000 U	NA	NA	NA	NA	5000 U	1000 U	27000

303002

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-4D	MW-5B	MW-5B	MW-5B	MW-5B	MW-6B	MW-7B	MW-7B	MW-23D	MW-23D
Sample Date	1/7/00	7/12/99	1/6/00	10/31/00	5/2/01	7/12/99	7/9/99	10/25/00	1/13/00	11/2/00
Round	R-2	R-1	R-2	R-3	R-4	R-1	R-1	R-3	R-2	R-3
Parameter										
GENERAL CHEMISTRY *(units in mg/l unless noted)*										
Total Organic Carbon (Quad)	17.8	10.8	11.3	NA	NA	1.2	9.4	9.6	218	214
Total Hardness	201	37.1	33.5	NA	NA	73.0	21.6	NA	594	NA
Total Dissolved Solids	758	124	124	NA	NA	129	136	NA	6540	NA
Total Suspended Solids	147	NA	4.0 J	NA	NA	NA	NA	NA	110	NA
Alkalinity to pH 4.5	0.37 U	5.7	5.6	NA	NA	2.2	6.3	1.1	0.37 U	0.37 U
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	NA	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloride (titrimetric)	111	37.9	36.3	NA	NA	16.3	32.2	32.7	163	169
Ammonia Nitrogen	1.59	0.18	0.15	NA	NA	0.048 J	0.088 U	0.11	8.45	9.67
Kjeldahl Nitrogen	2.7	0.57 J	0.78 J	NA	NA	0.43 J	0.40 U	NA	20	NA
Nitrate Nitrogen	0.030 U	0.030 U	0.049 J	NA	NA	6.38	0.030 U	0.030 U	0.15 U	0.031 J
Nitrite Nitrogen	0.107	0.015 J	0.025 J	NA	NA	0.015 J	0.015 U	0.015 U	0.301	0.172
Ortho-Phosphate as P	0.070	0.0078 J	0.043	NA	NA	0.0132 J	0.0112 J	NA	2.55	NA
Silica (as SiO2)	22.2	11.7	10.9	NA	NA	7.13	9.69	NA	147	NA
Sulfate (turbidimetric)	380	16.5	19.0	NA	NA	45	30.2	27.9	4300	4300
Sulfide	0.0090 U	0.0090 U	0.0090 U	NA	NA	0.0090 U	0.0090 U	NA	0.36	NA
Chemical Oxygen Demand	101	55	54	NA	NA	10.2 J	35.8 J	NA	2480	NA
Ethane *(ug/l)*	120	58	54	NA	NA	1U	4J	4 J	27	31J
Ethene *(ug/l)*	140	52	46	NA	NA	1U	3J	3 J	110	130J
Methane *(ug/l)*	10000	5100	4500	NA	NA	4J	2500	2200	15000	14000J
Carbon Dioxide	NA	NA	NA	NA	NA	NA	NA	240000	NA	1100000

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

ND = Tentatively Identified Compounds (TICs) not detected

303003

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23D	MW-26D	MW-26D	MW-26D	MW-27D	MW-32D	MW-32D	MW-36D	MW-37D	S-1C
Sample Date	5/4/01	1/12/00	11/3/00	5/4/01	1/10/00	11/21/00	5/3/01	8/14/2002	8/14/2002	7/15/99
Round	R-4	R-2	R-3	R-4	R-2	R-3	R-4	TS	TS	R-1
Parameter										
VOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acetone	24000 DJ	37000	30000 D	26000 DJ	8 J	49	75J	35000	27000	6U
Benzene	480	570	590 D	510	54	120	96	540 D	330 D	1 U
Bromodichloromethane	10 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	10 UJ	2 U	1 U	2 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U
Bromomethane/ Methyl bromide	20 U	6 U	2 U	4 U	3 U	2 U	2 U	1 U	1 U	3 U
2-Butanone	2400 J	3600	2900 D	3000 D	4 J	89	44	2900 D	3800 D	3 U
Carbon disulfide	770	2200	1600 D	1100 D	3 U	1 U	1 U	1200 D	370 D	3 U
Carbon tetrachloride	10 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	35 J	41	35	32	14	9	8	70	20	1 U
Chloroethane	20 U	14	20	13	5 J	2 U	2 U	7	23	3 U
Chloroform	32 J	42	36	29	1 U	1 J	1 U	73	24	1 U
Chloromethane	20 U	6 U	2 J	4 U	3 U	2 U	2 U	1 U	1 U	3 U
cis-1,2-Dichloroethene	750	1400	1100 D	1100 D	70	48	39	970 D	400 D	2 U
cis-1,3-Dichloropropene	10 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	10 U	4 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	2 U
1,1-Dichloroethane	35 J	85	84	60	13	8	6	67	58	1 U
1,1-Dichloroethene	27 J	27	27	22	1 J	2 J	1 U	63	14	2 U
1,2-Dichloroethane	230	280	250	270	15	85	71	180	290 D	2 U
1,2-Dichloropropane	19 J	100	110	60	1 U	4 J	7	57	47	1 U
Ethylbenzene	220	300	250	220	2 J	53	40	370 D	170	2 U
2-Hexanone	30 UJ	14 U	61	18 J	7 U	3 U	3 UJ	65	61	7 U
Methylene chloride	980	1200	910 D	860 D	5	4 J	5 J	1600 D	570 D	2 U
4-Methyl-2-pentanone	3300 J	6500	4900 D	4500 DJ	5 U	110	57J	3700 D	2600 D	5U
Styrene	10 U	2 U	1 U	2 U	3 J	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	27 J	33	23	20	16	2 J	2 J	63	12	1 U
1,1,2,2-Tetrachloroethane	51	4 U	30	2 U	3 J	12	11	100	32	2 U
Toluene	1300	2200	1900 D	2000 D	12	17	17	2000 D	1800 D	2 U
trans-1,2-Dichloroethene	10 U	12	12	9 J	2 U	8	4 J	18	12	2 U
trans-1,3-Dichloropropene	10 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	2200	2800	2000 D	1600 D	44	36	30	5500 D	770 D	1 U
1,1,1-Trichloroethane	19 J	24	17	11	1 U	1 U	1 U	NA	6	1 U
1,1,2-Trichloroethane	10 U	7 J	1 U	5 J	2 U	5 J	3 J	12	6	2 U
Vinyl chloride	35 J	56	74	59	61	7	7	69	44	2 U
Xylenes (Total)	670	880	730	690 D	8	30	31	1200 D	530	1 U
Total TICs	2487 J	1050 J	758 J	3831 J	ND	143 J	274 J	17854 J	10706 J	ND

303004

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23D	MW-26D	MW-26D	MW-26D	MW-27D	MW-32D	MW-32D	MW-36D	MW-37D	S-1C
Sample Date	5/4/01	1/12/00	11/3/00	5/4/01	1/10/00	11/21/00	5/3/01	8/14/2002	8/14/2002	7/15/99
Round	R-4	R-2	R-3	R-4	R-2	R-3	R-4	TS	TS	R-1
Parameter										
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acenaphthene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Acenaphthylene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Anthracene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Benzo(a)anthracene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Benzo(a)pyrene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Benzo(b)fluoranthene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Benzo(g,h,i)perylene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Benzo(k)fluoranthene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
bis(2-Chloroethoxy)methane	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
bis(2-Chloroethyl)ether	NA	1200 D	NA	NA	3800 D	NA	NA	620	1700 D	1 U
bis(2-Ethylhexyl)phthalate	NA	2 J	NA	NA	2 U	NA	NA	19 U	20 U	2 U
4-Bromophenyl phenyl ether	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
Butyl benzyl phthalate	NA	2 U	NA	NA	2 U	NA	NA	19 U	20 U	2 U
Carbazole	NA	3 U	NA	NA	3 U	NA	NA	10 U	10 U	2 U
2-Chloronaphthalene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	1 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	1 U
4-Chloroaniline	NA	6 J	NA	NA	1 U	NA	NA	85 J	10 U	1 U
4-Chlorophenyl phenyl ether	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Chrysene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Dibenz(a,h)anthracene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Dibenzofuran	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
1,3-Dichlorobenzene	NA	1 U	NA	NA	1 U	NA	NA	62 J	12 J	1 U
1,2-Dichlorobenzene	NA	34	NA	NA	1 J	NA	NA	10 U	10 U	1 U
1,4-Dichlorobenzene	NA	3 J	NA	NA	1 J	NA	NA	10 U	10 U	1 U
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	1 U
3,3'-Dichlorobenzidine	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
Diethyl phthalate	NA	8 J	NA	NA	2 U	NA	NA	19 U	20 U	2 U
Dimethyl phthalate	NA	2 U	NA	NA	2 U	NA	NA	19 U	20 U	2 U
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	63 J	110	1 U
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	190 U	200 U	15 U
2,4-Dinitrotoluene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
2,6-Dinitrotoluene	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	49 U	50 U	5 U
Di-n-butyl phthalate	NA	2 U	NA	NA	3 J	NA	NA	19 U	20 U	2 U

303005

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23D	MW-26D	MW-26D	MW-26D	MW-27D	MW-32D	MW-32D	MW-36D	MW-37D	S-1C
Sample Date	5/4/01	1/12/00	11/3/00	5/4/01	1/10/00	11/21/00	5/3/01	8/14/2002	8/14/2002	7/15/99
Round	R-4	R-2	R-3	R-4	R-2	R-3	R-4	TS	TS	R-1
Parameter										
Di-n-octyl phthalate	NA	2 U	NA	NA	2 U	NA	NA	19 U	20 U	2 U
Fluoranthene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Fluorene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Hexachlorobenzene	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
Hexachlorobutadiene	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
Hexachlorocyclopentadiene	NA	5 U	NA	NA	5 U	NA	NA	49 U	50 U	5 U
Hexachloroethane	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Indeno(1,2,3-cd)pyrene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Isophorone	NA	2300 D	NA	NA	28	NA	NA	10 U	10 U	1 U
2-Methylnaphthalene	NA	10	NA	NA	1 U	NA	NA	160	290	1 U
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	1900 D	1400 D	1 U
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	300	280	3 U
n-Nitrosodiphenylamine	NA	1 U	NA	NA	1 U	NA	NA	19 U	20 U	1 U
n-Nitrosodipropylamine	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Naphthalene	NA	NA	NA	NA	NA	NA	NA	48 J	40 J	1 U
Nitrobenzene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
2-Nitroaniline	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	1 U
3-Nitroaniline	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
4-Nitroaniline	NA	2 U	NA	NA	2 U	NA	NA	10 U	10 U	2 U
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	97 U	100 U	10 U
2,2'-Oxybis(1-chloropropane)	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	29 U	30 U	3 U
Phenanthrene	NA	1 J	NA	NA	1 U	NA	NA	10 U	10 U	1 U
Phenol	NA	NA	NA	NA	NA	NA	NA	860	300	1 U
Pyrene	NA	1 U	NA	NA	1 U	NA	NA	10 U	10 U	1 U
1,2,4-Trichlorobenzene	NA	1 J	NA	NA	1 U	NA	NA	10 U	10 U	1 U
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	2 U
2.4.6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	2 U
Total TICs	NA	4253 J	NA	NA	1262 J	NA	NA	28146J	52560J	ND
METALS *(ug/l)*										
Aluminum (Dissolved)	365000	NA	NA	441000	NA	NA	87500	NA	NA	NA
Aluminum (Total)	357000 J	473000 *	NA	414000 J	15200 *	NA	86800	NA	NA	52.0 U
Antimony	NA	29.0 U	NA	NA	29.0 U	NA	NA	NA	NA	25.0 U
Arsenic	NA	7.6 B	NA	NA	6.3 B	NA	NA	NA	NA	7.0 U

303006

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23D	MW-26D	MW-26D	MW-26D	MW-27D	MW-32D	MW-32D	MW-36D	MW-37D	S-1C
Sample Date	5/4/01	1/12/00	11/3/00	5/4/01	1/10/00	11/21/00	5/3/01	8/14/2002	8/14/2002	7/15/99
Round	R-4	R-2	R-3	R-4	R-2	R-3	R-4	TS	TS	R-1
Parameter										
Barium	NA	17.7 B	NA	NA	38.4 B	NA	NA	NA	NA	46.9 B
Beryllium	NA	21.5	NA	NA	5.3 B	NA	NA	NA	NA	1.7 U
Cadmium	NA	3.6 U	NA	NA	3.6 U	NA	NA	NA	NA	1.7 U
Calcium	NA	55800	NA	NA	40800	NA	NA	NA	NA	7720
Chromium	NA	969	NA	NA	16.7 B	NA	NA	NA	NA	5.4 U
Cobalt	NA	97.2	NA	NA	29.0 B	NA	NA	NA	NA	6.9 B
Copper	NA	79.2	NA	NA	16.8 B	NA	NA	NA	NA	5.8 U
Iron (Dissolved)	726000	687000	705,000	828000	77600	638,000	567000	577000	705000	6090
Iron (Total)	708000	708000	732,000	751000	81500	666000	555000	543000	724000	8620
Lead	NA	64.8	NA	NA	7.9 U	NA	NA	NA	NA	25.0
Magnesium	NA	70600	NA	NA	16700	NA	NA	NA	NA	6110
Manganese (Dissolved)	5040 J	NA	5210 E	6140 J	NA	3300 J	4210	6260	5880	NA
Manganese (Total)	4390 J	5770	5370 E	5040 J	1220	3410 E	4120	6230	6030	523
Nickel	NA	451	NA	NA	74.0	NA	NA	NA	NA	5.4 U
Potassium	NA	37200	NA	NA	10700	NA	NA	NA	NA	2540
Selenium	NA	37.9	NA	NA	4.4 U	NA	NA	NA	NA	5.9 U
Silver	NA	5.6 U	NA	NA	5.6 U	NA	NA	NA	NA	5.7 U
Sodium	NA	149000 E*	NA	NA	91300 E*	NA	NA	NA	NA	5270 E
Thallium	NA	46.0 U	NA	NA	9.2 U	NA	NA	NA	NA	9.7 U
Vanadium	NA	1650	NA	NA	220	NA	NA	NA	NA	2.8 U
Zinc	NA	7080	NA	NA	360	NA	NA	NA	NA	515 N*
Mercury	NA	0.10 U	NA	NA	0.10 U	NA	NA	NA	NA	0.042 U
ORGANIC ACIDS *(ug/l)*										
Acetic Acid	84000	66000	60000	63000	2000 U	2000 U	2000 U	75000 JP	41000 JP	NA
Butyric Acid	8800	2000 U	17000	20000	2000 U	2000 U	2000 U	200000 U	200000 U	NA
Citric Acid	1000 U	1000 U	200000 U	1000 U	1000 U	1000 U	1000 U	20000 U	20000 U	NA
Formic Acid	21000	3600 J	3000 J	3000 J	2000 U	2000 U	2000 U	40000 U	40000 U	NA
Oxalic Acid	2000 U	38000 U	8000 U	4000 U	800 U	NA	200 U	20000 U	20000 U	NA
Propionic Acid	2000 U	23000	22000	29000 J	5000 U	5000 U	2000 U	50000 U	50000 U	NA
Pyruvic Acid	120 U	120 U	120 U	120 U	120 U	120 U	120 U	12000 U	2500 U	NA
Quinic Acid	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	20000 U	20000 U	NA
Succinic Acid	1000 U	1000 U	2200 J	1000 U	1000 U	1000 U	1000 U	20000 U	20000 U	NA
Tartaric Acid	11000	19000 B	23000	10000	10000 U	1000 U	3200 U	20000 U	20000 U	NA

303007

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-23D	MW-26D	MW-26D	MW-26D	MW-27D	MW-32D	MW-32D	MW-36D	MW-37D	S-1C
Sample Date	5/4/01	1/12/00	11/3/00	5/4/01	1/10/00	11/21/00	5/3/01	8/14/2002	8/14/2002	7/15/99
Round	R-4	R-2	R-3	R-4	R-2	R-3	R-4	TS	TS	R-1
Parameter										
GENERAL CHEMISTRY *(units in mg/l unless noted)*										
Total Organic Carbon (Quad)	216	269	274	279	28.2	39.6	40.3	226	296	1.7 U
Total Hardness	NA	610	NA	NA	200	NA	NA	770	830	63
Total Dissolved Solids	7290	7620	NA	8100	881	NA	3230	5870	7620	106
Total Suspended Solids	NA	42	NA	NA	15	NA	NA	20	8.4 J	7.2 J
Alkalinity to pH 4.5	0.41 U	0.37 U	0.37 U	0.41 U	0.37 U	0.37 U	0.41 U	0.41 U	0.41 U	16.9
Alkalinity to pH 8.3	0.41 U	0.37 U	0.37 U	0.41 U	0.37 U	0.37 U	0.41 U	0.41 U	0.41 U	0.37 U
Chloride (titrimetric)	158	201	219	207	127	61	48.1	150	285	18.8
Ammonia Nitrogen	9.73	10.3	12.2	14.2	3.60	1.11	2.50	13.6	15.3	0.39
Kjeldahl Nitrogen	NA	17	NA	NA	5.1	NA	NA	19.7	21	0.75 U
Nitrate Nitrogen	0.20 U	0.15 U	0.22	0.40 U	0.030 U	0.030 U	0.20 U	1.0 U	1.0 U	NA
Nitrite Nitrogen	0.233	0.294	0.118	0.259	0.062	0.228	0.197	0.302	0.309	0.015 U
Ortho-Phosphate as P	NA	2.56	NA	NA	0.0030 U	NA	NA	1.17	1.81	0.0182 J
Silica (as SiO2)	NA	201	NA	NA	18.6	NA	NA	182	158	3.78
Sulfate (turbidimetric)	5000	5200	5400	5200	400	2110	1950	3600	5000	26
Sulfide	NA	0.0160 J	NA	NA	0.0090 U	NA	NA	0.022 U	0.022 U	0.46
Chemical Oxygen Demand	NA	1250	NA	NA	127	NA	NA	1010	1360	16.6 U
Ethane *(ug/l)*	42	23	27	33 J	150	2 J	2 J	9.7	18	1 U
Ethene *(ug/l)*	130	120	140	160 J	99	9.7	9.8	63	67	1 U
Methane *(ug/l)*	15000	12000	14000	21000	7500	2600	2000	12000	12000	30
Carbon Dioxide	910000	NA	1200000	1300000	NA	470000	410000	630000	910000	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

ND = Tentatively Identified Compounds (TICs) not detected

303008

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	S-2C	S-2C	S-2C	S-3C	S-3C	S-3C	S-11C	S-11C	S-11C	S-11C
Sample Date	7/16/99	1/13/00	11/1/00	7/16/99	1/11/00	11/1/00	7/13/1999	1/14/00	11/2/00	5/4/01
Round	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3	R-4
Parameter										
VOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acetone	6U	6 U	6 U	6U	6 U	6 U	41000	36000 D	37000 D	24000 DJ
Benzene	2 J	2 J	3 J	23	20	18	610	550	590 J	520
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U	10 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U	10 UJ
Bromomethane/ Methyl bromide	3 U	3 U	2 U	3 U	3 U	2 U	3 U	60 U	2 U	20 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	2800	2,600	2900 J	2000 J
Carbon disulfide	3 U	3 U	1 U	3 U	3 U	1 U	1300	1100	1400 D	970
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 UJ	10 U
Chlorobenzene	1 U	1 U	1 U	1 J	1 U	1 U	84	68 J	68	67
Chloroethane	3 U	3 U	2 U	3 U	3 U	2 U	6	60 U	5	20 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	79	58 J	70	60
Chloromethane	3 J	3 U	2 U	3 J	3 U	2 U	3 U	60 U	2 U	20 UJ
cis-1,2-Dichloroethene	2 U	2 U	2 J	19	16	16	1100	1100	1100 D	1,000
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U	10 U
Dibromochloromethane	2 U	2 U	1 U	2 U	2 U	1 U	2 U	40 U	1 U	10 U
1,1-Dichloroethane	1 U	2 U	1 U	4 J	4 J	3 J	69	56 J	70	54
1,1-Dichloroethene	2 U	1 U	1 U	2 U	1 U	1 U	84	68 J	77	57
1,2-Dichloroethane	2 U	2 J	3 J	6	7	7	250	210	200	180
1,2-Dichloropropane	4 J	6	6	1 U	1 U	1 U	89	55 J	76	56
Ethylbenzene	2 U	2 U	1 U	2 U	2 U	1 U	400	410	400 JD	400
2-Hexanone	7 U	7 U	3 U	7 U	7 U	3 U	18	140 U	74 J	30 UJ
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	1600	1600	1500 D	1,200
4-Methyl-2-pentanone	5 U	5 U	3 U	5 U	5 U	3 U	3900	3700	3700 J	2900 J
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U	10 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	86	56 J	67	56
1,1,2,2-Tetrachloroethane	2 U	2 U	1 U	2 U	2 U	1 U	130	90 J	89	10 U
Toluene	2 U	2 U	1 U	2 U	2 U	1 U	2200	2000	1900 D	1500
trans-1,2-Dichloroethene	2 U	2 U	1 U	2 U	2 U	1 U	27	40 U	24	15 J
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U	10 U
Trichloroethene	1 U	1 J	1 U	2 J	2 J	1 J	6500	5600	5800 D	5300 D
1,1,1-Trichloroethane	1 U	1 U	1 U	1U	1 U	1 U	95	54 J	79	58
1,1,2-Trichloroethane	2 U	2 U	1 U	2 U	2 U	1 U	18	40 U	16	15 J
Vinyl chloride	2 U	2 U	1 U	2 J	2 U	1 J	73	53 J	79	49 J
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1300	1400	1200 D	1200
Total TICs	103 J	68 J	34 J	ND	ND	ND	ND	657 J	1063 J	2236 J

303009

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	S-2C	S-2C	S-2C	S-3C	S-3C	S-3C	S-11C	S-11C	S-11C	S-11C
Sample Date	7/16/99	1/13/00	11/1/00	7/16/99	1/11/00	11/1/00	7/13/1999	1/14/00	11/2/00	5/4/01
Round	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3	R-4
Parameter										
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acenaphthene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Acenaphthylene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Anthracene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Benzo(a)anthracene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Benzo(a)pyrene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Benzo(b)fluoranthene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Benzo(g,h,i)perylene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Benzo(k)fluoranthene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
bis(2-Chloroethoxy)methane	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
bis(2-Chloroethyl)ether	1 U	1 J	NA	17	9 J	NA	410	540 D	NA	NA
bis(2-Ethylhexyl)phthalate	2 U	2 U	NA	2 U	2 U	NA	3 U	2 U	NA	NA
4-Bromophenyl phenyl ether	2 U	2 U	NA	2 U	2 U	NA	6 U	2 U	NA	NA
Butyl benzyl phthalate	2 U	2 U	NA	2 U	2 U	NA	3 U	2 U	NA	NA
Carbazole	2 U	3 U	NA	2 U	3 U	NA	6 U	3 U	NA	NA
2-Chloronaphthalene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
2-Chlorophenol	1 U	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
4-Chloro-3-methylphenol	1 U	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
4-Chloroaniline	1 U	1 U	NA	1 U	0.9 U	NA	130	72	NA	NA
4-Chlorophenyl phenyl ether	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Chrysene	1 U	1 U	NA	1 U	0.9 U	NA	6 U	1 U	NA	NA
Dibenz(a,h)anthracene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Dibenzofuran	1 U	1 U	NA	1 U	0.9 U	NA	8 J	1 U	NA	NA
1,3-Dichlorobenzene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 J	NA	NA
1,2-Dichlorobenzene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	76	NA	NA
1,4-Dichlorobenzene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	6 J	NA	NA
2,4-Dichlorophenol	1 U	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	NA	2 U	NA	NA	3 U	2 U	NA	NA
Diethyl phthalate	2 U	2 U	NA	2 U	2 U	NA	3 U	6 J	NA	NA
Dimethyl phthalate	2 U	2 U	NA	2 U	2 U	NA	3 U	2 U	NA	NA
2,4-Dimethylphenol	1 U	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
2,4-Dinitrophenol	14 U	NA	NA	15 U	NA	NA	3 U	NA	NA	NA
2,4-Dinitrotoluene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
2,6-Dinitrotoluene	2 U	2 U	NA	2 U	2 U	NA	6 U	2 U	NA	NA
4,6-Dinitro-2-methylphenol	5 U	NA	NA	5 U	NA	NA	3 U	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	NA	2 U	2 U	NA	6 U	2 U	NA	NA

303010

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	S-2C	S-2C	S-2C	S-3C	S-3C	S-3C	S-11C	S-11C	S-11C	S-11C
Sample Date	7/16/99	1/13/00	11/1/00	7/16/99	1/11/00	11/1/00	7/13/1999	1/14/00	11/2/00	5/4/01
Round	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3	R-4
Parameter										
Di-n-octyl phthalate	2 U	2 U	NA	2 U	2 U	NA	6 U	2 U	NA	NA
Fluoranthene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Fluorene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Hexachlorobenzene	2 U	2 U	NA	2 U	2 U	NA	3 U	2 U	NA	NA
Hexachlorobutadiene	2 U	2 U	NA	2 U	2 U	NA	6 U	2 U	NA	NA
Hexachlorocyclopentadiene	5 U	5 U	NA	5 U	5 U	NA	15 U	5 U	NA	NA
Hexachloroethane	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Indeno(1,2,3-cd)pyrene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Isophorone	1 U	1 U	NA	1 U	0.9 U	NA	1300	1600 D	NA	NA
2-Methylnaphthalene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	7 J	NA	NA
2-Methylphenol	1 U	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
4-Methylphenol	3 U	NA	NA	3 U	NA	NA	48	NA	NA	NA
n-Nitrosodiphenylamine	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
n-Nitrosodipropylamine	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Naphthalene	1 U	NA	NA	1 U	NA	NA	40	NA	NA	NA
Nitrobenzene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	34	NA	NA
2-Nitroaniline	2 U	2 U	NA	2 U	2 U	NA	3 U	2 U	NA	NA
2-Nitrophenol	1 U	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
3-Nitroaniline	2 U	2 U	NA	2 U	2 U	NA	6 U	2 U	NA	NA
4-Nitroaniline	2 U	2 U	NA	2 U	2 U	NA	6 U	2 U	NA	NA
4-Nitrophenol	10 U	NA	NA	10 U	NA	NA	29 U	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Pentachlorophenol	3 U	NA	NA	3 U	NA	NA	3 U	NA	NA	NA
Phenanthrene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
Phenol	1 U	NA	NA	1 U	NA	NA	1200	NA	NA	NA
Pyrene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
1,2,4-Trichlorobenzene	1 U	1 U	NA	1 U	0.9 U	NA	3 U	1 U	NA	NA
2,4,5-Trichlorophenol	2 U	NA	NA	2 U	NA	NA	6 U	NA	NA	NA
2.4.6-Trichlorophenol	2 U	NA	NA	2 U	NA	NA	6 U	NA	NA	NA
Total TICs	447 J	824 J	NA	137 J	35 J	NA	ND	3140 J	NA	NA
METALS *(ug/l)*										
Aluminum (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	NA	155000
Aluminum (Total)	29700	55900 *	NA	228	2170 *	NA	156000 N*	165000 E	NA	163000 J
Antimony	25.0 U	29.0 U	NA	25.0 U	29.0 U	NA	25.0 U	29.0 U	NA	NA
Arsenic	7.0 U	5.5 B	NA	7.0 U	5.0 U	NA	7.0 U	7.0 B	NA	NA

303011

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	S-2C	S-2C	S-2C	S-3C	S-3C	S-3C	S-11C	S-11C	S-11C	S-11C
Sample Date	7/16/99	1/13/00	11/1/00	7/16/99	1/11/00	11/1/00	7/13/1999	1/14/00	11/2/00	5/4/01
Round	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3	R-4
Parameter										
Barium	21.1 B	17.8 B	NA	78.8 B	72.4 B	NA	17.9 B	15.4 B	NA	NA
Beryllium	11.2	20.8	NA	1.7 U	1.9 U	NA	8.8 B	10.6	NA	NA
Cadmium	2.5 B	3.6 U	NA	1.7 U	3.6 U	NA	23.6	3.6 U	NA	NA
Calcium	18100	28100	NA	8200	7580	NA	56400	49300 E	NA	NA
Chromium	5.4 U	9.8 U	NA	5.4 U	9.8 U	NA	177	184	NA	NA
Cobalt	58.8	102	NA	5.9 B	6.9 B	NA	79.9	83.5	NA	NA
Copper	80.7	117	NA	5.8 U	3.5 U	NA	24.2 B	20.0 B	NA	NA
Iron (Dissolved)	35600	NS	39800 J	28400	NS	NA	614000	NS	566000	632000
Iron (Total)	32100	22200	35500	28400	32900	NA	499000 N*	596000	592000	641000
Lead	107	135	NA	32.8	147	NA	32.7	53.3	NA	NA
Magnesium	15300	26800	NA	5580	5850	NA	61300	57000 E	NA	NA
Manganese (Dissolved)	NA	NA	1570 J	NA	NA	NA	NA	NA	7170 J	7860 J
Manganese (Total)	988	1860	1320 J	242	230	NA	7100	6640 E	6120 J	6780 J
Nickel	63.9	113	NA	5.4 U	12.3 B	NA	168	154	NA	NA
Potassium	4480	4350	NA	2380	2360	NA	19000	16600	NA	NA
Selenium	5.9 U	4.4 U	NA	5.9 U	4.4 U	NA	14.0	19.0	NA	NA
Silver	5.7 U	5.6 U	NA	5.7 U	5.6 U	NA	5.7 U	5.6 U	NA	NA
Sodium	22600 E	20700 E*	NA	20000 E	21200 E*	NA	102000	102000	NA	NA
Thallium	9.7 U	9.2 U	NA	9.7 U	9.2 U	NA	58.8	35.4	NA	NA
Vanadium	369	272	NA	2.8 U	17.8 B	NA	667	720 E	NA	NA
Zinc	45600 N*	14900	NA	28700 N*	38100	NA	4070	5850 E	NA	NA
Mercury	0.042 U	0.10 U	NA	0.042 U	0.10 U	NA	0.042 U	0.10 UN	NA	NA
ORGANIC ACIDS *(ug/l)*										
Acetic Acid	NA	2000 U	2000 U	NA	2000 U	NA	44000	42000	45000	35000 J
Butyric Acid	NA	2000 U	2000 U	NA	2000 U	NA	2000 U	2000 U	18000	20000 U
Citric Acid	NA	1000 U	100000 UJ	NA	1000 U	NA	1000 U	6200	100000 UJ	1000000 U
Formic Acid	NA	2000 U	2000 U	NA	2000 U	NA	NA	2000 U	2000 U	2000000 U
Oxalic Acid	NA	14000 U	4000 U	NA	1600 U	NA	40 U	32000 U	4000 U	40000 U
Propionic Acid	NA	5000 U	10000 U	NA	5000 U	NA	11000	10000	14000	27000 J
Pyruvic Acid	NA	120 U	120 U	NA	120 U	NA	100 U	120 U	120 U	120000 U
Quinic Acid	NA	1000 U	1000 U	NA	1000 U	NA	1000 U	1000 U	1000 U	1000000 U
Succinic Acid	NA	1000 U	1000 U	NA	1000 U	NA	1000 U	1000 U	1000 U	1000000 U
Tartaric Acid	NA	1000 U	7400	NA	1000 U	NA	1000 U	1000 U	500000 U	1000000 U

303012

Table 4-48. Analytical Results for Ground Water Samples for Area of Concern 3. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	S-2C	S-2C	S-2C	S-3C	S-3C	S-3C	S-11C	S-11C	S-11C	S-11C
Sample Date	7/16/99	1/13/00	11/1/00	7/16/99	1/11/00	11/1/00	7/13/1999	1/14/00	11/2/00	5/4/01
Round	R-1	R-2	R-3	R-1	R-2	R-3	R-1	R-2	R-3	R-4
Parameter										
GENERAL CHEMISTRY *(units in mg/l unless noted)*										
Total Organic Carbon (Quad)	6.7	16.0	9.3	9.6	10.8	NA	189	184	178	178
Total Hardness	199	245	NA	101	54	NA	660	423	NA	NA
Total Dissolved Solids	532	1030	NA	217	207	NA	4290	4360	NA	4600
Total Suspended Solids	63	55	NA	19	46	NA	8 J	37	NA	NA
Alkalinity to pH 4.5	0.37 U	0.37 U	0.37 U	111	92.8	NA	0.37 U	0.37 U	0.37 U	0.41 U
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.41 U
Chloride (titrimetric)	56.7	58.8	49.3	40.8	40.5	NA	125	125	124	131
Ammonia Nitrogen	0.48	0.30	0.47	0.52	0.38	NA	7.8	6.83	7.98	8
Kjeldahl Nitrogen	0.90 J	0.63 U	NA	1.4	1.38 J	NA	12.4	21	NA	NA
Nitrate Nitrogen	NA	0.030 U	0.34 J	NA	0.030 U	NA	0.30 U	0.15 U	0.030 U	0.20 U
Nitrite Nitrogen	0.109	0.077	0.031 J	0.055	0.028 J	NA	0.264	0.222	0.159	0.251
Ortho-Phosphate as P	0.0177 J	0.0129 J	NA	0.031	0.0030 U	NA	0.397	0.299	NA	NA
Silica (as SiO2)	26.9	36.5	NA	10.1	8.47	NA	128	145	NA	NA
Sulfate (turbidimetric)	249	650	330	6.0 J	4.5 J	NA	2780	2850	3130	2400
Sulfide	1.73	0.52	NA	1.52	3.69	NA	1.6	1.35	NA	NA
Chemical Oxygen Demand	57	69	NA	51U	63	NA	876	900	NA	NA
Ethane *(ug/l)*	1 J	1 U	1 U	5.2	5 J	NA	15	13	16 J	18 J
Ethene *(ug/l)*	1 U	1 U	1 U	4 J	3 J	NA	72	63	79 J	85 J
Methane *(ug/l)*	110	110	200	3100	2800	NA	9000	9800	9900 J	11000
Carbon Dioxide	NA	NA	140000	NA	NA	NA	NA	NA	930000	700000

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

303013

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-11B	MW-11B	MW-11B	MW-11B	MW-12B	MW-12B	MW-12B	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	7/15/99	1/6/00	10/30/00	5/2/01	7/14/99	10/30/00	5/2/01	1/12/00	10/30/00	1/10/00	10/30/00	5/3/01
Round	R-1	R-2	R-3	R-4	R-1	R-3	R-4	R-2	R-3	R-2	R-3	R-4
Parameter												
VOLATILE ORGANIC COMPOUNDS *(ug/l)*												
Acetone	19 J	8 J	6 U	6 UJ	6 U	6 U	6 UJ	16 JB	6 U	6 U	6 UJ	6 UJ
Benzene	42	36	51	13	25	25	6	10	9	42	17	21
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 UJ
Bromomethane/ Methyl bromide	3 U	3 U	2 U	2 U	3 U	2 U	2 U	3 U	2 U	3 U	2 U	2 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	3 U	3 U	3 UJ	3 U
Carbon disulfide	13	13	11	1 U	3 U	1 U	1 U	3 U	1 U	3 U	1 U	1 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	3 J	3 J	4 J	1 U	1 U	1 U	1 U	1 U	1 U	12	4 J	5
Chloroethane	3 U	3 U	2 U	2 U	3 U	2 U	2 U	3 U	2 U	3 U	2 U	2 U
Chloroform	1 U	1 U	1 U	1 U	4 J	2 J	1 U	1 U	1 U	2 J	1 U	1 U
Chloromethane	3 J	3 U	2 U	2 U	3 U	2 U	2 UJ	3 U	2 U	3 U	2 U	2 UJ
cis-1,2-Dichloroethene	52	43	69	21	24	28	8	2 U	2 J	98	40	52
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U
1,1-Dichloroethane	8	6	8	3 J	9	10	3 J	2 U	1 U	17	6	8
1,1-Dichloroethene	3 J	2 J	4 J	1 U	2 U	1 U	1 U	1 U	1 U	11	4 J	5
1,2-Dichloroethane	27	17	33	10	7	7	1 U	2 U	1 U	80	32	40
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	7	7	12	1 U	2 U	1 U	1 U	2 U	1 U	16	6	6
2-Hexanone	7 U	7 U	3 U	3 UJ	7 U	3 U	3 UJ	7 U	3 U	7 U	3 UJ	3 UJ
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5. U	5 U	3 U	3 UJ	5 U	3 U	3 UJ	5 U	3 U	5 U	3 UJ	3 UJ
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	2 J	1 J	2 J	1 U	1 J	1 J	1 U	1 U	1 U	4 J	1 J	2 J
1,1,2,2-Tetrachloroethane	4 J	3 J	5 J	1 U	2 U	1 U	1 U	2 U	1 U	56	20	25
Toluene	2 U	2 U	1 J	1 U	2 U	1 U	1 U	2 U	1 U	3 J	1 U	1 U
trans-1,2-Dichloroethene	2 U	2 U	2 J	1 U	2 U	1 U	1 U	2 U	1 U	13	5	7
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	200	140	230	52	63	69	19	1 U	2 J	380 D	180	240
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	3 J	2 J	4 J	1 U	2 U	1 U	1 U	2 U	1 U	26	10	12
Vinyl chloride	12	8	14	6	11	13	3 J	2 U	1 U	7	3 J	4 J
Xylenes (Total)	5	4 J	9	1 U	1 U	1 J	1 U	1 U	1 U	6	1 U	1 J
Total TICs	96 J	83 J	83 J	55 J	18 J	ND	5 J	ND	ND	84 J	14 J	62 J

303014

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-11B	MW-11B	MW-11B	MW-11B	MW-12B	MW-12B	MW-12B	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	7/15/99	1/6/00	10/30/00	5/2/01	7/14/99	10/30/00	5/2/01	1/12/00	10/30/00	1/10/00	10/30/00	5/3/01
Round	R-1	R-2	R-3	R-4	R-1	R-3	R-4	R-2	R-3	R-2	R-3	R-4
Parameter												
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*												
Acenaphthene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Acenaphthylene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Anthracene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Benzo(a)anthracene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Benzo(a)pyrene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Benzo(b)fluoranthene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Benzo(g,h,i)perylene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Benzo(k)fluoranthene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
bis(2-Chloroethoxy)methane	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
bis(2-Chloroethyl)ether	450 D	370 D	NA	NA	180 D	NA	NA	8 J	NA	490 D	NA	NA
bis(2-Ethylhexyl)phthalate	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
4-Bromophenyl phenyl ether	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
Butyl benzyl phthalate	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
Carbazole	2 U	3 U	NA	NA	2 U	NA	NA	3 U	NA	3 U	NA	NA
2-Chloronaphthalene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
2-Chlorophenol	1 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	1 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
4-Chlorophenyl phenyl ether	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Chrysene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Dibenz(a,h)anthracene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Dibenzofuran	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
1,3-Dichlorobenzene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
1,2-Dichlorobenzene	2 J	2 J	NA	NA	0.9 U	NA	NA	1 U	NA	2 J	NA	NA
1,4-Dichlorobenzene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
2,4-Dichlorophenol	1 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
Diethyl phthalate	2 J	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 J	NA	NA
Dimethyl phthalate	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
2,4-Dimethylphenol	2 J	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	15 U	NA	NA	NA	14 U	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
2,6-Dinitrotoluene	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
4,6-Dinitro-2-methylphenol	5 U	NA	NA	NA	5 U	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA

303015

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-11B	MW-11B	MW-11B	MW-11B	MW-12B	MW-12B	MW-12B	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	7/15/99	1/6/00	10/30/00	5/2/01	7/14/99	10/30/00	5/2/01	1/12/00	10/30/00	1/10/00	10/30/00	5/3/01
Round	R-1	R-2	R-3	R-4	R-1	R-3	R-4	R-2	R-3	R-2	R-3	R-4
Parameter												
Di-n-octyl phthalate	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
Fluoranthene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Fluorene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Hexachlorobenzene	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
Hexachlorobutadiene	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
Hexachlorocyclopentadiene	5 U	5 U	NA	NA	5 U	NA	NA	5 U	NA	5 U	NA	NA
Hexachloroethane	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Indeno(1,2,3-cd)pyrene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Isophorone	17	8 J	NA	NA	3 J	NA	NA	1 U	NA	110	NA	NA
2-Methylnaphthalene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
2-Methylphenol	1 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	3 U	NA	NA	NA	3 U	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
n-Nitrosodipropylamine	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Naphthalene	1 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
2-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
2-Nitrophenol	1 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
4-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	NA	2 U	NA	2 U	NA	NA
4-Nitrophenol	10 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Pentachlorophenol	3 U	NA	NA	NA	3 U	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
Phenol	1 U	NA	NA	NA	0.9 U	NA	NA	NA	NA	NA	NA	NA
Pyrene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
1,2,4-Trichlorobenzene	1 U	1 U	NA	NA	0.9 U	NA	NA	1 U	NA	1 U	NA	NA
2,4,5-Trichlorophenol	2 U	NA	NA	NA	2 U	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	2 U	NA	NA	NA	2 U	NA	NA	NA	NA	NA	NA	NA
Total TICs	1158 J	838 J	NA	NA	319 J	NA	NA	86 J	NA	2433 J	NA	NA
METALS *(ug/l)*												
Aluminum (Dissolved)	NA	NA	NA	31.9 U	NA	NA	120 B	NA	NA	NA	NA	31.9 U
Aluminum (Total)	52.0 U	77.0 U*	NA	236	132 B	NA	502	326 *	NA	214 *	NA	54.7 B
Antimony	25.0 U	29.0 U	NA	NA	25.0 U	NA	NA	29.0 U	NA	29.0 U	NA	NA
Arsenic	7.0 U	5.0 U	NA	NA	7.0 U	NA	NA	5.0 U	NA	5.0 U	NA	NA

303016

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-11B	MW-11B	MW-11B	MW-11B	MW-12B	MW-12B	MW-12B	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	7/15/99	1/6/00	10/30/00	5/2/01	7/14/99	10/30/00	5/2/01	1/12/00	10/30/00	1/10/00	10/30/00	5/3/01
Round	R-1	R-2	R-3	R-4	R-1	R-3	R-4	R-2	R-3	R-2	R-3	R-4
Parameter												
Barium	43.0 B	35.8 B	NA	NA	91.5 B	NA	NA	45.5 B	NA	77.9 B	NA	NA
Beryllium	1.7 U	1.9 U	NA	NA	1.7 U	NA	NA	1.9 U	NA	1.9 U	NA	NA
Cadmium	3.2 B	3.6 U	NA	NA	1.7 U	NA	NA	3.6 U	NA	3.6 U	NA	NA
Calcium	33300	28100 E*	NA	NA	16100	NA	NA	19100	NA	98000	NA	NA
Chromium	5.4 U	9.8 U	NA	NA	5.4 U	NA	NA	9.8 U	NA	9.8 U	NA	NA
Cobalt	8.6 B	8.8 B	NA	NA	16.7 B	NA	NA	10.7 B	NA	104	NA	NA
Copper	5.8 U	3.5 U	NA	NA	5.8 U	NA	NA	3.5 U	NA	4.4 B	NA	NA
Iron (Dissolved)	131000	NS	162000	86100 J	710	881	783	NS	NA	NS	NA	145000
Iron (Total)	135000	136000	165000	60700 J	644	842	1220	50100	NA	287000	NA	148000
Lead	6.5 U	7.9 U	NA	NA	6.5 U	NA	NA	7.9 U	NA	7.9 U	NA	NA
Magnesium	26400	21200	NA	NA	11300	NA	NA	10800	NA	52100	NA	NA
Manganese (Dissolved)	NA	NA	904	524 J	NA	349	300	NA	NA	NA	NA	1340
Manganese (Total)	646	717 *	920	435 J	386	362	292	420	NA	2420	NA	1360
Nickel	11.8 B	13.8 B	NA	NA	19.3 B	NA	NA	9.1 B	NA	124	NA	NA
Potassium	5980	7770 *	NA	NA	2990	NA	NA	2720	NA	7370	NA	NA
Selenium	5.9 U	4.4 U	NA	NA	5.9 U	NA	NA	4.4 U	NA	18.6	NA	NA
Silver	5.7 U	5.6 U	NA	NA	5.7 U	NA	NA	5.6 U	NA	5.6 U	NA	NA
Sodium	29200 E	28800	NA	NA	8210 E	NA	NA	5180 E*	NA	19000 E*	NA	NA
Thallium	9.7 U	9.2 U	NA	NA	9.7 U	NA	NA	9.2 U	NA	33.8	NA	NA
Vanadium	2.8 U	23.0	NA	NA	2.8 U	NA	NA	3.4 U	NA	3.4 U	NA	NA
Zinc	35.9 N*	24.8 B	NA	NA	31.3 N*	NA	NA	44.8	NA	141	NA	NA
Mercury	0.042 U	0.10 U	NA	NA	0.046 B	NA	NA	0.10 U	NA	0.10 U	NA	NA
ORGANIC ACIDS *(ug/l)*												
Acetic Acid	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	NA	2000 U
Butyric Acid	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	NA	2000 U
Citric Acid	1000 U	1000 U	10000 UJ	1000 U	1000 U	5000 UJ	1000 U	1900 J	NA	1000 U	NA	1000 U
Formic Acid	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	NA	2000 U
Oxalic Acid	40 U	5300 U	400 U	200 U	40 U	200 U	200 U	900 U	NA	9500 U	NA	200 U
Propionic Acid	2300 NJ	5000 U	10000 U	2000 U	2000 U	10000 U	2000 U	5000 U	NA	5000 U	NA	2000 U
Pyruvic Acid	100 U	120 U	120 U	120 U	100 U	120 U	120 U	120 U	NA	120 U	NA	120 U
Quinic Acid	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NA	1000 U	NA	1000 U
Succinic Acid	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NA	1000 U	NA	1000 U
Tartaric Acid	1000 U	1000 U	10000 U	3500	1000 U	5000 U	1200 UJ	1000 U	NA	1000 U	NA	3200 U

303017

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-11B	MW-11B	MW-11B	MW-11B	MW-12B	MW-12B	MW-12B	MW-21D	MW-21D	MW-22D	MW-22D	MW-22D
Sample Date	7/15/99	1/6/00	10/30/00	5/2/01	7/14/99	10/30/00	5/2/01	1/12/00	10/30/00	1/10/00	10/30/00	5/3/01
Round	R-1	R-2	R-3	R-4	R-1	R-3	R-4	R-2	R-3	R-2	R-3	R-4
Parameter												
GENERAL CHEMISTRY *(units in mg/l unless noted)*												
Total Organic Carbon (Quad)	25.9	23.0	32.3	18.7	5.3	5.4	4.0	9.2	NA	26.1	NA	14.6
Total Hardness	224	186	NA	NA	92.3	NA	NA	100	NA	475	NA	NA
Total Dissolved Solids	700	650	NA	359	168	NA	119	139	NA	1460	NA	816
Total Suspended Solids	53	23	NA	NA	3.7 U	NA	NA	92	NA	50	NA	NA
Alkalinity to pH 4.5	70.4	47.6	76.5	69.1	7.4	8.2	3.1	64.7	NA	51.0	NA	38.1
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	0.41 U	0.37 U	0.37 U	0.41 U	0.37 U	NA	0.37 U	NA	0.41 U
Chloride (titrimetric)	45.9	39.9	51.5	33.0	28.5	28.8	22.9	15.7	NA	46.5	NA	24.8
Ammonia Nitrogen	1.94	1.95	3.64	1.76	0.99	0.89	0.88	0.83	NA	1.12	NA	0.76 J
Kjeldahl Nitrogen	4.3	4.0	NA	NA	1.5 U	NA	NA	1.15 J	NA	1.94 J	NA	NA
Nitrate Nitrogen	NA	0.030 U	0.030 U	0.040 U	NA	0.030 U	0.040 U	0.15 U	NA	0.030 U	NA	0.25 J
Nitrite Nitrogen	0.168	0.149	0.118	0.034 J	0.015 U	0.015 U	0.015 U	0.053	NA	0.202	NA	0.101
Ortho-Phosphate as P	0.029	0.0144 J	NA	NA	0.028	NA	NA	0.0030 U	NA	0.0030 U	NA	NA
Silica (as SiO2)	4.86	4.60	NA	NA	7.55	NA	NA	5.70	NA	10.5	NA	NA
Sulfate (turbidimetric)	316	290	430	129	61	60	50	9.6 J	NA	830	NA	450
Sulfide	0.0330 J	0.0280 J	NA	NA	0.11	NA	NA	0.0090 U	NA	0.0090 U	NA	NA
Chemical Oxygen Demand	123	105	NA	NA	29.4 J	NA	NA	33.0 J	NA	142	NA	NA
Ethane *(ug/l)*	61	53	68	39	26	29	7.3	2 J	NA	16	NA	9.1
Ethene *(ug/l)*	21	16	21	11	25	32	8.5	1 U	NA	23	NA	13
Methane *(ug/l)*	4400	2900	3600	1600	2200	2100	610	200	NA	6000	NA	3200
Carbon Dioxide	NA	NA	490000	200000	NA	150000	83000	NA	NA	NA	NA	190000

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

ND = Tentatively Identified Compounds (TICs) not detected

303018

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-17D	MW-17D	MW-17D	MW-18D	MW-18D	MW18D	MW-19D	MW-19D	MW-19D
Sample Date	1/4/00	10/30/00	5/2/01	1/6/00	10/27/00	6/11/01	1/6/00	10/26/00	5/1/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-4
Parameter									
VOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acetone	10 J	6 UJ	6 UJ	6 U	6 U	6 UJ	6 U	6 U	6 UJ
Benzene	43	37	36	10	9	7	1 U	1 U	1 J
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 UJ
Bromomethane/ Methyl bromide	3 U	2 U	2 U	3 U	2 U	2 U	3 U	2 U	2 U
2-Butanone	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Carbon disulfide	4 J	5	5	3 U	1 U	1 U	3 U	1 U	1 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	3 U	2 U	2 U	3 U	2 U	2 U	3 U	2 U	2 U
Chloroform	15	14	13	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	3 U	2 U	2 UJ	3 U	2 U	2 UJ	3 U	2 U	2 UJ
cis-1,2-Dichloroethene	54	56	56	6	7	7	2 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U
1,1-Dichloroethane	8	7	7	2 U	1 J	1 J	2 U	1 U	1 U
1,1-Dichloroethene	1 J	2 J	1 J	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	28	32	28	6	8	7	2 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	2 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U
2-Hexanone	7 U	3 UJ	3 UJ	7 U	3 U	3 UJ	7 U	3 U	3 UJ
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	3 UJ	3 UJ	5 U	3 U	3 UJ	5 U	3 U	3 UJ
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 J	1 J	1 J	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	2 J	1 U	1 U	10	9	9	2 U	1 U	1 U
Toluene	2 U	1 U	1 U	2 U	1 U	1 U	2 U	1 U	1 U
trans-1,2-Dichloroethene	2 U	1 U	1 U	2 U	1 J	1 J	2 U	1 U	1 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	50	53	54	18	21	21	1 U	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	2 U	1 U	1 U	2 J	2 J	3 J	2 U	1 U	1 U
Vinyl chloride	15	17	18	2 U	1 U	1 U	2 U	1 U	1 U
Xylenes (Total)	2 J	2 J	2 J	1 U	1 U	1 U	1 U	1 U	1 U
Total TICs	43 J	63 J	87 J	ND	ND	ND	ND	ND	ND

303019

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-17D	MW-17D	MW-17D	MW-18D	MW-18D	MW18D	MW-19D	MW-19D	MW-19D
Sample Date	1/4/00	10/30/00	5/2/01	1/6/00	10/27/00	6/11/01	1/6/00	10/26/00	5/1/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-4
Parameter									
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acenaphthene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Acenaphthylene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Anthracene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Benzo(a)anthracene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Benzo(a)pyrene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Benzo(b)fluoranthene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Benzo(g,h,i)perylene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Benzo(k)fluoranthene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
bis(2-Chloroethoxy)methane	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
bis(2-Chloroethyl)ether	480 D	NA	NA	37	NA	NA	1 J	NA	NA
bis(2-Ethylhexyl)phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
4-Bromophenyl phenyl ether	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
Butyl benzyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
Carbazole	3 U	NA	NA	3 U	NA	NA	3 U	NA	NA
2-Chloronaphthalene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	1 U	NA	NA	1 U	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Chrysene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Dibenz(a,h)anthracene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Dibenzofuran	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
1,3-Dichlorobenzene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
1,2-Dichlorobenzene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
1,4-Dichlorobenzene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
Diethyl phthalate	2 J	NA	NA	2 U	NA	NA	2 U	NA	NA
Dimethyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
2,6-Dinitrotoluene	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA

303020

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-17D	MW-17D	MW-17D	MW-18D	MW-18D	MW18D	MW-19D	MW-19D	MW-19D
Sample Date	1/4/00	10/30/00	5/2/01	1/6/00	10/27/00	6/11/01	1/6/00	10/26/00	5/1/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-4
Parameter									
Di-n-octyl phthalate	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
Fluoranthene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Fluorene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Hexachlorobenzene	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
Hexachlorobutadiene	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
Hexachlorocyclopentadiene	5 U	NA	NA	5 U	NA	NA	5 U	NA	NA
Hexachloroethane	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Indeno(1,2,3-cd)pyrene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Isophorone	5 J	NA	NA	1 U	NA	NA	1 U	NA	NA
2-Methylnaphthalene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Nitrosodiphenylamine	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
n-Nitrosodipropylamine	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
2-Nitroaniline	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
4-Nitroaniline	2 U	NA	NA	2 U	NA	NA	2 U	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
1,2,4-Trichlorobenzene	1 U	NA	NA	1 U	NA	NA	1 U	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TICs	952 J	NA	NA	232 J	NA	NA	92 J	NA	NA
METALS *(ug/l)*									
Aluminum (Dissolved)	NA	NA	31.9 U	NA	NA	31.9 U	NA	NA	31.9 U
Aluminum (Total)	93.4 B*	NA	31.9 U	77.0 U*	NA	31.9 U	148 B*	NA	31.9 U
Antimony	29.0 U	NA	NA	29.0 U	NA	NA	29.0 U	NA	NA
Arsenic	7.3 B	NA	NA	5.0 U	NA	NA	5.0 U	NA	NA

303021

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-17D	MW-17D	MW-17D	MW-18D	MW-18D	MW18D	MW-19D	MW-19D	MW-19D
Sample Date	1/4/00	10/30/00	5/2/01	1/6/00	10/27/00	6/11/01	1/6/00	10/26/00	5/1/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-4
Parameter									
Barium	71.4 B	NA	NA	174	NA	NA	66.3 B	NA	NA
Beryllium	1.9 U	NA	NA	1.9 U	NA	NA	1.9 U	NA	NA
Cadmium	3.6 U	NA	NA	3.6 U	NA	NA	3.6 U	NA	NA
Calcium	37300 E*	NA	NA	37200 E*	NA	NA	13400 E*	NA	NA
Chromium	9.8 U	NA	NA	9.8 U	NA	NA	9.8 U	NA	NA
Cobalt	35.0 B	NA	NA	27.3 B	NA	NA	9.9 B	NA	NA
Copper	3.5 U	NA	NA	3.5 U	NA	NA	3.5 U	NA	NA
Iron (Dissolved)	NS	84700	88000	NS	NA	59900	NS	NA	11400
Iron (Total)	94700	87000	85400	65000	NA	60500	13200	NA	11100
Lead	7.9 U	NA	NA	7.9 U	NA	NA	7.9 U	NA	NA
Magnesium	16600	NA	NA	19100	NA	NA	4180	NA	NA
Manganese (Dissolved)	NA	524	528	NA	NA	749	NA	NA	199
Manganese (Total)	573 *	533	514	743 *	NA	754	202 *	NA	193
Nickel	56.1	NA	NA	50.8	NA	NA	15.0 B	NA	NA
Potassium	7030 *	NA	NA	6720 *	NA	NA	3620 *	NA	NA
Selenium	4.4 U	NA	NA	4.4 U	NA	NA	4.4 U	NA	NA
Silver	5.6 U	NA	NA	5.6 U	NA	NA	5.6 U	NA	NA
Sodium	12600	NA	NA	7460	NA	NA	4990	NA	NA
Thallium	9.2 U	NA	NA	9.2 U	NA	NA	9.2 U	NA	NA
Vanadium	15.8 B	NA	NA	11.7 B	NA	NA	5.8 B	NA	NA
Zinc	162	NA	NA	79.4	NA	NA	175	NA	NA
Mercury	0.10 U	NA	NA	0.10 U	NA	NA	0.10 U	NA	NA
ORGANIC ACIDS *(ug/l)*									
Acetic Acid	2000 U	2,000 U	2000 U	2000 U	NA	NA	2000 U	NA	2000 U
Butyric Acid	2000 U	2,000 U	2000 U	2000 U	NA	NA	2000 U	NA	2000 U
Citric Acid	1000 U	1,000 UJ	1000 U	1000 U	NA	NA	1000 U	NA	1000 U
Formic Acid	2000 U	2,000 U	2000 U	2000 U	NA	NA	2000 U	NA	2000 U
Oxalic Acid	5700 U	400 U	200 U	1800 U	NA	NA	310	NA	40 U
Propionic Acid	5000 U	10,000 U	2000 U	5000 U	NA	NA	5000 U	NA	2000 U
Pyruvic Acid	120 U	120 U	120 U	120 U	NA	NA	120 U	NA	120 U
Quinic Acid	1000 U	1,000 U	1000 U	1000 U	NA	NA	1000 U	NA	1000 U
Succinic Acid	1000 U	1,000 U	1000 U	1000 U	NA	NA	1000 U	NA	1000 U
Tartaric Acid	1000 U	10,000 U	3400 U	1000 U	NA	NA	1000 U	NA	2100 UJ

303022

Table 4-49. Analytical Results for Ground Water Samples for Area of Concern 4. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-17D	MW-17D	MW-17D	MW-18D	MW-18D	MW18D	MW-19D	MW-19D	MW-19D
Sample Date	1/4/00	10/30/00	5/2/01	1/6/00	10/27/00	6/11/01	1/6/00	10/26/00	5/1/01
Round	R-2	R-3	R-4	R-2	R-3	R-4	R-2	R-3	R-4
Parameter									
GENERAL CHEMISTRY *(units in mg/l unless noted)*									
Total Organic Carbon (Quad)	13.0	13.2	13.2	8.8	NA	NA	2.3	NA	2.0
Total Hardness	200	NA	NA	180	NA	NA	55.9	NA	NA
Total Dissolved Solids	507	NA	503	311	NA	NA	100	NA	91
Total Suspended Solids	14	NA	NA	81	NA	NA	65	NA	NA
Alkalinity to pH 4.5	35.5	31.1	35.1	54.8	NA	NA	12.3	NA	21.4
Alkalinity to pH 8.3	0.37 U	0.37 U	0.41 U	0.37 U	NA	NA	0.37 U	NA	0.41 U
Chloride (titrimetric)	38.6	37.8	39.1	14.4	NA	NA	19.9	NA	16.4
Ammonia Nitrogen	0.92	0.90	0.98	0.50	NA	NA	0.48	NA	0.47
Kjeldahl Nitrogen	1.95 J	NA	NA	0.95 J	NA	NA	1.02 J	NA	NA
Nitrate Nitrogen	0.030 U	0.030 U	0.040 U	0.030 U	NA	NA	0.030 U	NA	0.040 U
Nitrite Nitrogen	0.095	0.050 J	0.068	0.085	NA	NA	0.025 J	NA	0.015 U
Ortho-Phosphate as P	0.0030 U	NA	NA	0.255	NA	NA	0.205	NA	NA
Silica (as SiO2)	15.9	NA	NA	8.57	NA	NA	7.78	NA	NA
Sulfate (turbidimetric)	250.	230	228	150	NA	NA	15.9 J	NA	25.5
Sulfide	0.0210 J	NA	NA	0.13	NA	NA	0.0280 J	NA	NA
Chemical Oxygen Demand	69	NA	NA	41.6 J	NA	NA	13.9 J	NA	NA
Ethane *(ug/l)*	11	12	14	3. J	NA	NA	1 U	NA	1 U
Ethene *(ug/l)*	12	13	15	1. U	NA	NA	1 U	NA	1 U
Methane *(ug/l)*	3800	4000	3900	830	NA	NA	39	NA	64
Carbon Dioxide	NA	230000	210000	NA	NA	NA	NA	NA	110000

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

ND = Tentatively Identified Compounds (TICs) not detected

303023

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-6A	MW-7A	MW-7A	MW-7A	MW-7A	MW-8A	MW-8A	MW-8A	MW-8A
Sample Date	7/12/99	7/9/99	1/5/00	10/25/00	4/30/01	7/8/99	1/4/00	10/26/00	5/1/01
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-2	R-3	R-4
Parameter									
VOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acetone	6 U	6 UJ	6 U	6 U	6 UJ	6 UJ	6 U	6 U	6 UJ
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 UJ
Bromomethane/ Methyl bromide	3 U	3 U	3 U	2 U	2 U	3 U	3 U	2 U	2 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Carbon disulfide	3 U	3 U	3 U	1 U	1 U	3 U	3 U	1 U	1 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	3 U	3 U	3 U	2 U	2 U	3 U	3 U	2 U	2 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	3 U	3 U	3 U	2 U	2 U	3 U	3 U	2 U	2 U
cis-1,2-Dichloroethene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
1,1-Dichloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
2-Hexanone	7 U	7 U	7 U	3 U	3 UJ	7 U	7 U	3 U	3 UJ
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	5 U	5 U	3 U	3 UJ	5 U	5 U	3 U	3 UJ
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
Toluene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
trans-1,2-Dichloroethene	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
Vinyl chloride	2 U	2 U	2 U	1 U	1 U	2 U	2 U	1 U	1 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total TICs	20 J	ND	ND	ND	ND	ND	ND	ND	ND

303024

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-6A	MW-7A	MW-7A	MW-7A	MW-7A	MW-8A	MW-8A	MW-8A	MW-8A
Sample Date	7/12/99	7/9/99	1/5/00	10/25/00	4/30/01	7/8/99	1/4/00	10/26/00	5/1/01
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-2	R-3	R-4
Parameter									
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*									
Acenaphthene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Acenaphthylene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Anthracene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Benzo(a)anthracene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Benzo(a)pyrene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Benzo(b)fluoranthene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Benzo(g,h,i)perylene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Benzo(k)fluoranthene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
bis(2-Chloroethoxy)methane	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
bis(2-Chloroethyl)ether	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
bis(2-Ethylhexyl)phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
4-Bromophenyl phenyl ether	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
Butyl benzyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
Carbazole	2 U	2 U	3 U	NA	NA	3 U	3 U	NA	NA
2-Chloronaphthalene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
2-Chlorophenol	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
4-Chloro-3-methylphenol	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
4-Chloroaniline	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
4-Chlorophenyl phenyl ether	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Chrysene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Dibenz(a,h)anthracene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Dibenzofuran	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
1,3-Dichlorobenzene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
1,2-Dichlorobenzene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
1,4-Dichlorobenzene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
2,4-Dichlorophenol	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
Diethyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
Dimethyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
2,4-Dimethylphenol	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
2,4-Dinitrophenol	15 U	15 U	NA	NA	NA	17 U	NA	NA	NA
2,4-Dinitrotoluene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
2,6-Dinitrotoluene	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
4,6-Dinitro-2-methylphenol	5 U	5. U	NA	NA	NA	6 U	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA

303025

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-6A	MW-7A	MW-7A	MW-7A	MW-7A	MW-8A	MW-8A	MW-8A	MW-8A
Sample Date	7/12/99	7/9/99	1/5/00	10/25/00	4/30/01	7/8/99	1/4/00	10/26/00	5/1/01
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-2	R-3	R-4
Parameter									
Di-n-octyl phthalate	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
Fluoranthene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Fluorene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Hexachlorobenzene	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
Hexachlorobutadiene	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
Hexachlorocyclopentadiene	5 U	5 U	5 U	NA	NA	6 U	5 U	NA	NA
Hexachloroethane	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Indeno(1,2,3-cd)pyrene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Isophorone	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
2-Methylnaphthalene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
2-Methylphenol	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
4-Methylphenol	3 U	3 U	NA	NA	NA	3 U	NA	NA	NA
n-Nitrosodiphenylamine	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
n-Nitrosodipropylamine	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Naphthalene	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
Nitrobenzene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
2-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
2-Nitrophenol	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
3-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
4-Nitroaniline	2 U	2 U	2 U	NA	NA	2 U	2 U	NA	NA
4-Nitrophenol	10 U	10 U	NA	NA	NA	11 U	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Pentachlorophenol	3 U	3 U	NA	NA	NA	3 U	NA	NA	NA
Phenanthrene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
Phenol	1 U	1 U	NA	NA	NA	1 U	NA	NA	NA
Pyrene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
1,2,4-Trichlorobenzene	1 U	1 U	0.9 U	NA	NA	1 U	1 U	NA	NA
2,4,5-Trichlorophenol	2 U	2 U	NA	NA	NA	2 U	NA	NA	NA
2,4,6-Trichlorophenol	2 U	2 U	NA	NA	NA	2 U	NA	NA	NA
Total TICs	ND	5 J		NA	NA	6 J	4 J	NA	NA
METALS *(ug/l)*									
Aluminum (Dissolved)	NA	NA	NA	NA	31.9 U	NA	NA	NA	31.9 U
Aluminum (Total)	69.3 BN*	358 N*	1520 *	NA	6060	60.0 BN*	77.0 U*	NA	64.5 B
Antimony	25.0 U	25.0 U	29.0 U	NA	NA	25.0 U	29.0 U	NA	NA
Arsenic	7.0 U	7.0 U	5.0 U	NA	NA	7.0 U	5.0 U	NA	NA

303026

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-6A	MW-7A	MW-7A	MW-7A	MW-7A	MW-8A	MW-8A	MW-8A	MW-8A
Sample Date	7/12/99	7/9/99	1/5/00	10/25/00	4/30/01	7/8/99	1/4/00	10/26/00	5/1/01
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-2	R-3	R-4
Parameter									
Barium	38.5 B	50.4 B	65.0 B	NA	NA	25.4 B	27.4 B	NA	NA
Beryllium	1.7 U	1.7 U	1.9 U	NA	NA	1.7 U	1.9 U	NA	NA
Cadmium	1.7 U	1.7 U	3.6 U	NA	NA	1.7 U	3.6 U	NA	NA
Calcium	13100	23200	29300 E*	NA	NA	4420	4830 E*	NA	NA
Chromium	5.4 U	25.5 B	41.6	NA	NA	5.4 U	9.8 U	NA	NA
Cobalt	5.5 U	5.5 U	6.6 U	NA	NA	5.5 U	6.6 U	NA	NA
Copper	5.8 U	5.8 U	3.5 U	NA	NA	5.8 U	3.5 U	NA	NA
Iron (Dissolved)	57.8 B	55.9 B	NA	NA	37.6 U	16.0 U	NS	NA	37.6 U
Iron (Total)	118 N*	793 N*	2800	NA	8010	82.5 BN*	26.5 B	NA	37.6 U
Lead	6.5 U	6.5 U	7.9 U	NA	NA	6.5 U	7.9 U	NA	NA
Magnesium	3930	3950	5320	NA	NA	949	1060	NA	NA
Manganese (Dissolved)	NA	NA	NA	NA	2.4 B	NA	NA	NA	48.2 J
Manganese (Total)	19.5	14.0	18.5 *	NA	21.1	37.1	58.8 *	NA	41.8 J
Nickel	5.4 U	21.6 B	10.1 B	NA	NA	5.4 U	6.6 U	NA	NA
Potassium	2220	3350	3010 *	NA	NA	6160	5710 *	NA	NA
Selenium	5.9 U	5.9 U	4.4 U	NA	NA	5.9 U	4.4 U	NA	NA
Silver	5.7 U	5.7 U	5.6 U	NA	NA	5.7 U	5.6 U	NA	NA
Sodium	4300	52400	79700	NA	NA	3190	4840	NA	NA
Thallium	9.7 U	9.7 U	9.2 U	NA	NA	9.7 U	9.2 U	NA	NA
Vanadium	2.8 U	2.8 U	8.2 B	NA	NA	2.8 U	3.4 U	NA	NA
Zinc	21.3 B	15.8 B	100	NA	NA	46.1	49.7	NA	NA
Mercury	0.042 U	0.078 B	0.10 U	NA	NA	0.042 U	0.10 U	NA	NA
ORGANIC ACIDS *(ug/l)*									
Acetic Acid	NA	NA	2000 U	NA	2000 U	NA	2000 U	NA	2000 U
Butyric Acid	NA	NA	2000 U	NA	2000 U	NA	2000 U	NA	2000 U
Citric Acid	NA	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U
Formic Acid	NA	NA	2000 U	NA	2000 U	NA	2000 U	NA	2000 U
Oxalic Acid	NA	NA	5400 U	NA	800 U	NA	3400 U	NA	40 U
Propionic Acid	NA	NA	5000 U	NA	2000 U	NA	5000 U	NA	2000 U
Pyruvic Acid	NA	NA	120 U	NA	120 U	NA	120 U	NA	120 U
Quinic Acid	NA	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U
Succinic Acid	NA	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U
Tartaric Acid	NA	NA	5700	NA	1500 UJ	NA	1000 U	NA	2200 UJ

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-6A	MW-7A	MW-7A	MW-7A	MW-7A	MW-8A	MW-8A	MW-8A	MW-8A
Sample Date	7/12/99	7/9/99	1/5/00	10/25/00	4/30/01	7/8/99	1/4/00	10/26/00	5/1/01
Round	R-1	R-1	R-2	R-3	R-4	R-1	R-2	R-3	R-4
Parameter									
GENERAL CHEMISTRY *(units in mg/l unless noted)*									
Total Organic Carbon (Quad)	0.75 J	1.8 U	2.0	NA	2.3 J	0.96 U	1.1	NA	1.1
Total Hardness	48.0	73.9	95.1	NA	NA	17.4	16.7	NA	NA
Total Dissolved Solids	95	255	348	NA	204	51	52	NA	62
Total Suspended Solids	NA	NA	12	NA	NA	NA	3.7 U	NA	NA
Alkalinity to pH 4.5	15.8	29.2	29.3	NA	31.9	0.59 U	0.38 J	NA	0.41 U
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	NA	0.41 U	0.37 U	0.37 U	NA	0.41 U
Chloride (titrimetric)	13.6	106	171	NA	29.7	3.8	4.0	NA	3.3
Ammonia Nitrogen	0.041 J	0.034 U	0.020 U	NA	0.16	0.025 J	0.020 U	NA	0.08
Kjeldahl Nitrogen	0.40 U	0.40 U	0.63 U	NA	NA	0.40 U	0.63 U	NA	NA
Nitrate Nitrogen	0.29	0.58	0.54	NA	0.75	0.70	0.27	NA	0.19
Nitrite Nitrogen	0.015 J	0.015 U	0.015 U	NA	0.036 J	0.015 U	0.015 U	NA	0.015 U
Ortho-Phosphate as P	0.0053 J	0.0197 J	0.050	NA	NA	0.0063 J	0.0030 U	NA	NA
Silica (as SiO2)	6.52	6.83	6.30	NA	NA	10.5	10.6	NA	NA
Sulfate (turbidimetric)	22.5	20.2	17.9	NA	9.6 J	20.1	22.2	NA	21.8
Sulfide	0.0090 U	0.0090 U	0.0090 U	NA	NA	0.0090 U	0.0090 U	NA	NA
Chemical Oxygen Demand	9.0 U	12.4 J	9.6 J	NA	NA	9.0 U	13.9 J	NA	NA
Ethane *(ug/l)*	1 U	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U
Ethene *(ug/l)*	1 U	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U
Methane *(ug/l)*	1 U	5.3	6.0	NA	4 J	1 U	2 U	NA	3 J
Carbon Dioxide	NA	NA	NA	NA	20000	NA	NA	NA	17000

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

ND = Tentatively Identified Compounds (TICs) not detected

303028

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-9A	MW-10A	MW-11A	MW-22S	S-4	S-4	S-4	S-4
Sample Date	7/7/1999	7/8/99	7/15/99	1/10/00	7/12/99	1/7/00	10/31/00	4/30/01
Round	R-1	R-1	R-1	R-2	R-1	R-2	R-3	R-4
Parameter								
VOLATILE ORGANIC COMPOUNDS *(ug/l)*								
Acetone	6 U	6 UJ	6 U	6 U	6 U	6 U	6 UJ	6 UJ
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromomethane/ Methyl bromide	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	3 UJ	3 U
Carbon disulfide	3 U	3 U	3 U	3 U	3 U	3 U	1 U	1 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U
cis-1,2-Dichloroethene	2 U	2 U	2. U	2 U	2 U	2 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
1,1-Dichloroethane	2 U	2 U	1 U	2 U	1 U	2 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U
1,2-Dichloroethane	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
2-Hexanone	7 U	7 U	7 U	7 U	7 U	7 U	3 UJ	3 UJ
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	5 U	5 U	5 U	5 U	5 U	3 UJ	3 UJ
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
Toluene	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
trans-1,2-Dichloroethene	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
Vinyl chloride	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total TICs	ND	ND	ND	ND	ND	ND	ND	ND

303029

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-9A	MW-10A	MW-11A	MW-22S	S-4	S-4	S-4	S-4
Sample Date	7/7/1999	7/8/99	7/15/99	1/10/00	7/12/99	1/7/00	10/31/00	4/30/01
Round	R-1	R-1	R-1	R-2	R-1	R-2	R-3	R-4
Parameter								
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*								
Acenaphthene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Acenaphthylene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Anthracene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Benzo(a)anthracene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Benzo(a)pyrene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Benzo(b)fluoranthene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Benzo(g,h,i)perylene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Benzo(k)fluoranthene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
bis(2-Chloroethoxy)methane	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
bis(2-Chloroethyl)ether	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
bis(2-Ethylhexyl)phthalate	2 J	2 U	2 U	2 U	2 U	2 U	NA	NA
4-Bromophenyl phenyl ether	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
Butyl benzyl phthalate	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
Carbazole	2 U	2 U	2 U	3 U	2 U	3 U	NA	NA
2-Chloronaphthalene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
2-Chlorophenol	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
4-Chloro-3-methylphenol	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
4-Chloroaniline	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
4-Chlorophenyl phenyl ether	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Chrysene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Dibenz(a,h)anthracene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Dibenzofuran	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
1,3-Dichlorobenzene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
1,2-Dichlorobenzene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
1,4-Dichlorobenzene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
2,4-Dichlorophenol	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
3,3'-Dichlorobenzidine	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
Diethyl phthalate	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
Dimethyl phthalate	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
2,4-Dimethylphenol	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
2,4-Dinitrophenol	14. U	16. U	16 U	NA	14 U	NA	NA	NA
2,4-Dinitrotoluene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
2,6-Dinitrotoluene	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
4,6-Dinitro-2-methylphenol	5. U	5. U	5 U	NA	5. U	NA	NA	NA
Di-n-butyl phthalate	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA

303030

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-9A	MW-10A	MW-11A	MW-22S	S-4	S-4	S-4	S-4
Sample Date	7/7/1999	7/8/99	7/15/99	1/10/00	7/12/99	1/7/00	10/31/00	4/30/01
Round	R-1	R-1	R-1	R-2	R-1	R-2	R-3	R-4
Parameter								
Di-n-octyl phthalate	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
Fluoranthene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Fluorene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Hexachlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
Hexachlorobutadiene	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
Hexachlorocyclopentadiene	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA
Hexachloroethane	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Indeno(1,2,3-cd)pyrene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Isophorone	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
2-Methylnaphthalene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
2-Methylphenol	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
4-Methylphenol	3 U	3 U	3 U	NA	3 U	NA	NA	NA
n-Nitrosodiphenylamine	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
n-Nitrosodipropylamine	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Naphthalene	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
Nitrobenzene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
2-Nitroaniline	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
2-Nitrophenol	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
3-Nitroaniline	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
4-Nitroaniline	2 U	2 U	2 U	2 U	2 U	2 U	NA	NA
4-Nitrophenol	9 U	11 U	10 U	NA	10 U	NA	NA	NA
2,2'-Oxybis(1-chloropropane)	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Pentachlorophenol	3 U	3 U	3 U	NA	3. U	NA	NA	NA
Phenanthrene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
Phenol	0.9 U	1 U	1 U	NA	1 U	NA	NA	NA
Pyrene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
1,2,4-Trichlorobenzene	0.9 U	1 U	1 U	1 U	1 U	0.9 U	NA	NA
2,4,5-Trichlorophenol	2 U	2 U	2 U	NA	2 U	NA	NA	NA
2,4,6-Trichlorophenol	2 U	2 U	2 U	NA	2 U	NA	NA	NA
Total TICs	6 J	ND	ND	ND	ND	ND	NA	NA
METALS *(ug/l)*								
Aluminum (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum (Total)	973 N*	78.6 BN*	435	387 *	52.0 UN*	115 B*	NA	31.9 U
Antimony	25. U	25.0 U	25.0 U	29.0 U	25.0 U	29.0 U	NA	NA
Arsenic	7. U	7.0 U	7.0 U	5.0 U	7.0 U	5.0 U	NA	NA

303031

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-9A	MW-10A	MW-11A	MW-22S	S-4	S-4	S-4	S-4
Sample Date	7/7/1999	7/8/99	7/15/99	1/10/00	7/12/99	1/7/00	10/31/00	4/30/01
Round	R-1	R-1	R-1	R-2	R-1	R-2	R-3	R-4
Parameter								
Barium	14.2 B	85.5 B	114	222	23.8 B	26.4 B	NA	NA
Beryllium	1.7 U	1.7 U	1.7 U	1.9 U	1.7 U	1.9 U	NA	NA
Cadmium	1.7 U	1.7 U	1.7 U	3.6 U	1.7 U	3.6 U	NA	NA
Calcium	6510	7710	16300	33800	13700	13900 E*	NA	NA
Chromium	5.4 U	17.2 B	5.4 U	9.8 U	5.4 U	9.8 U	NA	NA
Cobalt	5.5 U	5.5 B	10.3 B	6.6 U	5.5 U	6.6 U	NA	NA
Copper	7.7 B	5.8 U	5.8 U	3.5 U	5.8 U	3.5 U	NA	NA
Iron (Dissolved)	636	19.0 B	1230	NS	41.1 B	NS	NA	NA
Iron (Total)	2410 N*	24.3 BN*	1620	7570	24.2 BN*	396	NA	37.6 U
Lead	6.5 U	6.5 U	6.5 U	7.9 U	6.5 U	7.9 U	NA	NA
Magnesium	1920	1890	7220	15100	17400	20200	NA	NA
Manganese (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (Total)	11.9	107	315	944	1.6 U	2.6 U*	NA	0.62 U
Nickel	5.4 U	9.8 B	5.4 U	6.6 U	5.4 U	6.6 U	NA	NA
Potassium	1540	2660	1330	3050	7550	8810 *	NA	NA
Selenium	5.9 U	5.9 U	5.9 U	4.4 U	5.9 U	4.4 U	NA	NA
Silver	5.7 U	5.7 U	5.7 U	5.6 U	5.7 U	5.6 U	NA	NA
Sodium	39100	24100	29500 E	11500 E*	1650	1830	NA	NA
Thallium	9.7 U	9.7 U	9.7 U	9.2 U	15.2 B	9.2 U	NA	NA
Vanadium	7.3 B	2.8 U	4.3 B	3.4 U	2.8 U	3.4 U	NA	NA
Zinc	44.6	11.2 B	49.6 N*	14.2 B	65.7	447	NA	NA
Mercury	0.042 U	0.042 U	0.042 U	0.10 U	0.042 U	0.10 U	NA	NA
ORGANIC ACIDS *(ug/l)*								
Acetic Acid	2000 U	2000 U	NA	2000 U	NA	2000 U	NA	NA
Butyric Acid	2000 U	2000 U	NA	2000 U	NA	2000 U	NA	NA
Citric Acid	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	NA
Formic Acid	2000 U	2000 U	NA	2000 U	NA	2000 U	NA	NA
Oxalic Acid	40 U	40 U	NA	9800 U	NA	7900 U	NA	NA
Propionic Acid	2000 U	2000 U	NA	5000 U	NA	5000 U	NA	NA
Pyruvic Acid	120 U	120 U	NA	120 U	NA	120 U	NA	NA
Quinic Acid	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	NA
Succinic Acid	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	NA
Tartaric Acid	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	NA

303032

Table 4-50. Analytical Results for Ground Water Samples for Area of Concern-Water Table Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-9A	MW-10A	MW-11A	MW-22S	S-4	S-4	S-4	S-4
Sample Date	7/7/1999	7/8/99	7/15/99	1/10/00	7/12/99	1/7/00	10/31/00	4/30/01
Round	R-1	R-1	R-1	R-2	R-1	R-2	R-3	R-4
Parameter								
GENERAL CHEMISTRY *(units in mg/l unless noted)*								
Total Organic Carbon (Quad)	9.3	0.95 J	10.7	44.0	1.4	1.9	NA	NA
Total Hardness	29.9	30.3	76.4	154	102	117	NA	NA
Total Dissolved Solids	172	111	225	288	115	133	NA	NA
Total Suspended Solids	3.7 U	3.7 U	3.7 U	6.8 J	NA	4.0 J	NA	NA
Alkalinity to pH 4.5	72.5	2.4 U	6.9	139	85.2	99.2	NA	NA
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	NA	NA
Chloride (titrimetric)	21.3	42.1	56.9	25.9	3.6	3.6	NA	NA
Ammonia Nitrogen	0.02 U	0.020 U	0.045 J	4.24	0.020 U	0.020 U	NA	NA
Kjeldahl Nitrogen	0.80 U	0.40 U	0.87 U	7.6 J	0.40 U	0.63 U	NA	NA
Nitrate Nitrogen	0.18	0.46	NA	0.030 U	0.86	0.90	NA	NA
Nitrite Nitrogen	0.015 U	0.015 U	0.015 U	0.017 J	0.015 J	0.015 U	NA	NA
Ortho-Phosphate as P	0.024	0.0117 J	0.045	0.427	0.0093 J	0.020	NA	NA
Silica (as SiO2)	3.71	6.88	14.2	30.2	5.29	5.57	NA	NA
Sulfate (turbidimetric)	4.2 J	18.2	47	1.5 U	20.4	21	NA	NA
Sulfide	NA	0.0090 U	0.0090 U	0.26	0.0090 U	0.0090 U	NA	NA
Chemical Oxygen Demand	28.7 J	9.0 U	44.3 U	122	10.2 J	9.0 U	NA	NA
Ethane *(ug/l)*	1 U	1 U	1 U	1 U	1 U	1 U	NA	NA
Ethene *(ug/l)*	1 U	1 U	1 U	1 U	1 U	1 U	NA	NA
Methane *(ug/l)*	180	1 U	1 U	11000	1 U	2 U	NA	NA
Carbon Dioxide	NA	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits

* = Duplicate analysis not within control limits.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

ND = Tentatively Identified Compounds (TICs) not detected

303033

Table 4-51. Analytical Results for Ground Water Samples for Area of Concern-North Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-8B	MW-8B	MW-8B	MW-8B	MW-9B	MW-9B	MW-20D	MW-20D	EPA-107	EPA-108
Sample Date	7/9/99	1/4/00	10/26/00	5/1/01	7/7/1999	4/30/01	1/5/00	10/27/00	7/8/99	7/13/99
Round	R-1	R-2	R-3	R-4	R-1	R-4	R-2	R-3	R-1	R-1
Parameter										
VOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acetone	6 UJ	6 U	6 U	6 UJ	6 U	6 UJ	6 U	6 U	6 UJ	6. U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U
Bromomethane/ Methyl bromide	3 U	3 U	2 U	2 U	3 U	2 U	3 U	2 U	3 U	3 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Carbon disulfide	3 U	3 U	1 U	1 U	3 U	1 U	3 U	1 U	3 U	3 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	3 U	3 U	2 U	2 U	3 U	2 U	3 U	2 U	3 U	3 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	3 U	3 U	2 U	2 U	3 U	2 U	3 U	2 U	3 U	3 U
cis-1,2-Dichloroethene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
1,1-Dichloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dichloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
2-Hexanone	7 U	7 U	3 U	3 UJ	7 U	3 UJ	7 U	3 U	7 U	7 U
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	5 U	3 U	3 UJ	5 U	3 UJ	5 U	3 U	5 U	5 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
Toluene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
trans-1,2-Dichloroethene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 J	1 J	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
Vinyl chloride	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	2 U	2 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total TICs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

303034

Table 4-51. Analytical Results for Ground Water Samples for Area of Concern-North Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-8B	MW-8B	MW-8B	MW-8B	MW-9B	MW-9B	MW-20D	MW-20D	EPA-107	EPA-108
Sample Date	7/9/99	1/4/00	10/26/00	5/1/01	7/7/1999	4/30/01	1/5/00	10/27/00	7/8/99	7/13/99
Round	R-1	R-2	R-3	R-4	R-1	R-4	R-2	R-3	R-1	R-1
Parameter										
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acenaphthene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Acenaphthylene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Anthracene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Benzo(a)anthracene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Benzo(a)pyrene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Benzo(b)fluoranthene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Benzo(g,h,i)perylene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Benzo(k)fluoranthene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
bis(2-Chloroethoxy)methane	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
bis(2-Chloroethyl)ether	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
bis(2-Ethylhexyl)phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
4-Bromophenyl phenyl ether	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
Butyl benzyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
Carbazole	2 U	3 U	NA	NA	2 U	NA	3 U	NA	2 U	2 U
2-Chloronaphthalene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
2-Chlorophenol	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
4-Chloro-3-methylphenol	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
4-Chloroaniline	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
4-Chlorophenyl phenyl ether	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Chrysene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Dibenz(a,h)anthracene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Dibenzofuran	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
1,3-Dichlorobenzene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
1,2-Dichlorobenzene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
1,4-Dichlorobenzene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
2,4-Dichlorophenol	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
3,3'-Dichlorobenzidine	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
Diethyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
Dimethyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
2,4-Dimethylphenol	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
2,4-Dinitrophenol	15 U	NA	NA	NA	14 U	NA	NA	NA	14 U	14 U
2,4-Dinitrotoluene	1. U	0.9 U	NA	NA	1. U	NA	0.9 U	NA	0.9 U	1 U
2,6-Dinitrotoluene	2 U	2 U	NA	NA	2. U	NA	2 U	NA	2 U	2 U
4,6-Dinitro-2-methylphenol	5 U	NA	NA	NA	5 U	NA	NA	NA	5 U	5 U
Di-n-butyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U

303035

Table 4-51. Analytical Results for Ground Water Samples for Area of Concern-North Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-8B	MW-8B	MW-8B	MW-8B	MW-9B	MW-9B	MW-20D	MW-20D	EPA-107	EPA-108
Sample Date	7/9/99	1/4/00	10/26/00	5/1/01	7/7/1999	4/30/01	1/5/00	10/27/00	7/8/99	7/13/99
Round	R-1	R-2	R-3	R-4	R-1	R-4	R-2	R-3	R-1	R-1
Parameter										
Di-n-octyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
Fluoranthene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Fluorene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Hexachlorobenzene	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
Hexachlorobutadiene	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
Hexachlorocyclopentadiene	5 U	5 U	NA	NA	5 U	NA	5 U	NA	5 U	5 U
Hexachloroethane	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Indeno(1,2,3-cd)pyrene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Isophorone	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
2-Methylnaphthalene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
2-Methylphenol	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
4-Methylphenol	3 U	NA	NA	NA	3 U	NA	NA	NA	3 U	3 U
n-Nitrosodiphenylamine	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
n-Nitrosodipropylamine	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Naphthalene	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
Nitrobenzene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
2-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
2-Nitrophenol	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
3-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
4-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	2 U	NA	2 U	2 U
4-Nitrophenol	10 U	NA	NA	NA	10 U	NA	NA	NA	9 U	10 U
2,2'-Oxybis(1-chloropropane)	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Pentachlorophenol	3 U	NA	NA	NA	3 U	NA	NA	NA	3 U	3 U
Phenanthrene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
Phenol	1 U	NA	NA	NA	1 U	NA	NA	NA	0.9 U	1 U
Pyrene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
1,2,4-Trichlorobenzene	1 U	0.9 U	NA	NA	1 U	NA	0.9 U	NA	0.9 U	1 U
2,4,5-Trichlorophenol	2 U	NA	NA	NA	2 U	NA	NA	NA	2 U	2 U
2,4,6-Trichlorophenol	2 U	NA	NA	NA	2 U	NA	NA	NA	2 U	2 U
Total TICs	4 J	ND	NA	NA	ND	NA	ND	NA	6 J	ND
METALS *(ug/l)*										
Aluminum (Dissolved)	NA	NA	NA	62.1 B	NA	34.1 B	NA	NA	NA	NA
Aluminum (Total)	584 N*	162 B*	NA	220	135BN*	231	5430 *	NA	112 BN*	290 N*
Antimony	25.0 U	29.0 U	NA	NA	25. U	NA	29.0 U	NA	25.0 U	25.0 U
Arsenic	7.0 U	5.0 U	NA	NA	7. U	NA	5.0 U	NA	7.0 U	7.0 U

303036

Table 4-51. Analytical Results for Ground Water Samples for Area of Concern-North Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-8B	MW-8B	MW-8B	MW-8B	MW-9B	MW-9B	MW-20D	MW-20D	EPA-107	EPA-108
Sample Date	7/9/99	1/4/00	10/26/00	5/1/01	7/7/1999	4/30/01	1/5/00	10/27/00	7/8/99	7/13/99
Round	R-1	R-2	R-3	R-4	R-1	R-4	R-2	R-3	R-1	R-1
Parameter										
Barium	42.7 B	41.7 B	NA	NA	127	NA	78.8 B	NA	63.8 B	116
Beryllium	1.7 U	1.9 U	NA	NA	1.7 U	NA	1.9 U	NA	1.7 U	1.7 U
Cadmium	1.7 U	3.6 U	NA	NA	1.7 U	NA	3.6 U	NA	1.7 U	1.7 U
Calcium	7650	7830 E*	NA	NA	11200	NA	12700 E*	NA	27400	13200
Chromium	6.6 B	9.8 U	NA	NA	22.6 B	NA	19.0 B	NA	5.4 U	5.4 U
Cobalt	6.5 B	6.6 U	NA	NA	10.8 B	NA	6.6 U	NA	5.5 U	22.9 B
Copper	5.8 U	3.5 U	NA	NA	5.8 U	NA	16.3 B	NA	5.8 U	5.8 U
Iron (Dissolved)	16.0 U	NS	33.0 B	37.6 U	93. B	37.6 U	NS	NA	23800	79.8 U
Iron (Total)	2070 N*	447	1,640	388	822 N*	3570	8610	NA	26600	108 U
Lead	6.5 U	7.9 U	NA	NA	6.5 U	NA	12.6	NA	25.2	6.5 U
Magnesium	4410	4640	NA	NA	8270	NA	2940	NA	8230	8780
Manganese (Dissolved)	NA	NA	100	101	NA	108	NA	NA	NA	NA
Manganese (Total)	125	121 *	102	99.0 J	108	124	117 *	NA	6880	90.5
Nickel	7.4 B	6.6 U	NA	NA	27. B	NA	22.6 B	NA	5.4 U	31.6 B
Potassium	7050	7860 *	NA	NA	2980	NA	2650 *	NA	2730	2590
Selenium	5.9 U	4.4 U	NA	NA	5.9 U	NA	4.4 U	NA	5.9 U	5.9 U
Silver	5.7 U	5.6 U	NA	NA	5.7 U	NA	5.6 U	NA	5.7 U	5.7 U
Sodium	53400	51000	NA	NA	39000	NA	12400	NA	36600	4550
Thallium	9.7 U	9.2 U	NA	NA	9.7 U	NA	9.2 U	NA	9.7 U	9.7 J
Vanadium	10.0 B	3.4 U	NA	NA	2.8 U	NA	29.5	NA	16.1 B	2.8 U
Zinc	22.7 B	18.8 B	NA	NA	78.4	NA	54.7	NA	12300	46.8
Mercury	0.042 U	0.10 U	NA	NA	0.042 U	NA	0.10 U	NA	0.042 U	0.042 J
ORGANIC ACIDS *(ug/l)*										
Acetic Acid	NA	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	2000 U
Butyric Acid	NA	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	2000 U
Citric Acid	NA	1000 U	100000 UJ	1000 U	1000 U	1000 U	1000 U	NA	1000 U	1000 U
Formic Acid	NA	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	2000 U
Oxalic Acid	NA	60000 U	4000 U	2000 U	40 U	2000 U	31000 U	NA	40 U	40 U
Propionic Acid	NA	5000 U	10000 U	2000 U	2000 U	2000 U	5000 U	NA	2000 U	2000 U
Pyruvic Acid	NA	120 U	120 U	120 U	120 U	120 U	120 U	NA	120 U	120 U
Quinic Acid	NA	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NA	1000 U	1000 U
Succinic Acid	NA	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NA	1000 U	1000 U
Tartaric Acid	NA	1000 U	100000 U	1800 UJ	1000 U	1700 UJ	1000 U	NA	5000 U	1000 U

303037

Table 4-51. Analytical Results for Ground Water Samples for Area of Concern-North Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-8B	MW-8B	MW-8B	MW-8B	MW-9B	MW-9B	MW-20D	MW-20D	EPA-107	EPA-108
Sample Date	7/9/99	1/4/00	10/26/00	5/1/01	7/7/1999	4/30/01	1/5/00	10/27/00	7/8/99	7/13/99
Round	R-1	R-2	R-3	R-4	R-1	R-4	R-2	R-3	R-1	R-1
Parameter										
GENERAL CHEMISTRY *(units in mg/l unless noted)*										
Total Organic Carbon (Quad)	2.1	2.2	2.0	2.1	0.92 J	0.94 J	0.97 J	NA	4.2	0.73 J
Total Hardness	39.1	38.4	NA	NA	64.9	NA	71	NA	137	67.6
Total Dissolved Solids	224	221	NA	194	182	192	505	NA	232	112
Total Suspended Solids	NA	17	NA	NA	20	NA	526	NA	106	3.7 U
Alkalinity to pH 4.5	0.37 U	0.37 U	0.37 U	14.8	0.37 U	6.3	24.0	NA	120	0.37 U
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	0.41 U	0.37 U	0.41 U	0.37 U	NA	0.37 U	0.37 U
Chloride (titrimetric)	76.4	70.2	54.7	53.6	75.2	80.7	4.8	NA	60.9	19.8
Ammonia Nitrogen	1.35	1.33	1.34	1.42 J	0.02U	0.025 J	0.020 U	NA	0.63	0.020 U
Kjeldahl Nitrogen	1.3	2.1	NA	NA	0.40 U	NA	3.2 U	NA	0.88 J	0.48 J
Nitrate Nitrogen	6.78	6.33	6.17	5.48	2.12	2.43	3.53	NA	0.030 U	3.9
Nitrite Nitrogen	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.025 J	NA	0.051	0.015 J
Ortho-Phosphate as P	0.0088 J	0.0030 U	NA	NA	0.022	NA	0.065 J	NA	0.0058 J	0.021
Silica (as SiO2)	3.60	2.67	NA	NA	10.9	NA	9.61	NA	3.64	9.17
Sulfate (turbidimetric)	40	40	44	41	25.4	27.4	7.5 U	NA	6.0 U	38.9
Sulfide	0.0090 U	0.0090 U	NA	NA	NA	NA	0.045 U	NA	2.43	0.0090 U
Chemical Oxygen Demand	27.3 J	13.9 J	NA	NA	11.7 J	NA	9.0 U	NA	33.6 J	9.0 U
Ethane *(ug/l)*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U
Ethene *(ug/l)*	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U
Methane *(ug/l)*	19	22	3 J	15 J	1 U	3 J	2 U	NA	1000	1 U
Carbon Dioxide	NA	NA	130000	120000	NA	52000	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

303038

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-10B	MW-10B	MW-10B	MW-14A	MW-14B	MW-14B	MW-14B	MW-15A	MW-15B	MW-16A
Sample Date	7/8/99	1/5/00	10/27/00	7/7/1999	7/7/1999	1/5/00	10/25/00	9/13/99	9/14/99	9/14/99
Round	R-1	R-2	R-3	R-1	R-1	R-2	R-3	R-1	R-1	R-1
Parameter										
VOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acetone	6 UJ	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane/ Methyl bromide	3 U	3 U	2 U	3 U	3 U	3 U	2 U	3 U	3 U	3 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Carbon disulfide	3 U	3 U	1 U	3 U	3 U	3 U	1 U	3 U	3 U	3 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	3 U	3 U	2 U	3 U	3 U	3 U	2 U	3 U	3 U	3 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	3 UJ	3 U	2 U	3 U	3 U	3 U	2 U	3 U	3 U	3 U
cis-1,2-Dichloroethene	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
1,1-Dichloroethane	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
2-Hexanone	7 U	7 U	3 U	7 U	7 U	7 U	3 U	7 U	7 U	7 U
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	5 U	3 U	5 U	5 U	5 U	3 U	5 U	5 U	5 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
Toluene	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
Vinyl chloride	2 U	2 U	1 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total TICs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

303039

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-10B	MW-10B	MW-10B	MW-14A	MW-14B	MW-14B	MW-14B	MW-15A	MW-15B	MW-16A
Sample Date	7/8/99	1/5/00	10/27/00	7/7/1999	7/7/1999	1/5/00	10/25/00	9/13/99	9/14/99	9/14/99
Round	R-1	R-2	R-3	R-1	R-1	R-2	R-3	R-1	R-1	R-1
Parameter										
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*										
Acenaphthene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Acenaphthylene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Anthracene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Benzo(a)anthracene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Benzo(a)pyrene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Benzo(b)fluoranthene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Benzo(g,h,i)perylene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Benzo(k)fluoranthene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
bis(2-Chloroethoxy)methane	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
bis(2-Chloroethyl)ether	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
bis(2-Ethylhexyl)phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
4-Bromophenyl phenyl ether	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
Butyl benzyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
Carbazole	2 U	3 U	NA	2 U	2 U	3 U	NA	3 U	3 U	3 U
2-Chloronaphthalene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
2-Chlorophenol	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
4-Chloro-3-methylphenol	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
4-Chloroaniline	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
4-Chlorophenyl phenyl ether	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Chrysene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Dibenz(a,h)anthracene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Dibenzofuran	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
1,3-Dichlorobenzene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
1,2-Dichlorobenzene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
1,4-Dichlorobenzene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
2,4-Dichlorophenol	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
3,3'-Dichlorobenzidine	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
Diethyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
Dimethyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
2,4-Dimethylphenol	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
2,4-Dinitrophenol	14 U	NA	NA	15 U	15 U	NA	NA	20 U	22 U	19 U
2,4-Dinitrotoluene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
2,6-Dinitrotoluene	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
4,6-Dinitro-2-methylphenol	5 U	NA	NA	5 U	5 U	NA	NA	5 U	6 U	5 U
Di-n-butyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U

303040

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-10B	MW-10B	MW-10B	MW-14A	MW-14B	MW-14B	MW-14B	MW-15A	MW-15B	MW-16A
Sample Date	7/8/99	1/5/00	10/27/00	7/7/1999	7/7/1999	1/5/00	10/25/00	9/13/99	9/14/99	9/14/99
Round	R-1	R-2	R-3	R-1	R-1	R-2	R-3	R-1	R-1	R-1
Parameter										
Di-n-octyl phthalate	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
Fluoranthene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Fluorene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Hexachlorobenzene	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
Hexachlorobutadiene	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
Hexachlorocyclopentadiene	5 U	5 U	NA	5 U	5 U	5 U	NA	5 U	6 U	5 U
Hexachloroethane	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Indeno(1,2,3-cd)pyrene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Isophorone	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
2-Methylnaphthalene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
2-Methylphenol	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
4-Methylphenol	3 U	NA	NA	3 U	3 U	NA	NA	3 U	3 U	3 U
n-Nitrosodiphenylamine	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
n-Nitrosodipropylamine	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Naphthalene	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
Nitrobenzene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
2-Nitroaniline	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
2-Nitrophenol	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
3-Nitroaniline	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
4-Nitroaniline	2 U	2 U	NA	2 U	2 U	2 U	NA	2 U	2 U	2 U
4-Nitrophenol	10 U	NA	NA	10 U	10 U	NA	NA	10 U	11 U	10 U
2,2'-Oxybis(1-chloropropane)	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Pentachlorophenol	3 U	NA	NA	3 U	3 U	NA	NA	3 U	3 U	3 U
Phenanthrene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Phenol	1 U	NA	NA	1 U	1 U	NA	NA	1 U	1 U	1 U
Pyrene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
1,2,4-Trichlorobenzene	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
2,4,5-Trichlorophenol	2 U	NA	NA	2 U	2 U	NA	NA	2 U	2 U	2 U
2,4,6-Trichlorophenol	2 U	NA	NA	2 U	2 U	NA	NA	2 U	2 U	2 U
Total TICs	ND	ND	NA	7 J	ND	ND	NA	ND	ND	ND
METALS *(ug/l)*										
Aluminum (Dissolved)										
Aluminum (Total)	52.0 UN*	77.0 U*	NA	52. UN*	1570 N*	153 B*	NA	1090 N	345 N	827 N
Antimony	25.0 U	29.0 U	NA	25. U	25. U	29.0 U	NA	25.0 U	25.0 U	25.0 U
Arsenic	9.3 B	5.0 U	NA	7. U	7. U	5.0 U	NA	7.0 U	7.0 U	7.0 U

303041

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-10B	MW-10B	MW-10B	MW-14A	MW-14B	MW-14B	MW-14B	MW-15A	MW-15B	MW-16A
Sample Date	7/8/99	1/5/00	10/27/00	7/7/1999	7/7/1999	1/5/00	10/25/00	9/13/99	9/14/99	9/14/99
Round	R-1	R-2	R-3	R-1	R-1	R-2	R-3	R-1	R-1	R-1
Parameter										
Barium	38.2 B	37.0 B	NA	79.2 B	116	104	NA	87.3 B	81.4 B	80.7 B
Beryllium	1.7 U	1.9 U	NA	1.7 U	1.7 U	1.9 U	NA	1.7 U	1.7 U	1.7 U
Cadmium	1.7 U	3.6 U	NA	1.7 U	2. B	3.6 U	NA	1.7 U	1.7 U	1.7 U
Calcium	5150	5180 E*	NA	8200	6260	5470 E*	NA	8630	8480	9900
Chromium	5.4 U	9.8 U	NA	5.4 U	18.8 B	9.8 U	NA	5.4 U	5.4 U	5.4 U
Cobalt	5.5 U	6.6 U	NA	5.5 U	5.5 U	6.6 U	NA	5.5 U	5.5 U	5.5 U
Copper	5.8 U	3.5 U	NA	5.8 U	31	3.5 U	NA	5.8 U	5.8 U	5.8 U
Iron (Dissolved)	13100	NS	NA	25900	12000	NS	NA	28500	16200	20800
Iron (Total)	13600 N*	13700	NA	26400 N*	17500 N*	12800	NA	31500	18500	28100
Lead	6.5 U	7.9 U	NA	6.5 U	6.5 U	7.9 U	NA	6.5 U	6.5 U	6.5 U
Magnesium	3570	3710	NA	5310	2890	2450	NA	5330	3990	4930
Manganese (Dissolved)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (Total)	176	183 *	NA	335	151	131 *	NA	303	183	324
Nickel	6.7 B	7.9 B	NA	5.4 U	6.6 B	6.6 U	NA	5.4 U	5.4 U	5.4 U
Potassium	2580	2800 *	NA	3650	2710	2420 *	NA	3070	2500	2770
Selenium	5.9 U	4.4 U	NA	5.9 U	5.9 U	4.4 U	NA	5.9 U	5.9 U	5.9 U
Silver	5.7 U	5.6 U	NA	5.7 U	5.7 U	5.6 U	NA	5.7 U	5.7 U	5.7 U
Sodium	3810	4780	NA	4930	4570	4530	NA	3830	4470	3150
Thallium	9.7 U	9.2 U	NA	9.7 U	9.7 U	9.2 U	NA	9.7 U	9.7 U	9.7 U
Vanadium	2.8 U	3.4 U	NA	2.9 B	25.1	3.4 U	NA	2.8 U	2.8 U	2.8 U
Zinc	12.5 B	12.7 B	NA	3. U	113	4.7 U	NA	20.2 B	17.3 B	8.0 B
Mercury	0.042 U	0.10 U	NA	0.042 U	0.042 U	0.10 U	NA	0.042 U	0.042 U	0.042 U
ORGANIC ACIDS *(ug/l)*										
Acetic Acid	NS	2000 U	NA	2000 U	2000U	2000 U	NA	2000 U	2000 U	2000 U
Butyric Acid	NS	2000 U	NA	2000 U	2000 U	2000 U	NA	2000 U	2000 U	2000 U
Citric Acid	NS	1000 U	NA	1000 U	1000 U	1000 U	NA	2000 U	2000 U	2000 U
Formic Acid	NS	2000 U	NA	2000 U	2000 U	2000 U	NA	2000 U	2000 U	2000 U
Oxalic Acid	NS	220	NA	40 U	40 U	270	NA	40 U	40 U	40 U
Propionic Acid	NS	5000 U	NA	2000 U	2000 U	5000 U	NA	2000 U	2000 U	2000 U
Pyruvic Acid	NS	120 U	NA	120 U	120 U	120 U	NA	100 U	100 U	100 U
Quinic Acid	NS	1000 U	NA	1000 U	1000 U	1000 U	NA	1000 U	1000 U	1000 U
Succinic Acid	NS	1000 U	NA	1000 U	1000 U	1000 U	NA	1000 U	1000 U	1000 U
Tartaric Acid	NS	1000 U	NA	1000 U	1000 U	1000 U	NA	4000 B	3800 B	6200 B

303042

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-10B	MW-10B	MW-10B	MW-14A	MW-14B	MW-14B	MW-14B	MW-15A	MW-15B	MW-16A
Sample Date	7/8/99	1/5/00	10/27/00	7/7/1999	7/7/1999	1/5/00	10/25/00	9/13/99	9/14/99	9/14/99
Round	R-1	R-2	R-3	R-1	R-1	R-2	R-3	R-1	R-1	R-1
Parameter										
GENERAL CHEMISTRY *(units in mg/l unless noted)*										
Total Organic Carbon (Quad)	1.8 U	2.0	NA	1.6	1.2	1.4	NA	3.7	1.8	3.6
Total Hardness	33.7	32.7	NA	48.5	40	27.3	NA	45.6	40.3	49.8
Total Dissolved Solids	87	83	NA	151	68	75	NA	103	106	89
Total Suspended Solids	NA	79	NA	3.7 U	471	12	NA	52	95	80
Alkalinity to pH 4.5	0.37 U	5.2	NA	12.7	0.76 J	18.5	NA	45.6	23.2	30.6
Alkalinity to pH 8.3	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U
Chloride (titrimetric)	17.7	16.1	NA	15.8	10.9	10.5	NA	17.2	10.3	14.4
Ammonia Nitrogen	0.33	0.36	NA	0.15	0.13	0.13	NA	0.38	0.18	0.25
Kjeldahl Nitrogen	0.52 J	0.63 U	NA	0.40 U	2.1 J	0.63 U	NA	0.69 J	0.40 U	0.59 J
Nitrate Nitrogen	0.030 U	0.030 U	NA	0.030 U	0.030 U	0.030 U	NA	NA	NA	NA
Nitrite Nitrogen	0.019 J	0.019 J	NA	0.047 J	0.023 J	0.015 J	NA	0.029 J	0.015 J	0.026 J
Ortho-Phosphate as P	0.493	0.0040 J	NA	0.244	0.066	0.536	NA	0.036	0.0102 J	0.0030 U
Silica (as SiO2)	6.62	10.7	NA	20.3	15.5	19.2	NA	10.0	13.6	13.0
Sulfate (turbidimetric)	27.3	26	NA	59	6 U	14.9	NA	27	13	3.0 U
Sulfide	0.0160 J	0.0090 U	NA	NA	NA	0.0280 J	NA	0.0390 J	0.0090 U	0.0220 J
Chemical Oxygen Demand	10.2 J	9.0 U	NA	13.8 J	30.8 J	9.0 U	NA	31.5 J	23.0 J	20.9 J
Ethane *(ug/l)*	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Ethene *(ug/l)*	1 U	1 U	NA	1 U	1 U	1 U	NA	1 U	1 U	1 U
Methane *(ug/l)*	9.0	5.7	NA	32	18	18	NA	26	18	280
Carbon Dioxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

303043

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-16B	MW-16B	MW-16B	MW-16B	MW-17I	MW-17I	MW-22I	MW-22I	MW-34D	MW-34D	MW-35D	MW-35D	S-6
Sample Date	9/14/99	1/4/00	10/26/00	5/1/01	1/4/00	10/27/00	1/11/00	10/30/00	11/2/2000	5/2/01	12/20/2000	5/4/01	7/16/99
Round	R-1	R-2	R-3	R-4	R-2	R-3	R-2	R-3	R-3	R-4	R-3	R-4	R-1
Parameter													
VOLATILE ORGANIC COMPOUNDS *(ug/l)*													
Acetone	6 U	6 U	6 U	6 UJ	6 U	6 U	6 U	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Bromoform	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 UJ	1U
Bromomethane/ Methyl bromide	3 U	3 U	2 U	2 U	3 U	2 U	3 U	2 U	2 U	2 U	2 U	2 U	3 U
2-Butanone	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 UJ	3 UJ	3 U	4 UJ	3 UJ	3 U
Carbon disulfide	3 U	3 U	1 U	1 U	3 U	1 U	3 U	1 U	1 U	1 U	2J	1 U	3 U
Carbon tetrachloride	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Chloroethane	3 U	3 U	2 UJ	2 U	3 U	2 U	3 U	2 U	2 U	2 U	2 U	2 U	3 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Chloromethane	3 U	3 U	2 U	2 UJ	3 U	2 U	3 U	2 U	2 U	2 U	2 UJ	2 UJ	3 J
cis-1,2-Dichloroethene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	2 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Dibromochloromethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	2J	1 U	2 U
1,1-Dichloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1U
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dichloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Ethylbenzene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	2 U
2-Hexanone	7 U	7 U	3 U	3 UJ	7 U	3 U	7 U	3 UJ	3 UJ	3 UJ	3 U	3 UJ	7 U
Methylene chloride	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	5 U	5 U	3 U	3 UJ	5 U	3 U	5 U	3 UJ	3 UJ	3 UJ	3 U	3 UJ	5 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Tetrachloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
1,1,2,2-Tetrachloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	2 U
Toluene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	7	1 U	2 U
trans-1,2-Dichloroethene	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	2 U
trans-1,3-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
1,1,1-Trichloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
1,1,2-Trichloroethane	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	2 U
Vinyl chloride	2 U	2 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	2 U
Xylenes (Total)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1U
Total TICs	18 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

303044

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-16B	MW-16B	MW-16B	MW-16B	MW-17I	MW-17I	MW-22I	MW-22I	MW-34D	MW-34D	MW-35D	MW-35D	S-6
Sample Date	9/14/99	1/4/00	10/26/00	5/1/01	1/4/00	10/27/00	1/11/00	10/30/00	11/2/2000	5/2/01	12/20/2000	5/4/01	7/16/99
Round	R-1	R-2	R-3	R-4	R-2	R-3	R-2	R-3	R-3	R-4	R-3	R-4	R-1
Parameter													
SEMIVOLATILE ORGANIC COMPOUNDS *(ug/l)*													
Acenaphthene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Acenaphthylene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Anthracene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Benzo(a)anthracene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Benzo(a)pyrene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Benzo(b)fluoranthene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Benzo(g,h,i)perylene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Benzo(k)fluoranthene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
bis(2-Chloroethoxy)methane	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
bis(2-Chloroethyl)ether	1 U	1 U	NA	NA	1 J	NA	1 U	NA	NA	NA	NA	NA	1 U
bis(2-Ethylhexyl)phthalate	2 U	2 U	NA	NA	2 U	NA	2 J	NA	NA	NA	NA	NA	2 U
4-Bromophenyl phenyl ether	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
Butyl benzyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
Carbazole	3 U	3 U	NA	NA	3 U	NA	3 U	NA	NA	NA	NA	NA	2 U
2-Chloronaphthalene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
2-Chlorophenol	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
4-Chloro-3-methylphenol	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
4-Chloroaniline	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
4-Chlorophenyl phenyl ether	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Chrysene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Dibenz(a,h)anthracene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Dibenzofuran	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
1,3-Dichlorobenzene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
1,2-Dichlorobenzene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
1,4-Dichlorobenzene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
2,4-Dichlorophenol	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
3,3'-Dichlorobenzidine	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
Diethyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
Dimethyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
2,4-Dimethylphenol	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
2,4-Dinitrophenol	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14 U
2,4-Dinitrotoluene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
2,6-Dinitrotoluene	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
4,6-Dinitro-2-methylphenol	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U
Di-n-butyl phthalate	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U

303045

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-16B	MW-16B	MW-16B	MW-16B	MW-17I	MW-17I	MW-22I	MW-22I	MW-34D	MW-34D	MW-35D	MW-35D	S-6
Sample Date	9/14/99	1/4/00	10/26/00	5/1/01	1/4/00	10/27/00	1/11/00	10/30/00	11/2/2000	5/2/01	12/20/2000	5/4/01	7/16/99
Round	R-1	R-2	R-3	R-4	R-2	R-3	R-2	R-3	R-3	R-4	R-3	R-4	R-1
Parameter													
Di-n-octyl phthalate	2. U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
Fluoranthene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Fluorene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Hexachlorobenzene	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
Hexachlorobutadiene	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
Hexachlorocyclopentadiene	5 U	5 U	NA	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	5 U
Hexachloroethane	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Indeno(1,2,3-cd)pyrene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Isophorone	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
2-Methylnaphthalene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
2-Methylphenol	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
4-Methylphenol	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3 U
n-Nitrosodiphenylamine	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
n-Nitrosodipropylamine	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Naphthalene	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
Nitrobenzene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
2-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
2-Nitrophenol	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
3-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
4-Nitroaniline	2 U	2 U	NA	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	2 U
4-Nitrophenol	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U
2,2'-Oxybis(1-chloropropane)	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Pentachlorophenol	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3 U
Phenanthrene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
Phenol	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 U
Pyrene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
1,2,4-Trichlorobenzene	1 U	1 U	NA	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	1 U
2,4,5-Trichlorophenol	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2 U
2,4,6-Trichlorophenol	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2 U
Total TICs	ND	ND	NA	NA	12 J	NA	15 J	NA	NA	NA	NA	NA	ND
METALS *(ug/l)*													
Aluminum (Dissolved)	NA	NA	NA	31.9 U	NA	NA	NA	NA	NA	31.9 U	NA	122 B	NA
Aluminum (Total)	2480 N	1220 *	NA	31.9 U	533 *	NA	77.0 U*	NA	NA	1150	NA	368 J	52.0 U
Antimony	25.0 U	29.0 U	NA	NA	29.0 U	NA	29.0 U	NA	NA	NA	NA	NA	25.0 U
Arsenic	7.0 U	5.0 U	NA	NA	43.6	NA	5.0 B	NA	NA	NA	NA	NA	7.0 U

303046

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-16B	MW-16B	MW-16B	MW-16B	MW-17I	MW-17I	MW-22I	MW-22I	MW-34D	MW-34D	MW-35D	MW-35D	S-6
Sample Date	9/14/99	1/4/00	10/26/00	5/1/01	1/4/00	10/27/00	1/11/00	10/30/00	11/2/2000	5/2/01	12/20/2000	5/4/01	7/16/99
Round	R-1	R-2	R-3	R-4	R-2	R-3	R-2	R-3	R-3	R-4	R-3	R-4	R-1
Parameter													
Barium	123	82.4 B	NA	NA	188	NA	31.0 B	NA	NA	NA	NA	NA	10.5 B
Beryllium	1.7 U	1.9 U	NA	NA	1.9 U	NA	1.9 U	NA	NA	NA	NA	NA	1.7 U
Cadmium	1.7 U	3.6 U	NA	NA	3.6 U	NA	3.6 U	NA	NA	NA	NA	NA	1.7 U
Calcium	11800	18100 E*	NA	NA	31400 E*	NA	7140	NA	NA	NA	NA	NA	7020
Chromium	10.9 B	9.8 U	NA	NA	9.8 U	NA	9.8 U	NA	NA	NA	NA	NA	5.4 U
Cobalt	5.5 U	6.6 U	NA	NA	16.1 B	NA	6.6 U	NA	NA	NA	NA	NA	5.5 U
Copper	12.1 B	4.0 B	NA	NA	3.5 U	NA	3.5 U	NA	NA	NA	NA	NA	5.8 U
Iron (Dissolved)	19200	NS	13500	8820	NS	NA	NS	NA	14400	3090	NA	14800	3810
Iron (Total)	22500	14000	13000	8080	91600	NA	44200	NA	17800	36400	NA	16800	3590
Lead	6.5 U	7.9 U	NA	NA	7.9 U	NA	7.9 U	NA	NA	NA	NA	NA	31.8
Magnesium	4840	5050	NA	NA	5820	NA	5060	NA	NA	NA	NA	NA	5190
Manganese (Dissolved)	NA	NA	184	151	NA	NA	NA	NA	108	96.0	NA	183	NA
Manganese (Total)	184	343 *	195	149	460 *	NA	349	NA	117	232	NA	174	220
Nickel	5.4 U	9.1 B	NA	NA	19.7 B	NA	6.6 U	NA	NA	NA	NA	NA	5.4 U
Potassium	4160	6450 *	NA	NA	5120 *	NA	1960	NA	NA	NA	NA	NA	2490
Selenium	5.9 U	4.8 B	NA	NA	4.4 U	NA	4.4 U	NA	NA	NA	NA	NA	5.9 U
Silver	5.7 U	5.6 U	NA	NA	5.6 U	NA	5.6 U	NA	NA	NA	NA	NA	5.7 U
Sodium	6500	6850	NA	NA	6070	NA	4420 E*	NA	NA	NA	NA	NA	4180 E
Thallium	9.7 U	9.2 U	NA	NA	9.2 U	NA	9.2 U	NA	NA	NA	NA	NA	9.7 U
Vanadium	17.9 B	7.8 B	NA	NA	19.2 B	NA	3.4 U	NA	NA	NA	NA	NA	2.8 U
Zinc	46.6	22.0 B	NA	NA	35.2	NA	15.7 B	NA	NA	NA	NA	NA	3460 N*
Mercury	0.042 U	0.10 U	NA	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA	NA	0.077 B
ORGANIC ACIDS *(ug/l)*													
Acetic Acid	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	NA	2000 U	2000 U	NA	2000 U	NA
Butyric Acid	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	NA	2000 U	2000 U	NA	2000 U	NS
Citric Acid	2000 U	1000 U	1000 UJ	1000 U	1000 U	NA	1000 U	NA	1000 U	1000 U	NA	1000 U	NS
Formic Acid	2000 U	2000 U	2000 U	2000 U	2000 U	NA	2000 U	NA	2000 U	2000 U	NA	2000 U	NS
Oxalic Acid	40 U	40 U	40 U	40 U	440	NA	340	NA	40 U	40 U	NA	40 U	NS
Propionic Acid	2000 U	5000 U	10000 U	2000 U	5000 U	NA	5000 U	NA	10000 U	2000 U	NA	2000 U	NS
Pyruvic Acid	100 U	120 U	120 U	120 U	120 U	NA	120 U	NA	120 U	120 U	NA	120 U	NS
Quinic Acid	1000 U	1000 U	1000 U	1000 U	1000 U	NA	1000 U	NA	1000 U	1000 U	NA	1000 U	NS
Succinic Acid	1000 U	1000 U	1000 U	1000 U	1000 U	NA	1000 U	NA	1000 U	1000 U	NA	1000 U	NS
Tartaric Acid	5100 B	1000 U	5000 U	1000 U	1000 U	NA	1000 U	NA	5000 U	1100 U	NA	1500 J	NS

303047

Table 4-52. Analytical Results for Ground Water Samples for Area of Concern-South Deep Sentinel. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Sample Location	MW-16B	MW-16B	MW-16B	MW-16B	MW-17I	MW-17I	MW-22I	MW-22I	MW-34D	MW-34D	MW-35D	MW-35D	S-6
Sample Date	9/14/99	1/4/00	10/26/00	5/1/01	1/4/00	10/27/00	1/11/00	10/30/00	11/2/2000	5/2/01	12/20/2000	5/4/01	7/16/99
Round	R-1	R-2	R-3	R-4	R-2	R-3	R-2	R-3	R-3	R-4	R-3	R-4	R-1
Parameter													
GENERAL CHEMISTRY *(units in mg/l unless noted)*													
Total Organic Carbon (Quad)	2.8	3.5	2.8	2.7	4.3	NA	3.3	NA	1.7	1.5U	NA	1.0U	1.0 U
Total Hardness	55.6	67.8	NA	NA	101	NA	44	NA	NA	NA	NA	NA	47.6
Total Dissolved Solids	124	116	NA	132	101	NA	96	NA	NA	149	NA	124	80
Total Suspended Solids	262	60	NA	NA	371	NA	53	NA	NA	NA	NA	NA	4.4 J
Alkalinity to pH 4.5	35.1	57.4	54.7	71.7	57.3	NA	39.1	NA	64	97.6	NA	58.8	19.2
Alkalinity to pH 8.3	0.37 U	0.37 U	0.37 U	0.41 U	0.37 U	NA	0.37 U	NA	0.37U	0.41 U	NA	0.41 U	0.37 U
Chloride (titrimetric)	13.7	9.3	11.7	12.7	15.4	NA	15.5	NA	15.4	13.0	NA	15.3	15.6
Ammonia Nitrogen	0.25	0.23	0.27	0.28 J	0.61	NA	1.02	NA	0.5	0.37	NA	0.19	0.15
Kjeldahl Nitrogen	0.58 J	0.70 J	NA	NA	0.83 J	NA	1.33 J	NA	NA	NA	NA	NA	0.64 U
Nitrate Nitrogen	NA	0.030 U	0.030 U	0.040 U	0.030 U	NA	0.030 U	NA	0.030UJ	0.040 U	NA	0.20 U	NA
Nitrite Nitrogen	0.024 J	0.015 U	0.040 J	0.015 U	0.060	NA	0.047 J	NA	0.073	0.015 U	NA	0.033 J	0.015 U
Ortho-Phosphate as P	0.022	0.070	NA	NA	0.0100 J	NA	0.0030 U	NA	NA	NA	NA	NA	0.104
Silica (as SiO2)	11.8	11.2	NA	NA	13.8	NA	6.27	NA	NA	NA	NA	NA	6.66
Sulfate (turbidimetric)	10.9 J	7.3 J	12	13.4	7.5 U	NA	3.0 U	NA	15U	7.5 U	NA	7.5 U	20.3
Sulfide	0.0090 U	0.0090 U	NA	NA	0.0100 J	NA	0.0290 J	NA	NA	NA	NA	NA	0.85
Chemical Oxygen Demand	23.0 J	24.5 J	NA	NA	39.4 J	NA	18.1 J	NA	NA	NA	NA	NA	18.7 U
Ethane *(ug/l)*	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1J	1 J	NA	1 J	1 U
Ethene *(ug/l)*	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	1U	2 J	NA	2 J	1 U
Methane *(ug/l)*	67	53	50	63	26	NA	9.8	NA	19	78	NA	14J	52
Carbon Dioxide	NA	NA	63000	55000	NA	NA	NA	NA	57000	2900 J	NA	43000	NA

Qualifiers

NA = Compound was not analyzed.

U = Compound was not detected.

N = (Inorganic) Spike Sample not within Control Limits.

* = Duplicate analysis not within control limits.

P = Concentration difference between primary and confirmation columns >25%.

J = Estimated Value.

B = (Inorganic) Value is <CRDL, but > = IDL.

E = Estimated due to interference (inorganic qualifier).

D= Compound quantitated on a diluted sample.

303048

Table 5-1. Estimation of Total Travel Time of Dense Sulfuric Acid Waste from Base of Former Lagoon to Base of Upper Middle PRM, Recognizing 3 Hydrostratigraphic Zones and Using Darcy's Law. BROS Phase 2 RI/FS; Logan Township, New Jersey

Assumptions

1. Constant fluid density and viscosity
2. 1-D uniform flow
3. Negligible driving pressure gradient

Model

Travel time = fluid viscosity*n*d/(k*fluid density*g)
where n is effective porosity, k is intrinsic permeability
d is unit thickness, and g is gravitational constant.

Scenario 1: Gap in Upper Confining Unit

Parameters		
dynamic viscosity	1.00E-03	kg/m-s
density of water	1000	kg/m^3
fluid density	1840	kg/m^3
gravitational constant	9.8	m/s^2

Unit 1: Upper PRM

Unit thickness	10.98	m
Effective porosity	0.19	
hydraulic conductivity	9.52E-04	cm/s [1]
intrinsic permeability	9.71E-13	m^2

Unit 2: Upper Confining Unit

Unit thickness	2.44	m
Effective porosity	0.17	
hydraulic conductivity	3.53E-05	cm/s [2]
intrinsic permeability	3.60E-14	m^2

Unit 3: Upper Middle PRM

Unit thickness	19.21	m
Effective porosity	0.19	
hydraulic conductivity	1.34E-03	cm/s [1]
intrinsic permeability	1.37E-12	m^2

Scenario 1 Calculation Result

Unit 1 Travel time=	3.77E-03	yr
Unit 2 Travel time=	2.02E-02	yr
Unit 3 Travel time=	4.69E-03	yr
Total Travel time to base of Upper Middle PRM=	2.87E-02	yr
	10	**days**

Scenario 2: Clay zone in Upper Confining Unit

Parameters

same as scenario 1

Unit 1: Upper PRM

Unit thickness	10.98	m
Effective porosity	0.19	
hydraulic conductivity	9.52E-04	cm/s [1]
intrinsic permeability	9.714E-13	m^2

Unit 2: Upper Confining Unit

Unit thickness	2.44	m
Effective porosity	0.17	
hydraulic conductivity	1.76E-06	cm/s [2]
intrinsic permeability	1.80E-15	m^2

Unit 3: Upper Middle PRM

Unit thickness	19.21	m
Effective porosity	0.19	
hydraulic conductivity	1.34E-03	cm/s [1]
intrinsic permeability	1.367E-12	m^2

Scenario 2 Calculation Result

Unit 1 Travel time=	3.77E-03	yr
Unit 2 Travel time=	4.06E-01	yr
Unit 3 Travel time=	4.69E-03	yr
Total Travel time to base of Upper Middle PRM=	4.14E-01	yr
	151	**days**

[1]The vertical hydraulic conductivity was estimated based on a factor of 1 tenth of the horizontal hydraulic conductivity (Walton,1988) from site-specific pumping tests.
[2]The vertical hydraulic conductivity was estimated (Freeze and Cherry, 1979) using lithologic logs near MW26.

Walton, W.C., 1988. Practical Aspects of Groundwater Modeling, Third edtion.588 pp.
Freeze and Cherry, 1978. Groundwater, Prentice-Hall, New Jersey, 604 pp.

303049

Table 5-2. Natural Attenuation Screening - Round 2 Data. BROS Phase 2 RI/FS; Logan Township, NJ.

Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

Score: 38

Scroll to End of Table

* reductive dechlorination

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	◉	○	3
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	◉	0
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	◉	○	3
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	◉	○	3
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	◉	○	3
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	◉	○	1
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	◉	○	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	◉	○	2
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	◉	○	1
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	◉	○	1
Chloride*	>2x background	Daughter product of organic chlorine	◉	○	2
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	◉	0
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	◉	○	2
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	◉	○	2
PCE*		Material released	○	◉	0
TCE*		Daughter product of PCE [a/]	○	◉	0
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/]; 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	◉	○	2
1,1,1-Trichloroethane*		Material released	○	◉	0
DCA		Daughter product of TCA under reducing conditions	◉	○	2
Carbon Tetrachloride		Material released	○	○	0
Chloroethane*		Daughter product of DCA or VC under reducing conditions	◉	○	2
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	◉	○	2
	>0.1 mg/L	Daughter product of VC/ethene	◉	○	3
Chloroform		Daughter product of Carbon Tetrachloride	○	◉	0
Dichloromethane		Daughter product of Chloroform	○	◉	0

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE Reset

Table 5-3. Natural Attenuation Screening - Round 4 Data. BROS Phase 2 RI/FS; Logan Township, NJ.

Natural Attenuation Screening Protocol

The following is taken from the USEPA protocol (USEPA, 1998). The results of this scoring process have no regulatory significance.

Interpretation	Score
Inadequate evidence for anaerobic biodegradation* of chlorinated organics	0 to 5
Limited evidence for anaerobic biodegradation* of chlorinated organics	6 to 14
Adequate evidence for anaerobic biodegradation* of chlorinated organics	15 to 20
Strong evidence for anaerobic biodegradation* of chlorinated organics	>20

Score: 28

Scroll to End of Table

* reductive dechlorination

Analysis	Concentration in Most Contam. Zone	Interpretation	Yes	No	Points Awarded
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	○	◉	0
	> 5mg/L	Not tolerated; however, VC may be oxidized aerobically	○	◉	0
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	◉	○	2
Iron II*	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)-reducing conditions	◉	○	3
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	○	◉	0
Sulfide*	>1 mg/L	Reductive pathway possible	○	◉	0
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	◉	○	3
Oxidation Reduction Potential* (ORP)	<50 millivolts (mV)	Reductive pathway possible	○	◉	0
	<-100mV	Reductive pathway likely	○	◉	0
pH*	5 < pH < 9	Optimal range for reductive pathway	○	◉	-2
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	◉	○	2
Temperature*	>20°C	At T >20°C biochemical process is accelerated	○	◉	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	◉	○	1
Alkalinity	>2x background	Results from interaction of carbon dioxide with aquifer minerals	○	◉	0
Chloride*	>2x background	Daughter product of organic chlorine	◉	○	2
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	○	◉	0
Volatile Fatty Acids	>0.1 mg/L	Intermediates resulting from biodegradation of aromatic compounds; carbon and energy source	◉	○	2
BTEX*	>0.1 mg/L	Carbon and energy source; drives dechlorination	◉	○	2
PCE*		Material released	○	◉	0
TCE*		Daughter product of PCE [a/]	○	◉	0
DCE*		Daughter product of TCE. If cis is greater than 80% of total DCE it is likely a daughter product of TCE[a/]; 1,1-DCE can be a chem. reaction product of TCA	◉	○	2
VC*		Daughter product of DCE[a/]	◉	○	2
1,1,1-Trichloroethane*		Material released	○	◉	0
DCA		Daughter product of TCA under reducing conditions	◉	○	2
Carbon Tetrachloride		Material released	○	◉	0
Chloroethane*		Daughter product of DCA or VC under reducing conditions	◉	○	2
Ethene/Ethane	>0.01 mg/L	Daughter product of VC/ethene	◉	○	2
	>0.1 mg/L	Daughter product of VC/ethene	◉	○	3
Chloroform		Daughter product of Carbon Tetrachloride	○	◉	0
Dichloromethane		Daughter product of Chloroform	○	◉	0

* required analysis.

a/ Points awarded only if it can be shown that the compound is a daughter product (i.e., not a constituent of the source NAPL).

SCORE Reset

Table 5-4. Schedule of TCE Source Constant Concentration - Boundary Condition Cells.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Simulation Year	Primary Source Base of Lagoon (Model Layer 6) (ug/L)	Secondary Source AOC 3 (Model Layer 12) (ug/L)	Model Stress Period	Period Length (days)
1960	15263	0	1	1095
1961	15263	0	1	
1962	15263	0	1	
1963	15263	750	2	365
1964	15263	1500	3	365
1965	15263	3000	4	365
1966	15263	4500	5	365
1967	15263	6000	6	365
1968	15263	7000	7	6570
1969	15263	7000	7	
1970	15263	7000	7	
1971	15263	7000	7	
1972	15263	7000	7	
1973	15263	7000	7	
1974	15263	7000	7	
1975	15263	7000	7	
1976	15263	7000	7	
1977	15263	7000	7	
1978	15263	7000	7	
1979	15263	7000	7	
1980	15263	7000	7	
1981	15263	7000	7	
1982	15263	7000	7	
1983	15263	7000	7	
1984	15263	7000	7	
1985	15263	7000	7	
1986	14281	6840	8	365
1987	13300	6680	9	365
1988	12318	6520	10	365
1989	11337	6360	11	365
1990	10355	6200	12	365
1991	9374	6040	13	365
1992	8392	5880	14	365
1993	7411	5720	15	365
1994	6429	5560	16	365
1995	5448	5400	17	365
1996	4466	5240	18	365
1997	3485	5080	19	365
1998	2503	4920	20	365
1999	1522	4760	21	365
2000	540	4600	22	365

303052

Table 6-1. Selection of Exposure Pathways for the BROS Property [Soil AOC BP, Shallow GW AOC-1A] (Excluding Hotspots 1 and 2 and Debris/Fill Areas). BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Soil (0 to 2")	BP-uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to 2") in uncapped areas.
	Soil (0' to 4' excluding ash)	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of ground water from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols applicable to the Site preclude unregulated contact with chemical residuals, except for an accidental utility worker scenario.
	Ash (from lagoon incineration	Excavation in the 2' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Qualitative	
	Air (Soil 1'–10' and shallow groundwater)	Air in building	Trespasser into Pepper Building; Commercial/ Industrial employee	Vapor inhalation	Quantitative	Possible intrusion of vapors from unsaturated soils and shallow ground water into on-property buildings.
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.
Future	Soil (0 to 2")	BP-uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to 2") in uncapped areas.
	Soil (0' to 4' excluding ash)	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of ground water from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols applicable to the Site preclude unregulated contact with chemical residuals, except for an accidental utility worker scenario.
	Ash (from lagoon incineration	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of surface soil-derived dust	Qualitative	
	Air (Soil 1'–10' and shallow ground water)	Air in building	Commercial/ Industrial employee	Vapor inhalation	Quantitative	Possible intrusion of vapors from unsaturated soils and shallow ground water into on-property buildings.
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.

303053

Table 6-2. Selection of Exposure Pathways for Hot Spot 1 [Soil AOC 1, GW AOC-1A] on the BROS Property.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Soil (0' to 2")	Uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to 2") in uncapped areas.
	Soil (0' to 4') 0' to 4' excluding ash	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols applicable to the Site preclude unregulated contact with chemical residuals, except for an accidental utility worker scenario.
	Ash (from lagoon incineration	Excavation in the 2' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Qualitative	
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.
Future	Soil (0' to 2")	Uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to
	Soil (0' to 4') 0' to 4' excluding ash	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols applicable to the Site preclude unregulated contact with chemical residuals, except for an accidental utility worker scenario.
	Ash (from lagoon incineration	Excavation in the 2' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Qualitative	
	Air (Soil 1'–10' and shallow groundwater)	Air in building	Indoor commercial/ industrial worker	Vapor inhalation	Quantitative	Possible intrusion of vapors from soils and shallow groundwater into on-property buildings.
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.

303054

Table 6-3. Selection of Exposure Pathways for Hot Spot 2 [Soil AOC 6, GW AOC-1A] on the BROS Property.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Soil (0' to 2")	Uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to 2") in uncapped areas.
	Soil (0' to 4') 0' to 4' excluding ash	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols
	Ash (from lagoon incineration	Excavation in the 2' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Qualitative	
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.
Future	Soil (0' to 2")	Uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to 2") in
	Soil (0' to 4') 0' to 4' excluding ash	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols
	Ash (from lagoon incineration	Excavation in the 2' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Qualitative	
	Air (Soil 1'–10' and shallow groundwater)	Air in building	Indoor commercial/ industrial worker	Vapor inhalation	Quantitative	Possible intrusion of vapors from soils and shallow groundwater into on-property buildings.
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.

303055

Table 6-4. Selection of Exposure Pathways for the Debris/Fill Area [Soil AOC 3, GW AOC-1A] on the BROS Property.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Soil (0' to 2")	Uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to 2") in uncapped areas.
	Soil (0' to 4') 0' to 4' excluding ash	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols
	Ash (from lagoon incineration	Excavation in the 2' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Qualitative	
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.
Future	Soil (0' to 2")	Uncapped areas	Groundskeeper, trespasser	Ingestion, dermal contact, inhalation of surface soil-derived dust	Quantitative	While 2 feet of clean fill was placed over the majority of the site, sporadic surface detects of BROS COPC suggests the quantitative evaluation of surface soils (0 to 2") in
	Soil (0' to 4') 0' to 4' excluding ash	Excavation in the 0' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols
	Ash (from lagoon incineration	Excavation in the 2' to 4' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Qualitative	
	Air (Soil 1'–10' and shallow groundwater)	Air in building	Indoor commercial/ industrial worker	Vapor inhalation	Quantitative	Possible intrusion of vapors from soils and shallow groundwater into on-property buildings.
	Shallow groundwater	Surface of water table	Construction worker	Dermal contact	Quantitative	Possible contact with shallow groundwater during excavation.

303056

Table 6-5. Selection of Exposure Pathways for the West Side Property [Soil AOC 5, Shallow GW AOC-1B].
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Soil (6' to 10')	None	None	Ingestion, dermal, plant uptake	Qualitative assessment of plant uptake	No COPCs are identified at the soil/ground water interface at 6' to 10' below grade. No activities occur to that depth. Nearly all of the mass of crop roots are shallow, and there is no impact to crops.
	Shallow groundwater	None	None	Ingestion	None	No current use.
	Sediment (very limited area along the edge of Gaventa Pond)	None	None	Ingestion, dermal contact	Qualitative	The steep slope along the edge of the pond and the limited area above the pond surface precludes any significant direct contact (USEPA, 1989). Removal of residuals will be completed based on ecological risk reduction measures and the 1984 ROD.
Future	Soil (6' to 10')	Excavation into the 6' to 10' horizon	Construction worker	Ingestion, dermal contact and inhalation of soil-derived dust	Qualitative	Some limited COPCs are identified at the soil/ground water interface at 6' to 10' below grade but no activities are likely to occur to that depth. Remediation of NAPL is expected, consistent with NJAC 7:26E6-2. Future scenarios will deal only with exposures to post NAPL-remediation residuals.
	Air (Soil 6'–10' and shallow groundwater)	Residential building	Adult / child	Vapor inhalation	Quantitative	Viable potential pathway for possible intrusion of vapors from unsaturated soils and shallow ground water into on-property buildings if residential construction occurs on West Side Property.
	Shallow groundwater	Residential use	Adult / child	Ingestion, dermal contact and inhalation of vapors	Quantitative	Viable potential pathway if additional residential construction occurs on West Side Property and residents are not precluded from using ground water as a source of domestic water.
		Agricultural use - irrigation	Adult / child	Dermal and inhalation of vapors	Quantitative	Viable potential pathway if irrigation wells are installed on the property.
	Sediment (very limited area along a portion of the edge of the pond)	None	None	None	None	The steep slope along the edge of the pond and the limited area above the pond surface precludes any significant direct contact (USEPA, 1989). Remediation will occur in this area pursuant to the 1984 ROD and subsequent agreements with the USEPA related to potential ecological risk reduction measures.

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Table 6-6. Selection of Exposure Pathways for the South Side Property [Soil AOC 4, GW AOC-1C].
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Soil (0' to 4 ')	Excavation in the 0' to 4' horizon	Construction worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	Deed restrictions are in place. Potential exposure is limited.
	Shallow groundwater	Excavation in the 0' to 4' horizon	Construction worker	Dermal Contact	Quantitative	Deed restrictions are in place. Potential exposure is limited.
Future	Soil (0' to 4 ')	Excavation in the 0' to 4' horizon	Construction/Utility Worker worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	New Jersey Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) limit potential exposure and preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). In addition, health and safety protocols applicable to the Site preclude unregulated contact with chemical residuals, except for an accidental utility worker scenario.
	Shallow groundwater	Hypothetical fountain	Recreational area users	Ingestion	Quantitative	NJ Solid Waste Regulations and deed restrictions (due to ash placement in a landfill on-property) preclude the use of groundwater from beneath the BROS Property (USEPA, 1989). Nevertheless, a limited area outside this buffer zone exists where a well could be placed for recreational uses purposes.
		Excavation in the 0' to 4' horizon	Construction worker	Dermal contact	Quantitative	Deed restrictions are in place. Potential exposure is limited.

303058

Table 6-7. Selection of Exposure Pathways for the Drainage Swale Adjacent to the BROS Property [Soil AOC 2, GW AOC-1D].
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Soil (0' to 6')	Excavation in the 0' to 6' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	Site related constituents have been detected in LNAPL in this utility right-of-way outside the BROS fenceline. Development precluded by size and proximity to highway.
	Shallow groundwater	None	None	None	None	Exposure will not occur because of the depth to ground water (8' to 9') in the utility right-of-way.
Future	Soil (0' to 6')	Excavation in the 0' to 6' horizon	Construction worker/utility worker	Ingestion, dermal contact, inhalation of soil-derived dust	Quantitative	Site related constituents have been detected in LNAPL in this utility right-of-way outside the BROS fenceline. Development precluded by size and proximity to highway.
	Shallow groundwater	None	None	None	None	Exposure will not occur because of the depth to ground water (8' to 9') in the utility right-of-way.

303059

Table 6-8. Selection of Exposure Pathways for Deep (below 40' of ground surface) Groundwater.
BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current	Groundwater [GW AOC-2]	None	None	Ingestion	None	GW AOC-2 is the Upper Middle PRM aquifer under the BROS Property but excluding the bottom 15 feet of the aquifer. No current use of this AOC.
	Groundwater [GW AOC-3]	None	None	Ingestion	None	GW AOC-3 is the base of the Upper Middle PRM aquifer under and north of Swindell Pond. No current use of this AOC.
	Groundwater [GW AOC-4]	None	None	None	None	GW AOC-4 is the base of the Upper Middle PRM aquifer downgradient from Swindell Pond and is comprised of the bottom 15 feet of the aquifer. There is no current use of groundwater from this AOC.
	Groundwater Sentinel Monitoring Wells	Residential use	Adult / child	Ingestion	None	All sentinel AOCs are below MCLs or other primary drinking water criteria.
Future	Groundwater [GW AOC-2]	None	None	None	None	GW AOC-2 is the Upper Middle PRM aquifer under the BROS Property but excluding the bottom 15 feet of the aquifer. Deed restrictions preclude the use of this part of the aquifer for any beneficial use.
	Groundwater [GW AOC-3]	Hypothetical Recreational Fountain	Adult / child	Ingestion	Quantitative	While unlikely, placement of a well without knowledge of groundwater use restrictions in this area is hypothetically possible.
	Groundwater [GW AOC-4]	Residential use	Adult / child	Ingestion, dermal and inhalation of vapors	Quantitative	GW AOC-4 is the base of the Upper Middle PRM aquifer downgradient from Swindell Pond and is comprised of the bottom 15 feet of the aquifer.
		Agricultural use - irrigation	Adult / child	Dermal and inhalation of vapors	Quantitative	
	Groundwater Sentinel Monitoring Wells	Residential use	Adult / child	Ingestion	None	Groundwater modeling indicates that all sentinel AOCs will remain below MCLs or other primary drinking water criteria.

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Table 6-9. Selection of Exposure Pathways for Surface Water and Sediment. BROS Phase 2 RI/FS; Logan Township, New Jersey.

Scenario Timeframe	Exposure Medium	Exposure Point	Receptor Population	Exposure Routes	Type of Analysis	Rationale for Selection or Exclusion of Pathway
Current and Future	Surface water and sediment	Upstream portions of Little Timber Creek Swamp adjacent to and south of the I-295 [AOC LTCS-1 and LTCS-2A]	Hunters	Dermal contact and ingestion of sediment	Quantitative	Accessible from farm fields.
			Adult / child	Dermal contact and ingestion of sediment	Quantitative	Accessible to general recreational activities.
			Trespassers	Dermal contact and ingestion of sediment	Quantitative	Accessible from farm fields.
		Portions of Little Timber Creek Swamp adjacent to the Route 130 culvert [AOC LTCS–2B]	None	None	Qualitative	Accessibility is so limited by topography and density of plant growth that this very limited area is not considered to present a viable exposure pathway based on RAGS (USEPA, 1989) and best professional judgment. Remediation is planned in this area for ecological risk reduction.
		Portions of Little Timber Creek Swamp between Route 130 and Route 44 [AOC LTCS–3]	Hunters	Dermal contact and ingestion of sediment	Quantitative	Adjacent to farm fields and residences. Field observations of hunters and trappers.
			Adult / child	Dermal contact and ingestion of sediment	Quantitative	Accessible to general recreational activities.
			Trespassers	Dermal and ingestion	Quantitative	Adjacent to farm fields and residences.
		Portion of Cedar Swamp from the culvert towards the tide gate and then down the channel towards the Delware [AOC CS–1A]	Trespassers	Dermal and ingestion	Quantitative	Access possible via boat.
			Adult / child	Ingestion/dermal contact with sediment	Quantitative	Various recreational uses.
		Portion of Cedar Swamp from the culvert away from the tide gate [AOC CS-1B]	Trespassers	Dermal and ingestion	Quantitative	Access possible.
			Adult / child	Ingestion/dermal contact with sediment	Quantitative	Various recreational uses.

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NOTICE ABOUT UNSCANNABLE OBJECT

THE FOLLOWING OBJECT WAS NOT SCANNED BUT CAN BE FOUND IN THE U.S. EPA'S REGION 2 SUPERFUND RECORD CENTER. TO MAKE AN APPOINTMENT TO VIEW THE OBJECT PLEASE CONTACT THE RECORD CENTER AT (212) 637-4308.

Material Description: 2 CDs

Final Draft Phase 2 RI Report, Appendices (June 2006), ELM Project#95106-07-05, ELM, Inc. 4920 York Road, Suite 290, Holicong, PA 18928.

Location: US EPA Superfund Record Center
290 Broadway - 18th Floor
New York, New York 10007

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