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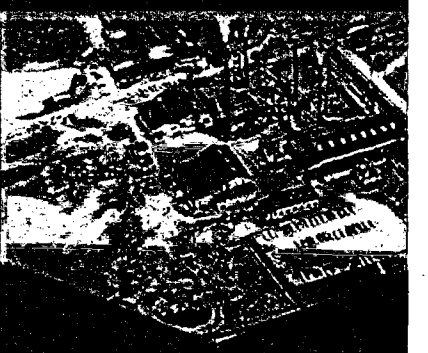
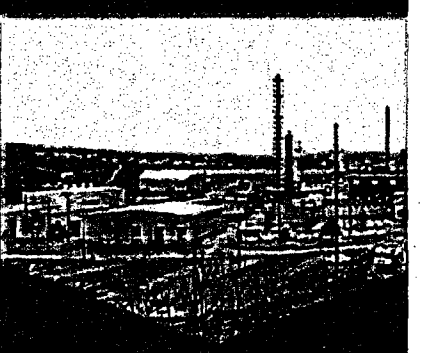
Supplemental Site Characterization Report for the Washington, Pennsylvania Site Appendices D-G





April 2004
4812001

MALCOLM PIRNIE

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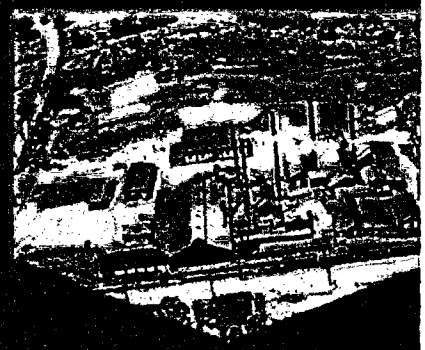
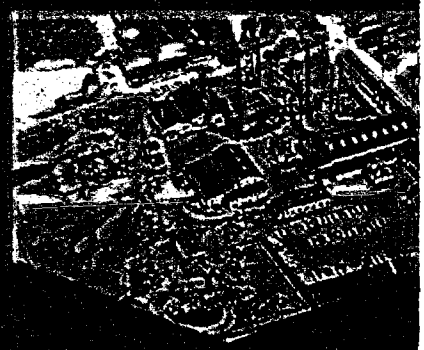
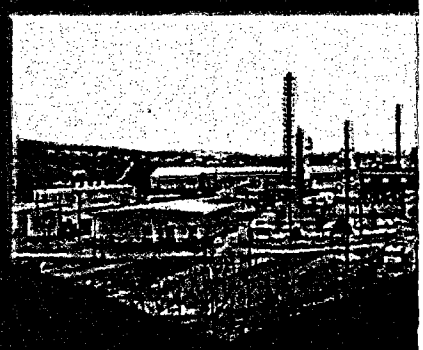
Supplemental Site Characterization Report for the Washington, Pennsylvania Site

Appendix D

Analytical Program Summary







April 2004
4812001

MALCOLM PIRNIE

Table D-1
Radiological Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Radiological Analytical Program		
		Gamma Spec with ingrowth[2]	Isotopic U[3]	Isotopic Th[4]
Soil Boring Samplings				
MPSB-01	12-14	X		
MPSB-02	0-2	X	X	X
	10-11.5	X		
MPSB-03	0-2	X		
	8-10	X		
MPSB-04	2-4	X		
MPSB-05	8-10	X		
MPSB-06	4-6	X		
MPSB-07	13-15	X		
MPSB-08	2-4	X		
	6-8	X		
MPSB-09	1-3	X		
MPSB-10	2-4	X	X	X
	19-21	X		
MPSB-11A	6-8	X	X	X
	20-22	X		
MPSB-12	5-7	X		
MPSB-14	10-12	X		
MPSB-15A	16-18	X		
MPSB-16	1-3	X		
MPSB-17	15-17	X		
MPSB-18	14-16	X		
MPSB-19	14-16	X		
MPSB-20	6-8	X		
MPSB-21	0-2	X		
	16-18	X		
MPSB-22	15-17	X		
MPSB-23	13-15	X		
MPSB-24	11-13	X		
MPSB-25	13-15	X		
MPSB-26	12-14	X		
MPSB-27	0-2	X		
	16-18	X		
MPSB-28	6-8	X		
MPSB-29	0-2	X		
	14-16	X		
MPSB-30	1-3	X		
MPSB-31	5-7	X		
MPSB-32	1-3	X		
	11-13	X		
MPSB-33	2-3	X		
	10-12	X		
MPSB-34	5-6	X		
	17-19	X		

Table D-1
Radiological Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Radiological Analytical Program		
		Gamma Spec with ingrowth[2]	Isotopic U[3]	Isotopic Th[4]
MPSB-35	3-4	X		
MPSB-36	7-9	X		
MPSB-37	6-8	X		
MPSB-38	4-4.6	X		
	14-16	X		
MPSB-39	9-11	X		
MPSB-40	2-4	X		
MPSB-41	9-11	X		
		X		
	19-21	X		
MPSB-42		X		
	10-12	X		
MPSB-43	8-10	X	X	X
MPSB-44	2-4	X		
MPSB-45		X		
	4-6	X		
MPSB-46	0-2	X		
MPSB-47	2-2.9	X		
		X	X	X
		X		
MPSB-48	0-2	X		
	6-8	X		
MPSB-49	4-6	X		
	6-8	X		
MPSB-50	0-2	X		
MPSB-51	3-5	X		
	13-15	X		
MPSB-52	5-7	X		
MPSB-53	9-11	X	X	X
MPSB-54	4-6	X	X	X
	8-10	X	X	X
	16-18	X		
MPSB-55	8-9	X		
MPSB-56	1-3	X	X	X
	5-7	X		
MPSB-57	4-6	X		
MPSB-58	4-6	X		
	8-10	X		
MPSB-59	2-4	X		
	18-20	X		
MPSB-60	4-6	X		
MPSB-61	8-10	X	X	X
	20-22	X		
MPSB-62	2-4	X		
MPSB-62A	2-4	X		
	12-14	X		

Table D-1
Radiological Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Radiological Analytical Program		
		Gamma Spec with ingrowth[2]	Isotopic U[3]	Isotopic Th[4]
MPSB-65	10-12	X		
	12-14	X		
MPSB-66	10-12	X		
MPSB-67	4-6	X		
MPSB-68	9-11	X		
MPSB-69	1-3	X	X	X
MPSB-70	3-5	X	X	X
MPSB-71	3-5	X		
MPSB-72	1-3	X		
MPSB-73	9-11	X		
MPSB-74	5-7	X		
MPSB-75	7-9	X		
MPSB-76	2-4	X		
	16-18	X		
MPSB-77	0-2	X		
MPSB-78	5-7	X		
MPSB-79	1-3	X	X	X
	3-5	X	X	X
	9-11	X		
MPSB-80	1-3	X		
	9-11	X		
MPSB-81	0-2	X		
MPSB-82	0-2	X		
MPSB-83	2-4	X	X	X
	6-8	X	X	X
	10-10.8	X		
MPSB-84	1-3	X		
MPSB-85	1-1.7	X		
MPSB-87	4-5.6	X		
MPSB-88	0-2	X		
MPSB-89	0-2	X		
MPSB-90	0-2	X		
MPSB-91	0-2	X		
	8-10	X		
MPSB-92	2-4	X		
	20-20.9	X		
MPSB-93	4-6	X	X	X
MPSB-94	2-3.4	X	X	X
MPSB-95	1-3	X		
MPSB-96	3-5	X		
MPSB-97	1-3	X	X	X
	15-17	X		
MPSB-98	1-3	X		
MPSB-99	7-9	X	X	X
	13-15	X		
MPSB-100	6-8	X		
	20-22	X		

Table D-1
Radiological Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Radiological Analytical Program		
		Gamma Spec with ingrowth[2]	Isotopic U[3]	Isotopic Th[4]
MPSB-101	4-6	X		
MPSB-102	8-10	X		
MPSB-103	2-4	X	X	X
MPSB-104	10-12	X		
	16-18	X		
MPSB-105	6-8	X		
MPSB-106	0-2	X		
	4-6	X	X	X
	10-12	X	X	X
MPSB-107	0-2	X		
	10-12	X		
MPSB-108	4-6	X		
	8-10	X		
MPSB-109	0-2	X		
	10-12	X		
MPSB-110	2-4	X		
	10-12	X		
MPSB-111	2-4	X		
	8-10	X		
MPSB-112	4-6	X		
	8-10	X		
MPSB-113	0-2	X		
	14-16	X		
MPSB-114	6-8	X		
	16-18	X		
MPSB-115	0-2	X		
MPSB-116	4-6	X		
MPSB-117	0-2	X		
MPSB-118	0-2	X		
	14-16	X		
MPSB-119	4-6	X		
MPSB-120	0-2	X		
MPSB-121	18-20	X		
MPSB-122	18-20	X		
MPSB-123	0-2	X		
	18-20	X		
MPSB-125	8-10	X		
MPSB-126	2-4	X		
MPSB-200	1-3	X		
MPSB-201A	15-17	X		
MPSB-202	11-13	X		
MPSB-203	1-3	X		
MPSB-204	1-3	X		
MPSB-205	1-3	X		
	7-9	X		
MPSB-207	1-3	X		
MPSB-208	1-3	X		

Table D-1
Radiological Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Radiological Analytical Program		
		Gamma Spec with ingrowth[2]	Isotopic U[3]	Isotopic Th[4]
MW-41	10-12	X		
	19-21	X		
MW-42	5-7	X	X	X
MW-43	1-3	X		
MW-44	6-8	X		
MW-45	1-3	X		
MW-46	7-9	X		
MW-47	3-5	X	X	X
	5-7	X		
MW-48	5-7	X		
MW-49	4-6	X		
MW-50	2-4	X		
	10-12	X		
	16-18	X		
BR-3	10-12	X		
BR-4	2-4	X		
Creek Surface Sediment Samples				
SS-1	NA[6]	X		
SS-2	NA	X		
SS-3	NA	X		
SS-4	NA	X		
SS-5	NA	X		
SS-6	NA	X		
SS-7	NA	X		
SS-10	NA	X		

Footnotes:
(1) feet bgs - feet below ground surface
(2) U^{238}, U^{234}, U^{235}, Th^{232}, Th^{228}, Ra^{226}, and Ra^{228} ingrowth were analyzed by Method 901.1M.
(3) Isotopic U was analyzed by Method ASTM D3972-90M.
(4) Isotopic Th was analyzed by Method ASTM D3972-90M.
(7) NA - Not Applicable

Table D-2
Non-Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (ft bgs)[1]	Analytical Program							
		VOCs[2]	SVOCs[3]	Act 2 Metals[4]	% Solids[5]	PCBs[6]	La & Ce[7]	Hex. Cr, Ti, & Mg[8]	TOC[9]
Soil Boring Samplings									
MPSB-11A	10-12	X	X	X	X				
	12-14	X			X				
	20-22	X			X				
	22-22.7			X	X				
MPSB-15A	4-6	X	X	X	X	X			
	14-16			X	X				
MPSB-16	9-11	X			X				
	13-15			X	X		X		
	17-19			X	X				
MPSB-17	7-9			X	X		X		
	13-15			X	X				
MPSB-18	8-10			X	X	X	X		
	12-14			X	X				
MPSB-19	6-8			X	X		X		
	12-14			X	X				
MPSB-25	15-17			X	X				
	19-21			X	X				
MPSB-28	10-12			X	X				
	12-14			X	X				
MPSB-29	2-2.3			X	X				
	8-10			X	X				
MPSB-31	11-13			X	X				
	13-15			X	X				
MPSB-33	6-7	X	X	X	X				
	16-18	X		X	X				
MPSB-34	9-11	X			X				
	11-13	X	X	X	X	X			
	17-19	X		X	X				
MPSB-37	2-2.6			X	X				
	4-4.3			X	X				
MPSB-41	3-5			X	X				
	7-9	X			X				
	9-11	X	X		X	X			
	11-13				X		X		
	13-15			X	X				
	19-21	X			X				
MPSB-42					X	X			
MPSB-43	4-4.6			X	X				
	6-6.6				X		X		
	12-14			X	X				
MPSB-47	7-9	X	X	X	X	X			
	13-15			X	X				

Table D-2
Non-Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (ft bgs)[1]	Analytical Program							
		VOCs[2]	SVOCs[3]	Act 2 Metals[4]	% Solids[5]	PCBs[6]	La & Ce[7]	Hex. Cr, Ti, & Mg[8]	TOC[9]
MPSB-49	4-6			X	X				
	12-14			X	X				
MPSB-50	6-8				X	X			
MPSB-53	1-3			X	X				
	5-7	X			X		X		
	11-13			X	X				
	13-15	X	X		X	X			
	19-21	X			X				
MPSB-59	0-2			X	X				
	6-8				X		X		
	10-12			X	X				
MPSB-61	6-8	X	X		X				
MPSB-62	4-6				X		X		
MPSB-62A	0-2			X	X				
	8-10			X	X				
MPSB-63	6-8	X	X		X	X			
MPSB-64	6-8				X	X			
MPSB-67	2-4			X	X				
	6-8			X	X				
MPSB-70	1-3			X	X				
	5-7			X	X				
MPSB-76	8-10	X	X		X				
	18-19	X			X				
MPSB-77	12-14			X	X		X		
	16-18			X	X				
MPSB-78	11-13	X	X		X				
	15-17	X			X				
	17-19	X			X				
MPSB-79	5-7			X	X				
	19-21			X	X				
MPSB-82	8-10	X	X		X			X	
	18-20	X			X				
MPSB-84	5-7			X	X				
	7-9			X	X				
	11-13			X	X				
MPSB-87	10-12				X	X			
MPSB-88	0-2			X	X				
	4-6			X	X				
MPSB-90	8-10	X	X		X				
	12-14	X			X				
	14-14.4	X			X				
MPSB-91	4-6			X	X				
	6-8			X	X				
MPSB-93	6-8			X	X				
	10-12	X		X	X				
	12-14	X	X		X				
	18-20	X			X				

Table D-2
Non-Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (ft bgs)[1]	Analytical Program							
		VOCs[2]	SVOCs[3]	Act 2 Metals[4]	% Solids[5]	PCBs[6]	La & Ce[7]	Hex. Cr, Ti, & Mg[8]	TOC[9]
MPSB-94	4-6				X			X	
MPSB-96	5-7			X	X				
	9-11			X	X				
MPSB-99	11-13	X	X		X				
	21-23	X			X				
MPSB-100	2-4			X	X				
	8-10			X	X				
MPSB-101	8-10	X			X				
	10-12	X	X		X				
	16-18	X			X				
MPSB-102	2-4			X	X				
	6-8			X	X				
MPSB-106	2-4			X	X				
	4-6	X			X				
	6-8			X	X				
	12-14	X	X		X				
	20-22	X			X				
MPSB-108	8-10	X	X		X				
	10-12	X			X				
	18-20	X			X				
MPSB-112	0-2			X	X				
	6-8			X	X				
MPSB-113	2-4			X	X				
	4-6			X	X				
MPSB-116	2-4			X	X				
	12-14			X	X				
MPSB-119	2-4			X	X				
	6-8			X	X				
MPSB-120	4-6			X	X				
	8-10			X	X				
MPSB-122	6-8	X	X		X				
	12-14	X			X				
	18-20	X			X				
MPSB-123	6-8			X	X				
	10-12			X	X				
MPSB-126	10-12	X	X		X				
	12-14	X	X	X	X				
	16-18	X			X				
BR-4	10-11	X	X	X	X				
	12-13	X			X				
MW-41	17-18	X	X	X	X				
	18-19			X	X				
	20-21	X			X				
	21-22	X			X				
MW-42						X			
MW-43	11-12	X	X	X	X				
	25-27			X	X				
	26-27	X			X				

Table D-2
Non-Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (ft bgs)[1]	Analytical Program							
		VOCs[2]	SVOCs[3]	Act 2 Metals[4]	% Solids[5]	PCBs[6]	La & Ce[7]	Hex. Cr, Ti, & Mg[8]	TOC[9]
MW-44	9-10	X	X	X	X				
	10-11	X			X				
	16-17.1			X	X				
	17-17.1	X			X				
MW-45	5-7		X		X	X			
MW-46									
MW-47	7-9	X	X	X	X	X			
	13-15			X	X				
MW-48	11-13							X	
MW-49	0-2	X			X				
	8-10	X	X	X	X				
MW-50	4-6			X	X				
	6-8			X	X				
Creek Surface Sediment Samples									
SS-1	NA[10]	X	X	X	X	X			X
SS-2	NA	X	X	X	X	X			
SS-3	NA	X	X	X	X	X			
SS-4	NA	X	X	X	X	X			X
SS-5	NA	X	X	X	X				
SS-6	NA	X	X	X	X				
SS-7	NA	X	X	X	X	X			X
SS-8	NA	X	X	X	X				
SS-9	NA	X	X	X	X				X
SS-10	NA	X	X	X	X	X			X
SS-11	NA	X	X	X	X				
SS-12	NA	X	X	X	X				
SS-13	NA	X	X	X	X				X
SS-14	NA	X	X	X	X	X			
SS-15	NA	X	X	X	X				
SS-16	NA	X	X	X	X	X			X

Footnotes:
(1) feet bgs - feet below ground surface
(2) VOCs were analyzed by USEPA Method 8260B.
(3) SVOCs were analyzed by USEPA Method 8270C.
(4) Act 2 Metals + Mo & W were analyzed by USEPA Methods 6010B and 7471 (mercury only).
(5) Percent Solids were analyzed by Method % Solids.
(6) PCBs were analyzed by USEPA Method 8082.
(7) La and Ce samples were analyzed by USEPA Method 6020.
(8) Hexavalent Cr, Ti, and Mg were analyzed by USEPA Methods 7196 and 6010.
(9) TOC samples were analyzed by USEPA Method 9060M.
(10) NA - Not Applicable

Table D-3
Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Analytical Program											
		BTEX[2]	PAHs[3]	Act 2 Metals[4]	% Solids[5]	Phenolics[6]	Cyanide[7]	Cyanide[8]	TOC[9]	VOCs[10]	SVOCs[11]	PCBs[12]	Hex. Cr, Ti, & Mg[13]
Soil Boring Samplings													
MPSB-128	14-16	X	X	X	X	X	X	X	X				
	16-18	X	X	X	X	X	X	X	X				
MPSB-129	6-8	X	X	X	X	X	X	X	X				
	12-14	X	X	X	X	X	X	X	X				
MPSB-130	0-2	X	X	X	X		X	X					
	4-6				X	X			X				
	8-10	X	X	X	X		X	X					
	10-12				X	X			X				
	16-18	X	X	X	X		X	X					
MPSB-133	0-2	X	X	X	X	X	X	X	X				
	2-4	X	X	X	X		X	X					
	4-6				X	X			X				
	12-14	X	X	X	X		X	X					
MPSB-134	0-2	X	X	X	X		X	X					
MPSB-135	0-2	X	X	X	X		X	X					
MPSB-137	0-2	X	X	X	X		X	X					
MPSB-139	0-2	X	X	X	X		X	X					
MPSB-140	0-2	X	X	X	X		X	X					
MPSB-142	0-2	X	X	X	X		X	X					
MPSB-143	0-2	X	X	X	X		X	X					
	2-4				X	X			X				
	6-8	X	X	X	X	X	X	X	X				
	16-18	X	X	X	X		X	X					
MPSB-145	0-2	X	X	X	X		X	X					
MPSB-146	6-8				X	X							
	8-10	X	X	X	X		X	X					X
	10-12	X	X	X	X		X	X					
	12-14				X	X							
MPSB-147	2-4	X	X	X	X		X	X					
	14-16	X	X	X	X		X	X					
MPSB-148	0-2	X	X	X	X		X	X					
	6-8	X	X	X	X		X	X					
	18-20	X	X	X	X		X	X					
MPSB-150	8-10	X	X	X	X		X	X					
MPSB-151	14-16	X	X	X	X		X	X					
	20-22	X	X	X	X		X	X					
MPSB-152	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X		X	X					
	12-14	X	X	X	X		X	X					

Table D-3
Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Analytical Program											
		BTEX[2]	PAHs[3]	Act 2 Metals[4]	% Solids[5]	Phenolics[6]	Cyanide[7]	Cyanide[8]	TOC[9]	VOCs[10]	SVOCs[11]	PCBs[12]	Hex. Cr, Ti, & Mg[13]
MPSB-153	6-8	X	X	X	X		X	X					
	10-12	X	X	X	X		X	X					
MPSB-154	4-6			X	X								
	6-8	X	X	X	X		X	X					
	12-14	X	X	X	X		X	X					
MPSB-155	0-2	X	X	X	X		X	X					
	2-4			X	X								
	6-8	X	X	X	X		X	X					
	16-18	X	X	X	X		X	X					
MPSB-162	0-2	X	X	X	X		X	X					
	6-8	X	X	X	X	X	X	X	X				
	12-14	X	X	X	X		X	X					
MPSB-166	0-2			X	X		X	X		X	X		
	6-8			X	X	X	X	X	X	X	X		
	14-16			X	X		X	X		X	X		
MPSB-177	8-10	X	X	X	X	X	X	X	X				
	10-12	X	X	X	X		X	X					
MPSB-178	8-10	X	X	X	X	X	X	X	X				
	10-12	X	X	X	X		X	X					
MPSB-179	8-10	X	X	X	X	X	X	X	X				
	10-12	X	X	X	X		X	X					
MPSB-180	8-10	X	X	X	X	X	X	X	X				
	10-12	X	X	X	X		X	X					
MPSB-181													
MPSB-182	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
MPSB-183	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
MPSB-184	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
MPSB-185	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
MPSB-186	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
MPSB-188	8-10			X	X		X	X		X	X		
	14-16			X	X		X	X		X	X		
	22-24			X	X		X	X		X	X		
MPSB-189	2-4			X	X					X	X	X	
	12-14			X	X					X	X	X	
MPSB-190	0-2	X	X	X	X		X	X					
	6-8	X	X	X	X	X	X	X	X				
	14-16	X	X	X	X		X	X					

Table D-3
Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Analytical Program											
		BTEX[2]	PAHs[3]	Act 2 Metals[4]	% Solids[5]	Phenolics[6]	Cyanide[7]	Cyanide[8]	TOC[9]	VOCs[10]	SVOCs[11]	PCBs[12]	Hex. Cr, Ti, & Mg[13]
MPSB-191	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
	12-14	X	X	X	X		X	X					
MPSB-192	0-2	X	X	X	X		X	X					
	6-8	X	X	X	X	X	X	X	X				
	12-14	X	X	X	X		X	X					
MPSB-193	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
	12-14	X	X	X	X		X	X					
MPSB-194	0-2	X	X	X	X		X	X					
	4-6	X	X	X	X	X	X	X	X				
	12-14	X	X	X	X		X	X					
MPSB-195	0-2			X	X		X	X		X	X		
	6-8			X	X	X	X	X	X	X	X		
	14-16			X	X		X	X		X	X		
MPSB-196	0-10 (inches)			X	X		X	X		X	X		
	29-36 (inches)			X	X		X	X		X	X		
	48-52 (inches)			X	X		X	X		X	X		
MPSB-197	0-10 (inches)			X	X		X	X		X	X		
	46-58 (inches)			X	X		X	X		X	X		
	94-104 (inches)			X	X		X	X		X	X		
MW-51	4-6			X	X		X	X					
	6-8				X	X			X				
	8-10				X	X			X				
	14-16	X	X	X	X		X	X					
MW-52	4-6	X	X	X	X		X	X					X
	6-8				X	X			X				
	10-12				X	X			X				
	14-16	X	X	X	X		X	X					
MW-53	0-2	X	X	X	X		X	X					
	6-8				X	X			X				
	8-10	X	X	X	X		X	X					
	10-12				X	X			X				
	14-16	X	X	X	X		X	X					
MW-54	0-2	X			X								
	4-6				X	X			X				
	6-8	X	X	X	X		X	X					
	8-10				X	X			X				
	12-14	X	X	X	X		X	X					

Table D-3
Tar Area Chemical Analytical Summary for Soil Samples

Sampling Location ID	Sample Interval (feet bgs)[1]	Analytical Program											
		BTEX[2]	PAHs[3]	Act 2 Metals[4]	% Solids[5]	Phenolics[6]	Cyanide[7]	Cyanide[8]	TOC[9]	VOCs[10]	SVOCs[11]	PCBs[12]	Hex. Cr, Ti, & Mg[13]
MW-55	0-2	X	X	X	X		X	X					
	6-8	X	X	X	X		X	X					
	12-14	X	X	X	X		X	X					
Test Pit Sampling Locations													
TP-1	0-2	X	X	X	X		X	X					
	8	X	X	X	X		X	X					
TP-2	0-2	X	X	X	X		X	X					
	8	X	X	X	X		X	X					
TP-3	0-2	X	X	X	X		X	X					
	8	X	X	X	X		X	X					
TP-4	0-2	X	X	X	X		X	X					
	8	X	X	X	X		X	X					
TP-5	0-2	X	X	X	X		X	X					
	8	X	X	X	X		X	X					
TP-6	0-2	X	X	X	X		X	X					
	8	X	X	X	X		X	X					

Footnotes:
(1) feet bgs - feet below ground surface
(2) BTEX were analyzed by USEPA Method 8260B.
(3) PAHs were analyzed by USEPA Method 8270C.
(4) Act 2 Metals + Mo & W were analyzed by USEPA Methods 6010B and 7471 (mercury only).
(5) Percent Solids were analyzed by Method % Solids.
(6) Acid Extractable Phenolics were analyzed by USEPA Method 8270
(7) Total Cyanide was analyzed by USEPA Method 9012.
(8) Weak Acid Dissociable Cyanide was analyzed by USEPA Method 4500-1.
(9) TOC samples were analyzed by USEPA Method 9060M.
(10) VOCs were analyzed by USEPA Method 8260B.
(11) SVOCs were analyzed by USEPA Method 8270C.
(12) PCBs were analyzed by USEPA Method 8082.
(13) Hexavalent Cr, Ti, and Mg were analyzed by USEPA Methods 7196 and 6010.

Table D-4
Radiological Analytical Summary for Groundwater and Surface Water Samples

Sampling Location ID	Analytical Program			
	Gross Alpha[1]	Gross Beta[2]	Isotopic U[3]	Ra^{226}[4]/Ra^{228}[5]
Groundwater Samples				
BR-1	X	X		
BR-2	X	X		
BR-3	X	X		
BR-4	X	X	X	X
BR-5	X	X		
BR-6	X	X		
BR-7	X	X		
BR-8	X	X		
GW-3	X	X		
MW-1	X	X	X	X
MW-2	X	X		
MW-3	X	X	X	X
MW-4	X	X		
MW-5	X	X	X	X
MW-6	X	X	X	X
MW-7	X	X	X	X
MW-9	X	X	X	X
MW-10	X	X		
MW-16	X	X	X	X
MW-18	X	X	X	X
MW-19	X	X		
MW-21	X	X	X	X
MW-24	X	X		
MW-25	X	X		
MW-26	X	X		
MW-27	X	X		
MW-28	X	X		
MW-29	X	X		
MW-40	X	X		
MW-41	X	X	X	X
MW-42	X	X		
MW-43	X	X		
MW-44	X	X		
MW-45	X	X		
MW-46	X	X	X	X
MW-47	X	X	X	X
MW-48	X	X		
MW-49	X	X		
MW-50	X	X		

Table D-4
Radiological Analytical Summary for Groundwater and Surface Water Samples

Sampling Location ID	Analytical Program			
	Gross Alpha[1]	Gross Beta[2]	Isotopic U[3]	Ra^{226}[4]/Ra^{228}[5]
MW-51	X	X		
MW-52	X	X		
MW-53	X	X		
MW-54	X	X		
MW-55	X	X		
TB-01-1	X	X		
TB-02	X	X		
TB-03	X	X		
TB-04	X	X		
TB-05	X	X		
UG-3	X	X		
UG-4	X	X		
Creek Surface Water Samples				
SW-1	X	X		
SW-2	X	X		
SW-3	X	X		
SW-4	X	X		
SW-5	X	X		
SW-6	X	X		
SW-7	X	X		
SW-8	X	X		
SW-9	X	X		
SW-10	X	X		
SW-11	X	X		
SW-12	X	X		
SW-13	X	X		
SW-14	X	X		
SW-15	X	X		
SW-16	X	X		

Footnotes:
(1) Gross Alpha was analyzed by Method 900.
(2) Gross Beta was analyzed by Method 900.
(3) Isotopic U was analyzed by Method ASTM D3972-90M.
(4) Ra^{226} was analyzed by Method 903.1.
(5) Ra^{228} was analyzed by Method 904.

Table D-5
Non-Tar Area Chemical Analytical Summary for Groundwater and Surface Water Samples

Sampling Location ID	Analytical Program					
	VOCs[1]	SVOCs & PAH[2]	Act 2 Metals + Mo & W[3]	PCBs[4]	Perchlorate[5]	Hex. Cr + Ti + Mg[6]
Groundwater Samples						
BR-1	X	X	X		X	X
BR-2	X	X	X			
BR-3	X	X	X			
BR-4	X	X	X			
BR-5	X	X	X			
MW-1	X	X	X			
MW-2	X	X	X		X	
MW-3	X	X	X			X
MW-4	X	X	X		X	
MW-5	X	X	X			
MW-6	X	X	X	X	X	X
MW-7	X	X	X			
MW-9	X	X	X			
MW-10	X	X	X			X
MW-16	X	X	X			
MW-18	X	X	X	X	X	
MW-19	X	X	X			
MW-21	X	X	X			X
MW-24	X	X	X		X	
MW-25	X	X	X	X		
MW-26	X	X	X	X		
MW-27	X	X	X			
MW-28	X	X	X			
MW-29	X	X	X			
MW-40	X	X	X			
MW-41	X	X	X			
MW-42	X	X	X			
MW-43	X	X	X	X		
MW-44	X	X	X			
MW-45	X	X	X	X		
MW-46	X	X	X			
MW-47	X	X	X			
MW-48	X	X	X			
MW-49	X	X	X			
MW-50	X	X	X			X
TB-04	X	X	X	X		
TB-05	X	X	X	X		
UG-3	X	X	X			
UG-4	X	X	X			

Table D-5
Non-Tar Area Chemical Analytical Summary for Groundwater and Surface Water Samples

Sampling Location ID	Analytical Program					
	VOCs[1]	SVOCs & PAH[2]	Act 2 Metals + Mo & W[3]	PCBs[4]	Perchlorate[5]	Hex. Cr + Ti + Mg[6]
Creek Surface Water Samples						
SW-1	X	X	X			
SW-2	X	X	X			
SW-3	X	X	X			
SW-4	X	X	X			
SW-5	X	X	X			
SW-6	X	X	X			
SW-7	X	X	X			
SW-8	X	X	X			
SW-9	X	X	X			
SW-10	X	X	X			
SW-11	X	X	X			
SW-12	X	X	X			
SW-13	X	X	X			
SW-14	X	X	X			
SW-15	X	X	X			
SW-16	X	X	X			

Footnotes:
(1) VOCs were analyzed by USEPA Method 8260B.
(2) SVOCs & PAH were analyzed by USEPA Method 8270C.
(3) Act 2 Metals + Mo & W were analyzed by USEPA Methods 6010B and 7471 (mercury only).
(4) PCBs were analyzed by USEPA Method 8082.
(5) Perchlorate samples were analyzed by USEPA Method 8321.
(6) Hexavalent Cr, Ti, and Mg were analyzed by USEPA Methods 7196 and 6010.

Table D-6
Tar Area Analytical Summary for Groundwater Samples

Monitoring Well ID	Analytical Program					
	BTEX[1]	PAHs[2]	Act 2 Metals + Mo & W[3]	Phenolics[4]	Weak Acid Dissociable Cyanide[5]	Hex. Cr, Ti, & Mg[6]
Groundwater Samples						
BR-6	X	X	X	X	X	
BR-7	X	X	X	X	X	
BR-8	X	X	X	X	X	
GW-3	X	X	X	X	X	
MW-51	X	X	X	X	X	
MW-52	X	X	X	X	X	X
MW-53	X	X	X	X	X	
MW-54	X	X	X	X	X	X
MW-55	X	X	X	X	X	
TB-01-1	X	X	X	X	X	
TB-02	X	X	X	X	X	
TB-03	X	X	X	X	X	

Footnotes:
(1) BTEX were analyzed by USEPA Method 8021.
(2) PAH were analyzed by USEPA Method 8310.
(3) Act 2 Metals + Mo & W were analyzed by USEPA Methods 6010B and 7471 (mercury only).
(4) Acid Extractable Phenolics were analyzed by USEPA Method 8270C.
(5) Weak Acid Dissociable Cyanide was analyzed by Method ASTM 4500-1
(6) Hexavalent Cr, Ti, and Mg were analyzed by USEPA Methods 7196 and 6010.

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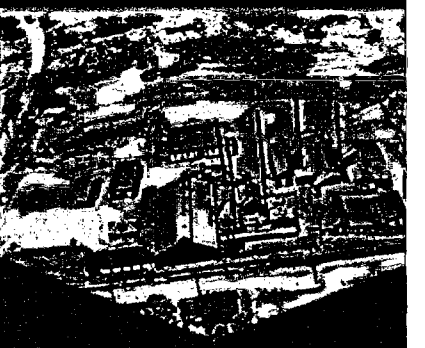
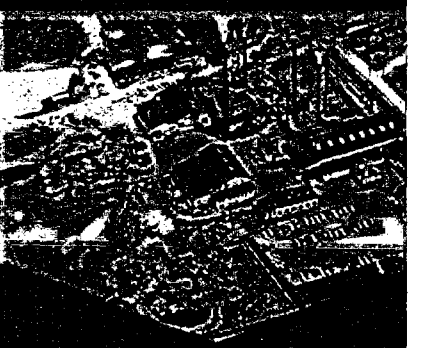
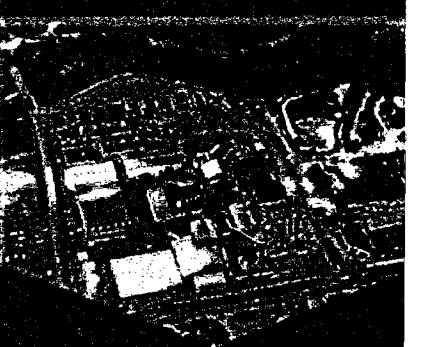
Supplemental Site Characterization Report for the Washington, Pennsylvania Site

Appendix E

Groundwater Elevation Measurements







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Appendix E
Groundwater Elevation Measurements

Monitoring Well Designation	Casing Diameter	Pennsylvania State Plane Coordinates		Ground Surface Elevation	Top of Steel Well Casing Elevation	Top of PVC Well Casing Elevation	11/11&13/03			12/3/2003			12/29/2003			1/15/2004	
							Depth to Water	Measured Total Well Depth	Groundwater Elevation	Depth to Water	Measured Total Well Depth	Groundwater Elevation	Depth to Water	Measured Total Well Depth	Groundwater Elevation	Depth to Water	Groundwater Elevation
	(inches)	Northing	Easting	(feet AMSL[1])	(feet AMSL)	(feet AMSL)	(feet TOC)	(feet TOC)	(feet AMSL)	(feet TOC)	(feet TOC)	(feet AMSL)	(feet TOC)	(feet TOC)	(feet AMSL)	(feet TOC)	(feet AMSL)
BR-1	2	315823.94	1262633.17	1021.22	1022.77	1022.68	8.78	35.30	1013.90	8.26	35.30	1014.42	8.10	35.25	1014.58	7.96	1014.72
BR-2	2	315037.99	1262513.48	1023.12	1025.29	1025.04	1.81	49.30	1023.23	1.71	49.29	1023.33	1.42	49.26	1023.62	1.57	1023.47
BR-3	2	315406.33	1263462.34	1045.91	1048.60	1048.22	10.35	34.16	1037.87	10.41	34.17	1037.81	10.09	34.13	1038.13	9.98	1038.24
BR-4	2	315450.89	1262370.61	1015.86	1018.63	1018.30	3.85	43.18	1014.45	7.53	43.28	1010.77	4.07	43.25	1014.23	3.69	1014.61
BR-5	2	315176.33	1262586.96	1020.02	1022.93	1022.63	10.34	27.15	1012.29	10.15	27.12	1012.48	10.06	27.11	1012.57	10.09	1012.54
BR-6	2	314507.36	1262735.72	1018.45	1020.43	1019.90	3.96	30.83	1015.94	3.90	30.83	1016.00	3.71	30.82	1016.19	3.72	1016.18
BR-7	2	314154.52	1262391.46	1018.78	1021.20	1020.95	4.01	33.37	1016.94	4.15	33.49	1016.80	3.00	33.43	1017.95	3.00	1017.95
BR-8	2	314265.00	1262634.55	1017.56	1020.21	1019.91	2.63	31.27	1017.28	2.54	31.26	1017.37	2.38	31.24	1017.53	1.90	1018.01
GW-3	2	314279.89	1262511.64	1017.13	1019.90	1019.63	3.63	15.48	1016.00	3.42	15.46	1016.21	3.36	15.45	1016.27	3.47	1016.16
MW-1	4	315582.55	1262783.30	1026.79	1028.75	1028.65	9.26	18.87	1019.39	9.12	18.88	1019.53	8.68	18.72	1019.97	8.30	1020.35
MW-2	4	315441.16	1262501.14	1020.62	1023.01	1022.31	7.07	17.42	1015.24	6.59	17.41	1015.72	6.49	17.31	1015.82	7.15	1015.16
MW-3	4	315575.55	1262473.78	1021.67	1023.66	1023.29	9.88	16.81	1013.40	9.83	16.84	1013.46	9.85	16.83	1013.44	9.49	1013.80
MW-4	4	315670.36	1262530.54	1021.55	1023.58	1023.05	8.94	17.44	1014.11	8.94	17.45	1014.11	8.72	17.39	1014.33	8.88	1014.17
MW-5	2	315774.61	1262608.00	1021.19	1023.91	1023.74	9.07	21.38	1014.67	8.56	21.36	1015.18	5.38	21.35	1018.36	8.44	1015.30
MW-6	2	315893.11	1262676.77	1021.56	1023.96	1023.80	9.46	20.77	1014.34	8.61	20.75	1015.19	8.62	20.71	1015.18	8.87	1014.93
MW-7	2	315888.09	1262924.50	1027.01	1027.04	1026.66	NM[2]	NM	NA[3]	9.08	21.53	1017.58	9.72	21.50	1016.94	9.02	1017.64
MW-9	2	315270.61	1262939.49	1023.04	1023.05	1022.83	NM	NM	NA	3.32	18.69	1019.51	3.15	18.65	1019.68	3.26	1019.57
MW-10	2	315209.45	1262566.62	1019.33	1022.31	1021.84	9.52	16.71	1012.32	9.30	16.74	1012.54	9.20	16.70	1012.64	9.25	1012.59
MW-16	2	315672.91	1262968.54	1028.97	1028.97	1028.61	7.19	21.12	1021.42	6.75	21.15	1021.86	6.72	21.08	1021.89	7.10	1021.51
MW-18	4	315669.35	1262835.12	1025.85	1028.43	1027.52	7.28	16.87	1020.24	6.89	16.80	1020.63	6.88	16.76	1020.64	6.71	1020.81
MW-19	2	315366.02	1263184.35	1031.99	1031.99	1031.63	6.45	16.74	1025.18	6.41	16.73	1025.22	6.60	16.40	1025.03	6.24	1025.39
MW-21	2	315583.12	1262544.78	1022.07	1023.30	1023.17	9.41	19.90	1013.76	8.98	19.90	1014.19	8.83	19.88	1014.34	8.96	1014.21
MW-24	2	315868.67	1262753.78	1023.41	1025.71	1025.28	8.41	17.48	1016.87	8.21	17.48	1017.07	8.13	17.45	1017.15	8.21	1017.07
MW-25	2	315773.09	1262640.80	1021.78	1024.46	1023.55	5.12	15.00	1018.43	6.75	15.00	1016.80	6.65	15.00	1016.90	6.93	1016.62
MW-26	2	315172.46	1262893.28	1021.84	1021.84	1021.75	2.49	11.08	1019.26	1.77	11.08	1019.98	1.54	11.07	1020.21	1.51	1020.24
MW-27	2	314867.11	1262890.43	1023.93	1026.63	1025.76	7.28	14.82	1018.48	7.07	14.84	1018.69	7.04	14.82	1018.72	6.95	1018.81
MW-28	2	314725.84	1262816.36	1024.36	1026.28	1026.20	10.50	22.27	1015.70	10.26	22.29	1015.94	10.12	22.26	1016.08	10.11	1016.09
MW-29	2	315100.93	1262612.46	1020.24	1022.79	1022.57	10.72	17.72	1011.85	10.41	17.74	1012.16	10.28	17.71	1012.29	10.33	1012.24
MW-40	2	314967.11	1263119.82	1040.56	1042.84	1042.58	18.32	27.88	1024.26	18.61	27.88	1023.97	18.39	27.85	1024.19	18.48	1024.10
MW-41	2	315397.88	1263458.71	1046.76	1049.33	1049.05	10.61	23.17	1038.44	11.02	23.17	1038.03	10.32	23.16	1038.73	10.15	1038.90
MW-42	2	315275.00	1263321.83	1043.08	1045.70	1045.46	16.35	22.24	1029.11	16.54	22.22	1028.92	16.48	22.20	1028.98	16.54	1028.92
MW-43	2	315723.72	1263344.68	1043.06	1045.74	1045.42	15.67	26.90	1029.75	15.81	27.31	1029.61	15.48	27.28	1029.94	15.42	1030.00
MW-44	2	315330.63	1263127.86	1029.37	1031.82	1031.27	7.31	18.06	1023.96	7.36	18.03	1023.91	7.22	18.01	1024.05	7.36	1023.91
MW-45	2	315856.47	1263156.56	1030.52	1033.35	1032.94	9.54	18.40	1023.40	9.53	18.40	1023.41	9.40	18.32	1023.54	9.57	1023.37
MW-46	2	315546.43	1263084.10	1033.42	1036.15	1035.84	12.43	20.48	1023.41	12.85	20.50	1022.99	12.40	20.48	1023.44	12.81	1023.03
MW-47	2	315595.74	1262924.04	1027.22	1029.96	1029.57	7.84	16.92	1021.73	7.54	17.39	1022.03	7.53	17.41	1022.04	7.94	1021.63
MW-48	2	315441.44	1262657.37	1026.84	1029.68	1029.34	10.61	20.02	1018.73	10.81	20.02	1018.53	10.76	19.98	1018.58	10.46	1018.88
MW-49	2	315094.13	1263270.46	1042.97	1045.38	1044.95	15.83	20.00	1029.12	15.88	20.02	1029.07	15.73	19.99	1029.22	15.74	1029.21
MW-50	2	314916.35	1262715.71	1020.00	1022.16	1021.81	7.01	15.93	1014.80	8.23	17.02	1013.58	8.20	16.98	1013.61	8.16	1013.65
MW-51	2	314517.16	1262723.87	1018.10	1020.69	1020.34	3.11	15.02	1017.23	4.70	15.03	1015.64	4.50	15.00	1015.84	4.54	1015.80
MW-52	2	314480.89	1262593.08	1018.47	1020.76	1019.95	7.19	14.93	1012.76	6.98	14.97	1012.97	6.90	14.92	1013.05	7.03	1012.92
MW-53	2	314434.96	1262502.75	1018.04	1020.85	1020.51	6.94	16.45	1013.57	7.03	16.42	1013.48	6.95	16.41	1013.56	6.95	1013.56

Appendix E
Groundwater Elevation Measurements

Monitoring Well Designation	Casing Diameter	Pennsylvania State Plane Coordinates		Ground Surface Elevation	Top of Steel Well Casing Elevation	Top of PVC Well Casing Elevation	11/11&13/03			12/3/2003			12/29/2003			1/15/2004	
							Depth to Water	Measured Total Well Depth	Groundwater Elevation	Depth to Water	Measured Total Well Depth	Groundwater Elevation	Depth to Water	Measured Total Well Depth	Groundwater Elevation	Depth to Water	Groundwater Elevation
	(inches)	Northing	Easting	(feet AMSL[1])	(feet AMSL)	(feet AMSL)	(feet TOC)	(feet TOC)	(feet AMSL)	(feet TOC)	(feet TOC)	(feet AMSL)	(feet TOC)	(feet TOC)	(feet AMSL)	(feet TOC)	(feet AMSL)
MW-54	2	314256.32	1262637.19	1017.51	1020.13	1019.90	4.45	16.61	1015.45	4.15	16.58	1015.75	4.08	16.58	1015.82	4.33	1015.57
MW-55	2	314162.51	1262397.55	1019.01	1021.73	1021.42	4.23	14.81	1017.19	4.25	14.80	1017.17	3.99	14.77	1017.43	4.13	1017.29
TB-01-1	2	314233.77	1261819.83	1120.24	1121.36	1120.51	38.94	41.41	1081.57	38.07	41.40	1082.44	38.23	NM	1082.28	38.63	1081.88
TB-01-2	2	314233.77	1261819.83	1120.24	1121.36	1120.63	62.29	74.57	1058.34	62.36	74.53	1058.27	62.15	NM	1058.48	62.20	1058.43
TB-01-3	2	314233.77	1261819.83	1120.24	1121.36	1120.93	77.87	88.11	1043.06	76.76	88.05	1044.17	76.58	NM	1044.35	77.08	1043.85
TB-01-4	2	314233.77	1261819.83	1120.24	1121.36	1120.30	99.24	120.43	1021.06	98.87	120.55	1021.43	98.48	NM	1021.82	98.72	1021.58
TB-02	2	314083.06	1262102.79	1077.49	1078.97	1078.50	18.41	33.00	1060.09	18.67	33.00	1059.83	18.20	32.98	1060.30	18.97	1059.53
TB-03	2	314190.57	1261449.93	1122.01	1125.01	1123.95	13.45	42.25	1110.50	10.23	42.17	1113.72	11.86	42.15	1112.09	10.47	1113.48
TB-04	2	314529.43	1261626.97	1046.62	1049.77	1048.78	7.41	16.79	1041.37	6.57	16.77	1042.21	6.54	16.45	1042.24	7.41	1041.37
TB-05	2	314463.24	1261308.65	1048.94	1051.60	1051.17	9.93	18.73	1041.24	9.09	18.71	1042.08	8.99	18.70	1042.18	9.85	1041.32
UG-3	2	315465.11	1262356.09	1015.78	1018.57	1018.04	3.18	13.05	1014.86	3.29	13.02	1014.75	3.10	13.00	1014.94	2.68	1015.36
UG-4	2	314995.38	1263095.79	1026.47	1028.62	1028.45	7.19	16.71	1021.26	7.12	16.71	1021.33	7.11	16.70	1021.34	7.17	1021.28

NOTES:
All groundwater measurements were collected from the top of the PVC well casing.
(1) AMSL - Above Mean Sea Level
(2) NM - Not Measured
(3) NA - Not Applicable

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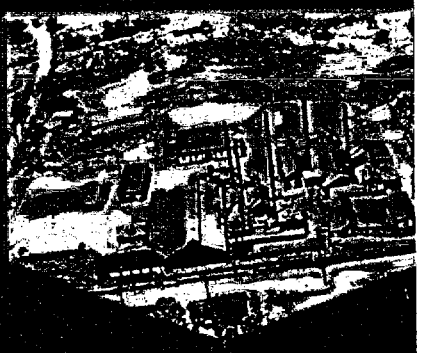
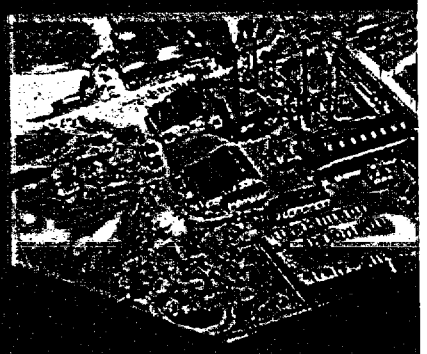
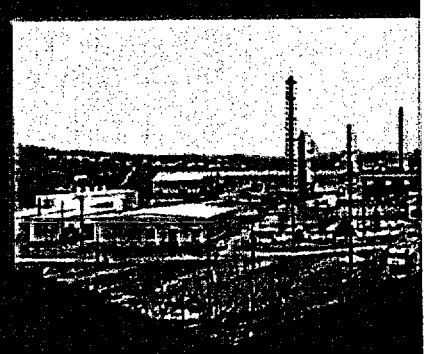
Supplemental Site Characterization Report for the Washington, Pennsylvania Site

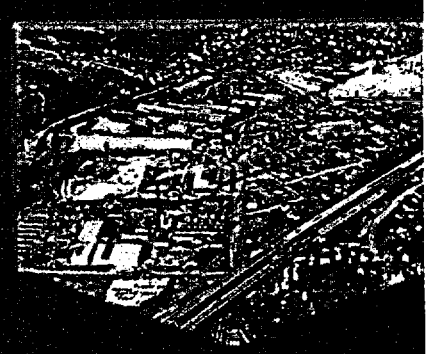
Appendix F

Hydraulic Conductivity









April 2004
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MALCOLM PIRNIE

Appendix F
BR-1 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	26.5
Saturated Thickness of the Aquifer (feet)	h	27
Drawdown at Time $t = 0$ (feet)	H_0	1.15
Drawdown at Time $t = t$ (feet)	H_t	0.46
Time since $H = H_0$ (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.72436721
Hydraulic Conductivity	K (ft/min)	2.90E-05
	K (ft/day)	0.04
	K (cm/s)	1.47E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
BR-2 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	47.69
Saturated Thickness of the Aquifer (feet)	h	49.26
Drawdown at Time t = 0 (feet)	H_0	1.47
Drawdown at Time t = t (feet)	H_t	0.6
Time since H = H_0 (seconds)	t	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.84604525
Hydraulic Conductivity	K (ft/min)	8.47E-06
	K (ft/day)	0.01
	K (cm/s)	4.30E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Notes:
L_e unknown. Asume 10 foot screen installed.

Appendix F
BR-3 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	24.15
Saturated Thickness of the Aquifer (feet)	h	34.13
Drawdown at Time t = 0 (feet)	H_0	1.72
Drawdown at Time t = t (feet)	H_t	1.32
Time since H = H_0 (seconds)	t	48
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.3469593
Hydraulic Conductivity	K (ft/min)	1.80E-05
	K (ft/day)	0.03
	K (cm/s)	9.17E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
BR-4 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	20
Distance from Water Table to Bottom of Borehole (feet)	L_w	39.56
Saturated Thickness of the Aquifer (feet)	h	43.25
Drawdown at Time $t = 0$ (feet)	H_0	2.44
Drawdown at Time $t = t$ (feet)	H_t	2.28
Time since $H = H_0$ (seconds)	t	48
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	3.18319371
Hydraulic Conductivity	K (ft/min)	3.14E-06
	K (ft/day)	0.00
	K (cm/s)	1.59E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
BR-5 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	17.02
Saturated Thickness of the Aquifer (feet)	h	27.11
Drawdown at Time $t = 0$ (feet)	H_0	2
Drawdown at Time $t = t$ (feet)	H_t	0.86
Time since $H = H_0$ (seconds)	t	561
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.20063411
Hydraulic Conductivity	K (ft/min)	4.62E-06
	K (ft/day)	0.01
	K (cm/s)	2.35E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
BR-6 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	27.1
Saturated Thickness of the Aquifer (feet)	h	30.82
Drawdown at Time t = 0 (feet)	H_0	1.7
Drawdown at Time t = t (feet)	H_t	0.61
Time since H = H_0 (seconds)	t	167.4
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.4961039
Hydraulic Conductivity	K (ft/min)	2.13E-05
	K (ft/day)	0.03
	K (cm/s)	1.08E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
BR-7 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	30.43
Saturated Thickness of the Aquifer (feet)	h	33.43
Drawdown at Time $t = 0$ (feet)	H_0	1.68
Drawdown at Time $t = t$ (feet)	H_t	0.63
Time since $H = H_0$ (seconds)	t	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.57010973
Hydraulic Conductivity	K (ft/min)	7.32E-06
	K (ft/day)	0.01
	K (cm/s)	3.72E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
BR-8 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	29.34
Saturated Thickness of the Aquifer (feet)	h	31.24
Drawdown at Time t = 0 (feet)	H_0	1.47
Drawdown at Time t = t (feet)	H_t	0.64
Time since H = H_0 (seconds)	t	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.60760627
Hydraulic Conductivity	K (ft/min)	6.30E-06
	K (ft/day)	0.01
	K (cm/s)	3.20E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
GW-3 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	11.98
Saturated Thickness of the Aquifer (feet)	h	15.45
Drawdown at Time $t = 0$ (feet)	H_0	0.92
Drawdown at Time $t = t$ (feet)	H_t	0.47
Time since $H = H_0$ (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.12671692
Hydraulic Conductivity	K (ft/min)	1.66E-05
	K (ft/day)	0.02
	K (cm/s)	8.44E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Notes:
L_e unknown. Assumed 10 foot screen installed for calculations.

Appendix F
MW-1 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.334
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.42
Saturated Thickness of the Aquifer (feet)	h	18.72
Drawdown at Time $t = 0$ (feet)	H_0	1.45
Drawdown at Time $t = t$ (feet)	H_t	1.42
Time since $H = H_0$ (seconds)	t	600
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	1.99449882
Hydraulic Conductivity	K (ft/min)	3.88E-07
	K (ft/day)	0.00
	K (cm/s)	1.97E-07

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Notes:
L_e unknown. Assumed 10 foot screen installed for calculations.

Appendix F
MW-2 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.334
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	47.69
Saturated Thickness of the Aquifer (feet)	h	49.26
Drawdown at Time $t = 0$ (feet)	H_0	1.5
Drawdown at Time $t = t$ (feet)	H_t	0.91
Time since $H = H_0$ (seconds)	t	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.846045246
Hydraulic Conductivity	K (ft/min)	1.65E-05
	K (ft/day)	0.02
	K (cm/s)	8.40E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Note:
L_e unknown. Asummed 10 foot screen for calculations.

Appendix F
MW-3 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.334
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	9.49
Saturated Thickness of the Aquifer (feet)	h	16.83
Drawdown at Time $t = 0$ (feet)	H_0	1.93
Drawdown at Time $t = t$ (feet)	H_t	1.88
Time since $H = H_0$ (seconds)	t	1140
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.957971059
Hydraulic Conductivity	K (ft/min)	2.51E-07
	K (ft/day)	0.00
	K (cm/s)	1.28E-07

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Notes:
L_e unknown. Asummed 10 foot screen installed for calculations.

Appendix F
MW-4 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.334
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	8.88
Saturated Thickness of the Aquifer (feet)	h	17.39
Drawdown at Time $t = 0$ (feet)	H_0	1
Drawdown at Time $t = t$ (feet)	H_t	0.5
Time since $H = H_0$ (seconds)	t	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.915887406
Hydraulic Conductivity	K (ft/min)	1.54E-05
	K (ft/day)	0.02
	K (cm/s)	7.84E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Notes:
L_e unknown. Asummed 10 foot screen installed for calculations.

Appendix F
MW-6 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	7.89
Distance from Water Table to Bottom of Borehole (feet)	L_w	11.84
Saturated Thickness of the Aquifer (feet)	*h*	20.71
Drawdown at Time $t = 0$ (feet)	H_0	1.38
Drawdown at Time $t = t$ (feet)	H_t	0.68
Time since $H = H_0$ (seconds)	*t*	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.90314518
Hydraulic Conductivity	K (ft/min)	4.96E-06
	K (ft/day)	0.01
	K (cm/s)	2.52E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-7 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	12.08
Saturated Thickness of the Aquifer (feet)	h	21.5
Drawdown at Time $t = 0$ (feet)	H_0	1.89
Drawdown at Time $t = t$ (feet)	H_t	1.73
Time since $H = H_0$ (seconds)	t	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.054310561
Hydraulic Conductivity	K (ft/min)	6.03E-07
	K (ft/day)	0.00
	K (cm/s)	3.07E-07

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-9 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	15.39
Saturated Thickness of the Aquifer (feet)	h	18.65
Drawdown at Time $t = 0$ (feet)	H_0	2.05
Drawdown at Time $t = t$ (feet)	H_t	1.83
Time since $H = H_0$ (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.253250057
Hydraulic Conductivity	K (ft/min)	2.97E-06
	K (ft/day)	0.00
	K (cm/s)	1.51E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-10 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	7.45
Saturated Thickness of the Aquifer (feet)	*h*	16.7
Drawdown at Time *t* = 0 (feet)	H_0	0.99
Drawdown at Time *t* = *t* (feet)	H_t	0.23
Time since H = H_0 (seconds)	*t*	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.8239418
Hydraulic Conductivity	K (ft/min)	8.84E-06
	K (ft/day)	0.01
	K (cm/s)	4.49E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-16 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	13.98
Saturated Thickness of the Aquifer (feet)	h	21.08
Drawdown at Time $t = 0$ (feet)	H_0	1.19
Drawdown at Time $t = t$ (feet)	H_t	0.27
Time since $H = H_0$ (seconds)	t	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.14277199
Hydraulic Conductivity	K (ft/min)	9.23E-06
	K (ft/day)	0.01
	K (cm/s)	4.69E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-18 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.334
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	7
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.05
Saturated Thickness of the Aquifer (feet)	h	16.71
Drawdown at Time t = 0 (feet)	H_0	0.53
Drawdown at Time t = t (feet)	H_t	0.46
Time since H = H_0 (seconds)	t	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.78609126
Hydraulic Conductivity	K (ft/min)	4.80E-06
	K (ft/day)	0.01
	K (cm/s)	2.44E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-19 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.16
Saturated Thickness of the Aquifer (feet)	*h*	16.4
Drawdown at Time $t = 0$ (feet)	H_0	1
Drawdown at Time $t = t$ (feet)	H_t	0.27
Time since $H = H_0$ (seconds)	*t*	180
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.00229905
Hydraulic Conductivity	K (ft/min)	2.03E-05
	K (ft/day)	0.03
	K (cm/s)	1.03E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-21 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.92
Saturated Thickness of the Aquifer (feet)	*h*	49.26
Drawdown at Time $t = 0$ (feet)	H_0	0.95
Drawdown at Time $t = t$ (feet)	H_t	0.28
Time since $H = H_0$ (seconds)	*t*	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.913315111
Hydraulic Conductivity	K (ft/min)	7.76E-06
	K (ft/day)	0.01
	K (cm/s)	3.94E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-24 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	9.24
Saturated Thickness of the Aquifer (feet)	h	17.45
Drawdown at Time $t = 0$ (feet)	H_0	1.37
Drawdown at Time $t = t$ (feet)	H_t	0.63
Time since $H = H_0$ (seconds)	t	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	1.93755751
Hydraulic Conductivity	K (ft/min)	5.00E-06
	K (ft/day)	0.01
	K (cm/s)	2.54E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-25 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	8.07
Saturated Thickness of the Aquifer (feet)	h	15
Drawdown at Time $t = 0$ (feet)	H_0	19.89
Drawdown at Time $t = t$ (feet)	H_t	12.53
Time since $H = H_0$ (seconds)	t	180
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	1.881446178
Hydraulic Conductivity	K (ft/min)	6.74E-06
	K (ft/day)	0.01
	K (cm/s)	3.42E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-26 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	9.56
Saturated Thickness of the Aquifer (feet)	h	11.06
Drawdown at Time $t = 0$ (feet)	H_0	1.37
Drawdown at Time $t = t$ (feet)	H_t	0.42
Time since $H = H_0$ (seconds)	t	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.074627671
Hydraulic Conductivity	K (ft/min)	7.13E-06
	K (ft/day)	0.01
	K (cm/s)	3.62E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-27 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	7.87
Saturated Thickness of the Aquifer (feet)	h	14.82
Drawdown at Time t = 0 (feet)	H_0	0.4
Drawdown at Time t = t (feet)	H_t	0.2
Time since H = H_0 (seconds)	t	60
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.868608753
Hydraulic Conductivity	K (ft/min)	3.01E-05
	K (ft/day)	0.04
	K (cm/s)	1.53E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-28 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	12.15
Saturated Thickness of the Aquifer (feet)	h	22.26
Drawdown at Time $t = 0$ (feet)	H_0	1.15
Drawdown at Time $t = t$ (feet)	H_t	0.47
Time since $H = H_0$ (seconds)	t	240
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.051732945
Hydraulic Conductivity	K (ft/min)	1.07E-05
	K (ft/day)	0.02
	K (cm/s)	5.42E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-29 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	7.38
Saturated Thickness of the Aquifer (feet)	h	17.71
Drawdown at Time t = 0 (feet)	H_0	1.44
Drawdown at Time t = t (feet)	H_t	0.92
Time since H = H_0 (seconds)	t	300
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.812830219
Hydraulic Conductivity	K (ft/min)	3.78E-06
	K (ft/day)	0.01
	K (cm/s)	1.92E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-40 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	9.37
Saturated Thickness of the Aquifer (feet)	h	27.85
Drawdown at Time t = 0 (feet)	H_0	0.98
Drawdown at Time $t = t$ (feet)	H_t	0.36
Time since $H = H_0$ (seconds)	t	360
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.89209685
Hydraulic Conductivity	K (ft/min)	7.34E-06
	K (ft/day)	0.01
	K (cm/s)	3.73E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Notes:
L_e unknown. Asummed 10 foot screen installed for calculations.

Appendix F
MW-41 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	Rc	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.01
Saturated Thickness of the Aquifer (feet)	*h*	23.16
Drawdown at Time $t = 0$ (feet)	H_0	1.24
Drawdown at Time $t = t$ (feet)	H_t	0.9
Time since $H = H_0$ (seconds)	*t*	240
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.944450893
Hydraulic Conductivity	K (ft/min)	3.62E-06
	K (ft/day)	0.01
	K (cm/s)	1.84E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-42 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	5.66
Saturated Thickness of the Aquifer (feet)	h	22.2
Drawdown at Time $t = 0$ (feet)	H_0	1.8
Drawdown at Time $t = t$ (feet)	H_t	0.59
Time since $H = H_0$ (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	1.654134349
Hydraulic Conductivity	K (ft/min)	2.14E-05
	K (ft/day)	0.03
	K (cm/s)	1.09E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-43 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	11.86
Saturated Thickness of the Aquifer (feet)	h	27.28
Drawdown at Time $t = 0$ (feet)	H_0	2.02
Drawdown at Time $t = t$ (feet)	H_t	1.24
Time since $H = H_0$ (seconds)	t	300
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.010410594
Hydraulic Conductivity	K (ft/min)	4.56E-06
	K (ft/day)	0.01
	K (cm/s)	2.32E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-44 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.65
Saturated Thickness of the Aquifer (feet)	*h*	18.03
Drawdown at Time $t = 0$ (feet)	H_0	0.33
Drawdown at Time $t = t$ (feet)	H_t	0.14
Time since $H = H_0$ (seconds)	*t*	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.013134937
Hydraulic Conductivity	K (ft/min)	2.01E-05
	K (ft/day)	0.03
	K (cm/s)	1.02E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-45 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	8.75
Saturated Thickness of the Aquifer (feet)	h	18.32
Drawdown at Time t = 0 (feet)	H_0	1.98
Drawdown at Time t = t (feet)	H_t	1.02
Time since H = H_0 (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.901228182
Hydraulic Conductivity	K (ft/min)	1.47E-05
	K (ft/day)	0.02
	K (cm/s)	7.45E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-46 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	7.61
Saturated Thickness of the Aquifer (feet)	h	20.48
Drawdown at Time t = 0 (feet)	H_0	2.06
Drawdown at Time $t = t$ (feet)	H_t	0.78
Time since $H = H_0$ (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.815327344
Hydraulic Conductivity	K (ft/min)	2.05E-05
	K (ft/day)	0.03
	K (cm/s)	1.04E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-47 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	9.47
Saturated Thickness of the Aquifer (feet)	*h*	17.41
Drawdown at Time $t = 0$ (feet)	H_0	1.04
Drawdown at Time $t = t$ (feet)	H_t	0.73
Time since $H = H_0$ (seconds)	*t*	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.951692141
Hydraulic Conductivity	K (ft/min)	8.03E-06
	K (ft/day)	0.01
	K (cm/s)	4.08E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:

Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-48 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	9.52
Saturated Thickness of the Aquifer (feet)	h	19.98
Drawdown at Time $t = 0$ (feet)	H_0	0.29
Drawdown at Time $t = t$ (feet)	H_t	0.08
Time since $H = H_0$ (seconds)	t	480
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	1.935991076
Hydraulic Conductivity	K (ft/min)	7.24E-06
	K (ft/day)	0.01
	K (cm/s)	3.68E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-49 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	4.27
Saturated Thickness of the Aquifer (feet)	h	19.99
Drawdown at Time t = 0 (feet)	H_0	1.38
Drawdown at Time t = t (feet)	H_t	0.54
Time since H = H_0 (seconds)	t	25.92
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.507797408
Hydraulic Conductivity	K (ft/min)	7.61E-05
	K (ft/day)	0.11
	K (cm/s)	3.87E-05

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-50 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	8.82
Saturated Thickness of the Aquifer (feet)	h	16.98
Drawdown at Time t = 0 (feet)	H_0	1.93
Drawdown at Time t = t (feet)	H_t	0.99
Time since H = H_0 (seconds)	t	240
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.915270225
Hydraulic Conductivity	K (ft/min)	7.43E-06
	K (ft/day)	0.01
	K (cm/s)	3.78E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-51 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.46
Saturated Thickness of the Aquifer (feet)	*h*	15
Drawdown at Time $t = 0$ (feet)	H_0	1
Drawdown at Time $t = t$ (feet)	H_t	0.43
Time since $H = H_0$ (seconds)	*t*	360
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.039299616
Hydraulic Conductivity	K (ft/min)	6.67E-06
	K (ft/day)	0.01
	K (cm/s)	3.39E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:

Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-52 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	7.89
Distance from Water Table to Bottom of Borehole (feet)	L_w	14.92
Saturated Thickness of the Aquifer (feet)	h	15
Drawdown at Time t = 0 (feet)	H_0	0.53
Drawdown at Time t = t (feet)	H_t	0.24
Time since H = H_0 (seconds)	t	600
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.516694223
Hydraulic Conductivity	K (ft/min)	5.87E-06
	K (ft/day)	0.01
	K (cm/s)	2.99E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-53 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	7.89
Distance from Water Table to Bottom of Borehole (feet)	L_w	6.95
Saturated Thickness of the Aquifer (feet)	h	16.41
Drawdown at Time t = 0 (feet)	H_0	0.38
Drawdown at Time $t = t$ (feet)	H_t	0.14
Time since H = H_0 (seconds)	t	600
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.674387774
Hydraulic Conductivity	K (ft/min)	4.92E-06
	K (ft/day)	0.01
	K (cm/s)	2.50E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-54 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	7.89
Distance from Water Table to Bottom of Borehole (feet)	L_w	12.25
Saturated Thickness of the Aquifer (feet)	h	16.58
Drawdown at Time t = 0 (feet)	H_0	0.76
Drawdown at Time t = t (feet)	H_t	0.41
Time since H = H_0 (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.976904715
Hydraulic Conductivity	K (ft/min)	1.80E-05
	K (ft/day)	0.03
	K (cm/s)	9.13E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
MW-55 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	7.89
Distance from Water Table to Bottom of Borehole (feet)	L_w	10.64
Saturated Thickness of the Aquifer (feet)	h	14.77
Drawdown at Time t = 0 (feet)	H_0	0.98
Drawdown at Time t = t (feet)	H_t	0.39
Time since H = H_0 (seconds)	t	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.920715378
Hydraulic Conductivity	K (ft/min)	7.45E-06
	K (ft/day)	0.01
	K (cm/s)	3.79E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R} \right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
TB-02 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	14.01
Saturated Thickness of the Aquifer (feet)	h	32.98
Drawdown at Time $t = 0$ (feet)	H_0	1.61
Drawdown at Time $t = t$ (feet)	H_t	1.27
Time since $H = H_0$ (seconds)	t	120
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	2.067520361
Hydraulic Conductivity	K (ft/min)	5.70E-06
	K (ft/day)	0.01
	K (cm/s)	2.90E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
TB-03 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	10
Distance from Water Table to Bottom of Borehole (feet)	L_w	31.68
Saturated Thickness of the Aquifer (feet)	h	42.15
Drawdown at Time t = 0 (feet)	H_0	1.95
Drawdown at Time t = t (feet)	H_t	1.23
Time since H = H_0 (seconds)	t	300
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	2.44879637
Hydraulic Conductivity	K (ft/min)	5.25E-06
	K (ft/day)	0.01
	K (cm/s)	2.67E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
TB-04 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	5
Distance from Water Table to Bottom of Borehole (feet)	L_w	9.04
Saturated Thickness of the Aquifer (feet)	h	16.45
Drawdown at Time $t = 0$ (feet)	H_0	1.99
Drawdown at Time $t = t$ (feet)	H_t	0.67
Time since $H = H_0$ (seconds)	t	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	$\ln L_e/R$	1.528233911
Hydraulic Conductivity	K (ft/min)	1.10E-05
	K (ft/day)	0.02
	K (cm/s)	5.62E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

Appendix F
TB-05 Rising Head Slug Test

Variable Description	Variable	Input
Radius of Well Casing (feet)	R_c	0.167
Radius of the Sand Envelope (feet)	R	0.5
Length of Screen from which GW can enter (feet)	L_e	5
Distance from Water Table to Bottom of Borehole (feet)	L_w	8.85
Saturated Thickness of the Aquifer (feet)	*h*	18.7
Drawdown at Time $t = 0$ (feet)	H_0	1.73
Drawdown at Time $t = t$ (feet)	H_t	0.75
Time since $H = H_0$ (seconds)	*t*	420
B&R Dimentionless Parameter	A	1.8
B&R Dimentionless Parameter	B	0.35

Bouwer & Rice Well and Aquifer Geometry Factor	ln L_e/R	1.498977406
Hydraulic Conductivity	K (ft/min)	8.32E-06
	K (ft/day)	0.01
	K (cm/s)	4.23E-06

$$\ln\frac{R_c}{R} = \left[\frac{1.1}{\ln(L_w/R)} + \frac{A+B*\ln[(h-L_w)/R]}{L_e/R}\right]^{-1}$$

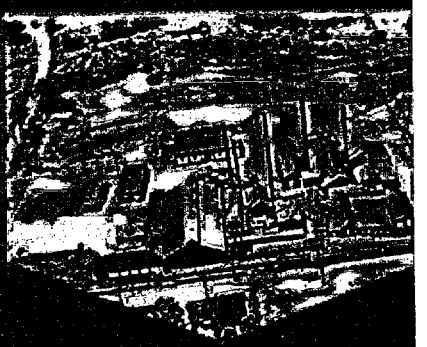
Refrence:
Applied Hydrogeology, Fourth Edition, C.W. Fetter, 2001 Merrill Publishing Company

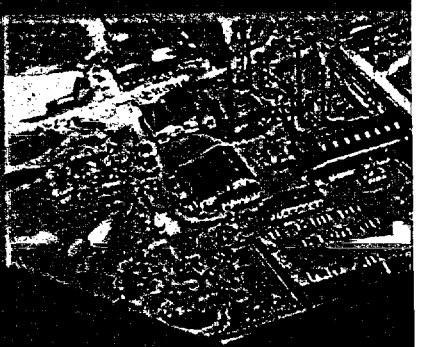
Molycorp

Supplemental Site Characterization Report for the Washington, Pennsylvania Site

Appendix G

Soil Radiological Data





April 2004
4812001

MALCOLM PIRNIE

Table G-1
Soil Alpha Spectroscopy Analytical Results

Sample Identification	Sample Date	Alpha Spectroscopy: Area 1 A					
		U-234	U-235	U-238	Th-228	Th-230	Th-232
MPSB-10 (2-4')	09/25/03	70 +/- 12 M3	2.9 +/- 1.0 M3	72 +/- 12 M3	5.3 +/- 1.7 M3	58 +/- 10 M3	1.43 +/- 0.68 M3
MPSB-11A (6-8')	09/26/03	15,353.27 +/- 2,500 M3	697.6 +/- 180 M3	15,790.82 +/- 2,500 M3	0 +/- 13 U,M	65,000 +/- 13,000 M3	212 +/- 59 M3
MPSB-93 (4-6')	10/17/03	10.9 +/- 1.8	0.67 +/- 0.18	10.8 +/- 1.8	2.97 +/- 0.55 M3	11.3 +/- 1.9 M3	2.68 +/- 0.49
MW-47 (3-5')	10/02/03	25.1 +/- 4.0	1.38 +/- 0.30	25.5 +/- 4.1	7.3 +/- 1.5 M3	27.8 +/- 5.2 M3	6.3 +/- 1.4

Sample Identification	Sample Date	Alpha Spectroscopy: Area 2					
		U-234	U-235	U-238	Th-228	Th-230	Th-232
MPSB-43 (8-10')	10/02/03	11.6 +/- 2.0	0.61 +/- 0.18	11.3 +/- 1.9	22.8 +/- 4.2	10.6 +/- 2.0	21.8 +/- 4.0
MPSB-52 (5-7')	10/02/03	8.7 +/- 1.5	0.59 +/- 0.18	9.6 +/- 1.6	8.4 +/- 1.6	6.5 +/- 1.2	8.4 +/- 1.6
MPSB-54 (4-6')	10/03/03	9.5 +/- 1.6	0.67 +/- 0.20	9.5 +/- 1.6	26.6 +/- 4.6 M3	10.6 +/- 1.9 M3	26.6 +/- 4.7
MPSB-54 (8-10')	10/03/03	13.2 +/- 2.2	0.69 +/- 0.20	12.2 +/- 2.0	14.2 +/- 2.6 M3	12.2 +/- 2.2 M3	13.5 +/- 2.4
MPSB-56 (1-3')	10/06/03	48.2 +/- 8.3 M3	3.5 +/- 1.1 M3	53.5 +/- 9.1 M3	171 +/- 29 M3	60 +/- 11 M3	174 +/- 30 M3
MPSB-61 (8-10')	10/07/03	2.26 +/- 0.44	0.162 +/- 0.079	2.28 +/- 0.44	43.5 +/- 7.9 M3	3.81 +/- 0.89 M3	42.3 +/- 7.7 M3
MPSB-70 (3-5')	10/08/03	10.2 +/- 1.8	0.50 +/- 0.20 M3	10.1 +/- 1.7	18.9 +/- 3.6 M3	8.3 +/- 1.6 M3	18.2 +/- 3.4
MPSB-79 (1-3')	10/08/03	13.2 +/- 2.2	0.79 +/- 0.22	13.2 +/- 2.2	90 +/- 14 M3	14.6 +/- 2.4 M3	85 +/- 13 M3
MPSB-79 (3-5')	10/08/03	3.70 +/- 0.66	0.180 +/- 0.081	3.79 +/- 0.67	19.3 +/- 3.4 M3	4.57 +/- 0.87 M3	18.7 +/- 3.3
MPSB-83 (2-4')	10/08/03	7.1 +/- 1.4 M3	0.33 +/- 0.21 M3	6.9 +/- 1.4	52.0 +/- 9.5 M3	10.5 +/- 2.5 M3	50.9 +/- 9.3 M3
MPSB-83 (6-8')	10/08/03	27.3 +/- 4.4	1.72 +/- 0.42	30.2 +/- 4.9	88 +/- 15 M3	29.5 +/- 5.7 M3	91 +/- 16 M3

Sample Identification	Sample Date	Alpha Spectroscopy: Area 3					
		U-234	U-235	U-238	Th-228	Th-230	Th-232
MPSB-97 (1-3')	10/13/03	2.10 +/- 0.42	0.187 +/- 0.081	2.28 +/- 0.45	2.21 +/- 0.51 M3	2.06 +/- 0.47 M3	2.42 +/- 0.53
MPSB-99 (7-9')	10/14/03	24.8+/-5.3 M3	2.6+/-1.2 M3	31.4+/-6.4 M3	217+/-39 M3	27.4+/-5.8 M3	214+/-38 M3
MPSB-103 (2-4')	10/15/03	11.2 +/- 2.0 M3	0.41 +/- 0.23 M3	12.0 +/- 2.2 M3	25.4 +/- 4.7 M3	10.3 +/- 2.1 M3	25.7 +/- 4.7 M3
MPSB-106 (4-6')	10/16/03	8.9 +/- 1.6	0.50 +/- 0.20	8.9 +/- 1.6	67 +/- 12 M3	8.3 +/- 2.2 M3	65 +/- 12 M3
MPSB-106 (10-12')	10/16/03	4.81 +/- 0.90	0.36 +/- 0.16	4.85 +/- 0.90	13.0 +/- 2.4 M3	5.7 +/- 1.2 M3	12.4 +/- 2.3 M3
MPSB-108 (4-6')	10/17/03	103 +/- 17 M3	4.9 +/- 1.1 M3	104 +/- 17 M3	133 +/- 23 M3	77 +/- 13 M3	127 +/- 22 M3
MPSB-111 (2-4')	10/20/03	27.6 +/- 5.1 M3	0.94 +/- 0.57 M3	26.9 +/- 5.0 M3	271 +/- 47 M3	26.1 +/- 5.3 M3	268 +/- 46 M3

Sample Identification	Sample Date	Alpha Spectroscopy: Area 10 A					
		U-234	U-235	U-238	Th-228	Th-230	Th-232
MPSB-02 (0-2')	09/23/03	10.8 +/- 2.4 M3	0.56 +/- 0.42 M3	10.6 +/- 2.3 M3	48.9 +/- 8.9 M3	11.0 +/- 2.5 M3	49.2 +/- 8.9 M3

Results +/- 2 s TPU (Total Propagated Uncertainty)

All results are reported in pCi/g (picocuries per gram).

U: Result is less than the sample specific MDC (Minimum Detection Limit) or less than the associated TPU.

M: The requested MDC was not met.

M3: The requested MDC was not met, but the reported activity is greater than the reported MDC.

Table G-2
Soil Gamma Spectroscopy Analytical Results: Area 1A

Sample Identification	Sample Date	Gamma Spectroscopy: Area 1A											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-06 (4-6')	09/24/03	2.20 +/- 0.54	-0.005 +/- 0.020 U	-0.008 +/- 0.028 U	13.6 +/- 2.3	0.001 +/- 0.023 U	2.7 +/- 2.7 U	1.68 +/- 0.29	1.70 +/- 0.29	1.56 +/- 0.27	0.510 +/- 0.093	2.32 +/- 0.68 TI	0.10 +/- 0.15 U
MPSB-07 (13-15')	09/24/03	1.54 +/- 0.36	-0.005 +/- 0.018 U	-0.006 +/- 0.022 U	13.9 +/- 2.3	0.004 +/- 0.019 U	3.9 +/- 1.8	1.58 +/- 0.26	1.82 +/- 0.46	1.31 +/- 0.23	0.490 +/- 0.086	1.26 +/- 0.10	0.074 +/- 0.068 U
MPSB-08 (2-4')	09/24/03	1.11 +/- 0.57	0.031 +/- 0.035 U	-0.033 +/- 0.038 U	6.5 +/- 1.4	0.022 +/- 0.034 U	2.0 +/- 5.4 U	1.14 +/- 0.21	2.82 +/- 0.59	1.10 +/- 0.23	0.361 +/- 0.080	3.21 +/- 0.25	0.45 +/- 0.21
MPSB-08 (6-8')	09/24/03	1.34 +/- 0.56	-0.013 +/- 0.036 U	-0.025 +/- 0.036 U	14.6 +/- 2.6	0.010 +/- 0.038 U	-1.9 +/- 6.0 U	1.75 +/- 0.31	1.80+/-0.40	1.54 +/- 0.30	0.456 +/- 0.094	1.54 +/- 0.12	-0.04 +/- 0.18 U
MPSB-09 (1-3')	09/25/03	1.56 +/- 0.51	0.007 +/- 0.029 U	-0.032 +/- 0.029 U	11.6 +/- 2.1	-0.001 +/- 0.028 U	4.8 +/- 5.1 U	1.52 +/- 0.27	1.85 +/- 0.32	1.41 +/- 0.26	0.448 +/- 0.090	1.89 +/- 0.73 TI	0.10 +/- 0.17 U
MPSB-10 (2-4') [1]	09/25/03	0.93 +/- 0.50	-0.016 +/- 0.032 U	-0.035 +/- 0.073 U	1.37 +/- 0.50	-0.015 +/- 0.033 U	98 +/- 18	1.09 +/- 0.23	44.1 +/- 7.4	2.64 +/- 0.46	0.314 +/- 0.075	65.5 +/- 5.08	50.9 +/- 8.4
MPSB-10 (19-21')	09/25/03	1.37 +/- 0.44	-0.005 +/- 0.028 U	-0.041 +/- 0.034 U	12.0 +/- 2.1	-0.023 +/- 0.030 U	2.7 +/- 5.1 U	1.14 +/- 0.20	2.03 +/- 0.35	1.25 +/- 0.24	0.372 +/- 0.072	1.11 +/- 0.09	0.41 +/- 0.17 TI
MPSB-11A (6-8') [1]	09/26/03	-5.9 +/- 6.8 U	0.38 +/- 0.30 U	-0.21 +/- 0.75 U	3.0 +/- 4.5 U	0.56 +/- 0.44 U	22,700 +/- 3,800	13.9 +/- 2.6 TI	2,450 +/- 400	6.1 +/- 1.9 TI	-0.14 +/- 0.67 U	7,860 +/- 609.47	680 +/- 110
MPSB-11A (20-22')	09/26/03	0.84 +/- 0.63 U	0.017 +/- 0.028 U	-0.009 +/- 0.024 U	13.6 +/- 2.4	0.006 +/- 0.030 U	5.4 +/- 5.5 U	1.15 +/- 0.20	1.65 +/- 0.29	1.07 +/- 0.21	0.337 +/- 0.070	1.19 +/- 0.09	0.17 +/- 0.14 U
MPSB-12 (5-7')	09/26/03	0.99 +/- 0.47	0.015 +/- 0.030 U	0.008 +/- 0.030 U	2.02 +/- 0.69	-0.018 +/- 0.028 U	2.2 +/- 4.9 U	1.00 +/- 0.18	2.84 +/- 0.48	0.89 +/- 0.20	0.297 +/- 0.068	1.42 +/- 0.11	0.14 +/- 0.16 U
MPSB-14 (10-12')	09/26/03	1.89 +/- 0.66	0.017 +/- 0.021 U	-0.023 +/- 0.035 U	11.0 +/- 2.1	0.016 +/- 0.034 U	16.3 +/- 7.4	1.68 +/- 0.29	4.85 +/- 0.81	1.49 +/- 0.29	0.430 +/- 0.091	15.4 +/- 1.19	0.62 +/- 0.19
MPSB-15A (16-18')	09/29/03	2.06 +/- 0.56	-0.020 +/- 0.029 U	-0.010 +/- 0.043 U	16.3 +/- 2.8	-0.013 +/- 0.027 U	4.4 +/- 4.4 U	1.85 +/- 0.32	2.42 +/- 0.41	1.78 +/- 0.32	0.53 +/- 0.10	1.99 +/- 0.15	0.20 +/- 0.13 U
MPSB-16 (1-3')	09/29/03	0.91 +/- 0.49	-0.015 +/- 0.029 U	-0.019 +/- 0.030 U	2.80 +/- 0.79	-0.015 +/- 0.031 U	4.8 +/- 4.2 U	1.18 +/- 0.21	2.77 +/- 0.47	0.99 +/- 0.20	0.255 +/- 0.062	3.68 +/- 0.29	0.27+/- 0.19 U
MPSB-17 (15-17')	09/29/03	2.72 +/- 0.62	0.000 +/- 0.026 U	-0.009 +/- 0.025 U	26.2 +/- 4.4	0.016 +/- 0.030 U	8.1 +/- 4.3 TI	2.84 +/- 0.48	1.44 +/- 0.25	2.40 +/- 0.41	0.80 +/- 0.14	1.86 +/- 0.14	0.07 +/- 0.11
MPSB-18 (14-16')	09/29/03	2.64 +/- 0.75	0.021 +/- 0.037 U	-0.016 +/- 0.036 U	26.5 +/- 4.6	0.015 +/- 0.044 U	3.5 +/- 5.8 U	2.51 +/- 0.43	1.54 +/- 0.27	2.32 +/- 0.42	0.74 +/- 0.14	1.26 +/- 0.10	0.11 +/- 0.14 U
MPSB-19 (14-16')	09/29/03	2.31 +/- 0.57	-0.013 +/- 0.027 U	-0.021 +/- 0.027 U	23.2 +/- 3.9	-0.010 +/- 0.029 U	3.5 +/- 4.3 U	2.30 +/- 0.39	1.49 +/- 0.26	2.16 +/- 0.38	0.71 +/- 0.13	1.38 +/- 0.11	0.139 +/- 0.070
MPSB-20 (6-8')	09/30/03	1.55 +/- 0.45	0.026 +/- 0.027 U	-0.006 +/- 0.023 U	16.6 +/- 2.8	-0.001 +/- 0.030 U	0.8 +/- 5.5 U	1.43 +/- 0.24	2.02 +/- 0.35	1.36 +/- 0.25	0.428 +/- 0.080	1.41 +/- 0.11	0.14 +/- 0.14 U
MPSB-21 (0-2')	09/30/03	1.36 +/- 0.42	0.013 +/- 0.025 U	-0.022 +/- 0.032U	7.4 +/- 1.4	0.027 +/- 0.037 U	8.5 +/- 4.0 TI	1.18 +/- 0.20	2.68 +/- 0.45	1.08 +/- 0.22	0.339 +/- 0.068	2.88 +/- 0.22	0.04 +/- 0.17 U
MPSB-21 (16-18')	09/30/03	2.56 +/- 0.70	-0.005 +/- 0.032 U	-0.018 +/- 0.050 U	19.9 +/- 3.4	-0.024 +/- 0.034 U	4.1 +/- 3.6 U	1.94 +/- 0.33	2.84 +/- 0.48	1.96 +/- 0.36	0.60 +/- 0.11	3.4 +/- 0.26	0.31 +/- 0.19 TI
MPSB-22 (15-17')	09/30/03	1.68 +/- 0.75	-0.011 +/- 0.045 U	-0.027 +/- 0.042 U	10.5 +/- 2.1	0.015 +/- 0.045 U	-1.0 +/- 6.8 U	1.55 +/- 0.28	1.91 +/- 0.33	1.37 +/- 0.29	0.44 +/- 0.10	1.46 +/- 0.11	0.07 +/- 0.17 U
MPSB-23 (13-15')	09/30/03	1.64 +/- 0.61	0.010 +/- 0.037 U	-0.026 +/- 0.042 U	14.6 +/- 2.7	0.010 +/- 0.040 U	-6.5 +/- 8.1 U	159 +/- 0.28	1.75 +/- 0.32	1.50 +/- 0.30	0.48 +/- 0.10	1.67 +/- 0.13	-0.01 +/- 0.22 U
MPSB-24 (11-13')	09/30/03	1.25 +/-0.57	-0.023 +/- 0.027 U	-0.006 +/- 0.021 U	13.3 +/- 2.3	-0.035 +/- 0.028 U	3.3 +/- 2.4 U	1.52 +/- 0.26	2.03 +/- 0.35	1.45 +/- 0.26	0.408 +/- 0.077	1.38 +/- 0.11	0.05 +/- 0.12
MPSB-25 (13-15')	09/30/03	1.75 +/- 0.60	0.008 +/- 0.035 U	-0.019 +/- 0.034 U	13.9 +/- 2.5	-0.008 +/- 0.034 U	1.2 +/- 5.3 U	1.68 +/- 0.29	1.95 +/- 0.34	1.66 +/- 0.31	0.53 +/- 0.11	1.76 +/- 0.14	0.12 +/- 0.15 U
MW-42 (5-7')	09/25/03	1.09 +/- 0.52	-0.019 +/- 0.034 U	-0.012 +/- 0.030 U	10.9 +/- 2.0	0.006 +/- 0.036 U	5.4 +/- 5.1 U	1.33 +/- 0.23	1.73 +/- 0.46	1.09 +/- 0.22	0.403 +/- 0.082	1.39 +/- 0.11	0.08 +/- 0.15 U
MW-43 (1-3')	09/25/03	1.07 +/- 0.36	0.010 +/- 0.019 U	0.007 +/- 0.019 U	2.54 +/- 0.61	0.005 +/- 0.018 U	2.2 +/- 3.2 U	1.03 +/- 0.18	2.52 +/- 0.42	1.06 +/- 0.20	0.306 +/- 0.063	2.91 +/- 0.75 TI	0.15 +/- 0.16 U
MW-44 (6-8')	09/24/03	1.55 +/- 0.68	-0.034 +/- 0.034 U	-0.034 +/- 0.028 U	13.8 +/- 2.4	0.007 +/- 0.033 U	4.6 +/- 4.8 U	1.43 +/- 0.25	1.61 +/- 0.28	1.41 +/- 0.27	0.423 +/- 0.083	1.93 +/- 0.66 TI	0.19 +/- 0.18 U
MW-45 (1-3')	09/26/03	2.95 +/- 0.76	-0.019 +/- 0.034 U	0.032 +/- 0.033 U	2.48 +/- 0.70	0.017 +/- 0.035 U	19.8 +/- 7.0	2.58 +/- 0.44	12.3 +/- 2.0	2.44 +/- 0.43	0.75 +/- 0.14	4.33 +/- 0.34	0.50 +/- 0.20

Results +/- 2 s TPU (Total Propagated Uncertainty)

All results are reported in pCi/g (picocuries per gram).

[1] U-235 results by be affected by interferences from an elevated Ra-226 content.

U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.

TI: Nuclide identification is tentative.

Table G-3
Soil Gamma Spectroscopy Analytical Results: Area 1B

Sample Identification	Sample Date	Gamma Spectroscopy: Area 1B											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-26 (12-14')	09/30/03	2.52 +/- 0.79	-0.002 +/- 0.041 U	-0.023 +/- 0.061 U	26.8 +/- 4.6	0.022 +/- 0.043 U	7.6 +/- 6.7 U	2.59 +/- 0.44	1.42 +/- 0.26	2.64 +/- 0.48	0.82 +/- 0.15	1.07 +/- 0.08	0.12 +/- 0.23 U
MPSB-27 (0-2')	09/29/03	2.79 +/- 0.78	0.025 +/- 0.040 U	0.023 +/- 0.039 U	4.04 +/- 0.99	-0.006 +/- 0.041 U	13.0 +/- 6.9	3.21 +/- 0.54	9.5 +/- 1.6	2.86 +/- 0.51	0.87 +/- 0.16	5.7 +/- 1.4 TI	0.41 +/- 0.22
MPSB-27 (16-18')	09/29/03	1.56 +/- 0.63	-0.010 +/- 0.041 U	-0.035 +/- 0.039 U	23.9 +/- 4.2	0.017 +/- 0.049 U	1.9 +/- 6.3 U	2.38 +/- 0.41	1.64 +/- 0.29	2.12 +/- 0.40	0.64 +/- 0.13	3.16 +/- 0.94 TI	-0.02 +/- 0.19 U
MPSB-28 (6-8')	10/01/03	8.0 +/- 1.7	-0.013 +/- 0.060 U	-0.020 +/- 0.084 U	1.14 +/- 0.81 U	0.023 +/- 0.060 U	41 +/- 12	7.4 +/- 1.2	29.7 +/- 4.9	6.5 +/- 1.1	2.13 +/- 0.36	21.3 +/- 1.65	1.16 +/- 0.34
MPSB-29 (0-2')	09/30/03	4.0 +/- 1.2	0.004 +/- 0.057 U	0.142 +/- 0.060	2.6 +/- 1.0	0.038 +/- 0.061 U	13.5 +/- 9.1 U	4.12 +/- 0.70	11.1 +/- 1.8	3.95 +/- 0.70	1.20 +/- 0.22	7.77 +/- 0.60	0.75 +/- 0.34 TI
MPSB-29 (14-16')	09/30/03	2.50 +/- 0.60	0.000 +/- 0.026 U	-0.007 +/- 0.026 U	25.4 +/- 4.3	-0.007 +/- 0.030 U	1.9 +/- 4.3 U	2.57 +/- 0.43	1.75 +/- 0.30	2.41 +/- 0.42	0.75 +/- 0.13	3.07 +/- 0.86 TI	0.11 +/- 0.11 U
MPSB-30 (1-3')	10/01/03	17.9 +/- 3.3	0.003 +/- 0.065 U	-0.01 +/- 0.11 U	4.6 +/- 1.2	0.025 +/- 0.066 U	22 +/- 10	17.1 +/- 2.8	16.5 +/- 2.7	16.4 +/- 2.7	5.20 +/- 0.87	12 +/- 0.93	0.90 +/- 0.38
MPSB-31 (5-7')	10/01/03	1.84 +/- 0.71	-0.003 +/- 0.033 U	-0.043 +/- 0.039 U	14.1 +/- 2.5	0.014 +/- 0.049 U	7.5 +/- 4.1	1.86 +/- 0.32	3.60 +/- 0.60	1.54 +/- 0.28	0.522 +/- 0.097	1.19 +/- 0.09	0.19 +/- 0.12 U
MPSB-32 (1-3')	10/01/03	4.40 +/- 0.99	-0.007 +/- 0.047 U	-0.002 +/- 0.058 U	7.0 +/- 1.4	-0.060 +/- 0.069 U	19 +/- 11	4.25 +/- 0.71	12.4 +/- 2.1	4.20 +/- 0.72	1.37 +/- 0.24	3.11 +/- 0.24	0.48 +/- 0.22
MPSB-32 (11-13')	10/01/03	1.52 +/- 0.75	-0.023 +/- 0.036 U	-0.010 +/- 0.038 U	9.1 +/- 1.8	-0.011 +/- 0.040 U	3.2 +/- 5.8 U	1.37 +/- 0.25	1.67 +/- 0.30	1.43 +/- 0.29	0.434 +/- 0.094	1.99 +/- 0.15	0.06 +/- 0.21 U
MPSB-33 (2-3')	10/01/03	4.8 +/- 1.4	-0.013 +/- 0.074 U	-0.01 +/- 0.11 U	0.75 +/- 0.84 U	-0.020 +/- 0.069 U	31 +/- 15	5.64 +/- 0.95	29.8 +/- 4.9	5.14 +/- 0.90	1.64 +/- 0.29	13.5 +/- 1.05	1.11 +/- 0.37
MPSB-33 (10-12')	10/01/03	1.78 +/- 0.46	0.008 +/- 0.028 U	-0.004 +/- 0.035 U	14.7 +/- 2.5	0.018 +/- 0.043 U	7.5 +/- 4.4 TI	1.64 +/- 0.28	5.03 +/- 0.84	1.57 +/- 0.29	0.460 +/- 0.086	2.58 +/- 0.20	0.11 +/- 0.19 U
MPSB-34 (5-6')	10/01/03	7.9 +/- 1.8	0.056 +/- 0.074 U	-0.03 +/- 0.11 U	2.6 +/- 1.2	0.070 +/- 0.072 U	32 +/- 14	7.2 +/- 1.2	23.5 +/- 3.9	7.1 +/- 1.2	2.26 +/- 0.39	8.45 +/- 0.66	1.12 +/- 0.53 TI
MPSB-34 (17-19')	10/01/03	1.94 +/- 0.55	-0.003 +/- 0.034 U	0.002 +/- 0.029 U	26.0 +/- 4.4	-0.005 +/- 0.037 U	5.7 +/- 7.8 U	1.97 +/- 0.33	1.66 +/- 0.29	1.75 +/- 0.32	0.62 +/- 0.11	2.63 +/- 0.76 TI	0.02 +/- 0.18 U
MPSB-35 (3-4')	10/01/03	7.8 +/- 1.8	0.047 +/- 0.068 U	0.00 +/- 0.10 U	2.4 +/- 1.0	-0.020 +/- 0.065 U	14 .1 +/- 7.9	5.88 +/- 0.99	22.0 +/- 3.7	6.4 +/- 1.1	1.82 +/- 0.32	9.5 +/- 0.74	0.64 +/- 0.29
MPSB-36 (7-9')	10/02/03	5.5 +/- 1.1	-0.003 +/- 0.033 U	-0.009 +/- 0.055 U	4.9 +/- 1.1	0.021 +/- 0.031 U	13.2 +/- 5.9	5.10 +/- 0.85	5.44 +/- 0.91	4.72 +/- 0.80	1.54 +/- 0.26	3.96 +/- 0.31	0.21 +/- 0.22 U
MPSB-37 (6-8')	10/01/03	3.34 +/- 0.71	-0.006 +/- 0.036 U	-0.028 +/- 0.043 U	3.80 +/- 0.89	0.033 +/- 0.052 U	25 +/- 10	3.09 +/- 0.52	20.4 +/- 3.4	2.26 +/- 0.40	0.97 +/- 0.17	5.39 +/- 0.42	0.57 +/- 0.18
MPSB-38 (4-6')	10/02/03	3.68 +/- 0.97	-0.017 +/- 0.052 U	0.011 +/- 0.067 U	2.20 +/- 0.85	0.002 +/- 0.051 U	19.4 +/- 7.8	3.76 +/- 0.64	18.8 +/- 3.1	3.28 +/- 0.58	0.99 +/- 0.18	10.3 +/- 0.80	1.02 +/- 0.31
MPSB-38 (14-16')	10/01/03	1.57 +/- 0.53	-0.010 +/- 0.034 U	0.001 +/- 0.028 U	16.0 +/- 2.8	-0.029 +/- 0.037 U	0.4 +/- 7.8 U	1.48 +/- 0.25	1.65 +/- 0.29	1.42 +/- 0.27	0.457 +/- 0.088	1.24 +/- 0.10	0.02 +/- 0.15 U
MPSB-39 (9-11')	10/02/03	1.65 +/- 0.60	0.002 +/- 0.035 U	-0.017 +/- 0.029 U	12.5 +/- 2.2	-0.007 +/- 0.037 U	0.1 +/- 4.9 U	1.41 +/- 0.25	1.45 +/- 0.26	1.29 +/- 0.25	0.429 +/- 0.083	1.75 +/- 0.69 TI	-0.18 +/- 0.17 U
MPSB-40 (2-4')	10/02/03	1.81 +/- 0.62	-0.007 +/- 0.038 U	0.005 +/- 0.038 U	13.7 +/- 2.5	-0.013 +/- 0.039 U	8.0 +/- 7.8 U	1.77 +/- 0.31	3.29 +/- 0.56	1.62 +/- 0.31	0.56 +/- 0.11	2.73 +/- 0.21	0.17 +/- 0.14 U
MPSB-84 (1-3')	10/13/03	16.2 +/- 3.9	-0.03 +/- 0.15 U	-0.08 +/- 0.16 U	2.0 +/- 1.5 U	-0.09 +/- 0.16 U	37 +/- 23 TI	17.5 +/- 2.9	19.0 +/- 3.3	16.2 +/- 2.8	5.12 +/- 0.89	11.9 +/- 0.92	1.34 +/- 0.89 U
MPSB-85 (1-1.7')	10/13/03	64 +/- 11	0.08 +/- 0.17 U	-0.10 +/- 0.31 U	4.3 +/- 2.2	-0.04 +/- 0.16 U	69 +/- 26	64 +/- 11	63 +/- 11	58.9 +/- 9.8	17.9 +/- 3.0	41.6 +/- 3.23	2.5 +/- 1.1
MPSB-86 (0-2')	10/13/03	21.9 +/- 3.8	0.027 +/- 0.055 U	-0.010 +/- 0.095 U	3.24 +/- 0.95	-0.024 +/- 0.073 U	26.5 +/- 9.4	19.8 +/- 3.3	19.8 +/- 3.3	18.5 +/- 3.1	5.91 +/- 0.98	11.8 +/- 0.91	1.00 +/- 0.32
MPSB-87 (4-5.6')	10/13/03	28.4 +/- 5.8	-0.05 +/- 0.14 U	-0.04 +/- 0.25 U	3.7 +/- 1.9	-0.08 +/- 0.14 U	30 +/- 22 U	28.1 +/- 4.7	19.8 +/- 3.4	25.7 +/- 4.3	8.0 +/- 1.4	16.2 +/- 1.26	-0.09 +/- 0.89 U
MPSB-88 (0-2')	10/14/03	19.0 +/- 4.0	0.06 +/- 0.11 U	0.03 +/- 0.18 U	4.3 +/- 1.8	-0.15 +/- 0.12 U	13 +/- 16 U	18.8 +/- 3.1	23.1 +/- 4.0	17.1 +/- 2.9	5.57 +/- 0.95	10.2 +/- 0.79	0.82 +/- 0.86 U
MPSB-89 (0-2')	10/14/03	62 +/- 11	-0.04 +/- 0.11 U	-0.02 +/- 0.13 U	9.1 +/- 2.2	0.05 +/- 0.11 U	63 +/- 18	65 +/- 11	52.8 +/- 8.8	58.2 +/- 9.6	19.0 +/- 3.1	35.2 +/- 2.73	2.33 +/- 0.65
MPSB-90 (0-2')	10/14/03	40.7 +/- 7.4	0.04 +/- 0.14 U	-0.12 +/- 0.21 U	5.4 +/- 2.0	-0.07+/-0.22 U	28 +/- 27 U	40.2 +/- 6.7	35.8 +/- 6.0	37.8 +/- 6.3	11.1 +/- 1.9	27.7 +/- 2.15	0.81 +/- 0.78 U
MPSB-91 (0-2')	10/14/03	28.7 +/- 5.9	0.01 +/- 0.16 U	-0.11 +/- 0.26 U	3.6 +/- 2.1	-0.09 +/- 0.15 U	37 +/- 21	31.6 +/- 5.3	28.9 +/- 4.8	27.8 +/- 4.7	8.6 +/- 1.5	21.5 +/- 1.67	0.91 +/- 0.77 U
MPSB-91 (8-10')	10/14/03	6.7 +/- 1.8	-0.013 +/- 0.067 U	0.05 +/- 0.11 U	4.3 +/- 1.1	0.010 +/- 0.066 U	19 +/- 12	6.6 +/- 1.1	25.1 +/- 4.2	6.1 +/- 1.1	1.85 +/- 0.33	13.1 +/- 2.5 TI	0.96 +/- 0.42
MPSB-92 (2-4')	10/14/03	18.4 +/- 3.5	0.029 +/- 0.070 U	0.020 +/- 0.077 U	2.8 +/- 1.0	0.075 +/- 0.073 U	29 +/- 12	17.4 +/- 2.9	20.2 +/- 3.5	15.6 +/- 2.6	4.91 +/- 0.83	10.8 +/- 0.84	0.88 +/- 0.48
MPSB-92 (20-20.9')	10/14/03	2.49 +/- 0.72	0.016 +/- 0.043 U	-0.018 +/- 0.035 U	25.9 +/- 4.4	-0.024 +/- 0.050 U	2.2 +/- 7.6 U	2.66 +/- 0.45	1.55 +/- 0.27	2.28 +/- 0.41	0.71 +/- 0.13	1.47 +/- 0.11	0.15 +/- 0.16 U
MPSB-93 (4-6')	10/17/03	3.93 +/- 0.95	-0.056 +/- 0.053 U	0.090 +/- 0.066 U	0.49 +/- 0.74 U	0.011+/-0.053 U	14.6 +/- 7.6	3.34 +/- 0.41	21.3 +/- 2.5	2.81 +/- 0.39	0.85 +/- 0.13	11.3 +/- 0.88	0.80 +/- 0.28
MPSB-94 (2-3.4')	10/16/03	5.1 +/- 1.2	-0.059 +/- 0.053 U	-0.006 +/ -0.083 U	1.36 +/- 0.87 U	0.031+/-0.057 U	13.5 +/- 9.6 U	5.80 +/- 0.70	14.5 +/- 1.7	5.03 +/- 0.65	1.61 +/- 0.21	7.93 +/- 0.61	0.65 +/- 0.27
MW-46 (7-9')	10/01/03	5.2 +/- 1.0	0.001+/-0.034 U	-0.014+/-0.047 U	9.6 +/- 1.7	0.056 +/- 0.052 U	4.0 +/- 7.8 U	4.69+/-0.78	3.95 +/- 0.66	4.45 +/- 0.75	1.43 +/- 0.24	1.82 +/- 0.14	-0.11 +/- 0.20 U
MW-47 (3-5')	10/02/03	6.5 +/- 1.4	-0.021 +/- 0.056 U	0.003 +/- 0.057 U	0.48 +/- 0.64 U	-0.021 +/- 0.056 U	37 +/- 12	6.7 +/- 1.1	31.4 +/- 5.3	6.9 +/- 1.2	2.18 +/- 0.37	14.9 +/- 1.16	1.27 +/- 0.39
MW-47 (5-7')	10/02/03	9.7 +/- 2.1	0.002 +/- 0.097 U	-0.13 +/- 0.12 U	1.2 +/- 1.5 U	0.09 +/- 0.15 U	33 +/- 16	10.4 +/- 1.7	24.0 +/- 4.0	8.5 +/- 1.4	3.18 +/- 0.54	13 +/- 1.01	1.12 +/- 0.52

Results +/- 2 s TPU (Total Propagated Uncertainty)
U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.
TI: Nuclide identification is tentative.

Table G-4
Soil Gamma Spectroscopy Analytical Results: Area 2

Sample Identification	Sample Date	Gamma Spectroscopy: Area 2											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-41 (9-11')	10/03/03	1.20 +/- 0.70	-0.015 +/- 0.047 U	-0.066 +/- 0.050 U	3.6 +/- 1.0	0.006 +/- 0.046 U	7.8 +/- 5.5	2.12 +/- 0.38	8.0 +/- 1.4	1.70 +/- 0.35	0.57 +/- 0.12	2.94 +/- 0.23	0.18 +/- 0.17 U
MPSB-41 (10-12')	09/24/03	1.65 +/- 0.52	-0.020 +/- 0.035 U	-0.016 +/- 0.028 U	13.6 +/- 2.4	-0.045 +/- 0.037 U	2.8 +/- 6.0 U	1.48 +/- 0.26	1.75 +/- 0.30	1.26 +/- 0.25	0.453 +/- 0.086	2.72 +/- 0.21	0.08 +/- 0.13 U
MPSB-41 (19-21')	09/24/03	2.08 +/- 0.66	-0.020 +/- 0.031 U	0.002 +/- 0.030 U	28.7 +/- 4.9	0.042 +/- 0.037 U	5.5 +/- 5.3 U	2.01 +/- 0.35	1.60 +/- 0.28	1.93 +/- 0.35	0.60 +/- 0.11	2.08 +/- 0.16	0.17 +/- 0.14 U
MPSB-42 (10-12')	10/02/03	9.7 +/- 1.8	-0.002 +/- 0.044 U	-0.015 +/- 0.047 U	11.0 +/- 2.1	0.000 +/- 0.041 U	3.3 +/- 8.0 U	8.7 +/- 1.4	3.19 +/- 0.55	8.0 +/- 1.3	2.46 +/- 0.42	4.41 +/- 0.34	0.12 +/- 0.19 U
MPSB-43 (8-10')	10/02/03	20.8 +/- 3.6	0.008 +/- 0.039 U	0.002 +/- 0.072 U	3.93 +/- 0.85	-0.001 +/- 0.037 U	16.8 +/- 6.1	19.6 +/- 3.2	12.7 +/- 2.2	19.6 +/- 3.2	6.4 +/- 1.1	8.19 +/- 0.64	0.51 +/- 0.21
MPSB-44 (2-4')	10/16/03	28.8 +/- 5.0	0.029 +/- 0.064 U	0.006 +/- 0.074 U	3.5 +/- 1.1	0.016 +/- 0.058 U	26.9 +/- 9.7	27.5 +/- 4.5	16.5 +/- 2.7	25.4 +/- 4.2	7.8 +/- 1.4	14.9 +/- 1.16	0.80 +/- 0.34
MPSB-45 (4-6')	10/16/03	4.9 +/- 1.3	0.016 +/- 0.054 U	-0.049 +/- 0.057 U	1.02 +/- 0.69 U	-0.056 +/- 0.061 U	7.9 +/- 8.1 U	5.31 +/- 0.90	1.95 +/- 0.46	4.67 +/- 0.81	1.61 +/- 0.29	2.67 +/- 0.21	0.32 +/- 0.29 U
MPSB-46 (0-2')	10/15/03	52.8 +/- 8.9	0.020 +/- 0.066 U	0.025 +/- 0.077 U	5.4 +/- 1.3	0.000 +/- 0.064 U	51 +/- 13	50.5 +/- 8.3	25.7 +/- 4.2	47.6 +/- 7.9	14.9 +/- 2.5	9.58 +/- 0.74	1.81 +/- 0.44
MPSB-47 (2.0-2.9')	10/15/03	29.5 +/- 5.1	-0.003 +/- 0.064 U	0.01+/-0.11 U	2.7 +/- 1.1	0.002+/-0.064 U	29.4 +/- 9.8	28.9+/-4.8	21.1+/-3.5	26.5 +/- 4.4	8.1 +/- 1.3	12.7 +/- 0.98	0.78 +/- 0.30
MPSB-48 (0-2')	10/15/03	4.6 +/- 1.5	0.011 +/- 0.069 U	-0.007 +/- 0.068 U	2.6 +/- 1.1	-0.036 +/- 0.082 U	10 +/- 10 U	4.76 +/- 0.82	12.9 +/- 2.2	4.29 +/- 0.79	1.32 +/- 0.25	6.5 +/- 0.50	0.51 +/- 0.49 U
MPSB-48 (5-7')	10/08/03	9.5 +/- 2.1	0.002 +/- 0.048 U	0.037 +/- 0.060 U	7.5 +/- 1.6	-0.009 +/- 0.054 U	8.7 +/- 7.9 U	9.6 +/- 1.6	4.15 +/- 0.84	8.5 +/- 1.4	2.66 +/- 0.46	10.8 +/- 2.4 TI	0.19 +/- 0.33 U
MPSB-48 (6-8')	10/15/03	5.7 +/- 1.5	0.037 +/- 0.059 U	0.022 +/- 0.100 U	3.1 +/- 1.0	-0.012 +/- 0.082 U	10 +/- 11 U	5.73 +/- 0.97	11.1 +/- 2.0	5.28 +/- 0.93	1.53 +/- 0.28	9.47 +/- 0.73	0.57 +/- 0.33
MPSB-49 (6-8')	10/13/03	1.98 +/- 0.74	-0.001 +/- 0.036 U	-0.032 +/- 0.034 U	19.7 +/- 3.5	0.011 +/- 0.042 U	0.5 +/- 5.2 U	2.00 +/- 0.35	1.70 +/- 0.37	1.83 +/- 0.34	0.54 +/- 0.11	2.40 +/- 0.87 TI	0.14 +/- 0.18 U
MPSB-50 (0-2')	10/08/03	45.1 +/- 7.6	0.034 +/- 0.056 U	0.031 +/- 0.068 U	5.5 +/- 1.2	-0.053 +/- 0.057 U	9.6 +/- 7.1 U	42.0 +/- 6.9	7.2 +/- 1.2	39.3 +/- 6.5	12.3 +/- 2.1	3.68 +/- 0.29	0.06 +/- 0.34 U
MPSB-51 (3-5')	10/02/03	32.0 +/- 5.7	0.012 +/- 0.079 U	-0.02 +/- 0.16 U	4.5 +/- 1.4	0.014 +/- 0.076 U	28 +/- 16	30.7 +/- 5.1	14.3 +/- 2.4	29.7 +/- 4.9	9.6 +/- 1.6	3.45 +/- 0.27	0.55 +/- 0.34 U
MPSB-51 (13-15')	10/02/03	9.4 +/- 1.8	-0.016 +/- 0.046 U	0.072 +/- 0.041	5.7 +/- 1.3	0.015 +/- 0.063 U	17.8 +/- 8.6	9.7 +/- 1.6	10.6 +/- 1.8	9.2 +/- 1.5	2.75 +/- 0.46	8.17 +/- 0.63	0.60 +/- 0.26
MPSB-52 (5-7')	10/02/03	14.7 +/- 2.6	0.003 +/- 0.038 U	0.018 +/- 0.046 U	9.1 +/- 1.7	0.021 +/- 0.053 U	19.0 +/- 6.8	14.5 +/- 2.4	12.6 +/- 2.2	13.9 +/- 2.3	4.46 +/- 0.74	9.37 +/- 0.73	0.50 +/- 0.20
MPSB-53 (9-11')	10/03/03	5.0 +/- 1.2	0.002 +/- 0.047 U	-0.007 +/- 0.053 U	10.2 +/- 2.0	0.014 +/- 0.049 U	6.9 +/- 7.4 U	5.55 +/- 0.93	4.65 +/- 0.90	4.97 +/- 0.86	1.56 +/- 0.27	3.44 +/- 0.27	0.36 +/- 0.22 TI
MPSB-54 (4-6')	10/03/03	38.7 +/- 6.9	0.10 +/- 0.11 U	-0.01 +/- 0.17 U	4.5 +/- 1.5	-0.07 +/- 0.12 U	22 +/- 14	37.5 +/- 6.2	10.0 +/- 1.8	34.6 +/- 5.7	10.9 +/- 1.8	7.1 +/- 0.55	0.69 +/- 0.62 U
MPSB-54 (8-10')	10/03/03	20.2 +/- 3.8	-0.005 +/- 0.057 U	0.002 +/- 0.084 U	3.3 +/- 1.0	0.002 +/- 0.061 U	13.0 +/- 8.9	20.2 +/- 3.3	7.7 +/- 1.4	18.9 +/- 3.2	6.0 +/- 1.0	11.8 +/- 0.91	0.68 +/- 0.41 TI
MPSB-54 (16-18')	10/03/03	1.80 +/- 0.61	0.001 +/- 0.033 U	-0.005 +/- 0.031 U	13.9 +/- 2.5	-0.006 +/- 0.034 U	-0.8 +/- 4.6 U	1.77 +/- 0.31	1.43 +/- 0.37	1.50 +/- 0.28	0.56 +/- 0.11	2.16 +/- 0.73 TI	-0.12 +/- 0.17 U
MPSB-55 (8-9')	10/03/03	8.8 +/- 2.3	0.00 +/- 0.11 U	-0.07 +/- 0.13 U	3.1 +/- 1.6	-0.22 +/- 0.12 U	14 +/- 14 U	10.1 +/- 1.7	15.3 +/- 2.7	8.4 +/- 1.5	2.70 +/- 0.48	8.59 +/- 0.67	0.61 +/- 0.53 U
MPSB-56 (1-3')	10/06/03	255 +/- 43	-0.07 +/- 0.25 U	-0.17 +/- 0.32 U	13.8 +/- 3.4	-0.13 +/- 0.26 U	74 +/- 32	240 +/- 40	77 +/- 13	223 +/- 37	71 +/- 12	12.4 +/- 0.96	2.5 +/- 1.4
MPSB-56 (5-7')	10/06/03	8.6 +/- 2.0	-0.058 +/- 0.066 U	0.068 +/- 0.073 U	3.5 +/- 1.1	-0.033 +/- 0.070 U	15 +/-11 U	8.5 +/- 1.4	9.3 +/- 1.7	7.8 +/- 1.3	2.52 +/- 0.44	5.73 +/- 0.44	0.33 +/- 0.36 U
MPSB-57 (4-6')	10/06/03	15.3 +/- 3.1	-0.068 +/- 0.080 U	-0.09 +/- 0.13 U	1.8 +/- 1.0	0.026 +/- 0.072 U	34 +/- 16	15.9 +/- 2.7	21.2 +/- 3.7	13.9 +/- 2.3	4.54 +/- 0.77	16.1 +/- 1.25	0.94 +/- 0.46
MPSB-58 (4-6')	10/06/03	14.2 +/- 2.9	-0.016 +/- 0.072 U	-0.09 +/- 0.11	4.6 +/- 1.3	0.045 +/- 0.069 U	9.4 +/- 8.9 U	12.6 +/- 2.1	13.5 +/- 2.4	12.0 +/- 2.0	3.84 +/- 0.65	9.82 +/- 0.76	0.79 +/- 0.40
MPSB-58 (8-10')	10/06/03	13.7 +/- 2.9	-0.04 +/- 0.11 U	0.03 +/- 0.14 U	3.7 +/- 1.6	-0.06 +/- 0.16 U	16 +/- 11	13.9 +/- 2.3	18.3 +/- 3.0	11.9 +/- 2.0	3.91 +/- 0.67	14.9 +/- 1.16	1.01 +/- 0.45
MPSB-59 (2-4')	10/07/03	11.9 +/- 2.5	-0.030 +/- 0.081 U	-0.040 +/- 0.082 U	7.6 +/- 1.8	-0.046 +/- 0.090 U	6.2 +/- 7.5 U	12.8 +/- 2.1	10.1 +/- 1.8	11.1 +/- 1.9	3.77 +/- 0.64	8.84 +/- 0.69	0.32 +/- 0.32 U
MPSB-59 (18-20')	10/07/03	1.31 +/- 0.56	0.000 +/- 0.032 U	-0.012 +/- 0.031 U	10.7 +/- 2.0	0.001 +/- 0.034 U	1.5 +/- 5.2 U	1.23 +/- 0.22	0.94 +/- 0.30	1.07 +/- 0.22	0.361 +/- 0.077	0.764 +/- 0.06	0.13 +/- 0.17 U
MPSB-60 (4-6')	10/07/03	9.1 +/- 2.0	0.023 +/- 0.061 U	0.061 +/- 0.070 U	5.1 +/- 1.3	-0.008 +/- 0.057 U	15 +/- 11 U	9.1 +/- 1.5	10.1 +/- 1.8	8.1 +/- 1.4	2.64 +/- 0.46	4.28 +/- 0.33	0.55 +/- 0.26
MPSB-61 (8-10')	10/07/03	57.6 +/- 9.8	-0.095 +/- 0.077 U	-0.025 +/- 0.099 U	5.3 +/- 1.4	0.009 +/- 0.076 U	10 +/- 11 U	52.3 +/- 8.6	4.36 +/- 0.75	51.9 +/- 8.6	16.1 +/- 2.7	-3.13 +/- 0.24	0.41 +/- 0.41 U
MPSB-61 (20-22')	10/07/03	7.4 +/- 1.6	-0.003 +/- 0.041 U	-0.004 +/- 0.046 U	14.2 +/- 2.6	0.015 +/- 0.047 U	8.7 +/- 6.7 U	7.8 +/- 1.3	2.14 +/- 0.54	6.9 +/- 1.2	2.14 +/- 0.37	4.7 +/- 1.3 TI	0.15 +/- 0.27 U
MPSB-62A (2-4')	10/07/03	73 +/- 13	0.12 +/- 0.13 U	-0.09 +/- 0.16 U	15.8 +/- 3.2	0.00 +/- 1.12 U	19 +/- 17 U	73 +/- 12	4.20 +/- 0.89	68 +/- 11	21.9 +/- 3.6	16.8 +/- 1.30	-0.11 +/- 0.80 U
MPSB-62A (12-14')	10/07/03	17.9 +/- 4.0	0.050 +/- 0.098 U	-0.03 +/- 0.13 U	14.0 +/- 3.1	0.06 +/- 0.11 U	4 +/- 14 U	17.8 +/- 3.0	4.14 +/- 0.87	15.6 +/- 2.7	4.89 +/- 0.85	3.08 +/- 0.24	-0.51 +/- 0.64 U
MPSB-62 (2-4')	10/07/03	32.5 +/- 5.7	0.003 +/- 0.067 U	-0.099 +/- 0.087 U	10.0 +/- 2.0	0.036 +/- 0.061 U	0 +/- 10 U	30.5 +/- 5.1	4.28 +/- 0.73	29.4 +/- 4.9	9.3 +/- 1.5	1.34 +/- 0.10	-0.33 +/- 0.40 U
MPSB-63B (12-14')	10/08/03	32.5 +/- 6.4	0.02+/-0.17 U	-0.08+/-0.18 U	10.4 +/- 2.9	-0.22 +/- 0.19 U	7 +/- 23 U	33.7 +/- 5.6	9.1+/-1.6	29.5 +/- 5.0	10.2 +/- 1.7	6.89 +/- 0.53	0.50 +/- 0.54 U
MPSB-64 (10-12')	10/08/03	17.1 +/- 2.6	0.009 +/- 0.075 U	-0.04 +/- 0.11 U	11.9 +/- 1.9	0.03 +/- 0.12 U	16 +/- 12 U	16.5 +/- 2.0	12.9+/-1.7	15.4 +/ -1.9	4.62 +/- 0.56	4.6 +/- 0.36	0.51 +/- 0.62 U
MPSB-65 (10-12')	10/09/03	3.4 +/- 1.2	-0.016 +/- 0.049 U	-0.010 +/- 0.082 U	1.52 +/- 0.74	0.017 +/- 0046 U	11.9 +/- 9.1 U	3.90 +/- 0.67	11.0 +/- 1.9	3.49 +/- 0.63	1.00 +/- 0.19	6.78 +/- 0.53	0.66 +/- 0.46 U
MPSB-65 (12-14')	10/09/03	3.6 +/- 1.3	0.050 +/- 0.069 U	-0.015 +/- 0.070 U	1.19 +/- 0.86 U	0.008 +/- 0.065 U	11 +/- 10 U	3.35 +/- 0.60	9.1 +/- 1.6	3.43 +/- 0.65	0.96 +/- 0.20	6.6 +/- 1.9 TI	0.42 +/- 0.43 U
MPSB-66 (10-12')	10/09/03	3.39 +/- 0.91	-0.024 +/- 0.045 U	-0.005 +/- 0.041 U	2.81 +/- 0.93	-0.043 +/- 0.048 U	8.1 +/- 6.6 U	3.05 +/- 0.51	1.85 +/- 0.32	2.81 +/- 0.50	0.95 +/- 0.17	3.76 +/- 0.95 TI	0.15 +/- 0.16 U
MPSB-67 (4-6')	10/09/03	11.8 +/- 2.5	0.064 +/- 0.068 U	-0.031 +/- 0.086 U	10.6 +/- 2.2	0.030 +/- 0.066 U	10.1 +/- 8.9 U	12.9 +/- 2.2	7.8 +/- 1.4	11.9 +/- 2.0	3.65 +/- 0.63	7.85 +/- 0.61	0.55 +/- 0.46 U
MPSB-68 (9-11')	10/08/03	1.55 +/- 0.90	-0.003 +/- 0.48 U	-0.016 +/- 0.051 U	13.6 +/- 2.7	0.003 +/- 0.055 U	-0.9 +/- 7.5 U	1.48 +/- 0.28	2.32 +/- 0.55	1.8 +/- 0.29	0.44 +/- 0.11	1.78 +/- 0.14	0.02 +/- 0.24 U
MPSB-69 (1-3')	10/08/03	2.09 +/- 0.68	-0.039 +/- 0.035 U	-0.039 +/- 0.035 U	23.9 +/- 4.1	-0.028 +/- 0.035 U	4.9 +/- 5.5 U	2.19 +/- 0.38	0.72+/-0.24	1.95 +/- 0.36	0.53 +/- 0.11	2.45+/-0.96 TI	0.12 +/- 0.13 U
MPSB-70 (3-5')	10/08/03	23.7 +/- 4.5	0.064 +/- 0.097 U	-0.05 +/- 0.15 U	7.1 +/- 1.8	-0.10 +/- 0.15 U	27 +/- 14 TI	23.6 +/- 3.9	11.8 +/- 2.1	21.2 +/- 3.5	6.9 +/- 1.2	11 +/- 0.85	0.56 +/- 0.47 U
MPSB-71 (3-5')	10/07/03	12.9 +/- 2.4	-0.012 +/- 0.057 U	-0.007 +/- 0.080 U	2.9 +/-1.0	-0.059 +/- 0.062 U	15 +/- 10 U	14.8 +/- 2.4	7.2 +/- 1.2	13.1 +/- 2.2	4.37 +/- 0.73	6.24 +/- 0.48	0.20 +/- 0.15 U
MPSB-72 (1-3')	10/07/03	6.1 +/- 1.4	-0.007 +/- 0.050 U	0.006 +/- 0.052 U	21.0 +/- 3.8	0.009 +/- 0.052 U	1.5 +/- 7.8 U	6.0 +/- 1.0	3.61 +/- 0.77	5.27 +/- 0.91	1.71 +/- 0.30	1.8 +/- 0.14	0.03 +/- 0.25 U

Table G-4
Soil Gamma Spectroscopy Analytical Results: Area 2

Sample Identification	Sample Date	Gamma Spectroscopy: Area 2											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-73 (9-11')	10/07/03	1.52 +/- 0.64	0.011 +/- 0.032 U	0.027 +/- 0.034 U	12.1 +/- 2.2	0.004 +/- 0.035 U	-0.3 +/- 4.8 U	1.65 +/- 0.29	1.62 +/- 0.42	1.51 +/- 0.29	0.54 +/- 0.10	1.91 +/- 0.70 TI	0.12 +/- 0.17 U
MPSB-74 (5-7')	10/06/03	11.8 +/- 2.2	0.001 +/- 0.041 U	0.069 +/- 0.052 U	16.1 +/- 2.8	0.030 +/- 0.041 U	4.3 +/- 4.3 U	11.2 +/- 1.9	4.49 +/- 0.88	10.2 +/- 1.7	3.30 +/- 0.56	2.29 +/- 0.18	0.29 +/- 0.25 U
MPSB-75 (7-9')	10/06/03	5.1 +/- 1.2	0.005 +/- 0.036 U	0.036 +/- 0.037 U	7.1 +/- 1.4	0.030 +/- 0.037 U	4.7 +/- 3.9 U	4.74 +/- 0.80	3.69 +/- 0.74	4.38 +/- 0.75	1.42 +/- 0.25	6.1 +/- 1.4 TI	-0.07 +/- 0.24 U
MPSB-76 (2-4')	10/06/03	7.5 +/- 1.9	-0.016 +/- 0.070 U	0.00 +/- 0.11 U	4.3 +/- 1.4	0.07 +/- 0.11 U	12 +/- 10 U	8.9 +/- 1.5	12.4 +/- 2.1	7.8 +/- 1.3	2.47 +/- 0.43	10.6 +/- 0.82	0.91 +/- 0.46 TI
MPSB-76 16-18')	10/06/03	1.54 +/- 0.65	-0.024 +/- 0.032 U	-0.016 +/- 0.037 U	11.5 +/- 2.2	0.017 +/- 0.036 U	6.2 +/- 5.7 U	1.33 +/- 0.24	1.42 +/- 0.38	1.09 +/- 0.23	0.380 +/- 0.084	0.953 +/- 0.07	0.08 +/- 0.19 U
MPSB-77 (0-2')	10/10/03	3.8 +/- 1.0	-0.023 +/- 0.034 U	-0.004 +/- 0.042 U	15.7+/-2.8	-0.040 +/- 0.040 U	5.0 +/- 6.1 U	3.65 +/- 0.62	2.25+/-0.54	3.33 +/- 0.59	1.01 +/- 0.18	4.6 +/- 1.3 TI	0.33 +/- 0.25 U
MPSB-78 (5-7')	10/09/03	9.5 +/- 2.1	-0.007 +/- 0.081 U	0.056 +/- 0.082 U	11.4 +/- 2.3	-0.022 +/- 0.088 U	6 +/- 11 U	9.9 +/- 1.6	6.6 +/- 1.2	8.7 +/- 1.5	3.03 +/- 0.52	2.61 +/- 0.20	0.22 +/- 0.26 U
MPSB-79 (1-3')	10/08/03	55.0 +/- 9.6	0.14 +/- 0.11 U	-0.04 +/- 0.13 U	8.1 +/- 2.1	-0.05 +/- 0.11 U	12 +/- 12 U	52.3 +/- 8.6	15.3 +/- 2.8	50.0 +/- 8.3	15.9 +/- 2.6	8.83 +/- 0.68	-0.07 +/- 0.79 U
MPSB-79 (3-5')	10/08/03	26.3 +/- 5.3	-0.06 +/- 0.15 U	0.04 +/- 0.16 U	12.1 +/- 2.9	-0.06 +/- 0.16 U	3 +/- 20 U	25.9 +/- 4.3	9.1 +/- 1.7	23.0 +/- 3.9	7.8 +/- 1.3	5.15 +/- 0.40	0.68 +/- 0.76 U
MPSB-79 (9-11')	10/08/03	4.4 +/- 1.1	-0.019 +/- 0.045 U	-0.003 +/- 0.050 U	12.0 +/- 2.3	0.016 +/- 0.049 U	0.6 +/- 7.5 U	4.13 +/- 0.70	2.97 +/- 0.60	4.03 +/- 0.70	1.36 +/- 0.24	2.3 +/- 0.18	0.13 +/- 0.19 U
MPSB-80 (1-3')	10/09/03	8.4 +/- 2.2	-0.098 +/- 0.084 U	0.004 +/- 0.093 U	9.2 +/- 2.3	-0.006 +/- 0.075 U	-1 +/- 10 U	8.6 +/- 1.5	2.53 +/- 0.60	7.5 +/- 1.3	2.43 +/- 0.44	4.6 +/- 1.2	-0.07 +/- 0.46 U
MPSB-80 (9-11')	10/09/03	11.9 +/- 2.8	0.02 +/- 0.11 U	0.05 +/- 0.11 U	12.2 +/- 2.8	0.14 +/- 0.12 U	7 +/- 16 U	12.6 +/- 2.1	3.77 +/- 0.72	11.2 +/- 1.9	3.70 +/- 0.65	2.23 +/- 0.17	-0.28 +/- 0.51 U
MPSB-81 (0-2')	12/08/03	2.22 +/- 0.84 G	0.004 +/- 0.045 U,G	0.060 +/- 0.048 U,G	14.6 +/- 2.2 G	0.005 +/- 0.053 U,G	11.3 +/- 7.5 G	2.8 +/- 0.36 G	2.20 +/- 0.29 G	2.42 +/- 0.36 G	0.79 +/- 0.13 G	3.16 +/- 0.99 TI,M3,G	0.24 +/- 0.22 U,G
MPSB-82 (0-2')	10/10/03	339 +/- 57	-0.11 +/- 0.27 U	0.25 +/- 0.57 U	27.1 +/- 5.5	-0.04 +/- 0.25 U	45 +/- 30 U	324 +/- 53	18.9 +/- 3.4	304 +/- 50	98 +/- 16	24 +/- 1.86	-0.2 +/- 2.0 U
MPSB-83 (2-4')	10/08/03	61 +/- 10	0.013 +/- 0.090 U	0.11 +/- 0.11 U	5.8 +/- 1.6	-0.019 +/- 0.094 U	14 +/- 15 U	64 +/- 11	9.1 +/- 1.5	57.6 +/- 9.5	18.2 +/- 3.0	8.2 +/- 0.64	-0.15 +/- 0.53 U
MPSB-83 (6-8')	10/08/03	172 +/- 29	0.00 +/- 0.11 U	0.05 +/- 0.14 U	12.7 +/- 2.6	0.07 +/- 0.12 U	59 +/- 19	167 +/- 27	32.6 +/- 5.4	157 +/- 26	48.6 +/- 8.0	18.5 +/- 1.43	1.53 +/- 0.68
MPSB-83 (10-10.8')	10/08/03	19.7 +/- 3.8	-0.016 +/- 0.088 U	-0.04 +/- 0.15 U	1.2 +/- 1.0 U	-0.012 +/- 0.093 U	25 +/- 12	19.0 +/- 3.2	24.6 +/- 4.3	17.9 +/- 3.0	5.74 +/- 0.97	10.9 +/- 0.85	0.83 +/- 0.53

Results +/- 2 s TPU (Total Propagated Uncertainty)
All results are reported in pCi/g (picocuries per gram).
U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.
TI: Nuclide identification is tentative.
M3: The requested MDC was not met, but the reported activity is greater than the reported MDC.
G: Sample density differs by more than 15% of LCS density

Table G-5
Soil Gamma Spectroscopy Analytical Results: Area 3

Sample Identification	Sample Date	Gamma Spectroscopy: Area 3											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-95(1-3')	10/13/03	135 +/- 22	-0.03+/-0.13 U	0.05+/-0.22 U	8.4+/-2.0	-0.03+/-0.13 U	106+/-26	130+/-21	86+/-14	120+/-20	37.8+/-6.3	51.4 +/- 3.99	4.07+/-0.92
MPSB-96 (3-5')	10/13/03	2.58 +/- 0.70	0.009+/-0.028 U	0.181+/-0.048	5.0+/-1.1	0.016+/-0.028 U	4.4+/-5.2 U	2.72+/-0.46	2.33+/-0.40	2.46+/-0.43	0.78+/-0.14	2.58 +/- 0.20	0.08+/-0.16 U
MPSB-97 (1-3')	10/13/03	2.60+/-0.73	-0.013+/-0.031 U	0.015+/-0.035 U	6.8+/-1.3	-0.010+/-0.029 U	4.5+/-5.1 U	2.80+/-0.47	2.69+/-0.46	2.67+/-0.47	0.82+/-0.15	3.17 +/- 0.25	0.14+/-0.13 U
MPSB-97 (15-17')	10/13/03	1.59+/-0.73	-0.007+/-0.045 U	0.002+/-0.039 U	31.9+/-5.5	0.028+/-0.050 U	1.8+/-6.9 U	2.15+/-0.37	1.19+/-0.31	2.05+/-0.38	0.61+/-0.12	2.52+/-0.99 TI	0.00+/-0.22 U
MPSB-98 (1-3)	10/14/03	2.52+/-0.66	0.002+/-0.029 U	-0.031+/-0.031 U	4.04+/-0.90	-0.018+/-0.032 U	6.7+/-5.8 U	2.90+/-0.49	2.16+/-0.37	2.48+/-0.44	0.80+/-0.14	3.12+/-0.83 TI	0.09+/-0.17 U
MPSB-99 (7-9')	10/14/03	504+/-84	0.02+/-0.47 U	-0.15+/-0.63 U	35.0+/-7.8	-0.46+/-0.48 U	70+/-54 U	505+/-83	38.8+/-6.7	464+/-77	148+/-24	2.28 +/- 0.18	-2.3+/-2.5 U
MPSB-99 (13-15')	10/14/03	7.8+/-1.8	-0.011+/-0.043 U	-0.016+/-0.051 U	12.0+/-2.3	-0.031+/-0.047 U	3.4+/-6.9 U	7.8+/-1.3	1.64+/-0.37	6.8+/-1.2	2.18+/-0.38	18.2 +/- 1.41	-0.06+/-0.30 U
MPSB-100 (6-8')	10/14/03	1,590+/-260	0.11+/-0.64 U	0.48+/-0.82 U	95+/-17	-0.23+/-0.64 U	144+/-65	1,420+/-230	77+/-13	1,440+/-240	453+/-75	24 +/- 1.86	-2.3+/-6.2U
MPSB-100 (20-22')	10/14/03	2.74+/-0.70	0.016+/-0.028 U	-0.004+/-0.027 U	18.5+/-3.2	0.001+/-0.032 U	2.3+/-4.3 U	2.69+/-0.45	1.03+/-0.19	2.54+/-0.44	0.71+/-0.13	1.63+/-0.59 TI	0.02+/-0.16 U
MPSB-101(4-6')	10/14/03	17.3+/-3.0	-0.29+/-0.040 U	-0.035+/-0.051 U	5.7+/-1.2	0.005+/-0.039 U	1.2+/-5.6 U	16.6+/-2.7	2.44+/-0.42	15.2+/-2.5	4.98+/-0.81	3.9 +/- 0.30	-0.02+/-0.23 U
MPSB-102 (8-10')	10/15/03	29.3+/-5.8	0.03+/-0.13 U	0.06+/-0.25 U	12.1+/-2.9	-0.02+/-0.14 U	17+/-20 U	29.9+/-5.0	9.9+/-1.8	27.6+/-4.6	8.9+/-1.5	11.9 +/- 0.92	0.49+/-0.55 U
MPSB-103 (2-4')	10/15/03	58+/-10	-0.16+/-0.17 U	-0.12+/-0.21 U	12.1+/-3.1	-0.16+/-0.17 U	28+/-22 U	62+/-10	12.6+/-2.2	56.0+/-9.3	18.1+/-3.0	14.8 +/- 1.15	0.79+/-0.84 U
MPSB-104 (10-12')	10/15/03	81 +/- 14	0.017 +/- 0.097 U	-0.01 +/- 0.14 U	5.9 +/- 1.6	0.11 +/- 0.10 U	0 +/- 14 U	76 +/- 13	6.6 +/- 1.2	71+/-12	22.9 +/- 3.8	11.9 +/- 0.92	-0.54+/-0.80 U
MPSB-104 (16-18')	10/15/03	4.2 +/- 1.0	0.016 +/- 0.044 U	-0.037 +/- 0.040 U	11.4 +/- 2.1	-0.018 +/- 0.049 U	6.2 +/- 7.2	3.44 +/- 0.58	1.16 +/- 0.22	2.94+/-0.52	1.03 +/- 0.18	2.39 +/- 0.19	0.05+/-0.15 U
MPSB-105 (6-8')	10/16/03	17.8+/-3.5	-0.076+/-0.073 U	-0.044+/-0.091 U	4.5+/-1.4	-0.050+/-0.079 U	13+/-10 U	16.0+/-2.7	4.68+/-0.84	15.4+/-2.6	4.73+/-0.81	11.0+/-2.7 TI	-0.73+/-0.57 U
MPSB-106 (0-2')	10/16/03	24.3+/-4.9	-0.01+/-0.11 U	0.06+/-0.13 U	13.2+/-2.9	0.01+/-0.12 U	4+/-15 U	24.1+/-4.0	3.58+/-0.78	21.0+/-3.6	7.0+/-1.2	3.15 +/- 0.24	-0.29+/-0.67 U
MPSB-106 (4-6')	10/16/03	55.7+/-9.9	-0.03+/-0.12 U	-0.08+/-0.15 U	5.4+/-1.7	0.05+/-0.12 U	5+/-16 U	56.8+/-9.4	5.10+/-0.96	52.2+/-8.7	16.7+/-2.8	10 +/- 0.78	0.04+/-0.88 U
MPSB-106 (10-12')	10/16/03	17.2+/-3.9	0.00+/-0.12 U	-0.09+/-0.13 U	2.1+/-1.4	-0.04+/-0.13 U	20+/-16 U	18.4+/-3.1	5.7+/-1.0	16.4+/-2.8	5.23+/-0.90	7.42 +/- 0.58	-0.16+/-0.64 U
MPSB-107 (0-2')	10/16/03	11.6+/-2.6	-0.058+/-0.080 U	-0.033+/-0.085 U	10.9+/-2.4	0.000+/-0.076 U	3+/-10 U	11.0+/-1.9	2.31+/-0.54	10.0+/-1.7	3.43+/-0.60	10.2+/-2.7 TI	0.06+/-0.49 U
MPSB-107 (10-12')	10/16/03	34.2+/-7.0	-0.10+/-0.17 U	-0.34+/-0.20 U	3.1+/-2.4 U	-0.08+/-0.19 U	4+/-23 U	32.9+/-5.5	7.4+/-1.4	29.0+/-4.9	9.9+/-1.7	10.3 +/- 0.80	-0.29+/-0.88 U
MPSB-108 (4-6')	10/17/03	203+/-25	-0.47+/-0.36 U	-0.39+/-0.51 U	11.4+/-3.7	0.02+/-0.50 U	162+/-62	196+/-23	121+/-14 M3	187+/-22 M3	57.9+/-6.8	22.3 +/- 1.73	4.0+/-1.7 TI
MPSB-108 (8-10')	10/17/03	206+/-25	-0.19+/-0.27 U	-0.32+/-0.38 U	20.2+/-4.3	-0.24+/-0.39 U	164+/-46	218+/-26	126+/-15	198+/-23 M3	62.7+/-7.4	89 +/- 6.90	5.2+/-1.2
MPSB-109 (0-2')	10/20/03	11.9+/-2.5	0.006+/-0.079 U	0.05+/-0.10 U	12.3+/-2.4	0.011+/-0.089 U	6+/-13 U	10.9+/-1.3	2.73+/-0.49	9.6+/-1.2	3.26+/-0.44	1.99 +/- 0.15	0.06+/-0.49 U
MPSB-109 (10-12')	10/20/03	109+/-13	0.032+/-0.090 U	-0.06+/-0.15 U	15.4+/-2.2	-0.02+/-0.13 U	45+/-16	106+/-12	10.9+/-1.5 M3	99+/-12	30.0+/-3.5	17.2 +/- 1.33	1.50+/-0.97 U
MPSB-110 (2-4')	10/20/03	250+/-30	0.21+/-0.28 U	0.13+/-0.34 U	23.6+/-4.5	-0.04+/-0.28 U	39+/-24	240+/-28	31.9+/-3.9 M3	228+/-27 M3	71.9+/-8.4	20.1 +/- 1.56	0.7+/-1.6 U
MPSB-110 (10-12')	10/20/03	37.3+/-5.6	-0.03+/-0.13 U	0+/-0.24 U	12.7+/-2.5	-0.09+/-0.13 U	21+/-19 U	37.5+/-4.4	4.01+/-0.70	33.9+/-4.1	11.3+/-1.4	9.5 +/- 0.74	0.31+/-0.87 U
MPSB-111 (2-4')	10/20/03	236+/-28	0.03+/-0.11 U	0.14+/-0.25 U	23.2+/-3.1	0.03+/-0.11 U	52+/-16	225+/-26	16.1+/-1.9	211+/-25	66.0+/-7.7	21.6 +/- 1.67	1.79+/-0.55
MPSB-111 (8-10')	10/20/03	71.5+/-9.0	0.01+/-0.13 U	0.06+/-0.15 U	14.1+/-2.3	-0.09+/-0.13 U	18+/-18 U	65.4+/-7.7	5.82+/-0.83	63.9+/-7.5	18.9+/-2.2	11.1 +/- 0.86	-0.93+/-0.94 U
MPSB-112 (4-6')	10/20/03	96+/-12	0.06+/-0.14 U	0.26+/-0.19 U	13.3+/-2.5	0.15+/-0.14 U	17+/-20 U	96+/-11	11.9+/-1.7 M3	88+/-10	28.5+/-3.4	15.6 +/- 1.21	-0.9+/-1.1 U
MPSB-112 (8-10')	10/20/03	42.4+/-6.0	0.06+/-0.14 U	-0.08+/-0.16 U	11.6+/-2.5	-0.01+/-0.15 U	3+/-19 U	39.6+/-4.7	3.86+/-0.60	35.1+/-4.2 M3	12.0+/-1.4	3.74 +/- 0.29	-0.91+/-0.82 U
MPSB-113 (0-2')	10/21/03	20.4+/-2.8	-0.004+/-0.067 U	-0.026+/-0.073 U	10.4+/-1.6	0.008+/-0.068 U	5.1+/-9.0 U	19.9+/-2.4	2.50+/-0.52	17.3+/-2.1	5.57+/-0.67	4.54 +/- 0.35	-0.42+/-0.46 U
MPSB-113 (14-16')	10/21/03	2.01+/-0.57	0.016+/-0.025 U	-0.005+/-0.027 U	30.2+/-3.7	0.001+/-0.031 U	2.3+/-4.2 U	2.34+/-0.29	1.06+/-0.31	1.96+/-0.26	0.636+/-0.088	1.72 +/- 0.13	0.06+/-0.12 U
MPSB-114 (6-8')	10/21/03	5.6+/-1.2	0.071+/-0.056 U	-0.015+/-0.058 U	13.1+/-1.9	-0.068+/-0.065 U	11.4+/-8.8 U	6.62+/-0.80	4.45+/-0.69	5.80+/-0.73	1.96+/-0.25	4.9 +/- 0.38	0.37+/-0.33 U
MPSB-114 (16-18')	10/21/03	2.44+/-0.96	0.005+/-0.052 U	-0.061+/-0.048 U	30.8+/-4.0	0+/-0.058 U	-3.0+/-7.8 U	2.25+/-0.29	1.40+/-0.30	1.90+/-0.30	0.64+/-0.10	0.872 +/- 0.07	0.09+/-0.22 U
MPSB-115 (0-2')	12/18/03	3.07+/-0.76 G	-0.030+/-0.043 U,G	0.039+/-0.035 U,G	15.8+/-2.1 G	-0.026+/-0.046 U,G	-0.6+/-7.4 U,G	3.02+/-0.38 G	2.39+/-0.30 G	2.83+/-0.38 G	0.85+/-0.12 G	3.4+/-1.2 TI,M3,G	0.17+/-0.26 U,G
MPSB-116 (4-6')	10/20/03	6.0+/-1.1	0.030+/-0.047 U	0.049+/-0.038 U	8.9+/-1.4	0.010+/-0.049 U	1.6+/-8.3 U	6.38+/-0.76	2.48+/-0.31	5.54+/-0.68	1.80+/-0.23	3.14 +/- 0.24	0.07+/-0.16 U
MPSB-117 (0-2')	10/20/03	3.34+/-0.74	-0.003+/-0.035 U	-0.013+/-0.037 U	7.2+/-1.2	-0.025+/-0.039 U	-1.0+/-5.8 U	2.99+/-0.37	1.48+/-0.19	2.84+/-0.38	0.93+/-0.13	1.11 +/- 0.09	0.11+/-0.15 U
MPSB-118 (0-2')	10/20/03	33.9+/-4.3	0.052+/-0.056 U	0.042+/-0.068 U	5.3+/-1.1	-0.036+/-0.057 U	19.0+/-8.6	36.0+/-4.2	6.87+/-0.82	32.7+/-3.8	10.1+/-1.2	6.58 +/- 0.51	0.46+/-0.32 U
MPSB-118 (14-16')	10/20/03	1.09+/-0.38	-0.004+/-0.025 U	-0.014+/-0.023 U	10.8+/-1.5	-0.003+/-0.026 U	2.4+/-3.8 U	1.17+/-0.15	1.78+/-0.33	1.22+/-0.18	0.354+/-0.057	1.26 +/- 0.10	0.25+/-0.13 TI
MPSB-119 (4-6')	10/20/03	9.2+/-1.5	-0.014+/-0.049 U	0.025+/-0.080 U	1.19+/-0.77 U	-0.034+/-0.051 U	10.2+/-6.6 U	8.9+/-1.1	6.37+/-0.76	8.19+/-0.99	2.64+/-0.32	6.9 +/- 0.54	0.42+/-0.24 TI
MPSB-120 (0-2')	10/21/03	10.1+/-2.2	-0.059+/-0.079 U	-0.07+/-0.10 U	5.8+/-1.5	-0.016+/-0.078 U	3+/-11 U	10.4+/-1.3	4.20+/-0.66	9.3+/-1.2	3.03+/-0.41	8.7+/-1.8 M3,TI	-0.02+/-0.48 U
MPSB-121 (18-20')	10/21/03	1.27+/-0.50	0.012+/-0.029 U	-0.017+/-0.029 U	11.2+/-1.6	-0.018+/-0.031 U	7.6+/-4.7 TI	1.33+/-0.18	1.39+/-0.19	1.16+/-0.18	0.396+/-0.068	2.10+/-0.58 TI	0.14+/-0.13 U
MPSB-122(18-20')	10/21/03	1.60+/-0.48	0.010+/-0.027 U	0.005+/-0.029 U	16.7+/-2.1	0.021+/-0.030 U	2.1+/-4.2 U	1.39+/-0.18	1.49+/-0.19	1.26+/-0.19	0.421+/-0.067	1.60+/-0.60 TI	0+/-0.16 U
MPSB-123 (0-2')	10/21/03	2.82+/-0.57	-0.023+/-0.028 U	-0.007+/-0.026 U	9.4+/-1.2	-0.018+/-0.032 U	3.2+/-4.2 U	2.66+/-0.32	2.60+/-0.54	2.19+/-0.29	0.761+/-0.099	2.2 +/- 0.17	0.10+/-0.14 U
MPSB-123 (18-20')	10/21/03	0.96+/-0.44	-0.001+/-0.034 U	-0.003+/-0.031 U	9.7+/-1.5	0.004+/-0.036 U	3.1+/-5.2 U	0.97+/-0.14	1.17+/-0.17	0.88+/-0.17 LT	0.323+/-0.062	0.883 +/- 0.07	0.16+/-0.13 U
MW-50 (2-4')	10/08/03	35.0 +/- 5.0	0.05 +/- 0.11 U	0.12+/-0.13 U	8.1 +/- 1.8	0.03+/-0.11 U	11 +/- 14 U	36.7 +/- 4.3	7.0+/-1.0	33.6 +/- 4.0	11.0 +/- 1.3	17.5 +/- 2.6 M3	0.58 +/- 0.48 U

Table G-5
Soil Gamma Spectroscopy Analytical Results: Area 3

Sample Identification	Sample Date	Gamma Spectroscopy: Area 3											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MW-50 (10-12')	10/21/03	4.9+/-1.0	0.005+/-0.042 U	-0.036+/-0.043 U	10.6+/-1.6	-0.013+/-0.043 U	2.8+/-6.5 U	4.59+/-0.56	2.20+/-0.29	4.49+/-0.57	1.43+/-0.19	1.46 +/- 0.11	0.17+/-0.14 U
MW-50 (16-18')	10/21/03	1.47+/-0.76	-0.006+/-0.045 U	-0.008+/-0.035 U	27.0+/-3.4	-0.010+/-0.054 U	-1.2+/-7.1 U	1.86+/-0.25	1.38+/-0.32	1.66+/-0.26	0.546+/-0.087	1.06 +/- 0.08	0.05+/-0.21 U

Results +/- 2 s TPU (Total Propagated Uncertainty)
All results are reported in pCi/g (picocuries per gram).
U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.
TI: Nuclide identification is tentative.
M3: The requested MDC was not met, but the reported activity is greater than the reported MDC.
LT: Result is less than Requested MDC, greater than sample specific MDC
G: Sample density differs by more than 15% of LCS density

Table G-6
Soil Gamma Spectroscopy Analytical Results: Area 8

Sample Identification	Sample Date	Gamma Spectroscopy: Area 8											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-126 (2-4')	12/19/03	1.44 +/- 0.64 G	-0.011 +/- 0.046 U,G	-0.037 +/- 0.046 U,G	20.0 +/- 2.7 G	-0.054 +/- 0.052 U,G	-2.5 +/- 7.4 U,G	1.73 +/- 0.23 G	1.30 +/- 0.19 G	1.73 +/- 0.27 G	0.540 +/- 0.093 G	0.965 +/- 0.07	0.05 +/- 0.21 U, G
BR-4 (2-4')	09/24/03	1.85 +/- 0.71	-0.021 +/- 0.043 U	-0.047 +/- 0.045 U	18.1 +/- 3.2	0.026 +/- 0.050 U	2.1 +/- 6.9 U	1.93 +/- 0.34	1.86 +/- 0.33	1.41 +/- 0.29	0.51 +/- 0.11	1.71 +/- 0.13	0.14 +/- 0.14 U

Results +/- 2 s TPU (Total Propagated Uncertainty)

All results are reported in pCi/g (picocuries per gram).

U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.

G: Sample density differs by more than 15% of LCS density

Table G-7
Soil Gamma Spectroscopy Analytical Results: Area 9

Sample Identification	Sample Date	Gamma Spectroscopy: Area 9											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
BR-3 (10-12')	09/23/03	1.77 +/- 0.73	0.014 +/- 0.038 U	-0.028 +/- 0.040 U	15.6 +/- 2.8	0.014 +/- 0.042 U	3.6 +/- 6.0 U	1.70 +/- 0.30	1.84 +/- 0.33	1.60 +/- 0.32	0.52 +/- 0.11	1.44 +/- 0.11	0.07 +/- 0.14 U

Results +/- 2 s TPU (Total Propagated Uncertainty)
All results are reported in pCi/g (picocuries per gram).
U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.

Table G-8
Soil Gamma Specroscopy Analytical Results: Area 10A

Sample Identification	Sample Date	Gamma Spectroscopy: Area 10A											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-01 (12-14')	09/23/03	2.07 +/- 0.67	-0.007 +/- 0.035 U	-0.010 +/- 0.032 U	26.2 +/- 4.5	-0.004 +/- 0.041 U	0.0 +/- 5.6 U	2.09 +/- 0.36	1.65 +/- 0.29	1.95 +/- 0.36	0.56 +/- 0.11	2.01 +/- 0.86 TI	0.13 +/- 0.17 U
MPSB-02 (0-2')	09/23/03	66 +/- 11	0.073 +/- 0.080 U	-0.07 +/- 0.14 U	10.4 +/- 2.0	0.022 +/- 0.077 U	12.0 +/- 8.0	63 +/- 10	14.5 +/- 2.6	61 +/- 10	19.8 +/- 3.3	12.5 +/- 0.97	0.68 +/- 0.50 U
MPSB-02 (10-11.5')	09/23/03	2.79 +/- 0.75	-0.014 +/- 0.037 U	-0.019 +/- 0.035 U	23.8 +/- 4.1	0.027 +/- 0.042 U	7.5 +/- 6.1 U	2.60 +/- 0.44	1.62 +/- 0.28	2.51 +/- 0.45	0.77 +/- 0.14	2.68 +/- 0.80 TI	0.15 +/- 0.16 U
MPSB-03 (0-2')	09/23/03	57.5 +/- 9.5	-0.019 +/- 0.037 U	0.012 +/- 0.042 U	6.6 +/- 1.2	0.005 +/- 0.034 U	24.2 +/- 6.6	55.3 +/- 9.1	12.8 +/- 2.3	54.0 +/- 8.9	17.4 +/- 2.9	8.62 +/- 0.67	0.76 +/- 0.26
MPSB-03 (8-10')	09/23/03	1.60 +/- 0.60	-0.001 +/- 0.034 U	-0.008 +/- 0.031 U	15.0 +/- 2.7	-0.012 +/- 0.039 U	0.2 +/- 5.2 U	1.90 +/- 0.33	1.75 +/- 0.31	1.75 +/- 0.32	0.53 +/- 0.10	1.9 +/- 0.15	0.15 +/- 0.12 U
MPSB-04 (2-4')	09/23/03	1.42 +/- 0.46	-0.011 +/- 0.027 U	0.001 +/- 0.028 U	11.3 +/- 2.0	0.018 +/- 0.029 U	3.5 +/- 4.7 U	1.69 +/- 0.29	1.80 +/- 0.31	1.68 +/- 0.31	0.508 +/- 0.096	1.26 +/- 0.10	0.18 +/- 0.18 U
MPSB-05 (8-10')	09/23/03	1.69 +/- 0.63	-0.022 +/- 0.041 U	-0.008 +/- 0.041 U	26.6 +/- 4.6	0.031 +/- 0.043 U	2.7 +/- 6.3 U	2.04 +/- 0.35	1.58 +/- 0.28	1.94 +/- 0.37	0.60 +/- 0.12	0.995 +/- 0.08	0.08 +/- 0.16 U
MPSB-49 (4-6')	09/23/03	1.95 +/- 0.49	-0.001 +/- 0.024 U	0.015 +/- 0.023 U	21.4 +/- 3.6	0.019 +/- 0.026 U	0.9 +/- 3.9 U	1.88 +/- 0.32	1.54 +/- 0.26	1.75 +/- 0.31	0.554 +/- 0.100	1.89 +/- 0.46	0.08 +/- 0.094

Results +/- 2 s TPU (Total Propagated Uncertainty)
All results are reported in pCi/g (picocuries per gram).
U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.
TI: Nuclide identification is tentative.

Table G-9
Soil Gamma Spectroscopy Analytical Results: Area 10B, Caldwell Avenue, Access Road

Sample Identification	Sample Date	Gamma Spectroscopy: Area 10B											
		Bi-212	Co-60	Cs-137	K-40	Na-22	Pa-234m	Pb-212	Ra-226	Th-232	Tl-208	U-234/238	U-235
MPSB-125 (8-10')	12/18/03	1.42+/-0.58 G	0.018+/-0.035 U,G	-0.024+/-0.038 U,G	13.7+/-1.9 G	-0.010+/-0.039 U,G	2.8+/-5.2 U,G	1.64+/-0.22 G	1.65+/-0.22 G	1.38+/-0.22 G	0.467+/-0.079 G	1.46+/-0.69 Tl,M3,G	0.01+/-0.19 U,G
MPSB-200 (1-3')	12/17/03	1.56+/-0.74 G	-0.008+/-0.040 U,G	-0.033+/-0.045 U,G	8.4+/-1.4 G	-0.023+/-0.043 U,G	4.8+/-7.0 U,G	1.66+/-0.23 G	2.99+/-0.38 G	1.25+/-0.23 G	0.445+/-0.086 G	2.66 +/- 0.21	0.20+/-0.27 U,G
MPSB-201A (15-17')	12/17/03	1.30+/-0.69 G	-0.010+/-0.047 U,G	-0.023+/-0.045 U,G	11.9+/-1.9 G	-0.005+/-0.051 U,G	3.2+/-6.8 U,G	1.28+/-0.18 G	1.37+/-0.20 G	1.15+/-0.21 G	0.314+/-0.077 G	0.896 +/- 0.07	0.01+/-0.20 U,G
MPSB-202 (11-13')	12/17/03	2.25+/-0.86 G	-0.069+/-0.050 U,G	-0.028+/-0.049 U,G	17.0+/-2.5 G	-0.003+/-0.057 U,G	9.6+/-8.0	1.79+/-0.25 G	1.99+/-0.27 G	1.48+/-0.27 G	0.56+/-0.10 G	3.0+/-1.1 Tl,M3,G	0.25+/-0.22 U,G
MPSB-203 (1-3')	12/17/03	1.95+/-0.86 G	-0.008+/-0.055 U,G	-0.024+/-0.048 U,G	13.9+/-2.2 G	-0.012+/-0.059 U,G	7.7+/-8.3 U,G	1.94+/-0.27 G	1.92+/-0.26 G	1.69+/-0.31 G	0.56+/-0.11 G	2.17+/-0.92 Tl,M3,G	0.04+/-0.28 U,G
MPSB-204 (1-3')	12/18/03	1.77+/-0.61 G	-0.024+/-0.038 U,G	0.017+/-0.039 U,G	16.0+/-2.1 G	-0.013+/-0.041 U,G	8.8+/-6.3 U,G	1.86+/-0.24 G	1.92+/-0.25 G	1.82+/-0.27 G	0.524+/-0.083 G	3.1+/-1.1 Tl,M3,G	-0.13+/-0.23 U,G
MPSB-205 (1-3')	12/18/03	2.14 +/- 0.88 G	0.005 +/- 0.043 U,G	0.003 +/- 0.050 U,G	15.6 +/- 22.3 G	-0.010 +/- 0.049 U,G	-0.3+/-7.5 U,G	2.04+/-0.23 G	1.91+/-0.27 G	1.82+/-0.30 G	0.55+/-0.10 G	2.12+/-0.96 Tl,M3,G	0.05+/-0.24 U,G
MPSB-205 (7-9')	12/18/03	1.52+/-0.83 G	-0.014+/-0.048 U,G	-0.015+/-0.045 U,G	13.2+/-2.0 G	-0.022+/-0.056 U,G	0.7+/-7.1U,G	1.42+/-0.21 G	1.51+/-0.21 G	1.36+/-0.26 G	0.54 +/- 0.10 G	1.51 +/- 0.88 Tl, M3,G	0.01 +/- 0.26 U,G
MPSB-207 (1-3')	12/19/03	2.7+/-1.1 G	-0.011+/-0.061 U,G	-0.075+/-0.057 U,G	25.9+/-3.6 G	-0.071+/-0.065 U,G	9+/-10 U,G	2.02+/-0.29 G	2.88+/-0.39 G	1.78+/-0.33 G	0.65+/-0.12 G	2.52 +/- 0.20	-0.15+/-0.31 U,G
MPSB-208 (1-3')	12/19/03	1.62+/-0.98 G	-0.018+/-0.050 U,G	-0.004+/-0.051 U,G	21.7+/-3.0 G	-0.029+/-0.059 U,G	1.9+/-7.7 U,G	2.13+/-0.29 G	2.49+/-0.33 G	1.91+/-0.31 G	0.57+/-0.11 G	2.62+/-0.97 Tl,M3,G	0.21+/-0.23 U,G

Results +/- 2 s TPU (Total Propagated Uncertainty)
All results are reported in pCi/g (picocuries per gram).
U: Result is less than the sample specific MDC (Minimum Detectable Concentration) or less than the associated TPU.
Tl: Nuclide identification is tentative.
M3: The requested MDC was not met, but the reported activity is greater than the reported MDC.
G: Sample density differs by more than 15% of LCS density

Molycorp

Supplemental Site Characterization Report for the Washington, Pennsylvania Site

Appendix H

Soil Chemical Data

April 2004
4812001

MALCOLM PIRNIE

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-11A	MPSB-11A	MPSB-11A	MPSB-11A	MPSB-15A	MPSB-15A	MPSB-16	MPSB-16	MPSB-16
				Sample Depth (ft bgs)[3]	10-12	12-14	20-22	22-22.7	4-6	14-16	9-11	13-15	17-19
				Sample Date	9/26/2003	9/26/2003	9/26/2003	9/26/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003
				Units									
Volatile Organic Compounds[4]													
Acetone	10,000,000	370,000	41,000	µg/kg[5]	24	34	4.7[6]	NS[7]	92	NS	27	NS	NS
Benzene	41,000	500	130	µg/kg	<5	<5	1.8[6]	NS	<5	NS	<5	NS	NS
Bromodichloromethane	8,600	10,000	3,400	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Bromoform	290,000	10,000	4,400	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Bromomethane	95,000	1,000	540	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
2-Butanone	--[8]	--	--	µg/kg	6.7[6]	9.7[6]	<10	NS	5.6[6]	NS	2.7[6]	NS	NS
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	13	3[6]	<5	NS	63	NS	8.9	NS	NS
Carbon tetrachloride	21,000	500	260	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Chloroethane	6,200,000	23,000	5,000	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Chloroform	6,000	10,000	2,500	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Chloromethane	180,000	300	38	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
1,1-Dichloroethane	200,000	2,700	650	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
1,2-Dichloroethane	12,000	500	100	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
1,1-Dichloroethene	6,400	700	190	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
1,2-Dichloropropane	31,000	500	110	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
cis-1,3-Dichloropropene	--	--	--	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
trans-1,3-Dichloropropene	--	--	--	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Dibromochloromethane	12,000	10,000	3,200	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
2-Hexanone	10,000,000	280,000	54,000	µg/kg	<10	<10	<10	NS	<10	NS	<10	NS	NS
Methylene chloride	680,000	500	76	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	<10	<10	<10	NS	<10	NS	<10	NS	NS
Styrene	10,000,000	10,000	24,000	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Tetrachloroethene	340,000	500	430	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Toluene	7,600,000	100,000	44,000	µg/kg	<5	<5	2[6]	NS	<5	NS	<5	NS	NS
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
1,1,2-Trichloroethane	20,000	500	150	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Trichloroethene	190,000	500	170	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Vinyl chloride	12,000	200	27	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Xylene, m & p-	--	--	--	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Xylene, o-	--	--	--	µg/kg	<5	<5	<5	NS	<5	NS	<5	NS	NS
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	<10	<10	<10	NS	<10	NS	<10	NS	NS
Semi-Volatile Organic Compounds[9]													
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	<83	NS	NS	NS	64	NS	NS	NS	NS

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-11A 10-12 9/26/2003 µg/kg	MPSB-11A 12-14 9/26/2003	MPSB-11A 20-22 9/26/2003	MPSB-11A 22-22.7 9/26/2003	MPSB-15A 4-6 9/29/2003	MPSB-15A 14-16 9/29/2003	MPSB-16 9-11 9/29/2003	MPSB-16 13-15 9/29/2003	MPSB-16 17-19 9/29/2003
Benzo(a)anthracene	25,000	90	79,000	µg/kg	320	NS	NS	NS	500	NS	NS	NS	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	260	NS	NS	NS	470	NS	NS	NS	NS
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	230	NS	NS	NS	530	NS	NS	NS	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	290	NS	NS	NS	430	NS	NS	NS	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	170	NS	NS	NS	340	NS	NS	NS	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	76[6]	NS	NS	NS	<52	NS	NS	NS	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Carbazole	900,000	3,300	21,000	µg/kg	<83	NS	NS	NS	32	NS	NS	NS	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Chrysene	2,500,000	190	230,000	µg/kg	300	NS	NS	NS	600	NS	NS	NS	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	78[6]	NS	NS	NS	150	NS	NS	NS	NS
Dibenzofuran	--	--	--	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Dimethylphthalate	--	--	--	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Di-n-butylphthalate	--	--	--	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	<170	NS	NS	NS	<100	NS	NS	NS	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	<170	NS	NS	NS	<100	NS	NS	NS	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Di-n-octylphthalate	--	--	--	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	580	NS	NS	NS	680	NS	NS	NS	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Hexachlorobenzene	11,000	100	960	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Hexachloroethane	220,000	100	560	µg/kg	<83	NS	NS	NS	<52	NS	NS	NS	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	170	NS	NS	NS	280	NS	NS	NS	NS

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-11A 10-12 9/26/2003	MPSB-11A 12-14 9/26/2003	MPSB-11A 20-22 9/26/2003	MPSB-11A 22-22.7 9/26/2003	MPSB-15A 4-6 9/29/2003	MPSB-15A 14-16 9/29/2003	MPSB-16 9-11 9/29/2003	MPSB-16 13-15 9/29/2003	MPSB-16 17-19 9/29/2003
Isophorone	10,000,000	10,000	1,900	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
Nitrobenzene	110,000	1,800	790	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
2-Nitroaniline	13,000	210	38	µg/kg		<170	NS	NS	NS	<100	NS	NS	NS	NS
3-Nitroaniline	13,000	210	33	µg/kg		<170	NS	NS	NS	<100	NS	NS	NS	NS
4-Nitroaniline	13,000	210	31	µg/kg		<170	NS	NS	NS	<100	NS	NS	NS	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg		<170	NS	NS	NS	<100	NS	NS	NS	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
Pentachlorophenol	150,000	100	5,000	µg/kg		<83	NS	NS	NS	<83	NS	NS	NS	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg		130	NS	NS	NS	230	NS	NS	NS	NS
Phenol	130,000,000	400,000	66,000	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg		520	NS	NS	NS	540	NS	NS	NS	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg		<170	NS	NS	NS	<100	NS	NS	NS	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg		<83	NS	NS	NS	<52	NS	NS	NS	NS
Polychlorinated Biphenyls[10]														
PCB 1016	15,000	260	72,000	mg/kg		NS	NS	NS	NS	<1	NS	NS	NS	NS
PCB 1221	36,000	130	630	mg/kg		NS	NS	NS	NS	<1	NS	NS	NS	NS
PCB 1232	36,000	130	500	mg/kg		NS	NS	NS	NS	<1	NS	NS	NS	NS
PCB 1242	36,000	130	16,000	mg/kg		NS	NS	NS	NS	<1	NS	NS	NS	NS
PCB 1248	9,900	37	18,000	mg/kg		NS	NS	NS	NS	<1	NS	NS	NS	NS
PCB 1254	4,400	37	75,000	mg/kg		NS	NS	NS	NS	<1	NS	NS	NS	NS
PCB 1260	30,000	110	500,000	mg/kg		NS	NS	NS	NS	<1	NS	NS	NS	NS
Total Metals[11]														
Aluminum	190,000	NA[12]	NA	mg/kg[13]		18,000	NS	NS	11,000	9,400	17,000	NS	18,000	12,000
Antimony	88	0.6	27	mg/kg		8.7	NS	NS	2.3	4.1	7.4	NS	2.3	1.7
Arsenic	12	5	150	mg/kg		40	NS	NS	12	20	13	NS	13	3.6
Barium	15,000	200	8,200	mg/kg		210	NS	NS	360	720	680	NS	160	74
Beryllium	440	0.4	320	mg/kg		2.3	NS	NS	1.5	3.4	2.4	NS	2.2	0.98
Boron	20,000	60	6.7	mg/kg		2.9[6]	NS	NS	4.2[6]	<7	<6.3	NS	26	2.8[6]
Cadmium	47	0.5	38	mg/kg		8.2	NS	NS	<0.28	0.22[6]	<0.25	NS	<0.23	<0.2
Cerium	--	--	--	mg/kg		NS	NS	NS	NS	NS	NS	NS	56.8	NS
Chromium	190,000	10	190,000	mg/kg		48	NS	NS	17	32	18	NS	24	21
Cobalt	4,400	73	8.1	mg/kg		12	NS	NS	11	2.3	16	NS	18	11
Copper	8,200	100	36,000	mg/kg		38	NS	NS	21	250	38	NS	52	48
Iron	66,000	NA	NA	mg/kg		59,000	NS	NS	36,000	9,200	160,000	NS	46,000	34,000
Lanthanum	--	--	--	mg/kg		NS	NS	NS	NS	NS	NS	NS	25.5	NS
Lead	500	0.5	450	mg/kg		41	NS	NS	18	49	19	NS	10	24
Manganese	31,000	NA	NA	mg/kg		350	NS	NS	3,200	48,000	9,100	NS	1,100	260

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-11A	MPSB-11A	MPSB-11A	MPSB-11A	MPSB-15A	MPSB-15A	MPSB-16	MPSB-16	MPSB-16
				Sample Depth (ft bgs)[3]	10-12	12-14	20-22	22-22.7	4-6	14-16	9-11	13-15	17-19
				Sample Date	9/26/2003	9/26/2003	9/26/2003	9/26/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003
				Units									
Mercury	66	0.2	10	mg/kg	0.044[6]	NS	NS	0.23	0.016[6]	0.048[6]	NS	0.011[6]	0.03[6]
Molybdenum	--	--	--	mg/kg	10,000	NS	NS	12	2,800	160	NS	3.1	1.5
Nickel	4,400	10	650	mg/kg	180	NS	NS	28	4.1	38	NS	30	37
Selenium	1,100	5	26	mg/kg	10	NS	NS	<0.71	28	4.5	NS	<0.57	0.52
Silver	1,100	10	84	mg/kg	0.65	NS	NS	<0.28	4.9	<0.25	NS	≤0.23	<0.2
Thallium	15	0.2	14	mg/kg	0.27[6]	NS	NS	<2.8	17	11	NS	1.5[6]	1.1[6]
Tin	130,000	2,200	240	mg/kg	8.6[6]	NS	NS	4.3[6]	74	3.4[6]	NS	3.7[6]	3.2[6]
Tungsten	--	--	--	mg/kg	1,100	NS	NS	3[6]	2,200	120	NS	7[6]	2.7[6]
Vanadium	1,500	26	26,000	mg/kg	1,100	NS	NS	26	71	51	NS	27	21
Zinc	66,000	200	12,000	mg/kg	260	NS	NS	52	65	78	NS	57	56

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 6020, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-17 7-9 9/29/2003	MPSB-17 13-15 9/29/2003	MPSB-18 8-10 9/29/2003	MPSB-18 12-14 9/29/2003	MPSB-19 6-8 9/29/2003	MPSB-19 12-14 9/29/2003	MPSB-25 15-17 9/30/2003	MPSB-25 19-21 9/30/2003
Volatile Organic Compounds[4]												
Acetone	10,000,000	370,000	41,000	µg/kg[5]	NS	NS	NS	NS	NS	NS	NS	NS
Benzene	41,000	500	130	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Bromodichloromethane	8,600	10,000	3,400	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Bromoform	290,000	10,000	4,400	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Bromomethane	95,000	1,000	540	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone	--[8]	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	21,000	500	260	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Chloroethane	6,200,000	23,000	5,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	6,000	10,000	2,500	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Chloromethane	180,000	300	38	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	200,000	2,700	650	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethane	12,000	500	100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	6,400	700	190	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	31,000	500	110	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,3-Dichloropropene	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Dibromochloromethane	12,000	10,000	3,200	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2-Hexanone	10,000,000	280,000	54,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	680,000	500	76	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	10,000,000	10,000	24,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	340,000	500	430	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	7,600,000	100,000	44,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2-Trichloroethane	20,000	500	150	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	190,000	500	170	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	12,000	200	27	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Xylene, m & p-	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Xylene, o-	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Semi-Volatile Organic Compounds[9]												
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-17	MPSB-17	MPSB-18	MPSB-18	MPSB-19	MPSB-19	MPSB-25	MPSB-25
				Sample Depth (ft bgs)[3]	7-9	13-15	8-10	12-14	6-8	12-14	15-17	19-21
				Sample Date	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/30/2003	9/30/2003
				Units								
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Carbazole	900,000	3,300	21,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Chrysene	2,500,000	190	230,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Dibenzofuran	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Dimethylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Di-n-butylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Di-n-octylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorobenzene	11,000	100	960	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Hexachloroethane	220,000	100	560	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-17	MPSB-17	MPSB-18	MPSB-18	MPSB-19	MPSB-19	MPSB-25	MPSB-25
				Sample Depth (ft bgs)[3]	7-9	13-15	8-10	12-14	6-8	12-14	15-17	19-21
				Sample Date	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/30/2003	9/30/2003
				Units								
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Nitrobenzene	110,000	1,800	790	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2-Nitroaniline	13,000	210	38	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
3-Nitroaniline	13,000	210	33	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4-Nitroaniline	13,000	210	31	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Phenol	130,000,000	400,000	66,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS
Polychlorinated Biphenyls[10]												
PCB 1016	15,000	260	72,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS
PCB 1221	36,000	130	630	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS
PCB 1232	36,000	130	500	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS
PCB 1242	36,000	130	16,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS
PCB 1248	9,900	37	18,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS
PCB 1254	4,400	37	75,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS
PCB 1260	30,000	110	500,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS
Total Metals[11]												
Aluminum	190,000	NA[12]	NA	mg/kg[13]	15,000	7,300	17,000	8,500	12,000	8,900	9,800	5,300
Antimony	88	0.6	27	mg/kg	1.7	0.96	1	0.81	1.7	1.2	1.5	0.52
Arsenic	12	5	150	mg/kg	7.6	2.3	3.7	4	6.6	23	8.3	3
Barium	15,000	200	8,200	mg/kg	160	73	200	73	180	63	140	65
Beryllium	440	0.4	320	mg/kg	1.2	0.61	1.6	0.66	1.4	1.3	1.3	0.59
Boron	20,000	60	6.7	mg/kg	6.9	4.1[6]	0.82[6]	1.3[6]	2.1[6]	4.2[6]	2.6[6]	1[6]
Cadmium	47	0.5	38	mg/kg	<0.24	<0.2	<0.22	<0.2	<0.2	<0.2	<0.22	0.15[6]
Cerium	--	--	--	mg/kg	35.6	NS	40	NS	13.9	NS	NS	NS
Chromium	190,000	10	190,000	mg/kg	18	11	23	14	16	15	17	9.2
Cobalt	4,400	73	8.1	mg/kg	14	7.9	9.3	5.7	11	12	12	12
Copper	8,200	100	36,000	mg/kg	16	13	18	14	18	60	23	11
Iron	66,000	NA	NA	mg/kg	30,000	13,000	14,000	16,000	26,000	9,400	25,000	6,400
Lanthanum	--	--	--	mg/kg	17.1	NS	10.9	NS	9.29	NS	NS	NS
Lead	500	0.5	450	mg/kg	15	12	18	11	15	23	17	10
Manganese	31,000	NA	NA	mg/kg	1,300	300	170	83	290	58	660	41

Table H-1
Area 1A Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-17	MPSB-17	MPSB-18	MPSB-18	MPSB-19	MPSB-19	MPSB-25	MPSB-25
				Sample Depth (ft bgs)[3]	7-9	13-15	8-10	12-14	6-8	12-14	15-17	19-21
				Sample Date	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/30/2003	9/30/2003
				Units								
Mercury	66	0.2	10	mg/kg	0.029[6]	0.027[6]	0.068[6]	0.041[6]	0.033[6]	0.18	0.071[6]	0.026[6]
Molybdenum	--	--	--	mg/kg	69	1.8	25	0.4[6]	110	0.57	5.8	0.51[6]
Nickel	4,400	10	650	mg/kg	18	12	19	12	19	35	20	17
Selenium	1,100	5	26	mg/kg	0.38[6]	0.27[6]	0.35[6]	0.14[6]	0.39[6]	0.7	0.44[6]	0.23[6]
Silver	1,100	10	84	mg/kg	<0.24	<0.2	<0.22	<0.2	<0.2	<0.2	<0.22	<0.2
Thallium	15	0.2	14	mg/kg	<2.4	<2	<2.2	<2	<2	<2	<2.2	<2
Tin	130,000	2,200	240	mg/kg	4[6]	3.9[6]	3.9[6]	3.7[6]	3.2[6]	3.8[6]	3.9[6]	3.5[6]
Tungsten	--	--	--	mg/kg	20	1.8[6]	8.9[6]	1.1[6]	2.3[6]	1.5[6]	2.8[6]	1.4[6]
Vanadium	1,500	26	26,000	mg/kg	32	15	30	16	25	10	24	12
Zinc	66,000	200	12,000	mg/kg	51	32	43	32	34	39	50	28

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 6020, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.

1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.

1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-2
Area 1A Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MW-42	MW-43	MW-43	MW-44	MW-44	MW-44	MW-45
				Sample Depth (ft bgs)[3]	9-11	11-12	25-27	9-10	10-11	16-17.1	5-7
				Sample Date	9/25/2003	9/25/2003	9/25/2003	9/25/2003	9/25/2003	9/25/2003	9/26/2003
				Units							
Volatile Organic Compounds[4]											
Acetone	10,000,000	370,000	41,000	µg/kg[5]	NS[6]	7.1[7]	4.5[7]	7[7]	5.5[7]	11	NS
Benzene	41,000	500	130	µg/kg	NS	<5	42	<5	<5	10	NS
Bromodichloromethane	9,000	10,000	3,400	µg/kg	NS	<5	<5	<5	<5	<5	NS
Bromoform	290,000	10,000	4,400	µg/kg	NS	<5	<5	<5	<5	<5	NS
Bromomethane	95,000	1,000	540	µg/kg	NS	<5	<5	<5	<5	<5	NS
2-Butanone	--[8]	--	--	µg/kg	NS	1.6[7]	<10	<10	<10	2.2[7]	NS
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	NS	4.9[7]	<5	<5	<5	<5	NS
Carbon tetrachloride	21,000	500	260	µg/kg	NS	<5	<5	<5	<5	<5	NS
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	NS	<5	<5	<5	<5	<5	NS
Chloroethane	6,200,000	23,000	5,000	µg/kg	NS	<5	<5	<5	<5	<5	NS
Chloroform	6,000	10,000	2,500	µg/kg	NS	<5	<5	<5	<5	<5	NS
Chloromethane	180,000	300	38	µg/kg	NS	<5	<5	<5	<5	<5	NS
1,1-Dichloroethane	200,000	2,700	650	µg/kg	NS	<5	<5	<5	<5	<5	NS
1,2-Dichloroethane	6,000	700	190	µg/kg	NS	<5	<5	<5	<5	<5	NS
1,1-Dichloroethene	12,000	500	100	µg/kg	NS	<5	<5	<5	<5	<5	NS
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	NS	<5	<5	<5	<5	<5	NS
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	NS	<5	<5	<5	<5	<5	NS
1,2-Dichloropropane	31,000	500	110	µg/kg	NS	<5	<5	<5	<5	<5	NS
cis-1,3-Dichloropropene	--	--	--	µg/kg	NS	<5	<5	<5	<5	<5	NS
trans-1,3-Dichloropropene	--	--	--	µg/kg	NS	<5	<5	<5	<5	<5	NS
Dibromochloromethane	12,000	10,000	3,200	µg/kg	NS	<5	<5	<5	<5	<5	NS
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	NS	<5	6.1	<5	<5	1.9[7]	NS
2-Hexanone	10,000,000	280,000	54,000	µg/kg	NS	<10	<10	<10	<10	<10	NS
Methylene chloride	680,000	500	76	µg/kg	NS	<5	<5	<5	<5	<5	NS
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	NS	<10	<10	<10	<10	<10	NS
Styrene	10,000,000	10,000	24,000	µg/kg	NS	<5	<5	<5	<5	<5	NS
1,1,2,2-Tetrachloroethane	6,000	300	9.3	µg/kg	NS	<5	<5	<5	<5	<5	NS
Tetrachloroethene	340,000	500	430	µg/kg	NS	<5	<5	<5	<5	<5	NS
Toluene	7,600,000	100,000	44,000	µg/kg	NS	<5	39	<5	<5	11	NS
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	NS	<5	<5	<5	<5	<5	NS
1,1,2-Trichloroethane	20,000	500	150	µg/kg	NS	<5	<5	<5	<5	5.7	NS
Trichloroethene	190,000	500	170	µg/kg	NS	<5	<5	<5	<5	<5	NS
Vinyl chloride	12,000	200	27	µg/kg	NS	<5	<5	<5	<5	<5	NS
Xylene, m & p-	--	--	--	µg/kg	NS	<5	16	<5	<5	3.8[7]	NS
Xylene, o-	--	--	--	µg/kg	NS	<5	5.2	<5	<5	1.3[7]	NS
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	NS	<10	21.2	<10	<10	5.1[7]	NS
Semi-Volatile Organic Compounds[9]											
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	<42	NS	<41	NS	NS	<41

Table H-2
Area 1A Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MW-42 9-11 9/25/2003	MW-43 11-12 9/25/2003	MW-43 25-27 9/25/2003	MW-44 9-10 9/25/2003	MW-44 10-11 9/25/2003	MW-44 16-17.1 9/25/2003	MW-45 5-7 9/26/2003
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Benzo(k)fluoranthene	13,000,000	26	180,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Benzo(g,h,i)perylene	250,000	55	610,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	<42	NS	<41	NS	NS	<41
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	<42	NS	<41	NS	NS	<41
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	<42	NS	<41	NS	NS	<41
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Carbazole	900,000	3,300	21,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	<42	NS	<41	NS	NS	<41
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	<42	NS	<41	NS	NS	<41
Chrysene	2,500,000	190	230,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	<42	NS	<41	NS	NS	<41
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Dibenzofuran	--	--	--	µg/kg	NS	<42	NS	<41	NS	NS	<41
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	<42	NS	<41	NS	NS	<41
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Dimethylphthalate	--	--	--	µg/kg	NS	<42	NS	<41	NS	NS	<41
Di-n-butylphthalate	--	--	--	µg/kg	NS	<42	NS	<41	NS	NS	<41
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	<85	NS	<83	NS	NS	<83
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	<85	NS	<83	NS	NS	<83
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	<42	NS	<41	NS	NS	<41
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	<42	NS	<41	NS	NS	<41
Di-n-octylphthalate	--	--	--	µg/kg	NS	<42	NS	<41	NS	NS	<41
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Hexachlorobenzene	11,000	100	960	µg/kg	NS	<42	NS	<41	NS	NS	<41
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	<42	NS	<41	NS	NS	<41
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Hexachloroethane	220,000	100	560	µg/kg	NS	<42	NS	<41	NS	NS	<41
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	<42	NS	<41	NS	NS	<41
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Nitrobenzene	110,000	1,800	790	µg/kg	NS	<42	NS	<41	NS	NS	<41

Table H-2
Area 1A Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MW-42 9-11 9/25/2003	MW-43 11-12 9/25/2003	MW-43 25-27 9/25/2003	MW-44 9-10 9/25/2003	MW-44 10-11 9/25/2003	MW-44 16-17.1 9/25/2003	MW-45 5-7 9/26/2003
2-Nitroaniline	13,000	210	38	µg/kg	NS	<85	NS	<41	NS	NS	<83
3-Nitroaniline	13,000	210	33	µg/kg	NS	<85	NS	<83	NS	NS	<83
4-Nitroaniline	13,000	210	31	µg/kg	NS	<85	NS	<83	NS	NS	<83
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	<42	NS	<41	NS	NS	<41
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	<85	NS	<83	NS	NS	<83
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	<42	NS	<41	NS	NS	<41
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	<83	NS	<83	NS	NS	<83
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Phenol	130,000,000	400,000	66,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	<42	NS	<41	NS	NS	<41
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	<85	NS	<83	NS	NS	<83
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	<42	NS	<41	NS	NS	<41
Polychlorinated Biphenyls[10]											
PCB 1016	15,000	260	72,000	mg/kg	<1	<1	NS	NS	NS	NS	<1
PCB 1221	36,000	130	630	mg/kg	<1	<1	NS	NS	NS	NS	<1
PCB 1232	36,000	130	500	mg/kg	<1	<1	NS	NS	NS	NS	<1
PCB 1242	36,000	130	16,000	mg/kg	<1	<1	NS	NS	NS	NS	<1
PCB 1248	9,900	37	18,000	mg/kg	<1	<1	NS	NS	NS	NS	<1
PCB 1254	4,400	37	75,000	mg/kg	<1	<1	NS	NS	NS	NS	<1
PCB 1260	30,000	110	500,000	mg/kg	<1	<1	NS	NS	NS	NS	<1
Total Metals[11]											
Aluminum	190,000	NA[12]	NA	mg/kg[13]	NS	14,000	7,000	18,000	NS	10,000	NS
Antimony	88	0.6	27	mg/kg	NS	1.4	7.4	2.2	NS	2.1	NS
Arsenic	12	5	150	mg/kg	NS	7.1	4.6	17	NS	34	NS
Barium	15,000	200	8,200	mg/kg	NS	140	130	240	NS	250	NS
Beryllium	440	0.4	320	mg/kg	NS	1.5	1.2	1.7	NS	0.97	NS
Boron	20,000	60	6.7	mg/kg	NS	11	12	2.7	NS	5.4	NS
Cadmium	47	0.5	38	mg/kg	NS	0.35	0.0051	0.86	NS	0.076[7]	NS
Chromium	190,000	10	190,000	mg/kg	NS	12	9.2	26	NS	14	NS
Cobalt	4,400	73	8.1	mg/kg	NS	13	11	15	NS	22	NS
Copper	8,200	100	36,000	mg/kg	NS	12	22	21	NS	38	NS
Iron	66,000	NA	NA	mg/kg	NS	18,000	180,000	43,000	NS	33,000	NS
Lead	500	0.5	450	mg/kg	NS	19	9.4	25	NS	34	NS
Manganese	31,000	NA	NA	mg/kg	NS	2,100	4,400	1,200	NS	1,900	NS
Mercury	66	0.2	10	mg/kg	NS	0.025[7]	0.012[7]	0.048[7]	NS	0.079[7]	NS
Molybdenum	--	--	--	mg/kg	NS	80	0.018[7]	20	NS	4.2	NS
Nickel	4,400	10	650	mg/kg	NS	12	19	27	NS	34	NS
Selenium	1,100	5	26	mg/kg	NS	0.53[7]	1.5	0.89	NS	<0.5	NS
Silver	1,100	10	84	mg/kg	NS	0.33	<0.2	0.5	NS	<0.2	NS
Thallium	15	0.2	14	mg/kg	NS	<2.2	13	<2.1	NS	1.6[7]	NS
Tin	130,000	2,200	240	mg/kg	NS	2.8[7]	2.4[7]	3.4[7]	NS	3.7[7]	NS

Table H-2
Area 1A Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MW-42	MW-43	MW-43	MW-44	MW-44	MW-44	MW-45
				Sample Depth (ft bgs)[3]	9-11	11-12	25-27	9-10	10-11	16-17.1	5-7
				Sample Date	9/25/2003	9/25/2003	9/25/2003	9/25/2003	9/25/2003	9/25/2003	9/26/2003
				Units							
Tungsten	--	--	--	mg/kg	NS	4.7[7]	0.78[7]	4.4[7]	NS	1.4[7]	NS
Vanadium	1,500	26	26,000	mg/kg	NS	23	26	42	NS	14	NS
Zinc	66,000	200	12,000	mg/kg	NS	52	37	52	NS	47	NS

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-28 10-12 10/1/2003	MPSB-28 12-14 10/1/2003	MPSB-29 2-2.3 9/30/2003	MPSB-29 8-10 9/30/2003	MPSB-31 11-13 10/1/2003	MPSB-31 13-15 10/1/2003	MPSB-33 6-7 10/1/2003	MPSB-33 16-18 10/1/2003	MPSB-34 9-11 10/1/2003	MPSB-34 11-13 10/1/2003
Volatile Organic Compounds[4]														
Acetone	10,000,000	370,000	41,000	µg/kg[5]	NS[6]	NS	NS	NS	NS	NS	190	21	33	36
Benzene	41,000	500	130	µg/kg	NS	NS	NS	NS	NS	NS	<5	2.8[7]	<5	<5
Bromodichloromethane	8,600	10,000	3,400	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Bromoform	290,000	10,000	4,400	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Bromomethane	95,000	1,000	540	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
2-Butanone	--[8]	--	--	µg/kg	NS	NS	NS	NS	NS	NS	2.8[7]	1.8[7]	4[7]	5.7[7]
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	NS	NS	NS	NS	NS	NS	25	8	11	9.2
Carbon tetrachloride	21,000	500	260	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Chloroethane	6,200,000	23,000	5,000	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Chloroform	6,000	10,000	2,500	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Chloromethane	180,000	300	38	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
1,1-Dichloroethane	200,000	2,700	650	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
1,2-Dichloroethane	12,000	500	100	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
1,1-Dichloroethene	6,400	700	190	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
1,2-Dichloropropane	31,000	500	110	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
cis-1,3-Dichloropropene	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
trans-1,3-Dichloropropene	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Dibromochloromethane	12,000	10,000	3,200	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
2-Hexanone	10,000,000	280,000	54,000	µg/kg	NS	NS	NS	NS	NS	NS	<10	<10	<10	<10
Methylene chloride	680,000	500	76	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	NS	NS	NS	NS	NS	NS	<10	<10	<10	<10
Styrene	10,000,000	10,000	24,000	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Tetrachloroethene	340,000	500	430	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Toluene	7,600,000	100,000	44,000	µg/kg	NS	NS	NS	NS	NS	NS	<5	1.8[7]	<5	<5
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
1,1,2-Trichloroethane	20,000	500	150	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Trichloroethene	190,000	500	170	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Vinyl chloride	12,000	200	27	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Xylene, m & p-	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	3.8[7]	<5	<5	<5
Xylene, o-	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<5	<5	<5	<5
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	NS	NS	NS	NS	NS	NS	3.8[7]	<10	<10	<10
Semi-Volatile Organic Compounds[9]														
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	NS	NS	NS	NS	NS	37[7]	NS	NS	<130
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	NS	NS	NS	NS	NS	200	NS	NS	<130
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	NS	NS	NS	NS	NS	670	NS	NS	65[7]
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	NS	NS	NS	NS	NS	550	NS	NS	<130

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-28 10-12 10/1/2003	MPSB-28 12-14 10/1/2003	MPSB-29 2-2.3 9/30/2003	MPSB-29 8-10 9/30/2003	MPSB-31 11-13 10/1/2003	MPSB-31 13-15 10/1/2003	MPSB-33 6-7 10/1/2003	MPSB-33 16-18 10/1/2003	MPSB-34 9-11 10/1/2003	MPSB-34 11-13 10/1/2003
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	NS	NS	NS	NS	NS	680	NS	NS	<130
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	NS	NS	NS	NS	NS	NS	590	NS	NS	<130
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	NS	NS	NS	NS	NS	NS	340	NS	NS	<130
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Carbazole	900,000	3,300	21,000	µg/kg	NS	NS	NS	NS	NS	NS	82	NS	NS	<130
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Chrysene	2,500,000	190	230,000	µg/kg	NS	NS	NS	NS	NS	NS	800	NS	NS	85[7]
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<44
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<44
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	NS	NS	NS	NS	NS	160	NS	NS	<130
Dibenzofuran	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	30[7]	NS	NS	<130
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Dimethylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Di-n-butylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<88	NS	NS	<260
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	NS	NS	NS	NS	NS	<88	NS	NS	<260
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Di-n-octylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	NS	NS	NS	NS	NS	1,000	NS	NS	150
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	NS	NS	NS	NS	NS	54	NS	NS	<130
Hexachlorobenzene	11,000	100	960	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Hexachloroethane	220,000	100	560	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	NS	NS	NS	NS	NS	310	NS	NS	<130
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	NS	NS	NS	NS	NS	33[7]	NS	NS	<130
Nitrobenzene	110,000	1,800	790	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-28 10-12 10/1/2003	MPSB-28 12-14 10/1/2003	MPSB-29 2-2.3 9/30/2003	MPSB-29 8-10 9/30/2003	MPSB-31 11-13 10/1/2003	MPSB-31 13-15 10/1/2003	MPSB-33 6-7 10/1/2003	MPSB-33 16-18 10/1/2003	MPSB-34 9-11 10/1/2003	MPSB-34 11-13 10/1/2003
2-Nitroaniline	13,000	210	38	µg/kg	NS	NS	NS	NS	NS	NS	<88	NS	NS	<260
3-Nitroaniline	13,000	210	33	µg/kg	NS	NS	NS	NS	NS	NS	<88	NS	NS	<260
4-Nitroaniline	13,000	210	31	µg/kg	NS	NS	NS	NS	NS	NS	<88	NS	NS	<260
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	NS	NS	NS	NS	NS	<88	NS	NS	<260
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	NS	NS	NS	NS	NS	<83	NS	NS	<130
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	NS	740	NS	NS	110[7]
Phenol	130,000,000	400,000	66,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	NS	NS	NS	NS	NS	810	NS	NS	140
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	73[7]
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	NS	NS	NS	NS	NS	<88	NS	NS	<260
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	NS	NS	NS	NS	NS	<44	NS	NS	<130
Polychlorinated Biphenyls[10]														
PCB 1016	15,000	260	72,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
PCB 1221	36,000	130	630	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
PCB 1232	36,000	130	500	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
PCB 1242	36,000	130	16,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
PCB 1248	9,900	37	18,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
PCB 1254	4,400	37	75,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
PCB 1260	30,000	110	500,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
Total Metals[11]														
Aluminum	190,000	NA[12]	NA	mg/kg[13]	14,000	17,000	12,000	13,000	13,000	9,900	13,000	12,000	NS	16,000
Antimony	88	0.6	27	mg/kg	2.1	2	4.9	3.2	<11	2.5[7]	4.2	1.7	NS	2.7
Arsenic	12	5	150	mg/kg	31	13	26	15	600	16	35	21	NS	15
Barium	15,000	200	8,200	mg/kg	320	210	490	64	160	1,400	1,100	140	NS	450
Beryllium	440	0.4	320	mg/kg	1.2	1.7	2.2	0.29	2[7]	1.1	3.7	2.6	NS	9.9
Boron	20,000	60	6.7	mg/kg	100	23	190	20	18[7]	16	230	13	NS	200
Cadmium	47	0.5	38	mg/kg	0.028[7]	0.043[7]	2.7	<0.23	7.5	0.75	1	0.26	NS	0.26
Chromium	190,000	10	190,000	mg/kg	22	25	73	18	17	17	260	22	NS	33
Chromium VI	94	10	190	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cobalt	4,400	73	8.1	mg/kg	11	13	5.5	5.2	15[7]	14	6.9	15	NS	19
Copper	8,200	100	36,000	mg/kg	25	27	460	150	21[7]	13	380	46	NS	33
Iron	66,000	NA	NA	mg/kg	23,000	33,000	14,000	22,000	57,000	61,000	11,000	24,000	NS	34,000
Lead	500	0.5	450	mg/kg	33	21	42	23	40	10	53	27	NS	31
Magnesium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	31,000	NA	NA	mg/kg	990	880	18,000	210	2,900	9,400	14,000	1,000	NS	1,700
Mercury	66	0.2	10	mg/kg	0.06[7]	0.049[7]	0.032[7]	0.067[7]	0.036[7]	0.012[7]	0.036[7]	0.065[7]	NS	0.05[7]
Molybdenum	--	--	--	mg/kg	530	45	7,400	3,000	46	51	6,200	190	NS	830
Nickel	4,400	10	650	mg/kg	23	29	7.4	11	39[7]	27	4	41	NS	18
Selenium	1,100	5	26	mg/kg	4.3	1.3	25	8	<11	<0.51	31	2	NS	6
Silver	1,100	10	84	mg/kg	0.0048[7]	<0.21	3.9	<0.23	<4.4	0.24	1.7	0.049[7]	NS	0.36

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-28	MPSB-28	MPSB-29	MPSB-29	MPSB-31	MPSB-31	MPSB-33	MPSB-33	MPSB-34	MPSB-34
				Sample Depth (ft bgs)[3]	10-12	12-14	2-2.3	8-10	11-13	13-15	6-7	16-18	9-11	11-13
				Sample Date	10/1/2003	10/1/2003	9/30/2003	9/30/2003	10/1/2003	10/1/2003	10/1/2003	10/1/2003	10/1/2003	10/1/2003
				Units										
Thallium	15	0.2	14	mg/kg	<2	0.36[7]	1.5[7]	<2.3	<44	2.1	0.7[7]	<2	NS	<2.4
Tin	130,000	2,200	240	mg/kg	5.1[7]	3.6[7]	19	4.9[7]	31[7]	2.1[7]	49	4.5[7]	NS	9.5[7]
Titanium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tungsten	--	--	--	mg/kg	580	68	2,600	270	130[7]	30	3,100	110	NS	500
Vanadium	1,500	26	26,000	mg/kg	470	35	31	51	31	21	150	84	NS	61
Zinc	66,000	200	12,000	mg/kg	86	62	53	54	53	51	130	59	NS	62

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 7196, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.

1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.

1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-34 17-19 10/1/2003	MPSB-37 2-2.6 10/1/2003	MPSB-37 4-4.3 10/1/2003	MPSB-84 5-7 10/13/2003	MPSB-84 7-9 10/13/2003	MPSB-84 11-13 10/13/2003	MPSB-88 0-2 10/14/2003	MPSB-88 4-6 10/14/2003	MPSB-90 8-10 10/14/2003	MPSB-90 12-14 10/14/2003
Volatile Organic Compounds[4]														
Acetone	10,000,000	370,000	41,000	µg/kg[5]	16	NS	NS	NS	NS	NS	NS	NS	24	52
Benzene	41,000	500	130	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	13	6.3
Bromodichloromethane	8,600	10,000	3,400	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Bromoform	290,000	10,000	4,400	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Bromomethane	95,000	1,000	540	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
2-Butanone	--[8]	--	--	µg/kg	<10	NS	NS	NS	NS	NS	NS	NS	3.8[7]	<10
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	28	37
Carbon tetrachloride	21,000	500	260	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Chloroethane	6,200,000	23,000	5,000	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Chloroform	6,000	10,000	2,500	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Chloromethane	180,000	300	38	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
1,1-Dichloroethane	200,000	2,700	650	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
1,2-Dichloroethane	12,000	500	100	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
1,1-Dichloroethene	6,400	700	190	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
1,2-Dichloropropane	31,000	500	110	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
cis-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
trans-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Dibromochloromethane	12,000	10,000	3,200	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	5.3
2-Hexanone	10,000,000	280,000	54,000	µg/kg	<10	NS	NS	NS	NS	NS	NS	NS	<10	<10
Methylene chloride	680,000	500	76	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	<10	NS	NS	NS	NS	NS	NS	NS	<10	<10
Styrene	10,000,000	10,000	24,000	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Tetrachloroethene	340,000	500	430	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Toluene	7,600,000	100,000	44,000	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	2.5	26
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
1,1,2-Trichloroethane	20,000	500	150	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Trichloroethene	190,000	500	170	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Vinyl chloride	12,000	200	27	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	<5.1
Xylene, m & p-	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	10
Xylene, o-	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	NS	NS	<5	2.8[7]
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	<10	NS	NS	NS	NS	NS	NS	NS	10	12.8
Semi-Volatile Organic Compounds[9]														
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	22[7]	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	26[7]	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	96	NS
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	290	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	270	NS

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-34	MPSB-37	MPSB-37	MPSB-84	MPSB-84	MPSB-84	MPSB-88	MPSB-88	MPSB-90	MPSB-90
				Sample Depth (ft bgs)[3]	17-19	2-2.6	4-4.3	5-7	7-9	11-13	0-2	4-6	8-10	12-14
				Sample Date	10/1/2003	10/1/2003	10/1/2003	10/13/2003	10/13/2003	10/13/2003	10/14/2003	10/14/2003	10/14/2003	10/14/2003
				Units										
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	270	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	290	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	170	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	20[7]	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Carbazole	900,000	3,300	21,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	41	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Chrysene	2,500,000	190	230,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	400	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	84	NS
Dibenzofuran	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Dimethylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Di-n-butylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	21[7]	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Di-n-octylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	790	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	32[7]	NS
Hexachlorobenzene	11,000	100	960	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Hexachloroethane	220,000	100	560	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	170	NS
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Nitrobenzene	110,000	1,800	790	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-34	MPSB-37	MPSB-37	MPSB-84	MPSB-84	MPSB-84	MPSB-88	MPSB-88	MPSB-90	MPSB-90
				Sample Depth (ft bgs)[3]	17-19	2-2.6	4-4.3	5-7	7-9	11-13	0-2	4-6	8-10	12-14
				Sample Date	10/1/2003	10/1/2003	10/1/2003	10/13/2003	10/13/2003	10/13/2003	10/14/2003	10/14/2003	10/14/2003	10/14/2003
				Units										
2-Nitroaniline	13,000	210	38	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
3-Nitroaniline	13,000	210	33	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
4-Nitroaniline	13,000	210	31	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	460	NS
Phenol	130,000,000	400,000	66,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	630	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<83	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<40	NS
Polychlorinated Biphenyls[10]														
PCB 1016	15,000	260	72,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1221	36,000	130	630	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1232	36,000	130	500	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1242	36,000	130	16,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1248	9,900	37	18,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1254	4,400	37	75,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1260	30,000	110	500,000	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	<1	NS
Total Metals[11]														
Aluminum	190,000	NA[12]	NA	mg/kg[13]	19,000	21,000	14,000	32,000	14,000	8,000	28,000	17,000	NS	NS
Antimony	88	0.6	27	mg/kg	4	<4.9	<5.8	2.1	<0.56	1.6	6.7	2.1	NS	NS
Arsenic	12	5	150	mg/kg	19	87	50	10	4.1	3.9	17	17	NS	NS
Barium	15,000	200	8,200	mg/kg	620	2,100	2,100	400	170	190	330	140	NS	NS
Beryllium	440	0.4	320	mg/kg	2.5	30	9.9	2.3	1.5	0.73	0.51	0.98	NS	NS
Boron	20,000	60	6.7	mg/kg	65	240	73	6.5	<5	11	540	19	NS	NS
Cadmium	47	0.5	38	mg/kg	0.85	0.52[7]	2.5	<0.26	<0.2	0.49	0.12[7]	0.077[7]	NS	NS
Chromium	190,000	10	190,000	mg/kg	59	750	630	40	19	16	47	25	NS	NS
Chromium VI	94	10	190	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cobalt	4,400	73	8.1	mg/kg	14	42	21	11	5.9	8.2	2.1	11	NS	NS
Copper	8,200	100	36,000	mg/kg	41	340	130	24	19	14	520	37	NS	NS
Iron	66,000	NA	NA	mg/kg	69,000	34,000	20,000	41,000	12,000	23,000	35,000	26,000	NS	NS
Lead	500	0.5	450	mg/kg	20	71	67	24	14	6.3	82	26	NS	NS
Magnesium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	31,000	NA	NA	mg/kg	7,400	35,000	41,000	360	82	2,100	1,300	730	NS	NS
Mercury	66	0.2	10	mg/kg	0.07[7]	0.058[7]	0.013[7]	0.1	0.05[7]	0.016[7]	0.014[7]	0.037[7]	NS	NS
Molybdenum	--	--	--	mg/kg	280	2,800	1,400	71	45	25	8,300	860	NS	NS
Nickel	4,400	10	650	mg/kg	38	21	6.1[7]	27	15	22	13	14	NS	NS
Selenium	1,100	5	26	mg/kg	4.7	37	17	1.2	1.9	<0.5	18	3.7	NS	NS
Silver	1,100	10	84	mg/kg	0.84	3.2	4.1	<0.26	<0.2	<0.2	1.2	<0.21	NS	NS

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC(1) Residential 0-15 Feet	MSC(2) Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-34	MPSB-37	MPSB-37	MPSB-84	MPSB-84	MPSB-84	MPSB-88	MPSB-88	MPSB-90	MPSB-90
				Sample Depth (ft bgs)(3)	17-19	2-2.6	4-4.3	5-7	7-9	11-13	0-2	4-6	8-10	12-14
				Sample Date	10/1/2003	10/1/2003	10/1/2003	10/13/2003	10/13/2003	10/13/2003	10/14/2003	10/14/2003	10/14/2003	10/14/2003
				Units										
Thallium	15	0.2	14	mg/kg	<2.7	<20	<23	<2.6	<2	<2	<2.7	<2.1	NS	NS
Tin	130,000	2,200	240	mg/kg	11(7)	390	140	4.2(7)	2.9(7)	2.5(7)	14	5.5(7)	NS	NS
Titanium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tungsten	--	--	--	mg/kg	720	6,400	370	24	260	97	660	220	NS	NS
Vanadium	1,500	26	26,000	mg/kg	63	140	300	55	27	17	8.1	35	NS	NS
Zinc	66,000	200	12,000	mg/kg	76	120	100	66	44	37	49	46	NS	NS

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 7196, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.

1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.

1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-90	MPSB-91	MPSB-91	MPSB-93	MPSB-93	MPSB-93	MPSB-93	MPSB-94
				Sample Depth (ft bgs)[3]	14-14.7	4-6	6-8	6-8	10-12	12-14	18-20	4-6
				Sample Date	10/14/2003	10/14/2003	10/14/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/16/2003
				Units								
Volatile Organic Compounds[4]												
Acetone	10,000,000	370,000	41,000	µg/kg[5]	8.2[7]	NS	NS	NS	6.7[7]	45	27	NS
Benzene	41,000	500	130	µg/kg	190	NS	NS	NS	<5	<5	8.5	NS
Bromodichloromethane	8,600	10,000	3,400	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Bromoform	290,000	10,000	4,400	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Bromomethane	95,000	1,000	540	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
2-Butanone	--[8]	--	--	µg/kg	<10	NS	NS	NS	<10	5.1[7]	<13	NS
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	3.3[7]	NS	NS	NS	<5	8.5	<6.7	NS
Carbon tetrachloride	21,000	500	260	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Chloroethane	6,200,000	23,000	5,000	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Chloroform	6,000	10,000	2,500	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Chloromethane	180,000	300	38	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
1,1-Dichloroethane	200,000	2,700	650	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
1,2-Dichloroethane	12,000	500	100	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
1,1-Dichloroethene	6,400	700	190	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
1,2-Dichloropropane	31,000	500	110	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
cis-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
trans-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Dibromochloromethane	12,000	10,000	3,200	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	35	NS	NS	NS	<5	<5	4.4	NS
2-Hexanone	10,000,000	280,000	54,000	µg/kg	<10	NS	NS	NS	<10	<10	<13	NS
Methylene chloride	680,000	500	76	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	<10	NS	NS	NS	<10	<10	<13	NS
Styrene	10,000,000	10,000	24,000	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Tetrachloroethene	340,000	500	430	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Toluene	7,600,000	100,000	44,000	µg/kg	210	NS	NS	NS	<5	<5	24	NS
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
1,1,2-Trichloroethane	20,000	500	150	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Trichloroethene	190,000	500	170	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Vinyl chloride	12,000	200	27	µg/kg	<5	NS	NS	NS	<5	<5	<6.7	NS
Xylene, m & p-	--	--	--	µg/kg	91	NS	NS	NS	<5	<5	9.8	NS
Xylene, o-	--	--	--	µg/kg	27	NS	NS	NS	<5	<5	<6.7	NS
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	118	NS	NS	NS	<10	<10	9.8	NS
Semi-Volatile Organic Compounds[9]												
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-90	MPSB-91	MPSB-91	MPSB-93	MPSB-93	MPSB-93	MPSB-93	MPSB-94
				Sample Depth (ft bgs)[3]	14-14.7	4-6	6-8	6-8	10-12	12-14	18-20	4-6
				Sample Date	10/14/2003	10/14/2003	10/14/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/16/2003
				Units								
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Carbazole	900,000	3,300	21,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Chrysene	2,500,000	190	230,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Dibenzofuran	--	--	--	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Dimethylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Di-n-butylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Di-n-octylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Hexachlorobenzene	11,000	100	960	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Hexachloroethane	220,000	100	560	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Nitrobenzene	110,000	1,800	790	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-90	MPSB-91	MPSB-91	MPSB-93	MPSB-93	MPSB-93	MPSB-93	MPSB-94
				Sample Depth (ft bgs)[3]	14-14.7	4-6	6-8	6-8	10-12	12-14	18-20	4-6
				Sample Date	10/14/2003	10/14/2003	10/14/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/16/2003
				Units								
2-Nitroaniline	13,000	210	38	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
3-Nitroaniline	13,000	210	33	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
4-Nitroaniline	13,000	210	31	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Phenol	130,000,000	400,000	66,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	NS	NS	NS	NS	<83	NS	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	NS	NS	NS	NS	<41	NS	NS
Polychlorinated Biphenyls[10]												
PCB 1016	15,000	260	72,000	mg/kg	NS	NS	NS	NS	NS	<1	NS	NS
PCB 1221	36,000	130	630	mg/kg	NS	NS	NS	NS	NS	<1	NS	NS
PCB 1232	36,000	130	500	mg/kg	NS	NS	NS	NS	NS	<1	NS	NS
PCB 1242	36,000	130	16,000	mg/kg	NS	NS	NS	NS	NS	<1	NS	NS
PCB 1248	9,900	37	18,000	mg/kg	NS	NS	NS	NS	NS	<1	NS	NS
PCB 1254	4,400	37	75,000	mg/kg	NS	NS	NS	NS	NS	<1	NS	NS
PCB 1260	30,000	110	500,000	mg/kg	NS	NS	NS	NS	NS	<1	NS	NS
Total Metals[11]												
Aluminum	190,000	NA[12]	NA	mg/kg[13]	NS	22,000	13,000	19,000	10,000	NS	NS	NS
Antimony	88	0.6	27	mg/kg	NS	47	18	0.52[7]	0.63	NS	NS	NS
Arsenic	12	5	150	mg/kg	NS	30	110	13	18	NS	NS	NS
Barium	15,000	200	8,200	mg/kg	NS	790	1,200	6,300	98	NS	NS	NS
Beryllium	440	0.4	320	mg/kg	NS	3.2	3.8	15	1.3	NS	NS	NS
Boron	20,000	60	6.7	mg/kg	NS	260	30	330	<5.6	NS	NS	NS
Cadmium	47	0.5	38	mg/kg	NS	<2.5	2.9	0.82	<0.23	NS	NS	NS
Chromium	190,000	10	190,000	mg/kg	NS	170	170	130	17	NS	NS	NS
Chromium VI	94	10	190	mg/kg	NS	NS	NS	NS	NS	NS	NS	1.9
Cobalt	4,400	73	8.1	mg/kg	NS	8.4[7]	16	6.4	7.1	NS	NS	NS
Copper	8,200	100	36,000	mg/kg	NS	640	550	71	15	NS	NS	NS
Iron	66,000	NA	NA	mg/kg	NS	25,000	22,000	6,700	14,000	NS	NS	NS
Lead	500	0.5	450	mg/kg	NS	48	410	57	12	NS	NS	NS
Magnesium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	10,000
Manganese	31,000	NA	NA	mg/kg	NS	13,000	16,000	48,000	210	NS	NS	NS
Mercury	66	0.2	10	mg/kg	NS	0.041[7]	0.47	0.009[7]	0.044[7]	NS	NS	NS
Molybdenum	--	--	--	mg/kg	NS	24,000	7,100	950	140	NS	NS	NS
Nickel	4,400	10	650	mg/kg	NS	27	27	3.3	16	NS	NS	NS
Selenium	1,100	5	26	mg/kg	NS	61	76	19	1.9	NS	NS	NS
Silver	1,100	10	84	mg/kg	NS	2.7	2.7	3.1	<0.23	NS	NS	NS

Table H-3
Area 1B Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-90	MPSB-91	MPSB-91	MPSB-93	MPSB-93	MPSB-93	MPSB-93	MPSB-94
				Sample Depth (ft bgs)[3]	14-14.7	4-6	6-8	6-8	10-12	12-14	18-20	4-6
				Sample Date	10/14/2003	10/14/2003	10/14/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/16/2003
				Units								
Thallium	15	0.2	14	mg/kg	NS	<25	3.1	12	<2.3	NS	NS	NS
Tin	130,000	2,200	240	mg/kg	NS	46[7]	130	21	3.6[7]	NS	NS	NS
Titanium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	1,100
Tungsten	--	--	--	mg/kg	NS	3,600	9,300	2,500	32	NS	NS	NS
Vanadium	1,500	26	26,000	mg/kg	NS	61	98	80	29	NS	NS	NS
Zinc	66,000	200	12,000	mg/kg	NS	81	700	75	40	NS	NS	NS

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 7196, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-4
Area 1B Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MW-47	MW-47
				Sample Depth (ft bgs)[3]	7-9	13-15
				Sample Date	10/2/2003	10/2/2003
				Units		
Volatile Organic Compounds[4]						
Acetone	10,000,000	370,000	41,000	µg/kg[5]	36	NS[6]
Benzene	41,000	500	130	µg/kg	<5	NS
Bromodichloromethane	9,000	10,000	3,400	µg/kg	<5	NS
Bromoform	290,000	10,000	4,400	µg/kg	<5	NS
Bromomethane	95,000	1,000	540	µg/kg	<5	NS
2-Butanone	--[7]	--	--	µg/kg	1.7[8]	NS
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	13	NS
Carbon tetrachloride	21,000	500	260	µg/kg	<5	NS
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	<5	NS
Chloroethane	6,200,000	23,000	5,000	µg/kg	<5	NS
Chloroform	6,000	10,000	2,500	µg/kg	<5	NS
Chloromethane	180,000	300	38	µg/kg	<5	NS
1,1-Dichloroethane	200,000	2,700	650	µg/kg	<5	NS
1,2-Dichloroethane	6,000	700	190	µg/kg	<5	NS
1,1-Dichloroethene	12,000	500	100	µg/kg	<5	NS
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	<5	NS
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	<5	NS
1,2-Dichloropropane	31,000	500	110	µg/kg	<5	NS
cis-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS
trans-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS
Dibromochloromethane	12,000	10,000	3,200	µg/kg	<5	NS
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	<5	NS
2-Hexanone	10,000,000	280,000	54,000	µg/kg	<10	NS
Methylene chloride	680,000	500	76	µg/kg	<5	NS
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	<10	NS
Styrene	10,000,000	10,000	24,000	µg/kg	<5	NS
1,1,2,2-Tetrachloroethane	6,000	300	9.3	µg/kg	<5	NS
Tetrachloroethene	340,000	500	430	µg/kg	<5	NS
Toluene	7,600,000	100,000	44,000	µg/kg	<5	NS
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	<5	NS
1,1,2-Trichloroethane	20,000	500	150	µg/kg	<5	NS
Trichloroethene	190,000	500	170	µg/kg	<5	NS
Vinyl chloride	12,000	200	27	µg/kg	<5	NS
Xylene, m & p-	--	--	--	µg/kg	<5	NS
Xylene, o-	--	--	--	µg/kg	<5	NS
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	<10	NS
Semi-Volatile Organic Compounds[9]						
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	<46	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	<46	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	<46	NS
Benzo(a)anthracene	25,000	90	79,000	µg/kg	23[8]	NS

Table H-4
Area 1B Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MW-47 7-9 10/2/2003	MW-47 13-15 10/2/2003
Benzo(a)pyrene	2,500	20	46,000	µg/kg	<46	NS
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	23[8]	NS
Benzo(k)fluoranthene	13,000,000	26	180,000	µg/kg	<46	NS
Benzo(g,h,i)perylene	250,000	55	610,000	µg/kg	<46	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	<46	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	<46	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	<46	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	<46	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	<46	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	<46	NS
Carbazole	900,000	3,300	21,000	µg/kg	<46	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	<46	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	<46	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	<46	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	<46	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	<46	NS
Chrysene	2,500,000	190	230,000	µg/kg	26[8]	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	<46	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	<46	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	<46	NS
Dibenzofuran	--	--	--	µg/kg	<46	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	<46	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	<46	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	<46	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	<46	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	<46	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	<46	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	<46	NS
Dimethylphthalate	--	--	--	µg/kg	<46	NS
Di-n-butylphthalate	--	--	--	µg/kg	<46	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	<91	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	<91	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	<46	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	<46	NS
Di-n-octylphthalate	--	--	--	µg/kg	<46	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	28[8]	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	<46	NS
Hexachlorobenzene	11,000	100	960	µg/kg	<46	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	<46	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	<46	NS
Hexachloroethane	220,000	100	560	µg/kg	<46	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	<46	NS

Table H-4
Area 1B Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MW-47 7-9 10/2/2003	MW-47 13-15 10/2/2003
Isophorone	10,000,000	10,000	1,900	µg/kg	<46	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	<46	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	<46	NS
Nitrobenzene	110,000	1,800	790	µg/kg	<46	NS
2-Nitroaniline	13,000	210	38	µg/kg	<91	NS
3-Nitroaniline	13,000	210	33	µg/kg	<91	NS*
4-Nitroaniline	13,000	210	31	µg/kg	<91	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	<46	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	<91	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	<46	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	<46	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	<83	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	<46	NS
Phenol	130,000,000	400,000	66,000	µg/kg	<46	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	25[8]	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	<46	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	<91	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	<46	NS
Polychlorinated Biphenyls[10]						
PCB 1016	15,000	260	72,000	mg/kg	<1	NS
PCB 1221	36,000	130	630	mg/kg	<1	NS
PCB 1232	36,000	130	500	mg/kg	<1	NS
PCB 1242	36,000	130	16,000	mg/kg	<1	NS
PCB 1248	9,900	37	18,000	mg/kg	<1	NS
PCB 1254	4,400	37	75,000	mg/kg	<1	NS
PCB 1260	30,000	110	500,000	mg/kg	<1	NS
Total Metals[11]						
Aluminum	190,000	NA[12]	NA	mg/kg[13]	15,000	11,000
Antimony	88	0.6	27	mg/kg	2.9	4.8
Arsenic	12	5	150	mg/kg	59	19
Barium	15,000	200	8,200	mg/kg	2,700	370
Beryllium	440	0.4	320	mg/kg	6.8	1.8
Boron	20,000	60	6.7	mg/kg	80	18
Cadmium	47	0.5	38	mg/kg	0.97	1.3
Chromium	190,000	10	190,000	mg/kg	110	18
Cobalt	4,400	73	8.1	mg/kg	9.6	20
Copper	8,200	100	36,000	mg/kg	420	37
Iron	66,000	NA	NA	mg/kg	44,000	92,000
Lead	500	0.5	450	mg/kg	3,100	61
Manganese	31,000	NA	NA	mg/kg	7,300	5,400
Mercury	66	0.2	10	mg/kg	0.018[8]	0.029[8]
Molybdenum	--	--	--	mg/kg	320	94

Table H-4
Area 1B Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MW-47	MW-47
				Sample Depth (ft bgs)[3]	7-9	13-15
				Sample Date	10/2/2003	10/2/2003
				Units		
Nickel	4,400	10	650	mg/kg	9	46
Selenium	1,100	5	26	mg/kg	6.4	<0.68
Silver	1,100	10	84	mg/kg	2.2	0.44
Thallium	15	0.2	14	mg/kg	<2.4	<2.7
Tin	130,000	2,200	240	mg/kg	86	4.5[8]
Tungsten	--	--	--	mg/kg	1,000	54
Vanadium	1,500	26	26,000	mg/kg	580	36
Zinc	66,000	200	12,000	mg/kg	8,100	240

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(8) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-41 3-5 10/3/2003	MPSB-41 7-9 10/3/2003	MPSB-41 9-11 10/3/2003	MPSB-41 13-15 10/3/2003	MPSB-41 19-21 10/3/2003	MPSB-43 4-4.6 10/2/2003	MPSB-43 12-14 10/2/2003	MPSB-49 4-6 10/13/2003	MPSB-49 12-14 10/13/2003	MPSB-50 6-8 10/8/2003	MPSB-53 1-3 10/3/2003
Volatile Organic Compounds[4]															
Acetone	10,000,000	370,000	41,000	µg/kg[5]	NS[6]	<710	220[7]	NS	22	NS	NS	NS	NS	NS	NS
Benzene	41,000	500	130	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Bromodichloromethane	8,600	10,000	3,400	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Bromoform	290,000	10,000	4,400	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Bromomethane	95,000	1,000	540	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
2-Butanone	--[8]	--	--	µg/kg	NS	<710	130[7]	NS	<10	NS	NS	NS	NS	NS	NS
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	21,000	500	260	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Chloroethane	6,200,000	23,000	5,000	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Chloroform	6,000	10,000	2,500	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Chloromethane	180,000	300	38	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	200,000	2,700	650	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
1,2-Dichloroethane	12,000	500	100	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	6,400	700	190	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	31,000	500	110	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	--	--	--	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
trans-1,3-Dichloropropene	--	--	--	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Dibromochloromethane	12,000	10,000	3,200	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
2-Hexanone	10,000,000	280,000	54,000	µg/kg	NS	<710	<320	NS	<10	NS	NS	NS	NS	NS	NS
Methylene chloride	680,000	500	76	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	NS	<710	<320	NS	<10	NS	NS	NS	NS	NS	NS
Styrene	10,000,000	10,000	24,000	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Tetrachloroethene	340,000	500	430	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Toluene	7,600,000	100,000	44,000	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
1,1,2-Trichloroethane	20,000	500	150	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Trichloroethene	190,000	500	170	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Vinyl chloride	12,000	200	27	µg/kg	NS	<350	<160	NS	<5	NS	NS	NS	NS	NS	NS
Xylene, m & p-	--	--	--	µg/kg	NS	<350	120[7]	NS	<5	NS	NS	NS	NS	NS	NS
Xylene, o-	--	--	--	µg/kg	NS	<350	83[7]	NS	<5	NS	NS	NS	NS	NS	NS
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	NS	<710	203	NS	<10	NS	NS	NS	NS	NS	NS
Semi-Volatile Organic Compounds[9]															
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	NS	250	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	NS	110[7]	NS	NS	NS	NS	NS	NS	NS	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	NS	210[7]	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	NS	450	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	NS	380	NS	NS	NS	NS	NS	NS	NS	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-41	MPSB-41	MPSB-41	MPSB-41	MPSB-41	MPSB-43	MPSB-43	MPSB-49	MPSB-49	MPSB-50	MPSB-53
				Sample Depth (ft bgs)[3]	3-5	7-9	9-11	13-15	19-21	4-4.6	12-14	4-6	12-14	6-8	1-3
				Sample Date	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/2/2003	10/2/2003	10/13/2003	10/13/2003	10/8/2003	10/3/2003
				Units											
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	NS	340	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	NS	NS	370	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	NS	NS	230	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Carbazole	900,000	3,300	21,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Chrysene	2,500,000	190	230,000	µg/kg	NS	NS	510	NS	NS	NS	NS	NS	NS	NS	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	NS	110[7]	NS	NS	NS	NS	NS	NS	NS	NS
Dibenzofuran	--	--	--	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Dimethylphthalate	--	--	--	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Di-n-butylphthalate	--	--	--	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	NS	<440	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	NS	<440	NS	NS	NS	NS	NS	NS	NS	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Di-n-octylphthalate	--	--	--	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	NS	930	NS	NS	NS	NS	NS	NS	NS	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	NS	280	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorobenzene	11,000	100	960	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Hexachloroethane	220,000	100	560	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	NS	210[7]	NS	NS	NS	NS	NS	NS	NS	NS
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	NS	670	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	NS	200[7]	NS	NS	NS	NS	NS	NS	NS	NS
Nitrobenzene	110,000	1,800	790	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-41	MPSB-41	MPSB-41	MPSB-41	MPSB-41	MPSB-43	MPSB-43	MPSB-49	MPSB-49	MPSB-50	MPSB-53
				Sample Depth (ft bgs)[3]	3-5	7-9	9-11	13-15	19-21	4-4.6	12-14	4-6	12-14	6-8	1-3
				Sample Date	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/2/2003	10/2/2003	10/13/2003	10/13/2003	10/8/2003	10/3/2003
				Units											
2-Nitroaniline	13,000	210	38	µg/kg	NS	NS	<440	NS	NS	NS	NS	NS	NS	NS	NS
3-Nitroaniline	13,000	210	33	µg/kg	NS	NS	<440	NS	NS	NS	NS	NS	NS	NS	NS
4-Nitroaniline	13,000	210	31	µg/kg	NS	NS	<440	NS	NS	NS	NS	NS	NS	NS	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	NS	<440	NS	NS	NS	NS	NS	NS	NS	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	NS	510	NS	NS	NS	NS	NS	NS	NS	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	NS	1,300	NS	NS	NS	NS	NS	NS	NS	NS
Phenol	130,000,000	400,000	66,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	NS	880	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	NS	<440	NS	NS	NS	NS	NS	NS	NS	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	NS	<220	NS	NS	NS	NS	NS	NS	NS	NS
Polychlorinated Biphenyls[10]															
PCB 1016	15,000	260	72,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1221	36,000	130	630	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1232	36,000	130	500	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1242	36,000	130	16,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1248	9,900	37	18,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1254	4,400	37	75,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	<1	NS
PCB 1260	30,000	110	500,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	<1	NS
Total Metals[11]															
Aluminum	190,000	NA[12]	NA	mg/kg[13]	43,000	NS	NS	15,000	NS	9,300	13,000	17,000	12,000	NS	19,000
Antimony	88	0.6	27	mg/kg	55	NS	NS	1.7	NS	1.7	1.6	<0.53	<0.5	NS	<0.57
Arsenic	12	5	150	mg/kg	<1.6	NS	NS	8	NS	570	27	8.7	73	NS	70
Barium	15,000	200	8,200	mg/kg	170	NS	NS	230	NS	740	600	280	2,700	NS	300
Beryllium	440	0.4	320	mg/kg	100	NS	NS	1.2	NS	0.98	1.5	0.39	8.8	NS	2.4
Boron	20,000	60	6.7	mg/kg	34	NS	NS	27	NS	100	25	620	350	NS	43
Cadmium	47	0.5	38	mg/kg	12	NS	NS	0.24	NS	1	0.39	<0.21	0.9	NS	5.3
Cerium	--	--	--	mg/kg	NS	NS	30.1	NS	NS	85.1	NS	NS	NS	NS	NS
Chromium	190,000	10	190,000	mg/kg	110	NS	NS	19	NS	40	48	30	120	NS	32
Chromium VI	94	10	190	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cobalt	4,400	73	8.1	mg/kg	250	NS	NS	12	NS	6.8	11	2.1	10	NS	6.8
Copper	8,200	100	36,000	mg/kg	3,300	NS	NS	27	NS	160	53	660	650	NS	94
Iron	66,000	NA	NA	mg/kg	170,000	NS	NS	24,000	NS	18,000	23,000	12,000	44,000	NS	30,000
Lanthanum	--	--	--	mg/kg	NS	NS	14.3	NS	NS	39.8	NS	NS	NS	NS	NS
Lead	500	0.5	450	mg/kg	20,000	NS	NS	31	NS	140	22	26	4,800	NS	110
Magnesium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	31,000	NA	NA	mg/kg	1,200	NS	NS	480	NS	2,200	4,600	1,200	4,900	NS	2,700
Mercury	66	0.2	10	mg/kg	0.045[7]	NS	NS	0.036[7]	NS	1.3	0.043[7]	0.017[7]	0.067[7]	NS	0.17
Molybdenum	--	--	--	mg/kg	57,000	NS	NS	590	NS	3,200	1,100	16,000	1,700	NS	1,400
Nickel	4,400	10	650	mg/kg	590	NS	NS	21	NS	57	21	15	12	NS	42
Selenium	1,100	5	26	mg/kg	17	NS	NS	3.5	NS	12	22	29	5.5	NS	1.8
Silver	1,100	10	84	mg/kg	47	NS	NS	0.12[7]	NS	<0.2	0.3	0.38	1.9	NS	0.33

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-41	MPSB-41	MPSB-41	MPSB-41	MPSB-41	MPSB-43	MPSB-43	MPSB-49	MPSB-49	MPSB-50	MPSB-53
				Sample Depth (ft bgs)[3]	3-5	7-9	9-11	13-15	19-21	4-4.6	12-14	4-6	12-14	6-8	1-3
				Sample Date	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/2/2003	10/2/2003	10/13/2003	10/13/2003	10/8/2003	10/3/2003
				Units											
Thallium	15	0.2	14	mg/kg	<6.3	NS	NS	<2.4	NS	<2	<2.3	<2.1	<2	NS	0.17[7]
Tin	130,000	2,200	240	mg/kg	23[7]	NS	NS	3.9[7]	NS	12	26	14	19	NS	43
Titanium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tungsten	--	--	--	mg/kg	140	NS	NS	140	NS	270	1,400	670	1,100	NS	120
Vanadium	1,500	26	26,000	mg/kg	90	NS	NS	29	NS	69	100	67	890	NS	100
Zinc	66,000	200	12,000	mg/kg	9,400	NS	NS	74	NS	95	72	42	9,600	NS	350

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 7196, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-53	MPSB-53	MPSB-53	MPSB-53	MPSB-59	MPSB-59	MPSB-59	MPSB-61	MPSB-62A	MPSB-62A	MPSB-62A
				Sample Depth (ft bgs)[3]	5-7	11-13	13-15	19-21	0-2	6-8	10-12	6-8	0-2	4-6	8-10
				Sample Date	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/6/2003	10/6/2003	10/6/2003	10/7/2003	10/7/2003	10/7/2003	10/7/2003
				Units											
Volatile Organic Compounds[4]															
Acetone	10,000,000	370,000	41,000	µg/kg[5]	160[7]	NS	53	8.4[7]	NS	NS	NS	370	NS	NS	NS
Benzene	41,000	500	130	µg/kg	<140	NS	1.5[7]	4.4[7]	NS	NS	NS	19	NS	NS	NS
Bromodichloromethane	8,600	10,000	3,400	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Bromoform	290,000	10,000	4,400	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Bromomethane	95,000	1,000	540	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
2-Butanone	--[8]	--	--	µg/kg	94[7]	NS	<10	<10	NS	NS	NS	59	NS	NS	NS
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	<140	NS	<5	1.5[7]	NS	NS	NS	96	NS	NS	NS
Carbon tetrachloride	21,000	500	260	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Chloroethane	6,200,000	23,000	5,000	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Chloroform	6,000	10,000	2,500	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Chloromethane	180,000	300	38	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
1,1-Dichloroethane	200,000	2,700	650	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
1,2-Dichloroethane	12,000	500	100	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
1,1-Dichloroethene	6,400	700	190	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
1,2-Dichloropropane	31,000	500	110	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
cis-1,3-Dichloropropene	--	--	--	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
trans-1,3-Dichloropropene	--	--	--	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Dibromochloromethane	12,000	10,000	3,200	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	<140	NS	<5	<5	NS	NS	NS	3.5[7]	NS	NS	NS
2-Hexanone	10,000,000	280,000	54,000	µg/kg	<280	NS	<10	<10	NS	NS	NS	<11	NS	NS	NS
Methylene chloride	680,000	500	76	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	<280	NS	<10	<10	NS	NS	NS	<11	NS	NS	NS
Styrene	10,000,000	10,000	24,000	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Tetrachloroethene	340,000	500	430	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Toluene	7,600,000	100,000	44,000	µg/kg	180	NS	<5	<5	NS	NS	NS	4.2[7]	NS	NS	NS
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
1,1,2-Trichloroethane	20,000	500	150	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Trichloroethene	190,000	500	170	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Vinyl chloride	12,000	200	27	µg/kg	<140	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Xylene, m & p-	--	--	--	µg/kg	200	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Xylene, o-	--	--	--	µg/kg	150	NS	<5	<5	NS	NS	NS	<5.7	NS	NS	NS
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	350	NS	<10	<10	NS	NS	NS	<11	NS	NS	NS
Semi-Volatile Organic Compounds[9]															
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	200[7]	NS	NS	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	630	NS	NS	NS
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	2,100	NS	NS	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	970	NS	NS	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-53	MPSB-53	MPSB-53	MPSB-53	MPSB-59	MPSB-59	MPSB-59	MPSB-61	MPSB-62A	MPSB-62A	MPSB-62A
				Sample Depth (ft bgs)[3]	5-7	11-13	13-15	19-21	0-2	6-8	10-12	6-8	0-2	4-6	8-10
				Sample Date	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/6/2003	10/6/2003	10/6/2003	10/7/2003	10/7/2003	10/7/2003	10/7/2003
				Units											
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	1,600	NS	NS	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	1,600	NS	NS	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	880	NS	NS	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Carbazole	900,000	3,300	21,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	430	NS	NS	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Chrysene	2,500,000	190	230,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	2,600	NS	NS	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	390[7]	NS	NS	NS
Dibenzofuran	--	--	--	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Dimethylphthalate	--	--	--	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Di-n-butylphthalate	--	--	--	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	NS	<87	NS	NS	NS	NS	<830	NS	NS	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	NS	<87	NS	NS	NS	NS	<830	NS	NS	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Di-n-octylphthalate	--	--	--	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	NS	42[7]	NS	NS	NS	NS	5,800	NS	NS	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Hexachlorobenzene	11,000	100	960	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Hexachloroethane	220,000	100	560	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	800	NS	NS	NS
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	280[7]	NS	NS	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Nitrobenzene	110,000	1,800	790	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-53	MPSB-53	MPSB-53	MPSB-53	MPSB-59	MPSB-59	MPSB-59	MPSB-61	MPSB-62A	MPSB-62A	MPSB-62A
				Sample Depth (ft bgs)[3]	5-7	11-13	13-15	19-21	0-2	6-8	10-12	6-8	0-2	4-6	8-10
				Sample Date	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/6/2003	10/6/2003	10/6/2003	10/7/2003	10/7/2003	10/7/2003	10/7/2003
				Units											
2-Nitroaniline	13,000	210	38	µg/kg	NS	NS	<87	NS	NS	NS	NS	<830	NS	NS	NS
3-Nitroaniline	13,000	210	33	µg/kg	NS	NS	<87	NS	NS	NS	NS	<830	NS	NS	NS
4-Nitroaniline	13,000	210	31	µg/kg	NS	NS	<87	NS	NS	NS	NS	<830	NS	NS	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	NS	<87	NS	NS	NS	NS	<830	NS	NS	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	NS	<83	NS	NS	NS	NS	<420	NS	NS	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	NS	40[7]	NS	NS	NS	NS	3,700	NS	NS	NS
Phenol	130,000,000	400,000	66,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	NS	36[7]	NS	NS	NS	NS	3,700	NS	NS	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	NS	<44	NS	NS	NS	NS	13,000	NS	NS	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	NS	<87	NS	NS	NS	NS	<830	NS	NS	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	NS	<44	NS	NS	NS	NS	<420	NS	NS	NS
Polychlorinated Biphenyls[10]															
PCB 1016	15,000	260	72,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1221	36,000	130	630	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1232	36,000	130	500	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1242	36,000	130	16,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1248	9,900	37	18,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1254	4,400	37	75,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1260	30,000	110	500,000	mg/kg	NS	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS
Total Metals[11]															
Aluminum	190,000	NA[12]	NA	mg/kg[13]	NS	15,000	NS	NS	22,000	NS	14,000	NS	21,000	NS	11,000
Antimony	88	0.6	27	mg/kg	NS	<0.57	NS	NS	<0.53	NS	<0.52	NS	<0.52	NS	<0.59
Arsenic	12	5	150	mg/kg	NS	15	NS	NS	39	NS	37	NS	28	NS	450
Barium	15,000	200	8,200	mg/kg	NS	230	NS	NS	260	NS	310	NS	310	NS	3,200
Beryllium	440	0.4	320	mg/kg	NS	0.81	NS	NS	3.4	NS	1.5	NS	2.7	NS	7.2
Boron	20,000	60	6.7	mg/kg	NS	66	NS	NS	92	NS	120	NS	42	NS	520
Cadmium	47	0.5	38	mg/kg	NS	4.4	NS	NS	5.1	NS	3.5	NS	8.4	NS	15
Cerium	--	--	--	mg/kg	48.8	NS	NS	NS	NS	189	NS	NS	NS	91.2	NS
Chromium	190,000	10	190,000	mg/kg	NS	21	NS	NS	27	NS	45	NS	18	NS	86
Chromium VI	94	10	190	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cobalt	4,400	73	8.1	mg/kg	NS	16	NS	NS	6.4	NS	14	NS	8.2	NS	16
Copper	8,200	100	36,000	mg/kg	NS	78	NS	NS	120	NS	50	NS	65	NS	2,600
Iron	66,000	NA	NA	mg/kg	NS	31,000	NS	NS	23,000	NS	24,000	NS	50,000	NS	69,000
Lanthanum	--	--	--	mg/kg	28.6	NS	NS	NS	NS	107	NS	NS	NS	78.9	NS
Lead	500	0.5	450	mg/kg	NS	230	NS	NS	120	NS	31	NS	71	NS	5,700
Magnesium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	31,000	NA	NA	mg/kg	NS	320	NS	NS	1,600	NS	1,100	NS	2,500	NS	840
Mercury	66	0.2	10	mg/kg	NS	0.051[7]	NS	NS	0.098[7]	NS	0.057[7]	NS	0.065[7]	NS	0.15
Molybdenum	--	--	--	mg/kg	NS	3,400	NS	NS	3,800	NS	1,400	NS	880	NS	25,000
Nickel	4,400	10	650	mg/kg	NS	23	NS	NS	84	NS	23	NS	21	NS	92
Selenium	1,100	5	26	mg/kg	NS	3.1	NS	NS	7.1	NS	13	NS	<0.52	NS	29
Silver	1,100	10	84	mg/kg	NS	1.6	NS	NS	0.44	NS	0.15[7]	NS	<0.21	NS	<2.4

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-53	MPSB-53	MPSB-53	MPSB-53	MPSB-59	MPSB-59	MPSB-59	MPSB-61	MPSB-62A	MPSB-62A	MPSB-62A
				Sample Depth (ft bgs)[3]	5-7	11-13	13-15	19-21	0-2	6-8	10-12	6-8	0-2	4-6	8-10
				Sample Date	10/3/2003	10/3/2003	10/3/2003	10/3/2003	10/6/2003	10/6/2003	10/6/2003	10/7/2003	10/7/2003	10/7/2003	10/7/2003
				Units											
Thallium	15	0.2	14	mg/kg	NS	1.7[7]	NS	NS	0.86[7]	NS	1.2[7]	NS	3.4	NS	<2.4
Tin	130,000	2,200	240	mg/kg	NS	6.4[7]	NS	NS	6.2[7]	NS	11	NS	8.1[7]	NS	<12
Titanium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tungsten	--	--	--	mg/kg	NS	110	NS	NS	95	NS	650	NS	100	NS	240
Vanadium	1,500	26	26,000	mg/kg	NS	31	NS	NS	230	NS	150	NS	31	NS	29
Zinc	66,000	200	12,000	mg/kg	NS	83	NS	NS	160	NS	86	NS	73	NS	1,100

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 7196, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-63	MPSB-64	MPSB-67	MPSB-67	MPSB-70	MPSB-70	MPSB-76	MPSB-76	MPSB-77	MPSB-77	MPSB-78
				Sample Depth (ft bgs)[3]	6-8	6-8	2-4	6-8	1-3	5-7	8-10	18-19	12-14	16-18	11-13
				Sample Date	10/8/2003	10/8/2003	10/9/2003	10/9/2003	10/8/2003	10/8/2003	10/6/2003	10/6/2003	10/10/2003	10/10/2003	10/9/2003
				Units											
Volatile Organic Compounds[4]															
Acetone	10,000,000	370,000	41,000	µg/kg[5]	34	NS	NS	NS	NS	NS	33	36	NS	NS	34
Benzene	41,000	500	130	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Bromodichloromethane	8,600	10,000	3,400	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Bromoform	290,000	10,000	4,400	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Bromomethane	95,000	1,000	540	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
2-Butanone	_[8]	--	--	µg/kg	5[7]	NS	NS	NS	NS	NS	4.9[7]	4.6[7]	NS	NS	6.7[7]
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	18	NS	NS	NS	NS	NS	3.7[7]	10	NS	NS	9
Carbon tetrachloride	21,000	500	260	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Chloroethane	6,200,000	23,000	5,000	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Chloroform	6,000	10,000	2,500	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Chloromethane	180,000	300	38	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
1,1-Dichloroethane	200,000	2,700	650	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
1,2-Dichloroethane	12,000	500	100	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
1,1-Dichloroethene	6,400	700	190	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
1,2-Dichloropropane	31,000	500	110	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
cis-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
trans-1,3-Dichloropropene	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Dibromochloromethane	12,000	10,000	3,200	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
2-Hexanone	10,000,000	280,000	54,000	µg/kg	<10	NS	NS	NS	NS	NS	<10	<10	NS	NS	<10
Methylene chloride	680,000	500	76	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	<10	NS	NS	NS	NS	NS	<10	<10	NS	NS	<10
Styrene	10,000,000	10,000	24,000	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Tetrachloroethene	340,000	500	430	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Toluene	7,600,000	100,000	44,000	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
1,1,2-Trichloroethane	20,000	500	150	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Trichloroethene	190,000	500	170	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Vinyl chloride	12,000	200	27	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Xylene, m & p-	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Xylene, o-	--	--	--	µg/kg	<5	NS	NS	NS	NS	NS	<5	<5.1	NS	NS	<5
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	<10	NS	NS	NS	NS	NS	<10	<10	NS	NS	<10
Semi-Volatile Organic Compounds[9]															
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Benzo(a)anthracene	25,000	90	79,000	µg/kg	98	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	98	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-63	MPSB-64	MPSB-67	MPSB-67	MPSB-70	MPSB-70	MPSB-76	MPSB-76	MPSB-77	MPSB-77	MPSB-78
				Sample Depth (ft bgs)[3]	6-8	6-8	2-4	6-8	1-3	5-7	8-10	18-19	12-14	16-18	11-13
				Sample Date	10/8/2003	10/8/2003	10/9/2003	10/9/2003	10/8/2003	10/8/2003	10/6/2003	10/6/2003	10/10/2003	10/10/2003	10/9/2003
				Units											
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	94	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	97	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	82	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	21[7]	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Carbazole	900,000	3,300	21,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Chrysene	2,500,000	190	230,000	µg/kg	120	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	32[7]	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Dibenzofuran	--	--	--	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Dimethylphthalate	--	--	--	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Di-n-butylphthalate	--	--	--	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	<83	NS	NS	NS	NS	NS	<86	NS	NS	NS	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	<83	NS	NS	NS	NS	NS	<86	NS	NS	NS	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Di-n-octylphthalate	--	--	--	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	160	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Hexachlorobenzene	11,000	100	960	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Hexachloroethane	220,000	100	560	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	70	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Isophorone	10,000,000	10,000	1,900	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Nitrobenzene	110,000	1,800	790	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-63	MPSB-64	MPSB-67	MPSB-67	MPSB-70	MPSB-70	MPSB-76	MPSB-76	MPSB-77	MPSB-77	MPSB-78
				Sample Depth (ft bgs)[3]	6-8	6-8	2-4	6-8	1-3	5-7	8-10	18-19	12-14	16-18	11-13
				Sample Date	10/8/2003	10/8/2003	10/9/2003	10/9/2003	10/8/2003	10/8/2003	10/6/2003	10/6/2003	10/10/2003	10/10/2003	10/9/2003
				Units											
2-Nitroaniline	13,000	210	38	µg/kg	<83	NS	NS	NS	NS	NS	<86	NS	NS	NS	NS
3-Nitroaniline	13,000	210	33	µg/kg	<83	NS	NS	NS	NS	NS	<86	NS	NS	NS	NS
4-Nitroaniline	13,000	210	31	µg/kg	<83	NS	NS	NS	NS	NS	<86	NS	NS	NS	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	<83	NS	NS	NS	NS	NS	<86	NS	NS	NS	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	<83	NS	NS	NS	NS	NS	<83	NS	NS	NS	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	73	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Phenol	130,000,000	400,000	66,000	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	170	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	<39	NS	NS	NS	NS	NS	70	NS	NS	NS	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	<83	NS	NS	NS	NS	NS	<86	NS	NS	NS	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	<39	NS	NS	NS	NS	NS	<43	NS	NS	NS	NS
Polychlorinated Biphenyls[10]															
PCB 1016	15,000	260	72,000	mg/kg	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1221	36,000	130	630	mg/kg	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1232	36,000	130	500	mg/kg	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1242	36,000	130	16,000	mg/kg	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1248	9,900	37	18,000	mg/kg	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1254	4,400	37	75,000	mg/kg	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
PCB 1260	30,000	110	500,000	mg/kg	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Metals[11]															
Aluminum	190,000	NA[12]	NA	mg/kg[13]	NS	NS	15,000	17,000	15,000	33,000	NS	NS	9,100	10,000	NS
Antimony	88	0.6	27	mg/kg	NS	NS	<0.6	<0.57	<0.5	<0.65	NS	NS	<0.56	<0.5	NS
Arsenic	12	5	150	mg/kg	NS	NS	39	21	6.9	140	NS	NS	5.8	21	NS
Barium	15,000	200	8,200	mg/kg	NS	NS	690	300	260	780	NS	NS	180	240	NS
Beryllium	440	0.4	320	mg/kg	NS	NS	3	1	1.4	6.6	NS	NS	0.96	1.9	NS
Boron	20,000	60	6.7	mg/kg	NS	NS	130	44	3.7	73	NS	NS	7.5	11	NS
Cadmium	47	0.5	38	mg/kg	NS	NS	<0.24	<0.23	5.4	17	NS	NS	2.8	13	NS
Cerium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	24.7	NS	NS
Chromium	190,000	10	190,000	mg/kg	NS	NS	50	32	22	170	NS	NS	14	31	NS
Chromium VI	94	10	190	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cobalt	4,400	73	8.1	mg/kg	NS	NS	7	16	16	25	NS	NS	9.9	30	NS
Copper	8,200	100	36,000	mg/kg	NS	NS	240	130	43	2,200	NS	NS	19	39	NS
Iron	66,000	NA	NA	mg/kg	NS	NS	47,000	34,000	38,000	21,000	NS	NS	22,000	120,000	NS
Lanthanum	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	106	NS	NS
Lead	500	0.5	450	mg/kg	NS	NS	320	90	20	120	NS	NS	14	29	NS
Magnesium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	31,000	NA	NA	mg/kg	NS	NS	5,500	1,300	1,300	8,000	NS	NS	200	1,800	NS
Mercury	66	0.2	10	mg/kg	NS	NS	0.058[7]	0.059[7]	0.026[7]	0.089[7]	NS	NS	0.029[7]	0.02[7]	NS
Molybdenum	--	--	--	mg/kg	NS	NS	4,700	6,800	2.4	38,000	NS	NS	230	250	NS
Nickel	4,400	10	650	mg/kg	NS	NS	14	23	40	41	NS	NS	20	37	NS
Selenium	1,100	5	26	mg/kg	NS	NS	16	52	<0.5	71	NS	NS	<0.56	<4.5	NS
Silver	1,100	10	84	mg/kg	NS	NS	1.4	0.41	<0.2	0.2[7]	NS	NS	<0.22	0.3	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-63	MPSB-64	MPSB-67	MPSB-67	MPSB-70	MPSB-70	MPSB-76	MPSB-76	MPSB-77	MPSB-77	MPSB-78
				Sample Depth (ft bgs)[3]	6-8	6-8	2-4	6-8	1-3	5-7	8-10	18-19	12-14	16-18	11-13
				Sample Date	10/8/2003	10/8/2003	10/9/2003	10/9/2003	10/8/2003	10/8/2003	10/6/2003	10/6/2003	10/10/2003	10/10/2003	10/9/2003
				Units											
Thallium	15	0.2	14	mg/kg	NS	NS	<2.4	<2.3	3.3	0.83[7]	NS	NS	0.82[7]	13	NS
Tin	130,000	2,200	240	mg/kg	NS	NS	15	7.6[7]	2.6[7]	67	NS	NS	3.7[7]	4[7]	NS
Titanium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tungsten	--	--	--	mg/kg	NS	NS	790	600	10	5,700	NS	NS	11	6.9[7]	NS
Vanadium	1,500	26	26,000	mg/kg	NS	NS	75	49	28	98	NS	NS	20	41	NS
Zinc	66,000	200	12,000	mg/kg	NS	NS	700	170	87	780	NS	NS	56	80	NS

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 7196, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification / Sample Depth (ft bgs)[3] / Sample Date / Units	MPSB-78 15-17 10/9/2003	MPSB-78 17-19 10/9/2003	MPSB-79 5-7 10/9/2003	MPSB-79 19-21 10/9/2003	MPSB-82 8-10 10/10/2003	MPSB-82 18-20 10/10/2003
Volatile Organic Compounds[4]										
Acetone	10,000,000	370,000	41,000	µg/kg[5]	37	55	NS	NS	36	21
Benzene	41,000	500	130	µg/kg	<5	<5	NS	NS	<5.7	22
Bromodichloromethane	8,600	10,000	3,400	µg/kg	<5	<5	NS	NS	<5.7	<5
Bromoform	290,000	10,000	4,400	µg/kg	<5	<5	NS	NS	<5.7	<5
Bromomethane	95,000	1,000	540	µg/kg	<5	<5	NS	NS	<5.7	<5
2-Butanone	--[8]	--	--	µg/kg	4.7[7]	7.7[7]	NS	NS	<5.7	3.2[7]
Carbon disulfide	10,000,000	190,000	160,000	µg/kg	3.8[7]	20	NS	NS	25	2.7[7]
Carbon tetrachloride	21,000	500	260	µg/kg	<5	<5	NS	NS	<5.7	<5
Chlorobenzene	4,400,000	10,000	6,100	µg/kg	<5	<5	NS	NS	<5.7	<5
Chloroethane	6,200,000	23,000	5,000	µg/kg	<5	<5	NS	NS	<5.7	<5
Chloroform	6,000	10,000	2,500	µg/kg	<5	<5	NS	NS	<5.7	<5
Chloromethane	180,000	300	38	µg/kg	<5	<5	NS	NS	<5.7	<5
1,1-Dichloroethane	200,000	2,700	650	µg/kg	<5	<5	NS	NS	<5.7	<5
1,2-Dichloroethane	12,000	500	100	µg/kg	<5	<5	NS	NS	<5.7	<5
1,1-Dichloroethene	6,400	700	190	µg/kg	<5	<5	NS	NS	<5.7	<5
cis-1,2-Dichloroethene	670,000	7,000	1,600	µg/kg	<5	<5	NS	NS	<5.7	<5
trans-1,2-Dichloroethene	1,300,000	10,000	2,300	µg/kg	<5	<5	NS	NS	<5.7	<5
1,2-Dichloropropane	31,000	500	110	µg/kg	<5	<5	NS	NS	<5.7	<5
cis-1,3-Dichloropropene	--	--	--	µg/kg	<5	<5	NS	NS	<5.7	<5
trans-1,3-Dichloropropene	--	--	--	µg/kg	<5	<5	NS	NS	<5.7	<5
Dibromochloromethane	12,000	10,000	3,200	µg/kg	<5	<5	NS	NS	<5.7	<5
Ethyl benzene	10,000,000	70,000	46,000	µg/kg	<5	<5	NS	NS	<5.7	2.5[7]
2-Hexanone	10,000,000	280,000	54,000	µg/kg	<10	<10	NS	NS	<11	<10
Methylene chloride	680,000	500	76	µg/kg	<5	<5	NS	NS	<5.7	<5
4-Methyl-2-pentanone	1,500,000	19,000	2,900	µg/kg	<10	<10	NS	NS	<11	<10
Styrene	10,000,000	10,000	24,000	µg/kg	<5	<5	NS	NS	<5.7	<5
1,1,2,2-Tetrachloroethane	5,500	300	9.3	µg/kg	<5	<5	NS	NS	<5.7	<5
Tetrachloroethene	340,000	500	430	µg/kg	<5	<5	NS	NS	<5.7	<5
Toluene	7,600,000	100,000	44,000	µg/kg	<5	<5	NS	NS	<5.7	18
1,1,1-Trichloroethane	10,000,000	20,000	7,200	µg/kg	<5	<5	NS	NS	<5.7	<5
1,1,2-Trichloroethane	20,000	500	150	µg/kg	<5	<5	NS	NS	<5.7	<5
Trichloroethene	190,000	500	170	µg/kg	<5	<5	NS	NS	<5.7	<5
Vinyl chloride	12,000	200	27	µg/kg	<5	<5	NS	NS	<5.7	<5
Xylene, m & p-	--	--	--	µg/kg	<5	<5	NS	NS	13	6.6
Xylene, o-	--	--	--	µg/kg	<5	<5	NS	NS	<5.7	2.4[7]
Xylenes, Total	8,000,000	1,000,000	990,000	µg/kg	<10	<10	NS	NS	13	9
Semi-Volatile Organic Compounds[9]										
Acenaphthene	13,000,000	220,000	2,700,000	µg/kg	NS	NS	NS	NS	<45	NS
Acenaphthylene	13,000,000	220,000	2,500,000	µg/kg	NS	NS	NS	NS	<45	NS
Anthracene	66,000,000	6,600	350,000	µg/kg	NS	NS	NS	NS	<45	NS
Benzo(a)anthracene	25,000	90	79,000	µg/kg	NS	NS	NS	NS	<45	NS
Benzo(a)pyrene	2,500	20	46,000	µg/kg	NS	NS	NS	NS	<45	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-78	MPSB-78	MPSB-79	MPSB-79	MPSB-82	MPSB-82
				Sample Depth (ft bgs)[3]	15-17	17-19	5-7	19-21	8-10	18-20
				Sample Date	10/9/2003	10/9/2003	10/9/2003	10/9/2003	10/10/2003	10/10/2003
				Units						
Benzo(b)fluoranthene	25,000	90	120,000	µg/kg	NS	NS	NS	NS	<45	NS
Benzo(k)fluoranthene	250,000	26	180,000	µg/kg	NS	NS	NS	NS	<45	NS
Benzo(g,h,i)perylene	13,000,000	55	610,000	µg/kg	NS	NS	NS	NS	<45	NS
Bis(2-chloroethoxy)methane	--	--	--	µg/kg	NS	NS	NS	NS	<45	NS
Bis(2-chloroethyl)ether	960	13	3.9	µg/kg	NS	NS	NS	NS	<45	NS
Bis(2-chloroisopropyl)ether	32,000	30,000	8,000	µg/kg	NS	NS	NS	NS	<45	NS
Bis(2-ethylhexyl)phthalate	1,300,000	600	130,000	µg/kg	NS	NS	NS	NS	<45	NS
4-Bromophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	<45	NS
Butylbenzylphthalate	10,000,000	270,000	10,000,000	µg/kg	NS	NS	NS	NS	<45	NS
Carbazole	900,000	3,300	21,000	µg/kg	NS	NS	NS	NS	<45	NS
4-Chloroaniline	880,000	15,000	19,000	µg/kg	NS	NS	NS	NS	<45	NS
4-Chloro-3-methylphenol	1,100,000	18,000	37,000	µg/kg	NS	NS	NS	NS	<45	NS
2-Chloronaphthalene	18,000,000	290,000	6,200,000	µg/kg	NS	NS	NS	NS	<45	NS
2-Chlorophenol	330,000	4,000	4,400	µg/kg	NS	NS	NS	NS	<45	NS
4-Chlorophenyl-phenylether	--	--	--	µg/kg	NS	NS	NS	NS	<45	NS
Chrysene	2,500,000	190	230,000	µg/kg	NS	NS	NS	NS	<45	NS
o-Cresol (2-Methylphenol)	10,000,000	180,000	64,000	µg/kg	NS	NS	NS	NS	<45	NS
p-Cresol (4-Methylphenol)	1,100,000	18,000	4,200	µg/kg	NS	NS	NS	NS	<45	NS
Dibenz(a,h)anthracene	2,500	9	41,000	µg/kg	NS	NS	NS	NS	<45	NS
Dibenzofuran	--	--	--	µg/kg	NS	NS	NS	NS	<45	NS
1,2-Dichlorobenzene	3,800,000	60,000	59,000	µg/kg	NS	NS	NS	NS	<45	NS
1,3-Dichlorobenzene	6,600,000	60,000	61,000	µg/kg	NS	NS	NS	NS	<45	NS
1,4-Dichlorobenzene	750,000	7,500	10,000	µg/kg	NS	NS	NS	NS	<45	NS
3,3'-Dichlorobenzidine	40,000	150	8,300	µg/kg	NS	NS	NS	NS	<45	NS
2,4-Dichlorophenol	660,000	2,000	1,000	µg/kg	NS	NS	NS	NS	<45	NS
Diethylphthalate	10,000,000	500,000	160,000	µg/kg	NS	NS	NS	NS	<45	NS
2,4-Dimethylphenol	4,400,000	73,000	32,000	µg/kg	NS	NS	NS	NS	<45	NS
Dimethylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	<45	NS
Di-n-butylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	13[7]	NS
4,6-Dinitro-2-methylphenol	--	--	--	µg/kg	NS	NS	NS	NS	<89	NS
2,4-Dinitrophenol	440,000	1,900	210	µg/kg	NS	NS	NS	NS	<89	NS
2,4-Dinitrotoluene	58,000	210	50	µg/kg	NS	NS	NS	NS	<45	NS
2,6-Dinitrotoluene	220,000	3,700	1,100	µg/kg	NS	NS	NS	NS	<45	NS
Di-n-octylphthalate	--	--	--	µg/kg	NS	NS	NS	NS	<45	NS
Fluoranthene	8,800,000	26,000	3,200,000	µg/kg	NS	NS	NS	NS	<45	NS
Fluorene	8,800,000	150,000	3,000,000	µg/kg	NS	NS	NS	NS	<45	NS
Hexachlorobenzene	11,000	100	960	µg/kg	NS	NS	NS	NS	<45	NS
Hexachlorobutadiene	44,000	100	1,200	µg/kg	NS	NS	NS	NS	<45	NS
Hexachlorocyclopentadiene	1,300,000	5,000	91,000	µg/kg	NS	NS	NS	NS	<45	NS
Hexachloroethane	220,000	100	560	µg/kg	NS	NS	NS	NS	<45	NS
Indeno(1,2,3-cd)pyrene	25,000	90	7,000,000	µg/kg	NS	NS	NS	NS	<45	NS
Isophorone	10,000,000	10,000	1,900	µg/kg	NS	NS	NS	NS	<45	NS
2-Methylnaphthalene	4,400,000	73,000	2,900,000	µg/kg	NS	NS	NS	NS	<45	NS
Naphthalene	4,400,000	10,000	25,000	µg/kg	NS	NS	NS	NS	<45	NS
Nitrobenzene	110,000	1,800	790	µg/kg	NS	NS	NS	NS	<45	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MPSB-78	MPSB-78	MPSB-79	MPSB-79	MPSB-82	MPSB-82
				Sample Depth (ft bgs)[3]	15-17	17-19	5-7	19-21	8-10	18-20
				Sample Date	10/9/2003	10/9/2003	10/9/2003	10/9/2003	10/10/2003	10/10/2003
				Units						
2-Nitroaniline	13,000	210	38	µg/kg	NS	NS	NS	NS	<89	NS
3-Nitroaniline	13,000	210	33	µg/kg	NS	NS	NS	NS	<89	NS
4-Nitroaniline	13,000	210	31	µg/kg	NS	NS	NS	NS	<89	NS
2-Nitrophenol	1,800,000	29,000	5,900	µg/kg	NS	NS	NS	NS	<45	NS
4-Nitrophenol	1,800,000	6,000	4,100	µg/kg	NS	NS	NS	NS	<89	NS
N-nitrosodi-n-propylamine	2,600	9.4	1.3	µg/kg	NS	NS	NS	NS	<45	NS
N-nitrosodiphenylamine	3,700,000	13,000	20,000	µg/kg	NS	NS	NS	NS	<45	NS
Pentachlorophenol	150,000	100	5,000	µg/kg	NS	NS	NS	NS	<83	NS
Phenanthrene	66,000,000	110,000	10,000,000	µg/kg	NS	NS	NS	NS	<45	NS
Phenol	130,000,000	400,000	66,000	µg/kg	NS	NS	NS	NS	<45	NS
Pyrene	6,600,000	13,000	2,200,000	µg/kg	NS	NS	NS	NS	<45	NS
1,2,4-Trichlorobenzene	2,200,000	7,000	27,000	µg/kg	NS	NS	NS	NS	<45	NS
2,4,5-Trichlorophenol	22,000,000	370,000	2,300,000	µg/kg	NS	NS	NS	NS	<89	NS
2,4,6-Trichlorophenol	66,000	1,100	3,100	µg/kg	NS	NS	NS	NS	<45	NS
Polychlorinated Biphenyls[10]										
PCB 1016	15,000	260	72,000	mg/kg	NS	NS	NS	NS	NS	NS
PCB 1221	36,000	130	630	mg/kg	NS	NS	NS	NS	NS	NS
PCB 1232	36,000	130	500	mg/kg	NS	NS	NS	NS	NS	NS
PCB 1242	36,000	130	16,000	mg/kg	NS	NS	NS	NS	NS	NS
PCB 1248	9,900	37	18,000	mg/kg	NS	NS	NS	NS	NS	NS
PCB 1254	4,400	37	75,000	mg/kg	NS	NS	NS	NS	NS	NS
PCB 1260	30,000	110	500,000	mg/kg	NS	NS	NS	NS	NS	NS
Total Metals[11]										
Aluminum	190,000	NA[12]	NA	mg/kg[13]	NS	NS	14,000	12,000	NS	NS
Antimony	88	0.6	27	mg/kg	NS	NS	<0.58	<0.54	NS	NS
Arsenic	12	5	150	mg/kg	NS	NS	26	10	NS	NS
Barium	15,000	200	8,200	mg/kg	NS	NS	470	190	NS	NS
Beryllium	440	0.4	320	mg/kg	NS	NS	1.6	1.7	NS	NS
Boron	20,000	60	6.7	mg/kg	NS	NS	40	6.1	NS	NS
Cadmium	47	0.5	38	mg/kg	NS	NS	5.1	1.7	NS	NS
Cerium	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS
Chromium	190,000	10	190,000	mg/kg	NS	NS	37	18	NS	NS
Chromium VI	94	10	190	mg/kg	NS	NS	NS	NS	<0.7	NS
Cobalt	4,400	73	8.1	mg/kg	NS	NS	13	8.8	NS	NS
Copper	8,200	100	36,000	mg/kg	NS	NS	110	68	NS	NS
Iron	66,000	NA	NA	mg/kg	NS	NS	34,000	13,000	NS	NS
Lanthanum	--	--	--	mg/kg	NS	NS	NS	NS	NS	NS
Lead	500	0.5	450	mg/kg	NS	NS	99	20	NS	NS
Magnesium	--	--	--	mg/kg	NS	NS	NS	NS	87	NS
Manganese	31,000	NA	NA	mg/kg	NS	NS	1,400	75	NS	NS
Mercury	66	0.2	10	mg/kg	NS	NS	0.068[7]	0.016[7]	NS	NS
Molybdenum	--	--	--	mg/kg	NS	NS	1,500	20	NS	NS
Nickel	4,400	10	650	mg/kg	NS	NS	23	35	NS	NS
Selenium	1,100	5	26	mg/kg	NS	NS	11	1.1	NS	NS
Silver	1,100	10	84	mg/kg	NS	NS	0.33	<0.21	NS	NS

Table H-5
Area 2 Soil Boring Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	Generic Value	Sample Identification	MPSB-78	MPSB-78	MPSB-79	MPSB-79	MPSB-82	MPSB-82
				Sample Depth (ft bgs)[3]	15-17	17-19	5-7	19-21	8-10	18-20
				Sample Date	10/9/2003	10/9/2003	10/9/2003	10/9/2003	10/10/2003	10/10/2003
				Units						
Thallium	15	0.2	14	mg/kg	NS	NS	2.1[7]	<2.1	NS	NS
Tin	130,000	2,200	240	mg/kg	NS	NS	16	4[7]	NS	NS
Titanium	--	--	--	mg/kg	NS	NS	NS	NS	1,800	NS
Tungsten	--	--	--	mg/kg	NS	NS	610	23	NS	NS
Vanadium	1,500	26	26,000	mg/kg	NS	NS	63	17	NS	NS
Zinc	66,000	200	12,000	mg/kg	NS	NS	260	58	NS	NS

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Volatile Organic Compunds were analyzed by US Environmental Protection Agency Method SW 846 8260B.
(5) µg/kg - micrograms/kilograms
(6) NS - A sample was not collected from this interval for laboratory analysis.
(7) Identified concentration is an estimated value below the laboratory reporting limit but above the method detection limit.
(8) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.
(9) Semi-Volatile Organic Compound were analyzed by US Environmental Protection Agency Method SW 846 8270C.
(10) Polychlorinated Biphenyls were analyzed by US Environmental Protection Agency Method SW 846 8082.
(11) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B, 7196, and 7471B.
(12) NA - Not Applicable
(13) mg/kg - milligrams/kilogram

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential Use Aquifer.
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater Residential Used Aquifer and Direct Contact.

Table H-6
Area 2 Monitoring Well Soil Sample Analytical Results

Constituent	MSC[1] Residential 0-15 Feet	MSC[2] Soil-to-Groundwater Residential Used Aquifers 100 X GW MSC	MSC[2] Soil-to-Groundwater Residential Used Aquifers Generic Value	Sample Identification	MW-48
				Sample Depth (ft bgs)[3]	11-13
				Sample Date	10/8/2003
				Units	
Total Metals[4]					
Chromium VI	94	10	190	mg/kg[5]	<0.62
Magnesium	--[6]	--	--	mg/kg	410
Titanium	--	--	--	mg/kg	130

Footnotes:
(1) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Direct Contact Numeric Values , 25 PA Code Chapter 250.
(2) MSC - Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil, Appendix A, Tables 3 and 4 - Soil to Groundwater Numeric Values, 25 PA Code Chapter 250.
(3) ft bgs - feet below ground surface
(4) Total Metals were analyzed by US Environmental Protection Agency Method SW 846 6010B and 7471B.
(5) mg/kg - milligrams/kilogram
(6) -- Medium specific concentration not yet established by Pennsylvania Department of Environmental Protection.

1.5 = Reported concentration exceeds MSC for Direct Contact.
1.5 = Reported concentration exceeds MSC for Soil-to-Groundwater Residential
1.5 = Reported concentration exceeds MSC for both Soil-toGroundwater