Table 2.3-1B
Codorus Creek Metals Sample Results
Former York Naval Ordnance Plant - York, PA

Location/ID	Water Quality	Human	Fish & Aquatic Life		COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-6	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-7	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-8	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-9	COD-SW-10	COD-SW-11
Depth (ft.)	Criteria for	Health	Continuous Criteria	Maximum Criteria																		
Sample Date	Toxic Substances	Criteria	Concentration	Concentration	8/22/13 8:38	8/22/13 16:04	9/26/13 7:40	11/21/13 7:40	8/22/13 8:38	8/22/13 16:19	9/26/13 7:55	11/21/13 7:55	8/22/13 9:21	8/22/13 15:21	9/26/13 8:52	11/21/13 9:07	8/22/13 9:36	8/22/13 15:21	9/26/13 9:07	11/21/13 9:07	8/22/13 10:48	8/22/13 11:45
Parameter	ug/L	ug/L	ug/L	ug/L																		
Total Metals																						
Antimony	5.6	5.6	220	1100	0.18J	0.23J	0.2J	0.039J	0.16J	0.14J	0.2J	0.15J	0.23J	0.22J	0.17J	0.082J	0.18J	0.22J	0.25J	0.19J	0.079J	0.05J
Arsenic	10	10	150	340	1U	0.48J	0.65J	1U	0.45J	1U	1U	1U	0.43J	1U	0.52J	1U	1U	0.46J	1U	1U	1U	1U
Barium	2400	2400	4100	21000	42B	35B	44B	41	40B	36B	43B	44	40B	36B	43B	44	39B	33B	39B	38	60B	31B
Beryllium					1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cadmium					1U	0.15J	1U	1U	0.18J	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.15J	1U
Calcium							41000	44000B			42000	50000B			43000	46000B			49000	50000B		
Chromium					0.68J	0.94J	1.4J	2.2	0.85J	0.8J	1.5J	2.2	1.3J	1J	1.3J	2.5	1.1J	1J	1.4J	2	8.1	2.9
Copper					3.8	4.7	2.1	1.5J	4.3	3.8	2	1.4J	3.6	3.4	1.9J	1.7J	3.2	3	2	1.7J	1.9J	3.2
Lead					0.56J B	1.1B	1.3B	0.23J B	0.97J B	0.71J B	1.1B	0.5J B	0.91J B	0.55J B	0.95J B	0.62J B	0.68J B	0.45J B	1.2B	0.62J B	0.11J B	0.3J B
Magnesium							11000	10000			10000	14000			11000	11000			12000	12000		
Mercury	0.05	0.05	0.77		0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Nickel	610	610			1	0.92J	0.83J	0.62J	1.2	0.81J	1	0.66J	0.97J	0.89J	0.72J	0.74J	1.2	1.2	0.86J	0.86J	1.5	0.78J
Potassium							6500				6200				6500				9900			
Selenium			4.6		5U	5U	0.68J B	5U	5U	5U	5U	0.85J	5U	5U	1.3J B	0.64J	5U	5U	1.7J B	0.9J	5U	5U
Silver					1U	1U	0.23J	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Sodium							56000	51000B			53000	55000B			55000	58000B			65000	63000B		
Thallium	0.24	0.24	13	65	1U	0.15J B	0.026J B	1U	0.086J B	0.046J B	0.055J B	0.096J	0.22J B	0.088J B	0.037J B	0.042J	0.089J B	0.049J B	0.019J B	0.025J	0.047J B	0.027J B
Vanadium	100		100	510	1.5	1.7	1.1	1.2	1.7	1.9	0.71J	1.2	1.3	1.7	0.65J	0.49J	1.5	2	1.1	0.77J	0.19J	0.63J
Zinc					9.5	8.1	7.1	7	8.7	13	7	4.7J	7.4	8.6	4.8J	4.6J	12	13	13	14	8.6	9.1
Dissolved Metals																						
Antimony					0.12J B	0.13J B	0.2J	0.18J	0.23J B	0.14J B	0.16J	0.24J	0.14J B	0.18J B	0.17J	0.18J	0.17J B	0.19J B	0.26J	0.3J	0.054J B	0.055J B
Arsenic					0.42J	1U	0.44J B	1U	1U	1U	0.75J B	1U	1U	1U	0.31J B	1U	0.43J	1U	0.38J B	1U	1U	1U
Barium					40	37	43	42B	39	36	41	47B	39	36	44	45B	38	32	36	40B	60	31
Beryllium					1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cadmium	0.25		0.25	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Calcium							45000	48000B			40000	55000B			45000	49000B			51000	55000B		
Chromium					0.7J	0.67J	1J	2.7B	1.1J	1.1J	0.79J	2.9B	1.1J	1.1J	1J	2.9B	1.1J	1.2J	1.2J	2.8B	8	3.1
Copper	9		9	13	2.3	2.6	1.7J	1.5J	2.4	2.9	1.5J	1.3J	2.1	2.3	2.3	1.3J	2.2	2.8	1.7J	1.7J	1.4J	1.9J
Lead	2.5		2.5	65	0.12J B	0.12J B	0.12J	0.065J B	0.16J B	0.11J B	0.15J	0.078J B	0.067J B	0.071J B	0.14J	0.098J B	0.13J B	0.19J B	0.57J	0.43J B	0.022J B	1U
Magnesium							11000	11000B			10000	15000B			12000	12000B			12000	13000B		
Mercury	0.77		0.77	1.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Nickel	52		52	470	0.89J	0.86J	0.57J	0.51J	0.83J	1.1	0.7J	0.65J	0.86J	0.83J	0.86J	0.7J	1	1.1	0.79J	0.98J	1.2	0.74J
Potassium							5900	6300			6500	8600			6600	8400			10000	12000		
Selenium	4.6		4.6		5U	5U	1.5J B	0.74J B	5U	5U	1J B	0.5J B	5U	5U	1.2J B	5U	5U	5U	1.2J B	0.54J B	5U	5U
Silver	3.2			3.2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Sodium							51000	50000B			56000	63000B			56000	62000B			65000	69000B		
Thallium					0.023J	0.02J	0.019J	0.079J	0.22J	0.16J	1U	0.15J	0.083J	0.083J	1U	0.083J	0.046J	0.052J	1U	0.053J	0.035J	0.03J
Vanadium				120	1.4	1.7	0.58J	1.4	1.5	1.5	0.99J	1	1.4	1.9	0.78J	1	1	1.7	0.73J	1.2	0.38J	0.7J
Zinc	120		120		8.9B	7.5B	7.7	4.4J	7B	9.8B	4J	3.5J	8.4B	9.5B	7	5.8	8.1B	14B	14	14	5.9B	7.9B

Notes:
Water quality criteria for metals are from PA Code § Chapter 93-Water Quality Standards (Table 5-Water Quality Criteria for Toxic Substances)
Blank Criterion indicate none was developed for analyte.
Blank results indicate that analyte was not analyized for.
Dissolved metal criteria are based on a hardness of 100 miligrams per liter (mg/L).
U = Not detected.
J = Estimated.
B = blank contamination.

Table 2.3-1B
Codorus Creek Metals Sample Results
Former York Naval Ordnance Plant - York, PA

Location/ID	Water Quality	Human	Fish & Aquatic Life		COD-SW-11	COD-SW-11	COD-SW-12	COD-SW-13	COD-SW-15	COD-SW-15	COD-SW-15	COD-SW-16	COD-SW-17	COD-SW-17	COD-SW-17	COD-SW-18	COD-SW-19	COD-SW-19	COD-SW-20	COD-SW-20	COD-SW-21	COD-SW-21
Depth (ft.)	Criteria for	Health	Continuous Criteria	Maximum Criteria																		
Sample Date	Toxic Substances	Criteria	Concentration	Concentration	9/26/13 8:52	11/21/13 11:45	8/22/13 12:00	8/22/13 10:19	8/22/13 12:28	9/26/13 9:50	11/21/13 11:45	8/22/13 15:21	8/22/13 13:26	9/26/13 10:04	11/21/13 8:24	8/22/13 14:24	9/26/13 9:07	11/21/13 11:31	9/26/13 8:09	11/21/13 7:55	9/26/13 12:14	11/21/13 9:50
Parameter	ug/L	ug/L	ug/L	ug/L																		
Total Metals																						
Antimony	5.6	5.6	220	1100	0.085J	2U	0.41J	0.14J	0.17J	0.1J	2U	0.19J	0.13J	0.089J	2U	0.17J	0.064J	2U	0.21J	0.033J	0.2J	0.027J
Arsenic	10	10	150	340	1U	1U	1U	0.66J	1U	1U	1U	1U	1U	1U	1U	0.4J	0.71J	1U	1U	1U	0.35J	1U
Barium	2400	2400	4100	21000	33B	28	19B	49B	39B	36B	36	37B	47B	43B	40	40B	31B	28	41B	36	38B	35
Beryllium					1U	1U	1U	0.044J	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cadmium					1U	1U	1U	0.47J	1U	1U	1U	1U	0.12J	1U	1U	0.12J	1U	1U	1U	1U	1U	1U
Calcium					73000	73000B				82000	82000B			90000	87000B		74000	74000B	52000	49000B	51000	49000B
Chromium					2.5	4.5	0.95J	3.7	6.6	6.7	7.8	0.8J	3.9	4.2	5.6	0.98J	2.6	4.5	1.1J	2.1	1.1J	2.2
Copper					1.2J	1.2J	3.2	7.9	2	0.45J	0.47J	2.6	3.6	1.9J	1.2J	5	1.2J	1.3J	1.6J	1.6J	2	1.6J
Lead					0.19J B	0.13J B	0.78J B	4.4B	0.23J B	0.044J B	0.023J B	0.38J B	1.9B	2.1B	0.94J B	4B	0.21J B	0.08J B	0.069J B	0.065J B	0.1J B	0.05J B
Magnesium					20000	19000				19000	18000			20000	19000		20000	20000	12000	11000	12000	11000
Mercury	0.05	0.05	0.77		0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Nickel	610	610			1U	1U	2.3	1.9	1.1	0.41J	0.27J	0.98J	1.6	0.32J	0.62J	1	1U	1U	1U	0.21J	1U	0.27J
Potassium					2200					5000				5100			2200		2900		2900	
Selenium			4.6		1.8J B	5U	5U	5U	5U	1.1J B	0.68J	5U	5U	1.7J B	0.7J	5U	1.2J B	5U	0.9J B	5U	1.3J B	5U
Silver					1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Sodium					22000	19000B				40000	36000B			40000	37000B		22000	19000B	30000	27000B	31000	28000B
Thallium	0.24	0.24	13	65	0.017J B	0.017J	0.024J B	0.02J B	0.19J B	0.016J B	0.02J	0.094J B	0.082J B	0.024J B	0.027J	0.043J B	1U	0.11J	1U	0.066J	1U	0.035J
Vanadium	100		100	510	0.29J	1U	0.8J	1.2	1U	0.097J	1U	1.9	0.39J	0.2J	0.26J	1.4	0.71J	0.87J	1U	0.31J	0.16J	1U
Zinc					13	4.6J	29	56	5.7	2.8J	3.7J	4.9J	11	7.4	5.8	20	5	3.2J	4.6J	4.8J	3.1J	3.6J
Dissolved Metals																						
Antimony					0.073J	0.051J	0.61J B	0.19J B	0.11J B	0.11J	0.14J	0.12J B	0.1J B	0.081J	0.08J	0.16J B	0.068J	0.034J	0.22J	0.14J	0.22J	0.12J
Arsenic					1U	1U	0.58J	1U	1U	1U	1U	1U	0.36J	0.37J B	1U	0.38J	0.29J B	1U	1U	1U	1U	1U
Barium					32	30B	20	43	39	37	39B	36	47	41	41B	39	30	29B	41	37B	37	36B
Beryllium					1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cadmium	0.25		0.25	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Calcium					75000	82000B				84000	91000B			90000	93000B		72000	80000B	53000	53000B	50000	53000B
Chromium					2.2	5.4B	0.97J	2.3	6.4	6.6	8.7B	0.86J	3.1	3.5	5.7B	0.97J	2.3	5.3B	0.98J	2.8B	0.92J	2.5B
Copper	9		9	13	1.9J	1.2J	2.6	3.3	1.8J	1.3J	1.6J	2.2	1.6J	1.4J	0.59J	3.1	1.7J	1.9J	1.7J	18	1.4J	1.5J
Lead	2.5		2.5	65	0.071J	0.031J B	0.95J B	0.32J B	0.079J B	0.043J	0.019J B	0.067J B	1U	0.05J	0.028J B	0.15J B	0.068J	0.025J B	0.14J	0.021J B	0.048J	1U
Magnesium					20000	21000B				19000	20000B			20000	20000B		19000	21000B	12000	12000B	12000	12000B
Mercury	0.77		0.77	1.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Nickel	52		52	470	1U	1U	2.1	0.86J	1.1	1U	0.33J	0.89J	1.1	0.27J	0.49J	0.82J	1U	0.18J	1U	0.32J	0.18J	0.31J
Potassium					2300	2400				5200	5700			5200	5500		2200	2300	2900	2900	2800	2900
Selenium	4.6		4.6		0.63J B	5U	5U	5U	5U	1.5J B	1J B	5U	1J	1.9J B	1.2J B	5U	0.96J B	0.6J B	0.83J B	5U	0.75J B	0.6J B
Silver	3.2			3.2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Sodium					23000	21000B				40000	40000B			40000	40000B		22000	20000B	31000	30000B	30000	30000B
Thallium					1U	0.044J	0.019J	0.019J	0.017J	1U	0.028J	1U	0.017J	1U	0.027J	1U	1U	1U	1U	1U	1U	1U
Vanadium				120	1U	1U	0.21J	0.21J	1U	1U	1U	1.3	1U	0.29J	1U	1	0.24J	1U	1U	1U	1U	1U
Zinc	120		120		8.5	4J	33B	17B	9.2B	8.9	4.8J	6.4B	6.6B	5.9	3.1J	12B	14	3.9J	4.7J	5.5	3.2J	2.5J

Notes:
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Blank results indicate that analyte was not analyized for.
Dissolved metal criteria are based on a hardness of 100 miligrams per liter (mg/L).
U = Not detected.
J = Estimated.
B = blank contamination.

Table 2.3-1B
Codorus Creek Metals Sample Results
Former York Naval Ordnance Plant - York, PA

Location/ID	Water Quality	Human	Fish & Aquatic Life		COD-SW-23	COD-SW-23	COD-SW-24	COD-SW-24	COD-SW-25	COD-SW-25	COD-SW-29
Depth (ft.)	Criteria for	Health	Continuous Criteria	Maximum Criteria							
Sample Date	Toxic Substances	Criteria	Concentration	Concentration	9/26/13 10:48	11/21/13 10:48	9/26/13 11:16	11/21/13 10:33	9/26/13 11:02	11/21/13 10:19	3/18/14 15:36
Parameter	**ug/L**	**ug/L**	**ug/L**	**ug/L**							
Total Metals											
Antimony	5.6	5.6	220	1100	0.2J	0.14J	0.21J	0.23J	0.17J	0.035J	0.27J
Arsenic	10	10	150	340	1U	1U	1U	1U	1U	1U	0.37J
Barium	2400	2400	4100	21000	43B	44	45B	45	45B	42	40
Beryllium					1U	1U	1U	1U	1U	1U	0.048J
Cadmium					1U	1U	1U	1U	1U	1U	0.17J
Calcium					49000	55000B	51000	70000B	43000	42000B	34000B
Chromium					1.2J	2.3	1.2J	2.3	1.3J	2	2.2
Copper					1.5J	1.1J	1.4J	1.3J	2.1	1.3J	4.9
Lead					0.56J B	0.24J B	0.52J B	0.2J B	0.53J B	0.13J B	11
Magnesium					15000	16000	18000	24000	10000	10000	9400
Mercury	0.05	0.05	0.77		0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Nickel	610	610			0.56J	0.53J	0.47J	0.35J	0.88J	0.77J	1.9
Potassium					6100		5900		7400		3900
Selenium			4.6		1.1J B	1.2J	1.6J B	1.9J	0.51J B	5U	0.44J
Silver					1U	1U	1U	1U	1U	1U	1U
Sodium					55000	54000B	55000	43000B	69000	60000B	32000
Thallium	0.24	0.24	13	65	1U	0.03J	1U	0.026J	1U	0.023J	0.015J
Vanadium	100		100	510	0.51J	1.5	0.35J	0.86J	1.2	1.3	2.1
Zinc					5.8	3.7J	3.8J	5.8	5.6	3.3J	38B
Dissolved Metals											
Antimony					0.2J	0.25J	0.22J	0.37J	0.15J	0.15J	0.19J
Arsenic					1U	1U	1U	1U	0.5J B	1U	1U
Barium					45	46B	45	47B	45	45B	29
Beryllium					1U	1U	1U	1U	1U	1U	1U
Cadmium	0.25		0.25	2	1U	1U	1U	1U	1U	1U	1U
Calcium					51000	60000B	53000	76000B	43000	46000B	30000B
Chromium					1J	2.8B	0.91J	2.7B	0.96J	2.7B	0.97J
Copper	9		9	13	2.1	1.1J	2	0.86J	2.4	1.8J	0.89J
Lead	2.5		2.5	65	0.091J	0.048J B	0.095J	0.024J B	0.1J	0.064J B	0.047J
Magnesium					16000	17000B	18000	25000B	10000	11000B	7700
Mercury	0.77		0.77	1.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Nickel	52		52	470	0.81J	0.52J	0.61J	0.3J	1.1	0.87J	0.48J
Potassium					6300	8000	6000	6500	7600	9500	3800
Selenium	4.6		4.6		1.3J B	1.3J B	0.9J B	1.7J B	1.2J B	0.79J B	0.43J
Silver	3.2			3.2	1U	1U	1U	1U	1U	1U	1U
Sodium					57000	58000B	54000	46000B	69000	68000B	32000
Thallium					1U	1U	1U	1U	1U	1U	1U
Vanadium				120	0.48J	0.45J	0.94J	1U	1	0.54J	0.67
Zinc	120		120		5.9	4.2J	6.6	3.9J	13	4.1J	8.8B

Notes:
Water quality criteria for metals are from PA Code § Chapter 93-Water Quality Standards (Table 5-Water Quality Criteria for Toxic Substances)
Blank Criterion indicate none was developed for analyte.
Blank results indicate that analyte was not analyized for.
Dissolved metal criteria are based on a hardness of 100 miligrams per liter (mg/L).
U = Not detected.
J = Estimated.
B = blank contamination.