

Appendix R

Surface Water Data Summary and August 10, 2025, Visual Assessment

Appendix R.1

Preliminary Laboratory Results: Surface Water

Preliminary Laboratory Results: Surface Water

PRJ-051861 | Upper Makefield Response

Data Updated at: 8/13/2025 1:27:13 PM

	UMPA0316W001	UMPA0323VW001	UMPA0323W001	UMPA0330W001	UMPA0406W001	UMPA0413W001	UMPA0420W001	UMPA0427W001	UMPA0504W001	UMPA0504W001	UMPA0511W001	UMPA0518W001	UMPA0525W001	UMPA0601W001	UMPA0608W001	UMPA0615W001	UMPA0622W001	UMPA0629W001	UMPA0706W001	UMPA0713W001	UMPA0720W001	UMPA0727W001
	3/16/2005 W001	3/23/2005 W001	3/23/2005 W001	3/30/2005 W001	4/06/2005 W001	4/13/2005 W001	4/20/2005 W001	4/27/2005 W001	5/04/2005 W001	5/04/2005 W001	5/11/2005 W001	5/18/2005 W001	5/25/2005 W001	6/01/2005 W001	6/08/2005 W001	6/15/2005 W001	6/22/2005 W001	6/29/2005 W001	7/06/2005 W001	7/13/2005 W001	7/20/2005 W001	7/27/2005 W001
	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	Delaware Canal - upstream at Washington Crossing Gateway	
	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample	Background Sample
Analyte	USEPA Region 3 BTAG	Criteria Maximum Concentration (ug/L) ¹	Human Health Criteria (ug/L) ²																			
1,2-Dichloroethane	300	15,000	3.9	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L
1,2,4-Trimethylbenzene	33	NE	72	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L
1,3,5-Trimethylbenzene	71	NE	72	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L
Benzene	370	640	0.58	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L
Diesel Range Organics	NE	NE	NE	< 110 ug/L	840 ug/L	820 ug/L	< 280 ug/L	< 71 ug/L	< 120 ug/L	< 71 ug/L	< 110 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L	< 71 ug/L
Ethylbenzene	90	2,500	58	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L
Gasoline Range Organics	NE	NE	NE	< 17 ug/L	13 ug/L (J)	13 ug/L (J)	< 18 ug/L	< 20 ug/L	< 13 ug/L	< 11 ug/L	< 14 ug/L	< 14 ug/L	< 24 ug/L	< 13 ug/L	< 16 ug/L	< 18 ug/L	< 18 ug/L	< 16 ug/L	< 21 ug/L	19 ug/L (J)	16 ug/L (J)	16 ug/L (J)
Isopropylbenzene	2,6	NE	NE	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L
Methyl tert-butyl ether	1,1070	NE	NE	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L
Naphthalene	3,1	140	NE	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L
p-Xylene	NE	NE	NE	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L
m-Xylene	NE	NE	NE	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L
Toluene	2	1,700	57	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	0.27 ug/L (J)	< 0.2 ug/L	< 0.2 ug/L	0.29 ug/L (J)	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L
Xylenes, Total	3,1	1,100	70,000	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L

NE = Not Established
ug/L = micrograms per liter
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is an approximate value between the laboratory method detection limit (MDL) and reporting limit (RL).

Troutwater Screening Benchmarks, as outlined in the Biological Technical Assistance Group (BTAG) Screening Values established by USEPA Region 3
Fish and Aquatic Life Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)
Human Health Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

■ Detection, Below Screening Benchmark
■ Detection, No Screening Benchmark
■ Non-Detect

Preliminary Laboratory Results: Surface Water

PRJ-051861 | Upper Makefield Response

Data Updated at: 8/13/2025 1:27:13 PM

		UMPA0727W001	UMPA0316W002	UMPA0323W002	UMPA0330W002	UMPA0406W002	UMPA0413V002	UMPA0413W002	UMPA0420W002	UMPA0427W002	UMPA0504W002	UMPA0511W002	UMPA0518W002	UMPA0525W002	UMPA0525W002	UMPA0601W002	UMPA0608W002	UMPA0615W002	UMPA0629W002	UMPA0706W002	UMPA0713W002	UMPA0727W002	UMPA0316W003	
		7/27/2025 W001	3/16/2025 W002	3/23/2025 W002	3/30/2025 W002	4/6/2025 W002	4/13/2025 W002	4/13/2025 W002	4/20/2025 W002	4/27/2025 W002	5/4/2025 W002	5/11/2025 W002	5/18/2025 W002	5/25/2025 W002	5/25/2025 W002	6/1/2025 W002	6/8/2025 W002	6/15/2025 W002	6/29/2025 W002	7/6/2025 W002	7/13/2025 W002	7/27/2025 W002	3/16/2025 W003	
		Delaware Canal - upstream at Washington Crossing Gateway ...	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - at pipeline crossing	Delaware Canal - mouth of unnamed creek	
		Background Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Duplicate	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Duplicate	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Analyte	Criteria Region 3 BTAG Maximum Concentration (ug/L) ¹	Human Health Criteria (ug/L) ²																						
1,2-Dichloroethane	300	15,000	3.9	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	
1,2,4-Trimethylbenzene	33	NE	72	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	
1,3,5-Trimethylbenzene	71	NE	72	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	
Benzene	370	640	0.58	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	
Diesel Range Organics	NE	NE	NE	110 ug/L (J)	< 120 ug/L	660 ug/L	< 71 ug/L	< 71 ug/L	< 160 ug/L	< 71 ug/L	< 160 ug/L	430 ug/L (J)	72 ug/L (J)	< 71 ug/L	< 71 ug/L	< 71 ug/L	130 ug/L (J)	< 140 ug/L	< 160 ug/L	< 120 ug/L	160 ug/L (J)	120 ug/L (J)	170 ug/L (J)	< 87 ug/L
Ethylbenzene	90	2,500	58	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	
Gasoline Range Organics	NE	NE	NE	16 ug/L (J)	< 18 ug/L	13 ug/L (J)	< 18 ug/L	< 22 ug/L	< 11 ug/L	< 14 ug/L	< 11 ug/L	< 13 ug/L	< 12 ug/L	< 14 ug/L	< 17 ug/L	< 16 ug/L	< 16 ug/L	< 14 ug/L	< 17 ug/L	< 21 ug/L	14 ug/L (J)	16 ug/L (J)	17 ug/L (J)	< 18 ug/L
Isopropylbenzene	2.6	NE	NE	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	
Methyl tert-butyl ether	11,070	NE	NE	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	
Naphthalene	3.1	140	NE	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	
p-Xylene	NE	NE	NE	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	
m-Xylene	NE	NE	NE	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	
Toluene	2	1,700	57	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	0.2 ug/L (J)	< 0.2 ug/L	0.25 ug/L (J)	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	
Xylenes, Total	3.3	1,100	70,000	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	

NE = Not Established

ug/L = micrograms per liter

Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is an approximate value between the laboratory method detection limit (MDL) and reporting limit (RL).

Freshwater Screening Benchmarks, as outlined in the Biological Technical Assistance Group (BTAG) Screening Values established by USEPA Region 3

Fish and Aquatic Life Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

Human Health Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

■ Detection, Below Screening Benchmark

■ Detection, No Screening Benchmark

■ Non-Detect

Preliminary Laboratory Results: Surface Water

PRJ-051861 | Upper Makefield Response

Data Updated at: 8/13/2025 1:27:13 PM

Analyze	USEPA Region 3 BTAG	Criteria Maximum Concentration (ug/L) ¹	Human Health Criteria (ug/L) ²	UMPA0323W003	UMPA0330W003	UMPA0406V003	UMPA0406W003	UMPA0413W003	UMPA0420W003	UMPA0427W003	UMPA0504W003	UMPA0511W003	UMPA0518W003	UMPA0525W003	UMPA0601V003	UMPA0601W003	UMPA0608W003	UMPA0615W003	UMPA0622W003	UMPA0629W003	UMPA0706W003	UMPA0713W003	UMPA0727W003	UMPA0316W004	UMPA0323W004	
				3/23/2025 W003	3/30/2025 W003	4/6/2025 W003	4/6/2025 W003	4/13/2025 W003	4/20/2025 W003	4/27/2025 W003	5/4/2025 W003	5/11/2025 W003	5/18/2025 W003	5/25/2025 W003	6/1/2025 W003	6/1/2025 W003	6/8/2025 W003	6/15/2025 W003	6/22/2025 W003	6/22/2025 W003	6/29/2025 W003	7/6/2025 W003	7/13/2025 W003	7/27/2025 W003	3/16/2025 W004	3/23/2025 W004
				Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of unnamed creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	
				Field Sample	Field Sample	Field Duplicate	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Duplicate	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample		
1,2-Dichloroethane	100	15,000	3.9	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L		
1,2,4-Trimethylbenzene	33	NE	72	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L		
1,3,5-Trimethylbenzene	71	NE	72	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L		
Benzene	370	640	0.58	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L		
Diesel Range Organics	NE	NE	NE	510 ug/L	< 71 ug/L	< 71 ug/L	86 ug/L (J)	< 140 ug/L	< 71 ug/L	< 71 ug/L	86 ug/L (J)	72 ug/L (J)	< 71 ug/L	82 ug/L (J)	< 170 ug/L	< 140 ug/L	< 91 ug/L	< 91 ug/L	< 71 ug/L	< 71 ug/L	110 ug/L (J)	160 ug/L (J)	84 ug/L (J)	< 130 ug/L	< 130 ug/L	
Ethylbenzene	90	2,500	58	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L		
Gasoline Range Organics	NE	NE	NE	14 ug/L (J)	< 17 ug/L	< 12 ug/L	< 11 ug/L	< 11 ug/L	< 14 ug/L	< 15 ug/L	< 11 ug/L	< 16 ug/L	< 19 ug/L	< 17 ug/L	< 16 ug/L	< 14 ug/L	< 16 ug/L	< 21 ug/L	18 ug/L (J)	12 ug/L (J)	16 ug/L (J)	16 ug/L (J)	13 ug/L (J)	< 15 ug/L	14 ug/L (J)	
Isopropylbenzene	2.6	NE	NE	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L		
Methyl tert-butyl ether	11,070	NE	NE	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L		
Naphthalene	3.1	140	NE	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L		
p-Xylene	NE	NE	NE	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L		
p-m-Xylene	NE	NE	NE	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L		
Toluene	2	1,700	57	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L		
Xylenes, Total	3.3	1,100	70,000	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L		

NE = Not Established
ug/L = micrograms per liter
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is an approximate value between the laboratory method detection limit (MDL) and reporting limit (RL).

Freshwater Sewering Benchmarks, as outlined in the Biological Technical Assistance Group (BTAG) Screening Values established by USEPA Region 3
Fish and Aquatic Life Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)
Human Health Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

■ Detection, Below Screening Benchmark
■ Detection, No Screening Benchmark
■ Non-Detect

Preliminary Laboratory Results: Surface Water

PROJ-051861 | Upper Makefield Response

Data Updated at 8/13/2025 1:27:13 PM

				UMPA0330W004	UMPA0330W004	UMPA0406W004	UMPA0413W004	UMPA0420W004	UMPA0427W004	UMPA0504W004	UMPA0511W004	UMPA0518W004	UMPA0525W004	UMPA0601W004	UMPA0608W004	UMPA0615W004	UMPA0615W004	UMPA0622W004	UMPA0629W004	UMPA0706W004	UMPA0713W004	UMPA0720W004	UMPA0727W004	UMPA0316W005	UMPA0323W005
				3/30/2005 W004	3/30/2005 W004	4/6/2005 W004	4/13/2005 W004	4/20/2005 W004	4/27/2005 W004	5/4/2005 W004	5/11/2005 W004	5/18/2005 W004	5/25/2005 W004	6/2/2005 W004	6/9/2005 W004	6/15/2005 W004	6/15/2005 W004	6/22/2005 W004	6/29/2005 W004	7/6/2005 W004	7/13/2005 W004	7/20/2005 W004	7/27/2005 W004	3/26/2005 W005	3/23/2005 W005
				Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware Canal - at mouth of Dyers Creek	Delaware River - upstream at Washington Crossing Bridge	Delaware River - upstream at Washington Crossing Bridge	
				Field Duplicate	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample with MS/MSD	Field Sample	Field Sample	Field Duplicate	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Background Sample	Background Sample
Analyte	USEPA Region 3 BTAG	Criteria Maximum Concentration (ug/L) ¹	Human Health Criteria (ug/L) ²																						
1,2-Dichloroethane	300	15,000	3.9	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	
1,2,4-Trimethylbenzene	33	NE	72	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	
1,3,5-Trimethylbenzene	71	NE	72	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	
Benzene	370	640	0.58	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	
Diesel Range Organics	NE	NE	NE	< 280 ug/L	< 180 ug/L	< 71 ug/L	< 160 ug/L	170 ug/L (J)	160 ug/L (J)	73 ug/L (J)	72 ug/L (J)	71 ug/L (J)	170 ug/L (J)	< 200 ug/L	< 120 ug/L	< 84 ug/L	< 80 ug/L	130 ug/L (J)	110 ug/L (J)	140 ug/L (J)	130 ug/L (J)	< 71 ug/L	92 ug/L (J)	< 71 ug/L	
Ethylbenzene	90	2,500	58	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	
Gasoline Range Organics	NE	NE	NE	< 16 ug/L	< 17 ug/L	< 12 ug/L	< 12 ug/L	< 14 ug/L	< 13 ug/L	< 8.2 ug/L	< 14 ug/L	< 19 ug/L	< 14 ug/L	< 16 ug/L	< 12 ug/L	< 21 ug/L	< 16 ug/L	19 ug/L (J)	14 ug/L (J)	16 ug/L (J)	14 ug/L (J)	16 ug/L (J)	< 14 ug/L	14 ug/L (J)	
Isopropylbenzene	2.6	NE	NE	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	
Methyl tert-butyl ether	11,070	NE	NE	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	
Naphthalene	3.1	140	NE	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	
p-Xylene	NE	NE	NE	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	
m-Xylene	NE	NE	NE	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	
Toluene	2	1,700	57	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	0.34 ug/L (J)	< 0.2 ug/L	0.62 ug/L (J)	0.24 ug/L (J)	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	
Xylenes, Total	3.3	1,100	70,000	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	

NE = Not Established

ug/L = micrograms per liter

Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is an approximate value between the laboratory method detection limit (MDL) and reporting limit (RL).

Freshwater Screening Benchmarks, as outlined in the Biological Technical Assistance Group (BTAG) Screening Values established by USEPA Region 3

Fresh and Aquatic Life Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

Human Health Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

■ Detection, Below Screening Benchmark

■ Detection, No Screening Benchmark

■ Non-Detect

PROJ-051861 | Upper Makefield Response

Preliminary Laboratory Results: Surface Water

PROJ-051861 | Upper Makefield Response

Data Updated at: 8/13/2025 5:27:13 PM

				UMPA0330W006	UMPA0406W006	UMPA0413W006	UMPA0420W006	UMPA0427W006	UMPA0427W006	UMPA0504W006	UMPA0511W006	UMPA0518W006	UMPA0525W006	UMPA0601W006	UMPA0608W006	UMPA0615W006	UMPA0622W006	UMPA0629W006	UMPA0706W006	UMPA0713W006	UMPA0713W006	UMPA0720W006	UMPA0727W006
				3/30/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	4/6/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	4/13/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	4/20/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	4/27/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	4/27/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	5/4/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	5/11/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	5/18/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	5/25/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	6/1/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	6/8/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	6/15/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	6/22/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	6/29/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	7/6/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	7/13/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	7/13/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	7/20/2025 W006 Delaware River - at pipeline crossing/Houghs Creek	7/27/2025 W006 Delaware River - at pipeline crossing/Houghs Creek
USEPA Region 3 BTAG	Criteria Maximum Concentration (ug/L) ¹	Human Health Criteria (ug/L) ²	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Duplicate	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample with MS/MSD	Field Duplicate	Field Sample	Field Sample	Field Sample	
Analyte																							
1,2-Dichloroethane	300	15,000	3.9	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L	< 0.13 ug/L		
1,2,4-Trimethylbenzene	33	NE	72	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L		
1,3,5-Trimethylbenzene	71	NE	72	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L		
Benzene	370	640	0.58	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L	< 0.16 ug/L		
Diesel Range Organics	NE	NE	NE	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L	< 270 ug/L		
Ethylbenzene	90	2,500	58	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L		
Gasoline Range Organics	NE	NE	NE	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L	< 12 ug/L		
Isopropylbenzene	2.6	NE	NE	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L	< 0.19 ug/L		
Methyl tert-butyl ether	11,070	NE	NE	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L	< 0.17 ug/L		
Naphthalene	3.1	140	NE	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L	< 0.22 ug/L		
p-Xylene	NE	NE	NE	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L	< 0.39 ug/L		
m-Xylene	NE	NE	NE	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L		
Toluene	2	1,700	57	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L	< 0.2 ug/L		
Xylenes, Total	3.1	1,100	70,000	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L	< 0.33 ug/L		

NE = Not Established

ug/L = micrograms per liter

Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is an approximate value between the laboratory method detection limit (MDL) and reporting limit (RL).

Freshwater Screening Benchmarks, as outlined in the Biological Technical Assistance Group (BTAG) Screening Values established by USEPA Region 3

Fresh and Aquatic Life Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

Human Health Criteria, as outlined in the Water Quality Criteria for Toxic Substances (Table 5) established by the Commonwealth of Pennsylvania in Title 25 of the Pennsylvania Code, Chapter 93: Water Quality Standards (25 Pa. Code § 93.8c)

■ Detection, Below Screening Benchmark

■ Detection, No Screening Benchmark

■ Non-Detect