

ANNEX A

TITLE 25. ENVIRONMENTAL PROTECTION
 PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION
 Subpart C. PROTECTION OF NATURAL RESOURCES
 ARTICLE II. WATER RESOURCES

**CHAPTER 16. WATER QUALITY TOXICS MANAGEMENT STRATEGY—
 STATEMENT OF POLICY**

**Subchapter A. GUIDELINES FOR DEVELOPMENT OF CRITERIA
 FOR TOXIC SUBSTANCES AND WATER QUALITY CRITERIA
 FOR TOXIC SUBSTANCES**

APPENDIX A

TABLE 1A

SITE-SPECIFIC WATER QUALITY CRITERIA FOR TOXIC SUBSTANCES

The following table contains water quality criteria that were developed based on a need for a site-specific water quality criterion, and according to the guidelines for criteria development, as contained in this chapter. The sources the Department of Environmental Protection (Department) uses to obtain relevant risk assessment values for these criteria include, but is not limited to, United States Environmental Protection Agency agency-wide supported data systems such as Integrated Risk Information System (IRIS) and ECOTOX; the Great Lakes' Tier II [aquatic] **aquatic** life criteria guidelines; and other nationally developed criteria as reviewed and approved by the Department for Statewide use. A criterion placed in this table will remain a site-specific criterion as originally developed and be incorporated into the appropriate portion of § § 93.9a—93.9z that relates to “exceptions to specific criteria” unless, during rulemaking, it is determined that the same criteria has general Statewide applicability.

		<i>Fish and [Aquatic] Aquatic Life Criteria</i>						
		Criteria Continuous	Criteria Maximum	Human Health Criteria				
PP NO	Chemical Name	CAS Number	Concentrations [(ug/l)] (ug/L)	Concentration [(ug/l)] (ug/L)	[(ug/l)]	Health Effect	Drainage List	Water Body/County
[-	1,4 Dioxane	123911	103000	515000	3.0	CRL	F	West Branch Perkiomen Creek, Berks

-	Acrylamide	79061	N/A	N/A	.008	CRL	S	County Stump Creek, Henderson Township, Jefferson County]
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Acronyms and Footnotes to Table 1A

CAS—Chemical Abstract Service number

CRL—Cancer risk level at 1×10^{-6}

H—Threshold effect human health criterion; incorporates additional uncertainty factor for some Group C carcinogens.

ln [H]—Natural Logarithm of the Hardness of stream as mg/l CaCO₃

ug/L—Micrograms per liter

N/A—Criterion not developed

PP NO—Priority Pollutant Number

TABLE 2A

APPROVED EPA AND DEP ACCREDITED ANALYTICAL METHODS AND
DETECTION LIMITS: INORGANICS

Parameter (CAS)	Method Number (Description) *Source	Detection Limit (MDL) (<u>µg/[1]L</u>)

11M	SILVER (07440224)	3111 B or C (AA, flame) 10
		3113 B (AA, furnace) 0.2
		200.7 (ICP/AES) 2
		200.8 (ICP/MS) 0.1
		200.9 (STGFAA) 0.6
		—* ³ (DCP) NA
		<u>200.7 (ICP/AES)</u> <u>0.01</u>
=	<u>STRONTIUM</u> <u>(07440246)</u>	<u>200.8 (ICP/MS)</u> <u>2.0</u>
		<u>6010B (ICP/AES)</u> <u>0.01</u>
		<u>6020(ICP/MS)</u> <u>1.0</u>

TABLE 2B

APPROVED EPA **AND DEP ACCREDITED** ANALYTICAL METHODS AND
DETECTION LIMITS: ORGANICS

Parameter (CAS)	Method Number (Description) *Source	Detection Limit (MDL) ($\mu\text{g}/\text{I} \text{L}$)

=	<u>BENZENE</u> <u>METADISULFONIC ACID</u> <u>(00098486)</u>	<u>OR 357A Test</u> <u>America, HPLC/UV</u> <u>50</u> <u>or LC/MS/MS</u>
=	<u>BENZENE</u> <u>MONOSULFONIC ACID</u> <u>(00098113)</u>	<u>OR 357A Test</u> <u>America, HPLC/UV</u> <u>50</u> <u>or LC/MS/MS</u>
1A	2-CHLOROPHENOL (00095578)	604—GC/FID 0.31 604—GC/ECD 0.58 625—GC/MS 3.3 1625B— 10 GC/MS(isotope)

7A	4-NITROPHENOL (00100027)	604—GC/FID 2.8 604—GC/ECD 0.70 625—GC/MS 2.4 1625B— 50 GC/MS(isotope)
=	<u>NONYLPHENOL</u> <u>(00104405)</u>	<u>7065-06M—GC/MS</u> <u>D7485-09 –</u> <u>2.0</u> <u>LC/LC/TANDEM</u> <u>.033</u> <u>MS</u>

10A	PHENOL (00108952)	604—GC/FID 0.14 604—GC/ECD 2.2 625—GC/MS 1.5 1625B— 10 GC/MS(isotope)

=	<u>P-PHENOL SULFONIC</u>	<u>OR 357A Test</u>	
	<u>ACID</u>	<u>America, HPLC/UV</u>	<u>50</u>
	<u>(00098679)</u>	<u>or LC/MS/MS</u>	
=	<u>RESORCINOL</u>	<u>8270D—GC/MS</u>	<u>100</u>
	<u>(01084603)</u>		
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3V	BENZENE	602—GC/PID	0.20
	(00071432)	624—GC/MS	4.4
		1624B—	10
		GC/MS(isotope)	
=	<u>BENZYL CHLORIDE</u>	<u>8021B—GC</u>	<u>1.0</u>
	<u>(00100447)</u>	<u>8260B—GC/MS</u>	<u>.005-5.0</u>
5V	BROMOFORM	601—GC/Hal.	0.20
	(00075252)	624—GC/MS	4.7
		1624B—	10
		GC/MS(isotope)	
=	<u>2-BUTOXYETHANOL</u>	<u>EPA R5/6LC –</u>	
	<u>(00111762)</u>	<u>LC/MS/MS</u>	<u>125</u>
		<u>(DIRECT INJECT)</u>	
	* * * * *		
26V	1,2-trans- DICHLOROETHYLENE	601—GC/Hal.	0.10
	(00156605)	624—GC/MS	1.6
		1624B—	10
		GC/MS(isotope)	
=	<u>1,2-cis- DICHLOROETHYLENE</u>	<u>601—GC/Hal.</u>	<u>0.10</u>
	<u>(00156592)</u>	<u>624—GC/MS</u>	<u>1.6</u>
		<u>1624B—</u>	<u>10</u>
		<u>GC/MS(isotope)</u>	
	* * * * *		
29V	TRICHLOROETHYLENE	601—GC/Hal.	0.12
	(00079016)	624—GC/MS	1.9
		1624B—	10
		GC/MS(isotope)	
=	<u>1,2,4- TRIMETHYLBENZENE</u>	<u>524.2 – GC/MS</u>	<u>0.5</u>
	<u>(00095636)</u>	<u>624 – GC/MS</u>	<u>1.0</u>
		<u>8021B—GC</u>	<u>1.0</u>
		<u>8260B—GC/MS</u>	<u>2.0</u>
=	<u>1,3,5-</u>	<u>524.2 – GC/MS</u>	<u>0.5</u>

	<u>TRIMETHYLBENZENE</u>	<u>624 – GC/MS</u>	<u>1.0</u>
	<u>(00108678)</u>	<u>8021B—GC</u>	<u>1.0</u>
		<u>8260B—GC/MS</u>	<u>2.0</u>

		610—GC/FID	NA
2B	ACENAPHTHYLENE	610—HPLC	2.3
	(00208968)	625—GC/MS	3.5
		1625B—	10
		GC/MS(isotope)	

=	<u>ACRYLAMIDE</u>	<u>8032A (GC)</u>	<u>.032</u>
	<u>(00079061)</u>	<u>8316 (HPLC)</u>	<u>10</u>

		610—GC/FID	NA
18B	CHRYSENE	610—HPLC	0.15
	(00218019)	625—GC/MS	2.5
		1625B—	10
		GC/MS(isotope)	

=	<u>CYCLOHEXYLAMINE</u>	<u>8270B—GC/MS</u>	<u>.01</u>
	<u>(00108918)</u>		

		606—GC/ECD	3.0
29B	DI-N-OCTYL PHTHALATE	625—GC/MS	2.5
	(00117840)	1625B—	10
		GC/MS(isotope)	

=	<u>1,4-DIOXANE</u>	<u>624—GC/MS</u>	<u>1.0</u>
	<u>(00123911)</u>	<u>625—GC/MS</u>	<u>5.0</u>
		<u>8260B —GC/MS</u>	<u>0.1</u>
		<u>8270L—GC/MS</u>	<u>0.2</u>
