

Pennsylvania (Chapter 252) Accreditation
Fields of Proficiency Testing
Non-Potable Water
Effective April 28, 2012

<i>Matrix</i>	<i>Analyte</i> ⁷	<i>PTRL</i>	<i>Units</i>		<i>Matrix</i>	<i>Analyte</i> ⁷	<i>PTRL</i>	<i>Units</i>
	Microbiology					Misc. Analytes		
NPW	Total Coliform, MF	2	CFU/100mL		DW/NPW	Acidity, as CaCO ₃ ⁸ *	585	mg/L
NPW	Fecal Coliform, MF	2	CFU/100mL		NPW	Color *	1.7	PC units
NPW	E.coli, MF	2	CFU/100mL		DW/NPW	Non-Filterable Residue (TSS) ⁸	14	mg/L
NPW	Enterococci, MF	2	CFU/100mL		NPW	pH	N/A	N/A
					NPW	Total Cyanide	0.01	mg/L
NPW	Total Coliform, MPN	2	MPN/100 mL		DW/NPW	Total Phenolics (4AAP) ⁸	0.01	mg/L
NPW	Fecal Coliform, MPN	2	MPN/100 mL		NPW	Total Residual Chlorine	0.36	mg/L
NPW	E.coli, MPN	2	MPN/100 mL		NPW	Settleable solids *	2.9	mL/L
NPW	Enterococci, MPN	2	MPN/100 mL		NPW	Silica as SiO ₂ *	38	mg/L
					NPW	Surfactants - MBAS	0.1	mg/L
	Minerals				NPW	Turbidity *	1.2	NTU
NPW	Alkalinity, total (CaCO ₃)	6.8	mg/L		NPW	Volatile solids, Total *	41	mg/L
NPW	Bromide *	0.56	mg/L					
NPW	Calcium	2.7	mg/L			Demands		
NPW	Chloride	29	mg/L		DW/NPW	5-day BOD ⁸	4.5	mg/L
NPW	Fluoride	0.13	mg/L		DW/NPW	Carbonaceous BOD ⁸	3.7	mg/L
NPW	Calcium hardness as CaCO ₃	6.8	mg/L		DW/NPW	COD ⁸	17	mg/L
NPW	Hardness, total (CaCO ₃)	8.4	mg/L		NPW	TOC	4.8	mg/L
NPW	Magnesium	1.6	mg/L					
NPW	Potassium	3	mg/L			Low Level Analytes ¹		
NPW	Sodium	5.1	mg/L		NPW	Mercury ¹	9.7	ng/L
NPW	Spec. Cond. (25°C)	170	µmhos/cm		NPW	Total Residual Chlorine ¹	15	µg/L
NPW	Sulfate	2.8	mg/L					
DW/NPW	Sulfide ⁸	0.1	mg/L					
NPW	Total Dissolved Solids at 180°C	98	mg/L					
DW/NPW	Total Solids ⁸	106	mg/L					
	Nutrients							
DWNPW	Ammonia as N ⁸	0.35	mg/L					
NPW	Nitrate as N	0.19	mg/L					
NPW	Nitrate-nitrite as N	0.2	mg/L					
NPW	Nitrite as N	0.28	mg/L					
NPW	Orthophosphate as P	0.34	mg/L					
DW/NPW	Total Kjeldahl-Nitrogen ⁸	1.1	mg/L					
DW/NPW	Total Phosphorus ⁸	0.34	mg/L					

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	Trace Metals						Volatile Ketones/Ethers		
NPW	Aluminum	130	µg/L			NPW	2-Hexanone *	4.4	µg/L
NPW	Antimony	55	µg/L			NPW	4-Methyl-2-pentanone (MIBK)	4.3	µg/L
NPW	Arsenic	54	µg/L			NPW	Methyl tert-butyl ether (MTBE) *	9	µg/L
NPW	Barium	86	µg/L						
NPW	Beryllium	5.3	µg/L				Volatile Halocarbons		
NPW	Boron	660	µg/L			NPW	Bromodichloromethane	5	µg/L
NPW	Cadmium	5.9	µg/L			NPW	Bromoform	5.6	µg/L
NPW	Chromium, total	12	µg/L			NPW	Bromomethane	8	µg/L
NPW	Chromium VI	31	µg/L			NPW	Carbon tetrachloride	6	µg/L
DW/NPW	Cobalt ⁸	22	µg/L			NPW	Chloroethane	8	µg/L
NPW	Copper	32	µg/L			NPW	Chloroform	8.1	µg/L
NPW	Iron	170	µg/L			NPW	Chloromethane	8	µg/L
NPW	Lead	54	µg/L			NPW	Dibromochloromethane	7.2	µg/L
NPW	Manganese	60	µg/L			NPW	1,1-Dichloroethane *	6.4	µg/L
NPW	Mercury	1.2	µg/L			NPW	1,2 Dichloroethane	6.8	µg/L
NPW	Molybdenum	45	µg/L			NPW	1,1-Dichloroethene	6.1	µg/L
NPW	Nickel	65	µg/L			NPW	cis-1,2-Dichloroethene *	7	µg/L
NPW	Selenium	67	µg/L			NPW	trans-1,2-Dichloroethene	3.6	µg/L
NPW	Silver	21	µg/L			NPW	1,2-Dichloropropane	5.9	µg/L
DW/NPW	Strontium ⁸	22	µg/L			NPW	cis-1,3-Dichloropropene *	5.1	µg/L
NPW	Thallium	21	µg/L			NPW	trans-1,3-Dichloropropene	3.9	µg/L
DW/NPW	Tin ⁸	790	µg/L			NPW	Methylene Chloride	5.8	µg/L
DW/NPW	Titanium ⁸	67	µg/L			NPW	Styrene	13	µg/L
NPW	Vanadium	47	µg/L			NPW	1,1,2,2-Tetrachloroethane	3.9	µg/L
NPW	Zinc	83	µg/L			NPW	Tetrachloroethene	4.3	µg/L
						NPW	1,1,1-Trichloroethane	6.5	µg/L
	Volatile Aromatics					NPW	1,1,2-Trichloroethane	17	µg/L
NPW	Benzene	4.6	µg/L			NPW	Trichloroethene	6.2	µg/L
NPW	Chlorobenzene	7.1	µg/L			NPW	Trichlorofluoromethane	8	µg/L
NPW	1,2-Dichlorobenzene ²	4.9	µg/L			NPW	Vinyl chloride	8	µg/L
NPW	1,3-Dichlorobenzene ²	5.2	µg/L						
NPW	1,4-Dichlorobenzene ²	4.9	µg/L				Volatile Petroleum Hydrocarbons		
NPW	Ethylbenzene	5.8	µg/L			NPW	Gasoline range organics (GRO) *	55	µg/L
NPW	Naphthalene ^{2 *}	6.3	µg/L						
NPW	Toluene	4.9	µg/L						
NPW	1,2,4-Trichlorobenzene ^{2 *}	4.3	µg/L						
NPW	Xylenes, total	10	µg/L						

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	Base/Neutrals						Base/Neutrals (cont.)		
NPW	Acenaphthene	5.6	µg/L			NPW	2-Methylnaphthalene	3.5	µg/L
NPW	Acenaphthylene	3	µg/L			NPW	Naphthalene ²	10	µg/L
NPW	Anthracene	4.9	µg/L			NPW	Nitrobenzene	7.2	µg/L
NPW	Benzidine	20	µg/L			NPW	N-Nitrosodimethylamine	7.5	µg/L
NPW	Benzo(a)anthracene	3.9	µg/L			NPW	N-Nitroso-di-n-propylamine	4.8	µg/L
NPW	Benzyl butyl phthalate	5	µg/L			NPW	N-Nitrosodiphenylamine	6.4	µg/L
NPW	Benzo(b)fluoranthene	5.8	µg/L			NPW	Phenanthrene	15	µg/L
NPW	Benzo(k)fluoranthene	5	µg/L			NPW	Pyrene	9.6	µg/L
NPW	Benzo(g,h,i)perylene	2.9	µg/L			NPW	1,2,4-Trichlorobenzene ²	5	µg/L
NPW	Benzo(a)pyrene	6.4	µg/L						
NPW	4-Bromophenyl-phenylether	8.1	µg/L				Acids		
NPW	bis(2-Chloroethoxy)methane	3.6	µg/L			NPW	4-Chloro-3-methylphenol	10	µg/L
NPW	bis(2-Chloroethyl)ether	4.8	µg/L			NPW	2-Chlorophenol	10	µg/L
NPW	bis(2-Chloroisopropyl) ether	9.6	µg/L			NPW	2,4-Dichlorophenol	11	µg/L
NPW	4-Chlorophenyl-phenylether	9.9	µg/L			NPW	2,6-Dichlorophenol *	15	µg/L
NPW	2-Chloronaphthalene	5.4	µg/L			NPW	2,4-Dimethylphenol	10	µg/L
NPW	Chrysene	5.2	µg/L			NPW	2,4-Dinitrophenol	10	µg/L
NPW	Dibenzo(a,h)anthracene	4.9	µg/L			NPW	2-Methyl-4,6-Dinitrophenol	14	µg/L
NPW	Dibenzofuran	11	µg/L			NPW	2-Methylphenol (o-Cresol)	9.5	µg/L
NPW	1,2-Dichlorobenzene ²	3	µg/L			NPW	4-Methylphenol (p-Cresol) ³	5	µg/L
NPW	1,3-Dichlorobenzene ²	4.5	µg/L			NPW	2-Nitrophenol	16	µg/L
NPW	1,4-Dichlorobenzene ²	3	µg/L			NPW	4-Nitrophenol	10	µg/L
NPW	3,3'-Dichlorobenzidine	10	µg/L			NPW	Phenol	10	µg/L
NPW	Diethyl phthalate	10	µg/L			NPW	Pentachlorophenol	11	µg/L
NPW	Dimethyl phthalate	10	µg/L			NPW	2,4,5-Trichlorophenol	19	µg/L
NPW	Di-n-butyl phthalate	14	µg/L			NPW	2,4,6-Trichlorophenol	16	µg/L
NPW	2,4-Dinitrotoluene	5.3	µg/L						
NPW	2,6-Dinitrotoluene	6.7	µg/L				PCBs in Water ⁴		
NPW	Di-n-octyl phthalate	14	µg/L			NPW	Aroclor 1016 ⁴	1.4	µg/L
NPW	bis(2-Ethylhexyl) phthalate	6.6	µg/L			NPW	Aroclor 1221 ⁴	0.13	µg/L
NPW	Fluoranthene	14	µg/L			NPW	Aroclor 1232 ⁴	0.61	µg/L
NPW	Fluorene	10	µg/L			NPW	Aroclor 1242 ⁴	1.4	µg/L
NPW	Hexachlorobenzene	7.7	µg/L			NPW	Aroclor 1248 ⁴	0.6	µg/L
NPW	Hexachlorobutadiene	5	µg/L			NPW	Aroclor 1254 ⁴	0.64	µg/L
NPW	Hexachlorocyclopentadiene	10	µg/L			NPW	Aroclor 1260 ⁴	0.62	µg/L
NPW	Hexachloroethane	5	µg/L						
NPW	Indeno(1,2,3, cd)pyrene	4.3	µg/L						
NPW	Isophorone	13	µg/L						

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	Organochlorine Pesticides						Low Level Polyaromatic Hydrocarbons (PAHs) ¹		
NPW	Aldrin	0.17	µg/L			NPW	Acenaphthene ^{1*}	0.79	µg/L
NPW	alpha-BHC	0.6	µg/L			NPW	Acenaphthylene ^{1*}	0.73	µg/L
NPW	beta-BHC	0.77	µg/L			NPW	Anthracene ^{1*}	0.14	µg/L
NPW	delta-BHC	0.57	µg/L			NPW	Benzo(a)anthracene ^{1*}	0.2	µg/L
NPW	gamma-BHC (Lindane)	0.74	µg/L			NPW	Benzo(a)pyrene ^{1*}	0.21	µg/L
NPW	alpha-Chlordane	0.43	µg/L			NPW	Benzo(b)fluoranthene ^{1*}	0.25	µg/L
NPW	gamma-Chlordane	0.55	µg/L			NPW	Benzo(g,h,i)perylene ^{1*}	0.18	µg/L
NPW	Chlordane (total)	1.1	µg/L			NPW	Benzo(k)fluoranthene ^{1*}	0.22	µg/L
NPW	4,4'-DDD	0.97	µg/L			NPW	Chrysene ^{1*}	0.23	µg/L
NPW	4,4'-DDE	0.84	µg/L			NPW	Dibenz(a,h)anthracene ^{1*}	0.1	µg/L
NPW	4,4'-DDT	0.38	µg/L			NPW	Fluoranthene ^{1*}	0.25	µg/L
NPW	Dieldrin	0.43	µg/L			NPW	Fluorene ^{1*}	0.74	µg/L
NPW	Endosulfan I	0.83	µg/L			NPW	Indeno(1,2,3-cd)pyrene ^{1*}	0.2	µg/L
NPW	Endosulfan II	1.4	µg/L			NPW	Naphthalene ^{1*}	0.56	µg/L
NPW	Endosulfan sulfate	0.69	µg/L			NPW	Phenanthrene ^{1*}	0.24	µg/L
NPW	Endrin	0.85	µg/L			NPW	Pyrene ^{1*}	0.28	µg/L
NPW	Endrin aldehyde	0.93	µg/L						
NPW	Endrin ketone *	2	µg/L				Radiochemistry		
NPW	Heptachlor	0.33	µg/L			DW/NPW	Gross Alpha ¹¹	3	pCi/L
NPW	Heptachlor Epoxide (beta)	0.42	µg/L			DW/NPW	Gross Beta ¹¹	3	pCi/L
NPW	Methoxychlor	0.4	µg/L			DW/NPW	Iodine-131 ¹¹	2.1	pCi/L
NPW	Toxaphene	2	µg/L			DW/NPW	Radium-226 ¹¹	0.86	pCi/L
						DW/NPW	Radium-228 ¹¹	0.88	pCi/L
	Herbicides					DW/NPW	Natural Uranium ¹¹	1.2	pCi/L
NPW	2,4-D	0.2	µg/L			DW/NPW	Uranium (mass) ¹¹	2	ug/L
NPW	Dicamba	0.2	µg/L			DW/NPW	Strontium-89 ¹¹	3.8	pCi/L
NPW	2,4,5-T	0.2	µg/L			DW/NPW	Strontium-90 ¹¹	1.4	pCi/L
NPW	2,4,5-TP (Silvex)	0.2	µg/L			DW/NPW	Tritium ¹¹	760	pCi/L
	Petroleum Hydrocarbons						Gamma Emitters		
NPW	Diesel range organics (DRO) *	80	µg/L			DW/NPW	Barium-133 ^{9,11}	6.4	pCi/L
DW/NPW	n-Hexane Extractable Material (O&G) ^{5,8}	8.8	mg/L			DW/NPW	Cesium-134 ^{9,10,11}	6.6	pCi/L
DW/NPW	non-Polar Extractable Material (TPH) ^{6,8}	7.6	mg/L			DW/NPW	Cesium-137 ^{9,10,11}	16	pCi/L
						DW/NPW	Cobalt-60 ^{9,11}	7.2	pCi/L
						DW/NPW	Zinc-65 ^{9,11}	25	pCi/L

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*) Identifies new Fields of Proficiency Testing.
1) The Low Level Analytes are specifically intended for technologies/methods that can achieve the listed PTRL. Laboratories analyzing routine environmental samples using technologies/methods that can achieve the listed PTRLs must analyze the Low Level Analyte PT samples.
2) Analysis required per volatile analytical technologies and solvent extraction/semivolatile analytical technologies.
3) Laboratories seeking or maintaining accreditation for Non-Potable Water 4-Methylphenol or the coeluting isomer pair of 3-Methylphenol and 4-Methylphenol must meet the PT requirements for this Field of Proficiency Testing (4-Methylphenol).
4) Laboratories must analyze and report results for all Arochlors in an individual PT study. Incorrect identification or quantitation of one Arochlor will result in failure for the group.
5) n-Hexane Extractable Material (HEM) per solvent extraction followed by gravimetric or infrared spectrometric analysis (Oil & Grease).
6) non-Polar Extractable Material per solvent extraction and Silica Gel Treated (SGT) followed by gravimetric or infrared spectrometric analysis (Total Petroleum Hydrocarbons).
7) All FoPTs must meet the design, verification, homogeneity, stability, and acceptance limits described in V3 of the TNI Standard and the TNI FoPT Tables.
8) Laboratories seeking to obtain or maintain accreditation for these analytes in the DW matrix must successfully perform a PT in the Non-Potable Water Matrix, also known as a WP study.
9) Laboratories seeking or maintaining accreditation for Gamma (Photon) Emitters must meet PT requirements for all Gamma Emitter analytes in the Fields of Proficiency Testing in a given PT study, by technology/method (Barium-133, Cesium-134, Cesium-137, Cobalt-60, Zinc-65).
10) Laboratories seeking or maintaining accreditation for Radioactive Cesium must meet PT requirements for both Radioactive Cesium analytes in the Fields of Proficiency Testing in a given PT study, by technology/method (Cesium-134, Cesium-137).
11) Laboratories seeking to obtain or maintain accreditation for these analytes in the NPW matrix must successfully perform a PT in the Drinking Water Matrix, also known as a WS study.