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Fields of Proficiency Testing with PTRLs

Non-Potable Water (NPW)

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			Red = Previous Experimental Analytes/Footnotes		Blue = New Analyte/Footnote			Magenta = Changes	
Matrix	EPA Analyte Code	NELAC Analyte Code	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	NELAC PTRL [7]
			Microbiology	CFU/100 mL					CFU/100 mL
NPW	0233	2500	Total Coliform, MF [8]	20 to 2400	Log transform; ±3 SD				2
NPW	0235	2530	Fecal Coliform, MF [8]	20 to 2400	Log transform; ±3 SD				2
NPW		2525	E.coli, MF [8]	20 to 2400	Log transform; ±3 SD				2
NPW		2520	Enterococci, MF [8]	20 to 1000	Log transform; ±3 SD				2
				MPN/100 mL					MPN/100 mL
NPW	0234	2500	Total Coliform, MPN [9]	20 to 2400	Log transform; ±3 SD				2
NPW	0236	2530	Fecal Coliform, MPN [9]	20 to 2400	Log transform; ±3 SD				2
NPW		2525	E.coli, MPN [9]	20 to 2400	Log transform; ±3 SD				2
NPW		2520	Enterococci, MPN [9]	20 to 1000	Log transform; ±3 SD				2
			Trace Metals	µg/L					µg/L
NPW	0001	1000	Aluminum	200 to 4000	0.9919	4.2186	0.0513	12.2782	130
NPW	0016	1005	Antimony	95 to 900	0.959	-3.6479	0.0779	3.2351	55
NPW	0002	1010	Arsenic	70 to 900	1.0062	-0.7508	0.0529	1.408	54
NPW	0237	1015	Barium	100 to 2500	0.9986	-0.6148	0.0433	0.0448	86
NPW	0003	1020	Beryllium	8 to 900	0.991	-0.6177	0.046	0.278	5.3
NPW		1025	Boron	800 to 2000	0.9815	13.987	0.0603	-3.4879	660
NPW	0004	1030	Cadmium	8 to 750	0.994	0.2323	0.0463	0.3919	5.9
NPW	0006	1040	Chromium, total	17 to 1000	1.0015	-0.2586	0.042	0.7988	12
NPW	0238	1045	Chromium VI	45 to 880	0.9974	-1.1203	0.0575	1.5828	31
NPW	0005	1050	Cobalt	28 to 1000	1.0002	-0.281	0.0395	0.4922	22
NPW	0007	1055	Copper	40 to 900	1.0031	-0.089	0.0296	1.2415	32
NPW	0008	1070	Iron	200 to 4000	1.0056	1.1497	0.039	2.0258	170
NPW	0012	1075	Lead	70 to 3000	0.9974	0.2778	0.0377	2.5294	54
NPW	0010	1090	Manganese	70 to 4000	1.0059	-1.1375	0.0351	0.3422	60
NPW	0009	1095	Mercury [10a]	2.0 to 30	0.9772	0.0995	0.1211	0.0262	1.2
NPW	0074	1100	Molybdenum	60 to 600	0.9950	-0.0183	0.0445	2.1345	45
NPW	0011	1105	Nickel	80 to 3000	1.0125	-1.6585	0.0333	2.0479	65
NPW	0013	1140	Selenium	90 to 2000	0.9774	-1.2658	0.0594	1.0204	67
NPW	0017	1150	Silver	26 to 600	1.0024	-0.2284	0.0475	0.1752	21
NPW	0075	1160	Strontium	30 to 300	1.0025	-0.2355	0.0390	1.1644	22
NPW	0018	1165	Thallium	60 to 900	1.0109	-4.1903	0.0495	8.6236	21
NPW	0239	1175	Tin	1000 to 5000	1.005	-6.8244	0.073	-4.266	790
NPW	0076	1180	Titanium	80 to 300	0.9927	0.075	0.042	0.577	67
NPW	0014	1185	Vanadium	55 to 2000	0.9969	0.1627	0.0399	0.3403	47
NPW	0015	1190	Zinc	100 to 2000	1.0014	2.1592	0.0464	1.5819	83

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			Demands [10b]	mg/L					mg/L
NPW	0038	1530	5-day BOD [10c]	15 to 250	0.6312	0.1919	0.1032	0.167	4.5
NPW	0102	1555	Carbonaceous BOD [10c]	15 to 250	0.5423	0.2956	0.0996	0.0697	3.7
NPW	0036	1565	COD [10d]	30 to 250	0.9517	0.4748	0.0471	2.4507	17
NPW	0037	2040	TOC [10e]	6.0 to 100	0.9904	0.1647	0.0508	0.1115	4.8
			Minerals	mg/L					mg/L
NPW	0027	1505	Alkalinity, total ($CaCO_3$)	10 to 120	0.9775	1.2668	0.0223	1.1905	6.8
NPW		1540	Bromide	1.0 to 10	1.0098	-0.0533	0.0400	0.0912	0.56
NPW	0023	1035	Calcium	3.5 to 110	1.0135	0.0036	0.0377	0.1333	2.7
NPW	0028	1575	Chloride	35 to 275	0.9941	0.5826	0.0415	0.5513	29
NPW	0029	1730	Fluoride	0.3 to 4	1.0029	-0.0032	0.0423	0.0401	0.13
NPW		1550	Calcium hardness as CaCO3	8.7 to 275	1.0135	0.0090	0.0377	0.3328	6.8
NPW	0022	1755	Hardness, total ($CaCO_3$)	17 to 440	See footnote 11				8.4
NPW	0024	1085	Magnesium	2.0 to 40	1.0056	-0.0744	0.0483	0.0094	1.6
NPW	0026	1125	Potassium	4.0 to 40	1.0104	-0.0582	0.0569	0.1131	3.0
NPW	0025	1155	Sodium	6.0 to 100	0.9949	0.2127	0.0487	0.0668	5.1
NPW	0020	1610	Spec. Cond. (25°C)	200 to 930 µmhos/cm	study mean		0.0263	3.5534	170 µmhos/cm
NPW	0030	2000	Sulfate	5.0 to 125	0.9854	0.0483	0.0471	0.4629	2.8
NPW		2005	Sulfide	1.0 to 10	0.9657	-0.1271	0.1205	0.2816	0.10
NPW	0021	1955	Total Dissolved Solids at 180°C	140 to 650	study mean		0.0686	4.3676	98
NPW	0105	1950	Total Solids	140 to 675	0.9875	1.789	0.0107	9.594	106
			Nutrients	mg/L					mg/L
NPW	0031	1515	Ammonia as N	0.65 to 19	0.9866	0.0806	0.0775	0.0738	0.35
NPW	0032	1810	Nitrate as N	0.25 to 40	0.9921	0.0096	0.0708	0.0050	0.19
NPW		1820	Nitrate-nitrite as N	0.25 to 40	0.9879	0.0080	0.0575	0.0053	0.20
NPW		1840	Nitrite as N	0.4 to 4.0	1.0021	-0.0056	0.0432	0.0214	0.28
NPW	0033	1870	Orthophosphate as P	0.5 to 5.5	1.0026	0.0055	0.0537	0.0268	0.34
NPW	0034	1795	Total Kjeldahl-Nitrogen [10f]	1.5 to 35	0.9645	0.1885	0.1035	0.0225	1.1
NPW	0035	1910	Total Phosphorus	0.5 to 10	1.0014	0.0224	0.0553	0.0320	0.34

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			Misc. Analytes	mg/L					mg/L
NPW		1500	Acidity, as CaCO3	650 to 1800	±10% fixed acceptance limit				585
NPW		1605	Color	10 to 75 PC units	0.9474	0.6098	0.0367	2.4407	1.7 PC units
NPW	0072	1960	Non-Filterable Residue	23 to 100	0.9728	-0.6338	0.0300	1.5793	14
NPW	0019	1900	pH [10g]	5.0 to 10 units	± 0.2 units fixed acceptance limit				Not applicable
NPW	0071	1645	Total Cyanide [10h]	0.1 to 1	0.9931	0.0052	0.0922	0.0234	0.010
NPW	0097	1905	Total Phenolics (4AAP) [10i]	0.06 to 5	0.6618	0.0001	0.0975	0.003	0.010
NPW	0098	1940	Total Residual Chlorine	0.5 to 3.0	0.9643	0.0186	0.0848	0.0027	0.36
NPW		1965	Settleable solids	5.0 to 50 mL/L	1.0436	-0.0108	0.0597	0.4546	2.9 mL/L
NPW		1990	Silica as SiO2	50 to 250	±25% fixed acceptance limit				38
NPW		2025	Surfactants - MBAS	0.2 to 1.0	1.0421	-0.0068	0.1326	0.0046	0.10
NPW		2055	Turbidity [10j]	2.0 to 30 NTU	1.0040	-0.0368	0.0475	0.1575	1.2 NTU
NPW		1970	Volatile solids, Total	100 to 500	0.9644	-4.7559	0.0182	14.9450	41
			Low Level Analytes [12]						
NPW		1095	Mercury [10a]	20 to 100 ng/L	0.9910	0.2064	0.0432	2.5774	9.7 ng/L
NPW		1940	Total Residual Chlorine	75 to 250 µg/L	1.0000	0.0000	0.0000	20.0000	15 µg/L

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			Volatile Aromatics [1]	µg/L					µg/L
NPW	0065	4375	Benzene	8.0 to 120	0.9947	0.1003	0.0832	0.4709	4.6
NPW	0064	4475	Chlorobenzene	10 to 120	0.9830	0.2498	0.0867	0.1251	7.1
NPW	0094	4610	1,2-Dichlorobenzene	8.0 to 100	0.9963	-0.0300	0.0971	0.2351	4.9
NPW	0096	4615	1,3-Dichlorobenzene	9.0 to 125	0.9776	-0.1210	0.0949	0.2922	5.2
NPW	0095	4620	1,4-Dichlorobenzene	8.0 to 115	0.9569	0.5677	0.0901	0.3965	4.9
NPW	0066	4765	Ethylbenzene	9.0 to 100	0.9748	0.2941	0.0927	0.2538	5.8
NPW	0222	5005	Naphthalene	15 to 150	0.8785	1.4343	0.1335	0.7561	6.3
NPW	0067	5140	Toluene	7.0 to 100	0.9651	0.5102	0.0908	0.1429	4.9
NPW	0092	5155	1,2,4-Trichlorobenzene	15 to 150	0.9160	-1.3028	0.1473	0.5100	4.3
NPW	0242	5260	Xylenes, total [13]	20 to 300	0.9498	1.1598	0.1232	0.7309	10
			Volatile Ketones/Ethers [1]	µg/L					µg/L
NPW		4860	2-Hexanone	20 to 200	1.0054	-1.1748	0.1534	1.7764	4.4
NPW		4995	4-Methyl-2-pentanone (MIBK)	20 to 200	0.9906	-0.7774	0.1482	1.9461	4.3
NPW		5000	Methyl tert-butyl ether (MTBE)	15 to 150	1.0233	-0.3620	0.1112	0.3083	9.0

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			Volatile Halocarbons [1]	µg/L					µg/L
NPW	0060	4395	Bromodichloromethane	8.0 to 115	1.0357	-0.4163	0.1057	0.0858	5.0
NPW	0062	4400	Bromoform	11 to 100	1.0311	-1.2680	0.1201	0.1464	5.6
NPW	0243	4950	Bromomethane	20 to 100	± 60% fixed acceptance limit				8.0
NPW	0058	4455	Carbon tetrachloride	10 to 140	0.9443	0.6895	0.1362	-0.0042	6.0
NPW	0244	4485	Chloroethane	20 to 100	± 60% fixed acceptance limit				8.0
NPW	0055	4505	Chloroform	12 to 95	0.9782	0.7000	0.0944	0.2960	8.1
NPW	0245	4960	Chloromethane	20 to 100	± 60% fixed acceptance limit				8.0
NPW	0061	4575	Dibromochloromethane	11 to 140	1.0106	-0.3030	0.1066	0.0429	7.2
NPW		4630	1,1-Dichloroethane	10 to 150	0.9977	0.2117	0.1227	0.0174	6.4
NPW	0054	4635	1,2 Dichloroethane	10 to 150	0.9944	0.6439	0.0996	0.2430	6.8
NPW	0246	4640	1,1-Dichloroethene	11 to 120	0.9755	0.4917	0.1558	-0.0034	6.1
NPW		4645	cis-1,2-Dichloroethene	10 to 150	0.9973	0.3699	0.1095	0.0036	7.0
NPW	0247	4700	trans-1,2-Dichloroethene	10 to 150	0.9923	0.4034	0.1103	1.1416	3.6
NPW	0248	4655	1,2-Dichloropropane	10 to 150	0.9845	0.1804	0.1062	0.2955	5.9
NPW		4680	cis-1,3-Dichloropropene	10 to 150	0.9704	-0.5083	0.0943	0.4146	5.1
NPW	0249	4685	trans-1,3-Dichloropropene	8.0 to 90	1.0191	-1.2898	0.1180	0.0196	3.9
NPW	0063	4975	Methylene Chloride	10 to 125	0.9904	0.7613	0.1244	0.3606	5.8
NPW		5100	Styrene	20 to 100	1.0019	0.1069	0.1268	-0.3703	13
NPW	0250	5110	1,1,2,2-Tetrachloroethane	10 to 150	1.0143	0.6507	0.1343	0.9582	3.9
NPW	0059	5115	Tetrachloroethene	10 to 150	0.9416	-0.5063	0.1189	0.3441	4.3
NPW	0056	5160	1,1,1-Trichloroethane	10 to 90	0.9579	0.7134	0.1131	0.1383	6.5
NPW	0251	5165	1,1,2-Trichloroethane	25 to 150	0.9818	0.9864	0.0979	0.2099	17
NPW	0057	5170	Trichloroethene	10 to 95	0.9611	0.5720	0.1077	0.2478	6.2
NPW	0252	5175	Trichlorofluoromethane	20 to 100	± 60% fixed acceptance limit				8.0
NPW	0253	5235	Vinyl chloride	20 to 100	± 60% fixed acceptance limit				8.0
			Volatile Petroleum Hydrocarbons	µg/L					µg/L
NPW		9408	Gasoline range organics (GRO) [14]	400 to 4000	1.0683	-7.7234	0.2162	35.0439	55

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			Base/Neutrals [1]	µg/L					µg/L
NPW	0189	5500	Acenaphthene	10 to 200	0.7692	2.3467	0.1308	0.1433	5.6
NPW	0190	5505	Acenaphthylene	10 to 200	0.799	0.6883	0.13	0.6054	3.0
NPW	0192	5555	Anthracene	10 to 200	0.8168	1.6860	0.1344	0.3049	4.9
NPW	0176	5595	Benzidine	200 to 1000	1.167	-12.268	0.579	-0.301	20
NPW	0177	5575	Benzo(a)anthracene	10 to 200	0.8592	0.1699	0.1324	0.2827	3.9
NPW	0254	5670	Benzyl butyl phthalate	50 to 200	0.8086	-0.1081	0.1818	2.8651	5.0
NPW	0178	5585	Benzo(b)fluoranthene	20 to 125	0.8568	0.2258	0.1503	0.8321	5.8
NPW	0179	5600	Benzo(k)fluoranthene	25 to 200	0.8223	1.996	0.1862	1.126	5.0
NPW	0180	5590	Benzo(g,h,i)perylene	20 to 200	0.8717	-0.4162	0.1406	1.8871	2.9
NPW	0255	5580	Benzo(a)pyrene	20 to 160	0.7547	2.2185	0.1551	0.5266	6.4
NPW	0198	5660	4-Bromophenyl-phenylether	20 to 200	0.8099	2.3636	0.1677	0.1142	8.1
NPW	0195	5760	bis(2-Chloroethoxy)methane	10 to 200	0.7828	0.898	0.128	0.4366	3.6
NPW	0196	5765	bis(2-Chloroethyl)ether	10 to 200	0.712	3.7209	0.154	0.48	4.8
NPW	0197	5780	bis(2-Chloroisopropyl) ether	30 to 200	0.6943	4.2457	0.1580	0.4258	9.6
NPW	0204	5825	4-Chlorophenyl-phenylether	25 to 200	0.7921	1.9652	0.1413	0.4139	9.9
NPW	0203	5795	2-Chloronaphthalene	20 to 200	0.7526	0.4699	0.1461	0.4542	5.4
NPW	0181	5855	Chrysene	10 to 200	0.8153	2.8201	0.1454	0.4654	5.2
NPW	0182	5895	Dibenzo(a,h)anthracene	20 to 100	0.8191	1.4972	0.1766	0.7749	4.9
NPW		5905	Dibenzofuran	30 to 125	0.7594	3.6744	0.1427	0.5944	11
NPW		4610	1,2-Dichlorobenzene	30 to 150	0.6396	1.9392	0.1644	1.4848	3.0
NPW		4615	1,3-Dichlorobenzene	30 to 150	0.6206	2.4567	0.1696	0.4375	4.5
NPW		4620	1,4-Dichlorobenzene	30 to 150	0.6238	2.0966	0.1693	1.4687	3.0
NPW	0185	5945	3,3'-Dichlorobenzidine	60 to 200	0.901	-0.5596	0.199	2.5071	10
NPW	0208	6070	Diethyl phthalate	65 to 170	0.7492	3.3637	0.1805	2.0213	10
NPW	0209	6135	Dimethyl phthalate	100 to 180	0.6375	3.9631	0.2524	0.8174	10
NPW	0205	5925	Di-n-butyl phthalate	40 to 180	0.7665	5.1677	0.1519	1.1586	14
NPW	0186	6185	2,4-Dinitrotoluene	20 to 190	0.7893	1.5498	0.1311	1.3861	5.3
NPW	0210	6190	2,6-Dinitrotoluene	20 to 190	0.8382	-0.5125	0.1354	0.4540	6.7
NPW	0211	6200	Di-n-octyl phthalate	40 to 190	0.7877	6.3589	0.2174	-0.7312	14
NPW	0256	6065	bis(2-Ethylhexyl) phthalate	20 to 200	0.7960	3.9523	0.1698	1.0070	6.6
NPW	0212	6265	Fluoranthene	30 to 190	0.7829	4.1019	0.1195	0.7518	14
NPW	0213	6270	Fluorene	30 to 190	0.7942	1.7962	0.1083	1.8219	10
NPW	0214	6275	Hexachlorobenzene	20 to 190	0.8153	1.5416	0.1227	0.9249	7.7
NPW	0215	4835	Hexachlorobutadiene	50 to 180	0.6286	2.6591	0.1616	1.9082	5.0
NPW	0216	6285	Hexachlorocyclopentadiene	100 to 225	0.6216	-4.4226	0.2049	4.3222	10
NPW	0217	4840	Hexachloroethane	50 to 190	0.6260	1.5100	0.1722	0.6725	5.0
NPW	0218	6315	Indeno(1,2,3, cd)pyrene	30 to 125	0.7650	1.1259	0.1377	2.4614	4.3
NPW	0219	6320	Isophorone	30 to 140	0.8256	1.6016	0.1489	0.0824	13
NPW		6385	2-Methylnaphthalene	30 to 190	0.6340	4.4846	0.1349	2.6122	3.5

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			Base/Neutrals [1] cont'	µg/L					µg/L
NPW	0222	5005	Naphthalene	30 to 190	0.6879	4.2817	0.1513	0.2921	10
NPW	0226	5015	Nitrobenzene	20 to 190	0.7413	2.4610	0.1470	0.3946	7.2
NPW	0227	6530	N-Nitrosodimethylamine	75 to 200	0.532	0.7787	0.202	1.4455	7.5
NPW	0230	6545	N-Nitroso-di-n-propylamine	30 to 140	0.7646	2.2742	0.1370	2.6637	4.8
NPW	0229	6535	N-Nitrosodiphenylamine	30 to 200	0.776	1.9604	0.178	0.9231	6.4
NPW	0231	6615	Phenanthrene	30 to 140	0.7965	3.7050	0.1194	0.4330	15
NPW	0187	6665	Pyrene	30 to 200	0.8196	2.682	0.161	1.062	9.6
NPW	0092	5155	1,2,4-Trichlorobenzene	35 to 180	0.6923	1.5037	0.1490	1.3815	5.0
			Acids [1]	µg/L					µg/L
NPW	0161	5700	4-Chloro-3-methylphenol	30 to 200	0.845	-0.891	0.146	0.3823	10
NPW	0162	5800	2-Chlorophenol	30 to 200	0.754	2.2054	0.163	-0.185	10
NPW	0163	6000	2,4-Dichlorophenol	40 to 190	0.7618	1.8795	0.1392	1.4585	11
NPW		6005	2,6-Dichlorophenol	40 to 200	0.7512	3.7563	0.1564	0.0312	15
NPW	0165	6130	2,4-Dimethylphenol	65 to 200	0.77	-0.7906	0.174	1.0376	10
NPW	0167	6175	2,4-Dinitrophenol	100 to 180	0.6531	3.5920	0.1695	8.5727	10
NPW	0168	6360	2-Methyl-4,6-Dinitrophenol	60 to 200	0.9582	-10.24	0.1756	0.4841	14
NPW		6400	2-Methylphenol (o-Cresol)	50 to 200	0.6983	1.6107	0.1704	0.4833	9.5
NPW		6410	4-Methylphenol (p-Cresol) [15]	50 to 200	0.6531	2.1854	0.2008	0.7807	5.0
NPW	0171	6490	2-Nitrophenol	50 to 190	0.7650	0.8551	0.1948	-2.1253	16
NPW	0173	6500	4-Nitrophenol	100 to 180	0.5591	-1.0075	0.2511	1.9409	10
NPW	0174	6625	Phenol	100 to 200	0.557	0.5929	0.253	1.0269	10
NPW	0158	6605	Pentachlorophenol	55 to 200	0.849	-3.1159	0.178	1.0189	11
NPW	0175	6835	2,4,5-Trichlorophenol	50 to 200	0.7760	4.7287	0.1503	0.4511	19
NPW	0159	6840	2,4,6-Trichlorophenol	50 to 200	0.7640	2.6926	0.1479	0.9226	16

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Matrix	EPA Analyte Code	NELAC Analyte Code	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	NELAC PTRL [7]
			PCBs in Water [2]	µg/L					µg/L
NPW	0040	8880	Aroclor 1016	3.8 to 13	0.8344	0.081	0.2101	-0.1922	1.4
NPW	0041	8885	Aroclor 1221	1 to 15	0.7867	0.2517	0.2005	0.1023	0.13
NPW	0042	8890	Aroclor 1232	1.4 to 4	0.9463	-0.0779	0.3325	-0.2539	0.61
NPW	0040	8895	Aroclor 1242	3.8 to 13	0.8344	0.081	0.2101	-0.1922	1.4
NPW	0044	8900	Aroclor 1248	1.5 to 5.5	0.9327	-0.0919	0.1699	-0.0187	0.60
NPW	0045	8905	Aroclor 1254	1.7 to 5.5	0.8622	0.114	0.1129	0.1214	0.64
NPW	0046	8910	Aroclor 1260	1.6 to 5	0.9507	-0.1281	0.1087	0.085	0.62
			Organochlorine Pesticides [1]	µg/L					µg/L
NPW	0047	7025	Aldrin	0.5 to 15.0	0.8245	0.0361	0.1824	0.0020	0.17
NPW	0079	7110	alpha-BHC	2.0 to 15	0.9027	-0.0286	0.1395	0.1128	0.60
NPW	0080	7115	beta-BHC	2.0 to 15	0.8729	0.1076	0.1494	0.0605	0.77
NPW	0081	7105	delta-BHC	2.0 to 15	0.8960	-0.0924	0.1650	0.0440	0.57
NPW	0082	7120	gamma-BHC (Lindane)	2.0 to 15	0.8868	0.0496	0.1549	0.0485	0.74
NPW		7240	alpha-Chlordane	1.0 to 9.8	0.8846	0.0940	0.1442	0.0369	0.43
NPW		7245	gamma-Chlordane	1.2 to 7.8	0.8643	0.1274	0.1555	0.0157	0.55
NPW	0053	7250	Chlordane (total)	3.0 to 25	0.9080	0.0288	0.1774	0.0125	1.1
NPW	0049	7355	4,4'-DDD	2.0 to 10.0	0.8735	0.1655	0.1739	0.0166	0.97
NPW	0050	7360	4,4'-DDE	2.0 to 10.0	0.8586	0.0716	0.1349	0.0458	0.84
NPW	0051	7365	4,4'-DDT	1.0 to 10	0.8798	0.1065	0.1692	0.0325	0.38
NPW	0048	7470	Dieldrin	1.0 to 13	0.9229	0.0173	0.1415	0.0280	0.43
NPW	0083	7510	Endosulfan I	4.0 to 17	0.9252	-0.5541	0.1932	-0.0031	0.83
NPW	0084	7515	Endosulfan II	4.0 to 20	0.7859	0.4000	0.1682	0.0173	1.4
NPW	0085	7520	Endosulfan sulfate	2.0 to 20	0.9216	-0.0333	0.1790	0.0136	0.69
NPW	0086	7540	Endrin	2.0 to 20	0.9005	0.1935	0.1886	0.0033	0.85
NPW	0087	7530	Endrin aldehyde	4.0 to 20	0.8812	0.1766	0.1825	0.1917	0.93
NPW		7535	Endrin ketone	4.0 to 20	0.8951	0.3702	0.1135	0.1902	2.0
NPW	0052	7685	Heptachlor	1.0 to 10	0.8358	0.0592	0.1710	0.0174	0.33
NPW	0078	7690	Heptachlor Epoxide (beta)	1.0 to 10	0.9449	0.0145	0.1448	0.0339	0.42
NPW	0234	7810	Methoxychlor	2.0 to 15	0.9125	0.1018	0.2095	0.0902	0.40
NPW	0241	8250	Toxaphene	20 to 100	0.8500	0.1293	0.3186	0.0039	2.0

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			Herbicides [1]	µg/L					µg/L
NPW	0257	8545	2,4-D	2 to 10	0.7510	0.1195	0.2675	0.1049	0.20
NPW	0258	8595	Dicamba	2 to 10	0.759	0.059	0.214	0.0954	0.20
NPW	0140	8655	2,4,5-T	2 to 10	0.783	-0.0043	0.205	0.1616	0.20
NPW	0259	8650	2,4,5-TP (Silvex)	2 to 10	0.7987	0.0112	0.2001	0.1190	0.20
			Low Level Polyaromatic Hydrocarbons (PAHs) [1]	µg/L					µg/L
NPW		5500	Acenaphthene	2.0 to 20	0.7600	0.1476	0.1456	0.0021	0.79
NPW		5505	Acenaphthylene	2.0 to 20	0.7856	0.0418	0.1133	0.0687	0.73
NPW		5555	Anthracene	0.5 to 5.0	0.8151	0.0194	0.1714	0.0115	0.14
NPW		5575	Benzo(a)anthracene	0.5 to 5.0	0.9012	-0.0236	0.0614	0.0462	0.20
NPW		5580	Benzo(a)pyrene	0.5 to 5.0	0.7745	0.0824	0.1162	0.0270	0.21
NPW		5585	Benzo(b)fluoranthene	0.5 to 5.0	0.8217	0.0544	0.1167	0.0144	0.25
NPW		5590	Benzo(g,h,i)perylene	0.5 to 5.0	0.7683	0.0737	0.1641	0.0088	0.18
NPW		5600	Benzo(k)fluoranthene	0.5 to 5.0	0.8943	-0.0069	0.1245	0.0108	0.22
NPW		5855	Chrysene	0.5 to 5.0	0.8883	0.0132	0.1046	0.0235	0.23
NPW		5895	Dibenz(a,h)anthracene	0.5 to 5.0	0.7914	0.0640	0.1377	0.0520	0.10
NPW		6265	Fluoranthene	0.5 to 5.0	0.8565	0.0211	0.1064	0.0128	0.25
NPW		6270	Fluorene	2.0 to 10	0.7863	0.0472	0.1153	0.0631	0.74
NPW		6315	Indeno(1,2,3-cd)pyrene	0.5 to 5.0	0.8224	0.0623	0.1316	0.0267	0.20
NPW		5005	Naphthalene	2.0 to 10	0.7279	0.0977	0.1251	0.0803	0.56
NPW		6615	Phenanthrene	0.5 to 5.0	0.8332	0.0256	0.1099	0.0118	0.24
NPW		6665	Pyrene	0.5 to 5.0	0.8468	0.0435	0.1023	0.0095	0.28
			Petroleum Hydrocarbons						
NPW		9369	Diesel range organics (DRO) [16]	800 to 6000 µg/L	0.7790	-96.0467	0.1386	109.1897	80 µg/L
NPW	0104	1860	n-Hexane Extractable Material (O&G) [10k,17]	20 to 200 mg/L	0.9400	-0.4116	0.0545	2.0789	8.8 mg/L
NPW		1935	non-Polar Extractable Material (TPH) [18]	20 to 200 mg/L	0.9692	-1.1573	0.1586	0.3709	7.6 mg/L

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1) For volatiles, base/neutrals, acids, organochlorine pesticides, herbicides and low level PAHs, providers must include a minimum number of analytes using the criteria described below:									
PT samples that are to be scored for one to ten analytes must include all of these analytes.									
PT samples that are to be scored for ten to twenty analytes must include at least ten of these analytes or 80% ot the total, whichever number is greater.									
PT samples that are to be scored for more than twenty analytes must include at least sixteen of these analytes or 60% ot the total, whichever number is greater.									
If the calculated percentage of the total number of analytes in the PT sample is a fraction, the fraction shall be rounded up to the next whole number.									
2) One sample (minimum) in every study, containing one Aroclor, selected at random from among the Aroclors listed above.									
3) Acceptance limits are set at the Mean ± 3 SD									
Where the a, b, c and d factors are presented, Mean = a*T + b; SD = c*T + d where T is the assigned value.									
Where only the c and d factors are presented, Mean = Robust Study Mean; SD = c*X + d where X is the Robust Study Mean.									
Where no factors are presented (Study Mean ±3SD), Mean = Robust Study Mean, SD = Robust Study Standard Deviation.									
Robust Study Mean and Standard Deviation are generated using statistical analysis of study data set. (ie. Bi-weight, Grubbs, Dixon, etc.)									
Quantitative Microbiology acceptance criteria are based on the robust participant Mean and SD determined from each respective PT study.									
4) If the lower acceptance limit generated using the criteria contained in this table is less than (<) 10% of the assigned value, the lower acceptance limits are set at 10% of the assigned value with the exception of microbiology analytes.									
5) If the lower acceptance limit generated using the criteria contained in this table is greater than 90% of the assigned value, the lower acceptance limits are set at 90% of the assigned value with the exception of microbiology analytes.									
6) If the upper acceptance limit generated using the criteria contained in this table is less than 110% of the assigned value, the upper acceptance limits are set at 110% of the assigned value with the exception of microbiology analytes.									
7) NELAC Proficiency Testing Reporting Limits (PTRLs) are provided as guidance to laboratories analyzing NELAC PT samples. These levels are the lowest acceptable results that could be obtained from the lowest spike level for each analyte. The laboratory should report any positive result down to the PTRL. It is recognized that in some cases (especially for analytes that typically exhibit low recovery) the PTRL may be below the standard laboratory reporting limit. However, the laboratory should use a method that is sensitive enough to generate results at the PTRL shown. NELAC PTRLs are also provided as guidance to PT Providers. At a minimum for all analytes with an assigned value equal to "0", the PT Provider should verify that the sample does not contain the analyte at a concentration greater than or equal to the PTRL.									
8) These limits are for quantitative methods using membrane filtration techniques.									
9) These limits are for quantitative methods using most probable number techniques.									

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			10) The following recommended sample designs, which were used in past USEPA studies, should be used as model designs because other designs may not give equivalent statistics. PT study providers may vary their sample designs from those shown. The specifics within each sample are within the discretion of the PT study Provider.						
			a) Design criterion for Mercury – 1:1 (mole:mole as Hg) Mercuric Oxide and Methyl Mercuric Chloride.						
			b) Design criteria for Demands – 1:1 Glucose and Glutamic Acid.						
			c) Design criteria for 5-Day BOD and Carbonaceous BOD – The assigned value used for BOD and CBOD is the known concentration in mg/Liter of Glucose - Glutamic Acid present in the sample ready for analysis.						
			d) Design criterion for Chemical Oxygen Demand – The assigned value of COD is (1.066 times mg Glucose plus 0.9787 times mg Glutamic Acid) divided by total liters of sample adjusted for required dilutions.						
			e) Design criterion for Total Organic Carbon – The assigned value of TOC is (0.4000 times mg Glucose plus 0.4082 times mg Glutamic Acid) divided by total liters of sample adjusted for required dilutions.						
			f) Design criterion for Total Kjeldahl Nitrogen – Glycine is the source of TKN.						
			g) Design criterion for pH – in separate solution (use buffer formulation from chemical handbook).						
			h) Design criterion for Total Cyanide – Potassium Ferricyanide.						
			i) Design criterion for Total Phenolics (4AAP) – 40% Phenol, 20% 2-Chlorophenol, 20% 2,4-Dinitrophenol, 20% 2,4-Dichlorophenol (mole %), calculated as mg/L Phenol.						
			j) Design criterion for Turbidity - Formazin is the source for Turbidity.						
			k) Design criterion for Oil and Grease – 1:1 Paraffin oil and cooking oil.						
			11) The Acceptance Criteria for Hardness, total (CaCO3) is a function of the Lower Acceptance Limit (LAL) and Upper Acceptance Limit (UAL) of both Calcium and Magnesium and are calculated as follows: Lower Acceptance Limit = Ca LAL*2.497 + Mg LAL*4.118 Upper Acceptance Limit = Ca UAL*2.497 + Mg UAL*4.118						
			12) The Low Level Analytes' concentration ranges and acceptance criteria are specifically intended for technologies/methods that can achieve the listed PTRL.						
			13) Volatiles Aromatics must contain all three Xylene isomers. The concentration range of o-Xylene and m&p-Xylene is 10-150 µg/L each.						
			14) Gasoline Range Organics (GRO) per purge-and-trap extraction followed by chromatographic analysis. GRO is defined as the carbon range between n-C5 and n-C10.						

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15) Laboratories seeking or maintaining NELAP accreditation for Non-Potable Water 4-Methylphenol or the coeluting isomer pair of 3-Methylphenol and 4-Methylphenol must meet the NELAC PT requirements for this Field of Proficiency Testing (4-Methylphenol).									
16) Diesel Range Organics (DRO) per solvent extraction followed by chromatographic analysis. DRO is defined as the carbon range between n-C_{10} and n-C_{28}.									
17) n-Hexane Extractable Material (HEM) per solvent extraction followed by gravimetric or infrared spectrometric analysis (Oil & Grease).									
18) non-Polar Extractable Material per solvent extraction and Silica Gel Treated (SGT) followed by gravimetric or infrared spectrometric analysis (Total Petroleum Hydrocarbons).									