TNI Chemistry FoPT Subcommittee Meeting Summary November 10, 2009

1. Roll call and Meeting Minutes:

Co-Chair Carl Kircher called the Chemistry FoPT Subcommittee to order on November 10, 2009, at 12pm EST. Attendance is recorded in Attachment A. Carl needed to leave the meeting at 1pm and co-chair Brian Boling lead the meeting after his departure.

The minutes from the November 3, 2009 meeting were distributed and reviewed. Stephen motioned to accept the minutes and Stacie seconded this motion. They were unanimously approved. They will be forwarded to the webmaster for posting on the TNI website.

2. PT Acceptance Limits

The subcommittee started work on the DW PAH/Phthalate/Adipate category. They worked through the determination of limits for a number of compounds as described below, but realized that the limits they were setting might be inappropriate. This information is included in the minutes for reference at the next meeting, but the limits will not be considered final until further discussion at the 11/17/09 meeting. Additional detail can be found below.

PAH / Phthalate / Adipate

Acenaphthene

Chuck would recommend leaving it at 50-150% fixed or using the regression equation.

Motion: 1-10 ug/L with 50-150% fixed limits. It must be noted that R^2 does not pass. Motion: Stephen Second: Stacie Vote: 6 – Yes. 2 Abstentions.

Acenaphthylene

There were 13 studies that went down to 10. Jeff suggested the use of a regression equation and 1-10 ug/L concentration.

Motion: Use recommended regression equation (Table distributed by Jeff Lowry via e-mail on 11/6/09) and a concentration range of 1-10 ug/L. Motion: Eric Second: Chuck Vote: 7 – Yes 1 - No

Anthracene

Passes all criteria. Jeff suggested the use of a regression equation and 1-10 ug/L concentration. Fixed limits would not really work on this.

Motion: Use recommended regression equation (Table distributed by Jeff Lowry via e-mail on 11/6/09) and a concentration range of 1-10 ug/L. Motion: Eric Second: Chuck Vote: Yes – 8 Unanimous

Benzo(a)anthracene

Passes all criteria. Jeff suggested the use of a regression equation and 1-10 ug/L concentration.

Motion: Use recommended regression equation (Table distributed by Jeff Lowry via e-mail on 11/6/09) and a concentration range of 1-10 ug/L Motion: Eric Second: Chuck Vote: Yes – 8 Unanimous

Chuck asked about whether the subcommittee is working with +/-2 or 3 standard deviations? If we are working with +/-2 – they will be too tight. Some will be within the +/-10-20% range. Chuck commented that this seemed too tight. The limits were 50-150% and now we are substantially tightening the limits at +/-2 standard deviations. They are significantly tighter than the method LCS limits. (525.2 has a fixed LCS limit of 70-130%.) Chuck suggested adding a footnote: If the regression equation calculates a lower limit greater than 70% it should be set at 70% and if the calculated limit is less than 130% it should be set at 130%.

Jeff suggested looking at a fixed limit of +/-40%. Naphthalene has the most alarming failure rate in looking at the list of these compounds. Maybe you need something different here. Perhaps all PAH should be moved over at +/-40%.

Stephen commented that if a regression is used, it should be used with no footnote.

A number of subcommittee members commented that they would like to retract their votes discussed above. They did not want to see limits that were tighter than LCS limits, but might be OK with limits that are wider if the data supports it. It was decided that the three options suggested would be sent out to the committee to vote on. The subcommittee would prefer to vote on all the PAHs as a group via email.

Addition 11/11/09:

Note: Stephen sent additional information via e-mail and Carl sent the following proposal to the subcommittee to consider via e-mail prior to the next meeting:

Dear Subcommittee Members:

Sorry I couldn't stay on the call yesterday. Here are my thoughts on what to do:

a. Consider each analyte individually.

b. My recommendation for concentration ranges is 1-10 ug/L for all PAH's except for Benzo(a)pyrene and Naphthalene, where we should use the different concentration ranges presented in the Table below.

- c. Have 4 voting choices:
- 1. Regression equations with the coefficients presented.
- 2. Fixed limits at +/- 40% of assigned value.

3. Fixed limits at 50-130% of assigned value (Steve Arpie's idea since some analytes show negative bias).

4. The regression equations with footnote as described: Acceptance Limits are calculated using the assigned value and the regression equation constants and set at the predicted mean +/- 2 X the predicted SD. If the calculated lower acceptance limit is greater than 70% of the Assigned Value the lower acceptance limit is set at 70% or the Assigned Value. If the calculated upper acceptance limit is less than 130% of the Assigned Value the upper acceptance limit is set at 130% of the Assigned Value the upper acceptance limit is set at 130% of the Assigned Value. (From Chuck's e-mail.)

d. Each Subcommittee member make two votes, choosing from 1-4 above for each analyte. Top choice gets double-score; second choice gets single-score. Total up the scores, and the highest score wins for the analyte.

Compound	Grouping	Concen (ug	tration /L)	SOP Fixed Limits Test a, b & d Pass	Suggested Fixed Limits Cal. Fixed Limit c*2	Comments
Acenaphthene	PolyaromaticNaphthenePolyaromaticHydrocarbons110Regress		Regression			
Acenaphthylene	Polyaromatic Hydrocarbons	1	10	Regression		Study data used n ≥ 5
Anthracene	Polyaromatic Hydrocarbons	1	10	Regression		
Benzo(a)anthracene	Polyaromatic Hydrocarbons	1	10	Regression		
Benzo(b)fluoranthene	Polyaromatic Hydrocarbons	1	10	Regression		

Note: Experimental Analytes are in red.

		Concen	tration	SOP Fixed Limits Test	Suggested Fixed Limits Cal. Fixed	
Compound	Grouping	(ug	/L)	a, b & d Pass	Limit c*2	Comments
Benzo (g,h,i)perylene	Polyaromatic Hydrocarbons	1	10	Fixed Limits	36.4%	
Benzo(k)fluoranthene	Polyaromatic Hydrocarbons	1	10	Regression		
Benzo(a)pyrene	Polyaromatic Hydrocarbons	<mark>0.2</mark>	<mark>2.5</mark>	Regression		
Chrysene	Polyaromatic Hydrocarbons	1	10	Fixed Limits	27.6%	
Dibenz(a,h)anthracene	Polyaromatic Hydrocarbons	1	10	Fixed Limits	40.1%	
Fluoranthene	Polyaromatic Hydrocarbons	1	10	Regression		Study data used n ≥ 5
Fluorene	Polyaromatic Hydrocarbons	1	10	Regression		
Indeno(1,2,3- cd)pyrene	Polyaromatic Hydrocarbons	1	10	Regression		
Naphthalene	Polyaromatic Hydrocarbons	2	<mark>50</mark>	Regression		Study data used n ≥ 5
Phenanthrene	Polyaromatic Hydrocarbons	1	10	Regression		
Pyrene	Polyaromatic Hydrocarbons	1	10	Regression		Study data used n ≥ 5

3. NPW Table sent by Jeff Lowry on 11/6/09 (Attachment B)

Motion: Accept the NPW FoPT Table sent by Jeff Lowry on 11/6/09. The only changes to the table included the addition of the low level mercury and low level total residual chlorine, the addition of Footnote 15 and the striking of the reference to Footnote 21. The effective date will be January 1, 2010. Send on to the PT Board for approval.

Motion: Stephen Second: Jim Discussion: Chuck - Cautions that these limits don't actually reflect what you can see. Vote: 6 – Yes 1- No 1 –Abstention

Carl will forward the table to the PT Board with an introductory note. He will distribute a DRAFT to the subcommittee before he sends it to the PT Board. He will prepare and give people until Friday to make any comments.

3. New Items

None.

4. Next Meeting

The next meeting of the Chemistry FoPT Subcommittee will be November 17, 2009, at 12PM EST. We will be meeting weekly until the limit updates are complete.

Action Items are included in Attachment C and Attachment D includes a listing of reminders.

The meeting ended at 1:25pm EST

Attachment A

Participants TNI Chemistry FoPT Subcommittee

Members	Affiliation	Contact Information
Carl Kircher,	Florida DOH	904-791-1574
Co-Chair		carl_kircher@doh.state.fl.us
Present		
Brian Boling,	Oregon DEQ	
Co-Chai		Boling.Brian@deq.state.or.us
Present		
Amy Doupe	Lancaster Laboratories,	717-656-2300 x1812
	Inc.	aldoupe@lancasterlabs.com
Absent		
Jeff Lowry	ERA	303-431-8454
Present		jlowry@eraqc.com
Chuck Wibby	Wibby Environmental	303-940 -0033
		cwibby@wibby.com
Present		
Eric Smith	TestAmerica	615-726-0177 x1238
		eric.smith@testamericainc.com
Present		
Dan Tholen	A2LA	231-929-1721
		Tholen.dan@gmail.com
Absent		
Stephen Arpie	Absolute Standards, Inc.	203-281-2917
		stephenarpie@mac.com
Present		
Dan Dickinson	New York, DOH	518-485-5570
Abaant		dmd15@nealth.state.ny.us
		054 052 2254 2220
Stacey Fry	E.S. BABCOCK & Sons,	951-053-3351 X238
Prosont	Inc.	Siry@babcockiabs.com
		mounoir@nu.com
JIII		mouseji@nu.com
Present		
Ilona Taunton,	TNI	828-712-9242
Program Administrator		tauntoni@msn.com
Present		

Attachment B

NELAC PT for Accreditation Fields of Proficiency Testing with PTRLs Non-Potable Water (NPW) Effective January 1, 2010

Matrix EPA N Analyte A		NELAC e Analyte Code	EPA NELAC nalyte Analyte Code Code	EPA NELAC Analyte ^{1,2} nalyte Analyte		Conc Range	Acceptance Criteria 3,4,5,6				NELAC PTRL ⁷
	Code	Code			а	b	с	d			
									CFU/100		
			Microbiology	CFU/100 mL		Log transform:			mL		
	0233	2500	Total Coliform ME ¹³	20 to 2400		Log transform, +3 SD			2		
	0200	2000		20102400		Log transform:			2		
NPW	0235	2530	Fecal Coliform, MF ¹³	20 to 2400		±3 SD			2		
						Log transform;					
NPW		2525	E.coli, MF ¹³	20 to 2400		±3 SD			2		
		0500		001-1000		Log transform;			0		
NPW		2520	Enterococci, MF	20 to 1000		±3 SD			2 MDN/100		
				MPN/100 ml					ml		
						Log transform;					
NPW	0234	2500	Total Coliform, MPN ¹⁴	20 to 2400		±3 SD			2		
			44			Log transform;					
NPW	0236	2530	Fecal Coliform, MPN ¹⁴	20 to 2400		±3 SD			2		
		0505		20 to 2400		Log transform;			2		
INPVV		2525	E.COII, MIPIN	20 to 2400		±3 SD			Z		
NPW		2520	Enterococci, MPN ¹⁴	20 to 1000		±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 ¹²	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
			Demands ¹²	mg/L					mg/L
NPW	0038	1530	5-day BOD ¹²	15 to 250	0.6312	0.1919	0.1032	0.167	4.5
NPW	0102	1555	Carbonaceous BOD ¹²	15 to 250	0.5423	0.2956	0.0996	0.0697	3.7
NPW	0036	1565	COD ¹²	30 to 250	0.9517	0.4748	0.0471	2,4507	17
NPW	0037	2040	TOC ¹²	6.0 to 100	0.9904	0.1647	0.0508	0.1115	4.8
			Minerals Alkalinity total	mg/L					mg/L
NPW	0027	1505	$(CaCO_3)$	10 to 120	0.9775	1.2668	0.0223	1.1905	6.8
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	8.7 to 275	1.0135	0.0090	0.0377	0.3328	6.8

			CaCO3						
			Hardness, total						
NPW	0022	1755	(CaCO ₃)	17 to 440		See footnote 8			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
				200 to 930	study				
NPW	0020	1610	Spec. Cond. (25°C)	µmhos/cm	mean		0.0263	3.5534	170
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
			Total Dissolved Solids		study				
NPW	0021	1955	at 180°C	140 to 650	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 Total Kjeldahl-Nitrogen	0.5 to 5.5	1.0026	0.0055	0.0537	0.0268	0.34
NPW	0034	1795	12	1.5 to 35	0.9645	0.1885	0.1035	0.0225	1.1
NPW	0035	1910	Total Phosphorus ²⁴	0.5 to 10	1.0014	0.0224	0.0553	0.0320	0.34
			Misc. Analytes	mg/L					mg/L
NPW	0072	1960	Non-Filterable Residue	23 to 100	0.9728	-0.6338	0.0300	1.5793	14
NPW	0104	1860	Oil & Grease ¹²	20 to 100	0.9400	-0.4116	0.0545	2.0789	8.8
			Total Petroleum						
NPW		1935	Hydrocarbons ⁹	20 to 170	0.9692	-1.1573 ± 0.2 units fixed	0.1586	0.3709	7.6 Not
NPW	0019	1900	pH ¹²	5.0 to 10 units		acceptance limit			applicable
NPW	0071	1645	Total Cyanide ¹² Total Phenolics	0.1 to 1	0.9931	0.0052	0.0922	0.0234	0.01
NPW	0097	1905	(4AAP) ¹² Total Residual	0.06 to 5	0.6618	0.0001	0.0975	0.003	0.01
NPW	0098	1940	Chlorine	0.5 to 3.0	0.9643	0.0186	0.0848	0.0027	0.36
NPW		2025	Surfactants - MBAS	0.2 to 1.0	1.0421	-0.0068	0.1326	0.0046	0.10

Low Level Analytes

NPW		1095	Mercury ¹²	20 to 100 ng/L	0.9910	0.2064	0.0432	2.5774	9.7
NPW		1940	Total Residual Chlorine	50 to 250 µg/l	1 0000	0 0000	0 0000	20 0000	5.0
		1010		00 10 200 µg/2	1.0000	0.0000	0.0000	20.0000	0.0
			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 gamma-BHC	2.0 to 15	0.8960	-0.0924	0.1650	0.0440	0.57
NPW	0082	7120	(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	DDD (4,4)	2.0 to 10.0	0.8735	0.1655	0.1739	0.0166	0.97
NPW	0050	7360	DDE (4,4)	2.0 to 10.0	0.8586	0.0716	0.1349	0.0458	0.84
NPW	0051	7365	DDT (4,4)	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	0052	7685	Heptachlor Heptachlor Epoxide	1.0 to 10	0.8358	0.0592	0.1710	0.0174	0.33
NPW	0078	7690	(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
			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	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

	0066	4765	Ethylbenzene	9.0 to 100	0 9748	0 2041	0 0927	0 2538	5.8
	0000	4703 5140	Toluono	3.0 to 100	0.9740	0.2341	0.0321	0.2330	1.0
	0007	5140	Yulanaa tatal	7.0 to 100	0.9051	0.0102	0.0900	0.1429	4.9
INPVV	0242	5260	Aylenes, total	2010/300	0.9496	1.1596	0.1232	0.7309	10
			Volatile Halocarbons¹ Bromodichloromethan	µg/L					µg/L
NPW	0060	4395	е	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 ± 60% fixed	0.1201	0.1464	5.6
NPW	0243	4950	Bromomethane	20 to 100		acceptance limit			8.0
NPW	0058	4455	Carbon tetrachloride	10 to 140	0.9443	0.6895	0.1362	-0.0042	6.0
NPW	0064	4475	Chlorobenzene	10 to 120	0.9830	0.2498 ± 60% fixed	0.0867	0.1251	7.1
NPW	0244	4485	Chloroethane	20 to 100		acceptance limit			8.0
NPW	0055	4505	Chloroform	12 to 95	0.9782	0.7000 ± 60% fixed	0.0944	0.2960	8.1
NPW	0245	4960	Chloromethane Dibromochloromethan	20 to 100		acceptance limit			8.0
NPW	0061	4575	е	11 to 140	1.0106	-0.3030	0.1066	0.0429	7.2
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 trans-1,2-	11 to 120	0.9755	0.4917	0.1558	-0.0034	6.1
NPW	0247	4700	Dichloroethene	10 to 150	0.9923	0.4034	0.1103	1.1416	3.6
NPW	0248	4655	1,2-Dichloropropane trans-1,3-	10 to 150	0.9845	0.1804	0.1062	0.2955	5.9
NPW	0249	4685	Dichloropropene	8.0 to 90	1.0191	-1.2898	0.1180	0.0196	3.9
NPW	0063	4975	Methylene Chloride 4-Methyl-2-pentanone	10 to 125	0.9904	0.7613	0.1244	0.3606	5.8
NPW		4995	(MIBK)	20 to 200	0.9906	-0.7774	0.1482	1.9461	4.3
NPW		5100	Styrene 1,1,2,2-	20 to 100	1.0019	0.1069	0.1268	-0.3703	13
NPW	0250	5110	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 Trichlorofluoromethan	10 to 95	0.9611	0.5720 ± 60% fixed	0.1077	0.2478	6.2
NPW	0252	5175	e	20 to 100		acceptance limit			8.0

NPW	0253	5235	Vinyl chloride	20 to 100		± 60% fixed	ł		8.0
	0200	0200		2010 100			•		0.0
			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 4-Bromophenyl-	20 to 160	0.7547	2.2185	0.1551	0.5266	6.4
NPW	0198	5660	phenylether bis(2-	20 to 200	0.8099	2.3636	0.1677	0.1142	8.1
NPW	0195	5760	Chloroethoxy)methane	10 to 200	0.7828	0.898	0.128	0.4366	3.6
NPW	0196	5765	bis(2-Chloroethyl)ether bis(2-Chloroisopropyl)	10 to 200	0.712	3.7209	0.154	0.48	4.8
NPW	0197	5780	ether Bis(2-ethylhexyl)	30 to 200	0.6943	4.2457	0.1580	0.4258	9.6
NPW	0256	6255	phthalate 4-Chlorophenyl-	20 to 200	0.7960	3.9523	0.1698	1.0070	6.6
NPW	0204	5825	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 Dibenzo(a.h)anthracen	10 to 200	0.8153	2.8201	0.1454	0.4654	5.2
NPW	0182	5895	е	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 ¹⁰	30 to 150	0.6396	1.9392	0.1644	1.4848	3.0
NPW		4615	1,3-Dichlorobenzene ¹⁰	30 to 150	0.6206	2.4567	0.1696	0.4375	4.5
NPW		4620	1,4-Dichlorobenzene ¹⁰	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-butylphthalate	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-octylphthalate	40 to 190	0.7877	6.3589	0.2174	-0.7312	14
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 Hexachlorocyclopenta	50 to 180	0.6286	2.6591	0.1616	1.9082	5.0
NPW	0216	6285	diene	100 to 225	0.6216	-4.4226	0.2049	4.3222	10
NPW	0217	4840	Hexachloroethane Indeno(1,2,3,	50 to 190	0.6260	1.5100	0.1722	0.6725	5.0
NPW	0218	6315	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
NPW	0222	5005	Naphthalene	30 to 190	0.6879	4.2817	0.1513	0.2921	10
NPW	0226	5015	Nitrobenzene N-	20 to 190	0.7413	2.4610	0.1470	0.3946	7.2
NPW	0227	6530	Nitrosodimethylamine N-Nitroso-di-n-	75 to 200	0.532	0.7787	0.202	1.4455	7.5
NPW	0230	6545	propylamine N-	30 to 140	0.7646	2.2742	0.1370	2.6637	4.8
NPW	0229	6535	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 1,2,4-	30 to 200	0.8196	2.682	0.161	1.062	9.6
NPW	0092	5155	Trichlorobenzene	35 to 180	0.6923	1.5037	0.1490	1.3815	5.0
			Acids¹ 4-Chloro-3-	µg/L					µg/L
NPW	0161	5700	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	0165	6130	2,4-Dimethylphenol	65 to 200	0.77	-0.7906	0.174	1.0376	10
NPW	0167	6175	2,4-Dinitrophenol 2-Methyl-4,6-	100 to 180	0.6531	3.5920	0.1695	8.5727	10
NPW	0168	6360	Dinitrophenol 2-Methylphenol (o-	60 to 200	0.9582	-10.24	0.1756	0.4841	14
NPW		6400	Cresol)	50 to 200	0.6983	1.6107	0.1704	0.4833	9.5

			4-Methylphenol (p-						
NPW		6410	Cresol) ¹¹	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
			PCBs in Water ^{2,12}	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
			Herbicides ¹	µg/L					µg/L
NPW	0257	8545	2,4-D	2 to 10	0.7510	0.1195	0.2675	0.1049	0.2
NPW	0258	8595	Dicamba	2 to 10	0.759	0.059	0.214	0.0954	0.2
NPW	0140	8655	2,4,5-T	2 to 10	0.783	-0.0043	0.205	0.1616	0.2
NPW	0259	8650	2,4,5-TP (Silvex)	2 to 10	0.7987	0.0112	0.2001	0.1190	0.2

1) For volatiles, pesticides, base/neutrals, acids, and herbicides standards, providers must include a minimum number of analytes using the same criteria described in Chapter 2, Appendix B, Section B.1.2.

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 \pm 3 SD (Mean = a^{T} + b; SD = c^{T} + d where T is the

assigned value).

Quantitative Microbiology acceptance criteria are based on the robust participant Mean and SD determined from each respective PT study, after outlier removal.

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) 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

9) Total Petroleum Hydrocarbons per solvent extraction with silica gel clean-up followed by gravimetric or infrared spectrometric technologies.

10) Dichlorobenzenes per solvent extraction and semivolatile analytical technologies.

11) 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).

12) 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.

Ø Mercury – 1:1 (mole:mole as Hg) Mercuric Oxide and Methyl Mercuric Chloride.

Ø Demands - 1:1 Glucose and Glutamic Acid.

Ø 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.

Ø 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.

Ø 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.

Ø Total Kjeldahl Nitrogen – Glycine is the source of TKN.

Ø Total Cyanide – Potassium Ferricyanide.

Ø pH – in separate solution (use buffer formulation from chemical handbook).

Ø Total Phenolics (4AAP) – 40% Phenol, 20% 2-Chlorophenol, 20% 2,4-Dinitrophenol, 20% 2,4-Dichlorophenol (mole %), calculated as mg/L Phenol.

Ø Oil and Grease – 1:1 Paraffin oil and cooking oil.

Ø PCBs in Water – Two samples in every study, each containing a different Aroclor, selected at random from among the Aroclors listed.

Ø PCBS in Oil – Two samples in every study, each containing a different Aroclor, selected at random from among the Aroclors listed. All previous USEPA studies used transformer oil.

13) These limits are for quantitative methods using membrane filtration techniques.

14) These limits are for quantitative methods using most probable number techniques.

15) The Low Level Analytes' concentration ranges and acceptance criteria are specifically intended for technologies/methods that can achieve the listed PTRL.

Attachment C

	Action Item	Who	Expected Completion	Actual Completion
13.	Prepare letter to ABs to find out their needs on analytes that may be under consideration for deletion. (3/24/09 – It was determined that these tables are used by more than just ABs. This needs to be reconsidered.)	TBD	TBD	
19.	Request the final revision of the SOP #4- 001 Guidelines for Calculation of Acceptance Limits from the TNI PT Board.	Eric/Carl	5/5/09	Complete
22.	Prepare for upcoming meetings by reviewing evaluation files that Jeff will send every 2 weeks.	All	Ongoing	
34	Prepare tables with Experimental Analyte data.	Jeff	11/2/09	Complete
38	Low Level Mercury - Brian will see if there is anymore data below 20 ng/L and provide this to the subcommittee if it becomes available.	Brian	On-going	
39	Low Level Total Residual Chlorine - Brian will check with some of the other PT Providers to see if they have any more data.	Brian	11/17/09	
40	Prepare DRAFT letter to PT Board for approval of the NPW FoPT Table. Send to subcommittee for comment. Forward final table to PT Board.	Carl	11/13/09	
41	Prepare e-mail vote on DW PAH limits.	Ilona	11/11/09	Complete

Attachment D

	Backburner / Kenninders Chennistry For F Subcommittee					
	Item	Meeting Reference	Comments			
1	Review summary data to see if it supports a change in the acceptance criteria for DW analytes (For example, VOA, 30% instead of 20%). If data is supportive, Jeff Lowry will approach ELAB.	10-30-08	3/10/09 - Jeff has approached ELAB. They would be happy to put it in a work group – and pass it along with a letter to EPA. We need to provide them with the data.			
3	Consider changing the lower limit for Vanadium on WP to 50 ug/L.	6-30-09				
4						
5						

Backburner / Reminders – Chemistry FoPT Subcommittee