

**TNI Chemistry FoPT Subcommittee  
Meeting Summary  
January 5, 2010**

1. Roll call and Meeting Minutes:

Co-Chair Carl Kircher called the Chemistry FoPT Subcommittee to order on January 5, 2010, at 12:08pm EST. Attendance is recorded in Attachment A.

The minutes from the December 8<sup>th</sup>, 15<sup>th</sup> and 22<sup>nd</sup> meetings were reviewed for approval. Eric was added to the December 8<sup>th</sup> minutes as the person who made the motion for acceptance of the Volatile Solids, Total. Jeff motioned to accept these sets of minutes with the change above and Dan Dickinson seconded the motion. The motion was unanimously approved and these minutes will be posted on the TNI website.

2. DW FoPT Table

Jeff asked if someone could double check the PTRLs before the table is finalized. During the call, Dan Dickinson and Carl went through the table and confirmed all the PTRLs.

- Eric asked about Footnote 10. He reminded the group about a PT Board discussion.

From the PT Board, 3-19-09 minutes:

*The question, **How may unique ten-sample sets does this client have to purchase for this scenario?** Technically, all results (Total, Fecal, E. coli) are obtained from the analysis of one ten-sample set. Given the fact that 9221E and 9221F cannot be done independently from 9222B, I would hope that only one unique ten-sample set is required for these methods in this situation. But, if you read the way the footnote is written, it could be interpreted that 3 unique ten-sample sets are required, one for each of the three methods that are being certified. I do not believe that was the intent of this requirement.*

*After much discussion the final conclusion was that for the specific scenario presented above, only one unique ten sample set would need to be purchased. The discussion also prompted Eric to submit a revision on the footnote to submit to Board members for comment.*

Jeff felt the footnote should not be changed today and that the PT Board should approach the NELAP Board on this issue. Eric will take this back to the PT Board.

- Dan Tholan had the following comments:

Footnote 1: Need to add an “s” to “sample” where it needs to be plural.

Footnote 3: Last line – why do we need “after outlier removal” if we are using “robust”? He is requesting that “after outlier removal” be removed. The subcommittee agreed that it should be removed.

Footnote 13, 14 and 16: Change “criteria” to “criterion”.

- Dan Dickinson had the following comment:

Footnote 14: Why is “simple” used in the footnote, but not in the table above? Jeff commented that it has to be potassium cyanide. Carl asked if clarification is needed? The subcommittee decided that information should be added. “Simple” will be changed to “uncomplexed, e.g. Potassium Cyanide”.

- Eric had the following comment:

Add the units to Perchlorate in the PTRL column.

Look at formatting in Footnote #1 – Is there a problem with the page break cutting off one of the words? Jeff looked at it and it does not appear to be a problem.

Dan Tholan made a motion to accept the Drinking Water Fields of Proficiency Testing with PTRLs table e-mailed by Jeff on 12-17-09 and as revised during the call. The motion was seconded by Steve. A roll call vote was taken:

Yes – Carl, Jeff, Steve, Dan Tholan, Eric, Stacie, Jim

No – Dan Dickinson (He has issue with the limits for the Unregulated VOCs as expressed in previous meetings.)

Abstentions - None

Jeff suggested giving the missing subcommittee members an opportunity to vote within the next 48 hours. Carl agreed. Ilona will send an e-mail to Chuck, Amy and Brian. They’ll need to see the edited table that Jeff will send out this afternoon (Attachment B). If they do not vote – they will be noted as an abstention.

### 3. PT Acceptance Limits

#### NPW Analytes

##### Endrin Ketone

There is a lot of data for this analyte. The Mean R<sup>2</sup> Evaluation passed. The Stdev R<sup>2</sup> Evaluation did not pass. This is why this analyte has been on the experimental table. The discussion also centered on Endrin Ketone and Endrin Aldehyde being breakdown products from Endrin if laboratory GC instruments are not functioning properly. Since the Endrin concentration range for the FoPT is 2-20 ug/L, it makes sense for the Endrin Ketone range to be 4-20 ug/L, to match the current range listed for Endrin Aldehyde.

Carl suggested that the concentration range be extended to 20 ug/L. He also suggested using the new regression equation. At 20 ug/L the limits look like 50-124%. At 4 ug/L, it is 50-147%. Currently it is a fixed limit of +/- 45%.

A motion was made by Jeff for a concentration range of 4 - 20 ug/L for Endrin Ketone with the newly derived regression equation with the coefficients presented in the table distributed by Jeff on 12/21/09. The motion was seconded by Dan Dickinson and the motion passed unanimously.

Summary –

Analyte	FoPT Category	Concentration Range	Acceptance Limits
Endrin ketone	Pesticides	4 – 20 ug/L	Newly derived regression equation with the coefficients presented in the table distributed by Jeff on 12/21/09.

### 3. New Items

Carl will not be attending the TNI meeting in Chicago. An alternate presenter will need to be assigned. Carl will still look at preparing a presentation.

### 4. Next Meeting

The next meeting of the Chemistry FoPT Subcommittee will be January 12, 2010, at 12PM EST.

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

The meeting ended at 1:29 pm EST. (Motion - Jeff, Second- Eric. Unanimously approved.)

## Attachment A

### Participants TNI Chemistry FoPT Subcommittee

Members	Affiliation	Contact Information
Carl Kircher, Co-Chair <b>Present</b>	Florida DOH	904-791-1574 <a href="mailto:carl_kircher@doh.state.fl.us">carl_kircher@doh.state.fl.us</a>
Brian Boling, Co-Chair <b>Absent</b>	Oregon DEQ	<a href="mailto:Boling.Brian@deq.state.or.us">Boling.Brian@deq.state.or.us</a>
Amy Doupe <b>Absent</b>	Lancaster Laboratories, Inc.	717-656-2300 x1812 <a href="mailto:aldoupe@lancasterlabs.com">aldoupe@lancasterlabs.com</a>
Jeff Lowry <b>Present</b>	ERA	303-431-8454 <a href="mailto:jlowry@eraqc.com">jlowry@eraqc.com</a>
Chuck Wibby <b>Absent</b>	Wibby Environmental	303-940 -0033 <a href="mailto:cwibby@wibby.com">cwibby@wibby.com</a>
Eric Smith <b>Present</b>	TestAmerica	615-726-0177 x1238 <a href="mailto:eric.smith@testamericainc.com">eric.smith@testamericainc.com</a>
Dan Tholen <b>Present</b>	A2LA	231-929-1721 <a href="mailto:Tholen.dan@gmail.com">Tholen.dan@gmail.com</a>
Stephen Arpie <b>Present</b>	Absolute Standards, Inc.	203-281-2917 <a href="mailto:stephenarpie@mac.com">stephenarpie@mac.com</a>
Dan Dickinson <b>Present</b>	New York, DOH	518-485-5570 <a href="mailto:dmd15@health.state.ny.us">dmd15@health.state.ny.us</a>
Stacey Fry <b>Present</b>	E.S. BABCOCK & Sons, Inc.	951-653-3351 x238 <a href="mailto:sfry@babcocklabs.com">sfry@babcocklabs.com</a>
Jim <b>Present</b>		860-947-2121 <a href="mailto:mousejr@nu.com">mousejr@nu.com</a>
Ilona Taunton, Program Administrator <b>Present</b>	TNI	828-712-9242 <a href="mailto:tauntoni@msn.com">tauntoni@msn.com</a>

**Attachment B**

**NELAC PT for Accreditation  
Fields of Proficiency Testing with PTRLs  
Drinking Water  
Effective July 1, 2010**

Red = Previous Experimental Analytes

Blue = New Analyte/Header

Magenta = Changes

Matrix	EPA Analyte Code	NELAC Analyte Code	Analyte <sup>1,2</sup>	Conc Range	Acceptance Criteria <sup>3,4,5,6</sup>				NELAC PTRL <sup>7</sup>
					a	b	c	d	
			<b>Microbiology</b>						<b>CFU/100 mL</b>
Drinking Water	0254	2500	Total Coliform <sup>8,9,10</sup>			Nine out of ten correct with no false negatives			Not Applicable
Drinking Water	0255	2530	Fecal Coliform <sup>8,9,10</sup>			Nine out of ten correct with no false negatives			Not Applicable
Drinking Water		2525	E.coli <sup>8,9,10</sup>			Nine out of ten correct with no false negatives			Not Applicable
				CFU (MPN)/mL					CFU (MPN)/mL
Drinking Water	0258	2555	Heterotrophic Plate Count (MF, PP) <sup>11</sup>	5 to 500		Log transform Mean ± 2 SD			2
Drinking Water	0258	2555	Heterotrophic Plate Count (MPN) <sup>12</sup>	5 to 500		Log transform Mean ± 2 SD			2
				CFU (MPN)/100 mL					CFU (MPN)/100 mL
Drinking Water		2525	E.coli (MF) <sup>11</sup>	20 to 200		Log transform Mean ± 2 SD			2
Drinking Water		2525	E.coli (MPN) <sup>12</sup>	20 to 200		Log transform Mean ± 2 SD			2
Drinking Water	0255	2530	Fecal Coliform (MF) <sup>11</sup>	20 to 200		Log transform Mean ± 2 SD			2
Drinking Water	0255	2530	Fecal Coliform (MPN) <sup>12</sup>	20 to 200		Log transform Mean ± 2 SD			2

Drinking Water	0254	2500	Total Coliform (MF) <sup>11</sup>	20 to 200	Log transform Mean $\pm$ 2 SD	2
Drinking Water	0254	2500	Total Coliform (MPN) <sup>12</sup>	20 to 200	Log transform Mean $\pm$ 2 SD	2
			<b>Trace Metals</b>	$\mu\text{g/L}$		$\mu\text{g/L}$
Drinking Water	0235	1000	Aluminum	130 to 1000	$\pm 20\%$ at $< 500$ $\pm 15\%$ $\geq 500$ fixed acceptance limit	104
Drinking Water	0140	1005	Antimony	6 to 50	$\pm 30\%$ fixed acceptance limit	4.2
Drinking Water	0001	1010	Arsenic	5 to 50	$\pm 30\%$ fixed acceptance limit	3.5
Drinking Water	0002	1015	Barium	500 to 3000	$\pm 15\%$ fixed acceptance limit	420
Drinking Water	0141	1020	Beryllium	2 to 20	$\pm 15\%$ fixed acceptance limit	1.7
Drinking Water	0226	1025	Boron	800 to 2000	$\pm 15\%$ fixed acceptance limit	680
Drinking Water	0003	1030	Cadmium	2 to 50	$\pm 20\%$ fixed acceptance limit	1.6
Drinking Water	0004	1040	Chromium	10 to 200	$\pm 15\%$ fixed acceptance limit	8.5
Drinking Water		1045	Hexavalent Chromium (VI)	5 to 50	$\pm 20\%$ fixed acceptance limit	4.0
Drinking Water	0091	1055	Copper	50 to 2000	$\pm 10\%$ fixed acceptance limit	45
Drinking Water	0284	1070	Iron	100 to 1800	$\pm 20\%$ at $< 250$ $\pm 15\%$ $\geq 250$ fixed acceptance limit	80
Drinking Water	0005	1075	Lead	5 to 100	$\pm 30\%$ fixed acceptance limit	3.5
Drinking Water	0236	1090	Manganese	40 to 900	$\pm 15\%$ fixed acceptance limit	34
Drinking Water	0006	1095	Mercury <sup>13</sup>	0.5 to 10	$\pm 30\%$ fixed acceptance limit	0.35
Drinking Water	0237	1100	Molybdenum	15 to 130	$\pm 15\%$ fixed acceptance limit	13
Drinking Water	0142	1105	Nickel	10 to 500	$\pm 15\%$ fixed acceptance limit	8.5
Drinking Water	0007	1140	Selenium	10 to 100	$\pm 20\%$ fixed acceptance limit	8.0

Drinking Water	0008	1150	Silver	20 to 300	±30% fixed acceptance limit	14
Drinking Water	0143	1165	Thallium	2 to 10	±30% fixed acceptance limit	1.4
Drinking Water	0238	1185	Vanadium	50 to 1000	±15% fixed acceptance limit	42
Drinking Water	0239	1190	Zinc	200 to 2000	±15% fixed acceptance limit	170
<b>Nutrients</b>				mg/L		
Drinking Water	0009	1810	Nitrate as N	3 to 10	±10% fixed acceptance limit	2.7
Drinking Water		1820	Nitrate + Nitrite as N	3 to 10	±15% fixed acceptance limit	2.6
Drinking Water	0092	1840	Nitrite as N	0.4 to 2	±15% fixed acceptance limit	0.34
Drinking Water	0261	1870	Ortho-Phosphate	0.5 to 5.5	±15% fixed acceptance limit	0.43
<b>Minerals</b>				mg/L		mg/L
Drinking Water	0287	1575	Chloride	20 to 160	±15% fixed acceptance limit	17
Drinking Water	0010	1730	Fluoride	1 to 8	±10% fixed acceptance limit	0.90
Drinking Water	0145	2000	Sulfate	25 to 250	±15% fixed acceptance limit	21
Drinking Water	0286	1125	Potassium	10 to 40	±15% fixed acceptance limit	8.5
Drinking Water	0029	1155	Sodium	12 to 50	±15% fixed acceptance limit	11
Drinking Water	0283	1035	Calcium	30 to 90	±15% fixed acceptance limit	26
Drinking Water	0285	1085	Magnesium	2 to 20	±15% fixed acceptance limit	1.7
Drinking Water	0025	1550	Ca Hardness as CaCO <sub>3</sub>	75 to 225	±15% fixed acceptance limit	64
Drinking Water		1755	Total Hardness as CaCO <sub>3</sub>	83 to 307	±15% fixed acceptance limit	71

		<b>Inorganic Disinfection By-Products</b>		µg/L					µg/L
Drinking Water	0193	1535	Bromate	7 to 50	±30% fixed acceptance limit				4.9
Drinking Water	0260	1540	Bromide	50 to 300	±15% fixed acceptance limit				42
Drinking Water	0194	1570	Chlorate	60 to 180	±30% fixed acceptance limit				42
Drinking Water	0195	1595	Chlorite	100 to 1000	±30% fixed acceptance limit				70
		<b>Misc Analytes</b>		mg/L					mg/L
Drinking Water	0027	1505	Alkalinity as CaCO <sub>3</sub> /L	25 to 200	0.9738	1.3564	0.0190	1.1222	23
Drinking Water	0253	1520	Asbestos	1.5 to 20 MF/L	study mean ± 0.4 SI units		0.6037	0.0731	1.4 MF/L
Drinking Water		1620	Corrosivity	-4 to +4 SI units	fixed acceptance				Not Applicable
Drinking Water	0146	1635	Cyanide <sup>14</sup>	0.1 to 0.5	±25% fixed acceptance limit				0.075
Drinking Water		1710	Dissolved Organic Carbon (DOC)	1.2 to 4.9	0.9744	0.0960	0.0402	0.0700	1.0
Drinking Water		1895	Perchlorate	4 to 20 µg/L	±20% fixed acceptance limit				3.2 µg/L
Drinking Water	0026	1900	pH	5 to 10 units	± 0.2 units fixed acceptance limit				Not Applicable
Drinking Water	0022	1945	Residual Free Chlorine	0.5 to 3.0	1.0000	0.0004	0.0776	0.0246	0.37
Drinking Water		1990	Silica as SiO <sub>2</sub>	5 to 75	±15% fixed acceptance limit				4.2
Drinking Water	0288	1610	Specific Conductance	250 to 2500 µmhos	±10% fixed acceptance limit				225 µmhos
Drinking Water		2025	Surfactants - MBAS	0.1 to 1.0	0.9804	0.0054	0.0673	0.0348	0.020
Drinking Water		1940	Total Residual Chlorine	0.5 to 3.0	1.0000	-0.0048	0.0723	0.0065	0.40
Drinking Water	0024	1955	Total Filterable Residue	200 to 450 as measured	study mean		0.1956	-6.683	135
Drinking Water	0263	2040	Total Organic Carbon	1.2 to 4.9	0.9873	0.0565	0.0643	0.0769	0.93



Drinking Water	0023	2055	Turbidity	0.5 to 8 NTU	1.0185	0.074	0.0623	0.0761	0.37 NTU
Drinking Water		2060	UV 254 Absorbance	0.05 to 0.7 cm-1	0.9919	0.0043	0.0872	0.0034	0.038 cm-1

**Purge and Trap Organic Parameters**

			Regulated VOCs <sup>1</sup>	µg/L		µg/L
Drinking Water	0039	4375	Benzene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0037	4455	Carbon Tetrachloride	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0049	4475	Chlorobenzene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0054	4610	1,2-Dichlorobenzene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0041	4620	1,4-Dichlorobenzene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0035	4635	1,2-Dichloroethane	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0034	4640	1,1-Dichloroethylene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0043	4645	Cis-1,2-Dichloroethylene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0042	4700	Trans-1,2-Dichloroethylene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0055	4975	Dichloromethane (Methylene Chloride)	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0044	4655	1,2 Dichloropropane	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0048	4765	Ethylbenzene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0053	5100	Styrene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0040	5115	Tetrachloroethylene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0047	5140	Toluene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0036	5160	1,1,1-Trichloroethane	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2

Drinking Water	0061	5165	1,1,2-Trichloroethane	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0038	5170	Trichloroethylene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0076	5155	1,2,4-Trichlorobenzene	2 to 20	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0032	5235	Vinyl Chloride	2 to 50	±40% fixed acceptance limit	1.2
Drinking Water	0090	5260	Total Xylenes	2 to 50	± 40% at < 10 ± 20% ≥ 10 fixed acceptance limit	1.2

**Regulated Trihalomethanes**

				µg/L		µg/L
Drinking Water	0019	4395	Bromodichloromethane	5 to 50	±20% fixed acceptance limit <sup>15</sup>	4.0
Drinking Water	0018	4400	Bromoform	5 to 50	±20% fixed acceptance limit <sup>15</sup>	4.0
Drinking Water	0020	4575	Chlorodibromomethane	5 to 50	±20% fixed acceptance limit <sup>15</sup>	4.0
Drinking Water	0017	4505	Chloroform	5 to 50	±20% fixed acceptance limit <sup>15</sup>	4.0

**Purge and Trap Organic Parameters**

**Unregulated VOCs<sup>1</sup>**

				µg/L		µg/L
Drinking Water		4370	T-amylmethylether (TAME)	5 to 50	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	3.0
Drinking Water	0067	4385	Bromobenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0089	4390	Bromochloromethane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0069	4950	Bromomethane	5 to 50	±40% fixed acceptance limit	3.0
Drinking Water		4420	Tert-Butyl Alcohol	10 to 100	±40% fixed acceptance limit	6.0
Drinking Water	0079	4435	n-Butylbenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0086	4440	Sec-Butylbenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0085	4445	Tert-Butylbenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2

Water						
Drinking Water	0070	4485	Chloroethane	5 to 50	±40% fixed acceptance limit	3.0
Drinking Water	0068	4960	Chloromethane	5 to 50	±40% fixed acceptance limit	3.0
Drinking Water	0071	4535	2-Chlorotoluene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0072	4540	4-Chlorotoluene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0057	4595	Dibromomethane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0066	4615	1,3-Dichlorobenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0088	4625	Dichlorodifluoromethane	5 to 50	±40% fixed acceptance limit	3.0
Drinking Water	0056	4630	1,1-Dichloroethane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0059	4660	1,3-Dichloropropane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0060	4665	2,2-Dichloropropane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0058	4670	1,1-Dichloropropene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0152	4680	Cis-1,3-Dichloropropene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water	0153	4685	Trans-1,3-Dichloropropene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water		4770	Ethyl-t-butylether (ETBE)	5 to 50	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	3.0
Drinking Water	0081	4835	Hexachlorobutadiene	5 to 50	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	3.0
Drinking Water	0084	4900	Isopropylbenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water		9375	Di-isopropylether (DIPE)	5 to 50	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	3.0
Drinking Water	0083	4910	4-Isopropyltoluene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2
Drinking Water		5000	Methyl-tert-butylether (MTBE)	5 to 50	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	3.0
Drinking Water		5005	Naphthalene	5 to 50	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit	1.2

Water

Drinking Water	0078	5090	n-Propylbenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2
Drinking Water	0063	5105	1,1,1,2-Tetrachloroethane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2
Drinking Water	0065	5110	1,1,2,2-Tetrachloroethane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2
Drinking Water	0077	5150	1,2,3-Trichlorobenzene	5 to 50	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				3.0
Drinking Water	0087	5175	Trichlorofluoromethane	5 to 50	±40% fixed acceptance limit				3.0
Drinking Water	0064	5180	1,2,3-Trichloropropane	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2
Drinking Water		5185	Trichlorotrifluoroethane (Freon 113)	5 to 50	±40% fixed acceptance limit				3.0
Drinking Water	0075	5210	1,2,4-Trimethylbenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2
Drinking Water	0082	5215	1,3,5-Trimethylbenzene	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2
			<b>Additional VOCs<sup>1</sup></b>	µg/L					µg/L
Drinking Water		4570	1,2-Dibromo-3-chloropropane (DBCP)	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2
Drinking Water		4585	Ethylene Dibromide (EDB)	2 to 20	± 40% at < 10 ± 30% ≥ 10 fixed acceptance limit				1.2

**Extractable Organic Parameters**

			<b>Pesticides<sup>1</sup></b>	µg/L					µg/L
Drinking Water	0093	7005	Alachlor	2 to 20	±45% fixed acceptance limit				1.1
Drinking Water	0256	7025	Aldrin	0.4 to 2	0.8453	-0.0077	0.2054	0.0048	0.15
Drinking Water	0094	7065	Atrazine	3 to 30	±45% fixed acceptance limit				1.6
Drinking Water		7130	Bromacil	2 to 40	±45% fixed acceptance limit				1.1
Drinking Water		7160	Butachlor	8 to 80	0.8796	0.7839	0.1805	0.2030	4.5
Drinking Water	0097	7250	Chlordane (technical)	2 to 20	±45% fixed acceptance limit				1.1

Water									
Drinking Water	0258	7470	Dieldrin	0.5 to 3	0.9418	0.0450	0.1607	0.0199	0.32
Drinking Water	0011	7540	Endrin	0.1 to 5	±30% fixed acceptance limit				0.070
Drinking Water	0095	7685	Heptachlor	0.4 to 5	±45% fixed acceptance limit				0.22
Drinking Water	0096	7690	Heptachlor Epoxide (beta)	0.2 to 5	±45% fixed acceptance limit				0.11
Drinking Water	0172	6275	Hexachlorobenzene	0.5 to 4	0.8546	0.0277	0.1954	0.0199	0.22
Drinking Water	0112	6285	Hexachlorocyclopentadiene	2 to 30	0.7942	0.0799	0.2990	0.1179	0.24
Drinking Water	0012	7120	Lindane	0.2 to 5	±45% fixed acceptance limit				0.11
Drinking Water	0013	7810	Methoxychlor	10 to 100	±45% fixed acceptance limit				5.5
Drinking Water		7835	Metolachlor	8 to 80	0.8477	1.5874	0.1813	0.1005	5.3
Drinking Water		7845	Metribuzin	2 to 60	0.7942	0.5152	0.2934	0.1413	0.64
Drinking Water		7875	Molinate (Ordram)	2 to 40	±45% fixed acceptance limit				1.1
Drinking Water	0259	8045	Propachlor	1 to 4	1.0037	-0.0645	0.1832	0.0418	0.48
Drinking Water	0113	8125	Simazine	4 to 40	0.7811	0.9474	0.2832	0.369	1.0
Drinking Water	0014	8250	Toxaphene (total)	3 to 20	±45% fixed acceptance limit				1.6
Drinking Water	0244	8295	Trifluralin	1.0 to 5	0.9013	-0.0331	0.1513	0.1195	0.33
			<b>Carbamates &amp; Vydate<sup>1</sup></b>	µg/L					µg/L
Drinking Water	0098	7010	Aldicarb	15 to 50	1.0183	-0.5229	0.1175	0.1852	11
Drinking Water	0099	7015	Aldicarb Sulfone	19 to 50	0.9909	0.4106	0.1356	-0.8493	16
Drinking Water	0100	7020	Aldicarb Sulfoxide	15 to 50	0.8943	1.1141	0.1078	0.3643	11
Drinking Water		8080	Baygon	15 to 100	±30% fixed acceptance limit				10

Water

Drinking Water		7195	Carbaryl	20 to 100	0.9067	0.1798	0.0938	-0.0024	14
Drinking Water	0101	7205	Carbofuran	15 to 150	±45% fixed acceptance limit				8.3
Drinking Water		7710	3-Hydroxycarbofuran	15 to 75	0.9343	-0.2013	0.0718	0.4949	10
Drinking Water		7800	Methiocarb	15 to 100	±30% fixed acceptance limit				10
Drinking Water	0245	7805	Methomyl	15 to 90	0.9867	-0.2117	0.0964	-0.1849	12
Drinking Water	0114	7940	Oxamyl (Vydate)	30 to 80	0.9781	0.2296	0.1273	-0.7009	23

**Extractable Organic Parameters**

				Herbicides <sup>1</sup>	µg/L					µg/L
Drinking Water	0262	8505	Acifluorfen	15 to 50	0.8871	0.1105	0.0885	5.4843	1.5	
Drinking Water		8530	Bentazon	20 to 140	±50% fixed acceptance limit				10	
Drinking Water	0015	8545	2,4-D <sup>16</sup>	5 to 150	±50% fixed acceptance limit				2.5	
Drinking Water		8560	2,4-DB	15 to 100	0.8236	1.9181	0.1825	1.3935	6.0	
Drinking Water		8553	Dacthal acids (total)	10 to 100	±50% fixed acceptance limit				5.0	
Drinking Water	0115	8555	Dalapon	10 to 150	0.6178	1.0356	0.3451	2.3812	1.0	
Drinking Water	0247	8595	Dicamba	5 to 100	0.8118	0.8711	0.2789	0.0923	1.9	
Drinking Water		8600	3,5-Dichlorobenzoic acid	10 to 100	0.9052	-0.1670	0.2369	1.2766	1.5	
Drinking Water	0116	8620	Dinoseb	6 to 50	0.8433	-1.1850	0.2958	0.1879	0.95	
Drinking Water		8605	Dichloroprop	20 to 120	±50% fixed acceptance limit				10	
Drinking Water	0137	9390	Diquat <sup>17</sup>	8 to 40	0.7102	1.729	0.385	-1.4335	4.1	
Drinking Water	0138	7525	Endothall <sup>18</sup>	90 to 500	0.849	9.3243	0.2733	-1.0969	38	

Water									
Drinking Water	0139	9411	Glyphosate	375 to 800	0.9285	41.0369	0.0677	10.6168	320
Drinking Water		9528	Paraquat	8 to 100	±50% fixed acceptance limit				4.0
Drinking Water	0102	6605	Pentachlorophenol	1 to 100	±50% fixed acceptance limit				0.50
Drinking Water	0117	8645	Picloram	10 to 70	0.8189	0.0626	0.2888	0.2204	2.0
Drinking Water	0016	8650	2,4,5-TP (Silvex)	5 to 150	±50% fixed acceptance limit				2.5
Drinking Water		8655	2,4,5-T	10 to 100	0.8309	1.1211	0.2183	0.5680	3.9
			<b>Organic Disinfection By-Products</b>						
Drinking Water	0165	4460	Chloral Hydrate	4 to 30	0.9300	-0.4088	0.3306	0.3088	0.40
			<b>Haloacetic acids</b>						
Drinking Water	0250	9315	Bromochloroacetic Acid	10 to 50	±40% fixed acceptance limit				6.0
Drinking Water	0157	9357	Dibromoacetic Acid	10 to 50	±40% fixed acceptance limit <sup>15</sup>				6.0
Drinking Water	0158	9360	Dichloroacetic Acid	10 to 50	±40% fixed acceptance limit <sup>15</sup>				6.0
Drinking Water	0160	9312	Monobromoacetic Acid	10 to 50	±40% fixed acceptance limit <sup>15</sup>				6.0
Drinking Water	0161	9336	Monochloroacetic Acid	10 to 50	±40% fixed acceptance limit <sup>15</sup>				6.0
Drinking Water	0162	9642	Trichloroacetic Acid	10 to 50	±40% fixed acceptance limit <sup>15</sup>				6.0
			<b>Regulated VOCs<sup>1</sup></b>						
Drinking Water	0045	4570	1,2-Dibromo-3-chloropropane (DBCP)	0.1 to 2	±40% fixed acceptance limit				0.06
Drinking Water	0046	4585	Ethylene Dibromide (EDB)	0.05 to 2	±40% fixed acceptance limit				0.03

		<b>Unregulated VOCs<sup>1</sup></b>		$\mu\text{g/L}$					$\mu\text{g/L}$
Drinking Water		5180	1,2,3-Trichloropropane	0.2 to 2.0	$\pm 40\%$ fixed acceptance limit				0.12
		<b>Adipate/Phthalate<sup>1</sup></b>		$\mu\text{g/L}$					$\mu\text{g/L}$
Drinking Water		5670	Butylbenzylphthalate	10 to 50	$\pm 50\%$ fixed acceptance limit				5.0
Drinking Water	0134	6062	Di(2-Ethylhexyl) Adipate	8 to 50	0.9443	-0.6332	0.2375	0.752	1.6
Drinking Water	0136	6065	Di(2-Ethylhexyl) Phthalate	9 to 50	1.012	-0.6622	0.2791	0.1121	3.1
Drinking Water		5925	Di-n-butylphthalate	10 to 50	$\pm 50\%$ fixed acceptance limit				5.0
Drinking Water		6070	Diethylphthalate	10 to 50	$\pm 50\%$ fixed acceptance limit				5.0
Drinking Water		6135	Dimethylphthalate	10 to 50	$\pm 50\%$ fixed acceptance limit				5.0
Drinking Water		6200	Di-n-octylphthalate	10 to 50	$\pm 60\%$ fixed acceptance limit				6.0

### Extractable Organic Parameters

		<b>PCBs in Water<sup>2</sup></b>		$\mu\text{g/L}$					$\mu\text{g/L}$
Drinking Water	0118	9105	PCBs as Decachlorobiphenyl <sup>19</sup>	0.5 to 5	$\pm 100\%$ fixed acceptance limit				0.05
Drinking Water		8872	PCB Aroclor Identification		Correct identification of Aroclor examined				
		<b>PAH<sup>1</sup></b>		$\mu\text{g/L}$					$\mu\text{g/L}$
Drinking Water		5500	Acenaphthene	1 to 10	$\pm 50\%$ fixed acceptance limit				0.50
Drinking Water		5505	Acenaphthylene	1 to 10	$\pm 50\%$ fixed acceptance limit				0.50
Drinking Water		5555	Anthracene	1 to 10	$\pm 50\%$ fixed acceptance limit				0.50
Drinking Water		5575	Benzo(a)anthracene	1 to 10	$\pm 50\%$ fixed acceptance limit				0.50
Drinking Water		5585	Benzo(b)fluoranthene	1 to 10	$\pm 50\%$ fixed acceptance limit				0.50



Drinking Water		5590	Benzo (g,h,i)perylene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		5600	Benzo(k)fluoranthene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water	0122	5580	Benzo(a)pyrene	0.2 to 2.5	0.8471	-0.0040	0.1854	0.0547		0.10
Drinking Water		5855	Chrysene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		5895	Dibenz(a,h)anthracene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		6265	Fluoranthene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		6270	Fluorene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		6315	Indeno(1,2,3-cd)pyrene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		5005	Naphthalene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		6615	Phenanthrene	1 to 10					±50% fixed acceptance limit	0.50
Drinking Water		6665	Pyrene	1 to 10					±50% fixed acceptance limit	0.50
			<b>Dioxin</b>	pg/L						pg/L
Drinking Water	0252	9618	2,3,7,8-Tetrachloro-dibenzodioxin	25 to 80	0.8642	1.4865	0.1392	1.1445		17

1) For volatile, pesticide, carbamate & vydate, herbicide, adipate/phthalates and PAH standards, 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% of 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% of 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 in every study, containing one or more Aroclors, selected at random from among the Aroclors listed (1016, 1221, 1232, 1242, 1248, 1254 or 1260) for the analysis of PCBs as decachlorobiphenyl.

3) The acceptance criteria found in 40 CFR Part 141 are incorporated herein by reference. Acceptance criteria for FoPTs not included in 40 CFR Part 141 are presented in this table. Acceptance limits are set at the Mean  $\pm$  2 SD (Mean =  $a \cdot T + b$ ; SD =  $c \cdot T + d$  where T is the assigned value).

Quantitative Microbiology acceptance criteria (e.g., HPC) 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) The ten-sample set which is provided to the participant laboratories shall contain bacteria that produces the following results when analyzed:

Positive results for total coliforms, fecal coliforms and E.coli.

Positive results for total coliforms and negative results for fecal coliforms and E.coli.

Negative results for total coliforms, fecal coliforms and E.coli.

These limits are for Presence-Absence only.

9) The ten-sample set shall be assigned lot numbers and randomly composed of samples as follows:

Two to four samples containing an aerogenic strain of Escherichia which will ensure positive results for total coliforms, fecal coliforms and E.coli. when analyzed by any of the USEPA approved methods.

Two to four samples containing an aerogenic strain of Enterobacter species and/or other microorganism which will ensure positive results for total coliforms and negative result for fecal coliforms and E.coli. when analyzed by any of the USEPA approved methods.

One to two samples containing *Pseudomonas* species and/or other microorganism which will ensure negative results for total coliforms, fecal coliforms and *E.coli*. when analyzed by any of the USEPA approved methods.

One to two samples which do not contain any microorganism which ensure negative results for total coliforms, fecal coliforms and *E.coli*. when analyzed by any of the USEPA approved methods.

- 10) Laboratories analyzing qualitative sample sets for more than one method in a particular study shall obtain a unique ten-sample set for each method reported as specified in Footnote 9.
- 11) These limits are for quantitative methods using membrane filtration (MF) or pour-plate (PP) techniques.
- 12) These limits are for quantitative methods using most probable number (MPN) techniques.
- 13) Design criterion for Mercury – 1:1 (mole:mole as Hg) Mercuric Oxide and Methyl Mercuric Chloride.
- 14) Design criterion for Cyanide – uncomplexed e.g., Potassium Cyanide.
- 15) Laboratories seeking or maintaining NELAP accreditation for Total Trihalomethanes must meet NELAC PT requirements for all 4 Trihalomethane Fields of Proficiency Testing in the given study, by technology/method (Chloroform, Bromoform, Bromodichloromethane, Chlorodibromomethane). Laboratories seeking or maintaining NELAP accreditation for Total Haloacetic Acids must meet NELAC PT requirements for 4 out of 5 regulated Haloacetic Acid Fields of Proficiency Testing in the given PT study, by technology/method (Monochloroacetic Acid, Monobromoacetic Acid, Dichloroacetic Acid, Dibromoacetic Acid, Trichloroacetic Acid).
- 16) Design criterion for 2,4-D – should be at least half the butyl ester.
- 17) Design criteria for Diquat – Starting material is Diquat Dibromide Monohydrate as required in the method. All assigned values and reported values should be as Diquat.
- 18) Design criteria for Endothall – Starting material is Endothall Monohydrate as required in the method. All assigned values and reported values should be as Endothall.
- 19) Design criteria for Decachlorobiphenyl is to be calculated by the provider from the concentration of the Aroclor used to prepare the sample according to Table 1 of r Decachlorobiphenyl – The source of the Decachlorobiphenyl is one of the following Aroclors: 1016, 1232, 1242, 1248, 1254, 1260. The assigned value the USEPA Method 508A.

## Attachment C

### Action Items – Chemistry FoPT Subcommittee

	<b>Action Item</b>	<b>Who</b>	<b>Expected Completion</b>	<b>Actual Completion</b>
13.	Prepare letter to ABs to find out their needs on analytes that may be under consideration for deletion. <i>(3/24/09 – It was determined that these tables are used by more than just ABs. This needs to be reconsidered.)</i>	TBD	TBD	
22.	Prepare for upcoming meetings by reviewing evaluation files that Jeff will send every 2 weeks.	All	Ongoing	
43	Prepare cover letter to go to PT Board with recommendation of the DW FoPT Table. Include discussion on Chloramben.	Carl	1/4/10	
44	Prepare DRAFT presentation for PT Caucus and distribute to subcommittee for comment.	Carl	1/5/10	
46	Distribute new DW FoPT table to subcommittee members that missed the 1/5/10 call. The need to provide feedback by noon on 1/7/09.	Ilona	1/5/10	Complete
47	Update DW FoPT table with changes discussed in 1/5/10 meeting.	Jeff	1/5/10	Complete
48	Provide feedback to the PT Board regarding Footnote 10 on the new DW FoPT Table.	Eric	1/21/09	

**Attachment D**

**Backburner / Reminders – Chemistry FoPT Subcommittee**

	<b>Item</b>	<b>Meeting Reference</b>	<b>Comments</b>
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			