TNI Chemistry FoPT Subcommittee
Meeting Summary
May 22, 2012

1. Roll call and Meeting Minutes:

Chair Carl Kircher called the meeting of the Chemistry FoPT Subcommittee to order on May 22, 2012 at 12:07 EST. Attendance is recorded in Attachment A. There were 7 members on the call.

Minutes from the 5/8/12 teleconference were reviewed. Stephen made a motion to approve the minutes as amended by Dan D. by e-mail. The motion was seconded by Joe and unanimously approved.

2. Review of NPW FoPT Table

Phenol

From 5-8-12: The study concentration was 90.3 – 179 ug/L. Carl commented previously by e-mail: new regressions FAIL the r-squared for Std Dev vs. AV, thus, keep current regression equations, recommend concentration range of 50-200 ug/L (expanded range, current range of 100-200 ug/L is way too narrow).

Stacey's current Reporting Limit is 10 ug/L and her MDL is 1 ug/L. The PTRL with the suggested new concentration is 5 ug/L This would be a problem. More input is needed and this analyte will be considered again at the next meeting.

New Discussion:

A motion was made by Steve to use a concentration limit of 100 - 200 ug/L for Phenol on the NPW FoPT accreditation table and use fixed limits of 10-140% of the assigned value. The motion was seconded by Dan Dickinson. Vote: For – 5 Against – 1 Abstain - 0. The motion does not pass.

A new motion was made by Jeff Lowry to leave the current values in place for Phenol. The motion was seconded by Dan D. Vote: For – 6. Against – 0 Abstain – 1 (Dan T.) The motion passes.

After review of 4-Nitrophenol, Dan asked for consensus scoring on these problem analytes and would like to talk to the PT Program EC about setting Phenol, 2,4-Nitrophenol and 4-Nitrophenol as +/- 3 standard deviations. Dan T. was in agreement.

2,4-Dinitrophenol

The study concentration was 90.3 – 179 ug/L. Carl commented previously by e-mail: new regressions FAIL the r-squared for Std Dev vs. AV, thus, keep current regression equations, recommend concentration range of 50-200 ug/L (expanded range).
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A motion was made by Dan D. to use a concentration limit of 100 - 200 ug/L for 2,4-Dinitrophenol on the NPW FoPT accreditation table and maintain the old regression equation. The motion was seconded by Jeff and unanimously approved.

4-Nitrophenol

The study concentration was 61.3 – 188 ug/L. Carl commented previously by e-mail: new regressions FAIL the r-squared for Std Dev vs. AV, thus, keep current regression equations, recommend concentration range of 50-200 ug/L (expanded range)
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A motion was made to use a concentration limit of 100 – 200 ug/L for 4-Nitrophenol on the NPW FoPT accreditation table and maintain the old regression equation. The motion was seconded by Stephen. Vote: Abstain – Dan T. (Feels these are problem analytes and would prefer to use something similar to the 10-140% and be open about these problem analytes.

Discussion:
In addition to Dan T., Stephen also expressed some concerns. It is suggested that the PT Program EC be contacted. Jeff wanted more information about why 140% should be used. He asked if someone could write this up.

Vote: For – 3 Against – 2 Abstain – 2 The motion did not pass.

Dan D. made a motion to reconsider Phenol, 2,4-Nitrophenol, and 4-Nitrophenol with a friendly amendment made by Jeff (There have been 3 analytes that have been thrown out in the past and he suggested that the subcommittee re-evaluate many other analytes that look just like these analytes we discussed today.) The motion was seconded by Dan T and was unanimously approved.

Dam D. made a motion to use a concentration limit of 100 – 200 ug/L for phenol, 2,4-nitrophenol and 4-Nitrophenol and use +/3 standard deviations of the study mean. There was no second to the motion.

(5/23/12: Carl distributed the following e-mails after the meeting:
1.
Dear Subcommittee Members,

Toward the end of the teleconference today, we approved a motion to reconsider the NPW FoPTs previously approved for Phenol, 24-Dintrophenol, Benzidine, 33'-Dichlorobenzidine, Hexachlorocyclopentadiene, and other analytes where the present FoPT Table regression equation coefficients were retained because the regression "r-squareds" failed SOP criteria. Did I reflect the motion accurately?

Under the assumption that the answer to the above question is "yes," I am going to assume that the motion pertains only to the NPW accreditation FoPTs that we have been recently considering and not to the NPW Experimental FoPTs that were previously recommended (and approved by the PTEC, ratified by the NELAP AC, and already posted on TNI internet site). Am I correct in that assumption? Or am I interpreting the motion incorrectly?

Now, under the assumption that I have interpreted the approved motion correctly, here are the NPW FoPTs that we are supposed to reconsider:

(a) FoPTs recommended for Table deletion:

Benzidine
3,3'-Dichlorobenzidine
Hexachlorocyclopentadiene

(b) FoPTs where the R-squared (standard deviation) and/or R-squared (mean) fail the SOP acceptance criteria and thus the present regression equation coefficients were recommended:

Phenol
2,4-Dinitrophenol
N-Nitrosodimethylamine
Diethyl Phthalate
Dimethyl Phthalate
Dibenzofuran
Hexachlorobutadiene
Banzo(k)fluoranthene

Tetrachloroethene
Trichloroethene

MBAS Surfactants
Sulfide
Orthophosphate as P
Alkalinity
TSS

Do we as a Subcommittee just want to reconsider the extractable organics analytes, or all of the analytes listed above? Or do we want to reconsider the experimental FoPTs, also?

I look forward to everybody's feedback and responses.

Response:

Carl,

Yes, I think you accurately captured the motion. The motion does not include the NPW Experimental FoPTs. I have no problem revisiting the others listed below, although, I think tetrachloroethene and the trichloroethene were okay in terms of R^2.

Dan D.

Carl also distributed the following e-mail:
2.
Dear Subcommittee Members,

During the teleconference, I heard discussions that I thought should lead to an Action Item that I should write to the PT Executive Committee to get their advice and approval. Here is the inquiry to the PT Exec. Committee:

Dear PTEC Members;

The Chemistry FoPT Subcommittee members have been making serious considerations on Non-Potable Water analytes that are both problemmatic analytically and difficult statistically. The present EPA PT evaluation system of using regression equations of robust means and robust standard deviations versus the Assigned Values are not very defensible for these analytes, and blanket recommendations of "Participant Mean +/- 3 Standard Deviations" can introduce other vulnerabilities to the NELAP PT Program. Since extractable organics analytes exhibit negative bias in recoveries with most laboratory test methods, the Subcommittee seeks the PT Executive Committee's concurrence and approval for the Subcommittee to recommend Fixed PT Acceptance Limits that are asymmatrical with respect to the made-to Assigned Value, for example, 60-120% of Assigned Value. Such a recommendation is contrary to the current SOP language for considering Fixed Limits (currently, b and d coefficients small compared to coefficients a and c times the concentrations, respectively). Such recommendations are probably forthcoming when the Solid/Chemical Materials FoPTs are considered in the future. Please let the Subcommittee know if there any PTEC objections or potential NELAP AC problems if such asymmetrical Fixed Limit recommendations are provided for problemmatic Non-Potable Water analytes. Thank you very much.

Responses:

From Dan Tholen:
Carl-
I think your proposal is worded well, and sensitive to the realities of what the committee is asking, which is for an expert determination of evaluation criteria for these analytes. What recoveries can we expect that are technically feasible, protective of public health (minimum recovery,) and economically defensible (maximum over recovery)? I worry that we are asking a very difficult question, so it might be useful to inform the Expert Committee that for the past few years we

have been accepting approximately 10%-140% recovery for the phenols (or 10% to 200% if you prefer). If you inform the PTEC of this maybe it will make them more comfortable with their decision. If you inform them further that prior to the addition of footnotes to the FoPT tables we were accepting 0% to 200%, maybe they will feel even better. You could also remind them that the assigned values are metrologically traceable to NIST and homogeneity has been assured, so this suggestion reflects the limitation of the method, not the material. My objections today were largely motivated by the fact that we have excellent information available in TNI right now, but we are ignoring it for reasons that are largely related to inconvenience and a lack of respect for our own standards and SOPs; plus, I know, limitations of volunteer time.

How to evaluate performance? what choices are available? how to determine them? One example I use is Toxaphene in drinking water, using TNI data and the linear regression equation - my European colleagues have shown me a published article on a similar approach that uses a method similar to ours, but uses a quadratic regression equation (essentially c d and e coefficients), that yield much better R-squares for standard deviations. Next month ISO TC69 will meet and we will consider adding this example to the revision of ISO 13528: Statistical Methods for PT, I intend to show how the quadratic equation improves on the linear (its in the draft CD2).

From Dan Dickinson:
Carl,

It is possible that they would be curious about the "other vulnerabilities" associated with scoring by Participant Mean +/- 3 Standard Deviations. Since the intent is to sell asymmetric fixed limits, it may be necessary to describe the vulnerabilities and their significance, if necessary. I can't think of many vulnerabilities other than the overly large acceptance windows 3SD would generate when the study RSD is >33 %. Since that would be true for all PT providers because these are such poor performing method analytes, its unlikely that differences in challenge would be evident across all PT providers.

A more realistic asymmetrical limit example would be 10%-110%.)

3. Action Items

   See action item table in attachments.

4. New Business

   None.

5. Next Meeting

The next meeting of the Chemistry FoPT Subcommittee will be June 5, 2012, at 12:00 PM EST.

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

Stephen motioned to adjourn the meeting and Dan T. seconded the motion. Unanimously approved. The meeting was adjourned at 1:31 pm EST.

Attachment A

Participants
TNI
Chemistry FoPT Subcommittee

Members	Affiliation	Contact Information
Carl Kircher, Chair **Present**	Florida DOH	904-791-1574 carl_kircher@doh.state.fl.us
Joe Marotti **Present**	Sigma-Aldrich RTC	307-721-5485 jmorotti@sial.com
Amy Doupe **Absent**	Lancaster Laboratories, Inc.	717-656-2300 x1812 aldoupe@lancasterlabs.com
Jeff Lowry **Present**	Wibby Environmental	720-560-2232 Jlowry@wibby.com
Mark Mensik **Absent**	Wibby Environmental	303-940 -0033 MMensik@wibby.com
Eric Smith **Absent**	TestAmerica	615-726-0177 x1238 eric.smith@testamericainc.com
Dan Tholen **Present**	A2LA	231-929-1721 Tholen.dan@gmail.com
Stephen Arpie **Present**	Absolute Standards, Inc.	203-281-2917 stephenarpie@mac.com
Dan Dickinson **Present**	New York, DOH	518-485-5570 dmd15@health.state.ny.us
Stacey Fry **Present**	E.S. BABCOCK & Sons, Inc.	951-653-3351 x238 sfry@babcocklabs.com
Ilona Taunton, Program Administrator **Present**	TNI	828-712-9242 tauntoni@msn.com

Attachment B

Action Items – Chemistry FoPT Subcommittee

	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	Ongoing	
87	Discuss views on dropping problem analytes with the PTP EC.	Carl	Next PTP EC Meeting	
88	Review SOP 4-101 distributed by e-mail on 4-24-12. Prepare any additional comments for the PT Exec Committee in writing and send to Ilona for review at the next subcommittee meeting on 5/8/12.	ALL	5/4/12 (Friday)	
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Attachment C

Backburner / Reminders – Chemistry FoPT Subcommittee

	Item	Meeting Reference	Comments
4	Consider nomenclature differences between the analyte codes and the FoPT tables.	2-23-10	
6	From PT Board: South Carolina requested that low level EDB and DBCP (8011) be added to the NPW table.	4-15-10 PT Board Meeting	They were added to the solids table where they were experimental. They were not experimental on the NPW table. 3/13: Close out on Subcommittee table and bring up at PTEC meeting. New member is from SC and they can use the new SOP for adding analytes to address this.
7	Review completed NPW table and look for grouped analytes that behave similarly and look for consistent criteria. Compare results to Drinking Water values too.	11-30-10	
9			