

**TNI Chemistry FoPT Subcommittee
Meeting Summary
June 30, 2009**

1. Roll call and Meeting Minutes:

Co-Chair Brian Boling called the Chemistry FoPT Subcommittee to order on June 30, 2009, at 11am EST. Attendance is recorded in Attachment A.

Minutes from the June 16, 2009 meeting were reviewed and approved. Limits were added for Antimony and Chromium from Jeff's table. Ilona will have the final version posted on the website. (Motion - Stacey., Second – Jeff, Unanimously approved.)

2. DRAFT Chemistry FoPT Tables

Jeff led the group through the Excel Spreadsheets he sent out to the group on June 29, 2009.

Jeff wanted to confirm that there is an MCL for Nickel. At the previous meeting, Amy mentioned that it is 100 ug/L. Brian confirmed this today on the CDC website.

Jeff continued with the table titled: TNI Chem DW Evaluation 2009:

Selenium: MCL is 50 ug/L. Lab reporting limit is 10 ug/L. CFR states +/- 20% at 10 ug/L.

Conclusion: Leave as is. Recommend +/- 20% limits. Concentration Range: 10-100 ug/L.

Motion: Dan Second: Steve Unanimously approved.

Silver: It is a regression equation. Passes test for a fixed limit at +/- 9%. Graph looks like a wider limit. It is a little like Antimony – a challenge. Antimony is set at +/-30%. Should set something similar.

Conclusion: Recommend +/- 30% limits. Concentration Range: 20-300 ug/L

Motion: Dan Second: Steve Unanimously approved.

Thallium: Present limit is fixed at +/-30%. Failed r^2 for std deviation. Labs with older instrumentation have trouble seeing this one as it is currently set. Labs should be using 200.8.

Conclusion: Recommend +/- 30% limits. Concentration Range: 2-50 ug/L

Motion: Eric Second: Steve Unanimously approved.

Vanadium: Present limit is +/-10%. No MCL. Lab RL for ICP is 20 ug/L. It meets fixed limit criteria based on the SOP. There is really no need for the range to be as high as it currently is. Chuck recommended changing it to 1000 ug/L at the high end. WP limit is 55-2000 ug/L – should consider changing this to 50 instead of 55 ug/L.

Conclusion: Recommend +/- 15% limits. Concentration Range: 50 -1000 ug/L

Motion: Steve Second: Stacey Unanimously approved.

Zinc: Non-potable water is 100-2000 ug/L. Jeff suggested going to at least 100 ug/L on the lower end. MCL is 5000 ug/L. 200.7 allows 15%. RL is 50 ug/L. Eric suggested 200 ug/L due to the RL.

Conclusion: Recommend +/- 15% limits. Concentration Range: 200-2000 ug/L

Motion: Eric Second: Steve Unanimously approved.

Mercury: Current limit is +/- 30%. MCL is 2 ug/L. Lab RL of 0.2 ug/L. CFR concentration range is 0.5 ug/L or above.

Conclusion: No change. Recommend +/- 30% limits. Concentration Range: 0.5 - 10 ug/L.

Motion: Eric Second: Dan D. Unanimously approved.

Hexavalent Chromium: Insufficient data. There are 8 studies with N above 20. There are many that are less than 20. We don't have enough data to take it to the accreditation table. It should be submitted to the PT Board, because it may need to be left on the Experimental Table. Previously it was set at 5-50 ug/L concentration and 20% limit. Do we use this new information or stay with the old. Steve suggested opening up the limits and adding it to the accreditation table, but Chuck pointed out that this can not be done based on the current 2003 Standard requirements. The limits have to be statistically derived as per the SOP. The SOP states that you need 10 studies with a minimum of 20 points. Jeff suggested that maybe the PT providers could provide more data from previous years so that the criteria can be met. Dan asked if we can take a look at the WP data too. It is the same method.

There was considerable discussion about the PT Board's recent decision to leave the Experimental PT tables in place until the standard is updated. Some were unhappy with the change. These concerns should be taken-up with the PT Board. This subcommittee needs to follow the SOP they have been given.

Decision: A request will be made for more data to be sent to Brian. He will mask the data and forward to Jeff for calculation. This will be looked at during the next meeting on 7/14. Brian will be making the request.

Volatiles: Jeff reviewed the work he has started on volatile analytes (see Attachment B.) Everyone should review this before the next meeting so the information can be discussed. The format could be an easier way to review the straight forward analytes.

4. Next Meeting

The next meeting of the Chemistry FoPT Subcommittee will be July 14, 2009, at 11AM EST. Jeff will send out evaluation files prior to the call and desktop sharing will be made available during the call.

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

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The meeting was adjourned at 12:32 PM EST. (Motion: Dan Second: Carl.)

Attachment A

Participants TNI Chemistry FoPT Subcommittee

Members	Affiliation	Contact Information
Carl Kircher, Co-Chair Present (last ½ hour)	Florida DOH	904-791-1574 carl_kircher@doh.state.fl.us
Brian Boling, Co-Chair Present	Oregon DEQ	Boling.Brian@deq.state.or.us
Amy Doupe Absent	Lancaster Laboratories, Inc.	717-656-2300 x1812 aldoupe@lancasterlabs.com
Jeff Lowry Present	ERA	303-431-8454 jlowry@eraqc.com
Chuck Wibby Present	Wibby Environmental	303-940 -0033 cwibby@wibby.com
Eric Smith Present	TestAmerica	615-726-0177 x1238 eric.smith@testamericainc.com
Dan Tholen Absent	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
Jim Absent		mousejr@nu.com
Ilona Taunton, Program Administrator Present	TNI	828-712-9242 tauntoni@msn.com

Attachment B

DW Volatiles Aromatic and Halogenated Aromatic

Review of Outliers:

A total of 910 study statistical summaries were evaluated for 23 analytes (average of 39 studies/analyte). Seven or 0.77% of the studies were dropped as influential outliers. Fifty-four or 6.0% of the studies were identified as level 1 outliers (± 2 standard errors of the mean). Forty-seven or 5.2% of the studies were identified as level 2 outliers (± 2 standard errors of the standard deviation). One hundred and ten or 12.1% of the studies were identified as level 3 outliers ($+1$ standard error of the standard deviation). After influential outlier removal, a total of 23.3% of the studies were identified as level 1, 2 and 3 outliers.

Review of FoPT Subcommittee Acceptance Criteria:

All analytes have met minimum data set requirements, the a and b factors calculated passed the mean R^2 test of > 0.90 and the c and d factors calculated passed the standard deviation R^2 test of > 0.75 . No equations produced convergence at the low end of the concentration range.

Review of Regression Plots:

There are nine of the twenty-three analytes considered as regulated volatiles in the federal register. Under the CFR the acceptance limits are set at $\pm 40\%$ at an assigned value of $< 10 \mu\text{g/L}$ and $\pm 20\%$ at an assigned value of $\geq 10 \mu\text{g/L}$. Interestingly enough, the linear regression equations for all nine regulated volatiles are all within $\pm 20\%$ at an assigned value of $\geq 10 \mu\text{g/L}$. The regression equations for several of the regulated analytes have acceptance criteria around $\pm 20\%$ across the full PT concentration range. The other fourteen analytes are considered as unregulated volatiles. The PT acceptance limits set by the present TNI FoPT table are at $\pm 40\%$ at an assigned value of $< 15 \mu\text{g/L}$ and $\pm 20\%$ at an assigned value of $\geq 15 \mu\text{g/L}$. Again interestingly enough, the linear regression equation for most of the unregulated volatiles are within $\pm 20\%$ of the assigned value at $\geq 15 \mu\text{g/L}$. Both these observations may point to data quality objectives being set and the industry working toward meeting these objectives.

Several of the aromatic and halogenated aromatic analytes could be set to tighter (and/or wider) acceptance limits based on the regression plots presented. To avoid confusion and potential conflict about the CFR requirement vs. a TNI FoPT table, I would suggest that the acceptance limits of regulated volatiles remain $\pm 40\%$ at an assigned value of $< 10 \mu\text{g/L}$ and $\pm 20\%$ at an assigned value of $\geq 10 \mu\text{g/L}$. The unregulated analytes regression plots should be reviewed by the subcommittee and appropriate acceptance criteria based on the data collected be developed.

Review PT Concentration Range:

Under the CFR the acceptance limits are set at $\pm 40\%$ at an assigned value of $< 10 \mu\text{g/L}$ and $\pm 20\%$ at an assigned value of $\geq 10 \mu\text{g/L}$ for the nine regulated volatiles. The present PT concentration ranges for the regulated analytes vary. The laboratory reporting limit for all analytes is reported at $0.5 \mu\text{g/L}$ for EPA Method 524.2. I would suggest changing all regulated volatile PT concentration to 2 to $20 \mu\text{g/L}$.

The present PT concentration range for the unregulated analytes is 5 to $50 \mu\text{g/L}$. Many of these analytes are of the same class as the regulated volatiles and therefore should perform identically. Considering the present PT concentration range of the regulated volatiles and the laboratory reporting limit of $0.5 \mu\text{g/L}$, I would suggest changing the PT concentration range for the unregulated aromatic and halogenated aromatic volatiles to 2 to $20 \mu\text{g/L}$.

Review of PTRL:

All suggested Proficiency Testing Reporting Limit (PTRL) as calculated from the developed regression equation for these analytes are well above the laboratory reporting limit supplied by the laboratories of $0.5 \mu\text{g/L}$.

Review of LCS vs. Acceptance Limits:

The laboratory control sample limit reported where $\pm 30\%$. Curiously, the CFR (regulated volatiles) and the present FoPT table (unregulated volatiles) applies tighter limits for PT sample acceptance above $10 \mu\text{g/L}$ of $\pm 20\%$.

Acceptance of Data Presented:

All aromatic and halogenated volatiles presently on the TNI accreditation table should remain on this FoPT table. Naphthalene should be moved from the experimental table to the accreditation table under volatile.

Attachment C

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 – <i>It was determined that these tables are used by more than just ABs. This needs to be reconsidered.</i>)	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	Delayed due to exp PT tables.
21.	Subcommittee members with labs to provide information about PT analytes. Information needs to be submitted to Jeff.	Eric Stacey Amy	5/31/09	
22.	Prepare for upcoming meetings by reviewing evaluation files that Jeff will send every 2 weeks.	All	Ongoing	
23.	Brian will contact PT providers to get more data for Hexavalent Chromium. A wider window of time will be used to see if sufficient data is available to determine limits.	Brian	7/14/09	

Attachment D

Backburner / Reminders – Chemistry FoPT 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.
2	Reminder: Look at what the minimum “n” should be once we start getting data from the PT providers. Take a few studies and run some comparisons. Also, look to see if the unacceptable rates are higher in smaller studies.	12-16-08	
3	Consider changing the lower limit for Vanadium on WP to 50 ug/L.	6-30-09	
4			
5			