

**TNI Chemistry FoPT Subcommittee
Meeting Summary
July 28, 2009**

1. Roll call and Meeting Minutes:

Co-Chair Carl Kircher called the Chemistry FoPT Subcommittee to order on July 28, 2009, at 11am EST. Attendance is recorded in Attachment A.

Minutes from the June 30 and July 14, 2009 meeting were previously distributed. A motion was made by Jeff Lowry to accept the June 30th minutes and it was seconded by Dan Dickenson. The minutes were unanimously approved. A motion was made by Dan Dickenson to accept the July 14th minutes with one date change and it was seconded by Jeff Lowry. The minutes were unanimously approved. Both will be posted on the website.

2. Additional PT Provider Data

In response to Action Item # 24, Brian stated, if Carl wants the data, we will have to ask the provider for revised data. The additional data set received included everything – not just $n > 20$. This data set should not be used.

Due to limited participation in the last meeting, the subcommittee continued the discussion on how additional data should be used. Will the group use the data received to re-establish the limits already discussed? Or will additional data only be used going forward for analytes where insufficient data was previously received to move the analyte from the Experimental Table to the accredited table?

Brian suggested only asking for additional data when it is needed for a particular analyte - where there is not enough data to elevate the analyte from Experimental to Accredited.

A motion was made by Brian that additional data will only be requested when the subcommittee is evaluating limits for analytes where insufficient data is available to move the analyte from Experimental to Accredited. In addition, all data requested must have an $n > 20$ and it will be masked before sending it to Jeff for inclusion in the limits. Any additional data received from providers will not be considered if the analyte is already on the accredited table or previous requests for data have provided sufficient data for inclusion of the analyte on the accredited tables. This motion was seconded by Dan Tholan. It was unanimously approved.

3. Review of Limits

Jeff led the group through the Excel Spreadsheets he sent out to the group on July 27, 2009.

Hexavalent Chromium: We received 3 more data points, which allows us to now determine a limit and elevate it to the accreditation table. The concentration in WP is 45-880 ug/L. The acceptance limit in WP is about +/-18% with 3 standard deviations.

Conclusion: Recommend +/- 20% fixed limits. Concentration Range: 5-50 ug/L.

Motion: Eric Second: Stacey Unanimously approved.

Volatiles:

Jeff prepared a document (Attachment B) summarizing the results and presented this to the group.

Regulated Aromatic and Halogenated Aromatics:

Benzene

Styrene

Toluene

Chlorobenzene

Ethylbenzene

Total Xylene

1,2- Dichlorobenzene

1,4 – Dichlorobenzene

1,2,4- Trichlorobenzene

Leave fixed at +/- 40% at < 10 ug/L and +/- 20% at ≥ 10 ug/L. This is what is currently promulgated.

Looking at concentration range, Jeff suggested 2-20 ug/L for the above listed analytes except for Xylene. It should be left at 2-50 ug/L.

Motion by Eric, second by Stacey. Unanimously approved.

Unregulated:

n-Butylbenzene

sec – Butylbenzene

tert – Butylbenzene

n-Propylbenzene

Isopropylbenzene

4-Isopropyltoluene

1,2,4 – Trimethylbenzene

1,3,5 - Trimethylbenzene

Naphthalene

Bromobenzene

2 - Chlorotoluene
4 - Chlorotoluene
1,3 - Dichlorobenzene
1,2,3 - Trichlorobenzene

Presently, most are at a 5- 50 ug/L and +/- 50% at < 15 ug/l and +/- 20% at \geq 15 ug/L.

In considering the compounds above, it has been recommended that we do not go narrower than the LCS limits.

Acceptance limit at +/- 30% fixed limit when \geq than 10 ug/L and fixed at 40% when < 10 ug/L. Concentration Range: 2-20 ug/L. This applies to all the analytes listed above, except Naphthalene and 1,2,3 - Trichlorobenzene.

Motion made by Eric, seconded by Dan Tholan. Unanimously approved.

For 1,2, 3 - Trichlorobenzene:

Acceptance limit at +/- 30% fixed limit when \geq than 10 ug/L and fixed at 40% when < 10 ug/L. Concentration Range: 5-50 ug/L.

Motion made by Eric, seconded by Chuck Wibby. Unanimously approved.

For Naphthalene: Jeff is concerned that there is not enough data for Method 525 - SVOA. In the past, the analyte was listed once and used for both SVOA and VOA ... so he felt the limits should be widened. This actually should not be a concern this time, because the analyte should be listed under SVOA if it is to be considered for SVOA. This discussion should focus on volatile. This will move Naphthalene from the Experimental Table to the regulated table.

Acceptance limit at +/- 30% fixed limit when \geq than 10 ug/L and fixed at 40% when < 10 ug/L. Concentration Range: 5-50 ug/L.

Motion made by Jeff Lowry, seconded by Dan Tholan. Unanimously approved.

4. Next Meeting

The next meeting of the Chemistry FoPT Subcommittee will be August 25, 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 12:35 PM EST.

Attachment A

Participants TNI Chemistry FoPT Subcommittee

Members	Affiliation	Contact Information
Carl Kircher, Co-Chair Present	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 Present	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 Present	A2LA	231-929-1721 Tholen.dan@gmail.com
Stephen Arpie Absent	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	
24.	Brian will contact one of the data providers to ensure that the data requested is what was sent. Data will be forwarded to Carl.	Brian	7/28/09	Complete. Data was not useable.

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			