TNI Chemistry FoPT Subcommittee
Meeting Summary
April 7, 2015

1. Roll call and Meeting Minutes:

Chair Carl Kircher called the meeting of the Chemistry FoPT Subcommittee to order on April 7, 2015 at 12:05 ET. Attendance is recorded in Attachment A. There were 7 members on the call.

Carl continues to maintain the updated concentrations and limits on the SCM Excel Summary table for use at each meeting.

2. SCM FoPTs

<u>Benzo(g,h,i)perylene</u>

The study concentration was 374 - 5060 ug/Kg. The PDF is dated 2-24-15. The current concentration limits are 1000 – 12000 ug/Kg. It did pass criteria for fixed limits at 58.7%. It passed the Stdev R^2 Eval > 0.75.

Stephen noted that some of the limits may be meaningless for the PT Providers because in some cases they are not soluble at these limits. Some of the concentrations cannot be made. He is not expecting the committee to make a change, but wanted to make a note of this. He also noted that more costly analytes at higher concentrations may be more costly for labs. He makes these comments because Carl has a tendency to want to widen the limits. Stephen will do these checks when the table is complete.

Andy noted that his lab statistical limits are 66-110% with an average recovery of 88%. Andy will forward his limits to Carl after the call. Stacey's lab does not have this in their current spike mix.

Andy noted that there is no data at the higher range – probably for the reason's Stephen noted above.

A motion was made by Andy to leave the concentration limit as 1000-12000 ug/Kg for Benzo(g,h,i)perylene on the SCM FoPT accreditation table and using the study mean and the new cd coefficients as presented on the PDF files presented by Carl dated 2-24-15. The motion was seconded by Stephen and passed unanimously.

Benzo(a)pyrene

The study concentration was 286 - 6730 ug/Kg. The PDF is dated 2-24-15. The current concentration limits are 1000 – 12000 mg/Kg. It did not pass criteria for fixed limits. It passed the Stdev R^2 Eval > 0.75.

Stephen wanted to expand on his discussion above. If a lab has problem with a PT – it could be a problem with the total weight of the analyte in the solvent the lab uses – that is a problem. There are issues with PTs at the higher concentrations. The PT Provider also has to look at what co-precipitates from the dirt that could also affect solubility. Everyone could be doing everything right – but there could be fit for use issues. Carl also noted that labs use different extraction procedures that also affect this. At this point in time … there is nothing this subcommittee can do with this. If there are issues in the future, the subcommittee will need to look this.

Carl recommended using the new equation.

Andy noted that his lab statistical limits are 60-117% with an average recovery of 89%. Stacey's lab limits does not have this analyte in the current mix.

A motion was made by Dan to leave the concentration limits as 1000-12000 ug/Kg for Benzo(a)pyrene on the SCM FoPT accreditation table and using the study mean and the new cd coefficients as presented on the PDF files presented by Carl dated 2-24-15. The motion was seconded by Stephen and passed unanimously.

Stephen asked the committee to look at page 2 of 5 of the PDF – Mean vs. Standard Deviation. He noted that as concentration increases - standard deviation also increases. He asked if this is a phenomena of solubility. Stephen is trying to understand this. Carl looked at some other graphs and he does not consistently see this. Dan commented that if this was consistent you would have problems with linearity.

Chrysene

The study concentration was 522 - 7310 ug/Kg. The PDF is dated 2-24-15. The current concentration limits are 1000 – 12000 mg/Kg. It did pass criteria for fixed limits at 48.8%. It passed the Stdev R^2 Eval > 0.75.

Carl noted the analyte is well behaved. The convergence is gone after applying the SOP. He recommends the new regression. He sees improvements across the entire concentration range.

Andy asked why the limits are higher at the lower concentrations? Carl thinks it is just an improvement in the data. Labs have improved. The subcommittee reviewed the data and looked at differences when the outliers were removed. Dan noted that a lot of the outliers were at the higher concentrations and those were removed.

Andy noted that his lab statistical limits are 65-108% with an average recovery of 86%.

A motion was made by Stephen to leave the concentration limits as 1000-12000 ug/Kg for Chrysene on the SCM FoPT accreditation table and using the study mean and the new cd coefficients as presented on the PDF files presented by Carl dated 2-24-15. The motion was seconded by Andy and passed unanimously.

Dibenz(a,h)anthracene

The study concentration was 741 - 6594 ug/Kg. The PDF is dated 2-24-15. The current concentration limits are 1000 – 12000 mg/Kg. It did not pass criteria for fixed limits. It passed the Stdev R^2 Eval > 0.75.

There is more of a problem for this analyte at higher concentrations. This may be caused by the solubility issues commented on by Stephen. There aren't as many outliers as other analytes relative to the number of data points. The upper part of the graph looks the same as the current limits. Carl recommends the new equation.

Andy thought the new equation may be looser. Dan looked at this and the new equation does offer improvement in standard deviations across the concentrations.

Andy noted that his lab statistical limits are 64-110% with an average recovery of 87%. This is consistent with the numbers previously received from labs and included in the Excel summary table. Stacie does not have data for this analyte.

Andy wonders if the solubility issue may be due to how the PT Provider is preparing the PT – spiked on soil, in an ampule, etc …

There is a convergence that is eliminated by applying the SOP.

Stephen noted that one of the providers gave most of the higher concentration data. Carl said that the disparity between concentrations and PT Providers has improved from the past. There is not as big a difference.

Carl looked ahead at the next analyte and noted it is heavier.

Stephen asked about recoveries – the recoveries are lower at the higher concentrations. Dan thinks this is a matrix issue.

Stephen noted that a lab that gets better recoveries at the upper end concentrations will often fail the PTs. Dan commented that if the Study Mean is below the Made to Value, then they have to multiply that according to the footnote, so the upper limit is 110% of the Made to Value. Dan noted hardly anyone fails this. If there is an issue ... it is usually a math error.

A motion was made by Andy to leave the concentration limits as 1000-12000 ug/Kg for Dibenz(a,h)anthracene on the SCM FoPT accreditation table and using the study mean and the

new cd coefficients as presented on the PDF files presented by Carl dated 2-24-15. The motion was seconded by Dan and passed unanimously.

Indeno(1,2,3-cd)pyrene

The study concentration was 446 - 5930 ug/Kg. The PDF is dated 2-24-15. The current concentration limits are 1000 – 12000 mg/Kg. It did pass criteria for fixed limits at 77.3%. It passed the Stdev R^2 Eval > 0.75.

Carl noted this is probably the heaviest PAH. There was some initial convergence that was taken care of by applying the SOP and then removing more analytes and by doing a re-insertion of one point. This made the d coefficient above zero. Carl would prefer going with the new equation and keeping the current concentration range. There might be reason to lower the top end of the concentration range.

Andy noted that his lab statistical limits are 57-121% with an average recovery of 89%. This is similar to the Excel Summary table.

The limits are a little tighter using the new equation, but impact on the labs would be negligible. Andy thinks the new limits are doable and would prefer to go with the new equation.

A motion was made by Andy to leave the concentration limits as 1000-12000 ug/Kg for Indeno(1,2,3-cd)pyrene on the SCM FoPT accreditation table and using the study mean and the new cd coefficients as presented on the PDF files presented by Carl dated 2-24-15. The motion was seconded by Stephen and passed unanimously.

3. Action Items

See action item table in attachments.

4. New Business

None.

5. Next Meeting

The next meeting of the Chemistry FoPT Subcommittee has been scheduled for April 21, 2015

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

The call was ended by FreeConference at 1:28 pm EST. (Motion: Stephen Second: Stacey Unanimously approved.)

Attachment A

Participants
TNI
Chemistry FoPT Subcommittee

Members	Affiliation	Contact Information
Carl Kircher, Chair **Present**	Florida DOH	carl_kircher@doh.state.fl.us
Joe Morotti **Present**	Sigma-Aldrich RTC	Joe.morotti@sial.com
Melanie Ollila **Absent**	Pace Analytical Services, Inc.	MOllila@pacelabs.com
Jeff Lowry **Absent**	Phenova	JeffL@phenova.com
Stephen Arpie **Present**	Absolute Standards, Inc.	stephenarpie@mac.com
Dan Dickinson **Present**	New York, DOH	daniel.dickinson@health.ny.gov
Stacey Fry **Present**	E.S. BABCOCK & Sons, Inc.	sfry@babcocklabs.com
Joe Pardue **Present – 12:35pm**	Pro2Serve, Inc.	423-337-3121 joe_pardue@charter.net
Dr. Andy Valkenburg **Present**	Energy Laboratories, Inc.	avalkenburg@energylab.com 406-869-6254
Ilona Taunton, Program Administrator **Recording**	TNI	Ilona.taunton@nelac-institute.org 828-712-9242

Attachment B

Action Items – Chemistry FoPT Subcommittee

	Action Item	Who	Expected Completion	Actual Completion
119	Use new PCB in Oil regression equation on historical data to confirm there is no substantial increase in failure rates.	Joe, Dan, Stephen, Jeff	2-26-15	
120				

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	
10			