TNI Chemistry FoPT Subcommittee
Meeting Summary
April 22, 2014

1. Roll call and Meeting Minutes:

   Chair Carl Kircher called the meeting of the Chemistry FoPT Subcommittee to order on April 22, 2014 at 12:09 ET. Attendance is recorded in Attachment A. There were 7 members on the call.

   The meeting minutes for April 8, 2014 were distributed for review. Joe Pardue motioned to accept the meeting minutes. Andy seconded the motion and there was no further discussion. Vote: For – 5, Against – 0, Abstain – 2 (Joe and Jeff). The motion passed and the minutes will be posted.

2. Metribuzin

   Carl noted that the PTPEC has asked that the committee review their previous work on Metribuzin. Carl's initial recommendation is that the limits should be left as they are.

   Jeff agrees that the limits should not be updated. He did not see a significant increase in failure rates.

   Dan sent an email with comments (Attachment D). He asked if the limits are set on a true value or assigned value? Carl responded it is centered on assigned value. Dan asked what happens if the recovery is only 50% - there would be more PT failures. He is concerned that this will be an issue as the subcommittee begins work on the extractable organics in solid waste. Jeff thought it would be appropriate to look at recovery when these PTs are evaluated. Dan is fine with leaving Metribuzin at +/- 50% and believes the labs will pay more attention to their recoveries. The lab community will work towards the limits.

   Andy asked why +/- 60% was not used for the fixed limits because the plots were wider than +/- 50%. Carl noted that the subcommittee thought it would be too wide to be an effective PT at 2-20 ug/L. Dan also commented that it is +/- 50% around the blue line, but it is not at 100%.

   Andy's recovery for Metribuzin is 104%. Stacey is seeing recoveries around 50-70% with 525.

   Dan commented on the linear regression equations and that the c-coefficient is around 0.26 is going to mean the acceptance limits are going to be around 50%.

   A suggestion was made to collect more information on how PT providers are formulating the PT. It was also noted that one failure makes the failure rate seem bigger when there is not as much data.

Jeff Suggest that the PTPEC investigate that providers stability information and leave limits as they are.

The subcommittee was not ready to make a decision on this analyte and discussion will continue at the next meeting.

3. FoPT Analyte Addition Application

Carl reviewed the application. Carl sent PT files out to the subcommittee on March 6, 2014.

The PDFs reviewed were dated 3-6-14. There was plenty of data reviewed. Carl does not recommend fixed limits.

Jeff thinks all three can be proposed at 0.2 to 2 ug/L with linear regression equations.

With EDB, Andy is seeing the following for his LCS (0.25 ug/L) Control Limits: 72-138% Recovery: 105%

A motion was made by Jeff to set a concentration limit of 0.2 to 2 ug/L for EDB, DBCP and 1,2,3-Trichloropropane on the NPW FoPT accreditation table using the new regression equation with the abcd coefficients described in the PDF provided by Carl by on 3-6-14. It is noted that the Std Dev R^2 is below 0.75 at 0.7284. The motion was seconded by Joe Pardue.

Discussion: Joe M. – On WS all these analytes are +/-40% fixed. Carl commented that the NPW data is comparable. It is a little wider at the lower concentration range.

The motion was unanimously approved.

Carl will draft a letter to the PTPEC to accept the analytes for addition to the NPW table.

Jeff asked what the header will be for the analytes. Currently they are under the Volatile Halocarbons. Carl looked at how the low level mercury and chlorine were put on the table – they were listed under a low level header.

In the DW table the three analytes are listed in the category of Volatile Organics. It was suggested putting them under a new header – Low Level Halocarbons above the BNAs.

Carl will send everyone a DRAFT of what will go the PTPEC.

4. Action Items

See action item table in attachments.

5. New Business

- None.

6. Next Meeting

The next meeting of the Chemistry FoPT Subcommittee has been scheduled for May 5, 2014. Carl and Dan should have more data available for review. Metribuzin will be finalized.

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

The call was ended at 1:03pm EST. Motion – Joe P Second - Jeff 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 **Present**	Phenova	JeffL@phenova.com
Stephen Arpie **Absent**	Absolute Standards, Inc.	stephenarpie@mac.com
Dan Dickinson **Present**	New York, DOH	dmd15@health.state.ny.us
Stacey Fry **Present**	E.S. BABCOCK & Sons, Inc.	sfry@babcocklabs.com
Joe Pardue **Present**	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 **Present**	TNI	Ilona.taunton@nelac-institute.org 828-712-9242

Attachment B

Action Items – Chemistry FoPT Subcommittee

	Action Item	Who	Expected Completion	Actual Completion
102	Data work-up when it comes in for analyte additions.	Carl	tbd	In Progress
105	Forward Metribuzin discussion to other subcommittee members for opinions.	Ilona	4/15/14	Complete
106	Prepare written comment for PTPEC regarding Metribuzin.	Carl	4/17/14	Complete
107	Prepare DRAFT of EDB, DBCP, 1,2,3-Dichloropropane addition to the NPW table.	Carl	5-5-14	

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			

Attachment D – Comments from Committee Members

4/16/14 – Dan Dickinson

Sorry I missed the call last week. I think the problem is related the recovery bias for this analyte. Historically, it was scored with an LRE using an "a" coefficient of 0.7942. The "new" LRE from the 8/25/2009 pdf has "a"= 0.8297. Not much difference and generalizing we can say that PT study participants will recover, on average, about 80% of the amount of Metribuzin added to the sample. The Subcommittee saw that this analyte developed acceptance limits approximating +/-50% over the data range and recommended that fixed limit as an SOP departure. Fixed limit scoring is generally limited to analytes without a bias, such as, the volatiles and the metals. That is, it is limited to those analytes where both the robust study mean and predicted study mean from the LRE would be the same as the Assigned Value (amount added by the PTP), meaning the "a" coefficient is 1.00 +/-0.05 and the "b" coefficient is < 5% of the lowest AV.

I think the PTP, in this case, may have centered the +/- 50% limits on the Assigned Value (amount added) as they would normally do for other fixed limit analytes. Referring to the WS Metribuzin pdf, if I draw in the +/- 50% limits centered on the AV(100%) and compare with the LRE limits (30%-140%) which are centered the predicted study mean (80%), I see that there is ~ 20% gap between the low fixed limit and the predicted low limit and maybe a 10% gap on the high side. And everything changes for AVs < 10 ug/L which comprises the lower half of the PT range. The limits are not +/- 50% anymore. They are predicted to become much wider. My replot of the data shows this to be completely artificial. However, the increased fail rate may be due to participant(s) with low recoveries falling between the old predicted low accept limit and 50% AV.

Prior to the change, from 2010 to 2011, there was only one (1) unsatisfactory score. From 2012 to 2013, there was one round that had no unsatisfactory, the other rounds had unsatisfactory of 24%, 21% and 15%. I think this statement is a little deceptive. It is trying to contrast a quantitative fail rate with a relative fail rate. The mean N for the studies on p. 5 of the WS Metribuzin pdf is ~ 17. So 20% of 17 is ~ 3 failures. If the PTP only has 13 participants and historically had 0 or 1 failures, one extra failure would make the relative fail rate upwards of 20% as described.

A concern was expressed about a bimodal distribution. This may be related to the two SPE prep procedures in the method; disc vs. cartridge. If all PTPs are seeing this then it should be communicated to the NELAC AC for on-site assessment follow-up.

Also for your consideration, I am including a reanalysis/replot of the Metribuzin data, but only in the current range of 2-20 ug/L. This eliminates the perceived LRE acceptance limit expansion imposed by studies outside the current range. It clearly shows the validity of the 50% fixed limit, however, it does not solve the bias issue which affects where the acceptance limits are centered.

Since there is a method bias for Metribuzin and Simazine , I think 50% fixed limits centered on the AV are not appropriate. The New LREs should be used. Or we could clarify that the fixed limit should be centered on the robust study mean. But that could be problematic for studies with low N.

Stephen Arpie – 4-16-14

Nice summary and view point. Once could also conclude if we re-define our goals, or better yet, align them with analytical chemistry and method performance to set fixed limits, we would be doing everyone a favor. The value of fixed limits includes easy computation and easy communication in that method performance can clearly be determined. We would not have this discussion if we said a particular analyte, in a matrix by a method must be within a certain acceptance fixed range.

Jeff Lowry – 4-16-14

Data I pulled last year WS Pesticides.

		N	Not Acceptable
Metribuzin	< Jan 2012	137	8
Metribuzin	>= Jan 2012	49	5

I don't see a problem with 10% FR. No correlation to concentration (AV) or method reported that I can see.
If we want to recalculate acceptance limit we can provide data, but not much with n>=20 (basically none).
I believe TNI needs failure rate data from all providers before moving forward. Perhaps the PTOBs

can provide before and after Jan 2012 for all providers. Like I wrote I don't see a problem with the present acceptancelimits with our design.

Jeff Lowry – 4-17-14

Three studies make up the 5 not acceptable.
Study 1 - 2 not acceptable. Same client both data points. 40% recovery. Atrazine and Simazine also low recoveries for this client and failed.
Study 2 - 2 not acceptable. One client reporting < sign, false negative. One client reporting 43% recovery.
Study 3 - 1 not acceptable. 44% recovery and atrazine and simazine also low recovery and failing.