Chemistry FoPT Subcommittee
Meeting Summary

July 6, 2023

1. Roll call, approval of minutes and overview:

Chair, Amy DeMarco, called the Chemistry FoPT meeting to order at 1pm Eastern on July 6, 2023. There were nine (9) members present (X):

Stephen Arpie - Absent		Svetlana Izosimova - Absent	
Kathryn Chang - Absent		Susan Jackson - Absent	
Audrey Cornell	X	Carl Kircher	X
Tom Dziedzic -Absent		Patrick Selig	X
Rachel Ellis	X	Amy DeMarco	X
Chuck Faulk	X	Aaron Bindel	X
Stacey Fry - Absent		Matt Graves	X
Craig Huff	X	Ilona Taunton – Program Administrator	X

The June minutes were reviewed. A motion was made by Craig to approve the minutes as written. The motion was seconded by Patrick. Vote: For – 8 Against – 0 Abstain – 1 (Carl). The motion was approved.

There were no changes made to the agenda.

2. ARA for PFAS Limits

<u>Data Submission</u>

The PT data was received from William and shared with Carl. He evaluated the data and then sent it to Amy to do a peer review.

The following email was sent on 6/20/23 from Carl:

Dear Amy and Other Chemistry FoPT Subcommittee Members,

Attached are some PDF files from the data analysis that was performed on the DW PFAS summary data from the TNI PT Database. The files only reflect analytes where there were 10 or more PT studies with which to do the data analysis per the SOP.

If one of you wants to peer review what I did from the original Excel files, please let me know and I'll attach those. Those file sizes are rather large, so I am not including them

in this e-mail. Dan Dickenson of New York did the peer reviews for me when we last did the wholesale Chem FoPT reviews.

As an executive summary, about two-thirds of the PFAS analytes did not have enough PT data to perform the analyses. The results from the other PFAS analytes indicated unacceptability due to low-concentration "convergence" (you'll see what I mean when you review the respective graph plots), and/or failure to achieve acceptable correlation between the PT study robust standard deviations and the Assigned Values.

Individually, here is what I find and conclude:

11-ClPF3OUdS	*only 7 data points (PT studies with nonzero Assigned Values)*
8:2 FTS	*only 7 data points*
6:2 FTS	*only 7 data points*
4:2 FTS	*only 7 data points*
N-EtFOSAA	*only 7 data points*
N-MeFOSAA	*only 6 data points*
9-ClPF3ONS	*only 8 data points*
ADONA	*only 9 data points*
NFDHA	*only 3 data points*
PFMPA	*only 3 data points*
PFMBA	*only 3 data points*
PFEESA	*only 3 data points*
PFBA	*only 6 data points*
PFDS	*only 1 data point*
PFHpS	*only 4 data points*
PFNS	*only 3 data points*
PFPeS	*only 4 data points*
PFPeA	*only 6 data points*
PFUnA	*only 9 data points*
PFOSAm	*only 4 data points*

PFBS	*15 points*	*convergence*
PFHxA	*15 points*	*convergence*
PFHxS	*21 points*	*fails r-squared (Std dev)*
PFHpA	*15 points*	*fails r-squared (Std dev)*
PFOA	*23 points*	*fails r-squared (Std dev)*
PFOS	*22 points*	*the only one that survived the data analysis and achieved criteria*
PFNA	*22 points*	*convergence*
PFDA	*13 points*	*fails r-squared (Std dev)*
PFDoA	*11 points*	*fails r-squared (Std dev); convergence*
PFTrA	*10 points*	*fails r-squared (Std dev); convergence*
PFTeA	*14 points*	*convergence*
HFPO-DA	*12 points*	*fails r-squared (Std dev)*

Thus, my opinion, I still stand by my original recommendation of (for each analyte) 10-200 ng/L concentration range and Acceptance Criteria AV +/- 40% fixed limit.

Please let me know what your comments and analyses are, particularly if I have drawn incorrect conclusions. (12 PDF files were attached and can be viewed in Attachment A).

Amy prepared the following peer review update on 7/3/23:

I have been peer reviewing your PFAS calculations/evaluations. I am not certain how much further I will get before our meeting on Thursday, but I have been able to make some significant progress. Mainly, I concur with your evaluations and have been able to replicate with my own data and can provide, if necessary. I will have a few questions where I may need your raw data and they are below so far. See status:

Analyte Code	LAMS Analyte	# Studies	Data Point Check	Date Peer Reviewed	Comments
9563	Perfluorotridecanoic acid (PFTrDA)	10	✓	✓06.28.23_ 07.03.23	confirm fails R^2 for SD; convergence
6903	Perfluorododecanoic acid (PFDOA)	11	✓	✓06.28.23_ 07.03.23	confirm fails R^2 for SD; convergence
9460	Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	12	✓	✓06.28.23_ 07.03.23	confirm fails R^2 for SD
6905	Perfluorodecanoic acid (PFDA)	13	✓	✓06.29.23_ 07.03.23	Carl typo on R^2 for mean =0.9623 should be 0.9683; confirm fails R^2 for SD
6902	Perfluorotetradecanoic acid (PFTDA)	14	✓	06.29.23	typo Carl PFTeA (?)- not matching up with Outlier 4, were these visual removals? Regression equation not the same.
6908	Perfluoroheptanoic acid (PFHpA)	15	✓	✓06.29.23_ 07.03.23	confirm fails R^2 for SD
6913	Perfluorohexanoic acid (PFHxA)	15	✓	06.29.23	go back not matching up iteration 3
6918	Perfluorobutane sulfonic acid (PFBS)	15	✓	not started	
6927	Perfluorohexane sulfonic acid (PFHxS)	21	✓	✓06.29.23_ 07.03.23	confirm fails R^2 for SD
6906	Perfluorononanoic acid (PFNA)	22	✓	not started	
6931	Perfluorooctane sulfonic acid (PFOS)	22	✓	not started	
6912	Perfluorooctanoic acid (PFOA)	23	✓	✓06.28.23_ 07.03.23	confirm fails R^2 for SD

Carl made a motion that the proposed DW PFAS analytes requested in the Analyte Request Application be accepted as FoPTs, with the concentration range for each analyte as 10-200 ng/L with acceptance criteria of Assigned Value +/- 40% relative SD fixed limit. The motion was seconded by Aaron.

Discussion:
Craig asked whether on the low end, were any analytes a problem at +/- 40%? Carl thinks the answer is no, but they will look at the plots. Amy displayed plots and confirmed Carl's recollection.

Vote:
All in favor. The motion passed.

Amy thanked Carl for all his work going through the data.

Footnote Discussion

Carl recommended the following footnotes by email:

Addition to the "Design Criteria" footnote:
(j) Design Criteria for PFAS Analytes – The starting materials are the metrologically traceable conjugate base salt forms for the analytes, with the Assigned Values stoichiometrically calculated to the corresponding acid forms for each PFAS analyte (linear form).

A motion was made by Carl and seconded by Craig to accept the addition to the "Design Criteria" footnote as shown above. There was no further discussion and the Subcommittee voted unanimously to approve the motion.

Additional Footnote:
##) Even though the analyte listing is the PFAS Acid, the delineated Field of Proficiency Testing consists of both the Acid and its deprotonated conjugate base form. The applicable test methods for PFAS do not distinguish between the acid and base forms for each analyte and instead determine the total (acid + base).

This will be further worked on by email. Amy asked people to comment by email.

Should the first footnote include linear vs. branched?

PT Provider comment: Neat material is linear and branched. Each batch is not necessarily the same. Specifying only linear would not be recommended.

3. New Business

None.

4. Action Items

6/1/23:

- Amy will send out the information provided above to the Subcommittee for discussion. -DONE

(Addition: Email from Amy – 6-7-23:
Attached are the documents that were discussed last week. The first one is gearing up for writing a PFAS footnote. What should we put in there, if anything? The second document is the difference that were found for 3 of the PFAS acronyms (LAMS vs ARA submission documents). Thanks again Audrey! We should decide how we will proceed with these.)

7/6/23:

- Continue discussion regarding footnotes by email.

5. Next Meeting

The next meeting will be a teleconference on September 7, 2023 at 1pm Eastern.

The meeting was adjourned at 2:01 pm Eastern.

Attachment A – PDF Files to Support PDF Data Evaluation

PDF files will be attached when posted. They were sent to everyone by Carl.