

SUMMARY

TNI CHEMISTRY EXPERT COMMITTEE MEETING

August 5, 2019

The Chemistry Expert Committee (CEC) met in a face-to-face format at 9:00 AM until 12:00 noon at the Environmental Measurement Symposium in Jacksonville, FL.

Roll Call

Valerie Slaven, Consulting Services (Other) - Chair	Present
Jay Armstrong, VA DGS (AB)	Present
Paula Blaze, NJ DEP (AB)	Absent
Eric Davis, Austin Water Utility (Lab)	Present
Deb Gaynor, Independent Consultant (Other)	Present
Shawn Kassner, Neptune (Other)	Present
Max Patterson, UT DOH (AB)	Present
Charles Neslund, Eurofins (Lab)	Present
Colin Wright, Florida DEP (Lab)	Present
Calista Daigle, Quality Consulting (Other)	Present
Chad Stoike, ALS Global (Lab)	Present
Robert Wyeth, Program Administrator	Present

Nicole Cairns, an associate committee member was also present. With a quorum present the meeting proceeded consistent with the Agenda (Attachment 1).

July 3, 2019 Meeting Minutes

Meeting minutes from the July teleconference were reviewed and after a motion by Deb and a second by Shawn were unanimously approved by vote of the committee. Minutes will be forwarded to William for posting on the TNI website.

Chemistry Committee Vice-Chair

After a brief discussion of the need for a vice chair Shawn nominated Colin but since he will be rotating off the committee after this year he declined the nomination. Chad volunteered to assume the position which was unanimously approved by the committee.

Review and Approval of revision to SIRs

The chemistry committee prepared revised responses to the LASEC/AC on a number of SIRs.

SIR 297 – Responses approved during the July teleconference but no feedback has yet to be received from the LASEC/AC.

SIR 282- Committee response after a motion by Deb and a second by Chuck was unanimously approved by the committee (Attachment 2).

SIR 339 - Committee response after a motion by Max and a second by Chuck was unanimously approved by the committee (Attachment 3).

SIR 340 – Committee response to the LASEC was reviewed and after a comment was received from the audience, it was decided to resolve a conflict in the language by adding “..or above the concentration of the lowest calibration standard..”. This change after a motion was made by Shawn and seconded by Max was approved unanimously by the committee and will be returned to the LASEC (Attachment 4).

Review and Discussion of new SIR – 355

This new SIR concerns single point calibrations in ICP/ICPMS analysis. The request was to the correctness of their interpretation. The committee agreed their interpretation as shown on Attachment 5 was correct.

Compilation of SIR Summary

The remainder of the meeting was spent on providing the required responses as to applicability of chemistry expert committee SIRs to the 2003, 2009 and/or 2016 TNI standards. Each chemistry SIR that has been resolved was addressed and the applicability of the SIR to the versions of the TNI Standard was presented as a simple yes (Y) or no (N) listing in the summary table in Attachment 6.

The face-to-face meeting of the committee was adjourned on a motion by Shawn and second by Chuck at 12:00 Noon. The next scheduled meeting of the committee will be by teleconference on Wednesday, September 4, 2019 at 2:00 PM ET.

Attachment 1

Environmental Measurement Symposium
Chemistry Expert Committee
Meeting Agenda
Monday August 5, 2019, 9:00 AM - Noon

1. Roll Call
2. Approval of July 3, 2019 Minutes
3. Committee Vice-Chair selection
4. Review and Approval of LASEC comments (if received)
 - a. SIR 297
5. Review and Approval of revision to SIRs
 - a. SIR 282
 - b. SIR 339
 - c. SIR 340
6. Review and Discussion of new SIR
 - a. SIR 355
7. Compilation of SIR Summary
8. Discuss AB comments on Demonstration of Capabilities (DOC) (if received)

ATTACHMENT 2

SIR 282

To the Chemistry Committee from LASEC SIR Subcommittee:

We tried to write Implementation Guidance for this SIR, as it was determined not to be a valid SIR back in 2014 when it was submitted. We learned from Silky that the language goes back to the early NELAC Standards but that the way it's now been put into practice is now what the old Quality Systems Committee intended when they wrote the language. Apparently, the language has been carried forward for two decades now, without really being examined.

Please coordinate your response with the Quality Systems Expert Committee. For this one, normal timeframes have long since been abandoned. Thank you!

Standard	2009 TNI Standard
Volume and Module (eg. V1M2)	V1M4
Section (eg. C.4.1.7.4)	1.7.3.2.3 and Note

The language in the note under Section 1.7.3.2.3 is as follows, "The matrix spike may be used in place of this control as long as the acceptance criteria are as stringent as for the LCS" seems to indirectly indicate that an analyte in the MS which meets the LCS acceptance criteria may be used in place of the same analyte in the LCS that does not pass the LCS criteria.

Describe the problem:

In short, if an analyte in the LCS fails the LCS acceptance criteria can you use the same analyte from the MS instead if it meets the LCS acceptance criteria.

My interpretation is that this is not the intent of the note in this section of the standard to allow this however I have received questions from several sources regarding the applicability of the above requiring further explanation.

I look forward to your response.

Committee Comments:

The MS is "used in place" meaning an LCS is not analyzed. The MS cannot replace a failing LCS. This note will need to be clarified in the upcoming revision of the standard. It is assumed that if a sample matrix can pass which is a worst case scenario, then a clean matrix should be able to as well. This is why the MS limits must be as

stringent as the LCS. It should also be noted that this was originally intended for use in small waste water labs that only analyze a single waste stream.

Response:

The language "used in place of" is interpreted to mean that the batch does not contain an LCS. The quality of the data is being evaluated with an MS instead of the LCS. However, if an LCS is present in the batch, it must be analyzed and evaluated to assess the quality of the data, independent of the results of a MS. If the method requires an LCS then a MS may not be substituted.

The committee will clarify the wording of this section in next revision of the Standard.

ATTACHMENT 3

SIR 339

Standard	2016 TNI Standard
Volume and Module (eg. V1M2)	V1M4
Section (eg. C.4.1.7.4)	1.6.1 c)

Describe the problem:

1.6.1.c) In cases where an individual has prepared and/or analyzed samples using a method that has been in use by the laboratory for at least one (1) year prior to applying for accreditation, and there have been no significant changes in instrument type or method, the ongoing DOC shall be acceptable as an initial DOC. The laboratory shall have records on file to demonstrate that an initial DOC is not required.

Question: Would like clarification on the wording in this section. Is the section saying that if a lab applies to add accreditation for a method the lab has been performing in house for at least one year, the analyst performing the test can submit an On-going DOC for accreditation rather than an Initial DOC? The wording almost suggests that the analyst does not need an IDOC for a test method the lab has held certification for over one year, only an On-going.

Thank You

Committee Comments:

The Standard does allow applying for accreditation for a method in the limited case of a method “the lab has been performing in house for at least one year” without the performance of an Initial DOC. Please note that Section 1.6.1.c) does not say “a test method the lab has held certification for [for] over one year”.

The Committee agrees that the requirements and clarity for Initial and Ongoing DOC are unsatisfactory, and has already slated these sections for revision in the next version of the Standard. Suggestions are welcome.

Response:

The question has been posed in two parts, and is answered accordingly. For the first question, if the individual has been performing the method, preparing and analyzing samples, and meets all the laboratory requirements for an Ongoing DOC (Section 1.6.3), the Standard allows substitution of an Ongoing DOC for an Initial DOC, aside from any other program requirements. It should be noted that the requirements for an Ongoing DOC (Section 1.6.3) include any one of five approaches, one of which is “another” Initial DOC.

Section 1.6.1.c) is not relevant to the second issue, in which “the lab has held certification for over one year”. This posits a situation in which a new analyst is being trained for an already-accredited method or new analytes are being added to an already accredited method; these requirements are set in Section 1.6.2 (the Initial DOC) since the laboratory already hold accreditation for the method.

ATTACHMENT 4

SIR 340

Standard	2016 TNI Standard
Volume and Module (eg. V1M2)	V1M4
Section (eg. C.4.1.7.4)	1.5.2.1.2

Describe the problem:

40 CFR 136 Appendix B (3) (a) "During any quarter in which samples are being analyzed, prepare and analyze a minimum of two spiked samples on each instrument, in separate batches, using the same spiking concentration used in Section 2." If the variation in the spiking concentration is used to calculate the MDL ($MDL = t(n-1, 1-\alpha = 0.99)S_s$), and the lab uses the MDL to calculate a LOQ (maintaining that the $LOQ \geq$ the lowest calibration concentration), this may not be "a spike at or below the LOQ" as prescribed in TNI V1M4-2016 §1.5.2.1.2 because the concentration value does not play a role in calculating the MDL (DL). It seems the TNI ongoing verification definition differs from 40 CFR. If the lab were to use a concentration at or below the LOQ, this would not always satisfy 40 CFR 136 Appendix B (4) (b) "Include data generated within the last twenty four months, but only data with the same spiking level." The lab seeks clarification on when to verify at or below the LOQ and when to use the same spiking concentration as in the original study. Thank you.

Committee Comments:

Response:

The TNI requirement does differ from the EPA MDL procedure in that it requires that the spikes used for the ongoing verification of the MDL be "at or below the LOQ." The EPA MDL procedure has no limitations for the spike concentration used in the initial determination and ongoing verification, other than they be at the same concentration. In order to comply, the LOQ would therefore be set at the concentration **at or above** the lowest calibration standard or the concentration of the spiked samples used to determine the MDL, whichever is greater. This will ensure that the spike concentration is at or below the LOQ and that the ongoing verification can be carried out using spikes of the same concentration as the initial determination, as is required by the TNI standard. Performing the EPA MDL procedure alone is not adequate to meet the requirements set forth in the TNI MDL standard.

ATTACHMENT 5

SIR 355 Referred to Chemistry for Response July 15, 2019

Standard	2016 TNI Standard
Volume and Module (eg. V1M2)	V1M4-2017 Rev2.2
Section (eg. C.4.1.7.4)	1.7.1.1 k

Describe the problem:

k) The laboratory shall use and document a measure of relative error in the calibration.
i, ii-a and ii-b discuss running calculations on the calibration standard results used in the curve.

For metals analysis, we use ICP/ICPMS and a zero point and single calibration standard, which makes it impossible to calculate %RE or %RSE of a mid point and low level calibration standard. We are interpreting the standard to read that when a zero point, single calibration standard is used, the requirements of 1.7.1.1.k do not apply and are replaced by the requirements in the next paragraph - section 1.7.1.1.L (which specifically discuss requirements for single point calibrations.)

Please confirm that we are interpreting these requirements correctly.

Committee Comments:

Response: Your interpretation is confirmed as correct.

ATTACHMENT 6
SIR Summary Table