Draft

Chemistry Expert Committee
Public Meeting Summary

July 31, 2023

The Committee met during the TNI Environmental Measurements Symposium in Minneapolis, MN on Monday, July 31, 2023 at 9:00 AM CT. Committee Chair Michelle Wade led the meeting. The meeting was recorded for participants who could not attend in person. Michelle introduced committee members in attendance and presented the other members unable to participate in the Minneapolis EMS meeting.

Introduction CEC members and Attendance

Joseph Manzella, OCSD (Lab)	Present
Jay Armstrong, VA DGS (AB)	Absent
Nicole Cairns, NYS DOH (Lab)	Absent
Paula Blaze, NJ DEP (AB)	Absent
Max Patterson, UT DOH (AB)	Absent
Denise Johnson, NEORSD (Lab)	Absent
Melissa Jackson, OR ELAB (AB)	Absent
Durant Maske, Southern Companies (Lab)	Present
Calista Daigle, Pace (Lab)	Present
Tony Francis, Saw Environmental (Other)- Vice Chair	Present
Anand Mudambi, US EPA	Absent
Ali Boren, State of Vermont (AB)	Present
Lee Wolf, Consultant (Other)	Absent
Chad Stoike, ALS Global (Lab)	Absent
Michelle Wade, Pace Analytical Services (Lab)- Chair	Present
Robert Wyeth, Program Administrator	Present

Michelle then began the formal presentation which is presented below. Information summarized in the minutes which follow are presented in detail in the PowerPoint presentation.

CEC Presentation - NEMC Aug 2023.pptx

Review of CEC Activities

Michelle reviewed the activities of the committee since the January Winter TNI meeting in San Antonio. Committee activities were dominated by the efforts of the four established Work Groups to recommend changes to four significant issues with the existing EL V1M4 of the TNI Standard. These 4 Work Groups, as discussed further below, are as follows:

- Sections 1.4 /1.5 Method Selection Method Validation LOD/LOQ (Validation/Verification)
- Section 1.6 Demonstration of Capability
- Section 1.7.1 Calibration
- Sections 1.7.2 Quality Control and 1.7.3 Data Acceptance 1.7.4 Sample Handling

To a large degree these Work Groups have completed their tasks and are in the process of presenting their recommendation to the full committee for further discussion and resolution. The committee will then move to a complete review of the other sections of the whole Module to ascertain any other changes that would be advantageous to the TNI stakeholders and other interested parties.

A number of Standard Interpretation Requests (SIR) continue to be addressed by the committee.

Review of SIRs

Michelle reviewed all outstanding SIR that have been and/or continue to be addressed by the committee.

SIR 390 concerns Ion Specific Electrode (ISE) calibration and the committee's response as previously discussed last January has been submitted to the LASEC/AC and has reportedly been accepted.

SIR 391 also relates to ISE, specifically relative error in calibration. The position of the committee is that the Standard does not adequately address the use of ISE which utilizes a point-to-point or segmented calibration so no response can be provided. ISE calibration will be addressed in the revisions being developed for Module 4.

SIR 402 is related to detection limit verification and the committee's response has been approved by the LASEC/AC and the full response to the SIR is presented on slides #7 & 8 of the above referenced PowerPoint presentation.

SIR 410 concerns ISE calibration; the CEC is awaiting final approval of the response to SIR 390 as these two issues are very much related. A committee response assuming successful resolution of SIR 390, has been prepared and will be submitted for LASEC/AC consideration.

SIR 426 questioned the use of surrogates. The committee's response has been submitted to the LASEC/AC.

SIR 427 relates to a question regarding relative error at the midpoint of the calibration curve. The committee's response has been submitted to the LASEC/AC.

SIR 437 concerned the use of LSC for on-going DOC. The committee's response was submitted to and approved by the LASEC/AC. The SIR and the committee's response is presented as slide # 9 of the above referenced PowerPoint presentation.

The CEC also received one Non-Valid SIR (as determined by the LASEC); SIR 462 concerning again ISE calibration. While not requiring a response from the committee, the topic will be addressed as the CEC develops language regarding ISE overall. See slide # 10 of the above referenced PowerPoint presentation.

V1M4 Revision – Work group Summaries

- Sections 1.4 /1.5 Method Selection Method Validation LOD/LOQ (Validation/Verification)

Michelle stated that the Work Group had completed their recommendations for changes. Proposed changes are under review by the full committee.


1.4 and 1.5 LOD LOQ
Workgroup Draft pos

- Section 1.6 Demonstration of Capability

The DOC Work Group has also completed their initial review and presented their recommendations to the full committee. Discussions regarding these recommendations are on-going. This topic was presented at the Winter meeting in January. The current status of these sections of M4 are seen in the attached file.


V1M4 02 02 2022
CEC workgroup sectic

- Section 1.7.1 Calibration

Discussions related to this section focused on Sections 1.7.1.1.f and 1.7.1.1.k, number of calibration points and relative error respectively. Numerous comments on both topics were heard with little proposed resolution. For 1.7.1.1.f, the primary question was the number of standards required by method or the requirements seem in M4? Or in the case of some procedures, the number of standards and procedures presented by the manufacturer. Calibration using ISE was also discussed at length and a consensus of thought was that point-to-point/segmented calibration should have its own discussion and requirements stated in M4. Arguments were made for removing the current table as well as keeping it because of the degrees of freedom regarding calibration curves that the table represents. A

recommendation was also made to look at EPA Calibration Guide from 2010, that it might have good language to use as guidance.

The changes recommended for 1.7.1.1.k by the work group were relatively well received by the crowd.

Notes of pertinent comments and suggestions were collected during these discussions and will be the topic of future CEC discussions.

The current status of these sections of M4 are seen in the attached file.

V1M4 02 02 2022
CEC workgroup sectic

- Sections 1.7.2 Quality Control and 1.7.3 Data Acceptance 1.7.4 Sample Handling

- Section 1.7.2.1 Negative Controls

Tony Francis, who coordinated this Work Group led the discussion. He illustrated the document in its current form and reviewed the proposed changes. The first discussion was related to the usability of quality system matrix samples when they are so different from the actual samples (i.e., Ottawa Sand for soil matrices). While participants agreed in general that the continuing use of matrix matching opens opportunities for contamination, the quality system matrix samples do provide a measure of systems/performance checks.

- Section 1.7.2.2 Positive Controls

Discussion was focused on the use of PT samples for LCS or in place of an LCS. General consensus was if a laboratory preferred to use PT samples as LCS, that was an acceptable practice and at the discretion of the laboratory as long as the certificate of analysis are available for the PT

- Section 1.7.2.2.3 Issue: required number of spiking compounds in the LCS

Tony began by presenting the current language of M4 illustrating the Work Groups proposed changes. One participant asked what are or should be the selection criteria when not all analytes are spiked? Another suggestion was that all compounds should be spiked in the LCS. The participant response and that of the committee was the issue of the “problematic” analytes. The suggestion was that after accumulating data for all analytes, ascertain the appropriate acceptance criteria realizing that the “problematic” analytes may be very wide. It was further suggested that the current two-year period to use all analytes should be reduced to one-year, at least, if all analyte spiking is not implemented. The exception to these suggestions would be analyses of PCB.

- Section 1.7.2.3 Sample Specific Controls

Tony reviewed the proposed changes and there were no comments and/or discussion from participants.

- Section 1.7.2.3.1 Matrix Spike; Matrix Spike Duplicate

Initial comment was should the section be titled simply as MS since section 1.7.2.3.2 is MSD? It was noted that the next section is MD not MSD.
It was also noted that the comments received during discussion of Section 1.7.2.2.3 are likely relevant here. The question was also raised as to what are the criteria for "representative subset"? With the caveat that other performance requirements are being met, MS should be spiked with all analytes except for those performance/analysis interferences are known to occur. It was also suggested that the time period for spiking all analytes, if that is the direction chosen, should be 1 year as opposed to every 2 years.

- Section 1.7.2.3.2 Matrix Duplicates

An initial consideration for the committee is to coordinate with the QMS committee regarding duplicate vs. replicate and amended the section(s) accordingly.
Tony reviewed the proposed changes and there were no comments and/or discussion from participants.

- Section 1.7.2.3.3 Surrogates

Tony reviewed the proposed changes and there were no substantive comments and/or discussion from participants.

- Section 1.7.2.4 Data Reduction

The Work Group has suggested deletion of this section and there were no substantive comments and/or discussion from participants.

- Section 1.7.2.5 Reagent Quality, Water Quality and Checks

One suggestion was to ensure that this section be consistent with whatever commendations are made from the Consumables Task Force.
Tony reviewed the proposed changes and there were no substantive comments and/or discussion from participants. One suggestion was except for the requirement for titrants, which could be placed elsewhere, that section may not be necessary.

- Section 1.7.2.6 Selectivity

Tony reviewed the proposed changes and there were no substantive comments and/or discussion from participants.

The current status of the Work Group efforts on Sections 1.7.2, 1.7.3 and 1.7.4 is presented in the file attached below.

V1M4 CEC section 1.7 draft post EMS.do

Due insufficient time in this public meeting, the following Sections were not presented for comment/discussion but will be addressed in future public presentations:

a) Section 1.7.3.1 Negative Control-Method Performance; Method Blank
b) Section 1.7.3.2 Positive Control -Method Performance; LCS
c) Section 1.7.3.3 Sample Specific Control
d) Section 1.7.4 Sample Handling

Open Discussion on V1M4 Changes

No time remained for any additional comments and/or discussion relative to the current M4 or to suggestions for other potential changes in the revisions to M4 Changes.

The meeting was adjourned at 12:00 PM CT. The next meeting of the Chemistry Expert Committee is scheduled for Wednesday September 6, 2023 at 2:00 PM ET.

Attachment 1

Chemistry Expert Committee
2023 Environmental Measurements Symposium
Monday, July 31, 2023; 9:00 AM
Minneapolis, MN

Agenda

1. Introduction of CEC Members/Attendance
2. Review of 2022 CEC Activities
3. Review or 2022 SIRs
4. V1M4 Revision – Work group Summaries
    i. 1.4 /1.5 Method Selection Method Validation LOD/LOQ (Validation/Verification)
    ii. 1.6 Demonstration of Capability

iii. 1.7.1 Calibration
iv. 1.7.2 Quality Control and 1.7.3 Data Acceptance 1.7.4 Sample Handling

5. Open Discussion on V1M4 Changes