Environmental Monitoring Coalition

September 28, 2020

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| **Name** | **Organization** | **Present/Absent** |
| Jordan Adelson | US Navy | X |
| Kristin Brown | Utah DoH | X |
| Michael Delaney | MRWA (retired) | X |
| David Friedman | ACIL | X |
| Jay Gandhi | Metrohm USA | X |
| Mary Johnson | Rock River Reclamation District (WEF) | X |
| Kitty Kong | Chevron | X |
| William Lipps | Shimadzu | X |
| Sharon Mertens | Milwaukee MSD (TNI) |  |
| Judy Morgan | Pace Analytical (ACIL) | X |
| Jerry Parr | TNI | X |
| Steven Rhode | MWRA (APHL) | X |
| David Thal | Environmental Standards | X |
| Sarah Wright | APHL | X |
| Dan Hautman (guest) | EPA OGWDW | x |
| Carol Batterton | TNI staff |  |

1. Roll call and approval of August minutes

No edits to the August minutes. They are approved.

2. Priority action items

1. **Drinking Water Issues.** 
   1. IDOC Requirements.
      1. How many analytes should be retested vs. how many are in the drinking water themselves? Dan: if there’s a method, then a subset have regulatory requirements for monitoring. Labs could not even include those in and be fine, but they need to put all the methods that they are trying to gain certifications for. If outside the regulated contaminant list, EPA does not have an opinion on it. Lab should focus on the regulated parameters, and not the full suite. Jerry: Could EPA issue a memo to communicate this to states or include in the next update to the cert manual? Dan: The memo is not likely. For the cert manual, it would depend on when they could get that released. William/Jerry: Can they do a make-up test for just the parameter that is failed. Dan: That would be a logical approach. **Potential Action Item: EMC might be able to issue some guidance on this topic.**
      2. Dan – Judy had a sample holding time issue she sent to Dan from a few months ago. Would you report it to the hour or to the day? How would this play out with time zones if it was kept to day increments? EPA tends to think in the units the HT is stated, but states can be more stringent. Dan will get back to Judy.
   2. ICPMS reaction/collision cell technology for drinking water.
      1. Update on Collision Cell: Dan has had a number of meetings with Jack Creed and his supervisor on this topic. They have some manuscripts to revise method 200.8. They are supposedly making headway, but Dan has not seen a draft method. On thein organic side you can do down lower and lower, but then “fall off a cliff.” Some lower level could be plugged in to make a reasonable reporting limit. Despite what you want to do, you should have a requirement for the lowest level of detection. The labs can say they want to report down to a nanogram/L, then run a standard and show EPA. You need to prove the threshold is an accurate quantitation point. This is current status for this topic as of two months ago. You don’t need to have MRL defined, but somehow verify the lowest standard you can use, particularly within +/- 10%. This could be tight, but would provide the guidance. Labs should run the lowest standard on their curve as the checkpoint. It should be tight all the way down. Dan is not sold into having an MRL approach integrated into the method. They know it’s a priority, but they are working slowly.
   3. MDL Issues
      1. October 2017 memo: EPA has not heard a lot about this memo. Lab needs to look at the method and see what it specifies for the MDL approach. Overall, you’re not going to be seeing very much in your blanks. EPA’s one big concern with pooling data – if you have a 10-15 year age difference in instruments and sensitivity, then you may not be able to pool data between the multiple instruments. It’s suggested to follow the memo and the method, and it also dependent on the primacy agency that your lab is certified through. The state may choose to be more restrictive beyond what is in the method or regulation. Drinking water is not as dependent on MDL (more on MCL), whereas wastewater uses MDL to write the permits. Would it make sense to MDL verification on each instrument? This would address the concern. +/- 10% is not a concern, but it is important to demonstrate instrument sensitivity differences. These differences could be because of age, configuration, or other topics.
   4. Collaboration with EPA
      1. Dan would like to continue to collaborate with our full group. Ask him again if you don’t happen to hear from him!
      2. Standard Practice for Method Development and Validation and Methods for Contaminants of Emerging Concern
         1. EPA Environmental Methods Forum is working to better define and refine method development and validation expectations and the process. Whatever EMF produces, they would hopefully put it out for comment, almost in the same realm as a regulation. Currently EMF is housed within Office of Science Advisor, but Dan is not sure where their progress is right now. Jerry: The Federal Register process is so cumbersome. It would be our goal to work together in a more collaborative process. Dan: EPA needs to abide by certain principles that are established by current leadership. It would be good for our group and this sub-work unit to be on the same page as this item.
         2. CEC Methods: EPA Office of Science and Technology is doing a lot of work with DOD and other labs on a PFAS isotope dilution method for non-drinking water matrices. EPA wants to know about new techniques for other CECs. ASTM has guidance for microplastics and two methods that are going to ballot. This is being done out of Region 9. EPA would like to generally encourage that kind of information and collaboration. Jerry: It’s the QC requirements variability that there needs to be more harmonization. Dan: EPA has tight QC requirements for obvious public health reasons, which may inhibit harmonization practices. What is the minimum number of calibrants? Could we get rid of the calibration coefficients across the board versus one at a time? This is codified within so many methods. Perhaps there could be some reference manual for instrument calibrations.
         3. Laboratory Accreditation – There’s room to work together to develop a program that works for everyone. Perhaps this could be worked best at the state level vs. the EPA level.
      3. At times we are frustrated with how much data needs to be submitted for it to be approved across all methods.
      4. Collaborate more with contaminants of emerging concern.
2. **User-Generated Mass Spec Library Acceptance Criteria.** Table to October meeting.
3. **Acrolein and Acrylonitrile Preservation and pH.**

* David Friedman developed a Study Plan and forwarded it to EPA. A conference call will be held in early October to discuss EPA comments and proposed revisions to the plan.

1. **Collaboration with EPA**

* Due to time limitations, this topic was not discussed..

3. New Topic: TNI’s draft White Paper on the Value of Accreditation

* For the past 6 months, TNI’s Advocacy Committee has been working on a White Paper on “Does Laboratory Accreditation Make a Difference?” This document was provided separately.
* This paper argues for moving away from TNI’s 25-year guiding principle, “data of known and documented quality,” to a principle of “reliable and trustworthy data,” of which the old principle is now one of several.
* TNI is requesting feedback on this draft document from the EMC.

**EMC Proposal to EPA to Address Monitoring Issues**

*Preliminary Rough Draft 2*

*August 28, 2020*

1. **Issues to Be Addressed**

A number of issues have been identified by the Agency (1988 Report to Congress) and by the former EPA Environmental Laboratory Advisory Board that need to be addressed. The Environmental Monitoring Coalition (EMC) proposes to help address them with a collaborative effort by working with EPA across all EPA’s Program Offices. Such issues include:

1. As a result of the growth of EPA’s mission during the 1970’s the Agency ended up with a number of method development programs. As the programs have matured and the matrices and analytes of concern have increased, the number of methods that laboratories are required to employ has expanded. Often different EPA programs have issued analytical methods that employ the same basic measurement technique but with slight differences. This has resulted in a problem for the environmental laboratory community and confusion in the regulated community as to appropriate methodology to employ when conducting compliance monitoring.

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1. The environmental problems facing our country have increased. New analytes of environmental concern have been discovered and measurement methods are needed to determine the extent and severity of these new analytes. Due to the lack of staff and resources, addressing the need has overtasked the ability of EPA staff and has led to long lead times. In many cases, the environmental monitoring needed crosses EPA program offices.
2. The technology innovation community has and continues to develop innovative new techniques and equipment for environmental monitoring. This equipment has the potential to increase the accuracy of, while decreasing the cost of testing, and improve productivity. However, before such technologies can be used, EPA approval is needed. This has been a slow process which decreases laboratory productivity and makes it more difficult for innovators to market their products. The net result is that testing costs are higher than they need to be and technology innovators are reluctant to invest to develop new techniques in the US.
3. Although the EPA has a national quality assurance program which provides a range of QA supports and guidance, the mandatory quality assurance programs and specific quality control methods established within the Agency's operating programs and in other federal and state programs are often inconsistent, sometimes inadequate, and not always cost­ effective nor ensure the quality of laboratory data.
4. **Proposed Effort**

The Environmental Monitoring Coalition (EMC) proposes to help address these issues with a collaborative effort by working with EPA across all EPA’s Program Offices. Such efforts would include:

1. The EMC would establish a Task Group to develop a standard practice for Method Development and Validation that all EPA Program Offices could adopt. This Practice would include both single-lab and inter-lab studies. The Task Group would use guidance documents from EPA, ASTM, and AOAC to develop this new practice.
2. When a new monitoring problem is identified, the EMC would establish a Task Group consisting of representatives from each interested EPA Program Office, EPA’s Office of Research and Development, EPA Regional laboratories, other appropriate federal agencies, voluntary consensus standard development bodies, state laboratories, municipal laboratories, commercial laboratories, and the technology community to facilitate the discussion on whatever methodology is needed to address the EPA need. EPA Program Office representatives would help guide the development.
3. The EMC would establish a similar Task Group to review existing Agency monitoring methods and prepare a report that the EPA Program Offices can use to harmonize the method Quality Control requirements. The Task group would look at developing consistent approaches for requirements such as instrument calibration and quality control based on the current best science. Example: Currently every method has its own calibration section which contains varying requirements and acceptance criteria. The EMC report could recommend a “Standard Instrument Calibration Practice” that every method could then reference. As this science improves, this one document could be updated without having to change all the other methods.
4. EMC would establish a Task Group to work with the Agency and the States to explore opportunities to expand NELAP into a true national environmental laboratory accreditation system that covers all environmental monitoring programs.