

**SUMMARY OF THE  
ENVIRONMENTAL LABORATORY ADVISORY BOARD MEETING  
Monthly Teleconference Meeting: 866-299-3188/9195415544#  
October 21, 2015; 1:00 – 3:00 p.m. EDT**

The U.S. Environmental Protection Agency's (EPA) Environmental Laboratory Advisory Board (ELAB or Board) teleconference was held on October 21, 2015. The agenda for this meeting is provided as Attachment A, a list of the participants is provided as Attachment B, and action items from the teleconference are included as Attachment C. The official certification of the minutes by the Chair or Vice-Chair is included as Attachment D.

**ROLL CALL/INTRODUCTION OF GUESTS**

Ms. Patty Carvajal, Chair of ELAB, and Ms. Lara Phelps, Designated Federal Official (DFO) of ELAB, welcomed participants to the teleconference. Ms. Kristen LeBaron called an official roll of the Board members and guests.

**OPENING REMARKS FROM THE DFO**

Ms. Phelps did not have any opening remarks.

**APPROVAL OF SEPTEMBER MINUTES**

Ms. Carvajal asked for comments regarding the Board's September meeting minutes; there were none. Dr. Mahesh Pujari moved to accept the minutes; Mr. Michael Flournoy seconded the motion. ELAB approved the September minutes unanimously with no discussion and one abstention.

**UPDATES ON AGENCY EFFORTS RELATED TO POLYCHLORINATED BIPHENYLS**

Mr. Adrian Hanley (EPA) explained that his group manages wastewater methods within 40 CFR 136. Method 608—a dual-column gas chromatography with electron-capture detection method that looks only at the seven aroclor mixtures—currently is the only approved method for polychlorinated biphenyls (PCBs). The group is exploring methods that focus more on aroclors rather than congeners, including a gas chromatography-mass spectroscopy-selected ion monitoring method that can be run safely by midsize, full-service environmental laboratories for normal PCB permitting situations; it will not require specialty analysis or laboratories.

EPA method development is a long-term, multiyear effort that generally begins with a small Agency workgroup with representatives from various offices and programs. The current focus of this workgroup is the Quality Assurance Project Plan and study plan. The next stage will be to perform single laboratory testing with many wastewater matrices to determine method performance followed by developing reports of the results. Finally, a multilaboratory validation will be performed before any 40 CFR 136 proposals are made. The workgroup is at the preliminary stages of the PCB project, so updates will not be available for at least 1 year.

Mr. Flournoy asked whether the method being explored could be classified as a modified Method 1668. Mr. Hanley responded that there are some similarities, but the method under

investigation will be significantly less sensitive and more focused on common congeners in the environment. The highest priority is common congeners of arochlor mixtures rather than toxic congeners. Mr. Flournoy was concerned about resolution issues. Mr. Hanley noted that the amount of literature about this, agreeing that it would be a challenge. Mr. Flournoy mentioned other factors (e.g., pH, pesticide interference, affordability) and noted the parameters of Method 8280. Mr. Hanley responded that affordability is a main consideration, with the goal of developing an “every day” laboratory method.

In response to a question from Dr. Dallas Wait about data quality objectives (DQOs) and the seven common aroclors, Mr. Hanley explained that these were the analytes for the current method. Dr. Wait asked whether these DQOs would remain in place for the new method. Mr. Hanley replied that they would not; the group is looking for a method that identifies highly weathered PCB contamination and contamination from nonaroclor sources. Dr. Wait asked how the translation of the congener analysis will get back to the regulatory requirement of identifying the seven aroclors. Mr. Hanley replied that this is a permitting issue rather than a method issue. Although these issues are related, permits are based on available methods.

Dr. Wait asked whether the workgroup included a broad variety of representatives from EPA offices and programs. Mr. Hanley responded that all offices and programs are invited to participate. Following method validation, the group can determine whether the method can be harmonized with other programs.

In response to a question from Dr. Wait, Mr. Hanley explained that Method 8082 provides a step in the right direction away from Method 608 and includes approximately 30 common congeners. Dr. Wait asked whether Method 8082 could be adapted to meet wastewater needs. Mr. Hanley responded that the goal was to go further down in sensitivity compared to this method to increase the ability to provide quantitation. In terms of this method being a starting point for adaptation rather than developing a new method, Mr. Hanley did not think that the congener list was optimal, although the workgroup is amenable to developing a method that will include all 209 congeners, at least indirectly. Dr. Henry Leibovitz thought that Method 8082 could be a good starting point, but the DQOs will determine whether the method is amenable to adaptation.

Dr. Leibovitz asked whether clean-up options would be available in the new method. Mr. Hanley indicated that this would be a natural part of method validation with the various wastewater matrices. Dr. Leibovitz noted limitations of SIM and its software when attempting to identify 209 congeners.

Dr. Wait wondered whether Method 1668 could be simplified to obtain the appropriate DQOs. Mr. Hanley responded that the standard operating procedures that the group is beginning with are similar to a simplified Method 1668, but a different column probably will be used. He thought that the method, though it might change throughout the validation process, would be similar to Method 1668, but the method should be different enough that it will be its own method and not merely an update of Method 1668. Dr. Wait thought that modifying an existing method would be less effort for EPA and easier for commercial laboratories to implement more efficiently. Mr. Hanley explained that the group was taking affordability and laboratory implementation into account, but the important factor is that the method must comprehensively identify a broad range of congeners rather than only a few.

In response to a question from Ms. Carvajal, Mr. Hanley explained that external input generally is not sought until following successful single-laboratory validation, when data become available and the group is confident with the results and the draft method. At this point, the group will seek laboratories to enter into the multilaboratory validation phase. In response to a question from Dr. Leibovitz, Mr. Hanley reiterated that the new method would be different enough from Method 1668 that it would not be considered an update of that method.

Drs. Leibovitz and Wait were concerned about isotope cost. Mr. Hanley explained that once a method is included in 40 CFR 136 and widely run, isotope cost decreases based on order volume.

## **UPDATES ON CURRENT TOPICS**

### ***PCBs/Acrolein and Acrylonitrile***

Dr. Pujari reminded the Board members that ELAB had written a letter to EPA regarding the Method Update Rule's (MUR) acrolein and acrylonitrile requirements, but the pH requirement for acrolein and acrylonitrile methods had not been removed in the recently released MUR. He would like to follow up with EPA regarding this issue. In response to a question from Dr. Leibovitz, Dr. Pujari explained that study results had been provided to the Agency with the Board's letter. Ms. Carvajal commented that the Agency had not provided its response to the MUR comments yet. She thought that the Board should wait to submit any additional comments until after EPA has had an opportunity to respond to the comments the Agency received during the public comment period. Dr. Leibovitz suggested sending the Agency a reminder that ELAB still is interested in receiving a response regarding this issue. Dr. Wait did not think that the Agency had had enough time to respond to MUR comments, and Ms. Aurora Shields reminded the Board that EPA does not provide individual responses to comments received during the public comment period. Ms. Patsy Root agreed. Dr. Wait thought that it was prudent to wait until EPA publishes its comments in the *Federal Register*. Ms. Root explained that the Agency would be announcing the final rule in the *Federal Register* rather than responding directly to comments.

Ms. Carvajal thought that the PCB issue should be suspended until ELAB can contribute to the Agency's effort, and the acrolein/acrylonitrile issue should be tabled until the final MUR is released. If the issue has not been addressed to ELAB's satisfaction at that time, the Board can provide comments at a later date. The Board agreed.

### ***Methods Harmonization***

Dr. Wait reported that the group still is developing its recommendations for the Board to approve. He added that any related topic that is introduced to the Board, such as the PCB method update Mr. Hanley described, should be embedded into ELAB's methods harmonization work. The goal is to diplomatically promote methods harmonization within the Agency. Board members agreed.

### ***Interagency Data Quality Task Force (IDQTF)/DQO Process***

Dr. Leibovitz explained that because he has been out of the office, he has not been able to contact Dr. Jordan Adelson (U.S. Navy). He will be returning to the office in early November and hopes to have an update for the Task Group prior to the Board's November meeting.

### ***Qualification of Drinking Water Data***

Ms. Carvajal reported that the Task Group had met and is developing a letter to send to the EPA staff whom the group met with during the Board's last face-to-face meeting. Ms. Aaren Alger (Pennsylvania Department of Environmental Protection) will present information on her state's program during the November ELAB meeting. The plan is for the Board to finalize the letter at its December meeting after hearing Ms. Alger's information. Ms. Carvajal asked Ms. Phelps whether the letter could be addressed to a wider Agency group than those present at the luncheon meeting in Chicago. Dr. Leibovitz remarked that members from the Association of Public Health Laboratories Environmental Laboratory Science Advisory Committee might be interested in receiving the letter and collaborating with the Board on this topic. Ms. Phelps recommended drafting two letters depending on the content, audience and goals; other organizations can be included if they have valuable input to provide. Ms. Carvajal explained that the letter will recommend that EPA develop reporting guidance for laboratories that is similar to guidelines to the state of Florida has implemented and possibly similar to the program that the state of Pennsylvania has implemented.

### ***In-Line and On-Line Monitoring***

Mr. Flournoy explained that the group had met with Ms. Janet Goodwin (EPA), who provided a considerable information about the substantial effort that the Agency has devoted to this topic. EPA's thinking about this issue is similar to how the Task Group had been approaching the issue. He is developing a specific list of agenda items for the Task Group to discuss during its upcoming teleconference with Ms. Goodwin on November 19, 2015.

## **NEW TOPICS/ISSUES FOR CONSIDERATION**

### ***Challenges of New Technology***

Ms. Phelps said that the Forum on Environmental Measurement (FEM) has an action item to help ensure that technology innovation is occurring across the Agency. Guidance documents have become a "double-edged sword" and, combined with other factors, are not allowing EPA's use of new, innovative technologies that could be useful. The FEM has been brainstorming and collecting feedback about how the Agency's offices and programs are integrating new technologies into rulemaking or measurements and whether they have identified barriers to implementing new technologies. ELAB represents a diverse group of stakeholders outside of the Agency who may be able to provide important feedback on this topic from a different perspective.

Dr. Joel Creswell (EPA) is looking for specific case examples about new technologies that would be useful to EPA for regulatory purposes but are not being used. This knowledge will assist him in identifying barriers that are impeding EPA's ability to keep up with the pace of technology. He also would like to hear success stories about efficiently evaluated and approved technologies now being used by EPA. He asked ELAB members to share any case studies that they may have by contacting him via email at [creswell.joel@epa.gov](mailto:creswell.joel@epa.gov). One specific potential barrier he is seeking feedback on is water monitoring. The Agency's Alternate Test Procedure (ATP) has been established to approve new water monitoring methods; the drinking water and wastewater

programs have their own ATP processes. A group is being convened to examine the issue, which will focus on nitrates; Board members interested in participating can contact Dr. Creswell via email.

Mr. Flournoy thought that the disconnect occurred because manufacturers' processes may not sync well with permits. His Task Group is attempting to identify an approach that allows manufacturers to comply with quality objectives and encourages EPA to develop quality objectives that address this situation. He would like to collaborate with Dr. Creswell on this issue. Dr. Creswell agreed the Task Group's feedback would be useful, and he would like to attend the Task Group's call on November 19.

Dr. Leibovitz asked about the linkage/overlap with some of the work being done with citizen science tools. Dr. Creswell replied that the group is considering citizen science as the effort unfolds, although no citizen science experts have been contacted directly at this time. His group is very cognizant of the citizen science activities on which other members of EPA's Innovation Team are working. Dr. Leibovitz noted that continuous water monitoring devices would be beneficial for private well owners to monitor their water.

In response to a comment from Ms. Shields, Dr. Creswell explained that the group is working with the U.S. Geological Survey, National Institute of Standards and Technology, and other organizations to maximize leveraging opportunities.

Dr. Creswell provided information on the Nutrient Sensor Challenge, which is designed to stimulate the market and encourage the development of better nutrient-sensing technology. Under the program, testing and validation is provided to participants at no cost. Another benefit to participants is exposure to potential customers from a variety of federal agencies. Participants had to meet certain requirements to enter the challenge, and the first round of testing has been performed. Currently, participants whose technologies tested well can register for the validation process. Technologies that complete the challenge successfully will have publicly available, independent evaluation data. Additional information can be found at <http://www.nutrients-challenge.org>.

Dr. Wait asked whether an ELAB workgroup should be established to address these requests. Mr. Flournoy thought that his Task Group is focusing on very similar issues and could work with Dr. Creswell and EPA on this topic. Dr. Creswell agreed that the two groups should work together, and he will follow up with Mr. Flournoy.

Dr. Leibovitz thought that ELAB support would be helpful to addressing concerns from the laboratory certification program. Ms. Carvajal noted that questions of authority for continuous water monitoring are an accreditation issue and must be clarified. Dr. Creswell agreed that there are many applications for continuous water monitoring within and outside of a regulatory context. Discharge permits do not require the use of an approved method, but approved methods for discharge will drive the market and ultimately make technologies more available to researchers, citizen science groups and other entities. His group is examining potential actions that EPA can take to stimulate the market and development of new technologies.

Ms. Shields asked whether Dr. Creswell thought that EPA might develop methods for online technologies; she didn't believe that the current process was amenable to this. Dr. Creswell agreed, noting that he was speaking about approval of ATPs that would ensure that the quality control/assurance aspects are met as opposed to method approval. Mr. Flournoy noted that technology advances cannot be limited. If an effort focuses on the quality objectives, more innovative technologies will be able to emerge. Dr. Creswell agreed, noting that the goal is to be open-ended enough that the development and use of new, innovative technologies are encouraged.

The group discussed the specific barriers to continuous online monitoring, including testing schedules and permit revisions. Addressing these will require a change in how permitting and compliance are viewed and how auditors are trained. A concise regulatory pathway for approval must be available to encourage product development; regulations are the main driver for product development. Nutrient monitoring and rainfall events may help to change the current mindset about continuous monitoring.

Dr. Creswell stressed that the goal of the Innovation Team is to encourage the use of sensors more broadly; the team is not focused on any one regulatory approach. Increased use of continuous water monitoring leads to better environmental management and helps the Agency to better meet its mission.

Ms. Root recommended that, if Dr. Creswell's group includes the public, at least one manufacturer with ATP experience be included. Dr. Creswell agreed. Ms. Shields asked how much interest Dr. Creswell had seen from manufacturers. Dr. Creswell responded that he does not have direct contact with instrument manufacturers, which is why he was interested in discussing this topic with ELAB. He asked the Board members to consider how much interest there is for instrument manufacturers to engage with EPA regarding the ATP process.

Dr. Creswell concluded by stating that he is optimistic that solutions to this issue would be found given the interest within and outside of EPA.

#### **WRAP-UP/SUMMARY OF ACTION ITEMS**

Ms. LeBaron reviewed the action items identified during the meeting, which are included as Attachment C.

#### **CLOSING REMARKS/ADJOURNMENT**

Dr. Leibovitz moved to adjourn the meeting; Mr. Flournoy seconded the motion. The Board approved a motion to adjourn the meeting at 2:57 p.m.

**Attachment A**

**AGENDA**  
**ENVIRONMENTAL LABORATORY ADVISORY BOARD**  
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Roll Call/Introduction of Guests	Carvajal/LeBaron
Opening Remarks From the DFO	Phelps
Approval of September Minutes	Carvajal
Updates on Agency Efforts Related to Polychlorinated Biphenyls	Hanley
Updates on Current Topics	All
Polychlorinated Biphenyls/Acrolein and Acrylonitrile: Pujari	
Methods Harmonization: Wait	
Interagency Data Quality Task Force/Data Quality Objectives Process: Leibovitz	
Qualification of Drinking Water Data: Carvajal	
In-Line and On-Line Monitoring: Flournoy	
New Topics/Issues for Consideration	Carvajal
Challenges of New Technology	Phelps
Wrap-Up/Summary of Action Items	Carvajal/LeBaron
Closing Remarks/Adjournment	Carvajal

**Attachment B****PARTICIPANTS LIST****Board Members**

<b>Attendance (Y/N)</b>	<b>Name</b>	<b>Affiliation</b>
Y	Ms. Patricia (Patty) Carvajal (Chair)	San Antonio River Authority Representing: Watershed/Restoration
Y	Dr. A. Dallas Wait (Vice- Chair)	Gradient Corporation Representing: Consumer Products Industry
Y	Ms. Lara Phelps, DFO	U.S. Environmental Protection Agency Representing: EPA
Y	Dr. Michael (Mike) Delaney	Massachusetts Water Resources Authority Representing: Massachusetts Water Resources Authority
Y	Mr. Michael Flournoy	Eurofins Environment Testing USA Representing: American Council of Independent Laboratories
Y	Dr. Deyuan (Kitty) Kong	Chevron Energy Technology Company Representing: Chevron
N	Ms. Sylvia (Silky) Labie	Environmental Laboratory Consulting & Technology, LLC Representing: Third-Party Assessors
Y	Dr. Henry Leibovitz	Rhode Island State Health Laboratories Representing: Association of Public Health Laboratories
Y	Dr. Mahesh Pujari	City of Los Angeles Representing: National Association of Clean Water Agencies
Y	Ms. Patsy Root	IDEXX Laboratories, Inc. Representing: Laboratory Product Developers
Y	Ms. Aurora Shields	City of Lawrence, Kansas Representing: Wastewater Laboratories
Y	Ms. Michelle Wade	Kansas Department of Health and the Environment Representing: Laboratory Accreditation Bodies



## PARTICIPANTS LIST (CONT)

### Contractors and Guests

<b>Attendance (Y/N)</b>	<b>Name</b>	<b>Affiliation</b>
Y	Ms. Kristen LeBaron (Contractor)	The Scientific Consulting Group, Inc. (SCG)
Y	Ms. Rachel McIntosh-Kastrinsky (EPA ASPPH Fellow)	EPA/OSP
Y	Dr. Joel Creswell (Guest)	EPA
Y	Mr. Adrian Hanley (Guest)	EPA
Y	Mr. Joe Lapcevich (Guest)	First Energy
Y	Dr. Denice Shaw (Guest)	EPA

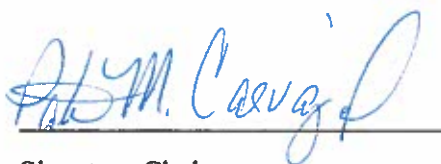
## **Attachment C**

### **ACTION ITEMS**

1. Ms. LeBaron will finalize the September meeting minutes and send them to Ms. Phelps via email.
2. ELAB members will contact Dr. Creswell (creswell.joel@epa.gov) via email with any information about existing technologies that would be useful for regulatory purposes but are not being used.
3. ELAB members who are interested in working with Dr. Creswell regarding breaking barriers and supporting innovative water monitoring technologies will contact him.

**Attachment D**

I hereby certify that this is the final version of the minutes for the Environmental Laboratory Advisory Board Meeting held on October 21, 2015.



Signature Chair

Ms. Patricia M. Carvajal

Print Name Chair