

US EPA ARCHIVE DOCUMENT

**SUMMARY OF THE
ENVIRONMENTAL LABORATORY ADVISORY BOARD MEETING
Monthly Teleconference Meeting: 866-299-3188/9195415544#
June 15, 2016; 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 June 15, 2016. 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

Dr. Dallas Wait, Chair of ELAB, and Ms. Lara Phelps, Designated Federal Official (DFO) of ELAB, welcomed participants and guests to the teleconference. Ms. Kristen LeBaron called the roll of the Board members and guests.

OPENING REMARKS AND UPDATES FROM THE DFO

Ms. Phelps reported that the membership process for the new ELAB term is slow, but progressing. She will be updating the EPA Science Advisor, Tom Burke, on ELAB activities and the membership process.

The quarterly DFO meeting occurred the prior day, but nothing that occurred in the meeting is of note to ELAB or will change the way that the Board handles its business or minutes. Ms. Phelps commended the Board for the ethical manner in which it conducts its business, noting that the ELAB applicant process assists in establishing a diverse Board of the highest caliber. The most recent process included a high number of applicants from academia. The Board discussed the potential makeup of the next Board, with Dr. Mahesh Pujari noting that toxicology is a desired expertise and Dr. Henry Leibovitz suggesting that molecular biology expertise would be helpful.

APPROVAL OF MAY MINUTES

Dr. Wait asked for comments regarding the Board's May meeting minutes. Ms. Phelps indicated that Ms. Lu-Ann Kleibacker, as alternate DFO, should be included in the "Board Members" section of the participants list. Dr. Pujari moved to accept the May minutes; Dr. Leibovitz seconded the motion. The May minutes were approved, and Ms. LeBaron will update the participants list.

UPDATES ON CURRENT TOPICS

Interagency Data Quality Task Force/Data Quality Objectives Process

This task has been tabled until ELAB receives a response from the Forum on Environmental Measurements (FEM). Ms. Phelps reported that the FEM will develop a response once it assembles the proper expertise, which the Board will receive following the FEM's August meeting.

Methods Harmonization

This task has been tabled until ELAB receives a response from the FEM. Ms. Phelps explained that the FEM was impressed with the Board's efforts in this area. The FEM has developed an initial letter, which is under review and will be sent to ELAB prior to the Board's July meeting. The topic will be discussed in further depth during the FEM's August meeting to determine how the FEM will manage its efforts in response to the recommendations. A second letter to the Board will detail the FEM's plan to move forward and assemble the proper group of experts to consider ELAB's recommendations.

In-Line and On-Line Monitoring

Mr. Michael Flournoy reported that the Task Group had a productive call regarding its plan and how ELAB can help with EPA efforts in this area. Dr. Joel Creswell (EPA) will provide the Task Group with a presentation regarding the recently promoted sensor challenge and how it can inform the group's work. The next Task Group teleconference will include the following EPA representatives: Ms. Denise Shaw, Dr. Alan Lindquist, Mr. Lem Walker, Ms. Janet Goodwin, and Dr. Creswell. The Task Group is attempting to determine current needs in this area so that it can develop an appropriate response to properly address the issue.

Dr. Creswell added that, in response to the Task Group's request on how it could be as useful as possible to EPA in addressing in-line and on-line monitoring, he has been convening colleagues within the Office of Research and Development and the Office of Water to discuss how to advance water quality sensing technology. The resulting ideas have been shared with the Task Group to inform the group's recommendations regarding the transition to on-line, continuous monitoring methods. Dr. Creswell's projects focus on market stimulation and creation of incentives for technology developers to create more advanced sensor technologies capable of *in situ* and on-line monitoring. Because of the clear overlap between EPA projects and the Task Group's objectives, it is imperative to collaborate and share information as much as possible. Ms. Phelps or Ms. Kleibacker will ensure that Adobe Connect is available for the Task Group's meeting with EPA.

Selected Ion Monitoring (SIM)

Dr. Mike Delaney explained that he had distributed to the Task Group, which includes external experts, a proposed set of minimum SIM criteria. He will incorporate the input he has received and plans to develop a cover letter for Task Group comment. The goal is to provide the cover letter and proposed criteria to the Board so that ELAB can discuss them at the August face-to-face meeting.

Whole Effluent Toxicity (WET) Testing

Dr. Wait reported that the Task Group has met twice so far; external experts were present during both calls. The Task Group has been reviewing the WET testing white paper to ensure that the group understands the document. The Task Group concluded that the white paper proposals are acceptable, although the group has suggestions to improve the white paper, which the Board as a whole will need to approve.

The Task Group's suggestions are as follows:

- A glossary should be added to the white paper to ensure that readers understand the terminology.
- The white paper should more strongly encourage those implementing WET procedures to follow performance evaluation samples.
- If the white paper is going to recommend the removal of no-effect-observed levels from reporting requirements, the methodology must be standardized.
- Additional footnotes need to be added to the table attachment.

In response to a suggestion from Dr. Leibovitz, Dr. Wait stated that the Board could discuss this during its face-to-face meeting in August to obtain additional input from participants.

Mr. Flournoy wondered whether a representative from The NELAC Institute (TNI) WET Expert Committee should be invited to the face-to-face meeting. In response to a question, Ms. Patty Carvajal clarified that the TNI WET Expert Committee had asked the Board to endorse the white paper. Ms. Phelps reminded the Board that it cannot advise TNI directly; it can share its opinions with EPA and send a copy to TNI. Dr. Wait thought that it might be beneficial for a representative from the committee to present about the white paper during ELAB's face-to-face meeting. Ms. Phelps explained that the TNI WET Expert Committee is holding a session the day following ELAB's meeting, so a representative should be present. Dr. Wait will follow up with the Chair of the TNI WET Expert Committee.

Method Update Rule (MUR)

Ms. Patsy Root reported that Mr. Adrian Hanley (OW) had indicated that the MUR will be finalized prior to the end of this calendar year. The next MUR process will begin soon, so Dr. Wait will contact Mr. Hanley to inquire how ELAB can be involved with this process.

NEW TOPICS/ISSUES FOR CONSIDERATION

Cyanide Methodology

Dr. Delaney explained that cyanide testing is problematic for a number of reasons, particularly the number of false-positive results that occur. The regulation governing cyanide states that any detected contaminants in finished drinking water must be included in the Consumer Confidence Report. The question, then, is the amount of discretion laboratories possess in setting their reporting limits. Dr. Delaney presented information (including results) about a simple illuminating experiment that highlights the issue of false-positive results forming in deionized water from routine drinking water treatment and cyanide sample preservation and the resulting need that laboratories have for alternative cyanide methodologies. In 2015, his laboratory switched to free-cyanide analysis, demonstrating that field dilution, avoidance of sodium hydroxide (NaOH), and same-day analysis supported by field spikes could provide substantiated results without false positives. The results have been peer reviewed and published.

From a regulatory point of view, 40 CFR 141.23 provides the required preservation techniques and approved test methods (e.g., Method OIA-1677-04). Regulation takes precedence over the analytical method, and federal regulations take precedence over state regulations. EPA only will approve national Alternative Test Procedures for drinking water. EPA contends that laboratories still must preserve samples with NaOH, despite the fact that Method OIA-1677-04 provides conflicting information. From a scientific point of view, maintaining sample integrity is paramount, and changes in the sample resulting from sampling, preservation, storage and testing should be avoided. Minimizing sample manipulations and testing quickly seems advisable for cyanide.

Dr. Delaney highlighted the overall issue, which is to either blindly follow the regulations and methods or use best scientific judgment to avoid false positive or negative results. He asked whether ELAB would be interested in forming a Task Group to address this issue and advise EPA.

Dr. Pujari noted that the instrument vendor, OI Analytical is working on similar instrumentation and wondered whether this group's support could be obtained. Dr. Delaney noted that the scientist who developed the instrumentation has left the group at OI Analytical, which is contributing to the problem. Dr. Delaney noted that he could re-engage with the instrument vendor.

Dr. Wait asked whether Dr. Delaney had received any response following the publishing of the two peer-reviewed journal articles. Dr. Delaney responded that he had not been challenged. A good deal of feedback comes from the wastewater community. He cited the example of the state of California, which is allowed to avoid the NaOH preservation requirement and begin analysis immediately for wastewater applications. EPA, however, will not allow this for drinking water because of the NaOH requirement.

In response to a question from Dr. Wait, Dr. Delaney explained the mechanism that causes a false positive in the presence of NaOH. It is a complicated process that has been documented in the literature. Dr. Wait asked how the issue of false-positive results had been identified. Dr. Delaney explained that after a change in 2007, the Massachusetts Water Resources Authority drinking water facility that previously had not had positive cyanide results was receiving positive results.

Dr. Wait stressed that it was important to ensure that the Board is addressing a common issue that many laboratories face rather than a local issue affecting only a few laboratories.

Dr. Leibovitz wondered whether an alternative would be to prove that the source water does not contain cyanide.

Mr. Flournoy thought that it would be beneficial to determine how other laboratories address this issue. Dr. Leibovitz agreed, noting that he would be interested to know the rates of false-positive results other laboratories report; this information might be obtained through organizations that represent public water systems or from state drinking water program administrators. Dr. Wait suggested obtaining input from face-to-face meeting attendees. Ms. Phelps explained that posing a general question to face-to-face meeting attendees is acceptable, but the Board cannot write a

letter to organizations to obtain this information. She clarified that the Board can request this information from EPA's Office of Ground Water and Drinking Water (OGWDW). Prior to the Board determining whether it will address an issue, it is appropriate for a single member to explore the issue further.

FINALIZE FACE-TO-FACE MEETING AGENDA

The Board members discussed the agenda for the upcoming face-to-face meeting, agreeing to use the generalized template from the prior face-to-face meeting. Ms. Phelps recommended that the Board use the presentation template from the previous meeting and ensure that she, all ELAB members and Ms. LeBaron have an electronic copy prior to the meeting on August 8, 2016. Ms. LeBaron will update the presentation format and provide Dr. Wait with a blank template.

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

Mr. Flournoy moved to adjourn the meeting; Dr. Leibovitz seconded the motion. The meeting was adjourned at 2:39 p.m.

Attachment A

AGENDA
ENVIRONMENTAL LABORATORY ADVISORY BOARD
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Roll Call/Introduction of Guests	Wait/LeBaron
Opening Remarks and Updates From the DFO	Phelps
Approval of Prior Minutes	Wait
Updates on Current Topics	
Interagency Data Quality Task Force/Data Quality Objectives Process: Leibovitz	
Methods Harmonization: Wait	
In-Line and On-Line Monitoring: Flournoy	
Selected Ion Monitoring: Delaney	
Whole Effluent Toxicity Testing: Carvajal	
Methods Update Rule: Root	
New Topics/Issues for Consideration	Wait
Cyanide Methodology	Delaney
Finalize Face-to-Face Meeting Agenda	Wait
Wrap-Up/Summary of Action Items	Wait/LeBaron
Closing Remarks/Adjournment	Phelps/Wait

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

Attendance (Y/N)	Name	Affiliation
Y	Dr. A. Dallas Wait (Chair)	Gradient Representing: Consumer Products Industry
Y	Dr. Henry Leibovitz (Vice-Chair)	Rhode Island State Health Laboratories Representing: Association of Public Health Laboratories
Y	Ms. Lara Phelps (DFO)	U.S. Environmental Protection Agency Representing: EPA
Y	Ms. Lu-Ann Kleibacker (Alternate DFO)	U.S. Environmental Protection Agency Representing: EPA
Y	Ms. Patricia (Patty) Carvajal	San Antonio River Authority Representing: Watershed/Restoration
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. Mahesh Pujari	City of Los Angeles Representing: National Association of Clean Water Agencies
Y	Ms. Patsy Root	IDEXX Laboratories, Inc. Representing: Laboratory Product Developers
N	Ms. Aurora Shields	City of Lawrence, Kansas Representing: Wastewater Laboratories
N	Ms. Michelle Wade	Kansas Department of Health and the Environment Representing: Laboratory Accreditation Bodies

PARTICIPANTS LIST (CONT)**Contractors and Guests**

Attendance (Y/N)	Name	Affiliation
Y	Ms. Kristen LeBaron (Contractor)	The Scientific Consulting Group, Inc. (SCG)
Y	Dr. Joel Creswell (Guest)	EPA/ORD


Attachment C

ACTION ITEMS

1. Ms. LeBaron will finalize the May meeting minutes and send them to Ms. Phelps via email.
2. Ms. Phelps or Ms. Kleibacker will ensure that Adobe Connect is available for the next On-Line and In-Line Monitoring Task Group teleconference.
3. Dr. Wait will contact the Chair of the TNI WET Expert Committee to invite a representative to present about its white paper at the Board's August face-to-face meeting.
4. Dr. Wait will contact Mr. Hanley regarding how ELAB can be involved with the next MUR process.
5. Dr. Delaney will conduct more research regarding the pervasiveness of false-positive cyanide results, including contacting EPA's OGWDW.
6. Ms. LeBaron will update the face-to-face meeting PowerPoint presentation and provide Dr. Wait with a blank template by Wednesday, June 22, 2016.

Attachment D

I hereby certify that this is the final version of the minutes for the Environmental Laboratory Advisory Board Meeting held on June 15, 2016.



Signature, Chair

Dr. Dallas Wait

Print Name, Chair