SUMMARY OF THE
ENVIRONMENTAL LABORATORY ADVISORY BOARD MEETING
Monthly Teleconference Meeting: 866-299-3188/9195415544#
March 16, 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 March 16, 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 to the teleconference and called the roll of the Board members and guests. Ms. Phelps introduced Ms. Lu-Ann Kleibacker (EPA OSA), who will serve as a backup for Ms. Phelps.

OPENING REMARKS AND UPDATES FROM THE DFO

Ms. Phelps explained that the *Federal Register* notice soliciting ELAB membership had been published, and several interested individuals have responded to the announcement. She will send the link to the *Federal Register* announcement to the members.

APPROVAL OF FEBRUARY MINUTES

Dr. Wait asked for comments regarding the Board's February meeting minutes; there were none. Dr. Henry Leibovitz moved to accept the minutes; Dr. Mike Delaney seconded the motion. ELAB approved the February minutes with no discussion.

UPDATES ON CURRENT TOPICS

Methods Harmonization

Dr. Wait explained that Dr. Mahesh Pujari and Dr. Leibovitz had reviewed the tables attached to the Board's letter on methods harmonization and found them acceptable. Dr. Wait had made the revisions as discussed during the February meeting and had sent the revised version to the Board members via email. Ms. Michelle Wade moved to approve the letter pending a final editorial review by Ms. Kristen LeBaron. Dr. Pujari seconded the motion. The Board approved the letter, which will undergo editorial review by Ms. LeBaron before being sent to EPA.

Interagency Data Quality Task Force (IDQTF)/Data Quality Objective (DQO) Process

Dr. Leibovitz had sent the draft letter regarding this topic to the Board members via email. The letter reflects the focus of this effort, which is to ensure that laboratories are included early in the DQO process. The Task Group found that an appropriate organization (e.g., The NELAC Institute [TNI], American Council of Independent Laboratories [ACIL]) should increase communication between engineering groups and laboratories (e.g., by holding joint sessions at

conferences and meetings). IDQTF also had recommended that a chemist be involved in the process. The recommendations are beyond ELAB's purview, so the Board developed the letter to inform EPA about this effort and forward the recommendations. The letter currently is addressed to Ms. Phelps, who confirmed that she is the appropriate recipient. She also suggested making the letter brief (approximately one page) and including additional details in an attachment. The Board agreed that the background information currently included in the body of the letter will be moved to an attachment.

Dr. Leibovitz moved to approve the letter with the understanding that the letter will undergo editorial review, and the current content will be packaged differently (i.e., background information will move to an attachment) to increase the effective communication of the recommendations. Ms. Patty Carvajal seconded the motion. The Board agreed to vote on the letter via email once the changes have been made. Dr. Leibovitz will include the background information currently found in the body of the letter regarding the DQO process as an attachment, and Ms. LeBaron will provide a final editorial review.

Dr. Wait wondered whether there should be ELAB representation at meetings that bring engineers and laboratories together. Ms. Phelps said that it was appropriate for ELAB members to make others aware of its efforts in this area, but the members should be careful not to become involved in the semantics of any discussion that goes beyond what the Board has discussed. Any individuals who are interested in further discussing the efforts can be encouraged to contact the Board as a whole. ELAB's letter on this subject can be published on the Board's website, which would make it a matter of public record. TNI and ACIL can be copied on the letter when it is sent to the Agency so that these organizations are aware of the recommendations; Ms. Phelps also could forward copies of the letter to TNI and ACIL.

In-Line and On-Line Monitoring

Mr. Michael Flournoy reported that the Task Group had not met since the face-to-face meeting, but he plans to set up a meeting within the next few weeks. The plan is to follow up with Dr. Joel Creswell (EPA ORD) and Ms. Janet Goodwin (EPA OW) about being involved with current Agency efforts in this area.

Selected Ion Monitoring (SIM)

Dr. Delaney explained that the Task Group, which had met the prior week, plans to reach out to laboratories to gather information about how they use SIM and possibly obtain standard operating procedures (SOPs). The Task Group also will seek laboratory input regarding the key required parameters that will minimize false positives and negatives and result in a good SIM method. The next Task Group meeting is scheduled for March 30, 2016. Ultimately, the goal is to provide EPA with recommendations regarding use of SIM.

Dr. Pujari has contacted several laboratories in California that are running SIM; two have volunteered to support the Task Group's efforts. Ms. Carvajal has identified two SIM experts who will be invited to participate in the Task Group's efforts.

WHOLE EFFLUENT TOXICITY (WET) TESTING PRESENTATION AND DISCUSSION

Dr. Rami Naddy (TRE Environmental Strategies, LLC/TNI) provided information about a white paper that TNI's WET Expert Committee developed. WET testing is an important component of EPA's integrated approach to protect surface waters from pollutants. It is generally included in permitting and used to assess the adverse effects/toxicity of an effluent in a population of test organisms (e.g., water flea, fathead minnow larvae). Ultimately, the testing assesses the combined effects of potential contaminants in effluent.

The purpose of the TNI proficiency testing (PT) program is to provide a means for a primary accreditation body to evaluate a laboratory's performance under specified conditions in a specific area of testing. The WET Expert Committee began as a subcommittee of the PT Executive Committee. As a result of inconsistencies found among PT providers, the PT Executive Committee solicited input from state agencies about the primary purpose of WET PT testing to ensure consistency. The majority responded that the purpose was to ensure that laboratories performed methods per permit requirements. The WET Expert Committee disagreed with this finding and drafted the white paper to explain what the primary purpose should be, which is to assess a laboratory's ability to perform the method per permit requirements or to assess a laboratory's ability to perform the method under standard conditions so that data from multiple laboratories can be compared quantitatively.

Accuracy does not apply to toxicity testing as it would apply to a solution of metals or pesticides for analytical testing. In response to a question from Dr. Wait, Dr. Naddy clarified that toxicity testing must be considered differently than analytical testing. "True" or assigned values (and acceptance limits) are derived from participating laboratory data, and toxicity endpoints can be affected by variables (e.g., temperature, test duration, water hardness).

Regarding the first WET approach (i.e., performing methods per permit requirements), it is important to note that WET test requirements may vary among states and EPA regions and even within states. Dissimilar methods result in greater data variability, making it difficult to identify laboratories with deficient techniques. This approach may be acceptable for testing within states in which the requirements are consistent. In terms of the second approach (i.e., comparison of all laboratories), all laboratories should perform tests using the same methods. It is not sufficient to say that methods must follow 40 CFR 136 guidelines or EPA 2002 manuals. The WET Expert Committee created a list of baseline test conditions, which the Board members received via email.

Acute WET testing uses a point estimate endpoint (LC_{50}), whereas chronic WET testing uses a hypothesis testing endpoint (no-observable effect concentration [NOEC]) as well as a point estimate endpoint (IC_{25}). The WET Expert Committee recommends endpoint standardization: one endpoint for acute WET testing (LC_{50}) and one endpoint for chronic WET testing (IC_{25}, which all WET laboratories can produce). Additionally, NOEC values should not be averaged. This increases the number of comparable data points and, therefore, the reliability of the conclusions. The committee also recommended standardizing discharge monitoring report-quality assurance (DMR-QA) and PT test methods and using IC_{25} as the primary chronic endpoint for DMR-QA/PT (i.e., discontinue use of NOEC).

Dr. Pujari volunteered to provide information about WET testing in California.

Dr. Leibovitz asked whether the DMR-QA reports are accompanied by dilution water samples, noting the variability present in water from various laboratories. Dr. Naddy agreed that laboratory water is a source of variability and explained that a small water sample is included.

Dr. Delaney asked about the test of significant toxicity. Dr. Naddy responded that this test is a relatively good test because it helps to meld together the hypothesis test and IC_{25}.

Dr. Wait commented that analytical chemistry laboratories are required to have an SOP that describes the methodologies used by the laboratories. He asked whether SOPs are required for WET testing. Dr. Naddy responded that most laboratories probably have SOPs, and auditors must have a good understanding of WET testing. He noted that his laboratory has reported its invalid studies and been told that it is the only laboratory in the state reporting any problems, which is statistically unlikely.

Ms. Silky Labie asked whether laboratories may be performing different tests than specified in the permit if they perform a standardized test. Dr. Naddy responded that this is a common question that can be examined by considering the purpose of the testing program. For DRM-QA testing, in which the goal is to compare data, harmonizing all of the test conditions is an obvious solution to increase comparability. If the goal is to determine whether laboratories are performing the tests per the permit requirements, this is a different question. To ascertain whether a test is performed correctly, it should be compared to another laboratory that is performing it the same way. Laboratories need to show that they can run a test a given way; standardizing which way the test is run allows comparison.

Ms. Michelle Wade noted that most states have unique methods in addition to standard EPA methods. In terms of PT and DMR-QA testing, laboratories are expected to run the standard EPA method. When laboratories prove that they can run the standard method, it allows reciprocity with other states. She did not think that the WET Expert Committee recommendations were much different than this scenario, so the community should not have trouble accepting them. Dr. Naddy explained that the committee determined that educating accreditation bodies about the process is important and has established a goal to provide educational outreach.

Dr. Naddy volunteered to answer any future questions that the Board members may have regarding WET testing.

In response to a question from Dr. Wait, the Board agreed to consider this topic. Dr. Wait reminded the Board that it had previously discussed establishing three Topic Groups (which would change membership/focus periodically), and this issue could be explored as a subtopic of one of these Topic Groups if ELAB decides to reorganize in this manner. The Board will discuss the reorganization during its April meeting.

NEW TOPICS/ISSUES FOR CONSIDERATION

No new topics for consideration were introduced.

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; Ms. Carvajal seconded the motion. The Board adjourned the meeting at 2:57 p.m.

Attachment A

AGENDA
ENVIRONMENTAL LABORATORY ADVISORY BOARD
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Roll Call/Introduction of Guests	Wait/Phelps
Opening Remarks and Updates From the DFO	Phelps
Approval of Prior Minutes	Wait
Updates on Current Topics	All
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 (WET) Testing Presentation and Discussion	Naddy
New Topics/Issues for Consideration	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. 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
Y	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
N	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)

Guests

Attendance (Y/N)	Name	Affiliation
Y	Ms. Kristen LeBaron (Contractor)	The Scientific Consulting Group, Inc. (SCG)
N	Ms. Marie Russell (EPA ASPPH Fellow)	EPA/OSP
Y	Ms. Lynn Bradley (Guest)	TNI
Y	Ms. Tracy Constantino (Guest)	Gradient
Y	Ms. Lu-Ann Kleibacker (Guest)	EPA/OSA
Y	Dr. Rami Naddy (Guest)	TRE Environmental Strategies, LLC/TNI

Attachment C

ACTION ITEMS

1. Ms. LeBaron will finalize the February meeting minutes and send them to Ms. Phelps via email.

2. Ms. Phelps will send the Board members the link to the *Federal Register* membership announcement.

3. Ms. LeBaron will provide final editorial review of the methods harmonization letter, and Dr. Wait will send the finalized letter to the Forum on Environmental Measurements.

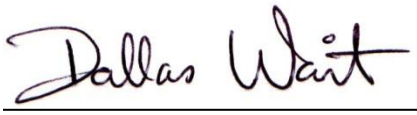
4. Dr. Leibovitz will include as an attachment the background information currently found in the body of the letter regarding the DQO process. Ms. LeBaron will provide final editorial review of the revised letter so that ELAB can vote to approve the letter via email.

5. The Board will consider addressing the topic of WET testing.

6. ELAB will discuss a potential reorganization into three Topic Groups during its April meeting.

Attachment D

I hereby certify that this is the final version of the minutes for the Environmental Laboratory Advisory Board Meeting held on March 16, 2016.



Signature, Chair

Dr. Dallas Wait

Print Name, Chair