SUMMARY OF THE
ENVIRONMENTAL LABORATORY ADVISORY BOARD MEETING
Face-to-Face Meeting/Teleconference: 866-299-3188/9195415544#
Hyatt Regency Louisville, Louisville, Kentucky
January 27, 2014; 8:00 a.m. – 10:00 a.m. EST

The U.S. Environmental Protection Agency's (EPA) Environmental Laboratory Advisory Board (ELAB or Board) face-to-face meeting was held on January 27, 2014, from 8:00 to 10:00 a.m. EST. The meeting was held as a session at the Forum on Laboratory Accreditation. The agenda for this meeting is provided as Attachment A, a list of meeting participants is provided as Attachment B, and action items are included as Attachment C. The official signature of the Chair or Vice-Chair is included as Attachment D.

AGENDA ITEMS:

1. OPENING REMARKS AND ROLL CALL

Ms. Lara Phelps, Designated Federal Officer (DFO) for the Board, and Ms. Patsy Root, Chair of the Board, welcomed the members and guests to the meeting. Following an overview of the agenda by Ms. Root, the Board members introduced themselves.

2. APPROVAL OF DECEMBER MINUTES

Ms. Root asked whether there were any comments regarding the December 2013 Board meeting minutes; there were none. Mr. Dave Speis moved to approve the minutes, and Mr. Jack Farrell seconded the motion. The meeting minutes for December 2013 were approved unanimously with no discussion and no changes.

3. ELAB CHARTER/HIGHLIGHTS OF 2013 BOARD ACTIVITIES

Ms. Root explained that ELAB's mission is to provide consensus advice, information and recommendations on issues related to enhancing EPA's measurement programs and facilitating the operation and expansion of a national environmental accreditation program. ELAB provides this advice, information and/or recommendations to the EPA Administrator, EPA Science Advisor and/or Forum on Environmental Measurements (FEM).

Ms. Root described the highlights of the Board's 2013 accomplishments, which included the transition from a permanent Workgroup structure to a temporary Task Group structure. During 2013, the Board reviewed EPA Methods 608, 624 and 625 at the Agency's request. The Board also sent the FEM two letters, one requesting the correction of nomenclature to a particular chemical compound and one regarding the Board's consensus advice on the conversion of helium to hydrogen as a carrier gas in various EPA-approved methods. ELAB also was involved with Method 1611, qPCR in recreational water testing, and provided feedback on the topic to EPA. Additional details about these and other Board activities can be found on the ELAB website at http://www.epa.gov/elab.

4. NEWS/UPDATES FROM THE DFO

Ms. Phelps explained that the Agency's website structure would be changing during the next several months, with the new site organized by thematic areas. The ELAB website will be located on the front page of the thematic area dedicated to methods, monitoring and data analysis.

A new Board term begins on October 1, 2014, and a *Federal Register* notice will be released in late February or early March soliciting new members to replace those who have reached their term limits. The process of selecting new members takes several months and requires the signature of the EPA Administrator.

5. TASK GROUP UPDATES

Ms. Root stated that the Board works on a variety of topics, each assigned to a temporary Task Group to address the issues related to each topic. The Task Group leaders provided a report of current activities.

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

Ms. Silky Labie explained that the DQO process is a way to approach the governmental problem in an organized manner. The process requires the articulation of project data quality and technical objectives to approach the problem. Because laboratories generally are the last to be informed of these objectives, the goal of this effort is to facilitate the involvement of laboratories in the DQO process so that there is a realistic understanding of the analytes and processes involved. ELAB has chosen to engage the IDQTF because there is multiple agency involvement, thus allowing access to a broad spectrum and the ability to maximize cross-agency/program consensus in developing an implementable approach to assure future laboratory involvement. Ultimately, ELAB would like to provide process improvement recommendations to the Agency.

Mr. Speis noted that the engineering and consulting communities should be involved as well because the drivers of the process must understand why laboratory involvement is crucial. Mr. John Phillips explained that SW-846 Update V speaks to quality plans and the DQO process, and although EPA's new *RCRA Waste Sampling Draft Technical Guidance* is considered guidance, it heavily endorses the DQO process. Mr. Farrell commented that education of key players in the process (e.g., engineering/consulting communities) and contracts are important. Inclusion of all parties, including laboratories, in the process will occur only if it is required.

Ms. Phelps explained that during the past 3 years, the FEM has introduced two competency policies. The *Policy to Assure Competency of Laboratories, Field Sampling and Other Organizations Generating Environmental Measurement Data Under Agency-Funded Acquisitions*, issued in March 2011, requires laboratories and other organizations performing environmental data activities or measurements to demonstrate competency. The second policy, *Policy to Assure the Competency of Organizations Generating Environmental Measurement Data Under Agency-Funded Assistance Agreements*, issued in December 2012 and renewed in March 2013, focused on grants, cooperative agreements and so forth. Both policies have the same intent.

Ms. Marlene Moore (Advanced Systems, Inc.) provided an update on IDQTF DQO activities, including free training courses; IDQTF now uses the term "systematic planning process." The training, which is provided to EPA and U.S. Department of Defense (DoD) personnel among others, occurs throughout the United States. Although budget cuts required training cuts in the past, increased funding for this year has allowed more trainings to be available through the Navy training school; information can be found on the Naval Civil Engineer Corporations Officer School (CECOS) website at http://www.netc.navy.mil/centers/csfe/cecos. IDQTF also is working with state and territorial government offices to increase state involvement because states often do not understand the process and do not have the budgets to send representatives to the meetings, which causes challenges. There are online and "train the trainer" courses, and some webcasts are available on the CECOS website. In response to a question from Mr. Speis about the participation of the engineering and consulting communities, Ms. Moore explained that it is a significant number because of the DoD contractors. EPA contractors attend when the training occurs at EPA offices. Uniform Federal Policy for Quality Assurance Project Plans formatting requires systematic planning. In response to a question from Mr. Phillips, Ms. Moore explained that general participation varies depending on the season, budget and other factors. Sometimes the amount of attendees is overwhelming, with some being turned away because of space issues, whereas other times only three to four individuals attend a training session.

Mr. Farrell thought that it might be helpful to examine the benefits to the various parties involved in the DQO process and institute incentives that strongly encourage them to utilize the systematic planning process.

Methods Harmony

Dr. Dallas Wait, via teleconference, explained that the Methods Harmony Task Group was formed to explore and suggest opportunities for harmonization of test methods throughout the Agency. Because expected redundancies are not present among methods from various EPA offices, ELAB is examining areas that can be harmonized. The Task Group contacted the Agency to determine whether it was receptive to such an effort, and members from the Task Group and the EPA Office of Water (OW) and Office of Resource Conservation and Recovery (ORCR) met via teleconference on January 7, 2014. During this teleconference, EPA staff members explained that communication among offices occurs, and OW and ORCR have established collaborative workgroups to explore any method development issues. The Agency is interested in method harmonization and requested that the Task Group develop a prioritized list of EPA methods that would provide benefits to the environmental laboratory community if harmonized among offices. During a teleconference the prior week, the Task Group decided to send a letter to EPA acknowledging its participation and providing information regarding areas that can be harmonized, such as method quality criteria (QC) practices (e.g., approaches to produce calibration curves). The effort still is in its formative stages. Dr. Wait invited the attendees to provide input as the Task Group publishes its efforts on the ELAB website.

Mr. Farrell noted that a portion of the effort is to facilitate communication about Agency harmonization so that those outside of EPA are aware of these efforts. There appears to be good work occurring in this area, but it is not visible by those who need to know and could possibly provide input. Prioritizing areas on which to focus will facilitate the communication process.

Dr. Richard Burrows stated that efforts have begun between the wastewater groups and ORCR to examine methods from a harmonization point of view and remove significant barriers. Ms. Root noted that comparing QC among methods rather than whole methods is a good starting point, and Dr. Burrows added that the laboratory control sample falls within method QC.

Method Detection Limit (MDL)/Revision of 40 CFR Part 136 Appendix B

Mr. Phillips reported that the six-member MDL Task Group was established because The NELAC Institute (TNI) Chemistry Expert Committee has proposed revisions to 40 CFR Part 136, Appendix B (the MDL procedure). After the proposed revisions were submitted to EPA's OW and ELAB for review, ELAB's MDL Task Group reviewed the revisions and offered comments, finding that most of the past concerns (e.g., long-term method variability, intralaboratory variability, pore method recoveries) had been corrected. The Task Group has developed a fairly positive letter regarding its thoughts on the revised procedure, and the full Board must vote to approve it before sending it to OW.

The Board discussed the MDL letter to OW, with Ms. Phelps noting that the formatting needed to be consistent with prior ELAB letters; the comments need to be included as an attachment to the cover letter rather than as a part of the main body of the letter.

Mr. Farrell noted the comment in Section 4 that stated, "Although an annual recalculation of the MDL is not in the current procedure, it is a NELAP requirement as well as a requirement in many state programs." He asked about the NELAP requirement, noting that it needed to be clearer. Mr. Phillips said that it referred to the TNI standard. Mr. Farrell explained that the 2009 TNI standard references the annual verification of the limit of detection (LOD) and limit of quantitation (LOQ). Mr. Stephen Arms (Florida Department of Health) said that there is no NELAP requirement that MDLs be re-determined on a certain time scale. Mr. Bill Hall (New Hampshire Environmental Laboratory Accreditation Program) suggested removing the statement regarding NELAP and states because it could cause confusion.

Mr. Farrell renewed his previous objection to the revised procedure, asking that a requirement be added to verify that any determined MDL can be seen analytically. The problem with the current process is that it is a statistical determination that in many cases means nothing to the analytical process in terms of quantitation. Dr. Burrows did not think that there should be a discussion of quantitation because the revised procedure does not mention quantitation. Referring to the MDL definition, he explained that the MDL is not the lowest level that can be reliably seen.
Ms. Michelle Wade stated that if the MDL is not used as the LOD, it is a moot point. Dr. Ed Askew (Askew Scientific Consulting) agreed with Mr. Farrell, noting that laboratories add a multiplier to the MDL to obtain the method reporting limit (MRL), and the Agency should differentiate an acceptable reporting limit from an MDL. The MDL is statistically rather than analytically determined. MRLs, rather than MDLs, now are the driving force in wastewater permits. Dr. Burrows clarified that the MRL is not included in the revised procedure nor was it reviewed by the Task Group, as it is not a part of this process. Dr. Askew noted a 2010 EPA document that states that, for OW, the MRL comes from Appendix B. Dr. Burrows explained that he is familiar with the document, noting that because Appendix B does not actually mention the MRL, the document is erroneous.

Mr. Phillips asked for clarification that Mr. Farrell was suggesting that the LOQ should not be linked to or derived from the MDL. Mr. Farrell said that it could be linked, but it should be a "real" number. Mr. Phillips said that this was going beyond the scope of what ELAB was asked to review, and he believes that the Board members will have an opportunity to provide such comments to the Agency at a later date. Mr. Farrell reiterated that if the MDL, which many laboratories report down to, is not analytically sound, then laboratories will be reporting down to nonsense. Dr. Burrows thought that there was a requirement in the procedure that any obtained results need to meet method criteria, and if not, there is a requirement in the procedure to increase the spiking level. Mr. Farrell wondered whether there was some measurement that allows the user to identify that there is a significant difference from the blank. Mr. Phillips said that the verification spike in the procedure is higher than the MDL. If a repetition spike was done at the MDL, then by definition approximately one-half of the results would be nondetectable. He is unsure what can be done in terms of verification because all results must meet qualitative criteria within the method. Mr. Farrell understood this but did not have confidence that proper verification was in place.

Ms. Root noted that, based on this discussion, the letter needed to be modified and asked how the letter could be adjusted to address Mr. Farrell's concerns. Dr. Burrows agreed with Mr. Phillips that there is no good method to address this. Mr. Farrell thought it could be done similar to an LOD. Mr. Phillips said that the procedure addresses this in the ongoing verification section. Mr. Farrell said that he would defer to those more familiar with the procedure, noting that he was more comfortable if ongoing verification is included. Ms. Ruth Forman commented, via teleconference, that a hands-on approach and experience will allow users to reach the desired comfort level because ongoing verification is included in the revised procedure, and Dr. Burrows agreed. Mr. Phillips added that Section 4 on annual verification allows a higher spiking range because of poor recovery.

Mr. Scott Hoatson (Oregon Department of Environmental Quality) asked whether the annual recalculation would require running various procedures. Dr. Burrows explained that data collected throughout the year are used to perform the recalculation, so there is no requirement to re-run anything.

Ms. Kim Watson (Stone Environmental, Inc.) explained that the DoD *Quality Systems Manual for Environmental Laboratories* requires nondetects to be reported to the MDL with a "U" designation, which is in opposition to this discussion because when there is a nondetect, the laboratory reports a "U" rather than a value. Therefore, verification is necessary to ensure that it is a real number. In response to a clarifying question from Dr. Burrows, Ms. Watson explained that the DoD requires laboratories to report below the LOQ and at the MDL with a "U" for all nondetects. Dr. Burrows noted that the DoD requires an LOD rather than an MDL. Ms. Watson said that often the MDL is equal to the LOD because of the manner in which it is derived; therefore, the DoD contradicts what has been established. Dr. Burrows noted that the revised procedure does not incorporate the LOD.

Mr. Jim Todaro (Alpha Analytical) explained that environmental laboratories do LODs, LOQs and MDLs for a variety of programs. For the DoD, the LOD cannot be at the MDL, so the LOD, MDL and LOQ must be reported. To be consistent with DoD, laboratories must run both, which is time-consuming, laborious and confusing. This must be considered with any procedure that is

implemented. Dr. Burrows agreed and noted that many entities have developed their own approaches because of a lack of confidence in the MDL as generated by Appendix B of 40 CFR 136. Hopefully, the revised procedure will increase confidence, and more organizations will adopt it.

A participant commented that some laboratories must calculate MDLs for drinking water and Clean Water Act programs. He asked that the next Method Update Rule (MUR) be modified to apply to drinking water programs. There is a chance for standardization regarding reporting limits and MDLs. Ms. Root explained that the MUR applies specifically to the Clean Water Act and does not apply to drinking water. Dr. Burrows said that when drinking water programs reference an MDL, they reference 40 CFR 136.

Mr. Farrell moved to vote on the letter via email after the following changes had been made: (1) formatting of comments as attachment, (2) removing the reference to NELAP/state requirements in Section 4, and (3) addressing verification. Following clarification by Ms. Phelps regarding the voting procedure and an additional comment by Mr. Phillips regarding spiking at higher concentrations, Mr. Farrell withdrew his motion.

Mr. Phillips moved that the Board vote on the MDL letter via email by January 31, 2014, after the statement regarding NELAP/state requirements has been removed and the comments are moved to an attachment. Dr. Burrows seconded the motion, which passed unanimously.

6. OPEN DISCUSSION/NEW ITEMS

Letter to ORCR Regarding SW-846 Update V

Ms. Root explained that comments about SW-846 Update V were due on January 21, 2014, but the Board requested an extension until January 31, 2014, to have a chance to discuss them during this face-to-face meeting. Ms. Phelps added that EPA agreed to accept and review ELAB's comments but is not required to provide a response because they were received following the official deadline.

In response to a question from Mr. Farrell, Mr. Phillips said that the Board was going on record as approving the addition of a formal quantitation limit termed the lower limit of quantitation (Item #6). Generally speaking, the letter is positive, but ELAB pointed out some oversights. Mr. Phillips made a motion to approve the letter regarding SW-846 Update V as written, which Ms. Wade seconded. The letter was approved unanimously.

Next MUR

Ms. Root reported that a letter was sent to the Agency on January 17, 2014, requesting ELAB engagement so that the Board may provide advice and comments as the MUR is being developed. The deadline to provide general comments is March 1, 2014, as Dr. Askew pointed out earlier in the meeting. During the Board's last teleconference, the members discussed topics important to their constituencies, such as the MDL, Methods 624 and 625, and so forth. Dr. Burrows noted that the letter requested that ELAB be involved while EPA develops the MUR, so the Board's involvement will be after March 1. Mr. Farrell asked about ELAB's input

within the Code of Federal Regulations (CFR) process. Ms. Root said that the Board would like to be involved before the MUR is published in the CFR. ELAB already has provided feedback to the Agency regarding three methods that she expected to be included in this update, as she assumed that EPA's request that ELAB review these methods is related to the MUR. Without knowing EPA's specific focus, it is difficult for the Board to provide comments at this time.

Ms. Phelps commented that this is an opportunity for the ELAB members to begin a dialogue about items critical to their constituencies that are not included in the MUR. The statement of interest that ELAB sent about being involved with the MUR development did not necessarily warrant a formal response from the Agency, so ELAB should not wait for a response to plan its activities in this area. The members should think about which items they would like to follow up on so that a list can be sent to EPA following the Board's February meeting.

Mr. Farrell was interested in including the TNI standards as an acceptable alternative to the 40 CFR 136 Part 7 QC standards. Ms. Root noted that other items identified by the Board members included: the MDL update; Methods 624, 625 and 1668; sample guidance; precision and accuracy table updates; and minimum limits, quantitation limits and LOQ. Ms. Phelps recommended that the Board members prioritize their expectations. ELAB can share as many items as it would like, but the list should be prioritized regarding what can be realistically addressed. Ms. Root suggested the Board take one of two approaches. It could provide EPA with the entire list with its top three priorities, or it could assign small Task Groups to work on each item. Dr. Burrows noted that the Board already had provided comments on Methods 624 and 625. He wondered whether it was realistic to provide comments on all items on the list by the March 1 deadline. Ms. Root did not think that it was realistic, so the letter should focus on topics of interest on which the Board could offer its assistance.

Mr. Farrell volunteered to obtain TNI's comments about the prior MUR update and provide them to the Board members. Mr. Phillips read some of the prior ELAB comments about the past MUR and offered to send the full set of comments to the Board members. Ms. Root asked the members to develop the letter prior to the February ELAB teleconference. Ms. Wade volunteered to lead the Task Group to draft the letter, and Mr. Farrell, Mr. Speis and Ms. Patricia Carvajal volunteered to serve on the Task Group.

Sample Collection

Because Dr. Jim Seiber was not present and in the interest of time, the Board agreed to discuss this topic during its February teleconference.

Open Discussion

Mr. Arms provided an update about TNI activities stemming from ELAB's efforts regarding a national environmental laboratory accreditation program. Mr. Arms is the chair of TNI's Advocacy Committee, which was assigned to review the FEM's response to ELAB's comments to determine activities that TNI could undertake to advance a national program. TNI is funded to perform many of the activities that the Board recommended. TNI needs to assess the national status, which it does periodically; the last such assessment was in 2006. The TNI Board of Directors tasked the Advocacy Committee with gathering input from stakeholder groups.

Webinars will be held in the coming months to help the committee assess the status of a national program, including the current status and the program's future direction. During the Thursday morning session of the Forum, the Advocacy Committee will plan its future activities, gather input and begin its efforts to assess the future of national accreditation.

Dr. Michael Miller (M.W. Miller Environmental Analytical Chemist, LLC) asked, in terms of sample collection, whether ELAB would examine the standard and encourage laboratories to insist that standards are present and must be used. When the laboratory obtains good samples, the result is much better performance. Ms. Root explained that the effort has just begun, and the Board will discuss the topic during its next teleconference. Mr. Farrell explained that during that discussion he will suggest that the TNI Field Sampling and Measurement Organization standard be incorporated.

7. REVIEW ACTION ITEMS/CLOSING REMARKS/ADJOURN

Ms. Kristen LeBaron reviewed the action items identified during the meeting, which can be found in attachment C.

Citing no additional comments or issues, Ms. Root asked for a motion to adjourn. Mr. Speis made the motion, which Ms. Carvajal seconded. The meeting was adjourned at 9:59 a.m.

Attachment A

AGENDA
ENVIRONMENTAL LABORATORY ADVISORY BOARD
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Hyatt Regency Louisville, Louisville, Kentucky
January 27, 2014; 8:00 a.m. – 10:00 a.m. EST

8:00 – 8:15 a.m.	Opening Remarks and Roll Call
8:15 – 8:30 a.m.	Approval of December Minutes
8:30 – 8:45 a.m.	ELAB Charter/Highlights of 2013 Board Activities
8:45 – 9:00 a.m.	News/Updates From the Designated Federal Officer
9:00 – 9:15 a.m.	Task Group Updates
9:15 –9:50 a.m.	Open Discussion/New Items
9:50 – 10:00 a.m.	Review Action Items/Closing Remarks/Adjourn

Attachment B

MEMBERSHIP LISTING AND GUESTS

ELAB MEETING
January 27, 2014; 8:00 a.m. – 10:00 a.m. EST

Attendance (Y/N)	Name	Affiliation
Y	Ms. Patsy Root (Chair)	IDEXX Laboratories, Inc. Representing: Laboratory Product Developers
Y	Ms. Michelle L. Wade (Vice-Chair)	Kansas Department of Health and the Environment Representing: Laboratory Accreditation Bodies
Y	Ms. Lara P. Phelps, DFO	U.S. Environmental Protection Agency Representing: EPA
Y	Dr. Richard Burrows	TestAmerica Laboratories, Inc. Representing: Commercial Laboratory Industry
Y	Ms. Patricia M. Carvajal	San Antonio River Authority Representing: Watershed/Restoration
Y	Mr. John (Jack) E. Farrell, III	Analytical Excellence, Inc. Representing: The NELAC Institute (TNI)
Y (via teleconference)	Ms. Ruth L. Forman	Environmental Standards, Inc. Representing: Large Third-Party Assessors
Y	Ms. Sylvia (Silky) S. Labie	Environmental Laboratory Consulting & Technology, LLC Representing: Third Party Assessors
Y (via teleconference)	Ms. Susan L. Mazur	Florida Power and Light Representing: Utility Water Act Group
Y	Mr. John H. Phillips	Ford Motor Company Representing: Alliance of Automobile Manufacturers
N	Dr. Mahesh P. Pujari	City of Los Angeles Representing: National Association of Clean Water Agencies (NACWA)
N	Dr. James N. Seiber	University of California, Davis Representing: Academic and Research Communities
N	Ms. Aurora Shields	City of Lawrence, Kansas Representing: Wastewater Laboratories
Y	Mr. David (Dave) N. Speis	QC Laboratories Representing: American Council of Independent Laboratories (ACIL)
Y (via teleconference)	Dr. A. Dallas Wait	Gradient Representing: Consumer Products Industry
N	Dr. Michael D. Wichman	State Hygienic Laboratory at the University of Iowa Representing: Association of Public Health Laboratories (APHL)

Attendance (Y/N)	Name	Affiliation
Y	Ms. Kristen LeBaron (Contractor)	The Scientific Consulting Group, Inc. (SCG)
Y	Mr. Stephen Arms (Guest)	Florida Department of Health
Y	Dr. Edward Askew (Guest)	Askew Scientific Consulting
Y	Mr. Bill Hall (Guest)	New Hampshire Environmental Laboratory Accreditation Program
Y	Mr. Scott Hoatson (Guest)	Oregon Department of Environmental Quality
Y	Dr. Michael Miller (Guest)	M.W. Miller Environmental Analytical Chemist, LLC
Y	Ms. Marlene Moore (Guest)	Advanced Systems, Inc.
Y	Mr. Jim Todaro (Guest)	Alpha Analytical
Y	Ms. Kim Watson (Guest)	Stone Environmental, Inc.

Attachment C

ACTION ITEMS

1. Ms. LeBaron will finalize the December 2013 teleconference minutes and send them via email to Ms. Phelps.

2. Ms. LeBaron will finalize the two letters discussed during the meeting, implementing the suggested changes, and forward them to Ms. Root and Ms. Phelps immediately following the meeting.

3. ELAB will vote on the updated MDL letter no later than January 31, 2014.

4. ELAB will send the updated letter to ORCR no later than January 27, 2014.

5. Mr. Farrell will obtain TNI's comments about the prior MUR update and provide them to the Board members.

6. Mr. Phillips will send ELAB's comments about the prior MUR update to the Board members via email.

7. Ms. Wade will lead the Task Group to draft a letter to EPA regarding the next MUR.

8. The Board will discuss the topic of sample collection during its February teleconference.

Attachment D

I hereby certify that this is the final version of minutes for the Environmental Laboratory Advisory Board Meeting held on January 27, 2014.

Signature Chair

Ms. Patsy Root

Print Name Chair