



# **THE INSTITUTE REVIEW**

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## 2017 Environmental Measurement Symposium

By Lara Phelps, USEPA and Jerry Parr, TNI

For the eleventh year, the Environmental Measurement Symposium, which represents the combined meetings of the National Environmental Monitoring Conference (NEMC) and the Forum on Laboratory Accreditation (the Forum), will be meeting at the Grand Hyatt in Washington, DC from August 7 – 11, 2017. This year, the Symposium's theme is "Effectively Communicating Scientific Information".

Some of the highlights for the week include:

- A special half-day general session focused on the conference theme, featuring Jory Weintraub, PhD, Duke Initiative for Science & Society – Science Communication 101; Liz Neeley, The Story Collider – Science Storytelling; and Craig R. McClain, PhD, Louisiana University Marine Consortium – Science in Social Media;
- Over 180 oral and poster presentations on a variety of cutting-edge environmental monitoring issues;
- Meetings of The NELAC Institute (TNI) Committees to further TNI efforts on environmental laboratory accreditation, proficiency testing, and accreditation of field sampling and measurement organizations;
- An exhibit program showcasing the latest innovations in environmental monitoring;
- An innovative new technologies showcase, featuring sensors, apps, and personal monitoring devices, among others that are the latest innovations available;
- Three special keynote presentations on topics of general interest; and
- An open meeting of the US Environmental Protection Agency's (EPA's) Environmental Laboratory Advisory Board.

### Forum on Environmental Accreditation

The NELAC Institute's (TNI's) semi-annual meeting is an integral part of the Environmental Measurement Symposium (Symposium). Highlights from this summer's Forum include:

- An Assessment Forum and Mentor Session;
- Meetings of TNI's standard development committees;
- A special session on changes to ISO/IEC 17025; and
- Meetings of the TNI executive committees that manage TNI's Proficiency Testing Program and National Environmental Field Activities Program.

As these sessions become further developed, additional details will be available on the TNI website at <http://www.nelac-institute.org>.



#### National Environmental Monitoring Conference (NEMC)

The National Environmental Monitoring Conference (NEMC) provides the principal forum for addressing policy and technical issues affecting monitoring in all environmental media (i.e., water, air, soil, and waste) and across all environmental programs. NEMC is co-sponsored by The NELAC Institute (TNI) under a cooperative agreement with the U.S. Environmental Protection Agency (US EPA). The technical program is organized by a committee of environmental experts from government and private industry, which brings together a balance of technical and policy topics for each year's symposium that are of interest to all.

NEMC 2017 will feature over 180 oral and poster presentations organized into concurrent technical sessions from Monday through Friday, with a general session on Wednesday morning. A keynote address on a major topic will kick-off the start of each day.

#### Technical Sessions for NEMC 2017 include:

- Academic Research Topics in Environmental Measurement and Monitoring
- Advances in Sample Preparation and Clean-up
- Advancing the Use of Passive Sampling
- Air Monitoring, Methods & Technology
- Best Practices for Reference Materials
- Challenges of Measuring Contaminants in Food & Beverages
- Changing the Paradigm for Water Pollution Monitoring
- Characterization of Polyfluoroalkyl Substances in the Environment
- Citizen Science
- Collaborative Efforts to Improve Environmental Monitoring
- Data Quality Management and Review
- Effectively Communicating Scientific Information
- Field Sampling, Measurement and Sensor Technology
- Forensic Chemistry
- Harnessing the Challenges in Reinventing California's Laboratory Accreditation Program
- High Performance Liquid Chromatography in Environmental Monitoring
- LIMS in the Modern Laboratory
- Metals and Metals Speciation Analysis in Environmental Samples
- Method Update Rule
- Non-Targeted Compound Screening
- Overcoming Interferences in Optical ICP Analyses



- Overcoming Legacy Obstacles with Innovative Approaches
- Premise Microbial Testing
- Reinventing Method Development and Validation for Environmental Monitoring
- Topics in Drinking Water
- Topics in Shale Gas
- Use of Continuous Monitoring for Compliance Monitoring

The Wednesday morning General Session will feature presentations regarding the conference theme – **Effectively Communicating Scientific Information.**

Please take a few minutes to look over the preliminary program and register today. To view abstracts and the preliminary program, in addition to conference arrangement details, visit <http://www.nemc.us>.

We look forward to seeing you in August!!!



## The 2017 Forum on Environmental Accreditation

By Lynn Bradley, TNI

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This summary is based on notes taken at the closing session of the TNI meeting in Houston, Texas on January 27, 2017.

### **Environmental Laboratory Advisory Board – Sharon Mertens**

Sharon reported that ELAB received updates on ongoing initiatives including: single ion monitoring criteria, the memo on GCMS spectral libraries, online monitoring and continuous inline monitoring, the memo from the WET committee, and the letter from the NELAP AC concerning training for DW certification officers. ELAB received comments from the audience on the need for criteria for reporting tentatively identified compounds. ELAB agreed to continue with 2 face to face meetings per year.

### **Chemistry Committee – Valerie Slaven**

The Chemistry Committee finalized editorial changes to the 2016 Standard to send the LASEC and NELAP AC for final approval. They will send these changes before the AC meeting next week. They also opened lines of communication with the NELAP AC on changes needed in the 2017 Standard. The NELAP AC has issues with LOQ verification, 3X MDL = LOQ. They also discussed options if the Method Update Rule is not published and how this should be handled.

### **Quality Systems Committee – Paul Junio**

Quality Systems is continuing work on the small lab handbook. They will also be working on new checklists. They anticipate revisions will be needed in Module 2 in light of changes to ISO 17025.

### **Radiochemistry Committee – Bob Shannon**

No report.

### **Whole Effluent Toxicity Committee – Rami Naddy**

The WET Committee has retained the 2009 Standard and has announced their intention to start working on a new standard. They would like the WET session held in Orange County last year to be converted into a webcast. Also, they are working with EPA and PTEC to see if there is any way to combine WET data sets among the three PTP's since some sets are very small.

### **Proficiency Testing Expert Committee – Nicole Cairns**

PT had a very short meeting! They forwarded editorial changes to the NELAP AC. Modules 3 and 4 have been approved by the NELAP AC, but cannot move forward until V1 is implemented because they work together.

### **Microbiology Committee – Robin Cook**

Microbiology has completed revising their chapter in the Small Lab Handbook. Next they will start revising the Micro Audit Checklist.



#### **Laboratory Accreditation Body Committee – Carl Kircher**

LAB is working on combining V2M1 and M3. The committee decided to wait until the revisions to ISO 17011 were finalized in late spring. At that time, the additional TNI requirements will be written. They have implemented the provisions of SOP 2-100 that encourages stakeholder participation in standards revision. Comments from the stakeholders at the meeting included: allowing the option for remotely assessing labs, going to a 3-year cycle for lab assessments, with a 2-year surveillance type assessment, extending the 30-day requirement for generating assessment reports, modification of requirements for entering data into LAMS, and comments on revisions to 17011 and V2M1.

#### **Consensus Standards Development Executive Committee – Bob Wyeth**

Bob indicated that CSDPEC has been focused on the NELAP AC's issues with the 2016 Standard. He believes the PT issues have been resolved, and those changes will move forward. The chemistry issues will need more time.

The CSDPEC met with the NELAP AC and members of the TNI Board to follow up on the issues with approving the 2016 Standard. The group has agreed on a process to use going forward, which should minimize any future issues.

After hearing the presentation by Warren Merkel, NIST, the CSDPEC believes changes to ISO 17025 will be manageable within the context of the TNI Standard.

Bob also reported that he got the final member needed for the Asbestos Committee and he will go ahead with the charter. Also, the Glossary Committee has been reconstituted.

#### **Laboratory Accreditation Systems Executive Committee – Judy Morgan**

Judy reported that the LASEC talked about the 2016 Chemistry Standard. The Chemistry committee will be providing language for them to review. They also discussed minimum requirements for test method selection.

#### **NELAP Accreditation Council – Aaren Alger**

Aaren reported that the current round of AB evaluations was almost complete and they will be starting on the next round. The renewal notices have gone out.

The AC also discussed issues with the chemistry module (LOQ/MDL, qualitative vs. quantitative). They do not anticipate any problems going forward.

The AC discussed the DW certification officers' course and proposed a workgroup with EPA to explore options.

The NELAP AC discussed the need for technical training for assessors. Jerry advised that the technical training was done and on the website. The AC also discussed the possibility of delays with revisions to the LAB chapter until ISO 17011 revisions were finalized.

#### **NGAB Working Group and TNRC – Alfredo Sotomayor/Judy Morgan**

Judy reported that three NGABs had been recognized last week by the TNRC to accredit laboratories to the TNI Standard. Alfredo reported on the reorganization of TNI recognition activities, which will be recommended to the TNI Board at their next meeting.



**NEFAP Executive Committee – Justin Brown**

The NEFAP EC presented an update and overview of committee activities. They discussed their request to the TNI Board to form a work group for mobile labs with possible expansion to other field activities. They began discussion of program expansion to other areas (cannabis and food). They also discussed their continuing efforts for marketing and advocacy.

**Field Activities Committee – Kevin Holbrooks**

FAC is in the process of opening the 2016 Standard for review. They have finalized the proposal for review and will submit it to CSDPEC for approval. They discussed the timing of ISO revisions and the standard review process. They also reviewed the new charter requirements and started a draft.

**PT Executive Committee – Maria Friedman**

Maria reported that the committee worked on SOP issues and updated the process for FOPT table revisions. They are planning to do a gap analysis with the new standards and update two SOPs.

**IT Committee – William Daystrom**

The IT committee gave a status update on the generic application. The application is currently being beta tested. They also unveiled the new LAMS.

**Advocacy Committee – Carol Batterton**

Advocacy assisted Jerry Parr with conference planning by reviewing proposals for the 2018 winter meeting. The committee gave Jerry feedback that the proposal from the Albuquerque Hyatt appeared to be the best option. The committee also discussed highlights of the Houston meeting and items that would need Advocacy attention. The next newsletter was planned and the comment letter to California summarizing the mentor session was reviewed.



## 2017 Board of Directors Election — Results

By Sharon Mertens, TNI Past Chair

As reported to you in the last newsletter, elections took place in January and February, and the newly elected directors assumed office on March 8 during the Board's regularly scheduled monthly teleconference. The Nominating Committee, which this year consisted of Sharon Mertens, Catherine Katsikis and Zonetta English (substituting for Aurora Shields) painstakingly reviewed the qualifications of each nominee and assembled the ballot for voting by the TNI membership. In addition to reviewing qualifications, the Nominating Committee must ensure that the board retains balance and representation from all recognized stakeholder groups.

This year's ballot included three returning Board members – Aaren Alger, Justin Brown and Patsy Root, who were willing to serve another term – and two new directors, Chris Gunning from A2LA and Cheryl Nolan from the Louisiana Department of Environmental Quality. The election also included the ratification of a new ex-officio director, Debbie Rosano, who is representing the Department of Energy.

The election closed on February 13 and in the end, 64 members cast votes and all the candidates were elected by at least 95% affirmatives.

After the introduction of the new Board members at the March meeting, the Board also held its annual election of officers, which include the Chair, Vice-Chair, Secretary, and Treasurer. These were all filled by the incumbents.

### 2017 TNI Board of Directors

Jordon Adelson	US Navy NAVSEA Programs Field Office
Aaren Alger (Vice Chair)	Pennsylvania DEP
Steve Arms	Florida DOH (Retired)
Justin Brown	Environmental Monitoring & Technology
Jack Farrell	Analytical Excellence
Myron Gunsalus	Kansas DHE
Chris Gunning	A2LA
Daniel Lashbrook	Energy Laboratories
Judy Morgan	Pace Analytical
Cheryl Nolan	Louisiana DEQ
Lara Phelps	EPA
Patsy Root (Secretary)	IDEXX
Debbie Rosano	DOE
Scott Siders	PDC Laboratories
Alfredo Sotomayor (Chair)	Milwaukee Metropolitan Sewerage District
David Speis (Treasurer)	Eurofins QC (Retired)

## The 2016 Environmental Sector Standard: Dead or Alive?

By Ken Jackson, TNI Consensus Standards Development Program Administrator

Several years of hard work by the Consensus Standards Development Expert Committees have culminated in the creation of a 2016 Environmental Sector Standard. This was developed to replace the current (2009) Standard, and most of the volumes and modules from the 2009 Standard were revised to reflect changing needs in the accreditation and operation of environmental laboratories. The only modules remaining unchanged are:

- in Volume 1, Modules 3 (Quality Systems for Asbestos Testing) and 7 (Quality Systems for Toxicity Testing); and
- in Volume 2, Modules 1 (General Requirements) and 3 (on-Site Assessment).

Development of the 2016 Standard was governed by the consensus process prescribed in SOP 2-100 Version 1.1 (Procedures Governing Standards Development). This followed a step-wise process beginning with a Working Draft Standard that was distributed for comment and input, followed by several stages (a Voting Draft Standard; a Modified Voting Draft Standard, if needed; and an Interim Standard) that provided all TNI members the opportunity to vote, and whose persuasive voting comments had to be resolved by the Expert Committees. Every commenter then received an individual response from the committee, explaining the action taken in response to the comment. In most cases this resulted in a modification of the Standard to satisfy the comment. This consensus process resulted in a Final Standard, which was subsequently approved by ANSI as an American National Standard. This Standard is currently undergoing a few minor editorial changes and is available for use by Accreditation Bodies (AB).

The 2016 Standard was offered, through the Laboratory Accreditation System Executive Committee (LASEC), to the State ABs as a replacement for the 2009 Standard. However, the ABs identified several issues in the laboratory proficiency testing (PT) module (Volume 1, Module 1) and the laboratory quality systems for chemical testing module (Volume 1, Module 4) that would prevent their adoption and implementation of the Standard. Substantive changes to the 2016 Standard cannot be made, but it is permissible to make editorial changes, with the strict caveat that they are for clarification only and do not change the sense of the Standard that passed the consensus voting process. Discussions between the Expert Committees and the ABs have led to a number of editorial changes that are expected to be acceptable to all parties. There are, however, at least two issues in Volume 1, Module 4 that cannot be resolved editorially. This will prevent adoption of Volume 1, and it will require the Chemistry Expert Committee to embark on the development of a new module that must be taken through the consensus voting process and must then be approved by ANSI.

So, what went wrong? When the PT Volume 1, Module 1 was presented as a Voting Draft Standard, it received 106 votes (94 affirmative and 12 negative). Collectively, those voters submitted 137 comments that were all considered by the PT Expert Committee. The committee then modified the Standard to satisfy 94 of those comments that were judged to be persuasive. Surprisingly, the 106 voters included representatives from only 3 State ABs. Most importantly, no AB representative commented during the voting process on any of the issues



later identified by the ABs as unacceptable for adoption of the Standard. The situation is even more striking for Volume 1, Module 4. The Voting Draft Standard on the detection quantitation section received 27 affirmative votes and 4 negative votes. Collectively, those voters submitted 22 comments that were all considered by the Chemistry Expert Committee, which modified the Standard to satisfy 14 of those comments that were judged to be persuasive. Again, only 4 of the voters represented State ABs, and in only one case did a voter raise an issue that the ABs later deemed unacceptable for adoption of the Standard. The committee did rule that one voter's comment non-persuasive and provided its reasons to the commenter, but the commenter did not pursue the matter again when the modified standard was presented as an Interim Standard. This led the committee to believe the voter was satisfied with the reasons provided for ruling the comment non-persuasive at the Voting Draft Standard stage.

### **Conclusions**

Clearly there was a failure in the consensus standards development process, when all TNI members had an opportunity to vote and to have their voting comments considered and resolved, but when many key players from State ABs either failed to vote or failed to comment on issues that would subsequently prevent them from adopting the Standard. This will require a new V1M4 to be prepared by the chemistry committee, and to be put through the voting process.

Giving credit to all parties, the Chemistry committee and the ABs have been working together to craft language that is expected to resolve the outstanding issues. If all goes well from now on, this process may be completed in 2017. A corrective action process has been undertaken, involving a re-write of the standards development process (SOP 2-100 Version 2.0). This new process requires the expert committees to reach out to the stakeholders (including the ABs) at the beginning of the process to reach agreement on what needs to be in the Standard. This should avoid surprises and a repetition of the problem encountered with the 2016 Standard. It is also hoped this will persuade a bigger turnout of TNI members to vote. The inability of the ABs to adopt Volume 1 of the 2016 Standard means adoption by TNI of Volumes 3 (PT Provider requirements) and 4 (PT Provider Accreditor requirements) must also wait for the new Volume 1, because changes in PT requirements in V3 and V4 are inconsistent with existing (2009) requirements in Volume 1.

So, the answer to the question posed in the title of this article is that the 2016 Standard is alive and available for anyone to purchase and use. (The State of CA has indicated it may adopt this Standard). As far as NELAP is concerned, the Standard is at best dormant until a modified version has been developed and voted in by the membership.



## Update on California

By Jerry Parr, TNI

As mentioned in the last issue of The Institute Review, the California Environmental Laboratory Accreditation Program (ELAP) has made a decision to use the 2016 TNI Standard to accredit California laboratories.

On January 23, 2017, The NELAC Institute (TNI) held a panel discussion at the annual Forum on Environmental Accreditation to discuss challenges that small laboratories may have in implementing the TNI Standard. Panelists included representatives from a municipal laboratory, consultants with experience assisting laboratories with compliance, and a representative from a commercial laboratory with extensive knowledge of TNI's quality systems requirements. Over 150 people attended and participated in this session, including many from small laboratories. Many of these small laboratories have been accredited to the TNI Standard and are willing to share the experience.

The panelists were given a list of topics, many of which were gleaned from the California stakeholders list of Proposed Modifications to TNI Volume 1. The panelists were asked to discuss ways a laboratory could meet the requirement and/or if they thought the requirement presented a major obstacle for small laboratories. Most participants in this session have implemented and maintained accreditation.

In addition to the specific issues discussed, a number of general themes and suggestions emerged during the session. These thoughts included:

- Encouraging the California program to minimize changes to the TNI Standard. The standards, as currently written, have been shown to be fully achievable for small laboratories and modifications could impact data quality and result in confusion in implementation.
- Encouraging small laboratories to align current business practices with the TNI requirements. It is not necessary to make the requirements of the Standard more complicated than necessary.
- Request California not delay implementation of any of the requirements. The laboratories should make an initial effort to meet the requirement for laboratory improvement and compliance. If the assessor determines that improvement is needed, allow the laboratory adequate time to achieve conformance.
- Training and attitude for the assessors is just as important as for the laboratories. Panelists agreed that the assessment process should be a learning experience and not adversarial.
- The panelists also agreed that the most successful laboratories are the ones who reach out to others for information. The California program should encourage labs to share information and learn from each other.

A detailed report was presented to an Expert Panel assisting ELAP with this effort for a meeting in California on February 1. A more detailed second report, that addressed all 58 recommendations concerning the TNI Standard, was prepared after this meeting and provided to the Expert Panel on February 14. Both reports are available under News on the TNI website.

## NEW TNI Environmental Laboratory Standard Recognition and Accreditation

By Judy Morgan, ESC Lab Sciences and Ilona Taunton, TNI

Three Non-Governmental Accreditation Bodies (NGABs) were formally recognized in Houston late January to accredit environmental laboratories to the TNI Environmental Laboratory Standard:

- American Association for Laboratory Accreditation (A2LA);
- ANSI-ASQ National Accreditation Board (ANAB); and
- Perry Johnson Laboratory Accreditation, Inc. (PJLA).

Judy Morgan, Chair of the TNI Non-Governmental Accreditation Body Recognition Committee (TNRC), presented each NGAB with their certificate and attached recognized scope.



TNI has updated the TNI website to include information on this new recognition and accreditation. NGABs and laboratories can find out more by going to the Laboratory Accreditation tab on the website ([nelac-institute.org](http://nelac-institute.org)).

TNI began developing the NGAB recognition process in 2013 with the formation of the NGAB Working Group chaired by Alfredo Sotomayor. In 2014, the TNI Board appointed the TNRC to approve NGABs according to TNI's evaluation SOP (SOP 7-100). These two groups worked jointly to implement the process each of the three NGABs completed.

Activities completed in order to implement the recognition included:

- developing the evaluation SOP, appointing a Lead Evaluator (TNI Staff – Ilona Taunton),
- posting the SOP and application on the TNI website under the TNI Board tab,
- holding evaluator training through a webinar and webcasts,
- establishing a budget and fees,

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## NEW TNI Environmental Laboratory Standard Recognition and Accreditation cont.



- performing evaluations, and
- designing a logo for NGABs and laboratories.

Thank-you to the individuals that worked on this process:

**Working Group:** Alfredo Sotomayor (Chair), Kristin Brown, Marlene Moore, Cheryl Morton, Jim Todaro, and David Speis

**TNRC:** Judy Morgan (Chair), Daniel Lashbrook, Marlene Moore, Kim Watson, and Yumi Creason

**Evaluations:** Kirstin Brown, Carl Kircher, and Ilona Taunton (Lead Evaluator)

**TNI Staff Support:** Jerry Parr and Carol Batterton

**Evaluation Coordinator:** Ilona Taunton



## NEFAP — What's Happening

By Kim Watson, NEFAP Chair and Marlene Moore, Advanced Systems, Inc.

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The program now has three accreditation bodies, more than a dozen accredited Field Sampling and Measurement Organizations (FSMOs), and is working on its third revision to the standard. As the new ISO/IEC 17025 is expected by the end of 2017, the Field Activities Committee (FAC) is going to start work on a new standard. If you are interested in the requirements for field operations, now is the time to get involved.

The Executive Committee is working towards standardizing the scope of accreditation, ensuring one accreditation for environmental fieldwork, and is developing a strategy for marketing the program. The web page has been updated and our first video testimonial can be viewed on the TNI website under NEFAP. More testimonials are expected this year, along with an introduction to the presentation that was given in Orange County in July 2016.

The current Standard is TNI FSMO 2014 Volume 1 for FSMOs and Volume 2 for accreditation bodies. Proficiency testing is part of the requirements for field measurements and must be performed following the TNI Volume 3 and 4 Standards for Proficiency Testing Providers and Accreditors. All accredited FSMOs are being evaluated to this revised standard. If you contract for sampling and field measurement services, ensure that you are using a competent organization by looking for the NEFAP seal on the report.

## EPA Finalizes Changes to Part 136 Affecting Laboratories that Perform Water Testing

By Jerry Parr, TNI

**This rule was withdrawn from the Federal Registry by the new EPA administrator. The rule is expected to be republished later this year.**

EPA has tentatively finalized a Methods Update Rule (MUR) that:

- Replaced Methods 608, 624, and 625 with updated versions of these methods,
- Approved over 100 methods published by ASTM International, Standard Methods, several vendors and other organizations,
- Clarified the procedures for EPA approval of nationwide and limited use ATPs,
- Amended the procedure for determination of the method detection limit (MDL) in Appendix B, and
- Made many other minor changes affecting methods, sample preservation and other issues.

A pre-publication version of this proposed rule was posted at <https://www.epa.gov/cwa-methods/methods-update-rule-2016> and a summary of the proposed rule is provided below. A webinar on the new rule occurred on January 18, 2017 and is available as a downloadable webcast on the TNI Education Delivery System page at <http://www.nelac-institute.org/content/eds-home.php>.

Although this rule was expected to be finalized in January, it has been held up along with many other Federal regulations under the new administration.

### Changes to Previously Approved EPA Methods

#### *Methods 608, 624, and 625*

- Substantive changes to both technology and QC have been made. Many improvements were made to the 2015 versions, but some changes will be controversial to both labs and permittees.

#### *Method 611*

- EPA corrected the analyte name for bis(2-chloroisopropyl)ether to 2,2'-oxybis(1-chloropropane), which matches the CAS Number 108-60-1.



**Methods 1600, 1603, 1680, and 1682**

- EPA corrected minor typographical or other errors in methods 1600, 1603, 1680, and 1682 that EPA identified in the methods after publication.

9221 B, C, E, F-06	3500-As B-11	4500-NH <sub>3</sub> B-H-11
9222 B, D, G-06	3500-Ca B-11	4500-NO <sup>2-</sup> B-11
9230 B, C-07	3500-Cr B, C-11	4500-NO <sup>3-</sup> D, E, F, H-11
2120 B, F-11	3500-Cu B, C-11	4500-Norg (B-D)-11
2130 B-11	3500-Fe B-11	4500-O B-G-11
2310 B-11	3500-K b-11	4500-P B (5), E-H-11
2320 B-11	3500-Mn B-11	4500-S <sup>2-</sup> C, E, F,-11
2340 B-11	3500-Na B-11	4500 SiO <sup>2-</sup> B-D, F, G-11
2340 C-11	3500-Pb B-11	5210 B-11
2510 B-11	3500-V B-11	5220 B, D-11
2540 B, C, D, E, F-11	3500-Zn B-11	5310 B, D-11
2550 B-10	4110 B-D-11	5520 B, F-11
3111 B, C, D, E-11	4140 B-2011	5530 B, D-10
3112 B-11	4500-B B-11	5540 C-11
3113 B-10	4500-Cl <sup>-</sup> B-G-11	6200 B, C-11
3114 B, C-11	4500-CN <sup>-</sup> B-G-11	6440 B-05
3120 B-11	4500-F <sup>-</sup> B-E-11	6630 B, C-07
3125 B-11	4500-H <sup>+</sup> B-11	6640 B-06
3500-Al B-11		

**New Versions of Approved ASTM Methods**

EPA approved new versions of the following currently approved ASTM methods:

D 511 – 09 (A, B)	D 3223 -12
D 516 – 11	D 3373 – 12
D 858 – 12 (A – C)	D 3557 – 12 (A – D)
D 859 – 10	D 4382 – 12
D 1067 – 11	D 4658 – 09
D 1068 – 10 (A-C)	D 5257 – 11
D 1126 – 12	D 5673 – 10
D 1179 – 10	D 5907 – 13
D 1246 – 10	D 6508 – 10
D 1688 -12 (A - C)	D 7284 – 13
D 1691 – 12 (A, B)	D 7511 – 12
D 1976 – 12	D 7065 – 11

**New Methods**

EPA added the following new methods:

- USGS Methods I-2547-11 and I-2548-11, *Colorimetric Determination of Nitrate Plus Nitrite in Water by Enzymatic Reduction, Automated Discrete Analyzer Methods*, for nitrate, nitrite, and combined nitrate-nitrite. Method I-2548-11 is a low level (analytical range) version of Method I-2547-11;



- NECi Method N07-0003, *Method for Nitrate Reductase Nitrate-Nitrogen Analysis*;
- Timberline Instruments, LLC Method Ammonia-001, *Determination of Inorganic Ammonia by Continuous Flow Gas Diffusion and Conductivity Cell Analysis*;
- IDEXX Laboratories, Inc. Colilert®-18, *Coliform/E. coli Enzyme Substrate Test for fecal coliforms in Wastewater*;
- NCASI Method TNTP-W10900, *Total (Kjeldahl) Nitrogen and Total Phosphorus in Pulp and Paper Biologically Treated Effluent by Alkaline Persulfate Digestion*;
- Hach Company Method 10242, *Simplified Spectrophotometric Measurement of Total Kjeldahl Nitrogen in Water and Wastewater*;
- Hach Company Method 10206, *Spectrophotometric Measurement of Nitrate in Water and Wastewater*.

#### **Changes to Appendix B to 40 CFR Part 136 — Definition and Procedure for the Determination of the MDL**

EPA finalized revisions to the procedure for determination of the MDL primarily to address laboratory blank contamination and to better account for intra-laboratory variability. The revisions address the following issues and would add new requirements:

- Laboratories would be required to evaluate the MDL to account for background levels of contamination.
- If a laboratory uses MDL values that represent multiple instruments, then the laboratory would be required to calculate the MDL using spiked samples and blank samples from all of these instruments.
- Laboratories would be required to check their MDL values once a quarter.

#### **Clarifications/Corrections to ATP Procedures**

Parts 136.4 and 136.5 describe EPA procedures for obtaining approval to use an alternate test procedures either on a national basis, or for limited use by dischargers or facilities specified in the approval. In the 2012 Method Update Rule, EPA made several clarifying changes to the language of these sections. At the same time, however, in many places where the phrase “Regional Alternate Test Procedures Coordinator” or “Regional ATP Coordinator” appears, EPA inadvertently also inserted the phrase “or permitting authority” following the phrase.

The effect of the change was to inadvertently authorize *State* permitting authorities to approve ATPs for limited use within the State. EPA never intended this. Consequently, EPA has deleted all instances of “or permitting authority” to correct this error and revised the rule text to its original intent. Based on this revision, EPA and EPA alone would have the authority to approve limited use ATPs.



### Other Minor Changes

EPA made several other minor changes, including:

- clarifying the language on the term “Director”,
- deleting the words “be sufficiently sensitive and” to eliminate unnecessary confusion,
- make a number of clarifications and corrections to its Whole Effluent Toxicity acute and chronic methods manuals,
- changing the Standard Method listed for *E. coli* most probable number (MPN) in Tables IA and IH,
- reinstating a line for Enterococci that was erroneously deleted in the 2012 Methods Update Rule,
- changing one of the Table IB hardness entries,
- editing Table IB, footnote 52 to show that a 1999 version of Method 300.1 is approved,
- removing the reference to costs in 40 CFR 136.3,
- adding rows to Table II that specify holding times for total/fecal coliforms, and fecal streptococci in Table IH,
- changing the sodium thiosulfate concentrations in Table II for bacterial tests from 0.0008% sodium thiosulfate to 0.008%, and
- re-inserting language that was accidentally deleted from footnote 5 of Table II.



## ChairSpeaks: “Musings from the TNI Chair”

By Alfredo Sotomayer

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### Four TNI Pieces

Since I still cannot dance a chair, I thought maybe I would attempt to play, as in playing the piano, four narrative pieces.

### *Intermezzo: Adagio*

Went to a play recently, *The Few*, by Samuel D. Hunter. Two characters, once founded and managed together in rural Idaho, a newspaper for truckers. He leaves without explanation and she is left behind to continue publishing. She makes it work with the help of a young assistant, who much admires the departed partner. The absent partner returns after four years and then, the drama (pun intended) begins...

It turns out that truckers, the men and women that drive semis across the nation, need connection. On stage, they did this by reading “*The Few*”, the eponymous newspaper of the play, and having gatherings at the paper’s headquarters.

So... truckers are not that different from scientists and regulators, who also like to meet and publish newsletters. TNI is “*The Few*” for the Environmental Sector. I liked the play because it connected with me in many dimensions. I like TNI for the same reasons.

### *Intermezzo: Andantino*

Sometimes overthinking is an excuse for not wanting to do something. Overthinking is not thinking over.

If a trend happens in a laboratory and no one is around to chart it, does it create a bias?

SOPs about dynamic procedures are hard to standardize. Dynamic operating procedures are serial revisions of SOPs.

### *Intermezzo: Grazioso*

One from Pittcon 2017:

I visited the booth of Chinchilla Scientific, a company new to me that manufactures a wide variety of analytical instruments for environmental and other types of analyses. As I am picking some giveaways to bring back to an employee who owns some pet chinchillas, I was approached by the attendant, who asked the usual questions. As I glanced at his nametag, I was surprised to see that I was speaking to the owner of the company, but was briefly stunned to see that his last name was Chinchilla! He also told me he had four of the furry creatures as pets! I had to confess that our analyzers bore a different animal’s image. He already knew, but he was still very gracious.

I have since found out that the last name “Chinchilla”, while not very common, is not completely rare. Sheltered life?



#### *Rhapsody: Allegro*

Another one from Pittcon 2017:

The number of exhibitors whose companies were connected with cannabis analysis amazed me. Given the legalization of cannabis use in some states, I expected there would be increased interest in this sector, but never that much, understanding that Federally, the substance is still illegal. I found out that last year the first Cannabis Science Conference in Portland, OR had about 800 participants. The conference organizer told me this year he expected double the number of attendees. Sheltered life?

Only connect...

*Alfredo*



## “The Crowd in the Cloud” - PBS Documentary Series by Waleed Abdalati

By Lara Phelps, OSA

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There are budding scientists around us no matter where we might be every day. Technology is allowing us to do things once unimaginable. For the older generation, the information available at their fingertips is overwhelming. For the younger generation, science is part of their everyday lives – not just an area of interest in which you might chose to have a career. The larger population of individuals considered ‘in the middle’ ask more questions, dig deeper than most once did, and expect more information about their personal environment and health.

Citizen science and crowdsourcing are approaches that educate, engage, and empower the public to apply their curiosity and talents to a wide range of real-world problems with programs popping-up all over the country to raise greater awareness. We, as scientists, should ensure the general public is aware of tools and programs and encourage them to take advantage of using them. The vast amounts of data being generated will be in our hands to appropriately find further use to advance science, and protect the environment and public health.

Waleed Abdalati, Director of the Cooperative Institute for Research in Environmental Sciences (CIRES) and plenary speaker for the 2016 Environmental Measurement Symposium, has completed the documentary series premiered for our community just seven months ago. His new PBS series on citizen science, *The Crowd and the Cloud*, includes a specific focus on environmental justice in one of the programs and highlights Public Lab and other environmental citizen science (i.e., watch the trailer). The first program in the 4-part series premiered on public television’s WORLD Channel at 9pm Eastern (with a re-feed at 9pm Pacific) on Thursday, April 6th. The series can be seen online at: <http://www.pbs.org/show/crowd-cloud>.

## Member Spotlight: Always Expect Moore

By Stephanie Drier, Minnesota DOH

You will not meet a person who does more for the complex industry of standards development and environmental laboratory analysis and field sampling accreditation than Marlene Moore. She has been involved with the environmental sampling and analysis community for over four decades. In fact, it was her in 1976 who suggested to the Environmental Protection Agency (EPA) that the environmental laboratory community and data users would benefit from a National Accreditation scheme. Marlene coordinated and attended workshops to help pull together the private environmental laboratory sector and convince the EPA on why a national program was needed. She was on the first Federal Advisory Committee (FAC) and meetings were held inside her small environmental laboratory, and inside her lab walls is where the National Environmental Laboratory Accreditation Coalition (NELAC) was founded. The Coalition was founded in 1987 with the help of ACIL. Marlene eventually organized and ran the Coalition, which was dissolved when the EPA/State focus group's work progressed and presented the first draft of the standard around 1995."



Marlene's love for science, chemistry and education was sparked in 11th grade, when a wonderful chemistry teacher influenced her passion and career in science and in teaching others. Marlene has gone on to create and own two companies that focused on business consulting, computer set-up and environmental sampling and testing, and has several years' experience as the Vice President in the private water utility managing the laboratory. It was not until the early 1990's, during a joint training of ISO 9000 and Guide 25 (ISO 17025), that she started her assessing and auditing career. *"Once I completed the training, I applied to be an RAB auditor. I then worked to maintain by training credits and assessments to remain a RAB registered auditor,"* stated Marlene. Since 1992, Marlene has been the President and CEO of Advanced Systems, Inc., which is a consulting company specializing in quality systems for laboratories and sampling operations.



Once again, Marlene pushed for more, and this time, in the field measurement and sampling arena. She combined all her life experiences as a business owner, consultant and lab person (who was always blamed for bad results) to design and establish the Field Sampling Measurement Organizations (FMSO) accreditation program. Marlene feels strongly that, *"The data we produce in the lab is only as good as the sample that is collected and the sample needs to be representative of the media it was collected from."*

Today, she enjoys teaching others about the complex industry of environmental sample analysis, sample collection, consensus standards development, and laboratory assessment. *"My most noteworthy accomplishment is that I am able to train others on what took me a lifetime to learn."* Marlene Moore is always expecting more from her students and plays an instrumental role in training new assessors, challenging their thought process and leaving them with wanting to learn more from an industry leader.

When no one is watching, Marlene dreams of TNI allowing everyone to vote on the final vote of a standard, and not just the committee members, reaching the highest level on Candy Crush, and spending her days baking and cooking.