

# The Institute Review

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First Quarter 2010



Editor-In-Chief  
Judy Duncan, Oklahoma DEQ

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## Re-Aligning TNI Operations

By Jerry Parr, TNI; Judy Duncan, Oklahoma DEQ; Steve Arms, Florida DOH

When The NELAC Institute (TNI) was formed in 2006, the primary focus was to assimilate the operations of the predecessor organizations, the Institute for National Environmental Laboratory Accreditation (INELA) and the National Environmental Laboratory Accreditation Conference (NELAC). Since that time, TNI's activities have grown into new areas such as the National Environmental Field Activities Program (NEFAP) and the Stationary Source Audit Sample (SASS) program. Some existing programs, like the Proficiency Testing (PT) program, are now even working on activities beyond the original scope of the National Environmental Laboratory Accreditation Program (NELAP). All of these changes and challenges have indicated a need to revisit the governance and structure of the organization.

There has also been some confusion on the use of the term Board with there being more than one (PT Board and the NELAP Board). As a result, the TNI Board of Directors has been working on a plan to realign TNI's program and committee structure to better match actual activities. This plan will ultimately result in a minor change to the TNI Bylaws in Article VI, Section 1 concerning core programs. While some details remain to be finalized, the new structure will have the following elements:

- ◆ TNI's Board of Directors will continue to be responsible for the overall management and direction of TNI's efforts.
- ◆ TNI's Consensus Standards Development Program, NEFAP, NELAP, and Proficiency Testing Program will each be designated as a Core Program, with an Executive Committee with balanced representation of stakeholder interests managing the program.
- ◆ The current NELAP Board will be redefined as a NELAP Accreditation Council, and will continue to be responsible for implementing the laboratory accreditation program.

A draft document posted on the TNI website, *The NELAC Institute: Governance and Operation*, provides more details about the roles of all TNI groups. Over the next few months, the Policy Committee will use this document to draft a proposed revision to the Bylaws of TNI, which will then be adopted by the TNI Board of Directors. The goal is to complete this effort in the May-June timeframe. TNI welcomes input from all members on this effort. Please review the document and provide comments to Jerry Parr at [jerry.parr@nelac-institute.org](mailto:jerry.parr@nelac-institute.org).

## Chicago Meeting Wrap-Up and Onward to DC

By David Friedman, Friedman Consulting and Jerry Parr, TNI

On January 25 - 29, 2010, TNI hosted *The Forum on Laboratory Accreditation* (Forum) in Chicago, Illinois. In conjunction with the Forum, a meeting of the *Environmental Laboratory Advisory Board* (ELAB) (i.e., a U.S. Environmental Protection Agency [EPA] Federal Advisory Committee) was held. The *Illinois Association of Environmental Testing Laboratories* (IAETL) held their annual meeting, as well. The meetings were an opportunity for the TNI Boards and Committees to fine tune the National Environmental Laboratory Accreditation Program (NELAP) that TNI oversees; continue working to establish a National Environmental Field Activities Accreditation Program (NEFAP); prepare for the replacement of the 2003 NELAC Standard with the TNI consensus standards; address issues that have been raised about the NELAP program; and continue working on several issues of concern to the environmental laboratory community with ELAB.

Approximately 190 people participated in the meeting with an additional 30+ attending a workshop on the new TNI consensus standards offered at the end of the conference. During the Forum, a great deal of work was accomplished with a few major issues discussed and worked on during the meeting. Some of these included:

Continued on next page

## Chicago Meeting Wrap-Up and Onward to DC (cont.)

- ◆ Reducing the need for a laboratory to obtain multiple accreditations for essentially identical SW-846 methods;
- ◆ Determining whether requiring laboratories to routinely participate in two proficiency testing studies per year, per method is justified;
- ◆ Ensuring consistency in the quality of the assessments performed by the accrediting bodies;
- ◆ Determining how the requirement in the TNI Standards for the laboratory to have a continuing improvement program will be assessed; and
- ◆ Expanding national accreditation to address field sampling and measurement organizations (e.g., stack testing).

About a year and a half ago, the Environmental Laboratory Advisory Board (ELAB) began working with the US Environmental Protection Agency (EPA), Office of Resource Conservation and Recovery (ORCR) (i.e., formally known as the Office of Solid Waste) to address the problems laboratories face when ORCR issues revisions to the SW-846 methods. Even though some revisions only clarify language or provide the laboratory with more flexibility in how the method is performed, many states require the laboratory to apply for a new accreditation before considering them accredited to perform the revised method with the method number remaining the same, but the revision code (i.e., a letter added to the method number) changed. In an effort to reduce the need for laboratories to obtain these multiple accreditations for essentially identical SW-846 methods, an ELAB work group has been collaborating with ORCR to address the issue in addition to clarifying when revised methods are technical improvements over the original method versus when methods have been improved to encourage the regulated community to use the revised test. Although a policy has been developed to provide definitions and clarity to future method revisions, there still remain some points to be addressed with some ideas already being pursued based on discussions held throughout the Forum week.

For years, there has been debate on what number of proficiency testing (PT) samples should be required by laboratories to conduct per method, per year. TNI formed a subcommittee to further examine this very issue in addition to ELAB following the results of this effort, as they ask questions of EPA needs for PT results, as well. In the EPA's Drinking Water Certification Program, participation in only one PT study is required per year. The real question, however, remains as to the true purpose of PT studies – what question is intended to be answered through these PT studies? Many of the participants at the meeting felt, for a number of reasons, that PT studies are a poor means of assessing laboratory performance. Other discussions during the Forum indicated that EPA's drinking water and solid waste programs initiated their respective laboratory PT studies primarily as a means of determining method performance during routine, broad scale use rather than as a means of assessing laboratory competence. As a result of the information gathered from these discussions, work continues in the TNI Proficiency Testing Expert Committee to reassess the two per year study requirement.

There continue to be conversations about significant differences in the assessments performed by the different Accreditation Bodies (ABs) and their individual assessors, but focused discussions of the apparent problem indicate that despite assessments being different at times those differences do not seem to affect accreditation decisions. Therefore, this apparent lack of consistency is not actually a major problem; however, additional assessor training is needed to ensure the quality of the program.

As the new TNI Standards are slated to be implemented in 2011, workshops will be offered around the country to ensure everyone is prepared. The ISO 17025 standard was used as the foundation for the TNI Standards and a new requirement based on ISO 17025 is that laboratories are required to have a continuing quality improvement program. Someone during the meeting asked how assessors would determine whether a laboratory is meeting the requirement. Examples of the suggestions to what a laboratory could do to demonstrate their continuing improvement program included: use of process mapping to identify areas for improvement; use of control charts; internal audits; and tracking of corrective actions, when deficiencies are found.

TNI is working to expand national environmental accreditation to address field sampling and measurement organizations through the hard work of expert committees and the overall TNI



### *New Directors Elected*

*The NELAC Institute held an election for individuals to serve as members of the TNI Board of Directors for three year terms beginning on April 14, 2010. The individuals listed below were elected by the membership.*

#### NEWLY ELECTED DIRECTORS

##### **Steve Arms**

Florida DOH  
NELAP Accreditation Body

##### **Susan Boutros**

Environmental Associates  
Laboratory

##### **Robert DiRienzo\***

ALS Laboratory Group  
Laboratory

##### **Zonetta English**

Louisville & Jefferson Co. MSD  
Laboratory

##### **Sharon Mertens**

Milwaukee MSD  
Laboratory

##### **Judy Morgan**

Environmental Science Corporation  
Laboratory

##### **Alfredo Sotomayor**

Wisconsin DNR  
Accreditation Body

##### **Elizabeth Turner**

City of Dallas  
Other

*\*nominated to a two-year term to fill a vacancy*



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## Chicago Meeting Wrap-Up and Onward to DC (cont.)

program. Standards for the program have been developed, and a National Environmental Field Activities Program (NEFAP) Board has been established. With a new rule in the Office of Pesticide Programs and Toxics (OPPT) that requires field sampling and measurement organizations working with lead paint to be accredited, an agreement to recognize NEFAP between TNI and EPA OPPT is under development.

The issues highlighted above are only a few of the topics tackled during the Forum, but there were also excellent mentoring sessions offered, training courses available, and workshops all aimed at eliminating confusion about the Standards, increasing the uniformity and quality of assessments, and reducing the burden on laboratories being assessed and accredited. Presentations from the Chicago Forum are on the TNI website at: <http://www.nelac-institute.org/meetings-prev.php>.

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Now, it is time to dust off the snow and get ready for the *Environmental Measurement Symposium* to be held at the Hyatt Regency from August 9 – 13, 2010 in Washington, DC! The combined meeting of the *26th Annual National Environmental Monitoring Conference (NEMC)* and the *Forum on Laboratory Accreditation (Forum)* is in its fourth year and has been hailed as "...a meeting anyone in this business cannot afford to miss..." by many attendees from the past symposiums. As part of the symposium, EPA's Environmental Laboratory Advisory Board will also meet.

As the principal forum for addressing policy and technical issues affecting monitoring in all environmental media (i.e., water, air, soil, and wastes) and across all environmental programs, the focus for the NEMC portion of the meeting is *Science and Its Impact on Public Policy*. Concurrent technical sessions will be held on Monday, Tuesday, Wednesday and Thursday. Wednesday morning will be a general session with very senior level EPA speakers, whom will begin to be announced soon on the NEMC website at <http://www.nemc.us>.

The Forum portion of the meeting will consist of committee meetings, an assessment forum, mentoring sessions and training courses and workshops. Watch for registration details on the new Environmental Measurement Symposium website (<http://www.envmeasym.org>) and be sure to make your reservations soon. This will be one meeting this year that you do not want to miss!!!!

## Workshops on Implementing the New TNI Standards Planned in 2010

By Jerry Parr, TNI

TNI will be organizing a series of Workshops around the country to assist laboratories with making the change from the 2003 NELAC Standard to the new TNI standards. The list below shows the current plan. This list will evolve over the next few months. You can register for these workshops by going to the TNI website.

### Upcoming Workshops

April 29: Taylorsville, UT  
 May 13: Salem, OR  
 May 26: St Petersburg Beach, FL  
 June 17: Dallas, TX  
 July 9: Orange County, CA  
 August 13: Washington, D.C  
 September 1: Topeka, KS  
 September 24: Seattle, WA  
 February 3, 2011: Savannah, GA

### Tentative Workshops

Fall 2010, St. Paul, MN  
 Fall 2010, Las Vegas, NV  
 Fall 2010, San Antonio, TX  
 Fall 2010, Houston, TX  
 Fall 2010, Baton Rouge, LA  
 Fall 2010, Miami, FL  
 Fall 2010, Northern California

### Summary of Workshop

The NELAC Institute (TNI) National Environmental Laboratory Accreditation Program (NELAP) has adopted for use within the program four new accreditation standards:



### Website Improvements Underway

Look for a number of style and functional improvements to the TNI website over the next few months, all designed to allow you to access information easier and quicker.



### New Discussion Board on TNI Standards Established

TNI has developed an on-line "Discussion Board" where questions and comments about the new TNI standard can be posted. Go to <http://www.nelac-institute.org/board/> and click on **2009 TNI Standard Discussion**. Anyone can view the information posted; you have to register to post a comment.



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## Workshops on Implementing the New TNI Standards (cont.)

- ◆ Management and Technical Requirements for Laboratories Performing Environmental Analysis;
- ◆ General Requirements for Accreditation Bodies Accrediting Environmental Laboratories;
- ◆ General Requirements for Environmental Proficiency Test Providers; and
- ◆ General Requirements for an Accreditor of Environmental Proficiency Test Providers.

The new standards will replace the 2003 NELAC Standard and be implemented in 2011. All NELAP-accredited laboratories will need to comply with the new requirements by July 1, 2011. This workshop will review in detail the standard applicable to laboratories, briefly review the other three standards, and present the plan for implementation.

### Workshop Agenda

8:15 a.m.	Welcome, Background and Implementation Schedule
8:45 a.m.	Proficiency Testing Requirements Affecting Laboratories
9:30 a.m.	Break
10:00 a.m.	Quality Systems: General Requirements
12:00 Noon	Lunch Break
1:00 p.m.	Quality Systems: Technical Requirements
2:00 p.m.	Accreditation Body Requirements Affecting Laboratories
2:30 p.m.	Interpretations, Clarifications and Guidance
3:00 p.m.	Questions and Answers

## Options for Satisfying the NELAC Requirement for Continuing Demonstration of Capability (CDOC)

By: *Small Laboratory Advocacy Group*

*This document only represents the opinions of the Small Laboratory Advocacy Group (SLAG), and it does not represent the opinions or policies of TNI.*

A goal of SLAG is to help demystify the NELAC Standard for the small laboratory community. One approach SLAG has identified to achieve this goal is the promotion of common sense, plain-language solutions for NELAC requirements, which are particularly suited to the unique work environment of the small laboratory. The purpose of this document is to summarize some strategies that have been used by members of SLAG to comply with the 2003 NELAC requirement for the analyst Continuing Demonstration of Capability (CDOC) (NELAC 5.5.2.6.c.3). The term, CDOC, is synonymous with the terms: continuing demonstration of method performance; ongoing demonstration of capability; and, ongoing demonstration of proficiency.

The CDOC is a conscious management action that must be taken annually to verify the ability of the analyst to generate data of acceptable accuracy. Approved approaches to comply with this requirement for chemical testing are found in TNI's publication, "Management and Technical Requirements for Laboratories Performing Environmental Analysis, Volume 1, Module 4, Quality Systems for Chemical Testing, Section 1.6.3.2." This document is referenced in each of the strategies presented below. The strategies presented are, more or less, testimonials by members of SLAG that describe their preferred approach for complying with the CDOC requirement.

### Strategy 1

Acceptable performance of a blind sample (Section 1.6.3.2.a): *Our lab has a staff of two, the Water chemist/technical director/quality control officer, which are my titles, and one Environmental Lab Technician. Once initial Demonstration of Capability (DOC) has been achieved for all laboratory staff, continuing Demonstration of Capability (CDOC) for each analyst needs to be maintained annually. This ongoing demonstration is performed by each analyst's acceptable performance of a blind sample (single blind to the analyst). This guideline is met by using the biannual Proficiency Test (PT) samples provided by PT providers. As long as each analyst has satisfactory performance on at least one (1) PT per year per analyte the requirement of CDOC is met under the standard. Released results of the PT studies are added to each analysts training file as proof of CDOC.*

Continued on next page



## Upcoming Meetings of Interest to Members

### Department of Defense Environmental Monitoring and Data Quality Workshop

April 12-16  
Louisville, KY

<http://www.navylabs.navy.mil/DoDChemistMeeting.htm>

### EPA Quality Conference

May 10-14  
Philadelphia, PA

<http://www.epa.gov/quality/2009.htm>

### TCEQ Trade Fair

May 4-6  
Austin, TX

<http://www.tceq.state.tx.us/assistance/events/etfc/etf.html>

### Florida Society of Environmental Analysts

May 26-28  
St. Petersburg Beach, FL

<http://www.fsea.net>

### Water Laboratory Alliance Security Summit

June 16-17  
San Francisco, CA

<https://www.thetestportal.com/wlasummit>



*If you know of any upcoming meetings of interest to environmental laboratory professionals, please contact*

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## Options for Satisfying the CDOC NELAC Requirement (cont.)

Municipal water treatment plant operation staff that perform laboratory analyses that are not used for process control must also comply with the NELAC Standard for CDOC. These individuals are provided with a blind sample (i.e., single blind to the analyst) purchased from a PT provider. Certificates of analysis are maintained in the laboratory. Parameters tested for these purposes include, but are not limited to: pH, Turbidity, Free Chlorine Residual, Color, and Chlorite. All single blind results for each operator are maintained in the laboratory as proof of CDOC. Note: a blind sample prepared in-house can be used to avoid the cost associated with an outside PT provider.

### Strategy 2

Analyze at least four (4) consecutive laboratory control samples with acceptable levels of precision and accuracy. The laboratory shall determine the acceptable limits for precision and accuracy prior to analysis. The laboratory shall tabulate or be able to readily retrieve four (4) consecutive passing laboratory control samples (LCSs) for each method for each analyst each year (Section 1.6.3.2.c): *The challenge with this approach is the tracking of results. One small lab developed the simple excel table below to track an analyst's LCS, as well as PT results. The analyst or lab manager may record results in the table.*

xxxxxx WATER DISTRICT							
Demonstration of Continued Proficiency							
Analyst:							
Year		2009					
Note: Continued Proficiency Demonstration can be either acceptable performance on PT sample or four consecutive laboratory control samples with acceptable results							

Parameter	ERA PT Performance		Laboratory Control Samples				
	Study	Date	LCS ID	test dates			
Ammonia, ISE	WP 167	12/29/08					
Ammonia, titration	WP 167	01/20/09					
BOD							
BOD, carbanaceous							
Chromium, hexavalent	WP 167	01/05/09					
COD							
Cyanide	WP 167	12/26/08					
Fecal Coliform	WP 172	05/19/09					
Fluoride	WP 167	01/08/09					
Hardness	WP 167	01/15/09					
HEM	WP 172	05/15/09					
HEM, non-polar			Env. Exp. 3025	04/27/09	05/21/09	06/05/09	07/10/09
Nitrate	WP 167	12/29/09					
pH							

### Strategy 3

A documented process of analyst review using QC samples (Section 1.6.3.2.d): *In our small laboratory, the responsibilities of management and analyst typically overlap or, in some cases, are indistinguishable. In cases where management has a documented, routine review of LCS results for an analyst, the analyst's CDOC inherently becomes part of the laboratory's routine review process. The process of our manager initialing test runs, which indicates acceptable precision and accuracy QC results, is considered adequate documentation of the review. The procedure for the CDOC is documented in our lab's Quality Manual, and documentation is also updated annually in the analyst's training file.*



## Updates on TNI Policies and Standard Operating Procedures (SOPs)

- ◆ The Policy Committee has approved a policy and SOP on the use of guidance documents.
- ◆ The Policy Committee is working on a general Complaint Procedure and expects to have that SOP completed within the next month.
- ◆ The Consensus Standards Development Program Board has revised SOP 2-100 to make clear that the process of implementing a tentative interim amendment (TIA) to the standard would not re-open the rest of the standard as a voting draft and SOP 2-101 to clarify issues surrounding committee membership.
- ◆ Policy Committee has also approved policies on membership Code of Ethics and ownership of TNI materials.
- ◆ The Consensus Standards Development Program Board has also revised SOP 2-101 to clarify certain items regarding membership on TNI expert committees.

The policies and SOPs can all be found on the TNI website at: <http://www.nelac-institute.org/policy.php>.



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## EPA's Environmental Response Laboratory Network Looking for NELAC Laboratories

By Alan Antley, CSC

The Environmental Protection Agency (EPA) would like to invite all accredited laboratories to participate in the Environmental Response Laboratory Network (ERLN).

EPA recently launched an open solicitation to commercial and public laboratories for membership in the ERLN. The ERLN program is based on a quality management system consistent with NELAC and ISO 17025 standards, which is ideal for TNI accredited laboratories. TNI laboratories will play an invaluable role in the network given their extensive capability and capacity to analyze contaminants in environmental media.

The ERLN is an all hazards/all environmental media network of laboratories with the capability and capacity to analyze toxic industrial chemicals, chemical warfare agents, and other chemical, biological, and radiological contaminants in multiple matrices. Though originally designed to address catastrophic events, network laboratories may also be used to support smaller events.

Benefits to member laboratories include:

- ◆ the opportunity to participate in vital national homeland security and response efforts;
- ◆ reimbursements from EPA for eligible services during routine and large scale events;
- ◆ membership in the Water Laboratory Alliance (WLA), for laboratories with drinking water capability; and
- ◆ listing in EPA's Compendium of Environmental Testing Laboratories, a secure Web-based system that includes the analytical capabilities of over 500 environmental laboratories available to EPA, Federal, State, and local emergency responders.

Please visit the ERLN website at [www.epa.gov/erln](http://www.epa.gov/erln) for program information, fact sheets, or to obtain a membership application. The current solicitation is posted through June 25, 2010.

For general inquiries related to the program, please contact the ERLN Helpdesk at (703) 818-4200 or [erlnhelpdesk@fedcsc.com](mailto:erlnhelpdesk@fedcsc.com).

## U.S. Environmental Protection Agency Water Laboratory Alliance Program — Creating a Powerful Network with Enhanced Analytical Capability

By Pamela Bernard (USEPA)

The environmental laboratory community plays a vital role in ensuring that drinking water systems are delivering water that complies with state and federal regulations. In addition to their regular role in ensuring compliance and providing validated data required to ensure human health, environmental laboratories also are called upon when a system is suspected of having a contamination incident.

In the event of a contamination incident involving chemical, biological, or radiochemical contaminants, an individual environmental laboratory may find that it lacks the capacity for the large volume of tests needed in a short time period; or a laboratory may lack the analytical capabilities for the analyte or class of analytes that are suspected of causing the contamination. Recognizing these needs in the laboratory community and in light of its mission to *protect human health and the environment*, the U.S. Environmental Protection Agency (EPA) continually develops tools and resources to support the laboratory community.

In response to Homeland Security Presidential Directive 9, issued in January 2004, EPA proposed and initiated development of the Water Laboratory Alliance (WLA). The WLA is designed to leverage existing laboratory capability and capacity, and to fill gaps in laboratory preparedness to provide analytical support to natural, intentional, and unintentional drinking water contamination incidents involving biological, chemical, or radiochemical contaminants. The WLA includes environmental, public health, utility, and select commercial laboratories. In addition to supporting response to contamination incidents, the WLA also ensures that the Water Sector (e.g. drinking water utilities,



### *Future Plans for the Water Laboratory Alliance (WLA)*

*EPA will continue working with laboratories and other Water Sector stakeholders to expand and enhance the WLA. Activities will include refining the WLA-RP, developing methods and tools, and developing a laboratory training curriculum.*

*EPA also is planning a West Coast WLA Security Summit for June 16-17, 2010 in San Francisco. For background and details about registration, visit <https://www.thetestportal.com/wlasummit>.*



### **TNI Small Laboratory Advocate**

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## U.S. EPA Water Laboratory Alliance Program (cont.)

public health and environmental laboratories, first responders, and federal, state, and local government agencies) has access to qualified laboratories with the analytical capability and capacity to support characterization and remediation.

EPA formally launched the WLA at the 2009 WLA Security Summit held in Philadelphia, Pennsylvania. The launch of the WLA was coordinated with the second-phase rollout of the EPA Environmental Response Laboratory Network (ERLN). The WLA is the water media component of ERLN; ERLN covers all environmental matrices, including air and soil. ERLN is one of five national laboratory networks within the Integrated Consortium of Laboratory Networks (ICLN), which also includes the Food Emergency Response Network (FERN), National Plant Diagnostic Network (NPDN), Laboratory Response Network (LRN), and National Animal Health Laboratory Network (NAHLN).

### Benefits of WLA Membership for Environmental Laboratories

For environmental laboratories, becoming a member of the WLA provides a wide range of benefits. Among them are the following:

- ◆ Improved preparedness to provide analytical support for emergency response;
- ◆ Improved communications with peer laboratories to help address emerging analytical capability and capacity, laboratory security, or laboratory operational challenges;
- ◆ Partnership with neighboring laboratories to support surge capacity needs;
- ◆ Knowledge of neighboring laboratory analytical capability and available personnel;
- ◆ Analytical support to address analyses performed by a limited number of laboratories (e.g., select agent pathogens, chemical warfare agents); and
- ◆ Coordination and standardization of data reporting systems and analytical methods.

In addition, WLA member laboratories receive priority access to planned EPA water security-related exercises and training opportunities. WLA laboratories will be positioned to benefit from technology transfer opportunities involving EPA and other federal agencies. In the future, laboratories will receive access to EPA-provided Proficiency Testing (PT) samples for unregulated contaminants of interest to the Water Sector.

### WLA Laboratory Membership Criteria and Enrollment Process

State, utility, public health, environmental, and commercial laboratories may become members of the WLA by applying to be part of ERLN. For detailed information on becoming a member of the ERLN/WLA, go to [www.epa.gov/erln/join.html](http://www.epa.gov/erln/join.html). After applying for ERLN membership, laboratories will be notified of acceptance within 60 days of submitting an application. In addition to completing and submitting the ERLN/WLA application, laboratories must register in the EPA Laboratory Compendium (go to [www.epa.gov/compendium](http://www.epa.gov/compendium)). There are no fees to apply or to become a member of the WLA, or to register in the Compendium. The deadline for laboratories to apply for ERLN (and WLA) membership is June 25, 2010.

The most critical attribute a laboratory must possess and maintain to become an ERLN/WLA member is accreditation or an established and well documented quality system. Accepted accreditation includes accreditation through TNI or an International Organization for Standardization (ISO) 17025 equivalent accreditation program.

### WLA Full-Scale Exercises and WLA-Response Plan

The foundation for the WLA is the WLA Response Plan (WLA-RP), which established a comprehensive approach for coordinated laboratory response to water contamination incidents. EPA organized a multi-jurisdiction full-scale exercise (FSE) in late 2009 to test the WLA-RP. This FSE included the analysis of more than 100 multi-media samples spiked with chemical warfare agents (CWA), CWA degradation products, select agents, and toxic industrial chemicals. FSE participants included 20 laboratories representing 12 states, a drinking water utility, multiple EPA Regions, EPA Office of Ground Water and Drinking Water, EPA Office of Emergency Management, the Centers for Disease Control and Prevention (CDC), Federal Bureau of Investigation (FBI), state environmental and public



## Upcoming PT Survey for Accreditation Bodies

By Judy Morgan,  
Environmental Science  
Corporation

*This Spring the PT Committee will release an electronic survey to NELAP and non-NELAP ABs, and any other state or federal program that might use proficiency testing to gain further insight into how these agencies use PT and how they structure and manage their PT program(s). The survey is intended to provide the information needed for the PT Committee to establish the purpose of proficiency testing for the accreditation of environmental testing laboratories and to determine if the existing NELAP / TNI PT program meets that purpose, and if it does not, how the program should be changed. The survey notice will be sent to the agencies via email in April and the PT committee hopes to have all responses back by mid-May in order to have sufficient time to tally the results and prepare for presentation at the Environmental Measurement Symposium in Washington DC this summer.*

*For additional information or questions, please contact the survey coordinator, Judy Morgan at 615-347-5418 or [jmorgan@envsci.com](mailto:jmorgan@envsci.com) or the PT Expert Committee Chairman, Kirstin McCracken at 802-923-1019 or [KirstinL.McCracken@testamericainc.com](mailto:KirstinL.McCracken@testamericainc.com).*



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URL: <http://www.nelac-institute.org>

## U.S. EPA Water Laboratory Alliance Program (cont.)

health laboratories, law enforcement, and first responders. Components of the plan evaluated during the FSE included initial response, communication and coordination, sampling and analysis, and data reporting.

EPA is planning a second FSE in 2010 to further refine the WLA-RP and engage its partners in the WLA.

### EPA Tools and Resources Supporting the WLA

In addition to further refining and testing the WLA-RP, EPA is providing support for the WLA that helps foster data integrity and enhance laboratory efficiency. This support includes chemical method development and validation. For example, EPA headquarters is collaborating with the EPA Region 5 laboratory in Chicago, Illinois to evaluate a liquid chromatography-mass spectrometry (LC-MS) protocol in order to develop a direct injection rapid screening method for several unregulated contaminants that could threaten the Water Sector. EPA also is working with CDC to develop quality control criteria for the ultrafiltration portion of the Laboratory Response Network (LRN) *Filter Concentration for the Detection of Bioterrorism Threat Agents in Potable Water Sample* protocol. This protocol enables concentration of select agents and toxins from 10-100 L water samples; these criteria will enhance capacity for select agent analyses in water and help ensure the Water Sector's ability to respond to potential drinking water contamination events. To address non-select agent biological threats, EPA headquarters is working with the EPA National Homeland Security Research Center (NHSRC) on single-laboratory verification studies for *E. coli* O157:H7, *Salmonella Typhi*, non-typhoidal *Salmonella*, and *Vibrio cholerae* O1 and O139. EPA anticipates beginning multi-laboratory validation of the *E. coli* O157:H7 and non-typhoidal *Salmonella* methods by FY 2011.

EPA also is developing tools, resources, and training that will benefit WLA member laboratories. Tools include the Water Contaminant Information Tool (WCIT) and the National Environmental Methods Index for Chemical, Biological, and Radiological Methods (NEMI-CBR), password-protected online resources that support preparation for and response to water contamination incidents. EPA also has developed multiple fact sheets, including *Reimbursement Tips for Water Sector Emergency Response and Recovery*, to help utilities and laboratories recover costs related to contamination response. To help WLA laboratories with sampling activities, EPA developed the *Sampling Guidance for Unknown Contaminants in Drinking Water* and laboratory training on chain of custody and evidence preservation techniques. For additional information on these resources, please see <http://cfpub.epa.gov/safewater/watersecurity/wla.cfm> or contact [WLA@epa.gov](mailto:WLA@epa.gov) with any questions.

### Future Plans for the WLA

EPA will continue working with laboratories and other Water Sector stakeholders to expand and enhance the WLA. Activities will include refining the WLA-RP, developing methods and tools, and developing a laboratory training curriculum. EPA also is planning a West Coast WLA Security Summit for June 16 and 17 in San Francisco (<https://www.thetestportal.com/wlasummit>).



## TNI Signs Memorandum of Understanding with EPA

TNI and EPA's Office of Pollution Prevention and Toxics (OPPT) have signed a Memorandum of Understanding (MOU) to formally recognize that TNI's voluntary National Environmental Field Activities Program (NEFAP) meets the goals and standards of EPA's National Lead Laboratory Accreditation Program (NLLAP) and EPA's Laboratory Quality System Requirements, Revision 3.0 (LQSR 3.0). The NEFAP includes procedures to evaluate and recognize accreditation bodies (ABs) and standards to accredit field sampling and measurement organizations (FSMOs) to conduct environmental sampling and analyses. The LQSR 3.0 provides the protocols, criteria, and minimum performance standards for accrediting laboratories as qualified to test substances (i.e., paint films [chips], soil, and dust) for lead content. This MOU also establishes that TNI, through implementation of its voluntary NEFAP, is qualified to evaluate, recognize, and perform oversight of the FSMO ABs. Finally, this MOU establishes that TNI's FSMO accreditation standards are consistent with EPA's LQSR 3.0, and will be used by TNI-recognized FSMO ABs to assess and accredit FSMOs as qualified to perform analyses consistent for lead in paint films, dust and soil samples collected, and measured on-site using portable field testing technologies.




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## Member Spotlight: Michael Shepherd

By Kirstin McCracken, TestAmerica

Meet TNI Member Michael Shepherd. Mr. Shepherd owns Shepherd Technical Services in Austin, Texas, a consulting firm that specializes in 3<sup>rd</sup> party assessments for the State of Texas, the Department of Defense (DoD) ELAP Program, and data validation. His firm also works with environmental laboratories and municipal wastewater and water supply operations located across the country to facilitate operational improvements, assist with internal audits, and help them prepare for and maintain NELAP accreditation. Let's get to know more about him and his thoughts on NELAP/TNI.



Mr. Shepherd holds a Bachelor of Science from Baylor University and a Doctorate in Chemistry from the University of Texas at Austin. He began his career in the environmental GC/MS testing laboratory at Radian, an engineering company where he worked as a staff scientist. He spent the next fourteen years at Radian, which subsequently sold the laboratory operation to Severn Trent Laboratories (STL). He steadily worked his way up the ladder to become Technical Director. It was from this position that he "retired" from our industry for a short while to pursue a career as QC Manager for Cerilliant, a company that manufactures standards for environmental testing as well as pharmaceutical testing and drugs of abuse. In 2002, Michael left Cerilliant to start Shepherd Technical Services, which he now runs with his wife, Mei Beth. The two are active participants in TNI. Mei Beth now serves on the Information Technology committee and Michael has been attending NELAP/TNI meetings since the early '90's.

I asked Michael how NELAP/TNI standards and accreditation influenced the work he has done over the years and he told me that the accreditation standards drive his consulting business. Before the State of Texas became a NELAP accrediting body (AB), certification requirements were an "alien" concept to many environmental testing laboratories in the state. Although the state did have a certification program for drinking water, the program was limited in scope. So, when the gauntlet came down and NELAP accreditation became a requirement, many labs turned to experienced consultants, such as Michael, to help them through the accreditation process. He said that in his experience many labs initially viewed the accreditation process as daunting and without value. You see, Texas is a BIG state and many testing facilities tend to be geographically isolated such that opportunities for interaction, networking, or attendance at industry conferences are limited. Some of these labs were not familiar with NELAP and they had no reason to be. As the old saying goes — if it ain't broke — don't fix it! Well, as Jerry would say, the State of Texas was fixin' to become a NELAP AB and that meant change — and as any laboratory that has been through the NELAP process knows, change is not always easy. Why not use a consultant like Michael to help navigate the process? And that is precisely what many of these labs did. Having been through this process in Texas, Mr. Shepherd looks forward to assisting labs in other states become accredited as more ABs come on line.

Michael said he thinks the best way to bring laboratories up to speed with the accreditation requirements is to encourage the laboratories to participate in the process. Attend a meeting, participate in committee work — he says you have to see how the process works to gain the full value of the program. With the consensus process, we all have a voice and it is through this process that we work together to build the program. He also told me that he thinks the interaction between the laboratory and the AB is essential to the program's success. The accreditation process provides mutual benefit. Consistent interpretation and application of the standards by NELAP ABs will ensure consistent implementation of the standard by accredited labs and consistent implementation of the standard by accredited laboratories helps assure the objectives of the program are met. Well said.

What is Michael most proud of at this point in his career? Starting his own business, now almost 10 years strong, and getting stronger every day. He also said the people that he has met and worked with over the years — really bright sharp people, many of whom he considers friends and that he gets to see every six months at the face to face TNI meetings — all contribute to his success. So, now that you have gotten to know Michael a bit — don't be shy, shout out a hello! Just be advised that you might not find him if the meeting locale is in a cooler climate. Mr. Shepherd is all about travel so long as the travel is to places warm and sunny — or maybe to Paris, France — not Paris, Texas!



### TNI MISSION

*The NELAC Institute is a 501(c) 3 non-profit organization whose mission is to foster the generation of environmental data of known and documented quality through an open, inclusive, and transparent process that is responsive to the needs of the community.*



### VISION

*All entities generating environmental data in the United States will be accredited to consensus national standards.*




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