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Tools and Resources for Implementing the 2016 TNI Standard

(Navigating the TNI Website)

Note: This presentation is available as a free webinar at:
https://nelac-institute.org/content/load_eds.php?id=224

Standards Development and Implementation in NELAP

Expert Committees develop language thru consensus process

LASEC reviews for suitability for NELAP

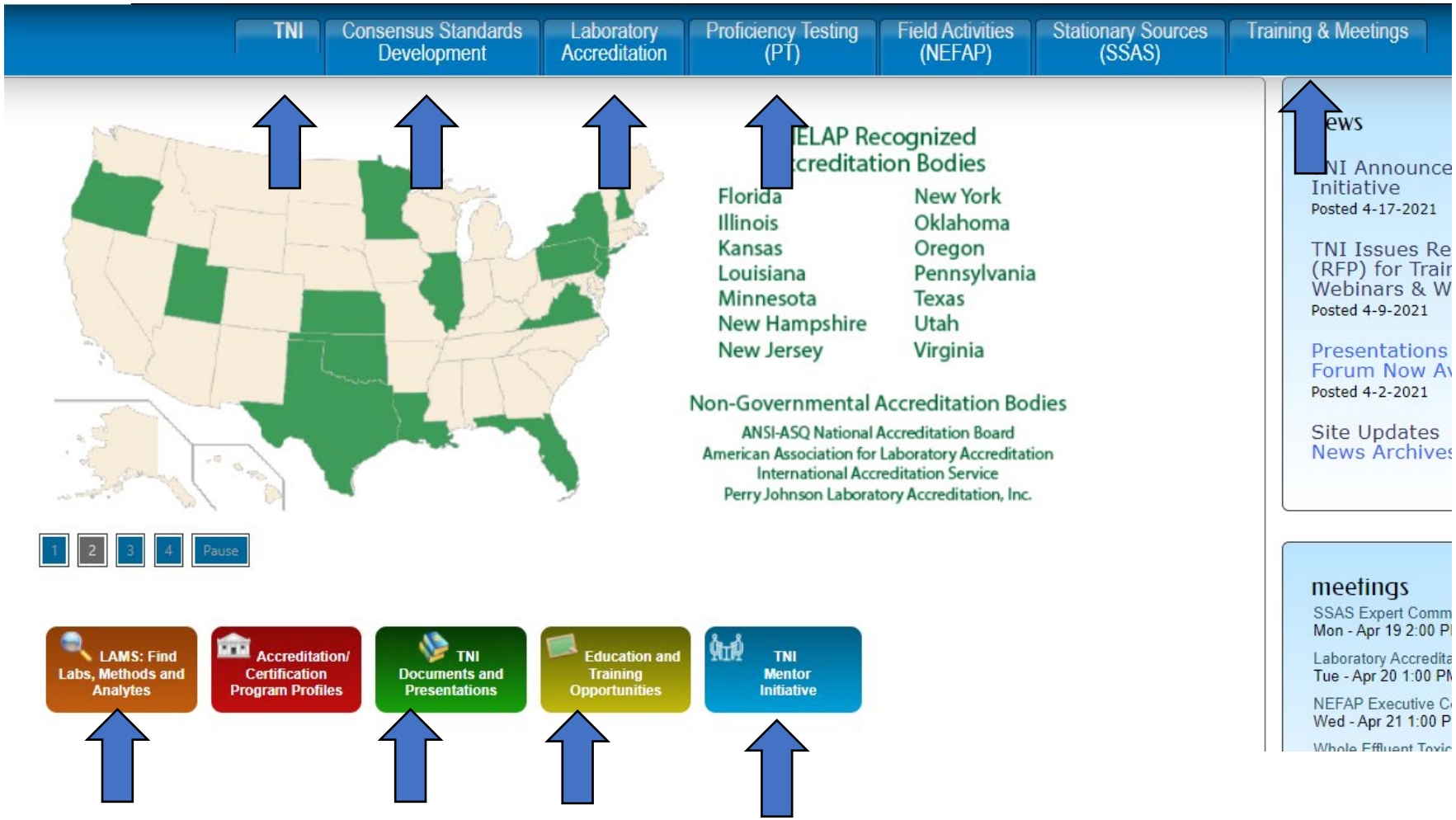
TNI develops “tools” to assist labs and ABs

NELAP AC adopts standard into NELAP with effective date

“Tools and Resources”

- Training courses
- Documents
  - Standards
  - Guidance
  - Checklists
  - Templates
  - FoPT Tables
- Other help
  - LAMS
  - Standard Interpretation Requests
  - PT Providers
  - Consultants
  - Presentations
  - Small Laboratory Advocate
  - Mentor Initiative

Help with the 2016 TNI Standard



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TNI | Consensus Standards Development | Laboratory Accreditation | Proficiency Testing (PT) | Field Activities (NEFAP) | Stationary Sources (SSAS) | Training & Meetings

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News Archives

Item Posted	Date Posted
TNI Issues Request for Proposal (RFP) for Training Courses - Webinars & Webcasts	4-9-2021
Presentations from 2021 TNI Forum Now Available	4-2-2021
Nominations Open for NEFAP Executive Committee until March 15, 2021	3-2-2021
Comments Invited on Recommended Changes to Volume 1 of the TNI Field Standards - Webinar to be Held February 19, 2021 at 1pm Eastern	2-1-2021
Comment Invited on Recommended Changes to the SSAS Program Standards - Webinar to be held February 16, 2021 at 2pm Eastern	2-1-2021
Forum on Environmental Accreditation PORTAL Now Open	1-24-2021
TNI Board of Directors elections begins	1-18-2021
Comment Period Extended for Draft Standard V2M1	1-13-2021
Request for Comments on the Draft Standard V1M3 Management and Technical Requirements for Laboratories Performing Environmental Analysis; Quality Systems for Asbestos Testing	12-22-2020
November 2020 TNI Newsletter Now Available	12-1-2020
Request for Comments on the Draft Standard V2M1 General Requirements for Accreditation Bodies Accrediting Environmental Laboratories	12-1-2020
TNI White paper show the Value of Accreditation to the TNI Standard	11-18-2020
Comment Invited on Changes to Microbiology Testing Standard, Webinar to be held December 1	11-18-2020
Registration for 2021 Forum on Environmental Accreditation Now Open	11-9-2020
Nominations for 2021 Board of Directors	11-1-2020
TNI moves the 2021 Forum to a virtual event	10-20-2020
Request for Speakers for 2021 TNI Winter Meeting	10-4-2020
Comment Invited on Changes to Quality Systems General Requirements Standard, Webinar to be held September 25	9-8-2020
Withdrawal of LA DOH from NELAP	9-2-2020
Fields of Proficiency Testing (FoPT) Table Updates - Effective Oct 2020	7-8-2020
TNI Offers Supports for California Laboratories after Adoption of a New Accreditation Program	6-4-2020
Comment Invited on Changes to Radiochemistry Standard, Webinar to be held June 12	5-27-2020
Response-to-Comments Posted for Asbestos	5-22-2020

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TNI White paper show the Value of Accreditation to the TNI Standard

Date Posted: 11-18-2020

TNI, after extensive research has concluded

"There is no doubt that accreditation to the TNI standard makes a difference in the quality of the data and in laboratory performance."

As stated in this White Paper, the "experiences of the laboratories that participated in this effort led TNI to believe that we need to redefine what we mean by "data quality". Providing quality data is much more than getting the right answer and being able to reconstruct the result. Quality includes confidence in the data as well as better laboratory operations. The laboratory QMS in and of itself does not generate better quality data, but if followed, ensures that the data will be of documented quality and that the laboratory management is committed to fostering a culture of quality. Laboratories accredited to the TNI standard have documented significant improvements which include efficiency, additional capability, and quicker reports. Traceability, training, sample tracking, and documentation all contribute to better decisions and contribute to laboratories with TNI accreditation having more confidence in their data."

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Symbols

Download JPEG (68K)
Download PDF (332K)
Download EPS (1.1M)

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TNI | Consensus Standards Development | ...tory Accreditation | Proficiency Testing (PT) | Field Activities (NEFAP) | Stationa (S

Standards

- Laboratory Accreditation (TNI 2009) Standards
- Laboratory Accreditation (TNI 2016) Standards
- 2003 NELAC Standard
- Summary of Changes Between 2003, 2009, and 2016 TNI Standards
- Field Activities Standards
- Stationary Source Audit Sample Program Standards
- Latest Standards Development Activity

Standard Interpretations and Guidance

- Laboratory Accreditation (TNI) Standards
- NELAC 2003 Standard
- Field Activities Standards
- Request an Interpretation for TNI 2009 or 2016
- Request an Interpretation for Field Activities

- Subscribe to be notified when new Interpretations are posted

Expert Committees

The following committees develop consensus standards for TNI Programs:

- Asbestos Expert Committee
- Chemistry Expert Committee
- Field Activities Committee
- Laboratory Accreditation Body Committee
- Laboratory Proficiency Testing Committee
- Laboratory Quality Systems
- Microbiology Expert Committee
- Radiochemistry Expert Committee
- Stationary Source Audit Sample Committee
- Whole Effluent Toxicity Testing Expert Committee

Resources

- How the standards development process works (PDF)
- Related Policies & Standard Operating Procedures

Management & Oversight

- Executive Committee

2016 TNI Standard

Volume 1: Management and Technical Requirements for Laboratories Performing Environmental Analysis (2016)

Single Use version: $250 (Non-Member Price)

Add to cart

Site License Subscription version (available to members only):

Contact us for pricing

Volume 2: General Requirements for Accreditation Bodies Accrediting Environmental Laboratories (2016)

Single Use version: $175 (Non-Member Price)

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Site License Subscription version (available to members only):

Contact us for pricing

Volume 3: General Requirements for Environmental Proficiency Test Providers (2016)

Single Use version: $120 (Non-Member Price)

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Network Use version: $120 (Non-Member Price)

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Volume 4: General Requirements for an Accreditor of Environmental Proficiency Test Providers (2016)

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Network Use version: $120 (Non-Member Price)

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Request an Interpretation

Email

Name

First Last

Email

Standard *

- ○ 2003 NELAC Standard
- ○ 2009 TNI Standard
- ○ 2016 TNI Standard

Please enter the volume, module, and section reference of the standard, as applicable, and then fully explain the problem in the text field below.

Volume and Module (eg. V1M2) *

Section (eg. C.4.1.7.4) *

Describe the problem: *

Requests cannot be used to resolve a dispute between and lab and an AB

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TNI | Consensus Standards Development | Laboratory Accreditation | ...Testing (PT) | Field Activities (NEFAP) | Stationa (S

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Lab Resources

- Search for TNI-accredited Laboratories
- Become a TNI-accredited Laboratory
- Available Training Courses
- Quality Manual Template
- SOP Templates
- Small Laboratory Handbook
- Logos & Symbols

Help with Accreditation

- Help on the 2009 TNI Standard (Quality Systems Checklist)
- Help on the 2016 TNI Standard (Quality Systems Checklist)
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Accreditation Body Resources

- List of NELAP-recognized Accreditation Bodies
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- Non-Governmental Accreditation Body (NGAB) Working Group
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Standard Interpretations, Implementation Guidance, and Guidance Documents

TNI has established an avenue for resolution of questions submitted electronically on interpretation of the 2003 NELAC and 2009 and 2016 TNI Standards. The method for submittal is to complete an on-line form (available here). Use of this entry form ensures that a question is automatically accepted, cataloged and emailed to the NELAP Accreditation Council Chair, the LAS Executive Committee Chair and the TNI Program Administrator for review. A consensus of these three individuals shall determine who oversees the final disposition of the question. Timelines are defined for the NELAP Accreditation Council Chair and LAS Executive Committee Chair to ensure a timely response to the question. Publication of the consensus resolution is then made to the affected parties via email and on this page. These interpretations are organized by each Standard (2003, 2009, and 2016) and then by section number.

Some of the older interpretations are still applicable to the 2016 Standard; others are not. TNI has prepared a consolidated document with all interpretations that relate to Volume 1 of the 2016 standard.

Some SIR submissions are valid questions but do not meet the criteria to be a SIR. Those are being treated as clarification requests and are now addressed with answers termed "Implementation Guidance" that are posted below.

Three Guidance Documents relating to Proficiency Testing Reporting Limits, Instrument Calibration, and Limit of Detection and Limit of Quantitation have been developed to assist with implementation of the 2016 Standard.

Receive an e-mail notification when updates are posted to this page!
Click here to subscribe.

Open All Close All

- Combined Interpretations of the 2003, 2009, and 2016 Standards that apply to Volume 1 of the 2016 TNI Standard
- 2016 Standard Interpretations
- 2009 Standard Interpretations
- 2003 Standard Interpretations
- Implementation Guidance
- Guidance Documents

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Combined Interpretations of the 2003, 2009, and 2016 Standards that apply to Volume 1 of the 2016 TNI Standard

− MODULE 1: PROFICIENCY TESTING REQUIREMENTS

Click here to view all of this module's sections on one page, or click a link below to view an individual section.

Section	Subject
4.1	General Requirements
4.2	Sample Handling, Preparation and Analysis Requirements
4.3	Reporting Requirements
5.1-5.2	Initial and Continuing Accreditation
	Analysis Date
Module 4 - 1.5.4	Evaluation of Selectivity
Volume 3 - 5.4.3	Supplemental PT Studies
Volume 3, 5.9.3	Evaluation of Individual Participant Results

+ MODULE 2: QUALITY SYSTEM GENERAL REQUIREMENTS

+ MODULE 4: CHEMISTRY TECHNICAL REQUIREMENTS

+ MODULE 5: MICROBIOLOGY TECHNICAL REQUIREMENTS

+ MODULE 6: RADIOCHEMICAL TECHNICAL REQUIREMENTS

SIR Response: M1, 4.2

Question: Section 2.5 of the 2003 NELAC standard states "When analyzing a PT sample, a laboratory shall employ the same calibration, laboratory quality control and acceptance criteria, sequence of analytical steps, number of replicates and other procedures as uses when analyzing routine samples." Questions 3 through 11 of the NELAC checklist contain additional details for this section of the NELAC standard. Are these statements an official interpretation? A laboratory analyzes the PT provider companion quality control sample with the unknown PT sample. The laboratory includes all routine QC, such as blanks, LCS, etc, in the batch. In addition to using the routine QC criteria, the companion QC sample is used to determine the acceptability of the batch containing the PT. This is not a routine practice of the laboratory. Is this considered a finding versus Section 2.5 of the NELAC standard?

TNI Response: It is the consensus of the PT Committee that Questions 3-11 are appropriate interpretation of the requirements specified in Section 2.5 of the 2003 NELAC Standard. 2) It is the consensus of the PT Committee that the scenario described in the problem is a finding against Section 2.5 of the NELAC Standard. The 2009 standard (V2) contains explicit language concerning the routine analysis of PT samples. The 2016 standard (V2) removed most of the language in the 2009 standard, but Section 4.2.2 of V1M1states "PT samples shall be analyzed in accordance with the laboratory's established standard operating procedures (SOPs) using the same quality control (QC), acceptance criteria and staff as used for the analysis of routine environmental samples."

Implementation Guidance

Module	Subject	Last Updated
Chemistry	New Calibration Curve Overwritten with Old	9-8-2019
Microbiology	Chlorine Residual	9-8-2019
Microbiology	Microbiology Surrogate Recovery Failure	4-17-2019
Microbiology	Sample Receipt	3-9-2015
Proficiency Testing	Second PT Failure	9-8-2019
Quality Systems	Conflict of Interest	3-9-2015
Quality Systems	Control of Records	3-9-2015

Plus many, many more

Implementation Guidance

Module: Microbiology

Subject: Sample Receipt	
Question 1	**Does the temperature of samples at the time of sample acceptance apply to presence/absence tests such as SM 9223-a chromogenic substrate test? The LOD is 1cfu and if the result of a test is present, it does not matter whether there is one or thousands of bacteria present.** SM 9223 (B) can also be run under quantitative most probable number and multiple well technologies and not just for presence-absence purposes. If compliance with US EPA's Clean Water Act is needed, the Microbiology sample arrival temperature needs to be <10 degrees Celsius. Thus, the temperature of the incoming Microbiology samples must be checked, regardless of the test method to be used. Even if regulatory compliance is not required, the laboratory should consider the condition of any and all received samples, and it should question the validity of any samples where the arrival times, temperatures, and preservations are such that the sample as received at the laboratory may not be representative of the sample as collected in the field.

Guidance Documents

- Proficiency Testing Reporting Limit (PTRL)
  - Only affects labs that do organics where the analyte may not be present
  - Requires lab to be able to measure to a specified concentration
- Detection and Quantitation
  - Includes guidance on EPA MDL Procedure
- Instrument Calibration
  - Includes examples of linear range, dropping calibration points, and calculation of relative standard error

Example of Guidance

Initial Verification of the LOQ

1.5.2.2.a) Each selected LOQ shall be verified through analysis of initial verification samples. An initial verification sample consists of a spiked matrix blank at or below the selected LOQ.

Note that the spiking level may be at or below the LOQ. In general, and assuming that the performance of the method is adequate, it is recommended to spike at a concentration half that of the LOQ. The reason for this is that the LOQ verification samples may also be used to calculate the MDL. Spiking at a concentration a little below the LOQ makes it more likely that the requirement for the MDL to be at least three times lower than the LOQ will be met. In some cases, if the laboratory is seeking the lowest possible LOQ, spiking at half the LOQ concentration may not be possible.

Subscribe to SIR

TNI: Standard Interpretation Notification • 10/13/2020, 8:39 PM TNI

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Subject **TNI: Standard Interpretation Notification** 10/13/2020, 8:39

To Jerry Parr

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You are receiving this e-mail because you requested to be notified when new Standard Interpretations are posted to the TNI website.

The following new Standard Interpretations are now available:

Standard and Module	Subject	Link to SIR
TNI 2016, V1M2	Laboratory Copy of TNI Standard	Link
TNI 2016, V1M5	Variability/Reproducibility of Quanti-Tray	Link
TNI 2009, V1M2	Accuracy Checks of Non-Class A Glassware	Link

The text of these and other Standard Interpretations are available on the NELAP and TNI Standards Interpretation page on the TNI website. Click here to go there now.

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TNI | Consensus Standards Development | Laboratory Accreditation | ...Testing (PT) | Field Activities (NEFAP) | Stationa (S

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- Laboratory Proficiency Testing Committee
- Laboratory Quality Systems
- Microbiology Expert Committee
- Radiochemistry Expert Committee
- Whole Effluent Toxicity Testing Expert Committee

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Quality Manual Template

The new TNI Quality Manual Template is a tool designed for laboratories to help prepare a Quality Manual in compliance with the 2009 or 2016 TNI Standard. The prefabricated sections of the Quality Manual follow the ISO/IEC 17025 outline, but are completely fluid so that you can put sections, examples, links or references anywhere. The Template includes helpful notes, examples and text that can be edited to match each laboratory's particular circumstances. It can be used by a laboratory to create a Quality Manual from scratch or ideas and sections can be used to update a current Quality Manual.

Note: A revised version of this template replaced the previous version on November 17, 2017. The primary change was combining the multiple files into one file to make the template easier to edit and replacing the reference to the 2009 standard to the 2016 standard. Since both the 2009 and 2016 standards have the same organization and very comparable content, anyone who purchased the 2009 version does not need to obtain the 2016 version.

View sample pages from the Quality Manual Template:

Section 3 - Introduction and Scope
Section 5 - Quality Systems
Section 27 - Quality Assurance for Environmental Testing

Quality Manual Template Example

4.4 Review of Contracts

The <Laboratory Director? Client Services Manager? Project Manager? Quality Manager? Technical Managers? Who?> determines if the laboratory has the necessary accreditations, resources, including schedule, equipment, deliverables, and personnel to meet the work request. <How is the review documented?>

The <Who?> informs the client of the results of the review if it indicates any potential conflict, deficiency, lack of accreditation, or inability of the lab to the complete the work satisfactorily.

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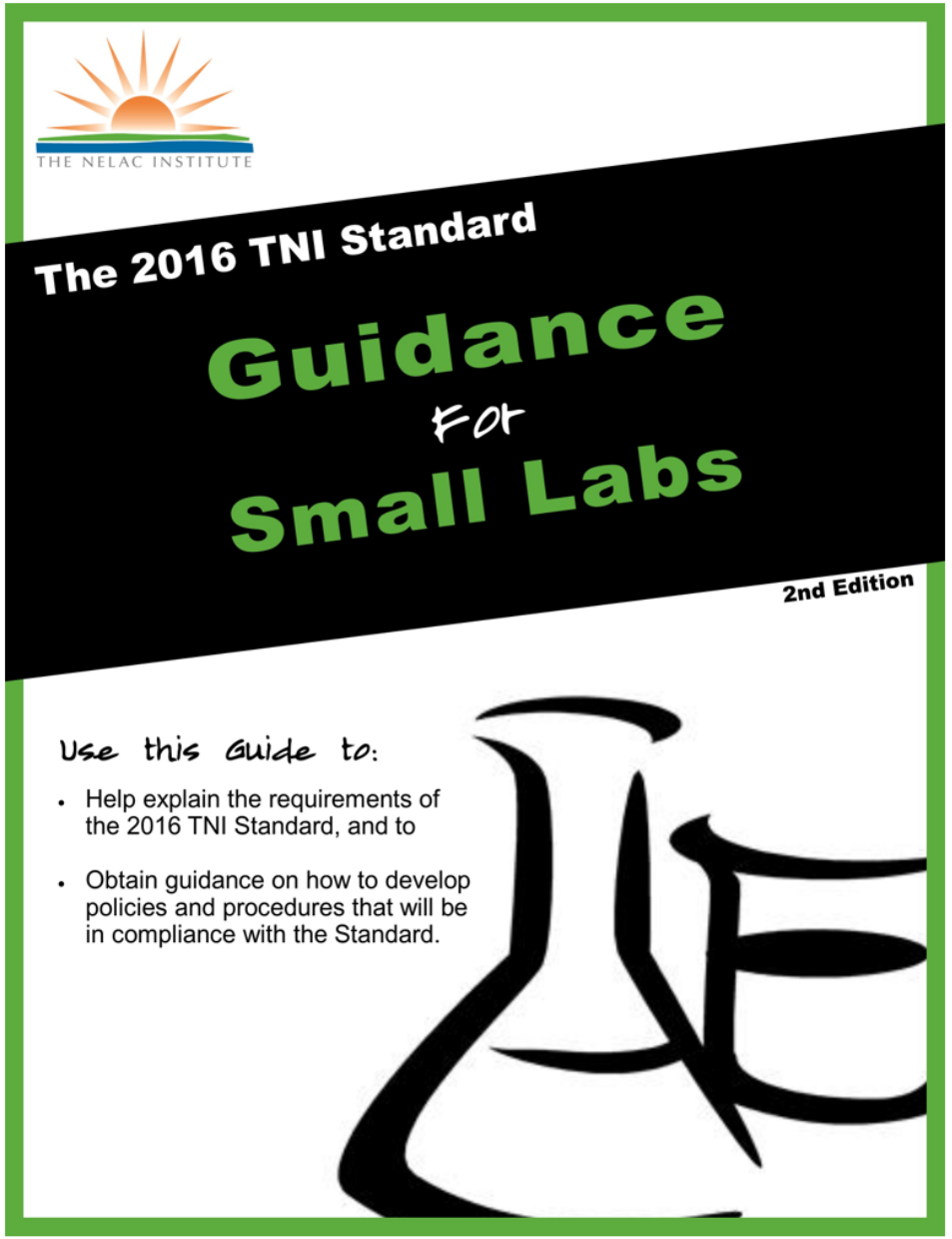

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Includes Key Points and Discussion

4.1.7.1 Quality Manager Requirements

Key Points:

- The Quality Manager and the Technical Manager may be the same person.
- The Quality Manager is the person who is the focal point of these requirements. The Quality Manager has to be independent of laboratory analyses. The Quality Manager must conduct or arrange for internal audits of laboratory activities. The findings of any deficiencies must be reported to laboratory management.

Discussion:

- There are very few actual requirements for the person who is named the Quality Manager, as opposed to the detailed requirements for the Technical Manager (see Section 5.2.6.1). The Quality Manager need not perform all duties of the position, but is responsible for assuring compliance with all aspects of these requirements. Monitoring of corrective actions is an important part of improving the laboratory, as when that is done well, the laboratory will learn from and minimize its future mistakes.

Examples are included

- An example of a Quality Policy Statement:

The objective of the quality/management system and the commitment of management is to consistently provide our customers with data of known and documented quality that meets their requirements. Our policy is to use good professional practices, to maintain quality, to uphold the highest quality of service, and to comply with the TNI Standard. The laboratory ensures that personnel are free from any commercial, financial, and other undue pressures, which might adversely affect the quality of work. This policy is implemented and enforced through the unequivocal commitment of management, at all levels, to the Quality Assurance (QA) principles and practices outlined in this manual. However, the primary responsibility for quality rests with each individual within the laboratory organization. Every laboratory employee must ensure that the generation and reporting of quality analytical data is a fundamental priority. Every laboratory employee is required to familiarize themselves with the quality documentation and to implement the policies and procedures in their work. All employees are trained annually on ethical principles and procedures surrounding the data that is generated. The laboratory maintains a strict policy of customer confidentiality.

Appendices

- Common Findings
- SOP Templates

Quality Systems Checklist

Affidavit to Access the 2016 Quality Systems Checklist

Your Name *

First Last

Organization Name *

Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

United States

Country

Email *

Phone

- ### -

Affidavit *

☐ I hereby confirm that as of today's date, I have obtained an official copy of the 2016 TNI Standard and will be able to show the copy to the assessor during the on-site assessment.

Checklist

Citation Volume 1 Module 4 (V1M4 - Chemistry)	Does the laboratory comply with this section?	Yes	No	N/A	Comments
V1M4 1	CHEMICAL TESTING	N/A	N/A	N/A	
V1M4 1.6.1	General	N/A	N/A	N/A	
V1M4 1.6.1 a)	An individual who performs any activity involved with preparation and/or analysis of samples must have constant, close supervision (as defined in the laboratory's training procedure) until a satisfactory initial DOC is completed (see Section 1.6.2).				
V1M4 1.6.1 b)	Thereafter, ongoing DOC (Section 1.6.3), as per the QC requirements in Section 1.7.2 (such as laboratory control samples) is required.				

InstructionsKey | V1M1 PT | V1M2 QS | V1M2 Management | V1M2 Technical | V1M3 Asbestos | **V1M4 Chemistry** | ...

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Consulting Firms for Labs Seeking Accreditation

A2LA WorkPlace Training	Michelle Wade	Lawrence	KS	913-449-5223	mwade@a2lawpt.org
Advanced Systems, Inc.	Marlene Moore	Newark	DE	302-368-1211	mmoore@advancedsys.com
Analytical Excellence, Inc.	John Farrell	Altamonte Springs	FL	407-331-5040	aex@ix.netcom.com
ChemVal Consulting	John Gumpper	Manistee	MI	231-723-4043	jgumpper@chemval.com
ddms inc.	Jeri Rossi	Clinton	NJ	908-370-3431	jrossi@ddmsinc.com
Dynamic Technology Solutions	Michael Hintz	Austin	TX	512-336-1900	mhintz@dyntechsolutions.com
Environmental Laboratory Consulting and Technology LLC	Silky Labie	Tallahassee	FL	850-656-6298	elcatllc@centurylink.net
EnviroScience, Inc.	Yakuta Bhagat	Stow	OH	330-688-0111	ybhagat@enviroscienceinc.com
Labtopia Solutions, Inc.	Jeanne Mensingh	Friendswood	TX	281-619-2600	jmensingh@labtopiainc.com
LDCFL-NAOS Consulting, LLC.	Catherine Katsikis	Boynton Beach	FL	561-512-9956	catherinekatsikis@gmail.com
NV5/Dade Moeller	Mitzi Miller	Knoxville	TN	509-531-0255	mitzi.miller@nv5.com
Quality Assurance Solutions, LLC	Diane Lawver	Lakeport	CA	707-275-2039	DLawver@QASolutions-LLC.com
SAW Environmental	Tony Francis	Highland	UT	801-999-8293	tfrancis@sawenviro.com
Shepherd Technical Services, LLC	Mei Beth Shepherd	Austin	TX	512-335-0906	mbshep@sheptechserv.com
Spectrum Environmental Assoicates, Inc.	William Massmann	Schenectady	NY	518-346-6374	wmassmann@4spectrum.com
The Markay Consulting Group LLC	Mark Alessandroni	Lakeland	FL	863-255-5856	mark@markaycg.com
William Ray Consulting LLC	William Ray	Martinez	CA	925-300-3350	Bill_Ray@williamrayllc.com

TNI receives no fees or revenue from these services. TNI has not evaluated the services, materials offered or technical knowledge of these individuals or companies. TNI does not endorse or warrant any of the services and a laboratory should do its own appropriate due diligence in selecting the service provider that is needed.

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TNI | Consensus Standards Development | **Laboratory Accreditation** | Proficiency Testing (PT) | Field Activities (NEFAP)

Standards

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- List of PT Provider Accreditors
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Management & Oversight

- PT Program Executive Committee

Related Expert Committees

- Laboratory Proficiency Testing Committee
- Stationary Source Audit Sample Committee

What PT Samples Are Required

- Any analyte on your scope of accreditation that is also in the TNI FoPT tables

http://www.nelac-institute.org/content/NEPTP/fopt.php

Example of PT Sample Selection

- Anaytes in Lab Scope
  - Lead
  - Mercury
  - Methylmercury
  - Benzene
  - Trifluralin
  - DRO
  - pH
- Analytes in FoPT Tables
  - Lead
  - Mercury
  - Benzene
  - pH

You do not need to PT test for methylmercury, trifluralin and DRO!

Fields of Proficiency Testing

Drinking Water Fields of Proficiency Testing (FoPT)

Chemistry and Microbiology

The table below contains a listing of the approved drinking water (potable water) fields of proficiency testing (FoPT) analytes and acceptance limits for **all analytes** except radiochemistry.

DW_FoPT_2019_07_01_Rev0.1.xlsx

DW_FoPT_2019_07_01_Rev0.1.pdf

Radiochemistry

The table below contains a listing of the approved drinking water (potable water) fields of proficiency testing (FoPT) analytes and acceptance limits for **all radiochemistry** analytes .

DW_Rad_FoPT_2007_10_01_Rev0.1.xlsx

DW_Rad_FoPT_2007_10_01_Rev0.1.pdf

Experimental Analytes

Experimental FoPT tables have been removed from the website as of March 3, 2011. Please see the attached memorandum for further information: PT Executive Committee Memorandum on Experimental PTs

Non-Potable Water (NPW) Fields of Proficiency Testing (FoPT)

FoPT Tables (Non-Potable Water)

Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6]				PTRL [7]
Minerals	mg/L					mg/L
Bromide	1.0 to 10	1.0098	-0.0533	0.0400	0.0912	0.56
Calcium	10 to 100	±15% fixed acceptance limit				8.5
Chloride	35 to 275	1.0005	0.0490	0.0376	0.3716	30
Fluoride	0.4 to 4	0.9748	0.0156	0.0487	0.0277	0.26
Calcium hardness as CaCO3	25 to 250	±15% fixed acceptance limit				21
Hardness, total ($CaCO_3$)	40 to 415	±15% fixed acceptance limit				34
Magnesium	4.0 to 40	±15% fixed acceptance limit				3.4
Potassium	4.0 to 40	±20% fixed acceptance limit				3.2

Where the a, b, c and d factors are presented,
Mean = a*T + b;
SD = c*T + d
where T is the assigned value.
Acceptable Values = Mean +/- 3*SD (2 for DW)

For Bromide
Mean = 5*1.0098 - 0.0533 = 4.996
SD = 5*0.04 + 0.0912 = 0.291
Range = Mean +/- 3*SD = **4.1 - 5.9**

Proficiency Testing Reporting Limit (PTRL)

- What is it?
  - Definition: A statistically derived value that represents the lowest acceptable concentration for an analyte in a PT sample, if the analyte is spiked into the PT sample.
  - *i.e.* the lowest acceptance limit for an analyte when the analyte is spiked at the lowest concentration allowed.
  - Acceptance criteria and concentration ranges are all defined by the FoPT tables.
  - For calcium in non-potable water, the PTRL is 8.5 mg/L

PTRL Example

- Example: Calcium in Non-Potable Water
  - Lowest spike concentration: 10 mg/L
  - Acceptance criteria: +/- 15%
  - Acceptance limits: **8.5** to 11.5 mg/L
  - PTRL = 8.5 mg/L

Reporting to the PTRL

- How do you report to the PTRL?
  - That depends on the analytical result obtained.
    - Numeric value at or above the PTRL
    - Numeric value below the PTRL
    - A “non-detect”

Numeric Value above PTRL

- Report the numeric value obtained, even if it is below the laboratory's established LOQ.

- The standard provides the following allowances:
  - If PT result is below the LOQ, the lab may:
    - rescale calibration curve to bracket result, or
    - report the result without qualification

Numeric value below the PTRL

- Report one of the following:
  - < PTRL, or
  - the numeric value obtained, if the numeric value is between the lab's LOQ and the PTRL, or
  - < LOQ, if the numeric value is below the LOQ and PTRL

Do not report ND, Not Detected!

Non Detected Results

- Report one of the following:
  - < PTRL, or
  - < LOQ

NOTE: If the lab's LOQ is greater than the PTRL and the lab chooses to report a value of < LOQ and the analyte is present above the PTRL, the result will be scored as "**Not Acceptable**" by the PT Provider.

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PT Providers

PT Provider	Contact	City, State
Absolute Standards, Inc.	Stephen Arpie	Hamden, CT
Advanced Analytical Solutions, LLC	Frederick Anderson	Parkersburg, WV
Environmental Resource Associates, Inc.	Christopher Crone	Golden, CO
MilliporeSigma	Patrick Brumfield	Laramie, WY
NYS DOH Wadsworth Center	Patrick Parsons	Albany, NY
NSI Solutions, Inc.	Mark Hammersla	Raleigh, NC
Phenova	Keith Ward	Golden, CO

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aboratory
creditation | Proficiency Testing (PT) | Field Activities (NEFAP) | Stationary Sources (SSAS) | Training & Meetings

TNI Conferences

- TNI Semi-Annual Meeting: Forum on Environmental Accreditation
- Past Conferences
- Meeting Presentations

Related Sites

- Environmental Measurement Symposium
- National Environmental Monitoring Conference

About Training & Meetings

TNI hosts live and on-demand training on a variety of topics of interest to the environmental measurement community. TNI also hosts two regularly scheduled meetings per year, typically in January and August. Both are a week long and involve open meetings of TNI committees as well as training courses and other special sessions.

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Forum on Environmental Accreditation

Online January 25-29, 2021

TNI Home | Forum Home | PROGRAM and PRESENTATIONS | EXHIBITORS

Technical Program

MONDAY Jan 25 | TUESDAY Jan 26 | WEDNESDAY Jan 27 | THURSDAY Jan 28 | FRIDAY Jan 29

MORNING

Plenary Session

Session Moderator(s): Alfredo Sotomayor, Milwaukee Metropolitan Sewerage District

TNI Plans for 2021, Jerry Parr, The NELAC Institute — *Download Presentation*

Laboratory Accreditation Makes a Difference, Steve Arms, Florida DOH (retired) — *Download Presentation*

TNI Change to a Quality Management System, Jessica Jensen, KC Water — *Download Presentation*

LUNCH BREAK

Vendor Technical Talk

Moving from the Past to the Future of Dioxins Analysis: Instruments and Methodologies for Current Analytical Issues, Frank Dorman, Waters Corporation — *Download Presentation*

The 2022 Forum

- January 10-13, 2022
  - San Antonio, TX
- The Forum will include:
  - Meetings of TNI committees;
  - An exhibit program;
  - A mentor session and an assessment forum; and
  - Several special sessions focused on accreditation issues.
- The Forum offers you an opportunity to participate in these sessions; to exchange ideas, findings, and recommendations; and to further TNI's efforts towards national accreditation.

2021 Environmental Measurement Symposium

- August 2-12, 2021
- Bellevue, WA and Virtual

The combined meeting of the Forum on Environmental Accreditation and the National Environmental Monitoring Conference (NEMC). Some of the highlights for the Symposium are:

- A special half-day general session focused on the conference theme, “Hitting Reset;”;
- Over 170 oral and poster presentations on a variety of cutting-edge environmental monitoring issues;
- Meetings of 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 Technology Showcase;
- 4 virtual vendor lunch presentations; and
- Two special keynote presentations on topics of general interest.

2021 Environmental Measurement Symposium

- In conjunction with National Environmental Monitoring Conference
- Week One: On-Site and Virtual
  - EPA Program Reports
  - NEMC Sessions
  - TNI Committee meetings
  - TNI Special Sessions
  - Keynotes and Plenary
- Week Two: Virtual Only
  - NEMC Sessions
  - TNI Meetings

Registration to open around April 20.

TNI Special Sessions

- Mentor Session: *Laboratory Quality – Are You in Jeopardy?*
- Assessment Forum: *Unmasking the 2016 TNI Standard*
- Updates on TNI
  - Reinventing the Technical Manager Position, Aaren Alger
  - Applying Management System Concepts to Environmental Activities, Marlene Moore
  - Benefits of Accreditation for Field Sampling and Measurement Organizations, Justin Brown
  - TNI's Training Efforts, Calista Daigle
  - State of National Accreditation, Jerry Parr
  - TNI's Mentor Initiative, Jacob Oaxaca

NEMC Sessions

- Advances in Field Sampling and Measurement
- Advances in High Resolution Mass Spectrometry
- Air Monitoring, Methods, and Technology
- Analyzing Microplastics in the Environment
- Best Management Practices for Laboratories
- Citizen Science in Environmental Monitoring
- Collaborative Efforts to Improve Environmental Monitoring
- Consensus Methods for Environmental Sampling and Measurement
- Data Quality, Management, and Review
- Drinking Water
- Environmental Sensors and Instrumentation
- Identifying and Combatting Inappropriate Laboratory Practices
- Instrumentation Focus: LCMS
- Laboratory Informatics
- Metals Analysis and Remediation
- New Organic Monitoring Techniques
- Operational Issues Impacting the Environmental Laboratory Industry
- Polyfluoroalkyl Substances (PFAS) in the Environment
- SARS CoV-2 Wastewater Testing
- Shale Oil and Gas

https://nemc.us/index.php

Help with the 2016 TNI Standard

- LAMS: Find Labs, Methods and Analytes
- Accreditation/ Certification Program Profiles
- TNI Documents and Presentations
- Education and Training Opportunities
- TNI Mentor Initiative

LABORATORY ACCREDITATION MANAGEMENT SYSTEM (LAMS)

- Searchable database of accredited laboratories
  - Assist ABs with secondary accreditation
  - Allows labs to verify information about their lab
  - Allow the public to find labs
  - Allow vendors to find labs
- Method Table (downloadable file)
  - 4658 methods
  - Includes approvals in Parts 136, 141, and SW-846
  - Includes links to methods
- Analyte Table
  - 3257 analytes (downloadable file)

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TNI LAMS

National Environmental Laboratory
Accreditation Management System

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PROGRAMS

- Accreditation Bodies

TNI CODES

- Analytes
- Methods
- Matrices
- Technologies

TNI WEBSITE LINKS

- Home Page
- Request Method Code
- Request Analyte Code

WELCOME TO THE NELAC INSTITUTE'S NATIONAL ENVIRONMENTAL LABORATORY ACCREDITATION MANAGEMENT SYSTEM

TNI LAMS is a central repository for information regarding the accreditation status of environmental laboratories.

A few TNI Accreditation Bodies are still in the process of migrating accreditation data to this database. If you find that FOAs for your lab are missing, you should contact your AB for an update.

CURRENT STATISTICS

Accreditation Bodies: 18
Laboratories: 1480
Fields of Accreditation: 582144
Methods: 4168
Analytes: 3257

To begin, click the Search button below. On the next page, you will be able to choose from a variety of ways to locate laboratories.

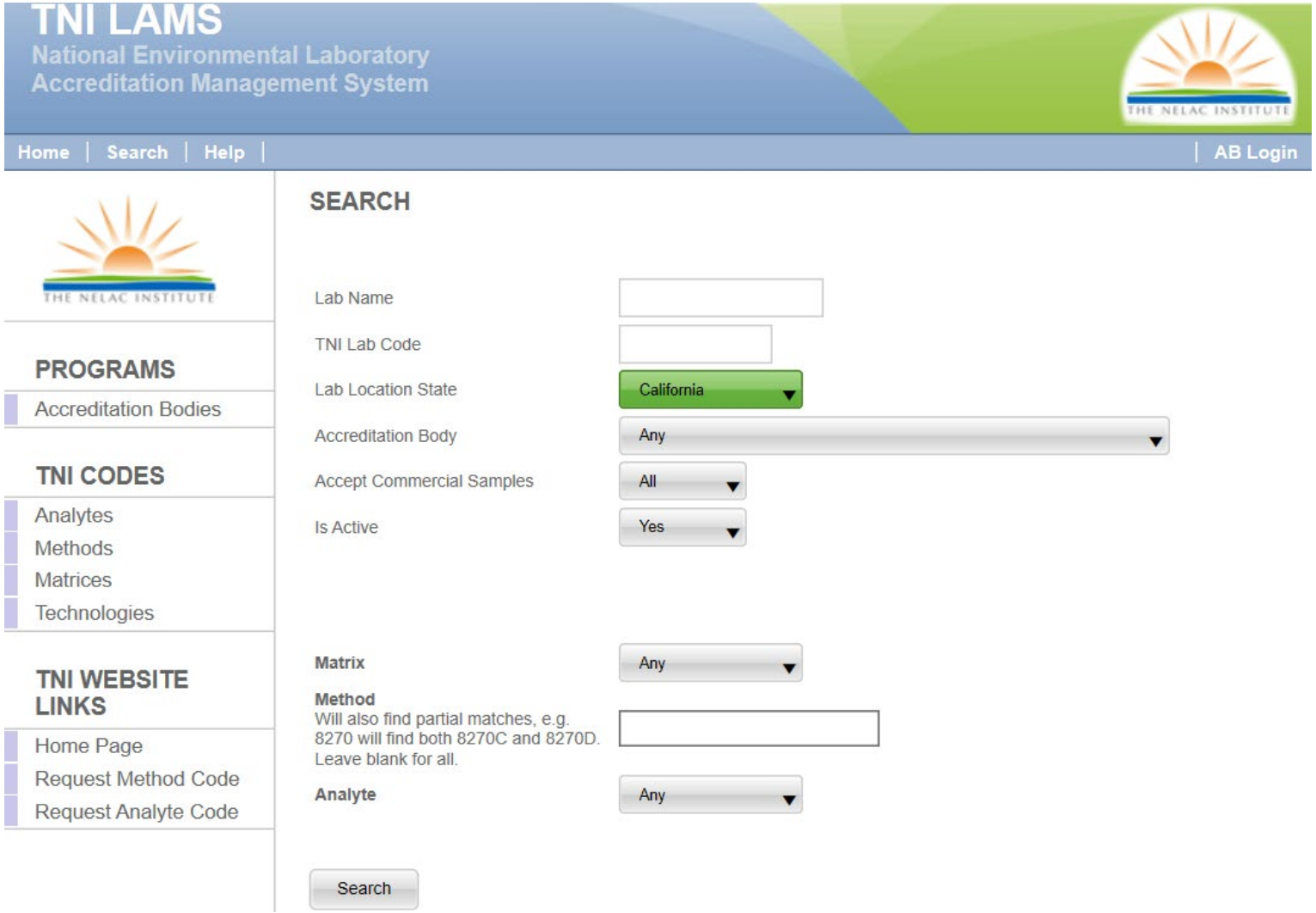
Search

NEW TO LAMS?

Read the **LAMS User Manual** (click to download as PDF)

Watch the **LAMS Practical Users Guide webcast**. TNI Database Administrator Dan Hickman walks you through all that LAMS has to offer, and provides tips and tricks to get the most out of this valuable resource. Click here to watch the webcast - it takes just 25 minutes.

LAMS Search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Accreditation Management System
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Request Analyte Code
SEARCH
Lab Name
TNI Lab Code
Lab Location State
California
Accreditation Body
Any
Accept Commercial Samples
All
Is Active
Yes
Matrix
Any
Method
Will also find partial matches, e.g. 8270 will find both 8270C and 8270D. Leave blank for all.
Analyte
Any
Search

Search Results - State

APPL, Inc.	Clovis	California	TNI01206
Atmospheric Analysis and Consulting, Inc.	Ventura	California	TNI00277
Babcock Laboratories, Inc.	Riverside	California	TNI02412
BC Laboratories Inc	Bakersfield	California	TNI02286
BSK Associates	Fresno	California	TNI02245
BSK-San Bernardino	San Bernardino	California	TNI02468
CALTEST ANALYTICAL LABORATORY	NAPA	California	TNI01211
Ceres Analytical Laboratory, Inc.	El Dorado Hills	California	TNI02279
Continental Water Laboratory	Sacramento	California	TNI01214
EA - Nautilus Environmental	San Diego	California	TNI02313
EMAX Laboratories, Inc.	Torrance	California	TNI01219

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Results for APPL

VIEW LAB

Basic Details

Name	APPL, Inc.
Type of Lab	Not Specified
TNI Lab Code	TNI01206
EPA Code	CA00046
State ID	2092752175
Website	www.applinc.com

Extended Details

Primary AB responsible for lab demographics	Utah Department of Health
GIS Location	
Description	
Comments	
Effective Date	n/a
Commercial Samples	Yes
Active	Yes

Location Address

Company	
Contact	Paula McCartney
Address 1	908 North Temperance
Address 2	
City	Clovis
State	California
Zip	93611-
Country	USA
Phone	(559) 275-2175
Fax	(559) 275-4422
Email	lsfong@applinc.com

Go to Fields of Accreditation

Search Results - Analyte

Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)

ALS Environmental, Kelso	Kelso	Washington	TNI00372
APPL, Inc.	Clovis	California	TNI01206
Babcock Laboratories, Inc.	Riverside	California	TNI01218
Eurofins Eaton Analytical, LLC	South Bend	Indiana	TNI00617
Eurofins Eaton Analytical, LLC - Monrovia	Monrovia	California	TNI01223
Eurofins TestAmerica Sacramento	West Sacramento	California	TNI01230
GEL Laboratories, LLC	Charleston	South Carolina	TNI00188
Gulf Coast Analytical Laboratories LLC GCAL	Baton Rouge	Louisiana	TNI01390
KENTUCKY EEC DEP DIV ENVIRONMENTAL PROGRAM SUPPORT	FRANKFORT	Kentucky	TNI01063
Legend Technical Services, Inc.	St Paul	Minnesota	TNI01120
Pace Analytical Services, LLC - Minneapolis MN	Minneapolis	Minnesota	TNI00223
Pace Analytical Services, LLC - Ormond Beach FL	Ormond Beach	Florida	TNI00527
RTI Laboratories	Livonia	Michigan	TNI01993
SGS AXYS Analytical Services Ltd.	Sidney	British Columbia	TNI00279
SGS North America, Inc.	Wilmington	North Carolina	TNI00558
SGS North America, Inc. - Orlando	Orlando	Florida	TNI00247
Summit Environmental Technologies, Inc.	Cuyahoga Falls	Ohio	TNI00583
TestAmerica Denver	Arvada	Colorado	TNI00010
Vista Analytical Laboratory Inc.	El Dorado Hills	California	TNI01235
Weck Laboratories, Inc.	City of Industry	California	TNI01236

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Analyte Codes

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PROGRAMS

Accreditation Bodies

TNI CODES

Analytes
Methods
Matrices
Technologies

TNI WEBSITE LINKS

Home Page
Request Method Code
Request Analyte Code

ANALYTES

Type: All Active: Yes

TNI Code	Analyte	CAS Number	Type
3205	# Eggs/Egg Case	NA	Toxicity Testing
6703	1,1'-Biphenyl (BZ-0)	92-52-4	SVOC-BNA
5105	1,1,1,2-Tetrachloroethane	630-20-6	VOC
5107	1,1,1,2-Tetrafluoroethane	29759-38-4	VOC
5162	1,1,1,3,3-Pentachloropropane	23153-23-3	SVOC-NOS
5164	1,1,1-Tribromo-2-methylpropan-2-ol	76-08-4	SVOC-NOS
5195	1,1,1-Trichloro-2,2,2-trifluoroethane (Freon 113a)	354-58-5	VOC
5190	1,1,1-Trichloro-2-propanone	918-00-3	VOC
5160	1,1,1-Trichloroethane	71-55-6	VOC
5161	1,1,1-Trifluoroethane	420-46-2	VOC
5110	1,1,2,2-Tetrachloroethane	79-34-5	VOC
5185	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	VOC
5165	1,1,2-Trichloroethane	79-00-5	VOC
5167	1,1,2-Trichlorofluoroethane	811-95-0	VOC
5172	1,1,2-Trifluoroethane	430-66-0	VOC
5168	1,1,2-Trimethylcyclohexane	7094-26-0	SVOC-NOS
5169	1,1,4-Trimethylcyclohexane	7094-27-1	SVOC-NOS
5171	1,1-Dichloro-1-fluoroethane	1717-00-6	VOC
5163	1,1-Dichloro-2,2-diethoxyethane	619-33-0	SVOC-NOS
5173	1,1-Dichloro-2-propanol	53894-19-2	VOC

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3373 items in **169** pages

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Method Codes

TEST METHODS

Part 136: All Part 141: All Active: Yes

SW-846 Current: All

TNI Code	Method	Revision	Revision Date	Name
60028004	3M 76-6900-3715-1(85.2)R1 Empore (TM) Disk		1994	Organochlorine Pesticides and PCBs in Wastewater Using Empore (TM) Disk
60028059	3M0222 (EPA 608 ATP)		1995	Organochlorine Pesticides and PCBs in Wastewater Using 3M Empore Extraction Disks
10000154	40 CFR 141.131 (D)(4)		FR	Specific Ultraviolet Absorbance Calculation
10000304	40 CFR Part 50 Appendix B		FR	Suspended Particulate Mater in Atmosphere (High Volume Method)
10000405	40 CFR Part 50 Appendix G		FR	Lead in Suspended Particulate Matter
10000507	40 CFR Part 50 Appendix J		FR	Particulate Matter as PM10 in the Atmosphere
10000709	40 CFR Part 50 Appendix L		FR	Fine Particulate Matter as PM2.5 in the Atmosphere
10000745	40 CFR Part 50 Appendix O		FR	Coarse Particulate Matter as PM10-2.5 in the Atmosphere
10000734	40 CFR Part 50 Appendix Q		FR	Lead in Particulate Matter as PM10
10000778	40 CFR Part 763 Sub E, Appendix A		FR	Asbebtos by TEM
60000353	AA SOP #23528	3	2018	Alpha Analytical - Perfluorinated Alkyl Substances by SPE and LC/MS/MS Isotope Dilution
60000375	AA SOP #29033	1	2019	Alpha Analytical - Perfluorinated Alkyl Substances in Non-Potable Water by Solid Phase Extraction and LC/MS/MS
60000488	Abraxis 522011			Cylindrospermopsin Plate by ELISA Procedure
60000502	Absolute SOP QA-801			Incremental Sampling for Soils
60001209	ADPEN SOP #6.5			ADPEN Labs - Atrazine, Metolachlor, and Simazine by HPLC-MS-MS
60001403	AEL MET-017	3		Advanced Environmental Laboratories - Metals except Hg by EPA 200.8 ICP-MS
60001607	AES SOP OA-11010			Analytical Environmental Services - EPA 8260 by GC-MS
60001652	AES0029		1991	Trace Elemental Analysis of Water and Wastes by Direct Current Plasma Optical Emission Spectrometry
10000825	AHERA		2009	Asbestos Hazard Emergency Response Act, TSCA
90015002	AK101 GRO		2002	Determination of Gasoline Range Organics - Alaska Department of Environmental Conservation

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4467 items in **224** pages

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Access Methods

60028004	3M 76-6900-3715-1(85.2)R1 Empore (TM) Disk		1994	Organochlorine Pesticides and PCBs in Wastewater Using Empore (TM) Disk
60028059	3M0222 (EPA 608 ATP)		1995	Organochlorine Pesticides and PCBs in Wastewater Using 3M Empore Extraction Disks
10000154	40 CFR 141.131 (D)(4)		FR	Specific Ultraviolet Absorbance Calculation
10000304	40 CFR Part 50 Appendix B		FR	Suspended Particulate Mater in Atmosphere (High Volume Method)
10000405	40 CFR Part 50 Appendix G		FR	Lead in Suspended Particulate Matter
10000507	40 CFR Part 50 Appendix J		FR	Particulate Matter as PM10 in the Atmosphere
10000709	40 CFR Part 50 Appendix L		FR	Fine Particulate Matter as PM2.5 in the Atmosphere
10000745	40 CFR Part 50 Appendix O		FR	Coarse Particulate Matter as PM10-2.5 in the Atmosphere
10000734	40 CFR Part 50 Appendix Q		FR	Lead in Particulate Matter as PM10
10000778	40 CFR Part 763 Sub E, Appendix A		FR	Asbebtos by TEM

Basic Details

Code	60028004
Name	Organochlorine Pesticides and PCBs in Wastewater Using Empore (TM) Disk
Reference	3M 76-6900-3715-1(85.2)R1 Empore (TM) Disk
Title	Organochlorine Pesticides and PCBs in Wastewater Using Empore (TM) Disk'
Revision	
Rev Date	1994
Citation	
Technology	Other
Method Source	
PDF	60028004.pdf

Extended Details

Part 136	☑
Part 141	☐
SW846 Current	☐
Date Added to LAMS	Jan 01, 2008
Last Updated	Sep 25, 2020
Last Uploaded	Sep 25, 2020
Active	☑

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3M

Empore™
Extraction Disks

Method Summary

Proposed SPE Disk Method for Aqueous Phase EPA Quick Turnaround Methods (QTMs):

Pesticides and Polychlorinated Biphenyls (PCBs)

The pesticide and PCB analyses for the QTM's are performed on separate fractions. The sample extraction is the same; however, the clean-up protocols vary. Because the sample extractions are identical, this method summary applies to both analyte groups. Please refer to the appropriate QTM for details on clean-up protocols.

Summary

For each group, a water sample (100 ml) is passed through a 47 mm C18 Empore™ disk and eluted with methylene chloride. The extract is dried, reduced in volume, solvent exchanged to hexane and analyzed by GC/ECD for Pesticides/PCBs. If interfering compounds are present, clean-up steps are described in the EPA QTM method.

PERFORMANCE DATA

	High Level[a]		Low Level[b]	
Analyte	**Ave % R**	**% RSD**	**Ave % R**	**% RSD**
PESTICIDES:				
alpha-BHC	68.8	3.8	80.7	3.0
beta-BHC	78.2	2.2	84.2	3.4
gamma-BHC	72.9	3.4	83.9	2.7
delta-BHC	77.6	1.4	120	16.5
Heptachlor	68.0	5.5	89.3	3.3

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Method Spreadsheet

1	TNI Code	Method	Revision	Revision	Name	Technology	Title	Method Source	Citation	Part 136	Approved	SW-846
1051	10014809	EPA 200.8	5.5	1998	Metals by ICP-MS	ICP-MS	Determination of Trace Elements in Water and Wa			FALSE	FALSE	FALSE
1052	10014605	EPA 200.8	**5.4**	1994	Metals by ICP-MS	ICP-MS	Determination	Methods for the Deter	40 CFR Part	**TRUE**	**TRUE**	FALSE
1053	10264401	EPA 200.8	4.3	1990	ICP/MS - metals	ICP-MS	TBD			FALSE	FALSE	FALSE
1054	10015608	EPA 200.9	3	2001	Metals by Graphite Furnace	GFAAS	Trace Elements in Water, Solids, and Biosolids by S			FALSE	FALSE	FALSE
1055	10015200	EPA 200.9	1.2	1991	Metals by Graphite Furnace	GFAAS	Determination of Trace Elements by St		40 CFR Part	FALSE	FALSE	FALSE
1056	10264605	EPA 200.9	1.1	1990	Metals by Graphite Furnace	GFAAS	Determination of Trace Elements by Stabilized Ter			FALSE	FALSE	FALSE
1057	10015404	EPA 200.9	2.2	1994	Metals by Graphite Furnace	GFAAS	Determination	Methods for the Deter	40 CFR Part	TRUE	TRUE	FALSE
1058	10264810	EPA 2000.0 - Bannerfis	5th Ed	2002	Bannerfish Shinner (Cyprine	BioTox	Bannerfish Shir	Methods for Measuring the Acute		TRUE	FALSE	FALSE
1059	10264809	EPA 2000.0 - Fathead I	5th Ed	2002	Fathead minnow (Pimephal	BioTox	Fathead minno	Methods for Measuring the Acute		TRUE	FALSE	FALSE
1060	10213419	EPA 2000.0 - Fathead I	5th Ed	2002	Fathead Minnow (Pimephal	BioTox	Fathead Minno	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1061	10213408	EPA 2000.0 - Fathead r	5th Ed	2002	Fathead minnow 48-hr Acut	BioTox	Fathead Minno	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1062	10213602	EPA 2000.0 - Fathead r	5th Ed	2002	Fathead minnow 48-hr Acut	BioTox	Fathead Minno	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1063	10214581	EPA 2002.0 - Ceriodap	5th Ed	2002	Ceriodaphnia dubia Acute T	BioTox	Ceriodaphnia d	Methods for Measuring	40 CFR Part	TRUE	FALSE	FALSE
1064	10213624	EPA 2002.0 - Ceriodap	5th Ed	2002	Ceriodaphnia dubia 48-hr A	BioTox	Ceriodaphnia d	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1065	10213646	EPA 2002.0 - Ceriodap	5th Ed	2002	Ceriodaphnia dubia, 48-hr A	BioTox	Ceriodaphnia d	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1066	10214605	EPA 2002.0 - Ceriodap	5th Ed	2002	Ceriodaphnia dubia 48-hr A	BioTox	Ceriodaphnia d	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1067	10214901	EPA 2002.0 - Ceriodap	5th Ed	2002	Ceriodaphnia dubia 48-hr A	BioTox	Ceriodaphnia d	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1068	10214401	EPA 2002.0 - Ceriodap	5th Ed	2002	Ceriodaphnia dubia 48-hr A	BioTox	Ceriodaphnia d	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE
1069	10214809	EPA 2002.0 - Ceriodap	5th Ed	2002	Ceriodaphnia dubia 48-hr A	BioTox	Ceriodaphnia d	Methods for Measuring	40 CFR Part	FALSE	FALSE	FALSE

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TNI Documents and Presentations

Category: Presentation

Found 205 record(s)

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Docid	Date	Title
444		2016 TNI Standard: Chemistry
445		2016 TNI Standard: Microbiology
446		2016 TNI Standard: Proficiency Testing
447		2016 TNI Standard: Quality Systems
294		A2LA TNI PT Oversight Program, Dan Tholen
325		AB Task Force II - Recommendations for Third Party Accreditation Bodies
252		AB Task Force: Findings and Draft Recommendations
85	01/01/2009	ABC Presentation at the TNI Forum, Miami, January 2009
366		Accreditation Body Task Force
220	01/25/2010	Activities of EPA's Environmental Laboratory Advisory Board (ELAB)
334		Advocacy Committee
367		Advocacy Committee
226	01/28/2010	AEL - New York Association of Approved Environmental Labs & PaAAEL - Pennsylvania Association of Approved Enviro
290		An Overview of EPA's National Lead Laboratory Accreditation Program, Paul Cestone, USEPA
233	01/26/2010	Assessing Continuous Improvement
450		Assessment Forum and Mentor Session: Assessing Whole Effluent Toxicity Laboratories
453		Assessment Forum and Mentor Session: Audit Findings - Myths and Legends
		Assessment Forum and Mentor Session: How Small Labs Effectively Comply with the TNI Standard
454		Assessment Forum and Mentor Session: Laboratory Auditing Myths
449		Assessment Forum and Mentor Session: SOP Hot Topics - Panel Discussion

Maui County Department of Water Supply (MDWS) Water Quality Lab Introduction

- Overview
  - Small Lab – 10 FTEs
  - 3/31/2008 - NELAP Accredited (Chem DW)
  - 2008 - Compliant with 2003 NELAC Std
  - 2010 - NELAP Accredited (Chem and Micro DW)
  - 2011 - Compliant with 2009 TNI Standard
  - Effective Compliance Indicators
    - July 13-14, 2016 – Last NELAP OSA – By Oregon Assessor's Closing Conference
      - No Findings
      - 2 Recommendations
      - Best Small Lab
      - Top 5% (Small and Large Labs)
      - Proficient Analysts
      - Best SOPs/Checklists
      - Binders – So well organized documentation
      - Good Document Control
      - Good systems in place

Implementation Schedule: For Chemistry DOH Certification (09/07/2006 – 02/2007)

	Goals	S	O	N	D	J	F	M	A	M	J	J
1	Maui to authorize project budget (rev 9/7/06)											
2	Analysts Training (Furnace and AA- Pb, Cu, Mg, K, Turbidity, pH, alkalinity, conductivity)											
3	Draft QA/QC summaries, Sample Sequence for other methods											
4	Onsite Visit → GFAA (2 days); Others (1 day); Field Collection											
5*	EEA submit to Maui the Draft of the *QA Plan and Draft SOPs											
6	Practice MDL/DOC 2006											
7	Onsite QA Plan training/ SOP Training Finalize Training Records											
8	Review Raw Data IDC/ Implement Corrective Action if Needed											
9	Maui to review Draft QA plan and SOPs											
10	Complete analysts IDC/MDL/Internal QC/PT											
11	Perform 2007 MDL/DOC											
12	Finalize QA Plan and SOPs											
13	Internal PT											
14	Perform external PT											
15	Send Application for Certification and DOH											
16	DOH Audit											
17	Submit Corrective Action report to DOH audit findings											

*QA Manual NELAC Template

EDUCATIONAL DELIVERY SYSTEM

- Accreditation Training for Laboratories
- Assessor Training for ABs
- Technical Training

http://www.nelac-institute.org/content/eds-home.php

2009 to 2016 Training Courses

- Five 1-2 hour downloadable webcasts
  - Proficiency Testing
  - Quality Systems
  - Chemistry
  - Microbiology
  - Radiochemistry

Other Accreditation Training

- **Quality System Topics**
  - Corrective Action Process and Root Cause Analysis
  - Internal Audits and Management Reviews
  - Ethics Training for the Environmental Professional
  - Data Integrity Plan
  - Defining Organizational Responsibilities
  - Method Selection and Validation
  - Developing the Quality Manual
  - Documents and Document Control
  - Records and Record Keeping
  - Lowering the Cost of Poor Quality with an Effective Quality Management System (10/22/20)
- **Implementing the 2016 TNI Standard (Fall 2020)**

- **Small Laboratory Implementation Series**
  - Part 1 – You Can Do It!
  - Part 2 – The Management Requirements
  - Part 3 – Management of Ethics
  - Part 4 – Personnel
  - Part 5 – Sample Handling
  - Part 6 – Equipment
  - Part 7 – Methods
  - Part 8 – Quality Control
  - Part 9 – Reporting Results

Examples of Assessor Training

- Assessor On-Going Training – 2016 TNI Environmental Laboratory Standard
- Assessor Technical Training: Microbiology
- Implementing and Assessing the Environmental Laboratory Standard Interpretations
- Internal Audits: Auditing the Management System in Environmental Analytical Laboratories
- NEFAP Assessor Training – TNI FSMO Standard Volume 1 (2014)
- Techniques for Assessing the TNI Environmental Standard – Refresher Training

Assessor classes are also useful for quality managers performing internal audits

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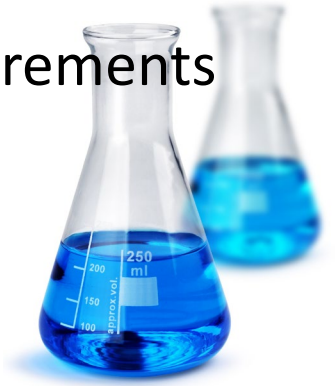
Examples of Technical Training

- New Regulatory Limits of Hexavalent Chromium in Drinking Water
- Good Laboratory Practice Series: Glassware
- Basics of Ion Chromatography in Environmental Analysis
- Hyphenated Techniques in Ion Chromatography in Environmental Analysis
- Sample Preparation for Ion Chromatography in Environmental Analysis
- Method Selection, Validation and Demonstration of Capability
- Testing Requirements in EPA Regulations
- The New EPA MDL Procedure
- Understanding WET Testing
- What Does QC Data Tell Me… and Why Should I Care?
- Theoretical and Practical Consideration for Establishing Sensitivity of Measurements

New Courses in 2020

- Remote Assessments Series – AB Assessments
- Remote Assessments Series – Laboratory and Client Audits
- Remote Assessments Series – Information Communication Technology
- Good Laboratory Practices - Understanding Basic Measurements
- Lowering the Cost of Poor Quality (CoPQ) with an Effective Quality Management System and Integrating Risk Management Principles
- History of Environmental Monitoring
- Implementing the 2016 TNI Standard
- Understanding Radiochemistry Testing and the TNI 2016 Standard: Radon Emanation, Total Uranium, Method Validation and Instrument Calibrations
- Theoretical and Practical Consideration for Establishing Sensitivity of Measurements
- Tools and Resources for Implementing the 2016 TNI Standard



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Potential 2021 Courses

- Tools to Calculate and Evaluate Measurement Performance
- Data Review and Validation
- Data Handling Techniques
- How to Use Qualified Data
- Introduction to Proper and Scientific Integration Techniques for Chromatographic Systems
- Auditing Laboratory Data and Records
- Data Review for Conformance to the TNI Standard
- Techniques for Using Routine and In-Depth Data Review
- Moving to Electronic Records

TNI Small Laboratory Advocate

- Robin Cook, City of Daytona Beach
  - Former Chair, Microbiology Committee
  - Former Member, Quality Systems Committee
  - Worked in both commercial and utility labs
- Roles
  - Respond to inquiries from small laboratories
  - Conduit from small labs to TNI Advocacy Committee
- Linked-In Group
  - https://www.linkedin.com/groups/8305372/

Mentor Initiative

Mission

- Explore and make recommendations on developing a financially sustainable laboratory mentoring plan that provides assistance to laboratories seeking to implement and maintain a quality management system based on the TNI standard.

Objectives

- Explore approaches to mentoring that can be used by laboratories.
- Develop and make recommendations for a mentoring plan for laboratories.
- Launch initiative by May 1, 2021

Background

- California ELAP piloted a very successful mentoring program in 2018-2019
- Based on CA's success, TNI's Board of Directors included exploration of a mentoring initiative for TNI in the new 2020-2025 strategic plan:
  - Explore and make recommendations on developing a financially sustainable laboratory mentoring plan that helps laboratories seeking to implement and maintain a quality management system based on the TNI standard

Note: Participating laboratories may or may not seek accreditation

Background (con't)

- In April 2020, the TNI Board formed a Mentoring Subcommittee under the Advocacy Committee
- Jacob Oaxaca from California ELAP was appointed Chair and TNI solicited volunteers for the subcommittee
- The TNI Board directed the subcommittee to provide a mentoring plan for approval within the next 12 months

Benefits of a Mentoring Initiative

- Learning from an industry professional
- Asking questions and having honest conversations with someone who's been there
- Receiving guidance and coaching to meet the challenges of transitioning to a quality management system
- Connecting real world experience by acquiring valuable advice from a mentor's experiences

Benefits of a Mentoring Initiative

- Sharing professional goals and gaining the skills and confidence necessary to excel
- Broadening your network and making meaningful connections with other laboratory professionals that will inspire, encourage, and support you in your future endeavors

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Proposed Process

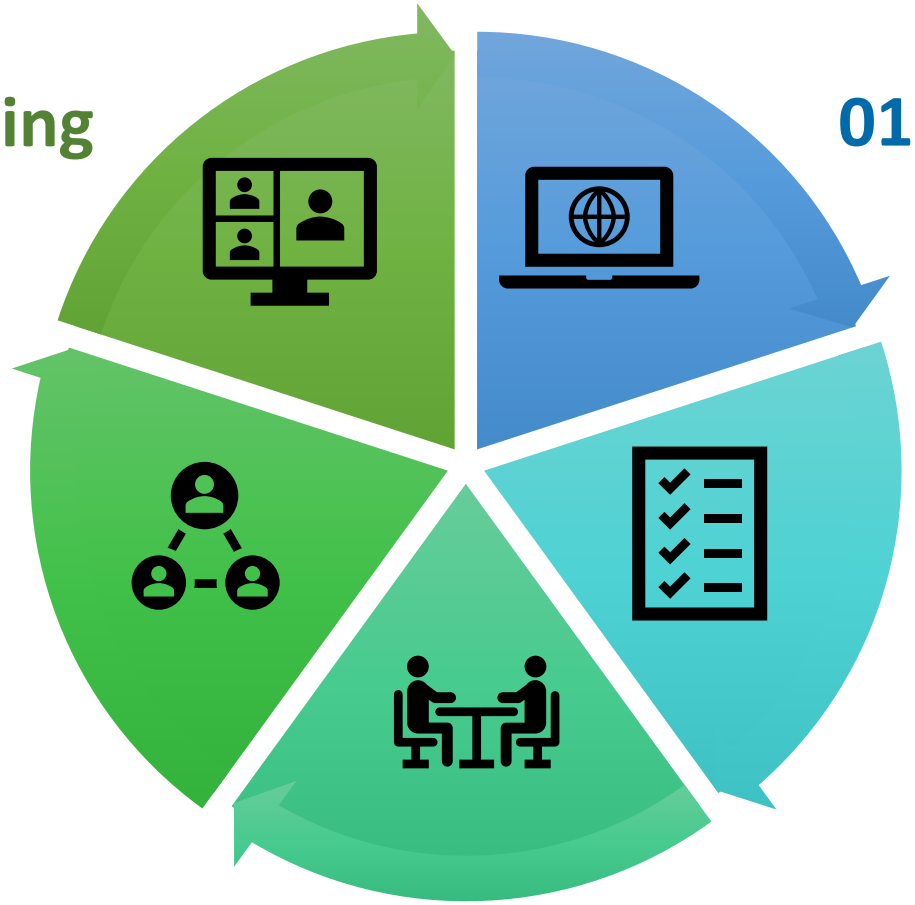
01 Laboratory Contacts TNI

02 Laboratory Completes Questionnaire

03 Laboratory Meets with TNI

04 TNI Starts Pairing Process

05 Laboratory Mentoring Begins



Laboratory Contacts TNI

- Laboratories interested in having a mentor will contact TNI through the Mentor Initiative webpage

TNI Mentor Initiative

Note: To participate in this program, at least one person in the laboratory must have a TNI membership

Laboratory Questionnaire

- The laboratory will be asked to complete a questionnaire which will be used to facilitate pairing the laboratory with a Mentor

TNI MENTOR INITIATIVE QUESTIONNAIRE

- What type of testing does the laboratory perform?
- What type of samples does the laboratory analyze?
- Does the laboratory perform sample collection?
- Does the laboratory plan to seek accreditation to the TNI standard? Within 1 year? 3 years? Implement a quality management system, but not seek accreditation?
- Is the laboratory run by paper or electronic system such as a LIMS?
- Status of Quality Management System?
- What does the laboratory need help with?

Laboratory Meets with TNI

- After receiving the questionnaire, TNI will host an initial meeting (teleconference) with the laboratory to:
  - Review basic information about the laboratory, including the scope of their testing and where they are in terms of developing a QMS
  - Discuss objectives and expectations of the mentor effort
  - Obtain commitment of the laboratory being mentored

TNI Starts Pairing

- Questionnaire forwarded to list of volunteer mentors
  - Mentors must volunteer through the TNI web page and provide qualifications
- List of potential Mentors sent to the laboratory to assess any conflict of interest
- Once the laboratory has decided on a Mentor, the two Parties will review and discuss the Mentoring Agreement

Mentoring Agreement

- Laboratory Expectations:
  - Provide scope of work and information/documentation as requested by the Mentor
  - Commit resources necessary to pursue implementation of a TNI-compliant QMS
  - Not hold TNI or the Mentor liable if accreditation is not achieved
  - Understand that the mentor is not a consultant and will serve in an advisory role only (i.e. the Mentor will not take any action on behalf of the laboratory)

Note: The mentoring agreement may be terminated at any time by either party

Mentoring Agreement

- Mentor Expectations:
  - Maintain professional and ethical standards while serving as a Mentor
  - Serve only in an advisory role while acting as a Mentor
  - Keep all information and sensitive materials observed or made aware of completely confidential
  - Avoid actions that could be considered a Conflict of Interest

Note: Laboratories are not prohibited from entering into Consulting Agreements with Mentors to provide additional services not covered by TNI's Mentor program

Mentoring Agreement

- TNI Expectations:
  - Host an initial meeting with the laboratory
  - Review the laboratory's responses to the questionnaire, assessing available resources, and determining if the Parties should move forward
  - Provide the name(s) of the potential Mentors to the laboratory to assess any conflict of interest
  - Only assign a Mentor that is acceptable to the laboratory

Other Options

- In some cases, laboratories may be able to find the help they need without entering into a mentoring agreement
- TNI has many resources available on its website including:
  - Training courses
  - Small Laboratory Handbook
  - 2016 Quality Manual Template
  - Checklists
  - Implementation guidance, guidance documents, and Standard interpretation Requests
  - Assessor training courses
  - Small Laboratory Advocate and SLA LinkedIn page

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Questions/Comments

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Summary

- To support the implementation of the 2016 standard, TNI has developed a number of tools and other resources to help both laboratories and the organizations that accredit laboratories.
- Join TNI
- Join a TNI Committee

Contact TNI

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