

**Request for Proposal (RFP)
Training**

**TNI Educational Delivery System (EDS)
Webinars and Webcasts
April 2021**

BACKGROUND

The NELAC Institute (TNI) is a not-for-profit scientific voluntary consensus organization engaged in research and development whose mission is to be the leader in providing systems and processes 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. The organization is managed by a Board of Directors and is governed by organizational Bylaws.

TNI's vision is a true national accreditation program, whereby all entities involved in the generation of environmental measurement data within the United States are accredited to one uniform, rigorous, and robust program that has been implemented consistently nationwide and focuses on the technical competence of the entity pursuing accreditation. TNI believes such a program will improve the quality and reliability of environmental data used by federal and state agencies.

TNI is interested in contracting with individuals and organizations to provide training in specified topics as outlined in Attachment 1. Training should impart knowledge with the goal that the person being trained will achieve some level of self-sufficiency with regard to the subject matter.

Proposals may be made to provide the training for only one course, or for multiple courses. Courses are expected to be offered online using Webinar tools with TNI staff support.

SCOPE OF WORK - TRAINING COURSES

TNI is seeking trainers (contractors) to provide formal training courses that can be anywhere from an hour to a full day or even a multiple course series over a number of months. Most courses should be offered online, but proposals with an onsite component will be considered.

TNI has prepared a list of courses (Attachment 1) that it is seeking contractors for but is open to proposals for additional courses similar in nature to the courses being requested.

FURNISHED EQUIPMENT, PROPERTY, OR INFORMATION

The following items will be provided by TNI:

- Outline and Synopsis review for suitability (not actual content);
- Course posted on TNI website and announcement emailed to TNI database;
- One-on-one training on use of Webinar tools;
- Set-up webinar – including invitations and uploaded documents. Set-up is based on Webinar Proposal/Application completed by trainer;
- Staff support as agreed upon in contract;

- Online course evaluation survey;
- Online registration and collection of fees;
- Attendance records for online courses;
- Listing of registered attendees 1 week prior to the course;
- Training certificates as purchased by attendees or negotiated at course set-up;
- Training Coordinator review of course slides sent by trainer 7-10 days prior to the course date;
- Prepare course handout from course slides; and
- Review of course content when courses are requested to be endorsed by TNI (due date may vary based on course size and content).

DELIVERABLE REQUIREMENTS

Contractor shall supply the agenda for the course, learning objectives and a copy of course materials provided to students (where available). Contractor shall retain all intellectual property rights for the course materials. If course has an onsite component, Contractor shall provide all travel and on-site costs and supply documentation of attendance records for on-site courses.

PROPOSAL FORMAT

Interested contractors should complete a proposal/application on the TNI website and provide the requested information. The proposal/application includes the following elements:

- A description of the training being proposed;
- Information about format and date(s) if known;
- Biography;
- Course outline and a synopsis; and
- A detailed cost proposal that satisfies the requirements specified in the pricing section below.

PROPOSAL DUE DATE

Proposals/applications must be received at TNI by midnight EST, May 4, 2021. Proposals/applications shall be submitted online using the TNI Educational Delivery System Proposal/Application System (<http://nelac-institute.org/content/eds-app.php>).

PRICE

Nothing herein shall be construed to commit TNI to pay any costs incurred by bidders in connection with preparation of a proposal, or to guarantee the procurement of any services. All prices are to be in U.S. dollars. Contractor shall furnish and provide all material, labor, supervision, equipment, and incidentals required for accomplishing the work covered by the Contract, except the work, materials, services, or equipment to be furnished by TNI. The proposal should include any fees for instructor, materials, and instructor(s) travel being requested.

TNI and the contractor may mutually agree to cancel the class(es), if fewer than 10 students are registered 1 week before the course date.

QUESTIONS

Questions must be sent to both Ilona Taunton - TNI Training Coordinator (ilona.taunton@nelac-institute.org) and Jerry Parr – TNI Executive Director (jerry.parr@nelac-institute.org).

EVALUATION CRITERIA

TNI will review all proposals that are received by the deadline in accordance with the following criteria:

- Relevance of proposal to TNI's objectives and priorities;
- Technical merit;
- Competency of the proposed staff;
- Feasibility of the proposal;
- Adequacy of the applicant's resources; and
- Cost.

The anticipated award date for any contracts is May 15, 2021 or sooner.

PAYMENT TERMS

Payment to the contractor will be on the 15th of the month following the course.

EXCEPTIONS, EXCLUSIONS, OR SPECIAL CONDITIONS

This solicitation permits the bidder to impose exceptions, exclusions, or special conditions. However, the bidder is hereby advised that any such exception, exclusion, or special condition may render your proposal non-responsive, which would preclude an award to you. Any exception, exclusion, or special condition the bidder wishes to include or impose must be fully and completely described in a written attachment to the Bidder's proposal.

TNI reserves the right to accept training proposals prior to the May 15, 2021 date that are outside of the course list (Attachment 1).

ACCEPTANCE OF PROPOSALS

TNI reserves the right to cancel this RFP or to not consider bids submitted in response to this solicitation.

Attachment 1.

Course Listing

This list was prepared by the TNI Training Committee based on training survey results, emails, past operational plans and ideas discussed in various TNI meetings. Course 10 was submitted by the TNI NEFAP Training Subcommittee.

Each course described below is in a format that might be posted on the TNI Educational Delivery System website. The descriptions below are intended to provide a Trainer with an idea of the type of course TNI is looking for, but the Trainer is encouraged to make the class their own and modify the description/synopsis as appropriate. Some courses are suggested as series and others may be a single class.

CEUs may be provided if course complies with the requirements of TNI SOP 1-117 (<https://nelac-institute.org/docs/sop-policy/sop-1-117-rev1-policy-ceu-04-07-17-final.pdf>).

Note: If you are not familiar with Webex capabilities, you may contact Ilona Taunton for assistance to decide on which tools to use to teach a course.

1. Basic Statistics for Laboratories

This seminar provides an introduction to basic statistical concepts and techniques used for the collection, organization, analysis, and presentation of various types of laboratory data, including how to assess the relationship between two variables and methods for calculation and evaluation of measurement performance indicators in an environmental laboratory.

Learning Objectives

- Understand numerical and categorical types of data in the laboratory
- Understand the terms population, batch, sample, sampling methods, and bias type and direction
- Understand and be able to calculate relative error, relative standard error, %RSD, % recovery, control limits, and percent differences in calibration curves
- Understand sample data distributions
- Be able to use linear regression to create a least-squares line and calculate the correlation between two numerical variables in a data set
- Understand and be able to perform hypothesis testing, outlier tests, and t-tests to show statistical differences between results
- Significant figures and rounding
- Be able to graphically represent and interpret laboratory data

Suggestion: 8 hours – perhaps four 2-hour classes to allow for homework and lumping concepts into 4 sessions.

2. Technical Writing for Environmental Laboratory Method SOPs

While both administrative SOPs and technical method SOPs are critical to a good quality management system, this course focuses on the skills required to write a clear, concise, and comprehensive method SOP. The main focus will be on the procedural section of the SOP, and ensuring that the section is detailed, clear, and includes all the information required.

Examples of reference method language will be presented, and methods to translate those requirements into laboratory procedures will be discussed. Exercises will be conducted where students are given a written SOP and the reference method, and they should be expected to find any issues with the SOP as written and provide suggestions for how to address those issues. Techniques for ensuring that laboratory SOPs reflect the actual current practice in the laboratory will be outlined. Graphical tools like flow charts, decision trees, graphics, and photos will be

covered. Tips for addressing all of the 2016 TNI Standard SOP requirements will be provided. The instructor will discuss common SOP issues, and how to prevent/resolve them. The class will also cover what an internal SOP reviewer's role is, and what they should look for during the review process.

Suggestion: 3 hours

3. Essential Wastewater Analyses

This series of courses covers the basic essential laboratory analyses performed on wastewater samples to evaluate the nature of the sample and the performance of the treatment process.

For each category, at a minimum the following is discussed:

- Brief wastewater program requirements
- A brief description of the theory behind the method
- What the analysis measures
- How the measured result relates to wastewater quality
- An overview of how the analysis is performed
- Basic quality control
- Some tips for optimal method performance
- Some common issues with method performance, and how they may be avoided or overcome.

The series is organized into four categories with specific methods in each category as shown below.

Demand and Organic Constituents

- Biochemical Oxygen Demand (BOD)
- cBOD
- Chemical Oxygen Demand
- Total Organic Carbon
- Oil and Grease (HEM and SGT-HEM)

Residues

- Total Solids
- Total Suspended Solids
- Total Dissolved Solids
- Total Volatile Solids
- Total Fixed Solids

Nutrients

- Ammonia
- Total Kjeldahl Nitrogen
- Nitrite/Nitrate
- Total Phosphorus

Physical Properties

- Turbidity
- Odor
- Color
- pH
- Temperature

- Conductivity
- Residual Chlorine

After discussing individual methods, the typical relationships between some of the inter-related parameters may be explored. Relationships between COD and BOD, TSS and BOD, and others are discussed.

Suggestion: Four class series

- Demand and Organic Characteristics
- Solids (Residues)
- Nutrients
- Physical Properties

4. Contracts and Tenders: Requirements and Implementation Ideas

All laboratories (including captive and municipal laboratories) need to know what work is coming in, when and what it takes to perform the analysis.

Once a work request is received or inquiries are made it is the laboratory's responsibility to review if the request can be met and how this review is to be documented. The discussion will include the components required to accomplish a successful review and the generation and maintenance of the documentation of any requested new work, tender and contract. Additionally, the course will address what constitutes new work in the commercial, captive, and public laboratory and what is considered routine work. Guidance will be given for providing feedback to the client and how to document final decisions made.

The objective of the class is to provide guidance in meeting TNI's 2016 Standard – Section 4.4 - Review of Requests, Tenders and Contracts. A laboratory needs to consider how contracts and tenders are handled.

The class will also cover the intent of the Standard's Section 4.7 Service to the Client by providing ideas on how to ensure your laboratory is represented fairly to your current and potential clients while providing services and data that satisfy the needs of the end user. Planning upfront will poise you for success, ideas such as regular meetings with the sales force and project managers to discuss any gained or lost capabilities that may include new methods, analytes, or state certifications. Suggestions include:

- Regularly updating your sales force and project managers:
 - on current and future work capacity based on expected in-coming work.
 - on new regulations for relevant programs (i.e., State, SDWA, CWA, DOD, RCRA, etc.)
- Discuss tools such as a questionnaire to help your team ask the right questions.
- While municipal or captive laboratories may have limited scopes, regular meetings or a quick email to their internal clients can assist in regulatory updates that may impact their routine work.

Suggestion: 1-2 hours

5. Electronic Records Management

Records play a big part in determining the quality and usefulness of the data, both hard copy and electronic. This class focuses on how electronic records might be used. With many labs moving to the use of electronic records, it becomes important to understand how these are handled.

The objective of this class is to provide guidance in meeting TNI's 2016 standard (EL-V1M2-2016-Rev 2.1: Quality Systems General Requirements Sections 4.13 Control of Records; 4.16 Data Integrity, 5.5-5.10 traceability, collection, handling, testing and reporting of results). This would also include ideas for how to locate state requirements.

Learning Objectives:

- Understanding TNI requirements for an electronic record, storage requirements, maintenance and disposal, retrievability, confidentiality, protection, and back-up with an emphasis on how electronic record keeping can be used.
- Audit trails, traceability, records of observations, calculations, tracking changes/corrections to include signage of who made the changes provide the guidelines to meet the standard requirements.
- Raw Data management/association- how can the raw data be kept and associated and easily accessible.
- Electronic security, software documentation and verification- establish the requirements and processes to demonstrate adequate documentation.
- Electronic QC records- what types of information can be attained?
- Where can I locate state requirement information?

Suggestion: 4 hours (maybe more if additional depth is covered)

6. Understanding Data and Data Management for Chemical Testing

The objective of the course is to present techniques for data handling, review, and evaluation/verification. The course is for laboratory personnel applying the TNI Standard in chemistry laboratories. The fundamental concepts include review of calibration curve calculations, maintaining data records, reporting results to clients, applying internal data review procedures, understanding the TNI requirements, and evaluating quality control results in chemistry laboratories. Practical examples are discussed throughout the course.

Learning Objectives:

- Establish what should be considered during the laboratory's review of data and test results.
- How to determine if data is appropriate for intended use.
- Discuss use of data qualifiers and their applicability.
- Data record types and retention policies.
- Overview of data reporting, review and characteristics as defined in the TNI requirements.
- Outline the purpose and understanding of what quality control is telling you.

Suggestion: 4-8 hours depending on level of detail

7. Introduction to Proper and Scientific Integration Techniques for Chromatographic Systems

This 4-hour mini course will focus on the fundamental issues of automated and manual integration techniques, emphasizing proper technical requirements for sound integration, optimizing chromatography, proper documentation of manual integrations, and problems associated with improper integration techniques. The class will use interactive discussions, presentations, and live data examples with problem solving techniques to demonstrate proper techniques and processes in relation to chromatography, published methods, and meeting the TNI Standard requirements. Chromatographic analysis principles considered in this training include those applicable to GC, GC/MS, HPLC, and ion chromatography. Presentations and discussions on when and how to properly manually correct integrations to assure accurately, reproducibly, consistently and representative to response.

Suggestion: Workshops could be offered for more "hands-on" training. Workshops could provide examples or people could bring their own examples for clarification. The workshop should follow-up on the application of the concepts of the course.

Consider language in the DoD/DOE quality systems manual and EPA Inspector General reports. Great examples.

While there are no prerequisites, some basic knowledge and experience of chromatography will be helpful given the compression of this training topic.

8. How to Properly & Scientifically Calibrate an Analytical System - A Practical Guide to Sound Operational Practices

Proper calibration and calibration verification of analytical systems are critical cornerstones to the generation of accurate and reliable data. Understanding the strengths of calibration options and the limitations of computerized data systems will assure proper calibrations and efficient operational practices. This interactive course focuses on the critical importance of properly calibrating organic and inorganic analytical systems. A variety of options for calibrating and verifying calibration for instrumental and non-instrumental analytical systems are discussed along with proper practices, documentation practices, and advantages and disadvantages that are associated with different types of calibration curves. Particular attention is given to differentiating between proper and improper calibration procedures so that participants will have a clear understanding of what is acceptable practice and what is not.

This 8-hour training series provides practical, comprehensive, and invaluable guidance on understanding the principles of calibration using lecture, discussion, and small group exercise.

Course Topics:

- Fundamentals of calibration (number of points, distribution, etc.)
- TNI Standard Requirements
- Equipment requiring calibration
- Initial calibration objectives
- Second source standard use
- Continuing calibration verification
- Frequency of calibration
- What to do when the calibration fails criteria
- Calibration curve types
- Internal vs. external calibration
- Proper documentation practices
- Improper calibration activities
- How to review a calibration package
- Tips on what to include in a Calibration SOP or Guidance Document

Suggestion: Split into 2 or 3 classes in a series.

9. Understanding Microbiology

This course will focus on basic skills and techniques, such as aseptic technique and serial dilution, along with some basic knowledge required to successfully perform microbiological analysis of environmental samples. This course will also outline some of the required QC components of Module 5 of the 2016 TNI standard and the various regulatory programs and how these can be implemented. Analysts seeking to expand their knowledge beyond the standard by learning details regarding method selection as it relates to regulatory programs approved methods and how-to approaches of QC practices should take this course.

- Brief program requirements
- A brief description of the theory behind the method
- What the analysis measures
- How the result relates to water quality
- An overview of how the analysis is performed
- Basic quality control
- Some tips for optimal method performance
- Some common issues with method performance, and how they may be avoided or overcome.

Suggestion: 4 or more hours depending on depth of course.

10. Internal Audit for FSMOs (Field Sampling and Measurement Organizations)

Field Sampling and Measurements Organizations (FSMOs) implementing the TNI FSMO Standard are required to complete an annual internal audit. The "Internal Audit for FSMOs" course is specifically designed for FSMOs who want to learn how to conduct internal audits in their field operations. This course provides the knowledge and tools needed to develop, implement, and manage an internal audit program. Attendees of this course will learn how to apply and conduct audits for collecting evidence of conformance, documenting observations, questioning field personnel, identifying non-conformances and preparing the audit report.

The audit process includes verifying the Sampling and Analysis Plans (SAPs), Quality Assurance Project Plans (QAPPs) and other client requirements are implemented by the FSMO as well as meeting the requirements in the TNI FSMO Standard - Volume 1. The audit process is performed through the observation of sampling techniques, field testing and reviewing field documentation.

The goal of the course is to provide a practical approach for completing internal audits on field sampling and field measurements to the TNI FSMO Standard. The course will demonstrate the process for internal auditing required in the TNI FSMO Standard - Volume 1. The course does not present how to implement the TNI FSMO Standard but provides examples of how to audit to the TNI FSMO Standard - Volume 1.

COURSE TOPICS:

- Why should you do an internal audit of the FSMO activities?
- Standard requirements for an internal audit
- Approaches to internal auditing
- ISO 19011 Guidance for the audit process
- Audit of SAPs, QAPPs and SOPs and how they are part of the internal audit
- Audit of compliance to TNI FSMO Volume 1
- How to audit a management system
- Audit Tools (Checklist, Gap Analysis Tool, NEFAP Online Checklist, etc.)
- How to collect evidence while observing field sampling and testing
- Questioning and listening techniques
- Records review
- Writing Non-conformances identified from internal audits of FSMOs
- Writing the internal audit report
- Post Audit (Corrective Action Resolution, Management Review, Closing the audit)

Suggestions:

The course may be provided as a series of offerings – course may be split into 2 or more sessions to give students the opportunity to do assignments related to internal auditing and then bring feedback.