Training Committee
Meeting Summary
August 3, 2023

1. Roll Call:

   Calista Daigle, Chair, called the meeting to order at 1pm Central on August 3, 2023, Minneapolis, MN. The following voting members were in attendance: Calista Daigle, Elizabeth Turner, Joe Manzella and Jerry Thao.

   The Committee did not meet in July 2023.

   There were not enough voting members present to do business, but the Committee did meet to review information and seek input from conference attendees.

2. Summary

   Calista reviewed the presentation prepared for todays meeting: Attachment A.

   Course Suggestions:
   - At the winter QSM meeting, the work of the Consumables Task Force was presented for possible inclusion in the Standard. Perhaps a course may be an appropriate place for them to share checklists, lists of critical supplies, etc … How does a lab evaluate suppliers?
   - There can be duplicate classes that may present a topic differently.
   - Course for FSEA - Back to Basics for new analysts.
   - If a facility needs a course developed, can TNI help? Yes. Talk to us we may have ideas for you.

3. LinkedIn Page

   Jerry Thao brought up the LinkedIn page to show how it used and shared postings from the conference.

   The page includes:
   - notifications for new training classes.
   - conference updates - registration reminders, etc.

   Jerry will be setting up an Events page.

4. Training Course Catalog

Elizabeth provided information and showed a copy of the new DRAFT training catalog (Attachment A).

- She asked if the badging should be on the Table of Contents (TOC) page? People would like to see the badge in words on the TOC.

- Badges
  - Hexagon shapes can be stacked.
  - Include in course description along with words.
  - What do you think of the look?
    Hard to see words in the orange.
    Do not like orange. Letters are hard to read - change color or change text color.
    Different colors on the circles - Each badge type has its own color. Add color key to page.
    Silky offered to make hexagons using photoshop.
    Text could be colored for different credentials. Match the badge colors.
    Complexity of multiple colors could cause costs.

- How does course link? This will be up to William Daystrom (TNI IT)

- Should the catalog be downloadable? Yes.

  - Want people to get the most current information, so current webpage is important.

- Should the catalog and website be the same? Yes

- Additional Suggestions to Consider:

  - What info do you need to take classes? Pre-requisites.

  - Written out and badge symbols.

  - It was suggested that testimonials for courses could be added?

  - Add comments about the courses - Share Q&A that comes up about a course.

  - Should we have a posting of beginner, intermediate or advanced course. Level of difficulty. Add this to the trainer application if we do this.

  - People want the option to filter the catalog.

This information will be taken back to the Training Committee and considered in a final version of the SOP related to the Training Catalog (SOP 1-128 – Content of Training Courses).

5. SOP on Examination Questions (SOP 1-129)

If an exam has 30 questions - the exam is 25 minutes.

For the Credentialing Exam:
- Questions are defined as lookup questions or things that have to be thought through.
- Multiple Choice - always has to be 5 questions.
- True False questions.
- No fill in the blank.
- Questions will be reviewed by experienced individuals before they are used.
- There will be multiple questions prepared so the exam is never the same.

Ilona asked if the right group is working on the SOP since Credentialing Committee has been doing work on the exam also. Jerry will represent Credentialing Committee and join Marlene and Mark's effort.

People asked if exams are open book. It was noted that some similar exams are closed book.

Badge tests - Open book and not proctored.
Credential tests - 300 questions - proctored.

Exam questions - not all questions are from classes, but most would have been covered by one of the classes.

The Exams are based on language in the Standard - reading comprehension of the standard is another way to learn. Courses may not cover all of the questions.

Meeting attendees did not support the need for every question must be in a training course.

There need to be guidelines for how to write a class exam. Format of questions should be addressed too.

Knowledge skills and abilities. Page can be downloaded on the Credentials page. Details what person needs to know to get a badge.

No partial credit will be given for questions with multiple answers.

Some questions may be at a higher difficulty level - but scored the same as simple questions. The exam is a mix of types of questions and difficulty level.

Skipped questions are zero.

Comment: If questions are already categorized - why not offer 2 points for more difficult questions instead of just 1.

Comment: Should we tell people what area they need to work on if they did not pass?

Feedback on scores:
- Would like to receive score.
- ANAB does not.
- EPA DW - just pass/fail
- Illinois - Give you a scoring and breaks down individual areas. Different test every time.

Make up tests - need to rewrite with credential exams and badge exams. Don't call it a makeup test. Re-test?

May need to have a waiting period before it can be retaken – People could try to copy test and then retake?

One year waiting period seems extreme.

Perhaps a study guide could be prepared to stop people from taking the first test as test prep.

Tests that affect people's careers are not new. PE and Operator exams.

Add new questions to the pool that don't count the first round.

Test should continue to evolve. Add new ones that are not part of scores.

Failures need to be checked to make sure there are no errors before being penalized.

May need to go to expert committees for questions.

People that are credentialed already can help write questions - could be part of professional development hours.

Slide 1

Report from TNI's Training Committee

AGENDA
- Training Courses Offered
- Training Courses in Development
- TNI Linked-In Page
- Training Course catalogue
- SOP on Examination Questions

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Slide 2

Training Courses Offered

- Courses are grouped by Category

  - **Assessor**
    - Assessor On-Going Training - 2016 TNI Environmental Laboratory
    - NEFAP Assessor Training - TNI FSMO Standard Volume 1
  - **Management**
    - Managing an Environmental Laboratory - Five Part Series
    - Lowering the Cost of Poor Quality with an Effective Quality Management System and Integrating Risk Management Principles
  - **Field Activities**
    - Applying Data Integrity to Field Activities
    - Good Laboratory Practice Series: Principles of Sample Collection - All 3 Sessions

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Slide 3

Training Courses Offered

- **Quality Systems**
  - Brown Bag 1: Corrective Action Process and Root Cause Analysis
  - Understanding Data, Data Review and Data Management for Chemical Testing

- **Fundamental Laboratory Skills**
  - Understanding Basic Measurements
  - Glassware

- **Regulatory**
  - The 2023 Proposed Method Update Rule
  - A History of EPA Regulations and How They Created the Environmental Testing Industry

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Slide 4

Training Courses Offered

- **Technical**
  - How to Properly and Scientifically Calibrate an Analytical System
  - Whole Effluent Toxicity (WET) Testing – Data Interpretation Training
- **TNI Laboratory Standard**
  - Managing Your Proficiency Testing Program
  - Brown Bag 11: Contracts and Tenders & Service to Client Requirements and Implementation Idea
- **Conference Learning**
  - Leading Through Effective Communication
  - TNI Assessment Forum Summer 2021 – Unmasking the 2016 TNI Standard

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Slide 5

Training Courses Offered

- **Other**

  - Navigating the TNI Website
  - LAMS Practical Users Guide

  Complete list available at: https://www.nelac-institute.org/content/eds-home.php

- **Courses can be …**
  - Live, in person
  - Live, Webinars
  - Recorded, Webcasts

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Slide 6

Register for Current Classes

Upcoming Live Training Events

Title	Start Date	Presented By	Type
Policies and Procedures Needed for a NELAP Laboratory	11–Aug–2023	Marlene Moore	Webinar
Managing a Data Integrity Investigation	29–Aug–2023	Silky and John Labie	Webinar
Managing the Accreditation Process: Laboratories	19–Sep–2023	Tony Francis	Webinar
Environmental Laboratory Assessments – Basic Assessor Training: Virtual Event (Sep 2023)	25–Sep–2023	Marlene Moore	Webinar
Environmental Laboratory Assessments – Basic Assessor Training: Virtual Event (Oct 2023)	16–Oct–2023	Marlene Moore	Webinar

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Training Courses Currently in Development

- ❑ **Quality for Field Operations – TNI NEFAP standard**
  - ➢ Marlene Moore]
  - ➢ September 2023

- ❑ **Internal Auditing for Field Sampling and Measurement Organizations**
  - ➢ NEFAP Executive Committee
  - ➢ Late 2023

- ❑ **Risk Management for 17011**
  - ➢ Melanie Ross, ANAB
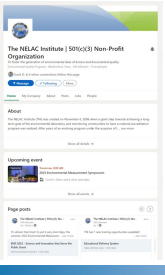 - ➢ Late 2023

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Suggestions for Classes?

- ❑ Some classes will be needed to support the credentialing program.
  - ➢ Critical courses are currently in development.
  - ➢ As the program expands additional courses will need to be developed to meet requirements.

- ❑ Be a TNI Trainer
  - ➢ Use the application on on the TNI Website under the Training

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LinkedIn Page

- ❑ Upcoming training opportunities
  - ➢ Course summary
  - ➢ Trainor(s)
  - ➢ Date(s)
  - ➢ Cost
  - ➢ Link to TNI website
- ❑ Conferences
  - ➢ Updates and reminders
- ❑ Get to know the TNI Committees

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Training Course Catalog

- ❑ Viewable on the website and downloadable
- ❑ Provide a consistent experience
- ❑ Course titles linked to course description
- ❑ Clear identification of applicable badges
- ❑ Standardized course description format to be developed by Training Opportunities Workgroup

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Training Course Catalog

Training Course Catalog

This catalogue provides a summary of every Webcast that is available for viewing from the TNI website, organized into one of the 10 categories shown below.

#	Category
1	Assessor
2	Management
3	Field Activities
4	Quality Systems
5	Fundamental Laboratory Skills
6	Regulatory
7	Technical
8	TNI Laboratory Standard
9	Conference Learning
10	Other

Because some classes fit into various categories, they may appear multiple times.

Frequently Asked Questions (FAQ)

Q: What is the difference between a webinar and a webcast?
A: Webinars are Live Training conducted over the internet at a specific time. Webinars include interactive on-line training courses, workshops, forums or seminars. They are set-up for a specific audience at a specific time and allow for interaction among the attendees. All you need is a phone and internet access.

Webcasts are On-Demand Training. Webcasts include on-line material that can be accessed anytime and generally by anyone who is interested. A webcast can be a pre-recorded training course, workshop, forum or seminar. All you need is internet access.

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Training Course Catalog Feedback

1. **Assessor**

Course #	Title	Date	Presented By
TR-101	NEFAP Assessor Training – TNI FSMO Standard Volume 1 (2014)	03-Mar-2017	Marlene Moore
TR-102	Implementing and Assessing the Environmental Laboratory Standard Interpretations	13-Jul-2017	Marlene Moore
TR-103	Assessor Technical Training: Asbestos	21-May-2018	Marlene Moore
TR-104	Assessor Technical Training: Microbiology	01-Jun-2019	Marlene Moore
TR-105	Assessor On-Going Training – 2016 TNI Environmental Laboratory Standard	23-Apr-2019	Marlene Moore

. **Assessor**

Course #	Title	Date	Eligible Badges	Presented By
TR-101	NEFAP Assessor Training – TNI FSMO Standard Volume 1 (2014)	03-Mar-2017	Quality Specialist	Marlene Moore
TR-102	Implementing and Assessing the Environmental Laboratory Standard Interpretations	13-Jul-2017		Marlene Moore
TR-103	Assessor Technical Training: Asbestos	21-May-2018		Marlene Moore
TR-104	Assessor Technical Training: Microbiology	01-Jun-2019		Marlene Moore
TR-105	Assessor On-Going Training – 2016 TNI Environmental Laboratory Standard	23-Apr-2019		Marlene Moore

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Course Title Links to Website

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Course Catalog Goals

- Consistent, standardized format
- Course information to include:
  - Synopsis
  - Learning objectives
  - Prerequisites
  - Recommended attendees
  - Applicable badges,
  - Fees
  - Training hours
  - Certificate options
  - Information about presenter

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Course Catalog Feedback

- Should course title link to catalog page and page have link to website?
- Should there be a link to instructor bio?
- Should catalog and website be the same?
- What information do you need to decide to take a course?
- Do you need a downloadable catalog?

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Course Catalog Feedback

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SOP on Examination Questions

- Exam by credential category.
  - Exam by Badge and exam for Certification
  - Clarify available credentials. Maybe after test questions have been developed.
  - The same question may appear in multiple credential exams.
- Number of questions should be defined for each credential.
  - At least ten questions plus ten questions per every 2 hours of training required. (eight hours training requests a 50-question exam)

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SOP on Examination Questions

- Exam time: The time is 1 minute per question less 20%. For example: 50 question exams should be times at 40 minutes. Not enough time to look up every answer.

- Exam answers: True/False and multiple choice
  - Approximately the same number of True /False and multiple choice questions

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SOP on Examination Questions

- Exam questions taken from course materials or general subject matter.
  - Questions covered in at least one of the required classes.
  - Note source of question/answer on the answer sheet in case changes are made to the course.

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SOP on Examination Questions

- Pass fail or score given: 70% or better is passing.
  - Each question is scored as one point. Multiple choice are not given partial credit. All correct (+1 point) or one or more wrong answer is scored as -1 point

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SOP on Examination Questions

- Is the test returned after scoring?
- o   This can be considered a great learning tool but means the test bank must have three times the number of questions so different tests can be given to different registered personnel. Consider that the questions and answers are then in the public domain for future scrutiny, criticism, and debate. Not necessarily a "bad" thing (in the name of science).
- o   Questions and answers may be changed with each time the test is taken by the same person.

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SOP on Examination Questions

- Make up tests.
  - If failed, the test may be taken one more time after a 30 day period
    - In order for the person to retake some of the courses.
  - If failed again, the person must wait one year and retake the classes.
    - Evidence of course retake must be provided.

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SOP on Examination Questions

- Recommend to test the test (exam).
  - The first time the test is given the score may be adjusted due to a poorly worded question or answer.. These questions will be scored as correct the first time when at least 50% of the persons taking the test score the question incorrect (per the answer key) (Question is modified and added back into the pool of questions). Obviously, consider keeping track of question revision history and reasons for changes.
  - The second time the test is given the score may be adjusted for any given question when at least 50% of the persons taking the test score the question incorrect (Question is modified and added back into the pool of questions)
  - The third tine the test should be valid and wrong answers are clearly wrong.

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SOP on Examination Questions

- Questions should be prepared by expert committee members and submitted to the pool of questions.
  - A request for questions based on the TNI standard and policies should be sent to each committee to request T/F and multiple choice questions with answers and the source of the question/answer based on the standard or training class.
  - Consider having a moderate component of the questions based on real in-lab scenarios and not just standard language.
  - Consider having a couple of questions that require the student to contemplate the impacts of a given dilemma (nonconformance) and/or resolution (corrective action) on the end data users' decision-making.
  - Instructors should also be solicited for submitted questions.

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SOP on Examination Questions

- The order for taking the first test must be defined. The first group to take the test should be for credit or if given free then no credit. Or some other scenario.

- Fee for testing – Will depend on the process used for this testing. Professional proctored, "trust testing" or other considerations.

- Consider offering the first review courses and credential tests in-person only at TNI meetings to encourage meeting participation. For fee or volunteer

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Contact TNI

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