

Summary of the TNI Competency Task Force Meeting
Wednesday, March 24, 2021 1:00 pm Eastern

1. Welcome and Roll Call

The Interim Chair, Jerry Parr, welcomed everyone to the meeting. Attendance is recorded in Attachment 1. The minutes of the February 24, 2021, meeting were approved by acclamation with the correction that Amanda Dutko was present and not absent as marked on the draft.

Two new people, Chairs of the Quality Systems and Microbiology Expert Committees, were added as associate members for the duration of this Technical Manager activity.

Jerry asked to rearrange the agenda so that the election of a permanent Chair for the Task Force came at the end of the meeting, so that he could continue to manage the discussion about transitioning from assessor training and KSAs to delving into the Technical Director/Manager (TD/TM) definition and role(s).

2. Requirements from Volume 1 of the 2016 TNI Standard

Prior to the meeting, Jerry distributed a spreadsheet of items in V1M2 and V1M4 assigning relevant requirements to one of four individuals -- Laboratory Manager, Technical Manager, Subject Matter Expert, and QA Manager. Ken Brown provided some excellent feedback and then Jerry identified several additional requirements, all of which are included in the version attached with these minutes. Jerry also provided draft definitions for each of those roles, and the updated definitions (from this meeting) are in Attachment 2, below. When distributing those items, Jerry also noted that the Task Force may also want to consider the RACI concept. RACI is an acronym derived from the four key responsibilities most typically used: *responsible*, *accountable*, *consulted*, and *informed*. The Wikipedia link for this concept is https://en.wikipedia.org/wiki/Responsibility_assignment_matrix.

Participants discussed these roles and titles at length. Throughout the industry, many terms are used – seemingly interchangeably – for different roles: laboratory supervisor, group leader, and lab superintendent, in addition to those named above. Also, it became apparent that there is no clear demarcation between supervisory/managerial responsibilities and technical oversight/expertise – the combinations seem as variable as the titles, and some but not all managerial personnel have technical expertise. In response to a question, Jerry researched what titles are used in NELAP AB state regulations and provided that information after the meeting (see Attachment 3, below).

Consensus appeared to emerge around the concept that any training or credentialing offered by TNI should focus on the technical KSAs needed to meet the requirements of the standard, and not try to force the nomenclature used across the industry into a particular structure, while being clear that this technical expertise is being treated for training/credentialing purposes as separate and distinct from the Quality Manager role (which will be addressed by the Task Force later). A tentative definition emerged for the Technical Director/Technical Manager (TD/TM) role on which the training should focus, as follows:

An individual who is the key resource for the generation of data in the lab, who is knowledgeable and competent to make decisions related to analytical results about whether those results are fit for use. This would involve knowledge of data and instruments, SOPs, calibration and much more, probably for a specific area of the lab (chemistry or microbiology, for example) and the individual would work with the Quality Manager to assure that data generated are truly fit for use, for the purpose required by the client (this is a distinction different than the “quality of data”).

The discussion about how to characterize this subject matter expert (SME) as distinct from the Quality Manager (QM) role will continue at the April meeting.

4. Election of a New Chair for the Task Force

Only one individual, Aaren Alger, volunteered for the Chair position. She affirmed her willingness to serve, but acknowledged that others on the Task Force are fully capable of filling the position and that she would gladly defer to another nominee. There were no other volunteers, and Aaren was elected Chair by acclamation. Congratulations, Aaren!

In response to Aaren's question, Jerry affirmed that he plans to remain involved with the Task Force and would be willing to serve as "back-up" if for some reason Aaren were to be unavailable for a meeting.

5. Next Meeting

The next meeting of the Competency Task Force will be on **April 28, 2021, at 1 pm Eastern**. An agenda and any necessary documents will be sent in advance of the meeting.

Attachment 1

Competency Task Force Roster

| NAME | | EMAIL | AFFILIATION | Present? | |
|--|-----------|--|----------------------------------|----------|----|
| Aaren | Alger | aaren@alger-consulting.com | Alger Consulting & Tech. | Yes | 1 |
| Paul | Banfer | paul.banfer@eisc.net | EISC | no | 2 |
| Kenneth | Brown | kbrown@escondido.org | City of Escondido | Yes | 3 |
| Julia | Caprio | JKlensCaprio@Geosyntec.com | Geosyntec | No | 4 |
| Patricia | Carvajal | pmcarvajal@sara-tx.org | San Antonio River Authority | Yes | 5 |
| Yumi | Creason | ycreason@pa.gov | Pennsylvania DEP | No | 6 |
| Kirstin | Daigle | Kirstin.daigle@pacelabs.com | Pace Laboratories | Yes | 7 |
| Bob | Di Rienzo | Bob.DiRienzo@ALSGlobal.com | ALS Global | Yes | 8 |
| Steve | Drielak | drielak-associates@usa.net | Drielak & Associates | Yes | 9 |
| Amanda | Dutko | adutko@fairwaylaboratories.com | Fairway Laboratories | Yes | 10 |
| Stacey | Fry | sfry@babcocklabs.com | Babcock Laboratories | Yes | 11 |
| Kitty | Kong | Kitty.Kong@chevron.com | Chevron | No | 12 |
| Kimberly | Kostzer | kkostzer@coca-cola.com | Coca-Cola | No | 13 |
| Silky | Labie | elcatllc@centurylink.net | ELCAT | No | 14 |
| Harold | Longbaugh | Harold.Longbaugh@houston.tx.gov | City of Houston | Yes | 15 |
| Mike | Michaud | Mike.michaud@abilenetx.gov | City of Abilene | No | 16 |
| Mitzi | Miller | Mitzi.Miller@nv5.com | NV5 | No | 17 |
| Jerry | Parr | jerry.parr@nelac-institute.org | The NELAC Institute | Yes | 18 |
| Sharon | Robinson | Sharon.Robinson@doh.nj.gov | New Jersey DOH | No | 19 |
| Joann | Slavin | Joann.slavin@health.ny.gov | NY ELAP | Yes | 20 |
| Alfredo | Sotomayor | asotomayor@mmsd.com | MMSD | Yes | 21 |
| Elizabeth | Turner | Elizabeth.turner@pacelabs.com | Pace Labs, Inc. | No | 22 |
| Curtis | Wood | curtis_wood@waters.com | ERA, A Waters Company | No | 23 |
| Associate Members (for TM/TD activities): | | | | | |
| Debbie | Bond | DBOND@southernco.com | Alabama Power | Yes | 24 |
| Kasey | Raley | kasey.raley@pacelabs.com | Pace Laboratories | Yes | 25 |
| Program Administrator: | | | | | |
| Lynn | Bradley | The NELAC Institute | Lynn.bradley@nelac-institute.org | Yes | |

Attachment 2 KSAs for Laboratory Management – Definitions

Laboratory Manager (Owner, Laboratory Director, Department Head, General Manager): The individual responsible for the overall management of the laboratory. This individual could be a scientist, but could also be an attorney, accountant, engineer, or any other individual that meets the qualifications of the position. This person does not need to be skilled in laboratory technical issues. The Laboratory may be the Technical Manager.

Technical Manager (Laboratory Director, Operations Manager): The individual responsible for the technical management of the laboratory, including implementation of the Quality Management System, overseeing personnel, and ensuring the laboratory facilities and equipment are adequate for activities required. Note: This individual does not need to be an expert in every test.

Subject Matter Expert (Technical Specialist, Group Leader): The individual who is the key resource regarding all processes involved in generating data from a specific area (e.g., microbiology, inorganic non-metals). This individual requires education and experience commensurate with the type of testing involved and must have detailed knowledge and experience in the fundamentals of each test he/she is responsible for including sample preparation, instrument calibration, analysis, quality control, identification and quantitation, reporting,This individual may have supervisory responsibilities, but this is not required.

QA Manager (QA Director, QA Officer): The individual responsible for the Quality Assurance aspects of the laboratory.

Attachment 3 NELAP Regulations Relating to Technical Manager

Note: Florida, Illinois, Kansas, Minnesota, New Hampshire, Oklahoma, Oregon, Texas, and Utah have no specific regulations.

Louisiana

4901. Laboratory Staff for All Programs Covered by These Regulations

A. Managerial Staff. The laboratory shall have the managerial staff with the authority and resources needed to discharge their duties. The technical director or his/her designated representative shall be a full-time member of the laboratory staff who has the authority to exercise the day-today supervision of the laboratory policies and procedures. The laboratory shall be organized in such a way that confidence in its independence of judgment and integrity is maintained at all times.

B. Laboratory Technical Director

1. Academic Training. The laboratory technical director must have a bachelor's degree in science or a minimum of four years' equivalent experience in a related field.
2. Experience. The laboratory technical director must have a minimum of two years' experience in the area of environmental analysis.

C. Quality Assurance Manager

1. Academic Training. The quality assurance manager must have a minimum of a bachelor's degree in science or four years' equivalent experience in a related field.
2. Experience. The quality assurance manager must have a minimum of two years' environmental laboratory experience.
3. Reporting Authority. The quality assurance manager must have direct access to the highest level of management for decisions regarding laboratory quality assurance policy and resources. He or she must have independent authority regarding quality assurance oversight and implementation of the quality assurance program. This organizational position must not report through the technical management of the laboratory. The quality assurance manager must have the opportunity and freedom to evaluate data objectively without influence from technical or financial management.
4. Technical Knowledge. The quality assurance manager must have a general knowledge of all analytical methods that are performed by the laboratory.
5. Small Laboratories. In smaller laboratories (staff less than 10 total employees), the quality assurance manager's responsibilities may be performed by an upper level technical or operational manager of the facility. Academic and experience requirements apply.

D. Supervisors

1. Academic Training. Supervisors must have a minimum of a bachelor's degree or a minimum of four years' experience in a related field.
2. Experience. Supervisors must have a minimum of one year of experience in the area to be supervised, preferably with a minimum of six months' supervisory experience.
3. Radiochemistry. If the individual is supervisor of a radiochemistry laboratory, the individual must have a minimum of four years' experience in the field/area of radiochemistry; however, each year of additional college level training in related fields may substitute for one year of experience, up to a maximum of two years.

E. Instrument Operators

1. Academic Training. Instrument operators must have a minimum of a high school diploma or equivalent and satisfactory completion of a short course or structured in-house equivalent on the operation of the instrument (by equipment manufacturer, professional organization, university, or other qualified training facility).
2. Experience. Instrument operators must have a minimum of six months' experience in the operation of the instrument with documentation that acceptable results are achieved by the operator (performance evaluation and quality control samples successfully analyzed).
3. On-the-Job Training. During on-the-job training to fulfill the requirement for experience, the data produced by the operator shall be deemed acceptable when validated and reviewed by a qualified instrument operator and/or laboratory supervisor.

F. Analyst

1. Chemistry Procedures

- a. Academic Training. An analyst must have a minimum of a high school diploma or equivalent, plus proper training in a methods training course or by a qualified analyst.
- b. Experience. An analyst must have a minimum of six months' laboratory experience with the analysis procedure(s) with documentation that acceptable results are achieved by the analyst (performance evaluation and quality control samples successfully analyzed).
- c. On-the-Job Training. During on-the-job training to fulfill the requirement for experience, data produced by the analyst shall be deemed acceptable when validated and reviewed by a qualified analyst and/or laboratory supervisor.

2. Microbiological Procedures

- a. Academic Training. An analyst must have a minimum of a bachelor's degree in science or four years' experience in a related field. He or she must have training in water analyses for total coliform and fecal coliform, a minimum of a high school diploma, or the equivalent, and satisfactory completion of a short course or structured in-house equivalent on the proper techniques of analysis.
- b. Experience. An analyst must have a minimum of six months' experience in microbiological analysis and techniques.

3. Radiological Procedures (Gross Alpha, Gross Beta, and Specific Radionuclides)

- a. Academic Training. An analyst must have a minimum of a high school diploma or equivalent, plus specialized training in standards and sample preparation, instrument calibration, calculations, and data handling.
- b. Experience. An analyst must have a minimum of six months of on-the-job training. An analyst may assist in routine sample preparation and radioanalytical procedures provided that the work is supervised and validated by a qualified analyst and/or laboratory supervisor.

4. Biomonitoring Procedures

- a. Academic Training. An analyst must have a minimum of a high school diploma, or the equivalent, and documented training by a qualified analyst. EPA video training tapes should be utilized where available.
- b. Experience. An analyst must have six months of on-the-job training with documentation of acceptable results from standard reference toxicant tests performed by the analyst.

c. On-the-Job Training. During on-the-job training to fulfill the requirements for experience, data produced by the analyst shall be deemed acceptable when validated and reviewed by a qualified analyst and/or laboratory supervisor.

G. Information on the relevant qualifications, training, and experience of the technical staff shall be maintained by the laboratory.

H. The laboratory shall provide additional training as needed in order to keep personnel current with new procedures, changes in existing procedures, and/or equipment changes or improvements.

New Jersey

7:18-2.10 Environmental laboratory personnel requirements

(a) A certified environmental laboratory shall employ qualified personnel who possess the education, training, and experience required under this section. The laboratory shall maintain current employee records that include a resume and college transcript documenting each employee's training, experience, duties, and dates of relevant employment. The laboratory shall include at least the following personnel:

1. An environmental laboratory manager, who shall be the individual in responsible charge of the laboratory;
2. One or more supervisors, who shall be qualified in accordance with the applicable provisions of (b) below to perform the tests and analyses within the Category or Categories for which the environmental laboratory is certified, or seeks certification. The environmental laboratory manager may also serve as a supervisor provided that the manager meets the qualifications for supervisor;
3. A Quality Assurance (QA) officer. For a laboratory that is certified or seeks to be certified in any of Categories CLP01 through 6, the QA officer shall meet the applicable requirements of (b)9 below. For any other laboratory, the QA officer shall meet the applicable requirements of (b) below for a supervisor in any Category, provided however, that an individual who meets only the requirements for a supervisor in the Categories listed in (b)2 below may serve as the QA officer only in those Categories; and
4. If required under (b) below, technical support staff, who shall be qualified in accordance with the applicable provisions of (b) below for the tests and analyses within the Category or Categories for which the environmental laboratory is certified, or seeks certification.

New York

Each environmental laboratory shall appoint one or more technical directors, who shall be full-time members of the laboratory's staff, and who shall exercise actual day-to-day supervision of laboratory operations, including the reporting of results. The designation of a lead technical director shall be documented; and each technical director shall have the requisite credentials and experience for an area of analysis, such as microbiology, organic chemistry, inorganic chemistry, and radiochemical analysis, and shall supervise only the areas of environmental analysis for which he or she meets the qualifications specified in this item.

Responsibilities A technical director's responsibilities shall include, but not be limited to, development and implementation of a quality system, including: monitoring standards of performance in quality control and quality assurance; monitoring the validity of analyses performed and data generated to ensure reliable data; ensuring that sufficient numbers of qualified personnel are employed to supervise and perform the work of the laboratory; and providing educational direction to laboratory staff.

Pennsylvania

252.301. Laboratory supervisor.

(a) The Department will consider the laboratory supervisor of an environmental laboratory as the individual listed on the laboratory's application for accreditation for which the Department has reviewed and approved the individual's qualifications.

(b) Testing, analysis and reporting of data by an environmental laboratory shall be under the direct supervision of a laboratory supervisor.

(c) The laboratory supervisor shall certify that each test or analysis is accurate and valid and the test or analysis was performed in accordance with all conditions of accreditation. A laboratory supervisor may certify a test or analysis by signing the final laboratory report. A laboratory may use other mechanisms to certify a test or analysis, provided the mechanism is documented in the laboratory quality manual.

(d) The laboratory supervisor shall ensure that the records required by this chapter are maintained.

(e) The Department may disqualify a laboratory supervisor who is responsible for the submission of inaccurate test or analysis results.

(f) The Department will disqualify a laboratory supervisor convicted of any crime or offense related to violations of State or Federal laws or regulations related to the provision of environmental laboratory services or reimbursement for the services.

(g) An environmental laboratory may appoint one or more laboratory supervisors for the appropriate fields of accreditation for which they are seeking accreditation.

(h) An environmental laboratory shall designate another staff member meeting the qualifications of a laboratory supervisor and who is approved by the Department as described in subsection (a) to temporarily perform this function when a laboratory supervisor is absent for a period of time exceeding 21 consecutive calendar days. If this temporary absence exceeds 30 consecutive calendar days, the environmental laboratory shall notify the Department in writing under § 252.708 (relating to reporting and notification requirements).

Virginia

"Technical manager (however named)" means the person who has overall responsibility for the technical operation of the environmental laboratory and who exercises actual day-to-day supervision of laboratory operation for the appropriate fields of testing and reporting of results. The title of this person may include but is not limited to laboratory director, technical manager, laboratory supervisor, or laboratory manager.