The NELAC Institute (TNI) Position Statement

The Quality Systems Approach to Accreditation

All Environmental Laboratories, Field Sampling and Measurement Organizations, Proficiency Test Providers, Proficiency Test Provider Accreditors and Accreditation Bodies should conduct their operations according to and be evaluated and accredited using a quality systems approach. As defined in the TNI standards, a Quality System is "A structured and documented management system describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for ensuring quality in its work processes, products (items), and services. The quality system provides the framework for planning, implementing, and assessing work performed by the organization and for carrying out required quality assurance (QA) and quality control (QC) activities." (EL-V1M2-ISO-2016-Rev2.1: *Quality Systems General Requirements)*

INTRODUCTION

Virtually all environmental measurement activities in the United States originate with the federal, state or tribal statutes and regulations. Historically, these regulations have focused on efforts to ensure consistency and technical competence among organizations that conduct these activities by requiring adherence to specified testing protocols. While this approach can serve environmental data needs in a narrow context, the broader need for data of known and documented quality, customer service and quality improvement demands a more comprehensive approach to quality in the environmental testing community.

BENEFITS OF A QUALITY SYSTEM

A quality system benefits the environmental laboratory or sampling organization, its customers and the end-users of environmental data by helping to ensure the organization has the managerial, human, physical and technical resources to consistently produce data of known and documented quality in support of decisions that affect the environment and public health. An effective quality system provides confidence as to the consistency, effectiveness and efficiency of the organization. It establishes the overarching principles that guide all other quality assurance and quality control practices, which, when integrated with the applicable technical and analytical specifications, will meet the needs of all interested parties. Furthermore, organizations that support, oversee, or accredit environmental laboratories or sampling organizations will also benefit in similar fashion by instituting a quality system.

An effective quality system can be implemented by an organization of any size. Ultimately, having such a system will reduce errors that can jeopardize compliance. The result of adopting the principles and practices of a quality system such as the TNI Standard is improved standardization of operations and data quality with increased confidence in the safeguarding of public health and the environment.

Once an organization implements a quality system, it is then a fairly easy step to become accredited to the TNI Standard. Taking this next step will provide the following benefits to organizations and oversight bodies:

- Formal recognition of testing competence from an authoritative independent body;
- National recognition for data produced that is of a known and documented quality;
- Continued compliance with requirements through external assessment of the laboratory's implemented quality system;
- Identification and management of risks for laboratory capability and products/data through internal assessments performed by the laboratory;
- A marketing advantage for commercial laboratories; and
- Consistency among accreditation bodies.

RECOMMENDATIONS

- TNI's standard is an essential element of an accreditation system which provides the laboratory, field sampling and measurement organization, proficiency test providers, Proficiency Test Provider Accreditors, client, regulator, or accreditation body with confidence in an organization's data.
- TNI will continue to promote the adoption of its quality system standards and principles by all environmental testing organizations regardless of accreditation status.
- TNI will continue to encourage state regulatory agencies and laboratory clients to require testing organizations to adopt quality systems.
- TNI will continue to create tools and training to facilitate documentation and implementation of quality systems.

ACKNOWLEDGEMENTS

TNI Quality Systems Committee

TNI Advocacy Committee

RESOURCES

The Benefits of Laboratory Accreditation, Judy Morgan, Environmental Science Corporation, January, 2009; Presented to the Forum on Laboratory Accreditation in Miami, FL

How NELAC Accreditation Improves Laboratory Operations, Nan Thomey, Presented at the TCEQ Trade Fair, May 2010

TNI EL-V1M2-ISO-2016-Rev2.1: Quality Systems General Requirements, February 22, 2016

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