TECHNICAL EXCHANGE

MEASUREMENT TRAINING PROVIDED BY NCSL INTERNATIONAL

February 26-28, 2018

The Florida Hotel & Conference Center| Orlando, FL

1500 Sand Lake Road, Orlando, Florida 32809 | 1-800-588-4656

TE-10 | Tuesday & Wednesday, February 27 & 28 | 8:00 AM - 5:00 PM | 2-Day (16 Hours)

Course Title: Measurement Decision Risk for Conformity Assessment

Instructor: Scott Mimbs, American Association for Laboratory Accreditation (A2LA)

Track: Quality Management

Course Description:

This 2-day course provides the information needed to evaluate the decision risk for measurements used in conformity assessments and to develop decision rules that mitigate the risks. The technical and mathematical details are based on International standards and internationally accepted practices. There is a focus on metrology's influence throughout a product's lifecycle, and where key elements reside within the Quality Management System (QMS), specifically ISO 9001:2015 and AS9100D. This course provides the background and details for meeting the 2 % risk requirements of ANSI/NCSL Z540.3-2006 and the decision rule additions to ISO/IEC FDIS 17025.This information can be used to strike a balance between the cost of reducing the likelihood and the cost of negative consequences resulting from an incorrect measurement-based decision.

Course Content:

1. The basics of metrology, measurements, and risk;
2. Essential elements of "good" measurement data within the QMS;
3. Basic probability;
4. Concepts of measurement risk – consumer, producer, specific, global;
5. Influences on the general risk model;
6. Achieving acceptable risk levels – methods and decision rules

Learning Objectives:

After successful completion of this course, attendees will be able to:

1. Recognize key elements of metrology within the QMS;
2. Describe how the two types of decision risk may impact their business;
3. Recognize Specific and Global risk requirements specified in standards and how implementation differences may impact business costs;
4. List the four basic components of the General Risk Model and how each individually influences the model; and
5. Apply techniques that balance the cost of metrology with the desired level of decision risk within a decision rule.

Prerequisite:

1. Be familiar with measurement principles and techniques;
2. Have a functional understanding of the principles of measurement uncertainty;
3. Have received training in engineering, science, or mathematics; and
4. Have a basic understanding of calculus, algebra, and statistics.