UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

November 17, 2015

MEMORANDUM FOR: RMAP Participants and Laboratory Directors

From: Georgia L. Harris, Laboratory Metrology Program
Office of Weights and Measures

Subjects: 2016 Regional Measurement Assurance Programs (RMAP) Training

2016 Regional Measurement Assurance Program (RMAP) Training

Handbook 143, Program Handbook details the criteria used for OWM Laboratory Recognition. **NIST Handbook 143, Section 5.2, Table 2 notes that annual attendance at the RMAP training session is required for ongoing laboratory Recognition.** In addition, participation in ongoing RMAP proficiency tests (PTs) requires completion of training requirements to the designated level and attendance at the annual RMAP training sessions.

The 2016 Regional Measurement Assurance Program (RMAP) training events have been scheduled as noted in the table below. Training topics (see attached detailed agenda and abstracts) are selected based on annual needs assessments; input is obtained during laboratory assessments, annual reviews of submitted data, laboratory requests, and input at prior regional training events.

Schedules and Locations:
The schedule, location, and contact host for each of the RMAP training is listed below. The agenda and detailed learning objectives are in the following sections. NIST will provide training content. Local hosts will provide details on hotel and local registration logistics as each training event approaches.

Region	Dates	City, State (*City may change*)	Host Contact
SEMAP	April 11 to 14, 2016	Richmond, VA	William Loving william.loving@vdacs.virginia.gov 804-786-0479
CaMAP (NCSLI)	April 18 to 21, 2016 (April 22, 2016)	Puerto Rico	Jose Torres jatorres@nist.gov 787-319-6174
WRAP	May 2 to 5, 2016	Los Angeles, CA	Lina Ng lng@acwm.lacounty.gov 562-622-0419
NEMAP	September 19 to 22, 2016	Concord, NH	Tim Osmer timothy.osmer@agr.nh.gov 603-271-0894
SWAP	October 3 to 6, 2016	Austin, TX	Lisa Corn lisa.corn@TexasAgriculture.gov 979-542-3231
MidMAP	October 17 to 20, 2016	Columbus, OH	Dan Walker daniel.walker@agri.ohio.gov 614-728-6290

Registration:

TWO registrations are required for each event (first with OWM and second with the local host). 1) The OWM Contact System is used to generate attendee registration lists, name tags/tent cards, adequate training materials, and training certificates. The registration list is shared with each host. 2) R*egistration fees* for the RMAP training are determined and collected by the local hosts. Every effort is made to keep registration fees to a minimum. Specific details about registration will be sent with information for each RMAP.

Agenda at a Glance

Sessions will be held from 8:00 am to 5:00 pm each day. Successful completion requires full attendance, participation in group activities, and familiarity with laboratory recognition/accreditation requirements in ISO/IEC 17025, and having required laboratory documents on-hand at the RMAP event for activities and case studies that are noted with applicable topics to obtain a training certificate. Be especially careful to note the documents that are requested to be *submitted in advance* and/or *brought to the training*! Electronic versions are acceptable, but reliance on WiFi availability is discouraged.

Monday	**Tuesday**	**Wednesday**	**Thursday**
Laboratory Staffing (5.2)	Round Table (Lab Reports: 5.2 through 5.6)	Care and Handling of Standards (5.8) (Val Miller)	Quality Management Systems (QMS) and Auditing the QMS (4.2, 4.3, 4.14)
Lunch	**Lunch**	**Lunch**	**Lunch**
Laboratory Designs and Renovations (5.3)	PT Reporting and Planning (5.9) Lab Visit (Val Miller)	Risk Management (New Standard)	Technical Auditing (4.14)

Abstracts and Learning Objectives

Numbers in parenthesis in the "Agenda at a Glance" refer to requirements in NIST Handbooks 143, 150, or ISO/IEC 17025. *Be sure to review these sections (4.2, 4.3, 4.14, 5.2, 5.3, 5.6, 5.8 and 5.9) prior to the training!*

Laboratory Staffing. OWM updated training courses and requirements will be reviewed. NCSLI Recommended Practice 17 on conducting and documenting on the job training will be reviewed and provided. Metrologists will review their laboratory documents such as the Quality Management System (QMS) that includes the Quality Manual, Associated Appendices, Administrative Procedures, Laboratory Developed Procedures, and records of training and on the job training for review during activities. Participants within each region will share examples used in their laboratories. At the end of this session, participants should be able to: 1) identify and describe training course availability, and training requirements for OWM Laboratory Recognition and ensure that laboratory documentation is complete and up to date; 2) review and create sample on the job training (OJT) outlines as a part of orienting a new employee; 3) share best practices in OJT; and 3) contribute insights for a working group outline related to metrologist hiring, probation, promotion, retention, and succession planning.

Participants must bring:
QMS with all training logs, training plans, administrative procedure on training, hiring criteria and job descriptions (with job descriptions to be collected for national assessment project).

Laboratory Designs and Renovations. We have had several sessions on Laboratory Design over the years, including at NCWM in 2002, and at the RMAP meetings in 2005 and 2009. Quite a number of metrology laboratories have been renovated or built since then and each time we cover this topic there are new "lessons learned". There are a number of NCSLI publications on laboratory design, selection of laboratory facility requirements, validation of laboratory environments, and reestablishing recognition or accreditation after a natural disaster or simply a move. Hear the latest lessons learned on laboratory design, vibration measurements, monitoring requirements and resources, as well as publications that are available to help you. Be prepared to identify laboratory design requirements, share your lessons learned, and apply good laboratory design concepts to renovation or building projects in your program. Specific metrologists within each region will be requested to present lessons learned (contact Georgia Harris if interested in presenting).

Laboratory Round Table. Laboratory round table sessions help to identify major trends and changes among the laboratory community. Each laboratory will present an oral report that focuses on changes and challenges related to facilities, equipment, standards, staffing, operations, and economic/workload issues. These items are covered in Handbook 143 and ISO/IEC 17025, Sections 5.2, 5.3, 5.4, 5.5, and 5.6. Specific follow up actions are identified.

PT Reviews and Planning. Proficiency testing results will be presented by the PT coordinators with analyses and corrective actions discussed among participants. Planning is done to ensure that every laboratory has a PT available to cover every area of their scope at least once every four years. PT Plans must be available for every laboratory and are a new Recognition and Accreditation Requirement (every recognized and/or accredited laboratory must have a PT Plan available for their Recognition and/or Accreditation Body). Participants will ensure that the regional plan meets their own laboratory requirements. Updated publications and new software analysis and applications will be presented and reviewed again to ensure effective application and review of proficiency testing reports. Highlights of observations from the 2015 annual submission technical analysis will be presented as well.

Laboratory Visit/Assessment. Participants will be provided explicit guidance to observe specific laboratory components and identify at least one best practice or idea to implement in their own lab and/or to share with the host.

Care and Handling Field Standards and PT Standards. This session will review the available documentation regarding the care and handling of laboratory and field standards related to receipt, equilibration, cleaning, sealing, storage, packing, shipping, and other methods for return to the customer. It will include a collection of guidance documents obtained from participants in advance. These topics are generally not covered in detail during the NIST OWM training seminars and have been identified as a gap and are often requested. (This will not be about: purchasing, supplier evaluation, measurement assurance, calibration intervals, and contract review.) Participants will be able to describe, and later implement best practices for care and handling of laboratory standards, field standards, and PT standards, identify risks or points of failure in correct handling, and for providing instructions to laboratory customers. Participants will also create an OJT plan for sharing care and handling instructions with a new laboratory employee.

> **Participants should <u>submit where available</u>**: examples of care and handling instructions provided or posted for laboratory customers to Val Miller by **January 16, 2016**.

Risk Management. The new ISO 9001:2015 standard incorporates a philosophy of risk management. The new ISO/IEC 17025 standard is now being developed and will include both a complete reorganization of content and a risk management approach and philosophy. A second draft of the ISO/IEC 17025 standard is expected early in 2016. Normally, laboratories have a two-year window to implement updated standards as a part of Recognition and Accreditation. An orientation on Risk Management will be provided in 2016 with additional details and instructions provided in 2017, in anticipation of the need to implement new laboratory requirements. Participants will be able to describe risk management concepts and philosophies, identify laboratory risks, will be able to describe and use tools related to risk management including prioritization of risks, and will be able to begin identifying risk management concerns to managers as a part of the laboratory's annual Management Review.

Quality Management Systems (QMS) and Auditing the QMS. This interactive and hands-on session will include review of OWM provided guidance and best practices for conducting a quality audit of the laboratory QMS. Participants will review their own laboratory documents, with specific case studies touching on staffing and training, document references and master lists, and other guidance that will be provided based on identified nonconformities during laboratory assessments from Accreditation Bodies and OWM annual reviews. At the end of this session, participants will have identified specific corrective, preventive or improvement action items related to their own laboratory documentation.

> **Participants must bring:** All laboratory documents that comprise the Quality Management System (QMS) including the Quality Manual, Associated Appendices, Administrative Procedures, Laboratory Developed Procedures, Work Instructions, Forms, and Corrective Action Logs. Be sure to include any forms or supplemental instructions for conducting a quality audit.

Technical Auditing. This session will include a best practices overview of technical auditing methods, supplemented by participants within each region sharing examples from their laboratories. (Contact Georgia Harris if interested in sharing.) Participants will identify requirements for conducting technical audits, describe approaches that can be used and share/compare their own approach to the various methods that are presented, and create a list of corrective or improvement actions that they can take regarding technical auditing. Participants will also create an OJT outline for teaching a new staff member how to conduct a technical audit.

> **Participants must bring:** As a part of bringing the laboratory QMS, ensure that all procedures and forms used for conducting a technical audit (not just the quality audit) are included.