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Laboratory Metrology Updates

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Handbook 105-1, Specifications and Tolerances for Field Standard Weights

An updated draft of NIST Handbook 105-1 for field mass standards is now posted for review in the OWM Contacts System (described later). One day of training at each of the 2013 Regional Measurement Assurance Program (RMAP) events will cover the proposed updates and training on several of the concepts that are now being proposed. One key aspect to consider is that the 1990 version of Handbook 105-1 only covers one class of weights (Class F) and they are not suitable for all weights and measures applications. For example, Class I and II balances and scales require mass standards with tolerances that are tighter than the 1990 Class F tolerances. The United States is moving toward harmonization with OIML R 111 in this version as well, with the additions needed to support U.S. Customary units and the “3s” (i.e., 3 lb, 300 g, and so on). We expect work to proceed on a second draft of this handbook AFTER all 2013 RMAPs are held.

Handbook 105-7, Specifications and Tolerances for Dynamic Small Volume Provers

An updated draft of NIST Handbook 105-7 for small volume provers (SVP) is posted for review. There are two aspects of this update to consider. One aspect is that a number of updates are being proposed for the traditional SVPs that were originally addressed in this handbook, based on laboratory experience in performing calibrations (which was not the case when the handbook was first published) and the use of SVPs in field testing.

The second aspect that is being proposed in this draft is the inclusion of specifications and requirements (or exceptions) as suggested for the newer technology often called Closed Loop Provers (CLP). The Alternative Test Methods working group and laboratory subgroup have been discussing these topics for some time now. A question is proposed on the cover page of the draft document which provides an opportunity to provide input on whether you think this new technology should be included in this handbook or whether a separate addendum or completely new handbook should be developed for alternative technologies.

We expect work to proceed on this project after field testing comparisons have evaluated and demonstrated suitability and acceptability of alternative test methods.

Process for Submitting Comments on NIST 105-x Handbooks

1. Obtain a user account and log-in password for the OWM Contacts System (if you don't already have one): <https://tsapps.nist.gov/WMD/default.aspx>
2. Process to Download and review the draft documents:

To get the Draft HB 105-1 and 105-7 documents, login to the OWM Contacts System and:

- Select **My Items** (top menu)
- Scroll down to the document and press **REQUEST**
- Press **SUBMIT**
- Press **DOWNLOAD**

3. Process to Submit comments:

To comment on the document, login to the OWM Contact System and select:

- **My Comments** (top menu)
Submit a Comment (above list; in the middle of the screen)
Select the document (button on left next to Documents in list)
Enter Section, Page, Comment, and Press **CONTINUE** (at bottom)
Either **EDIT** or **SUBMIT** (at bottom)

SOP 18 Podcast and SOP Job Aids

Val Miller recently produced a training podcast for the calibration of a five- gallon graduated neck test measure using a slicker-plate type standard and Standard Operating Procedure (SOP) 18. It is posted as a “job aid” with SOP 18 on the Calibration Procedures area of the OWM website. The video instructs you to read SOP 18 and 19 prior to watching the video. See: <http://www.nist.gov/pml/wmd/labmetrology/sops.cfm>. While you are checking out the podcast, you can also review the updated spreadsheets from OWM (as used in our seminars) and from Dan Wright (Washington) that are posted with the other SOPs for calibrations. Be sure to validate any of these spreadsheets prior to use in your laboratory! And of course, be sure to provide us with your feedback.

Requests for additional information regarding these items can be address to Georgia Harris at gharris@nist.gov or Val Miller at val.miller@nist.gov.