NIST WMD update presentation for NISA October, 2010

NIST Reorganization:

The National Institute of Standards and Technology (NIST) is being called on to address high-visibility technical issues such as the U.S. Electricity Smart Grid, Health IT, advanced manufacturing, and stronger cyber security. It is an important element for NIST's mission to help accelerate innovation and economic growth at a time when the U.S. urgently needs to create high-wage jobs.

NIST's last major reorganization occurred 20 years ago and since then our responsibilities and our programs have changed substantially. The operational entities within NIST have also evolved and more than doubled in number during that time. These organizational units (OUs) have increased from 7 to 18 (including all laboratory units, extramural programs, administrative units, and the director's office). This extended organizational profile of our agency makes it difficult to achieve larger goals that extend across organizational lines. This type of structure also puts too much centralized responsibility in the Director's office for day-to-day operational management.

The goal of this reorganization is to make NIST both more effective by moving more operational decisions down to program experts who are intimately involved with the individual programs. This restructuring will not include any reduction in staff.

The complete reorganization proposal was first submitted to the Department of Commerce and the Office of Management and Budget for review. Relevant committees in Congress were also consulted. An announcement was made on July 22, 2010 that the proposal to realign NIST's laboratory structure was approved by Congress.

The new laboratory structure will include the current two facility organizational units--the Center for Nanoscale Science and Technology and the NIST Center for Neutron Research and will combine the remaining 8 laboratory OUs into four new units.

1. Material Measurement Laboratory
2. Physical Measurement Laboratory
3. Engineering Laboratory
4. Information Technology Laboratory

NIST Weights and Measures Division (WMD) will be placed within the Physical Measurement Laboratory currently under the direction of Katharine Gebbie.

The first phase of this effort is a change in the organization of the Director's Office and senior executive management for NIST. This part of the realignment replaces the previous deputy director position with three Associate Director positions.

1. The Associate Director for Laboratory Programs will oversee the NIST technical laboratory programs and functions and will serve as the principal deputy if the director is unavailable.
2. The Associate Director for Innovation and Industry Services will coordinate externally focused programs:

   - The Technology Innovation Program;

   - Manufacturing Extension Partnership and;

   - Baldrige National Quality Program.
3. The Associate Director for Management Resources will direct all support services and business operations at NIST.

Vacancy announcements for these three positions have been posted and a national search for candidates will be conducted over the next several months.

NIST WMD Budget

The 2011 fiscal year's budget has not been established as we are expecting to operate under a continuing resolution. WMD will set spending levels based on last year's budget. The Weights and Measures Division will remain solvent by maintaining a hold on future costs of operating and by careful planning and judicious spending.

NIST WMD staffing changes

Position held by Dick Suiter (retired) has been unfilled since February 2008. Vacancy had been posted and was officially closed on June 23, 2010. Following an unsuccessful attempt to secure a pool of acceptable candidates, the position has now been re-posted and the application and interview process will soon follow.

U.S. National Work Group (USNWG) on Belt-Conveyor Scales (BCS)

The USNWG on BCS was the source of several significant amendments to the 2009 NIST Handbook 44 Belt-Conveyor Scale Code. Included were changes that clarified the actions taken as a result of zero tests and material tests. These changes were incorporated in the HB44 BCS Code and were largely received as beneficial to operators, service & regulatory personnel.

The USNWG is currently working to establish requirements within HB44 Belt-Conveyor Scales Code that apply to the definition of an acceptable zero condition for belt-conveyor scale systems and for the consistency/uniformity of the belt in use in these systems.

An Examination Procedure Outline (EPO) has been developed and is now ready for use by anyone performing evaluations on these devices. A copy of the newly updated EPO can be obtained by contacting John Barton – NIST WMD, or by going to the WMD website at www.nist.gov/owm.

The previous three meetings of the USNWG on BCS along with the National Type Evaluation Technical Committee (NTETC) Belt-Conveyor Sector meetings have been held in conjunction with the National Weighing and Sampling Association (NW&SA) conference each February in Saint Louis. It is anticipated that the 2011 meeting will follow the same venue. For more information on the upcoming meeting, go to the NW&SA website at http://www.nwsassn.org/ or contact John Barton (NIST).

Seafood Forum / Discussion

A presentation by the National Fisheries Institute was given during the NCWM Interim meeting in January 2009 which addressed the growing problem of economic fraud in the seafood industry.

On May 28, 2009, a forum was held at NIST in Gaithersburg, Maryland to discuss the problem and possible solutions for short net weight fraud occurring in the seafood industry. The types of fraud identified include trans-shipping to avoid customs duties, species substitution, over treating to increase water content, adding excessive ice to increase weight and short weighing. In addition discussions included ways to increase collaboration between federal agencies.

The meeting was attended by 30 participants representing a number of Federal Agencies including Food and Drug Administration (FDA), National Marine Fisheries Service (NMFS), and the U.S. Department of Agriculture (USDA). Also attending the forum were several state weights and measures officials, trade association representatives, and representatives from the seafood industry

A direct outcome of this forum was a training program provided to state weights and measures officials by NIST WMD. The states were expected to use the training to conduct inspections involving packaged seafood products. Results of these inspections were to be provided to Judy Cardin, Chief of Weights and Measures in Wisconsin and the coordinator of the investigation.

NIST WMD has received a number of inquiries from industry regarding proper testing methods of packaged seafood products indicating a desire for better understanding of acceptable practices.

A follow-up Seafood Forum was held on Sunday July 11, 2010, with 40 industry and regulatory officials in attendance including representatives of the National Oceanic and Atmospheric Administration (NOAA), the National Marine Fisheries Services (NMFS) Seafood Inspection Program (SIP) and the National Fisheries Institute. The forum was mainly directed at problems found in the practice of packaging glazed seafood products.

David Sefcik - NIST WMD, informed the group that although the primary focus of the investigation was related to ice glaze, many variables in a complete packaging system contribute to short net weight including packer controls, weighing accuracy, tare and product distribution; and each of these variables should be examined.

Please direct comments and questions regarding the seafood forums to:

David Sefcik
National Institute of Standards and Technology
Weights and Measures Division
Laws and Metric Group
Stop 2600
Gaithersburg, Maryland USA 20899-2600
301 975 4868
dsefcik@nist.gov

NIST Handbook 44 Updates

General Code - no changes

Scales Code:

1. **Specification and Tolerance committee (S&T) item 320-2**

S.2.1.1. General (Zero) and Appendix D Definitions for Automatic Zero Setting Mechanism and Automatic Zero-Tracking Mechanism

Many scales are equipped with an automatic zero-setting mechanism (AZSM) feature that is typically disabled for the U.S. marketplace; however some devices have been entering the U.S. market with this feature enabled. This feature is not addressed or defined in HB 44, and is not listed on NTEP CCs. Additionally, HB 44 does not clearly state that this function is not allowed.

While AZSM is permitted under OIML R76, (International Recommendations for Nonautomatic Weighing Instruments), its operation is allowed only when the indicated

values are below zero. Some devices submitted through the National Type Evaluation Program (NTEP) have been found to be capable of automatically rezeroing the device when the indicated value is above or below zero. This feature is viewed as not having any value in the U.S. marketplace and can potentially facilitate inaccurate weight determinations against either the buyer or the seller.

The intent of this proposal is to retroactively prohibit the use of this feature.

S.2.1. Zero-Load Adjustment.

S.2.1.1. General. – A scale shall be equipped with means by which the zero-load balance may be adjusted. Any loose material used for this purpose shall be enclosed so that it cannot shift in position and alter the balance condition of the scale.

Except for an initial zero-setting mechanism, an automatic zero adjustment outside the limits specified in **S.2.1.3. Scales Equipped with an Automatic Zero-Tracking Mechanism** for an automatic zero-tracking mechanism is prohibited.
(Amended 2010)

This proposal also moves the definition for "automatic zero-tracking (AZT) mechanism" as a stand-alone definition. This stand-alone definition serves to distinguish the subtle differences between AZT and automatic zero-setting mechanism-. The definitions of other methods of zero adjustment features have been located under the broad heading "zero-setting mechanism" as follows:

automatic zero-tracking (AZT) mechanism. Automatic means provided to maintain the zero balance indication, within specified limits, without the intervention of an operator. [2.20, 2.22, 2.24]

(Amended 2010)

zero-setting mechanism. Means provided to attain a zero balance indication with no load on the load-receiving element. The types of zero-setting mechanisms are:[2.20, 2.22, 2.24]

automatic zero-setting mechanism (AZSM). Automatic means provided to set the zero-balance indication without the intervention of an operator.[2.22]
(Added 2010)

automatic zero-tracking (AZT) mechanism. See "automatic zero-tracking (AZT) mechanism."[2.20, 2.22, 2.24]

initial zero-setting mechanism. Automatic means provided to set the indication to zero at the time the instrument is switched on and before it is ready for use.[2.20]
(Added 1990)

manual zero-setting mechanism. Nonautomatic means provided to attain a zero balance indication by the direct operation of a control.[2.20]

semiautomatic zero-setting mechanism. Automatic means provided to attain a direct zero balance indication requiring a single initiation by an operator.[2.20]

(Amended 2010)

2. S&T item 320-3

T.N.4.5.1. Time Dependence: Class II, III, and IIII, T.N.4.5.2. Time Dependence: Class III L, and T.N.4.5.3. Zero Load Return: Non-automatic Weighing Instruments

Following changes to HB 44, Section 2.20 paragraph T.N.4.7. (Creep Recovery for Load Cells During Type Evaluation), it was believed that the increased tolerance for Class III load cells could result in the rejection of scales that incorporate these load cells if the creep recovery requirements for scales in T.N.4.5.1. and T.N.4.5.2. were not brought into alignment.

A new paragraph was added (T.N.4.5.3.) as shown below which incorporates elements extracted from T.N.4.5.1.(c) and T.N.4.5.2.(c) regarding the deviation on return to zero (creep recovery) requirements. This new paragraph reflects the adopted changes in the tolerance values for Class III devices with more than 4000 divisions.

T.N.4.5.3. Zero Load Return: Non-automatic Weighing Instruments. – A non-automatic weighing instrument shall meet the following requirements at constant test conditions. During type evaluation, this test shall be conducted at 20 °C ± 2 °C (68 °F ± 4 °F). The deviation on returning to zero as soon as the indication has stabilized, after the removal of any load which has remained on the instrument for 30 minutes shall not exceed:

(a) 0.5 e for Class II and IIII devices,

(b) 0.5 e for Class III devices with 4000 or fewer divisions,

(c) 0.83 e for Class III devices with more than 4000 divisions, or

(d) one-half of the absolute value of the applicable tolerance for the applied load for Class III L devices.

For a multi-interval instrument, the deviation shall not exceed 0.83 e_1 (where e_1 is the interval of the first partial weighing range or segment of the scale).

On a multiple range instrument, the deviation on returning to zero from Max_i (load in the applicable weighing range) shall not exceed 0.83 e_i (interval of the weighing segment). Furthermore, after returning to zero from any load greater than Max_1

(capacity of the first weighing range) and immediately after switching to the lowest weighing range, the indication near zero shall not vary by more than e_1 (interval of the first weighing range) during the following 5 minutes.
(Added 2010)

3. S&T Item 320-4

UR.2.6. Approaches

This proposal is intended to provide clear guidelines for the width and length and a level plane for approaches at temporary vehicle scales installed for a period of six months or less.
Amend Scales Code paragraph UR.2.6.1. as follows:

UR.2.6. Approaches.

UR.2.6.1. Vehicle Scales. *– On the entrance and exit end(s) of a vehicle scale, there shall be a straight approach as follows:*

(a) the width at least the width of the platform,

(b) the length at least one-half the length of the platform but not required to be more than 12 m (40 ft), and

(c) not less than 3 m (10 ft) of any approach adjacent to the platform shall be in the same plane as the platform. Any slope in the remaining portion of the approach shall ensure (1) ease of vehicle access, (2) ease for testing purposes, and (3) drainage away from the scale.

In addition to (a), (b), and (c), scales installed in any one location for a period of 6 months or more shall have not less than 3 m (10 feet) of any approach adjacent to the platform constructed of concrete or similar durable material to ensure that this portion remains smooth and level and in the same plane as the platform; however, grating of sufficient strength to withstand all loads equal to the concentrated load capacity of the scale may be installed in this portion.
[Nonretroactive as of January 1, 1976]
(Amended 1977, 1983, 1993, 2006, and **2010**)

The previous language in HB 44 paragraph UR.2.6.1. could be misinterpreted such that it was not clear that approaches for temporary vehicle scales required the same approach requirements (except for the concrete construction material) as permanently installed scales. The 2010 S&T Committee agreed that it was the intent of the S&T Committee in 1975 that suitable approaches are needed to address safety, access for testing, and scale maintenance/preservation issues when the proposal to add UR.2.6.1. was adopted.

BELT-CONVEYOR SCALE SYSTEMS

1. S&T Item 321-1 (Developmental)

N.3.1.3. Check for Consistency of the Conveyor Belt Along Its Entire Length

The U.S. National Work Group on Belt-Conveyor Scales has determined that the current language in HB44 Section 2.21, paragraph N.3.1.3. results in an excessive allowance for the variation of the indicated totalized load with no load on the belt for a BCS with larger minimum division sizes. Conversely, the current allowance of +/- three divisions can impose an excessively narrow restriction for belt-conveyor scales with smaller minimum divisions. The proposed amendment would correct the issue and make the allowable variation independent of division size.

The latest discussions among a sub-group addressing this matter have centered on replacing the tolerance of +/- three divisions with a percentage that would be based on the amount of totalized load delivered in a single revolution of the belt. The group is still debating the exact language and percentage value in the development of this item. The requirement as it exists in the 2010 edition of HB44 is shown below.

N.3.1.3. Check For Consistency of the Conveyor Belt Along Its Entire Length. – After a zero-load test with flow rate filtering disabled, the totalizer shall not change by an amount greater than plus or minus 3.0 scale divisions (± 3 d) from its initial indication during one complete belt revolution.
(Added 2002) (Amended 2004)

In the most current form the amendment would appear as the following:

N.3.1.3. Check for Consistency of the Conveyor Belt Along Its Entire Length. – During a zero-load test, the total change indicated in the totalizer during one revolution of the belt shall not exceed 0.12% of the minimum test load for the system as defined in paragraph N.2.3. Minimum Test Load. The end value of the zero-load test must meet the ± 0.06 % requirement of paragraph N.3.1.2. Test for Zero Stability
(Added 2002) (Amended 2004 and 201X)

AUTOMATIC BULK-WEIGHING SYSTEMS

1. S&T Item 322-1

S.2.1. Zero-Load Adjustment

As mentioned earlier, the proposal to establish requirements for an "automatic zero-setting" feature in the Scales Code was adopted under S&T Item 320-2. During its discussions, the NTETC Weighing Sector Work Group recommended that the automatic zero-setting mechanism be prohibited for devices covered by Section 2.22. Automatic Bulk-Weighing Systems for the same reasons it should be prohibited in the Scales Code (i.e., incorrect net weight determinations may occur when unintentional and unobserved zeroing or tracking off of material that remains in a hopper between drafts).

The amended requirement will appear in the 2011 HB44 as seen below:

S.2.1. Zero-Load Adjustment. – The weighing system shall be equipped with manual or semiautomatic means by which the zero-load balance or no-load reference value indication may be adjusted. ~~**An a**~~**A**utomatic zero-tracking **and automatic zero-setting** mechanism**s** ~~**is**~~**are** prohibited.
(Amended 2010)

AUTOMATIC WEIGHING SYSTEMS

1. S&T Item 324-1

S.2.1.3. Automatic Zero-Setting Mechanism

In order to maintain consistency in HB44 Codes with the previously mentioned requirements that have been adopted regarding automatic zero-setting mechanisms, the following change was made to the Automatic Weighing Systems Code. The intent of this amended proposal is to retroactively prohibit the use of this feature and align this Code with other HB44 changes already mentioned.

Amend HB 44 Section 2.24. Automatic Weighing Systems by amending paragraph S.2.1.1. as follows:

S.2.1.1. Automatic Zero-Tracking Mechanism. – Except for automatic checkweighers, under normal operating conditions the maximum load that can be

"rezeroed," when either placed on or removed from the platform all at once, shall be 1.0 scale division.

Except for an Initial Zero-Setting Mechanism, an automatic zero adjustment outside these limits is prohibited.
(Amended 2004 **and 2010**)

OTHER ITEMS

1. S&T Item 360-1

Tentative Code for Hydrogen Gas-Measuring Devices.

In order to provide manufacturers, users, and Weights and Measures officials with legal metrology requirements to address gaseous hydrogen refueling dispensers that are already in operation in 24 states, proposed HB44 Section 3.39 has been adopted. This ***tentative*** code is intended for trial or experimental status and is not intended to be enforced. The requirements are designed for study prior to the development and adoption of a final code.

NCWM

1. National Certification Program from the Professional Development Committee (PDC)

   The PDC is currently developing processes to certify regulators and service agents in areas of weights and measures competency. For states that require testing of service agents, this test can be used to demonstrate an agent's knowledge and could be used to waive additional testing by the individual states.
   The group is working towards the goal of offering exams and issuing certificates.
   The group's initial plan was to provide certification in the areas of:

   - retail motor fuel devices (completed), beta testing took place in spring 2010 and the program was launched in August 2010.

   - Tests are being developed for small capacity Class III scales, package checking, and vehicle tank meters.

2. Conformity assessment program – NTEP Committee

   The NCWM is firmly committed to a conformity assessment program which will ensure that devices produced will meet the same requirements after type evaluation

has been completed and the Certificate of Conformance (CC) has been issued. This program consists of three major elements:

- Certificate review:

  Although CCs are reviewed due to manufacturer's requests or reported findings of errors identified during field tests, the ideal situation would be a systematic and routine review of all CCs. More resources are needed for this to occur.

- Initial verification:

  Checklists have been developed for several device categories (small scales, vehicle scales, and retail motor-fuel dispensers) and data has been received on small capacity computing scales from several states. On-line forms have been developed for use by the participating states to report device deficiencies found in initial tests during field examinations.

- Verified conformity assessment program (VCAP)

  This program has been developed to protect the integrity of NTEP CCs which is a concern of NCWM and NTEP. The program has been launched with the initial focus being on load cells (LC) that are traceable to NTEP CCs. Manufacturers meeting this criterion have been notified.
  These load cells are evaluated to verify compliance with current Certificates. The VCAP process consists of the following basic steps:

  1. LC manufacturer to put VCAP quality management system in place.
  2. LC manufacturer to conduct audit by certified body.
  3. LC manufacturer to submit audit report to NTEP.

  Further information on the conformity assessment program may be found at: http://www.ncwm.net/

OIML Update

1. Revision of OIML R50-1 Continuous totalizing automatic weighing instruments (belt weighers)

   - Now in the form of a 3rd Committee Draft (CD).
   - U.S. Comments submitted in June 2010
   - TC9/SC2 meeting scheduled for 4/18/2011 at National Measurement Office (NMO) in Teddington, U.K.

2. Revision of OIML R60 - Metrological regulation for load cells

- Working draft is being formatted, and comments are being compiled.
- A Working Draft comprised of the 2000 edition formatted to the framework of OIML template is being circulated and comments on the formatting are being solicited.
- U.S. manufacturer participation for this revision is being sought.

3. Revision of OIML R106 - Automatic rail-weighbridges. Part 1 : Metrological and technical requirements – Tests

- Draft Recommendation (DR) of R106 - 1 has been circulated.
- Voting on the acceptance of the Draft Recommendation took place at the CIML meeting in Orlando in September 2010.
- The call for comments on the 4th CD of R106 – 2 (Test Report Format) has been made. Comments are due Nov. 30, 2010.

Further information may be obtained on any of the above topics by contacting:

John Barton
NIST Weights and Measures Division
Legal Metrology Devices Group
100 Bureau Dr.
Gaithersburg, MD.
20899 Mail Stop 2600
(301) 975-4002
john.barton@nist.gov

WMD Presentation to NISA

John Barton
Weights and Measures Division
October 4-5, 2010

Items of interest

- NIST WMD Update
- 2011 HB 44 Changes
- International (OIML)
- Other

NIST WMD Updates

NIST Reorganization:

- Last reorganization occurred 20 years ago
- Operational entities have more than doubled (7operational units to 18 currently)
- NIST must be in position to address current, high-profile concerns of the U.S.

Reorganization:

- Directors office able to shed centralized responsibility for day to day operations
- More operational decisions made at division levels
- Enable more effective communication across operational unit lines

Director

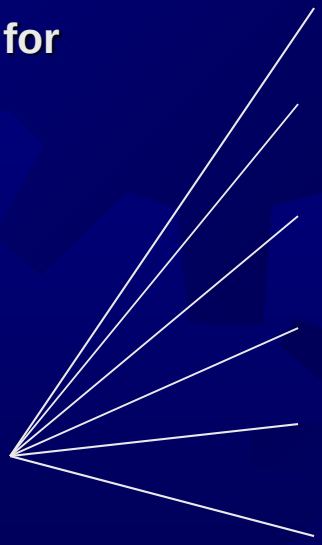
Executive Administration

Management and Organization
Administrative Support

Chief of Staff

Program Coordination Office
Public and Business Affairs Office
Congressional and Legislative Affairs Office
International and Academic Affairs Office

- **Associate Director for Management Resources**
- **Innovation and Industry Services**
- **Associate Director for Laboratory Programs**



Material Measurement Laboratory

Physical Measurement Laboratory

Engineering Laboratory

Information Technology Laboratory

Center for Nanoscale Science and Technology

NIST Center for Neutron Research

Physical Measurement Laboratory

- Weights and Measures
- NVLAP
- Semiconductor Electronics
- Atomic Physics
- Quantum Electrical Metrology
- Ionizing Radiation
- Time and Frequency
- Process Measurements
- Electron and Optical Physics
- Optoelectronics
- Optical Technology
- Electromagnetics
- Precision Engineering
- Quantum Physics

NIST WMD Budget and Staffing

- Continuing Resolution
- WMD will operate using 2010 FY budget
- Vacancy since February 2008 - posted

U.S. Work Group- Belt-Conveyor Scales

- Previous 3 meetings held in St. Louis
- Consists of manufacturers, users, servicing agents and regulatory personnel
- NIST Handbook 44 changes
  - Actions based on results of zero and material tests
  - Finalization of draft EPO for BCS
  - Currently working on defintion of zero condition and belt consistency requirements
- Revision of OIML R50 (Belt Weighers)

Seafood Forum

- Based on information from the National Fisheries Institute about fraud in industry
- May 2009, NIST hosted forum with trade associations, industy representatives, federal agencies, and state regulators
- Training program provided by NIST WMD
  - Ensured proper inspection practices by states
  - Inspection results have been forwarded to Judy Cardin – Wisconsin to be compiled and reviewed
- Follow up forum held in July 2010
- Contact: David Sefcik (NIST WMD)

NIST Handbook 44 Changes

Scales Code S.2.1. Zero-Load Adjustment

AZSM: Automatic Zero Setting Mechanism

- Use is not prohibited in 2010 HB44. Viewed as a potential source of fraudulent practice.
- Some devices have been found in use with AZSM enabled.
- Some have been submitted to NTEP that will function automatically above or below zero.
- Automatic zero adjustment outside limits of AZT is now prohibited (excluding initial zero setting mechanism).
- Changes to Appendix D: AZSM is defined, AZT has a stand-alone definition.

HB 44 Changes

Scales Code –

T.N.4.5.1. Time Dependence: Class II, III, and IIII, T.N.4.5.2. Time Dependence: Class III L, and T.N.4.5.3. Zero Load Return: Non-automatic Weighing Instruments

- T.N.4.7. (Creep Recovery for Load Cells During Type Evaluation) was amended in 2009 by increasing the tolerance for Class III load cells with more than 4000 divisions
- Scales that use this type of cells may be rejected when evaluated for creep recovery due to the increased tolerances for load cells
- Creep recovery tolerances for these scales have been increased to align requirements for these scales with the load cells they use

HB 44 Changes

Scales Code -

UR.2.6. Approaches, UR.2.6.1. Vehicle Scales

Previous language was unclear that temporary vehicle scale installations were to adhere to the same requirements for approaches as a permanent installation.

HB 44 Changes

Belt-Conveyor Scale Code – Developmental Item:

N.3.1.3. Check for Consistency of the Conveyor Belt Along Its Entire Length.

- Most current draft requires the totalizer reading to be held within ***0.12% of the minimum test load*** during one revolution.
- Replaces +/- 3 scale division tolerance for totalizer reading during a zero test with a percentage.
- More appropriate tolerance application for systems of varying belt lengths and sizes.

HB 44 Changes

Automatic Bulk-Weighing Systems

S.2.1. Zero-Load Adjustment

and

Automatic Weighing Systems

S.2.1.3. Automatic Zero-Setting Mechanism

Both requirements in these Codes were amended to reflect Scale Code change prohibiting the use of automatic zero-setting mechanisms

HB 44 Changes

Tentative Code for Hydrogen Gas-Measuring Devices.

- Section 3.39 adopted as a tentative Code.
- Systems already being used in 24 states.
- Primarily experimental/trial use – not intended for enforcement.
- Juana Williams (NIST WMD) leading effort.

National Conference on Weights and Measures Activities (NCWM)

Professional Development Committee (PDC)

- Developing criteria for certification of regulators and service agents.
- Goal is to offer exams and issue certificates on competency.
- Portion of program for retail motor fuel devices was launched August 2010.
- Under development is testing for small capacity Class III scales, package checking, and vehicle tank meters.

NCWM

Conformity assessment program – NTEP Committee

- Instituted to provide assurance that devices that are produced will meet same requirements after type evaluation.
- Three elements:
  - Certificate review
  - Initial verification
  - Verified conformity assessment program (VCAP)

NCWM

VCAP

"Production meets type"

- Initial focus on load cells having traceable NTEP Certificates.
- Manufacturers to institute a quality assurance program.
- Manufacturers to conduct an audit by certified body.
- Manufacturers to submit report of audit to NCWM.

Further information at: http://www.ncwm.net

OIML Update

Revision of OIML R50-1 Continuous totalizing automatic weighing instruments (belt weighers)

- Now in the form of a 3rd Committee Draft.
- U.S. Comments submitted in June 2010
- TC9/SC2 meeting scheduled for 4/18/2011 at National Measurement Office (NMO) – Teddington, U.K.

OIML Update

Revision of OIML R60 - Metrological regulation for load cells

- Working draft is being formatted, and comments are being compiled.
- A Working Draft comprised of the 2000 edition formatted to the framework of OIML template is being circulated and comments on the formatting are being solicited.
- U.S. manufacturer participation for this revision is being sought.

OIML Update

Revision of OIML R106 - Automatic rail-weighbridges. Part 1 : Metrological and technical requirements – Tests

- Draft Recommendation of R106 - 1 has been circulated.
- Voting on the acceptance of the Draft Recommendation took place at the CIML meeting in Orlando in September 2010.
- The call for comments on the 4th CD of R106 – 2 (Test Report Format) has been made. Comments are due Nov. 30, 2010.

Contact:

John Barton
NIST Weights and Measures Division
Legal Metrology Devices Group
100 Bureau Dr.
Gaithersburg, MD.
20899 Mail Stop 2600
(301) 975-4002
john.barton@nist.gov