David Aguayo, Chair
NCWM S&T Committee 2025
And Committee Members

January 12, 2025

As a member of the NCWM Multiple Dimension Measuring Devices Work Group and Chair of the MDMD 2024 Volume Focus Group, I am asking for your support of MDM 25.1, 25.2, and 25.3 as voting items on the NCWM S&T Committee Agenda for 2025.

At the last meeting of the MDMD Work Group a MDMD 2024 Volume Focus Group was formed to develop the proposed changes and additions to NIST Handbook 44 along with a test procedure for NTEP Publication 14. Once the focus group completed their work the proposals the subcommittee submitted them to the MDMD Work Group for approval. The Work Group provided support for the items with no opposition or suggested changes to the items as presented. A form 15 was them submitted to the NCWM requesting the changes and additions to NIST Handbook 44.

Two manufacturers of these systems currently have a "provisional" NTEP Certificate of Conformance for their devices (23-001P and 24-001P). It is important to get appropriate language into the handbook for both manufacturers and for weights and measures officials. The manufacturers need the H44 language in order to have the "provisional" on their certificate removed and officials need the language for inspections, if devices begin to be installed in their jurisdiction. The MDMD Work Group also developed inspection criteria for addition to NTEP Publication 14 once these items are adopted for addition to NIST Handbook 44.

At the WWMA Meeting an official ask it the volume of a rail car needed to be determined in order for it to be used for testing. Testing is not based on the volume of the conveyance method used but rather on the actual volume of the commodity being tested determined using multiple "dumps" from a physical volume standard measure as shown in the Power Point presentation verified as a transfer standard using a State metrology lab certified tape measure.

Following the discussion at the SWMA Regional meeting October 7, 2024 I recommended removing the sentence "The maintenance and acceptance tolerance shall be as shown in Table XX" from the heading paragraph T.3.1. For Volume Devices. of Item MDM-25-3 as Table XX only shows Maintenance Tolerances. One SWMA official found that to be confusing. The new language is as follows:

T.3. Tolerance Values. – ~~The maintenance and acceptance tolerance values shall be ± 1division.~~

T.3.1 For Volume Devices.

(a) Maintenace Tolerance Values. – The maintenance tolerance shall be as shown in Table T. 3.1 Maintenance Tolerance values.

(b) Acceptance Tolerance Values. – The acceptance tolerance values shall be one-half of the maintenance tolerance values with a minimum tolerance of 1d.

Table T. 3.1

Maintenance Tolerances (All values in this table are in displayed divisions)			
1	2	3	4
0 – 20[1]	21 – 40	41- 80	81 +
[1] See S.1.7. Minimum Measurement (12 d).			

T.3.2. For all other devices. – The maintenance and acceptance tolerance values shall be ± 1division.

At the CWMA 2024 Interim Meeting the question was asked if the method of sale was changing from weight to volume. These devices provide a direct volume measurement for commodities that are typically sold by volume. The question was also asked if any special equipment needed to be added to trucks carrying the commodities for measurement and the answer was nothing special needs to be added to the method of conveyance. Another question was asked if the test method looked at minimum and maximum speed need to be marked on this device. The devices are marked with a minimum and maximum speed and provide an error message if either limit is exceeded.

Following the regional meetings the NIST OWM provided comments in their analysis of the MDM Items regarding additional paragraphs in Handbook 44, Section 5.58. Multiple Dimension Measuring Devices that should be considered for additional language changes to include these direct volume measurement devices. Suggested additional changes were submitted to the MDMD Volume Focus Group and OWM for consideration. Loren Minnich with NIST OWM and the Chair of the Focus Group worked together to clarify some of the suggestions which were then forwarded to the Focus Group for review and to the NCWM S&T Committee for consideration.

Several emails from the Volume Focus Group have been submitted indicating support for the additions that have been proposed to the NCWM S&T Committee to be added to Section 5.58.. No negative responses have been received.

With the suggested additional changes to Section 5.58. the MDMD Volume Focus Group believes that the MDM Items are ready for voting status at the NCWM Annual Meeting and is willing to work with the S&T Committee should any additional questions arise.

If I can provide additional information or answers to any questions, please let me know or contact me at the phone number or email address below.

Richard C. Suiter, Chair
MDMD Volume Focus Group
Cell Phone: 240 309 3662
Email: rsuiter700@aol.com