

**NTEP - Measuring Sector
Meeting Agenda
(Meeting Room Antelles)**

September 15, 2026, 8:00 am to 5:00 pm and September 16, 2026, 8:00 am to 12:00 pm

Contents

NTEP - Measuring Sector Meeting Agenda.....1

Carry-over Items: 3

**1. ADM-23.1 (I) Acceptance of OIML-CS Test Reports Issued for Devices Evaluated to the OIML R117
Recommendation for Issuing NTEP Certificates of Conformance. 3**

2. ADM-24.2 (I) Implement Metrological Software Version Change Policy 3

New Items: 4

1. Items that were adopted during the NCWM 2026 Annual Meeting 4

**Block 3: SCL-26.1, BCW-26.1, AWS-26.1, LMD-26.2, VTM-26.1, LPG 26.1, CLM-26.1, MLK-26.1, WTR- 26.1.
MFM-26.1, CDL 26.2, HGM-26.2, EVF-26.3. EMS-26.2, MDM-26.2 4**

2. Use of Composite Meter Factor (CMF). 4

3. CC Number Continually Displayed on Not Built for Purpose Software 5

4. Open Forum Discussion for topics, challenges and items that did not make the agenda.....6

Closing Items.....7

1. Meeting Location and Date of 2027 Measuring Sector Meeting.....7

2. Meeting Attendees. 7

Glossary of Acronyms			
CC	Certificate of Conformance	NTETC	National Type Evaluation Technical Committee
DMS	Division of Measurement Standards	OIML	International Organization of Legal Metrology
ECR	Electronic Cash Register	OWM	Office of Weights and Measures (NIST)
EVFS	Electric Vehicle Fueling Systems	PD	Positive Displacement
HB 44	NIST Handbook 44 “Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices”	Pub 14	NCWM Publication 14
LMD	Liquid Measuring Devices	RMFD	Retail Motor-Fuel Dispenser
mA	Milliamp	SI	International System of Units
MFM	Mass Flow Meters	S&T	Specifications and Tolerances
NCWM	National Conference on Weights and Measures	TG	Task Group
NIST	National Institute of Standards and Technology	VTM	Vehicle Tank Meter
NTEP	National Type Evaluation Program	W&M	Weights and Measures
This glossary is meant to assist the reader in the identification of acronyms used in this agenda and does not imply that these terms are used solely to identify these organizations or technical topics.			

Carry-over Items:

1. ADM-23.1 (I) Acceptance of OIML-CS Test Reports Issued for Devices Evaluated to the OIML R117 Recommendation for Issuing NTEP Certificates of Conformance.

Source: Dmitri Karimov/ Advanced Flow Solution

Conclusion: This item was recommended by the NTEP Committee to move to the NCWM BOD for a vote during the 2026 Spring Board of Directors/NTEP Committee meeting. The item was rejected and has been withdrawn.

No comments added this item will be removed from the 2027 Measuring Sector agenda.

2. ADM-24.2 (I) Implement Metrological Software Version Change Policy

Source: NTEP Administrator

Background: To encourage companies to inform NTEP of changes to software and have an easier more economical application to submit the changes.

Conclusion: This item was recommended by the NTEP Committee to move to the NCWM BOD for a vote during the 2026 Spring Board of Directors/NTEP Committee meeting. The item was accepted and will no longer appear on the report.

NTEP provided an overview and does not expect it to be implemented until 2nd quarter of next year (2027). We can no longer state “software revision xx or higher” on certificates. There will be a new application form for a software change only at a lower cost if it applies to ADM-24.2. A check sum can be listed but it is not utilized or required. Separation of software is recommended. Inspectors and NTEP have had most of the software version issues with POS, EVSE, and weigh-in weigh out devices.

--It is a misnomer to have “metrological” in the title of this item, as metrological software changes already require an update to the certificate. Software has been deemed metrological back to general code clause G-S.9 since 2016.

New Items:

1. Items that were adopted during the NCWM 2026 Annual Meeting

Block 3: LMD-26.2, VTM-26.1, LPG 26.1, CLM-26.1, MLK-26.1, WTR- 26.1. MFM-26.1, CDL 26.2, HGM-26.2

There were no items that were adopted during the NCWM 2026 Annual meeting that require developmental changes to Publication 14 Measuring Devices. Block 3 code sections will be changed as an editorial change to all applicable sections of NTEP Publication 14 Measuring Devices.

Discussion:

NTEP will take the language that was adopted at the annual meeting and plug into the sections of Pub 14, other than the taximeters which was not part of this change. Note that the EVSE and weighing codes have their own Pub 14's and the updates for this adopted item are not done by the Measuring Sector.

2. Use of Composite Meter Factor (CMF).

Source: Measurement Canada

As per Canadian W&M Regulation 288, when planning to use Composite Meter Factor (CMF), means to ensure constant (limited change) product pressure during the delivery period is required. As per Canadian Bulletin V-15, 5.3: "Therefore, the use of composite meter factors is not acceptable in trade applications. In situations where pressure compensation is desirable, additional dynamic pressure sensing elements must be provided in the metering installation."

As per API MPMS Ch 6.2, 8.2.1, the use of CMF is suggested for situations where the liquid product pressure over the delivery period can be considered constant. However, API MPMS Ch 12.2, 9.6.4, does not define a "Constant Pressure" condition, rather a sensitivity analysis is being recommended to increase the overall uncertainty of the process, provided that all parties involved agree to it. in addition, this is applicable to liquids governed by API MPMS Ch 11.2.1.

It was commented that Canada installations do not have or do not want to add pressure sensing taps or transducers. API MPMS Ch 6.2 refers to load racks.

Does NTEP get involved with this in any capacity specifically in relation to API Ch 12.2, 9.6.4 (increased U)?
No, NTEP would use provers.

To be acceptable, should U remain within tolerance AND CMF be used instead of MF?
no conclusion reached

Use of other ATC tables

2- Use of ATC tables other than those from API (e.g. IEC)

Other ATC tables would be a hard sell for some state directors, as in USA we only recognize API tables. For products that API does not address, there may be questions as to what to use.

Canada has questions on biofuels.

In Canada there is another body that defines diesel. Studies determined that can blends of synthetic diesel are still considered diesel.

Canada regulation says that dispensing must be done in gross only (not ATC) if there are no tables established for the fluid, and this may apply to biodiesel.

Harmonization

- 1- To resolve the issue by harmonizing the process across the border, defined conditions would be required under which the use of CMF would be allowed. That could include the comparison of the U before and after the consideration of pressure variation range, the difference between the pressure at the time of proving and at the time of use in trade, etc.

May need an NCWM Form 15 (should check with Don Onwiler), and maybe a gap analysis is needed. This is out of scope for the Measurement Sector group.

Canada to check claim that CMF is used at load rack per guidelines of API somewhere in the USA. As far as we know NTEP has not approved devices with a CMF feature.

- 2- To consider other ATC models than those provided by API, for certain products not listed specifically under API, if they are available.

Grey zone with biodiesel or blends, no ATC data or data lacking.

Logical route or suggestion is for API (or other agency) to move forward on developing more ATC tables for newer fuels.

There are annual API meetings and open ballots. Jim P. will bring this topic up at meeting next month (Oct) at ad hoc committee on new standards.

We should ask the requestor to get more support for behavior data of biofuels.

CMF ban

- 1- There may not be an appetite to disallow CMF. However, in the lack of a better solution, this option may be considered.

Matching ATC

- 2- Find closest API existing ATC model

ISO may have standards (ISO/TR 19441:2018). Is that an option to use these tables/data in USA? Unknown.

USA uses ATC at commercial wholesale level (loading racks) for petroleum fuels.

ASTM D1250 is joint standard with API Ch 11.1 and it shows temperature corrections at blends.

3. CC Number Continually Displayed on Not Built for Purpose Software.

Source: NTEP Administrator, Weighing Sector

Discussion:

Form 15 submitted to edit GS 1.1 for not built for purpose devices. This is the only device type that inspectors must search to find the Certificate of Conformance number on the device.

Impacts the weighing and software sectors, not so much Measuring Sector member devices.

NTEP will send out for responses to the members of the Measuring Sector by next week, to ask if they support, neutral, or do not support the item.

Apply to point-of-sale terminals, self-checkout devices, devices running by hand held devices.

This is the only device/category that does not require the Certificate of Conformance number to be hard marked.

Older devices and existing devices do not have to update; new ruling will apply to new devices at the new implementation date.

Comment: OIML does not evaluate SW separately, SW must be with hardware/device to make a system and the system is certified.

4. Open Forum Discussion for topics, challenges and items that did not make the agenda.

Source: NTEP Administrator

Discussion Items:

Topic of defining hot water: Zenner to work on a Form 15 for definition of “hot water”. Measuring Sector may support and submit in time for the Interim.

Topic HB44 water meter testing is different than AWWA (American Water Works Association) M6 manual. Would like to replace NCWM specs with AWWA version. T1 table would change, and the draft size tables. Ultrasonic meters are now prevalent and are tested differently. It is a good topic to bring up to AWA, an opportunity for harmonization between standards. Zenner to work on a draft.

Recorded representations and printed receipts: A printed copy is required for the LMD and LPG code devices. It is not required for other devices, for example the EVSE code. NTEP position is the HB44 would need to change, remove the “shall”. Some consumers may want a hard copy printed receipt at the pump, do not want to sign up with multiple apps, and often people are opposed to change.

Discussion on three different wordings throughout the HB44 code “within one cent, nearest (one) cent, closest to one cent”. Do these have the same meaning? “Within” is most restrictive, closest or nearest may be a gray area. Pub 14 says +/-0.5 cents in formula in reference to the General Code. Context of how it applies may make a difference, for example nearest may imply rounding up. Nearest cent may mean something different than the nearest one cent. Much of these codes/passages were derived in the 1980’s. Can argue that “within” means it has to match. LPG code refers to analog and digital divisions, analog has a large description, S1.5.2 Table has various +/- cent amounts. LMD code has different verbiages of “to the closest cent” and “within one cent”. We need to ask NIST for interpretation and to look back at history of changes for these wordings. Alison W. said she would mention it to Loren Minnich of NIST to see if we have history of these wordings.

--PowerPoint presentation by Measurement Canada on CMF. Example in the presentation demonstrates that sites that use small volume provers can cause a higher operating pressure to be present at the loading rack meter undergoing test, and this may be costing the distributor millions of dollars in product. So not using CMF as a calibration adjustment factor is beneficial to the end customer, and not beneficial to the loading rack. Farhad to inquire where in USA this (CMF) is being used.

NTEP provided update on VCAP program for water meters. Will be decided by NTEP committee whether to pass this item to the BOD for vote. Has been on the agenda for over two years now. At the BOD November 2026 fall meeting it may be moved forward and voted on. Have been awaiting test data from California. If not by this fall, then at least by the BOD March 2027 spring meeting it should be decided. The meters are reported to be failing in testing BEFORE they are put into service and there is a high failure rate of water meters sourced from overseas.

Closing Items

1. Meeting Location and Date of 2027 Measuring Sector Meeting.

Background: This Item is included on the Sector's agenda to allow for input from Sector members on future meetings and to allow NTEP Administration to apprise the Sector of dates that have already been set.

The idea of combining meetings of software, weighing, and measuring sectors was discussed. Software rotates between MDMD, weighing and measuring sectors. NTEP suggested a meeting day scenario of weighing first, software in the middle, measuring sector last. The recent weighing sector suggested locations of Ottawa, Nashville, and Indianapolis. Requests from Measuring sector members to meet in mid-September and ensure that it is a week after the Labor day. Meeting in August which is the traditional weighing sector date, was not recommended by the Measuring Sector.

Concerns with Ottawa were added expense, need for passports, and potentially few host locations or hotels that are willing and suitable for our group size.

Suggested date Sept 14-15, 2027.

Assuming we have the same stand-alone meeting for measuring sector, suggested locations are: Pensacola Beach, Nashville, Grand Rapids MI.

2. Meeting Attendees.

The final list of attendees will be available from the NCWM for the 2026 Measuring Sector meeting and can be obtained by emailing info@ncwm.com and requesting the list.