

Comments on LPG-15.1 and MFM-15.1
Seraphin Test Measure

- The stated purpose for Items LPG-15.1 and MFM-15.1 is to allow the use of field standard meters as field standards. The proposed changes in Items LPG-15.1 and MFM-15.1 suggest changes to the *test draft criteria* for devices covered under these codes. The original intent of these proposals was to recognize the use of Coriolis meters as field standards. The proposals have no effect on whether or not Coriolis meters are accepted as field standards nor does it prove that field standard meters meet the Fundamental Considerations as field standards.
- If the changes to the test procedures in the LPG and MFM Codes are adopted, then must H44 be changed every time a new field standard is proposed to be recognized?
 - If these changes are adopted, does that mean that every meter is acceptable for use as a field standard? How do you know which meters are acceptable as standards and which ones are not acceptable? For example, if a meter is brought into the United States from another country, can it be used as a field standard?
 - The NIST Handbook 105 series of handbooks specify the design characteristics to which the artifact standards must be built. The Seraphin neck-type standards are built to meet these documentary standards. There are no specific design or performance requirements specified for dynamic field standards. How do you know which meters perform at acceptable levels to be used as field standards?
- The current paragraph N.3. of the LPG code already specifies the size of the test draft when using a field standard as one minute at the normal discharge rate. What are the reasons to change the size of the test draft when field standard meters are used? No analysis has been provided regarding the uncertainties associated with field standard meters and the sizes of the test drafts.

Existing Requirement (italics added): **N.3. Test Drafts.** – Test drafts should be equal to at least the amount delivered by the device in one minute *at its normal discharge rate*.

Proposed Requirement (italics added): **N.3.2. Field Reference Standard Meter Test.** – The minimum quantity for any test draft shall be equal to or greater than the amount delivered in one minute *at the flow rate being tested*.

- Several NTEP CCs for MFMs were found with one or more flow rates for which the MMQs are less than the quantities delivered for one minute of flow at the minimum flow rate. For MFM-15.1, the proposed changes would prevent W&M officials from testing the accuracy of meters at the MMQ when the MMQ is less than 1 minute of flow at the minimum rated flow rate of the meter. W&M officials should be able to test any delivered quantities at or above the MMQ. W&M officials should not be prohibited from testing meters at quantities that are legal for trade.
- OWM commented that some CNG test drafts for the amount of 1/3 of the capacity of the test cylinder (as specified in the EPO) take less than 1 minute to complete. The proposed change to the size of the test draft could prevent W&M officials from conducting some or all of these tests.