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S&T Block 1 Items
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If the S&T Committee would change H44 to recognize master meters, how do you know which meters are acceptable as master meters? If you accept a Coriolis meter from one manufacturer, how do you know that Coriolis meters from different manufacturers can perform within the 1/3 requirement? How do you know that meters of different designs can meet the 1/3 requirement? Are the performance curves for all meters exactly the same? Of course not. Meters may perform well under the stable laboratory conditions, but we must verify that they produce correct results under field conditions. You can't accept a claim that a meter performs within the 1/3 requirement without proof.

To accept a meter as a field standard, you need data that shows that the meter performs within the 1/3 requirement of the Fundamental Considerations under field conditions. To obtain acceptable field test data, you must specify the tests to be run, the range of parameters over which the tests are to be run, collect the data, and have guidelines on how to analyze the data to show that meters perform at the level of a field standard. Finally, you have to specify how well different standards must agree, because you have to obtain very similar test results from different standards when testing the same meters. Until you do that, you cannot verify that a proposed field standard meets the 1/3 requirement of Handbook 44.

NIST has started its testing. It is advantageous to wait for the NIST test results to be sure that their meters and test systems perform at an acceptable level. If you have different results from two different field standards or from two different master meters, how do you deal with conflicting results?