**Section 501.220 Multi-Path Ultrasonic Meters**

a) A utility shall install a multi-path ultrasonic meter in accordance with the recommendations of AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, XQ0701 (April 2007). Ultrasonic meters installed prior to April 2007 shall meet the installation recommendations of AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, XQ9801 (June 1998), unless the meter is physically removed from service after January 1, 2017, then the meter must meet the installation recommendations of AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, XQ0701 (April 2007).

b) At least every three months, a utility that installs a multi-path ultrasonic meter shall verify the proper operation of the meter so that the meter meets the manufacturer's tolerances using, at a minimum, all of the following inspection requirements:

1) Path velocities;

2) Gain levels;

3) Gain limits;

4) Performance percentage;

5) Meter output frequency range;

6) Speed of sound verification; and

7) Verification that the flow computer and ultrasonic meter have the correct settings for the installation, including:

A) Meter pulse uncorrected actual per cubic foot factor;

B) Internal diameter of pipe; and

C) Validation of flow computer operation by independent calculation of corrected volume, thermal output, and meter adjustment factors.

c) A utility that installs a multi-path ultrasonic meter shall flow calibrate the meter at least every 120 months. A utility shall test a multi-path ultrasonic meter as a metering package so that the utility tests the flow conditioner, thermowells, and affixed meter tubes as one unit with the meter. If the utility can demonstrate that the meter meets the manufacturing tolerances set forth in subsection (b) and the utility conducts an internal inspection of the meter body at least every 120 months to ensure the meter body has not accumulated internal deposits or incurred other damage that would affect the meter's accuracy, the utility may forego the 120-month flow calibration requirement.

d) The initial accuracy test of an ultrasonic meter shall include the metering package that consists of the ultrasonic meter, adequate upstream and downstream piping (per AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, Section 7.2.2, XQ0701 (April 2007)), along with thermowells, sample probe, and any flow conditioning to ensure that there is no material difference between the velocity profile experienced by the meter in the laboratory and the velocity profile experienced in the final installation.

e) A utility shall maintain the most recent five years of inspection records. A utility shall also maintain documents for a multi-path ultrasonic meter's most recent accuracy test, the prior accuracy test, and the dates of any other accuracy test that occurred during the prior 10 years.