

Question 12.6

Topic: Flow Monitor Multiple Point Sensor Replacement

Question: Suppose that a utility has a thermal or differential pressure-type flow monitor with multiple point sensors, and one of the sensors must be replaced.

May the abbreviated flow-to-load ratio diagnostic test described in Question 12.5 be used to validate data from the flow monitoring system in the period extending from the removal of the bad sensor until a new sensor can be installed?

After the new sensor is installed, does the diagnostic test have to be repeated?

Answer: If, following the removal of the bad sensor, a probationary calibration error test of the monitoring system is passed and the abbreviated flow-to-load ratio diagnostic test is performed and passed, then data from the flow monitor may be considered valid from the hour of the probationary calibration error test until the new sensor is installed. However, both the probationary calibration error test and the diagnostic test must be repeated following the sensor replacement, to verify that the new component is working and has not significantly affected the monitoring system's ability to accurately measure flow rate.

If the post-replacement diagnostic test is failed, the flow monitor is considered to be out-of-control. Data from the monitoring system are invalidated back to the hour of the post-replacement calibration error test and a single-load or three-load RATA (as applicable) must be passed to bring the monitor back in-control (see Section 2.2.5.3(c) in Appendix B). Data validation for the RATA shall be done in accordance with Section 2.3.2 of Appendix B. Optionally, the utility may elect to conduct a two-load RATA in lieu of the single-load diagnostic RATA.

If a 2-load or 3-load RATA is performed, it establishes the frequency (i.e., annual or semi-annual) for the next required RATA (see Appendix B, section 2.4(b)). For this reason, it may be advantageous to replace the sensor in the calendar quarter in which the annual quality-assurance RATA of the flow monitor is ordinarily performed---this will keep the RATA schedule intact.

References: § 75.20(b), (b)(1), and (b)(3); Appendix B, Sections 2.2.5.3, 2.3.1.3(c), 2.3.2, and 2.4(b).

History: First published in March 1997, Update #11; revised in October 1999 Revised Manual; revised in 2013 Manual