Question 12.10

Topic: Recertification and Diagnostic testing

Background: According to § 75.20(b), "whenever the owner or operator makes a replacement, modification, or change in the certified continuous emission monitoring system or continuous opacity monitoring system that may significantly affect the ability of the system to accurately measure or record the SO_2 or CO_2 concentration, stack gas volumetric flow rate, NO_x emission rate, percent moisture, or opacity, or to meet the requirements of § 75.21 or Appendix B to this part, the owner or operator shall recertify the continuous emission monitoring system or continuous opacity monitoring system according to the procedures in this paragraph."

Section 75.20(b) goes on to give the following examples of events which require recertification: "replacement of the analyzer; change in location or orientation of the sampling probe or site; and complete replacement of an existing continuous emission monitoring system or continuous opacity monitoring system. The owner or operator shall recertify a continuous opacity monitoring system whenever the monitor path length changes or as required by an applicable state or local regulation or permit." Section 75.20(b)(1) states that "for all recertification testing, the owner or operator shall complete all initial certification tests in paragraph (c) of this section that are applicable to the monitoring system, except as otherwise approved by the Administrator."

Section 75.20(b) also states that "any change to a flow monitor or gas monitor for which a RATA is not necessary shall not be considered a recertification event. In such cases, any other tests that are necessary to ensure continued proper operation of the monitoring system (e.g., three-load flow RATAs following changes to flow monitor polynomial coefficients, linearity checks, calibration error tests, DAHS verifications, etc.) shall be performed as diagnostic tests, rather than as recertification tests."

Question: Can EPA provide guidance on recertification and diagnostic test events and the appropriate quality-assurance tests for each event?

Answer: The following Tables describe various events as either recertification events or diagnostic test events and outline the appropriate tests to be performed for each event. The Tables clarify which types of changes to a monitoring system may "significantly affect the ability of the system to accurately measure or record" emissions or flow rate and therefore require recertification testing and which types of changes require less rigorous diagnostic testing "to ensure continued proper operation of the monitoring system."

The recertification events listed in the Tables include the examples given in § 75.20(b) (i.e., analyzer replacements, complete monitoring system replacements, and changes in probe location). The Tables also identify other events that EPA believes are likely to have the potential to

significantly affect the accuracy of the monitoring system and that EPA therefore intends to treat as recertification events in applying § 75.20(b).

These events are: (1) changing from in-stack dilution methodology to outof-stack dilution methodology; and (2) replacement of the critical orifice in a dilution extractive system with an orifice of a different size.
Section 75.20(b)(1) specifies that for recertification, the same battery of tests which was performed for initial certification must be repeated, unless otherwise approved by the Administrator. The Tables reflect EPA's intention to require, for most of the recertification events listed in the Tables, the full battery of certification tests to be repeated. However, note that in a number of instances, EPA intends to exercise its authority under § 75.20 (b)(1) to require less than the full battery of tests.

The diagnostic test events listed in the Tables are the types of component replacements and repairs which are most commonly done on continuous monitoring systems. The Tables reflect EPA's intention to require only certain tests for these events. The diagnostic tests listed for each event are consistent with case-by-case determinations previously made by EPA and are tests that EPA believes are likely to be necessary to ensure continued proper operation of the monitoring system. To reduce the testing burden, EPA is allowing two simplified diagnostic tests to be performed in lieu of more rigorous tests, in some cases. The simplified diagnostic tests (which are described in greater detail in the Addendum following the Tables) are as follows:

(1) Abbreviated Linearity Check -- This test may be performed in some instances, in lieu of a full linearity check. The test consists of a single sequence of injections of low (20 – 30% of span), mid (50 – 60% of span) and high (80 – 100% of span) calibration gases. The results of the test are acceptable if the linearity error (LE) does not exceed 5.0% of the reference gas tag value (or, alternatively, for low-emitters, if | R - A | does not exceed five ppm), at all three gas levels. If these specifications are not met, a full "hands-off" linearity check must be performed; and

(2) Alternative System Response Check -- This test may be performed in some instances, in lieu of a cycle time test. The test can be done as part of a daily calibration error test, by using a timer (e.g., a stopwatch) to determine how long it takes for the monitor reading to reach 95% of the upscale calibration gas tag value. The results are acceptable if the 15-minute cycle time specification in Part 75, Appendix A is met.

EPA notes that § 75.63(a)(2) requires, for all recertification events, submission of a recertification application no later than 45 days after completion of the required tests. However, the regulations do not require submittal of a formal application for approval after completion of diagnostic tests.
Sections 75.64(a)(2), 75.65 and 75.63 (a)(2)(iii) require that recertification test results and the results of diagnostic tests be submitted electronically in the appropriate quarterly report. In accordance with § 75.64(d) and with

Section 5.0 of the Quality Assurance and Certification Reporting

Instructions, a <QACertificationEventData> record is used to identify such events requiring testing and what tests are required. This record also provides information regarding any data that is to be validated using the conditional data validation provisions of § 75.20(b)(3). However, note that a <QACertificationEventData> record is not required for events where the only required tests are daily calibration error checks and/or the simplified diagnostic tests described above.

EPA recognizes that this guidance cannot possibly address every situation that may arise and is not binding for situations that it does address. You may want to contact EPA concerning your specific situation, particularly in cases where:

(1) An event occurs that is not listed in the Tables, and you do not know which (if any) tests are required; or

(2) An event occurs which is listed in the Tables, but for which you believe, based on sound engineering judgment or other technical considerations, that the tests listed in the Tables may be inappropriate or unnecessary.

Note: EPA has not included a table for opacity monitors in this policy guidance. The proper recertification and diagnostic tests for a continuous opacity monitoring system (COMS) are the tests required by Performance Specification 1 (PS-1) in Appendix B of 40 CFR, Part 60 and by any other applicable state or Federal regulation(s).

References: § 75.20(b), § 75.21, Appendix B

History: First published in October 2003 Revised Manual; revised in 2013 Manual