

### Question 3.10

**Topic:** Test Methods 2F, 2G, and 2H – Application

**Question:** How do I implement Test Methods 2F, 2G, and 2H? In particular, what adjustments can be made to the flow monitor in preparation for performing a RATA using Methods 2F, 2G, and 2H?

**Answer:** The *recommended* procedures for implementing these flow rate methods are as follows:

- (1) First, decide which flow reference method or combination of methods will be implemented (e.g., Methods 2 and 2H with a default wall adjustment factor (WAF), Methods 2F and 2H with a calculated WAF, etc.)
- (2) Second, perform whatever diagnostic testing and wall effects measurements are necessary to establish new parameter values or to adjust existing parameter values that will be programmed into the flow monitor to make the monitor readings agree with the selected reference method(s). (This process is analogous to the set-up or characterization of the flow monitor that was done prior to initial certification, to make the monitor readings agree with Method 2.) If Method 2F or 2G is selected as a reference method, establish the new parameter values or parameter value adjustments at three load or operating levels (low, mid, and high). If Method 2H will be used to obtain calculated WAFs, characterize separate WAFs at each of the three load or operating levels. If Method 2H is used with a default WAF, no wall effects measurements are needed. In that case, apply a constant parameter adjustment of either 0.5% or 1.0% (as appropriate to the type of stack) at each load or operating level.
- (3) Third, incorporate the new parameter values or parameter value adjustments, determined in the second step, above, into the flow monitor and then perform a follow-up 3-load (or 3-level) RATA using the selected reference method(s). For the follow-up RATA, use the data validation procedures in Section 2.3.2 of Appendix B (note especially paragraph (b)(3)).

(Note: The procedures described above are recommended, not required, because EPA recognizes that there may be situations in which the owner or operator desires to use the new flow rate methods for reference method testing without making any adjustments to the polynomial coefficients or K-factor(s) of the flow monitor. For example, if a particular flow monitor installed on a brick stack was originally characterized or set up using regular Method 2, and if the monitor has a one percent bias adjustment factor (BAF) with respect to Method 2, the owner or operator may elect to perform the next RATA of the flow monitor cold (i.e., without changing any coefficients or K-factors) and to use a combination of regular Method 2 and Method 2H (using the one percent default wall effects adjustment factor allowed under Method 2H) to try to eliminate the BAF.)

**References:** 40 CFR Part 60, Appendix A (RMs 2, 2F, 2G, and 2H); 40 CFR Part 75, Appendix B, Sections) 2.3.2(b)(1), 2.3.2(b)(2) and 2.3.2(b)(3)

**History:** First published in October 1999 Revised Manual; revised in October 2003 Revised Manual