

Question 19.31

Topic: Use of EPA Reference Methods for Monitoring Flow Rate

Question: May EPA Reference Method 2 be used to provide backup data for Part 75 reporting when the primary flow monitor malfunctions?

Answer: Yes. This option is allowable under § 75.24(c)(2). However, if this method is used, sufficient RM data must be collected to represent each unit operating hour. Therefore, use the following guidelines to collect RM backup flowrate data for Part 75:

- (1) The number and location of the RM traverse points must be in accordance with EPA Reference Method 1.
- (2) For each full operating hour and for each partial operating hour covering more than two 15-minute quadrants, perform a minimum of two complete velocity traverses. The traverses must generate sufficient data to represent at least two of the four 15-minute quadrants in the clock hour. Successive traverses may not begin within the same 15-minute quadrant.
- (3) For partial operating hours covering one or two 15-minute quadrants, perform at least one velocity traverse to validate the hour.
- (4) The individual velocity head measurements should be made at evenly spaced time intervals over the duration of each traverse.
- (5) The dry-basis CO₂ and O₂ concentrations must be accounted for to determine the dry stack gas molecular weight. These concentrations may be obtained by RM 3 or 3A, or from available CEMS data. The tester may opt to use a single CO₂ and O₂ determination for a series of flow test runs at steady process operating conditions.
- (6) The moisture content of the stack gas must be accounted for, in order to calculate the wet-basis stack gas molecular weight. Because the calculated flow rate is relatively unaffected by minor variations in the stack gas molecular weight, the tester may opt to make a single moisture determination to represent a series of flow test runs.
- (7) For each operating hour, calculate the arithmetic average of the flow rate from all traverses performed during the hour.

References: § 75.20(d)(3); Methods 1, 2, 3, 3A, and 4 in Appendices A-1, A-2 and A-3 to 40 CFR Part 60

History: First published in March 1995, Update #5; revised in October 1999 Revised Manual; revised in 2013 Manual