Question 3.23

Topic: Test Method 2H -- Restrictions on Use of Default Wall Effects
Adjustment Factors (WAFs)

Question: Can the default WAF specified in Section 8.1 of Method 2H be applied to
the average velocity unadjusted for wall effects obtained from a Method 1
traverse regardless of the number of points in the Method 1 traverse?

Answer: The default WAF may only be applied to the average velocity unadjusted
for wall effects obtained from a Method 1 traverse consisting of 12 or 16
traverse points. A default WAF may not be applied to the average
velocity obtained from a Method 1 traverse consisting of more than 16
traverse points.

The default WAF values specified in Method 2H (i.e., 0.9900 for brick
and mortar stacks and 0.9950 for all other types of stacks) were derived
based on field data from 16-point Method 1 traverses. Consistent with the
provisions of Section 12.7.2, these default WAFs may be applied to the
average velocity unadjusted for wall effects "obtained from runs in which
the number of Method 1 traverse points sampled does not exceed the
number of traverse points in the runs used to derive the wall effects
adjustment factor." That is, the default WAF may be used with Method 1
traverses consisting of 12 or 16 points, but not with Method 1 traverses
consisting of more than 16 points.

Without this restriction, velocity decay would be double-counted in
traverses consisting of more than 16 points (once in the additional Method
1 traverse points close to the wall and then again when the default wall
effects adjustment factor is applied to the results of the Method 1
traverse).

References: 40 CFR Part 60, Appendix A-2, Method 2H, Sections 8.1 and 12.7.2

History: First published in March 2000, Update #12