

Question 3.34

Topic: Reporting of Support Records for Flow RATA's

Question: Please clarify the reporting requirements for the new flow RATA support records.

Answer: First, note that the <RATADData>, <RATASummaryData>, and <RATARunData> records are required for all flow RATAs, whether the tests are done for initial certification, recertification, or on-going quality assurance. However, the flow RATA support records (i.e., the <FlowRATARunData> record, and the <RATATraverseData> record) are required to be reported only as follows:

(1) When Method 2 is used for the RATA:

Report the <ReferenceMethodCode> in the <RATASummaryData> record as "2" and do not report any <FlowRATARunData>, or <RATATraverseData> records.

(2) When Methods 2 and 2H (Default WAF) are used:

When regular Method 2 is used for the flow RATA and you elect to apply a default WAF to all runs of the RATA (as allowed by Method 2H), report the <ReferenceMethodCode> in the <RATASummaryData> record as "D2H" and do not report any <FlowRATARunData>, or <RATATraverseData> records. Instead report the default WAF used in the <DefaultWAF> field of the <RATASummaryData> record.

(3) When Methods 2 and 2H (Measured WAF) are used:

When regular Method 2 is used for the flow RATA and a WAF is measured with Method 2H, report the <ReferenceMethodCode> in the <RATASummaryData> record as "M2H" and report the <FlowRATARunData>, and <RATATraverseData> records only for RATA runs in which Method 2H is used to derive a calculated WAF from the run data and the run is used in the relative accuracy calculations. Do not report <FlowRATARunData>, or <RATATraverseData> records for RATA runs which are not used to measure wall effects.

For example, suppose that you use Method 2 to perform a 3-load flow RATA and make wall effects measurements during one run per load level using Method 2H (with 16 Method 1 velocity traverse points for each wall effects run). Suppose further that you use all of the RATA runs in the relative accuracy calculations and decide to apply the

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calculated WAF values at the mid and high load levels, but to use a default WAF at the low load level.

In this case, you would report only two <FlowRATARunData> records, one each for the mid-level and high-level runs at which a WAF was determined by measuring the wall effects, and 32 point-level <RATATraverseData> records, 16 for each of these same two runs. You would not report any <FlowRATARunData>, or <RATATraverseData> records for the low load level, since you have elected to apply a default WAF at that level -- rather, you would report the default used in the <DefaultWAF> field of the <RATASummaryData> record for the low load level (see (2), above).

(4) When either Method 2F or 2G is used:

Report the <ReferenceMethodCode> in the <RATASummaryData> record as either "2F", "2FH", "2G", or "2GH" as appropriate and report <FlowRATARunData> records, and <RATATraverseData> records, as required. One <FlowRATARunData> record is required for each RATA run that is used in the relative accuracy calculations (*i.e.*, each run with a <RunStatusCode> of "1", and one <RATATraverseData> record is required for each Method 1 traverse point in each of these runs.

For example, if Method 2F is used for a 3-load flow RATA and if 12 runs are performed at each load level, using 16 traverse points per run, but only 9 of the 12 runs at each level are used in the relative accuracy calculations, you would report a total of 27 <FlowRATARunData> records (*i.e.*, 9 per load level) and 432 point-level <RATATraverseData> records (*i.e.*, [16 points per run] times [9 runs per load level] times [3-load levels]).

(5) The following Table summarizes the reporting requirements:

**SUMMARY OF REPORTING REQUIREMENTS
FOR FLOW RATA SUPPORT RECORDS**

Case No.	Case Description	Reference Method(s) Used	Reference Method Code (<RATASummaryData>)	Required Records	
				<RATADData>, <RATASummaryData>, <RATARunData>	<FlowRATARunData>, <RATATraverseData> ¹
1	Method 2, with no wall effects adjustments	2	2	Y	N
2	Method 2 with default WAF	2 and 2H	D2H	Y	N
3	Method 2 with calculated WAF	2 and 2H	M2H	Y	Y ²
4	Method 2F, with no wall effects adjustments	2F	2F	Y	Y
5	Method 2F with calculated or default WAF	2F and 2H	2FH	Y	Y
6	Method 2G, with no wall effects adjustments	2G	2G	Y	Y
7	Method 2G with calculated or default WAF	2F and 2H	2GH	Y	Y

¹ When <FlowRATARunData> and <RATATraverseData> records are required, report them only for RATA runs that are used in the relative accuracy calculations (when the <RunStatusCode> field in the <RATARunData> record = "1").

² For reference method code "M2H," report <FlowRATARunData> and <RATATraverseData> records for a particular RATA run only if the run is both: used in the relative accuracy calculations (if the <RunStatusCode> field in the <RATARunData> record = "1") and that run is used to derive a calculated WAF.

References: 40 CFR Part 60, Appendix A-2, Methods 2, 2F, 2G, and 2H; EDR Version 2.1/2.2 Reporting Instructions

History: First published in December 2000, Update #13; revised in October 2003 Revised Manual; revised in 2013 Manual