Question 13.12

Topic: Reporting of Partial Hours

Question: How do I account for SO_2 and CO_2 emissions and heat input rate during a partial operating hour?

Answer: Account for partial operating hours when the quarterly cumulative tons of SO_2 or CO_2 are calculated. Before summing SO_2 or CO_2 mass emissions for the quarter, multiply each reported hourly SO_2 or CO_2 mass emission rate (i.e., lb/hr or tons/hr) by the corresponding unit operating time to convert it to a mass value (lbs or tons).

For example, if a unit operated only for the first 12 minutes in a clock hour and took SO_2 readings once every minute, those 12 readings would be averaged and would be reported as the average hourly concentration. The hourly average volumetric flow rate would be calculated in the same way.

These values would then be substituted into the appropriate equation (F-1 or F-2) to calculate the hourly SO_2 mass emission rate. Suppose, for the sake of this example, that the hourly SO_2 and flow averages for the 12 minutes of unit operation are, respectively, 500 ppm and 25,000,000 scfh.

Assuming that SO_2 is measured on a wet basis, the hourly SO_2 mass emission rate reported would be 2,075 lbs/hr, according to Equation F-1. However, to indicate that the unit emitted SO_2 at this rate for only 12 minutes, you would report the unit operating time, rounded to the nearest hundredth of an hour, as 0.20.

The product of the hour's SO_2 mass emission rate and the unit operating time would then give the *actual* SO_2 mass emitted during the partial unit operating hour: (2,075 lbs/hr)(0. 20 hr) = 415 lbs. This would then be added to the products of the SO_2 mass emission rates and the unit operating times for all of the other unit operating hours in the quarter and divided by 2,000 lbs/ton to determine the quarterly SO_2 mass emissions (in tons).

The quarterly CO_2 mass emissions and heat input should be reported and calculated in an analogous fashion (i.e., quantify the effects of partial unit operating hours *only* when the cumulative quarterly CO_2 mass emissions and heat input values are determined).

Note: There is one exception to this. If the DAHS is programmed such that it performs the calculation of SO_2 mass or CO_2 mass on an hourly basis and enters the results into the optional data fields for SO_2 mass and CO_2 mass, then the quarterly cumulative mass of SO_2 or CO_2 emitted is determined simply by summing all of the reported hourly mass emissions values for the quarter.

References: § 75.64(d)

History: First published in July 1995, Update #6; revised October 1996, Update

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