

§ 75.42

(Eq. 24)

Compare the experimental F-value with the critical value of F at the 95-percent confidence level with n-1 degrees of freedom. The critical value is obtained from a table for F-distribution. If the calculated F-value is greater than the critical value, the proposed method is unacceptable.

(2) *Correlation analysis.* The owner or operator shall conduct the correlation analysis according to the following procedures.

(i) Plot each of the paired emissions readings as a separate point on a graph where the vertical axis represents the value (pollutant concentration or volumetric flow, as appropriate) generated by the alternative monitoring system and the horizontal axis represents the value (pollutant concentration or volumetric flow, as appropriate) generated by the continuous emission monitoring system (or reference method). On the graph, draw a horizontal line representing the mean value, e_p , for the alternative monitoring system and a vertical line representing the mean value, e_v , for the continuous emission monitoring system where,

$$\bar{e}_p = \frac{\sum e_p}{n}$$

(Eq. 25)

$$\bar{e}_v = \frac{\sum e_v}{n}$$

(Eq. 26)

where,

e_p = Hourly value generated by the alternative monitoring system.

e_v = Hourly value generated by the continuous emission monitoring system.

n = Total number of hours for which data were generated for the tests.

A separate graph shall be produced for the data generated at each of the operating levels or fuel supplies described in paragraphs (a)(4) and (a)(5) of this section.

(ii) Use the following equation to calculate the coefficient of correlation, r , between the emissions data from the alternative monitoring system and the continuous emission monitoring system using all hourly data for which paired values were available from both monitoring systems.

$$r = \frac{\sum e_p e_v - (\sum e_p)(\sum e_v)/n}{\left(\left[\sum e_p^2 - (\sum e_p)^2/n \right] \left[\sum e_v^2 - (\sum e_v)^2/n \right] \right)^{(1/2)}} \quad (\text{Eq. 27})$$

(Eq. 27)

(iii) If the calculated r -value is less than 0.8, the proposed method is unacceptable.

[58 FR 3701, Jan. 11, 1993, as amended at 60 FR 26530, May 17, 1995; 60 FR 40296, Aug. 8, 1995; 67 FR 40440, June 12, 2002]

§ 75.42 Reliability criteria.

To demonstrate reliability equal to or better than the continuous emission monitoring system, the owner or operator shall demonstrate that the alternative monitoring system is capable of providing valid 1-hr averages for 95.0 percent or more of unit operating hours over a 1-yr period and that the

system meets the applicable requirements of appendix B of this part.

§ 75.43 Accessibility criteria.

To demonstrate accessibility equal to or better than the continuous emission monitoring system, the owner or operator shall provide reports and on-site records of emission data to demonstrate that the alternative monitoring system provides data meeting the requirements of subparts F and G of this part.

§ 75.44 Timeliness criteria.

To demonstrate timeliness equal to or better than the continuous emission