

**§ 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,

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

(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

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monitoring system, the owner or operator shall demonstrate that the alternative monitoring system can meet the requirements of subparts F and G of this part; can provide a continuous, quality-assured, permanent record of certified emissions data on an hourly basis; and can issue a record of data for the previous day within 24 hours.

### § 75.45 Daily quality assurance criteria.

The owner or operator shall either demonstrate that daily tests equivalent to those specified in appendix B of this part can be performed on the alternative monitoring system or demonstrate and document that such tests are unnecessary for providing quality-assured data.

### § 75.46 Missing data substitution criteria.

The owner or operator shall demonstrate that all missing data can be accounted for in a manner consistent with the applicable missing data procedures in subpart D of this part.

### § 75.47 Criteria for a class of affected units.

(a) The owner or operator of an affected unit may represent a class of affected units for the purpose of applying to the Administrator for a class-approved alternative monitoring system.

(b) The owner or operator of an affected unit representing a class of affected units shall provide the following information:

(1) A description of the affected unit and how it appropriately represents the class of affected units;

(2) A description of the class of affected units, including data describing all the affected units which will comprise the class; and

(3) A demonstration that the magnitude of emissions of all units which will comprise the class of affected units are *de minimis*.

(c) If the Administrator determines that the emissions from all affected units which will comprise the class of units are *de minimis*, then the Administrator shall publish notice in the FEDERAL REGISTER, providing a 30-day period for public comment, prior to

granting a class-approved alternative monitoring system.

[60 FR 40297, Aug. 8, 1995]

### § 75.48 Petition for an alternative monitoring system.

(a) The designated representative shall submit the following information in the application for certification or recertification of an alternative monitoring system.

(1) Source identification information.

(2) A description of the alternative monitoring system.

(3) Data, calculations, and results of the statistical tests, specified in § 75.41(c) of this part, including:

(i) Date and hour.

(ii) Hourly test data for the alternative monitoring system at each required operating level and fuel type. The fuel type, operating level and gross unit load shall be recorded.

(iii) Hourly test data for the continuous emissions monitoring system at each required operating level and fuel type. The fuel type, operating level and gross unit load shall be recorded.

(iv) Arithmetic mean of the alternative monitoring system measurement values, as specified in Equation 25 in § 75.41(c) of this part, of the continuous emission monitoring system values, as specified in Equation 26 in § 75.41(c) of this part, and of their differences.

(v) Standard deviation of the difference, as specified in equation A-8 in appendix A of this part.

(vi) Confidence coefficient, as specified in equation A-9 in appendix A of this part.

(vii) The bias test results as specified in § 7.6.4 in appendix A of this part.

(viii) Variance of the measured values for the alternative monitoring system and of the measured values for the continuous emission monitoring system, as specified in Equation 23 in § 75.41(c) of this part.

(ix) F-statistic, as specified in Equation 24 in § 75.41(c) of this part.

(x) Critical value of F at the 95-percent confidence level with  $n-1$  degrees of freedom.

(xi) Coefficient of correlation,  $r$ , as specified in Equation 27 in § 75.41(c) of this part.