

15A NCAC 02D .2611 SULFUR DIOXIDE TESTING METHODS

(a) If compliance is to be demonstrated for a combustion source through stack sampling the procedures described in Method 6 or Method 6C of Appendix A of 40 CFR Part 60 shall be used. When Method 6 of Appendix A of 40 CFR Part 60 is used to determine compliance, compliance shall be determined by averaging six 20-minute samples taken over such a period of time that no more than 20 minutes elapses between any two consecutive samples. The 20-minute run requirement only applies to Method 6 not to Method 6C. Method 6C is an instrumental method and the sampling is done continuously.

(b) Fuel burning sources not required to use continuous emissions monitoring to demonstrate compliance with sulfur dioxide emission standards, may determine compliance with sulfur dioxide emission standards by stack sampling or by analyzing sulfur content of the fuel.

(c) For stationary gas turbines, Method 20 of 40 CFR Part 60 shall be used to demonstrate compliance with applicable sulfur dioxide emissions standards.

(d) When compliance is to be demonstrated for a combustion source by analysis of sulfur in fuel, sampling, preparation, and analysis of fuels shall be according to the following American Society of Testing and Materials (ASTM) methods. The Director may approve ASTM methods different from those described in this Paragraph if they will provide equivalent or more reliable results. The Director may prescribe alternate ASTM methods on an individual basis if that action is necessary to secure reliable test data.

(1) Coal Sampling:

- (A) Sampling Location. Coal shall be collected from a location in the handling or processing system that provides a sample representative of the fuel bunkered or burned during a boiler operating day. For the purpose of this method, a fuel lot size is defined as the weight of coal bunkered or consumed during each boiler-operating day. For reporting and calculation purposes, the gross sample shall be identified with the calendar day on which sampling began. The Director may approve alternate definitions of fuel lot sizes if the alternative will provide a more representative sample.
- (B) Sample Increment Collection. A coal sampling procedure shall be used that meets the requirements of ASTM D 2234 Type I, condition A, B, and C, and systematic spacing for collection of sample increments. All requirements and restrictions regarding increment distribution and sampling device constraints shall be observed.
- (C) Gross Samples. ASTM D 2234, 7.1.2, Table 2 shall be used except as provided in 7.1.5.2 to determine the number and weight of increments (composite or gross samples).
- (D) Preparation. ASTM D 2013 shall be used for sample preparation from a composite or gross sample.
- (E) Gross Caloric Value (GCV). ASTM D 2015 or D 3286 shall be used to determine GCV on a dry basis from a composite or gross sample.
- (F) Moisture Content. ASTM D 3173 shall be used to determine moisture from a composite or gross sample.
- (G) Sulfur Content. ASTM D 3177 or D 4239 shall be used to determine the percent sulfur on a dry basis from a composite or gross sample.

(2) Oil Sampling

- (A) Sample Collection. A sample shall be collected at the pipeline inlet to the fuel-burning unit after sufficient fuel has been drained from the line to remove all fuel that may have been standing in the line.
- (B) Heat Of Combustion. ASTM Method D 240 or D 2015 shall be used to determine the heat of combustion.
- (C) Sulfur Content. ASTM Method D 129 or D 1552 shall be used to determine the sulfur content.

The sulfur content and BTU content of the fuel shall be reported on a dry basis. When the test methods described in Subparagraph (d)(1) or (d)(2) of this Rule are used to demonstrate that the ambient air quality standards for sulfur dioxide are being protected, the sulfur content shall be determined at least once per year from a composite of at least three or 24 samples taken at equal time intervals from the fuel being burned over a three-hour or 24-hour period, respectively, whichever is the time period for which the ambient standard is most likely to be exceeded; this requirement shall not apply to sources that are only using fuel analysis in place of continuous monitoring to meet the requirements of Section .0600 of this Subchapter.

(e) When compliance is shown for sulfuric acid manufacturing plants or spodumene ore roasting plants with Rules .0517 and .0527, respectively, of this Section through stack sampling, the procedures described in Method 8 of Appendix A of 40 CFR Part 60 shall be used. When Method 8 of Appendix A of 40 CFR Part 60 is used to determine compliance, compliance shall be determined by averaging emissions measured by three one-hour test runs unless otherwise specified in the applicable rule or federal subpart.

(f) When compliance is shown for a combustion source emitting sulfur dioxide not covered under Paragraph (a) through (e) of this Rule through stack sampling, the procedures described in Method 6 or Method 6C of Appendix A of 40 CFR Part 60 shall be used. When using Method 6 procedures to show compliance, compliance shall be determined by averaging six 20-minute samples taken over such a period of time that no more than 20 minutes elapses between any two consecutive samples. The 20-minute run requirement only applies to Method 6 not to Method 6C. Method 6C is an instrumental method and the sampling is done continuously.

History Note: Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5);
Eff. June 1, 2008.