SECTION .2600 - SOURCE TESTING

15A NCAC 02D .2601 PURPOSE AND SCOPE

(a) The purpose of this Section is to assure consistent application of testing methods and methodologies to demonstrate compliance with emission standards.

(b) This Section shall apply to all air pollution sources.

(c) Emission compliance testing shall comply with the procedures of this Section, except as otherwise required by:

(1) 40 CFR Part 60, New Source Performance Standards in 15A NCAC 02D .0524;

(2) 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants in 15A NCAC 02D .1110; or

(3) 40 CFR Part 63, Maximum Achievable Control Technology requirements in 15A NCAC 02D .1111.

(d) Applicable source test audit requirements shall comply with the procedures specified in 40 CFR 60.8, 40 CFR 61.13, or 40 CFR 63.7.

(e) Test methods other than those specified in this Section may be used pursuant to15A NCAC 02D .2602(h)(3). Requests for the use of alternative test methods shall be submitted to the Director at least 45 days prior to testing.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2602 GENERAL PROVISIONS ON TEST METHODS AND PROCEDURES

(a) The owner or operator of a source shall perform all required tests at his or her own expense.

(b) The owner or operator of an air pollution source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. The testing protocol, using the requirements in 15A NCAC 02D .2603, shall not be required to be pre-approved by the Director prior to air pollution testing. If requested by the owner or operator at least 45 days before conducting the test, the Director shall review air emission testing protocols for pre-approval prior to testing.

(c) Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least 15 days before beginning the test.

(d) The owner and operator of the source shall provide:

(1) sampling ports, pipes, lines, or appurtenances for the collection of samples and data required by the test procedure;

(2) scaffolding and safe access to the sample and data collection locations in compliance with Occupational Safety and Health Administration regulations; and

(3) light, electricity, and other utilities required for sample and data collection.

(e) The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at a production rate that meets the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.

(f) The final air emission test report shall be submitted to the Director no later than 30 days following sample collection.

(1) The final test report shall include a signed statement by the responsible official, as defined in 15A NCAC 02Q .0303, indicating the compliance or noncompliance of the stack test results with the applicable emission standards.

(2) The results of the tests shall be expressed in the same units as the emission limits given in the corresponding compliance rule, unless otherwise specified in the applicable permit or pre-approved air emissions testing protocol.

(3) The final test report shall describe the training and air testing experience of the person directing the test.

(4) The owner or operator may request an extension of time in which to submit the final test report. The Director shall approve an extension request if he or she finds the cause of the delay was unforeseeable and beyond the control of the owner or operator.

(g) Within 15 days of submission of a test report signifying noncompliance, the owner, operator, or responsible official shall submit to the Director a written plan that includes:

(1) interim actions to minimize emissions pending demonstration of compliance;

(2) corrective actions in place or proposed to return the source to compliance;

(3) a proposed date for the compliance retest; and

(4) changes necessary to update the site-specific test plan prior to a retest.

(h) The Director shall make the final determination regarding a testing procedure deviation and the validity of the compliance test. The Director shall:

(1) allow deviations from a method specified in a rule in this Section if the owner or operator of the tested source demonstrates that the deviation is appropriate.

(2) prescribe alternate test procedures on an individual basis if the alternative method is necessary to secure more reliable test data.

(3) prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.

(i) The Director shall authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter if necessary to determine the compliance status of that source or to verify test data submitted relating to that source. Test results obtained by the Division of Air Quality using the appropriate testing procedures described in this Section shall be presumed accurate despite differing results from any other test.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5);*
Eff. July 1, 2008;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2603 TESTING PROTOCOL

(a) Testing protocols shall include:

(1) the facility and testing company contact information, including a mailing address, email, and phone number;

(2) the air permit number and revision including permitted source name and ID number;

(3) an introduction explaining the purpose of the proposed test, including identifying the regulations and permit requirements for which compliance is being demonstrated and the allowable emission limits;

(4) a description of the facility and the source to be tested;

(5) a description of the test procedures, including sampling equipment, analytical procedures, sampling locations, reporting and data reduction requirements, and internal quality assurance and quality control activities;

(6) source test audit requirements applicable to the proposed test methods;

(7) all modifications made to the test methods referenced in the protocol;

(8) the permitted maximum process rate, maximum normal operation process rate, and the proposed target process rate during testing;

(9) a description of how production or process data will be documented during testing; and

(10) the proposed test schedule.

(b) The tester shall not deviate from the protocol or test plan unless the owner or operator documents the deviation in the test report.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5);*
Eff. July 1, 2008;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2604 NUMBER OF TEST POINTS

(a) Method 1 of Appendix A to 40 CFR Part 60 shall be used to select a suitable site and the appropriate number of test points for the following situations:

(1) particulate testing;
(2) volatile organic compounds testing;
(3) velocity and volume flow rate measurements;
(4) testing for acid mist or other pollutants occurring in liquid droplet form;
(5) sampling for which velocity and volume flow rate measurements are necessary for computing final test results; or
(6) isokinetic sampling.

(b) Method 1 of Appendix A to 40 CFR Part 60 shall be used as written with the following clarifications:

(1) Testing installations with multiple ducts may be accomplished by testing the discharge stacks to which the ducts exhaust. If the multiple ducts are individually tested, then Method 1 shall be applied to each duct individually.
(2) If test ports in a duct are less than two diameters downstream or less than one-half diameter upstream from any disturbance, such as a fan, elbow, change in diameter, or other physical feature disturbing the gas flow, the acceptability of the test location shall be determined by the Director before the test and after a review of technical and economic factors.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2605 VELOCITY AND VOLUME FLOW RATE

Method 2 of Appendix A to 40 CFR Part 60 shall be applied as written and used concurrently with any test method requiring velocity and volume flow rate measurements.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2606 MOLECULAR WEIGHT

(a) Except as allowed by Paragraph (b) of this Rule, Method 3 of Appendix A to 40 CFR Part 60 shall be applied as written and used concurrently with any test method if necessary to determine the molecular weight of the gas being sampled by determining the fraction of carbon dioxide, oxygen, carbon monoxide, and nitrogen.

(b) The grab sample technique may be substituted using instruments such as Bacharach Fyrite™, with the following restrictions:

(1) Instruments such as the Bacharach Fyrite™ shall only be used for the measurement of carbon dioxide.

(2) Gas samples shall be taken during the emission test run to account for variations in the carbon dioxide concentration. At least four samples shall be taken during a one-hour test run.

(3) The total concentration of gases other than carbon dioxide, oxygen, and nitrogen shall be less than one percent.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2607 DETERMINATION OF MOISTURE CONTENT

Method 4 of Appendix A to 40 CFR Part 60 shall be applied as written and used concurrently with any test method requiring determination of gas moisture content.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2608 NUMBER OF RUNS AND COMPLIANCE DETERMINATION

Each test, excluding fuel sample tests, shall consist of three consecutive runs of the applicable test method at the same operating condition. If other operating conditions or scenarios are to be tested, then three consecutive runs shall be performed for each of these operating conditions or scenarios. For determining compliance with an applicable emission standard, the average of the results of all repetitions shall apply. On a case-by-case basis, compliance may be determined using the arithmetic average of two run results if the Director determines that an unavoidable and unforeseeable event happened beyond the owner's, operator's, or tester's control and that a third run could be not be completed.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2609 PARTICULATE TESTING METHODS

(a) Except as allowed by Paragraph (b) of this Rule, Method 5 of Appendix A to 40 CFR Part 60 and Method 202 of Appendix M to 40 CFR Part 51 shall be used to demonstrate compliance with particulate emission standards. The owner or operator may request an exemption from using Method 202 and the Director shall approve the exemption if the Director determines the demonstration of compliance with an applicable emission standard is unlikely to change with or without the Method 202 results included.

(b) Method 17 of Appendix A to 40 CFR Part 60 may be used instead of Method 5 if:

(1) the stack gas temperature does not exceed 320º F;

(2) particulate matter concentrations are known to be independent of temperature over the normal range of temperatures characteristic of emissions from a specified source category; and

(3) the stack does not contain liquid droplets or is not saturated with water vapor.

(c) Particulate testing on steam generators that use soot blowing as a routine means for cleaning heat transfer surfaces shall be conducted so the contribution of the soot blowing is represented as follows:

(1) If the soot blowing periods are expected to represent less than 50 percent of the total particulate emissions, only one of the test runs shall include a soot blowing cycle.

(2) If the soot blowing periods are expected to represent more than 50 percent of the total particulate emissions, two of the test runs shall each include a soot blowing cycle. No more than two of the three test runs shall include soot blowing.

(3) The average emission rate of particulate matter for steam generators that use soot blowing shall be calculated by the equation:

$$E_{AVG} = (S * E_S)[(A + B)/(A * R)] + E_N[((R - S)/R) - (B * S)/(A * R)]$$

where:

E_{AVG} = the average emission rate in pounds per million Btu for daily operating time;

E_S = the average emission rate in pounds per million Btu during soot blowing runs;

E_N = the average emission rate in pounds per million Btu during non-soot blowing runs;

A = number of hours of soot blowing during soot blowing runs;

B = number of hours without soot blowing during soot blowing runs;

R = average number of hours of operation per 24 hours; and

S = average number of hours of soot blowing per 24 hours.

(4) The Director may approve an alternate method of prorating the emission rate during soot blowing if the owner or operator of the source demonstrates that changes in boiler load or stack flow occurred during soot blowing that are not representative of normal soot blowing operations.

(d) Unless otherwise specified by an applicable rule or federal subpart, the minimum time per test point for particulate testing shall be two minutes and the minimum time per test run shall be one hour.

(e) Unless otherwise specified by an applicable rule or federal subpart, the sample gas drawn during each test run shall be at least 30 dry standard cubic feet.

(f) Method 201 in combination with Method 202 of Appendix M to 40 CFR Part 51 or Method 201A in combination with Method 202 of Appendix M to 40 CFR Part 51 shall be used to determine compliance with PM2.5 or PM10 emission standards. If the exhaust gas contains entrained moisture droplets, Method 5 of Appendix A of 40 CFR Part 60 in combination with Method 202 of Appendix M to 40 CFR Part 51 shall be used to determine PM2.5 or PM10 emission compliance.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2610 OPACITY

(a) Method 9 of Appendix A to 40 CFR Part 60 shall be used to show compliance with opacity standards if opacity is determined by visual observation.

(b) Method 22 of Appendix A to 40 CFR Part 60 shall be used to determine compliance with opacity standards if these standards are based upon the frequency of fugitive emissions that are visible during the observation period specified in the applicable rule or by permit condition.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2611 SULFUR DIOXIDE TESTING METHODS

(a) If compliance with a sulfur dioxide emission standard is to be demonstrated for a combustion source through stack sampling, the procedures described in Method 6 or Method 6C to Appendix A of 40 CFR Part 60 shall be used as follows:

(1) If Method 6 of Appendix A to 40 CFR Part 60 is used to determine compliance, compliance shall be determined by averaging six 20-minute runs without more than 20 minutes elapsing between any two consecutive runs.

(2) If Method 6C of Appendix A to 40 CFR Part 60 is used to determine compliance, the sampling shall be performed continuously during each run.

(b) Method 8 of Appendix A to 40 CFR Part 60 shall be used to determine compliance with emission standards for sulfuric acid manufacturing plants governed by 15A NCAC 02D .0517 and spodumene ore roasting plants governed by 15A NCAC 02D .0527. Compliance shall be determined by averaging emissions measured from three one-hour test runs, unless otherwise specified in the applicable rule or federal subpart.

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

(d) 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.

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

(1) For coal sampling, the following methods shall be used:

(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 shall 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 D2234 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 D2234 8.1.1.2 Table 2 shall be used except as provided in 8.1.1.5 to determine the number and weight of increments from a composite or gross sample.

(D) Preparation. ASTM D2013 shall be used for sample preparation from a composite or gross sample.

(E) Gross Caloric Value (GCV). ASTM D5865 shall be used to determine GCV on a dry basis from a composite or gross sample.

(F) Moisture Content. ASTM D3173 shall be used to determine moisture from a composite or gross sample.

(G) Sulfur Content. ASTM D4239 shall be used to determine the percent sulfur on a dry basis from a composite or gross sample.

(2) For fuel oil sampling, the following methods shall be used:

(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 D240 or D4809 shall be used to determine the heat of combustion. The BTU content of the fuel shall be reported on a dry basis.

(C) Sulfur Content. ASTM Method D129 or D1552 shall be used to determine the sulfur content. The sulfur content of the fuel shall be reported on a dry basis.

(f) If the test methods described in Subparagraph (e)(1) or (e)(2) of this Rule are used to demonstrate that the ambient air quality standards for sulfur dioxide set forth in 15A NCAC 02D .0402 are not exceeded, the sulfur content shall be determined at least once per year from a composite of:

(1) at least three samples over a three-hour period for sources that are most likely to exceed the maximum three-hour ambient standard; or

(2) at least 24 samples over a 24-hour period for sources that are most likely to exceed the maximum 24-hour ambient standard.

This Paragraph shall not apply to sources that are only using fuel analysis in place of continuous monitoring to meet the requirements of 15A NCAC 02D .0600.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2612 NITROGEN OXIDE TESTING METHODS

(a) Combustion sources not required to use continuous emissions monitoring to demonstrate compliance with nitrogen oxide emission standards shall demonstrate compliance with nitrogen oxide emission standards using Method 7 or Method 7E of Appendix A to 40 CFR Part 60.

(b) Method 20 of Appendix A to 40 CFR Part 60 shall be used to demonstrate compliance with nitrogen oxide emissions standards for stationary gas turbines.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2613 VOLATILE ORGANIC COMPOUND TESTING METHODS

(a) For surface coating material, such as paint, varnish, stain, and lacquer, the volatile matter content, water content, density, volume of solids, and weight of solids shall be determined by Method 24 of Appendix A to 40 CFR Part 60.

(b) For printing inks and related coatings, the volatile matter and density shall be determined by Method 24A of Appendix A to 40 CFR Part 60.

(c) For solvent metal cleaning equipment as defined in 15A NCAC 02D .0930, the following procedure shall be followed to perform a material balance test:

(1) clean the degreaser sump before testing;

(2) record the amount of solvent added to the tank with a flow meter;

(3) record the weight and type of workload degreased each day;

(4) at the end of the test run, pump out the used solvent and measure the amount with a flow meter. In addition, estimate the volume of metal chips and other material remaining in the emptied sump;

(5) bottle a sample of the used solvent and analyze it to find the percent that is oil and other contaminants. The oil and solvent proportions may be estimated by weighing samples of used solvent before and after boiling off the solvent; and

(6) compute the volume of oils in the used solvent. The volume of solvent displaced by this oil plus the volume of makeup solvent added during operations equals the solvent emissions.

(d) For bulk gasoline terminals as defined in 15A NCAC 02D .0927, emissions of volatile organic compounds shall be determined by the procedures in 40 CFR 60.503.

(e) For organic process equipment, leaks of volatile organic compounds shall be determined by Method 21 of Appendix A to 40 CFR Part 60. Organic process equipment shall include valves, flanges and other connections, pumps and compressors, pressure relief devices, process drains, open-ended valves, pump and compressor seal system degassing vents, accumulator vessel vents, access door seals, and agitator seals.

(f) For determination of solvent in filter waste, such as muck and distillation waste, in accordance with 15A NCAC 02D .0912, the tester shall derive the quantity of volatile organic compounds per quantity of discarded filter muck. The procedure to be used in making this determination shall be the test method "Standard Method of Test for Dilution of Gasoline-Engine Crankcase Oils," ASTM D322 except the filter muck is to be used instead of crankcase oil.

(g) For sources of volatile organic compounds not covered by the methods specified in Paragraphs (b) through (e) of this Rule, one of the applicable test methods in Appendix M to 40 CFR Part 51 or Appendix A to 40 CFR Part 60 shall be used to determine compliance with volatile organic compound emission standards.

(h) Compounds excluded from the definition of volatile organic compound in 15A NCAC 02D .0901 shall be treated as water.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2614 DETERMINATION OF VOC EMISSION CONTROL SYSTEM EFFICIENCY

(a) This Rule shall apply to any test method used to determine the capture or control efficiency of any device or system designed, installed, and operated for the purpose of reducing volatile organic compound emissions.

(b) The control efficiency of volatile organic compound emission control systems shall be determined using the following procedures:

(1) The volatile organic compound containing material shall be sampled and analyzed using the procedures set forth in this Section.

(2) Samples of the gas stream containing volatile organic compounds shall be taken simultaneously at the inlet and outlet of the emissions control device.

(3) The efficiency of the control device shall be expressed as a percent of the total combustible carbon content reduction achieved.

(c) The volatile organic compound mass emission rate shall be the sum of emissions from the control device and the emissions not collected by the capture system.

(d) Capture efficiency shall be determined using the EPA recommended capture efficiency protocols and test methods described in the EPA document, EMTIC GD-035, "Guidelines for Determining Capture Efficiency." This document is hereby incorporated by reference including subsequent amendments or editions. A copy of the referenced materials may be obtained free of charge via the Internet from the EPA TTN website at http://www3.epa.gov/ttn/emc/guidlnd/gd-036.pdf.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68; 143-215.107(a)(5);*
Eff. June 1, 2008;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2615 DETERMINATION OF LEAK TIGHTNESS AND VAPOR LEAKS

(a) Leak Testing. One of the following test methods from the EPA document "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection System," EPA-450/2-78-051, published by the U.S. Environmental Protection Agency, December 1978, shall be used to determine compliance with Rule .0932 Gasoline Truck Tanks And Vapor Collector Systems of this Section:

(1) The gasoline vapor leak detection procedure by combustible gas detector described in Appendix B of EPA-450/2-78-051 shall be used to determine leakage from gasoline truck tanks and vapor control systems.

(2) The leak detection procedure for bottom-loaded truck tanks by bag capture method described in Appendix C of EPA-450/2-78-051 shall be used to determine the leak tightness of truck tanks during bottom loading.

(b) Annual Certification. The pressure-vacuum test procedures for leak tightness of truck tanks described in Method 27 of Appendix A of 40 CFR Part 60 shall be used to determine the leak tightness of gasoline truck tanks in use and equipped with vapor collection equipment. Method 27 of Appendix A of 40 CFR Part 60 is changed to read:

(1) 8.2.1.2 "Connect static electrical ground connections to tank."

(2) 8.2.1.3 "Attach test coupling to vapor return line."

(3) 16.0 No alternative procedure is applicable.

(c) Copies of Appendix B and C of the EPA document, "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection System," EPA-450/2-78-051, cited in this Rule, are hereby incorporated with subsequent amendments and editions by reference and are available on the Division's Website http://daq.state.nc.us/enf/sourcetest.

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

15A NCAC 02D .2616 FLUORIDES

The procedures for determining compliance with fluoride emissions standards shall be completed using:

(1) Method 13A or 13B of Appendix A to 40 CFR Part 60 for determining total fluoride emissions from stacks;

(2) Method 14 of Appendix A to 40 CFR Part 60 for determining total fluoride emissions from roof monitors not employing stacks or pollutant collection systems; or

(3) Method 26 or Method 26A of Appendix A to 40 CFR Part 60 for determining hydrogen halide and halogen emissions.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2617 TOTAL REDUCED SULFUR

(a) Method 16 of Appendix A to 40 CFR Part 60 or Method 16A of Appendix A to 40 CFR Part 60 shall be used to determine emission rates and compliance with total reduced sulfur emission standards.

(b) Method 15 of Appendix A to 40 CFR Part 60 may be used as an alternative method to determine total reduced sulfur emissions from tail gas control units of sulfur recovery plants, hydrogen sulfide in fuel gas for fuel gas combustion devices, and if specified in other applicable federal subparts.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2618 MERCURY

The procedures for determining compliance with mercury emission standards shall be performed using one of the following methods:

(1) Method 29 of Appendix A to 40 CFR Part 60;
(2) Method 30A of Appendix A to 40 CFR Part 60;
(3) Method 30B of Appendix A to 40 CFR Part 60;
(4) Method 101 of Appendix B to 40 CFR Part 61;
(5) Method 101A of Appendix B to 40 CFR Part 61; or
(6) Method 102 of Appendix B to 40 CFR Part 61.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2619 ARSENIC, BERYLLIUM, CADMIUM, HEXAVALENT CHROMIUM

(a) Method 29 of Appendix A to 40 CFR Part 60 shall be used to show compliance for arsenic, beryllium, cadmium, and hexavalent chromium metals emission standards.

(b) SW-846 Test Method 3060 shall be used to differentiate hexavalent chromium from total chromium. EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," is incorporated by reference including subsequent amendments or editions. A copy of chapters, methods, and supporting documents for SW-846 may be obtained free of charge via the Internet from the EPA website at http://www.epa.gov/hw-sw846/sw-846-compendium.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2620 DIOXINS AND FURANS

Method 23 of Appendix A to 40 CFR Part 60 shall be used to determine emission rates and compliance with polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans emission standards.

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;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2621 DETERMINATION OF POLLUTANT EMISSIONS USING THE F FACTOR

(a) Emissions for wood or fuel burning sources expressed in units of pounds per million Btu shall be determined by the "Oxygen-Based F Factor Procedure" described in Section 12.2.1 of Method 19 of Appendix A to 40 CFR Part 60. Other procedures described in Method 19 may be used if appropriate.

(b) A continuous oxygen (O_2) or carbon dioxide (CO_2) analyzer meeting the requirements of Method 3A of Appendix A to 40 CFR Part 60 may be used if the average of all values during the run are used to determine the average O_2 or CO_2 concentrations.

(c) If the continuous monitor method in Paragraph (b) of this Rule is not used, an integrated bag sample shall be taken for the duration of each test run. For simultaneous testing of multiple ducts, there shall be a separate bag sample for each sampling train. Each bag sample shall be analyzed with an Orsat analyzer by Method 3 of Appendix A to 40 CFR Part 60. The specifications stated in Method 3 for the construction and operation of the bag sampling apparatus shall be followed.

(d) The Director shall review the use of alternative methods according to 15A NCAC 02D .2601(e) and shall approve them if they meet the requirements of Method 3 of Appendix A to 40 CFR Part 60.

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;
Readopted Eff. November 1, 2019.