SUBCHAPTER 02D - AIR POLLUTION CONTROL REQUIREMENTS

SECTION .0100 - DEFINITIONS AND REFERENCES

15A NCAC 02D .0101 DEFINITIONS

The definition of any word or phrase used in Rules of this Subchapter is the same as given in Article 21, G.S. 143, as amended. The following words and phrases, which are not defined in the article, have the following meaning:

(1) "Act" means Article 21, G.S. 143, entitled "Water and Air Resources."

(2) "Administrator" means, when it appears in any Code of Federal Regulation incorporated by reference in this Subchapter, the Director of the Division of Air Quality unless:
   (a) a specific rule in this Subchapter specifies otherwise; or
   (b) the U.S. Environmental Protection Agency, in a delegation or approval, states that a specific authority of the Administrator of the Environmental Protection Agency is not included in such a delegation or approval.

(3) "Air pollutant" means an air pollution agent or combination of such agents, including any physical, chemical, biological, or radioactive substance or matter emitted into or otherwise entering the ambient air.

(4) "Ambient air" means that portion of the atmosphere outside buildings or other enclosed structures, stacks, or ducts and that surrounds human, animal, or plant life or property.

(5) "Approved" means approved by the Director of the Division of Air Quality according to these Rules.

(6) "Capture system" means the equipment including hoods, ducts, and fans, used to contain, capture, or transport a pollutant to a control device.

(7) "CFR" means the Code of Federal Regulations.

(8) "Combustible material" means any substance that, when ignited, will burn in air.

(9) "Construction" means change in method of operation or any physical change, including on-site fabrication, erection, installation, replacement, demolition, or modification of a source, that results in a change in emissions or affects the compliance of a facility.

(10) "Control device" means equipment, including fume incinerator, adsorber, absorber, scrubber, filter media, cyclone, and electrostatic precipitator, used to destroy or remove an air pollutant before discharge to the ambient air.

(11) "Day" means a 24-hour period beginning at midnight.

(12) "Director" means the Director of the Division of Air Quality, unless otherwise specified.

(13) "Division" means Division of Air Quality.

(14) "Dustfall" means particulate matter that settles out of the air. Dustfall shall be expressed in units of grams per square meter per 30-day period.

(15) "Emission" means the release or discharge, whether directly or indirectly, of any air pollutant into the ambient air from any source.

(16) "Facility" means all of the pollutant-emitting activities, except transportation facilities, that are located on one or more adjacent properties under common control.

(17) "FR" means the Federal Register.

(18) "Fugitive emission" means those emissions that could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.

(19) "Fuel burning equipment" means equipment whose primary purpose is the production of energy or power from the combustion of any fuel. Uses of the equipment include heating water, generating or circulating steam, heating air as in a warm air furnace, or furnishing process heat by transferring energy by fluids or through process vessel walls.

(20) "Garbage" means any animal or vegetable waste resulting from the handling, preparation, cooking, or serving of food.

(21) "Incinerator" means a device designed to burn solid, liquid, or gaseous waste material.

(22) "Opacity" means that property of a substance tending to obscure vision and is measured as percent obscuration.

(23) "Open burning" means any fire whose products of combustion are emitted directly into the outdoor atmosphere without passing through a stack or chimney, approved incinerator, or other similar device.

(24) "Owner or operator" means any person who owns, leases, operates, controls, or supervises a facility, source, or air pollution control equipment.
(25) "Particulate matter" means any material except uncombined water that exists in a finely divided form as a liquid or solid at standard conditions.
(26) "Particulate matter emissions" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by methods specified in this Subchapter.
(27) "Permitted" means any source subject to a permit under this Subchapter or 15A NCAC 02Q.
(28) "Person" as defined in G.S. 143-212 includes any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, or any other legal entity, or its legal representative, agent, or assigns.
(29) "PM10" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by methods specified in this Subchapter.
(30) "PM10 emissions" means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by methods specified in this Subchapter.
(31) "PM2.5" means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by methods specified in this Subchapter.
(32) "Refuse" means any garbage, rubbish, or trade waste.
(33) "Rubbish" means solid or liquid wastes from residences, commercial establishments, or institutions.
(34) "Rural area" means an area that is devoted to the following uses: agriculture, recreation, wildlife management, state park, or any area of natural cover.
(35) "Salvage operation" means any business, trade, or industry engaged in whole or in part in salvaging or reclaiming any product or material, including metal, chemicals, motor vehicles, shipping containers, or drums.
(36) "Smoke" means small gas-borne particles resulting from incomplete combustion, consisting predominantly of carbon, ash, and other burned or unburned residue of combustible materials that form a visible plume.
(37) "Source" means any stationary article, machine, process equipment, or other contrivance, singly or in combination, or any tank-truck, trailer, or railroad tank car, from which air pollutants emanate or are emitted, either directly or indirectly.
(38) "Sulfur oxides" means sulfur dioxide, sulfur trioxide, their acids, and the salts of their acids.
(39) "Transportation facility" means a complex source as defined in G.S. 143-213(22).
(40) "Total suspended particulate" means any finely divided solid or liquid material, except water in uncombined form, that is or has been airborne as measured by methods specified in this Subchapter.
(41) "Trade wastes" means all solid, liquid, or gaseous waste materials or rubbish resulting from combustion, salvage operations, building operations, or the operation of any business, trade, or industry including plastic products, paper, wood, glass, metal, paint, grease, oil and other petroleum products, chemicals, and ashes.
(42) "ug" or "µg" means micrograms.

History Note: *Authority G.S. 143-213; 143-215.3(a)(1);*
Eff. June 1, 1976;
Amended Eff. December 1, 1989; July 1, 1988; July 1, 1984;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. January 1, 2015; December 1, 2005; June 1, 2004; July 1, 1998; July 1, 1996; July 1, 1994;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0102 PHRASES

History Note: *Authority G.S. 143-215.3(a)(1); 143-213;*
Eff. February 1, 1976;

Amended Eff. December 1, 1976;
Repealed Eff. July 1, 1984.

15A NCAC 02D .0103 COPIES OF REFERENCED FEDERAL REGULATIONS

Copies of the Code of Federal Regulations sections referred to in this Subchapter may be obtained free of charge online at https://www.govinfo.gov/app/collection/cfr/. Copies of referenced rules are also available for public inspection at Department of Environmental Quality regional offices upon request. The contact information for the regional offices is provided on the Division of Air Quality website at https://deq.nc.gov/about/divisions/air-quality/regional-offices.

History Note: *Authority G.S. 143-215.3; 150B-21.6;*
Eff. December 1, 1976;
Amended Eff. December 1, 2005; December 1, 1992; August 1, 1991; July 1, 1988; July 1, 1987;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. January 5, 2016;
Amended Eff. September 1, 2023; January 1, 2018.

15A NCAC 02D .0104 INCORPORATION BY REFERENCE

(a) If referred to in this Subchapter, the following materials shall be incorporated in this Subchapter by reference:
(1) a regulation codified in the Code of Federal Regulations (CFR); and
(2) a method established by the American Society for Testing and Materials (ASTM).

(b) The Code of Federal Regulations and American Society for Testing and Materials methods incorporated by reference in this Subchapter shall include subsequent amendments and editions unless a rule specifies otherwise.

(c) The Code of Federal Regulations is available in electronic form free of charge at https://www.gpo.gov/fdsys/search/home.action.

(d) The American Society for Testing and Materials methods may be purchased from https://www.astm.org/. Purchase price varies according to the particular test method and format chosen, and the cost of the materials are set forth at https://www.astm.org/.

History Note: *Authority G.S. 150B-21.6;*
Eff. July 1, 1988;
Amended Eff. July 1, 1998; May 1, 1995; December 1, 1992; October 1, 1989;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. January 5, 2016;
Amended Eff. January 1, 2018.

15A NCAC 02D .0105 MAILING LIST

(a) The Division shall develop and maintain a mailing list of persons who have requested notification of rule-making as required by G.S. 150B 21.2(d). Such persons shall receive a copy of the complete notice as filed with the Office of Administrative Hearings.

(b) Any person requesting to be on a mailing list established under Paragraph (a) of this Rule shall submit a written request to the Division of Air Quality, 1641 Mail Service Center, Raleigh, North Carolina, 27699-1641. Payment of fees required under this Rule may be by check or money order for thirty dollars ($30.00) made payable to the Department of Environmental Quality. Payment shall be submitted with each request and received by June 1 of each year. The fee covers from July 1 to June 30 of the following year. A person requesting to be on the list for notification of rule-making may opt to receive notification via email free of charge by contacting Division staff as shown at https://deq.nc.gov/about/divisions/air-quality/air-quality-planning.

History Note: *Authority G.S. 143-215.3(a)(1); 150B 21.2(d);*
Eff. April 1, 1995;
Amended Eff. April 1, 2003; July 1, 1998; May 1, 1998;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. January 5, 2016;
Amended Eff. January 1, 2018.

SECTION .0200 - AIR POLLUTION SOURCES

15A NCAC 02D .0201 CLASSIFICATION OF AIR POLLUTION SOURCES

(a) Purpose. This Rule establishes a system for classifying air pollution sources. The Commission shall use the system for classifying air pollution sources set forth in this Rule to classify air pollution sources governed by this Subchapter.

(b) Scope. This Rule shall apply to all air pollution sources, both combustion and non-combustion. The following system for classifying air pollution sources shall be used:

(1) "Class I-C" includes all sources of air pollution using fuel-burning equipment for the production of heat to generate electricity for public use.

(2) "Class II-C" includes all sources of air pollution using fuel-burning equipment for the production of steam, and for other process uses at commercial and industrial establishments.

(3) "Class III-C" includes all sources of air pollution using fuel-burning equipment for comfort heating at institutional, commercial, or industrial establishments, or at apartment houses having a central heating system serving more than four apartments.

(4) "Class IV-C" includes all sources of air pollution that burn trash, rubbish, refuse, or similar materials in incinerators, teepee burners, or similar devices.

(5) "Class V-C" includes all sources of air pollution using fuel-burning equipment for comfort heating that are not included in Class III-C.

(6) "Class VI-C" includes all sources of air pollution using internal combustion engines.

(7) "Class I-I" includes all sources of air pollution resulting from industrial plants engaged in the manufacture of chemicals or allied products whose processes depend on the chemical reaction of two or more elements or compounds, and includes plants producing acids, fertilizer materials, dyestuff, synthetic fibers, and industrial gases.

(8) "Class II-I" includes all sources of air pollution resulting from industrial plants engaged in the production of pulp and paper.

(9) "Class III-I" includes all sources of air pollution resulting from the mining and processing of minerals, stone, clay, and cement products, and includes phosphate ore, mica and feldspar operations, stone quarries and crushers, cement plants, concrete mixing plants, and masonry block plants.

(10) "Class IV-I" includes all sources of air pollution resulting from industrial operations using petroleum products, and includes asphalt mix plants, roofing felt plants, and petroleum products storage areas.

(11) "Class V-I" includes all sources of air pollution resulting from furniture, lumber, or wood product plants.

(12) "Class VI-I" includes all sources of air pollution resulting from textile manufacturing, textile dyeing, or finishing plants.

(13) "Class VII-I" includes all sources of air pollution resulting from the shelling, drying, storage, ginning, and processing of tobacco, corn, soybeans, peanuts, cotton, fruits, vegetables, or other agricultural products.

(14) "Class VIII-I" includes all sources of air pollution resulting from industries engaged in the processing of metals, and includes smelting, casting foundries, metal working, and other similar operations.

(15) "Class IX-I" includes all sources of air pollution resulting from slaughtering and processing of meat, poultry, fish, and similar products and from rendering or the recovering of by-products of these operations.

(16) "Class X-I" includes all sources of air pollution resulting from industries which do not fall within the classifications described in Subparagraphs (b)(7) through (b)(15) of this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4);*
Eff. February 1, 1976;
Amended Eff. July 1, 1984; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0202 REGISTRATION OF AIR POLLUTION SOURCES

(a) The Director may require the owner or operator of a source of air pollution to register that source, pursuant to G.S. 143 215.107(a)(4).

(b) Any person required to register a source of air pollution with the Division shall register the source on forms provided by the Division and shall provide the following information:

(1) the name of the person, company, or corporation operating the sources;
(2) the address, location, and county;
(3) principal officer of the company;
(4) quantities and kinds of raw materials used;
(5) process flow sheets;
(6) operating schedules;
(7) total weights and kinds of air pollution released;
(8) types and quantities of fuels used;
(9) stack heights; and
(10) other information considered essential in evaluating the potential of the source to cause air pollution.

The forms shall be completed and returned to the Division within 60 days following their receipt.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4);*
Eff. February 1, 1976;
Amended Eff. July 1, 1998; June 1, 1985; July 1, 1984;
Readopted Eff. January 1, 2018.

SECTION .0300 - AIR POLLUTION EMERGENCIES

15A NCAC 02D .0301 PURPOSE

Notwithstanding any other provisions of air pollution control regulations or standards, this Section is designed to prevent the excessive buildup of air contaminants during air pollution episodes thereby preventing the occurrence of an emergency due to the effects of these contaminants on the public health.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(12);*
Eff. February 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0302 EPISODE CRITERIA

The Director may issue a proclamation of an air pollution alert, air pollution warning, or air pollution emergency if the Director determines that the accumulation of air contaminants in any place is attaining or has attained levels that could, if such levels are sustained or exceeded, lead to a threat to the health of the public. In deciding whether to issue such a proclamation, the Director shall be guided by the following criteria:

(1) Alert. The alert level is that concentration of pollutants at which first stage control actions are to begin. The Secretary of the Department of Environmental Quality with the concurrence of the Governor shall proclaim an alert when any of the following levels is reached at any monitoring site and meteorological conditions are such that pollutant concentrations can be expected to remain at or exceed above levels for 12 or more hours or, in the case of ozone, the situation is likely to reoccur within the next 24-hours unless control actions are taken:
    (a) sulfur dioxide -- 800 $\mu g/m^3$ (0.3 ppm), 24-hour average;
    (b) carbon monoxide -- 17 $\mu g/m^3$ (15 ppm), eight-hour average;
    (c) ozone -- 400 $\mu g/m^3$ (0.2 ppm), one-hour average;
    (d) nitrogen dioxide -- 1130 $\mu g/m^3$ (0.6 ppm), one-hour average; 282 $\mu g/m^3$ (0.15 ppm), 24-hour average; or
    (e) PM10--350 $\mu g/m^3$ 24-hour average.
(2) Warning. The warning level indicates that air quality is continuing to degrade and that additional abatement actions are necessary. The Secretary of the Department of Environmental Quality with the concurrence of the Governor shall proclaim a warning when any one of the following levels is reached at any monitoring site and meteorological conditions are such that pollutant concentrations can be expected to remain at or exceed above levels for 12 or more hours or, in the case of ozone, the situation is likely to reoccur within the next 24-hours unless control actions are taken:
    (a) sulfur dioxide -- 1600 $\mu g/m^3$ (0.6 ppm),24-hour average

(b) carbon monoxide -- 34 µg/m^3 (30 ppm), eight-hour average;
(c) ozone -- 800 µg/m^3 (0.4 ppm), one-hour average;
(d) nitrogen dioxide -- 2260 µg/m^3 (1.2 ppm), one-hour average; 565 µg/m^3 (0.3 ppm), 24-hour average; or
(e) PM10 -- 420 µg/m^3 24-hour average.

(3) Emergency. The emergency level indicates that air quality is continuing to degrade to a level that the most stringent control actions are necessary. The Secretary of the Department of Environmental Quality with the concurrence of the Governor shall declare an emergency when any one of the following levels is reached at any monitoring site and meteorological conditions are such that pollutant concentrations can be expected to remain at or exceed above levels for 12 or more hours or, in the case of ozone, the situation is likely to reoccur within the next 24-hours unless control actions are taken:
(a) sulfur dioxide -- 2100 µg/m^3 (0.8 ppm) 24-hour average;
(b) carbon monoxide -- 46 µg/m^3 (40 ppm), eight-hour average;
(c) ozone -- 1000 µg/m^3 (0.5 ppm), one-hour average;
(d) nitrogen dioxide -- 3000 µg/m^3 (1.6 ppm), one-hour average; 750 µg/m^3 (0.4 p.p.m.), 24-hour average; or
(e) PM10--500 µg/m^3 24-hour average.

(4) Termination. After a proclamation has been issued, any level reached by application of these criteria shall remain in effect until the criteria for that level are no longer met. At that time the next lower level shall remain in effect until the criteria for that level are no longer met.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(12);*
Eff. February 1, 1976;
Amended Eff. July 1, 1998; July 1, 1988; July 1, 1984; June 1, 1980; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0303 EMISSION REDUCTION PLANS

(a) Air Pollution Alert. Any person responsible for the operation of a source of air pollution described in 15A NCAC 02D .0305 shall take all air pollution alert actions required for that source and shall put into effect the preplanned abatement program that is required by 15A NCAC 02D .0304 for an air pollution alert.
(b) Air Pollution Warning. Any person responsible for the operation of a source of air pollution described in 15A NCAC 02D .0306 shall take all air pollution warning actions required for that source and shall put into effect the preplanned abatement program that is required by 15A NCAC 02D .0304 for an air pollution warning.
(c) Air Pollution Emergency. Any person responsible for the operation of a source of air pollution described in 15A NCAC 02D .0307 shall take all air pollution emergency actions required for that source and shall put into effect the preplanned abatement program that is required by 15A NCAC 02D .0304 for an air pollution emergency.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(12);*
Eff. February 1, 1976;
Amended Eff. July 1, 1984;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0304 PREPLANNED ABATEMENT PROGRAM

(a) Any person who is responsible for the operation of a source of air pollution that is described in 15A NCAC 02D .0305, .0306, or .0307 or that emits 100 tons per year or more of any one pollutant shall prepare an abatement program plan to reduce the emissions of air pollutants into the outdoor atmosphere during periods of an air pollution episode as described in 15A NCAC 02D .0302. The plan shall be consistent with good industrial practices and safe operating procedures. When the Director requests that the plan be submitted for review, the owner or operator of the source shall submit the plan within 30 days of the Director's request.
(b) When requested by the Commission in writing, any person responsible for the operation of a source not described in 15A NCAC 02D .0305, .0306, or .0307 shall prepare a plan to reduce the emissions of air pollutants into the outdoor atmosphere during periods of air pollution alert, air pollution warning, and air pollution emergency as described in 15A NCAC 02D .0302. The plan shall be consistent with good industrial practices and safe operating procedures.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(12);*
Eff. February 1, 1976;
Amended Eff. July 1, 1988; July 1, 1984;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0305 EMISSION REDUCTION PLAN: ALERT LEVEL

(a) General.

(1) There shall be no open burning of any material otherwise allowed under 15A NCAC 02D .1900.

(2) The use of incinerators for the disposal of any form of solid waste shall be limited to the hours between noon and 4:00 p.m.

(3) Persons operating fuel burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of noon and 4:00 p.m.

(4) Persons operating motor vehicles should eliminate all unnecessary operations.

(b) Source Curtailment. Any person responsible for the operation of a source of air pollution shall take all required control actions for the alert level that are listed below:

(1) Operators of coal or oil fired electric power generating facilities shall:
(A) use fuels having low ash and sulfur content,
(B) perform boiler lancing and soot blowing between noon and 4:00 p.m., and
(C) divert electric power generation to facilities outside of the alert area;

(2) Operators of coal or oil fired process steam generating facilities shall:
(A) use fuels having low ash and sulfur content,
(B) perform boiler lancing and soot blowing between noon and 4:00 p.m., and
(C) reduce steam load demands consistent with continuing plant operation;

(3) Operators of manufacturing industries of the following classifications: primary metals industry; petroleum refining and related industries; chemical and allied products industries; paper and allied products industries; glass, clay, and concrete products industries shall:
(A) reduce air pollutants from manufacturing operations by curtailing, postponing, or deferring production and related operations;
(B) defer trade waste disposal operations that emit particles, gases, vapors, or malodorous substances;
(C) reduce heat-load demands for processing; and
(D) perform boiler lancing or soot blowing between noon to 4:00 p.m.; and

(4) Other persons requested by the Commission to prepare a preplanned abatement program shall take all required control actions for the alert level contained in their program plan.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(12);*
Eff. February 1, 1976;
Amended Eff. July 1, 1984; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0306 EMISSION REDUCTION PLAN: WARNING LEVEL

(a) General

(1) There shall be no open burning of any material otherwise allowed under 15A NCAC 02D .1900.

(2) The use of incinerators for the disposal of solid waste or liquid waste shall be prohibited.

(3) Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between noon and 4:00 p.m..

(4) Persons operating motor vehicles should minimize their use through car pools and increased use of public transportation.

(b) Source Curtailment. Any person responsible for the operation of a source of air pollution shall take all required control actions for the warning level that are listed below:

(1) Operators of coal or oil fired electric power generating facilities shall:
(A) use fuels having the lowest ash and sulfur content;
(B) perform boiler lancing and soot blowing between noon to 4:00 p.m.; and
(C) divert electric power generating to facilities outside of the warning area;

(2) Operators of coal or oil fired process steam generating facilities shall:
(A) use fuels having the lowest ash and sulfur content;

(B) perform boiler lancing and soot blowing between noon to 4:00 p.m.;
(C) reduce steam load demands consistent with continuing plant operations; and
(D) prepare to use the preplanned abatement program for emergency level;

(3) Operators of manufacturing industries of the following classifications: primary metal industries; petroleum refining and related industries; chemical and allied products industries; paper and allied products industries; glass, clay, and concrete products industries shall:
(A) reduce air pollutants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing production and related operations;
(B) defer trade waste disposal operations that emit particles, gases, vapors, or malodorous substances;
(C) reduce heat-load demands for processing consistent with continuing plant operations; and
(D) perform boiler lancing or soot blowing between noon to 4:00 p.m.; and

(4) Other persons requested by the Commission to prepare a preplanned abatement program shall take all required control actions for the warning level contained in their program plan.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(12);*
Eff. February 1, 1976;
Amended Eff. July 1, 1984; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0307 EMISSION REDUCTION PLAN: EMERGENCY LEVEL

(a) General

(1) There shall be no open burning of any material otherwise allowed under 15A NCAC 02D .1900.

(2) The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.

(3) All places of employment described below shall cease operations:
(A) mining and quarrying of nonmetallic minerals;
(B) all manufacturing establishments except those required to have in force a preplanned abatement program for an air pollution emergency;
(C) all construction work involving grading or other operations that generate dust;
(D) all wholesale and retail establishments except pharmacies and stores primarily engaged in the sale of food;
(E) all commercial and manufacturing establishments, automobile repair services and garages, laundries, barbershops, beauty shops, and motion picture theaters; and
(F) elementary and secondary schools, colleges, universities, and professional schools.

(4) The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

(b) Source Curtailment. Any person responsible for the operation of a source of air pollution shall take all required control actions for the emergency level that are listed below:

(1) Operators of coal- or oil-fired electric power generating facilities shall:
(A) use fuels having lowest ash and sulfur content;
(B) perform boiler lancing or soot blowing between noon to 4:00 p.m.;
(C) divert electric power generation to facilities outside of emergency area;

(2) Operators of coal- or oil-fired process steam generating facilities shall:
(A) reduce heat and steam demands to that necessary to prevent equipment damage;
(B) perform boiler lancing and soot blowing between noon and 4:00 p.m.;
(C) take the action called for in the preplanned abatement program;

(3) Operators of manufacturing industries of the following classifications: primary metals industries; petroleum refining and related industries; chemical and allied products industries; paper and allied products industries; glass, clay, and concrete products industries shall:
(A) eliminate air pollutants from manufacturing operations by ceasing, curtailing, postponing, or deferring production and related operations to the extent possible without causing injury to persons or damage to equipment;
(B) eliminate air pollution from trade waste disposal processes which emit particles, gases, vapors, or malodorous substances;
(C) reduce heat-load demands for processing to the minimum;
(D) perform boiler lancing or soot blowing between 12:00 p.m. to 4:00 p.m.; and

(4) Other persons requested by the Commission to prepare a preplanned abatement program shall take all required control actions for the emergency level contained in their program plan.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(12);*
Eff. February 1, 1976;
Amended Eff. July 1, 1984; December 1, 1976;
Readopted Eff. January 1, 2018.

SECTION .0400 - AMBIENT AIR QUALITY STANDARDS

15A NCAC 02D .0401 PURPOSE

(a) The purpose of the ambient air quality standards set out in this Section is to establish certain maximum limits on parameters of air quality considered desirable for the preservation and enhancement of the quality of the State's air resources. Furthermore, the objective of the Commission, consistent with the North Carolina Air Pollution Control Law, shall be to prevent significant deterioration in ambient air quality in any substantial portion of the State where existing air quality is better than the standards. An atmosphere in which these standards are not exceeded should provide for the protection of the public health, plant and animal life, and property.
(b) Ground-level concentrations of pollutants shall be determined by sampling at fixed locations in areas beyond the premises on which a source is located. The standards shall be applicable at each such sampling location in the State.
(c) No facility or source of air pollution shall cause any ambient air quality standard in this Section to be exceeded or contribute to a violation of any ambient air quality standard in this Section except as allowed by 15A NCAC 02D .0531 or .0532.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. February 1, 1976;
Amended Eff. December 1, 1992; October 1, 1989; July 1, 1984;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0402 SULFUR OXIDES

(a) The ambient air quality standards for sulfur oxides measured as sulfur dioxide shall be:
(1) 80 micrograms per cubic meter (0.03 ppm) annual arithmetic mean;
(2) 365 micrograms per cubic meter (0.14 ppm) maximum 24-hour concentration not to be exceeded more than once per year; and
(3) 1300 micrograms per cubic meter (0.5 ppm) maximum three-hour concentration not to be exceeded more than once per year.
(b) Sampling and analysis shall be in accordance with procedures in Appendix A or A-1 of 40 CFR Part 50 or by a Federal Equivalent Method (FEM) designated in accordance with 40 CFR Part 53.
(c) Applicability of the standards listed in Subparagraph (a)(1) and (2) of this Rule shall be in effect until one year after the effective date of initial designations under Section 107(d) of the Clean Air Act for the sulfur dioxide standard in Paragraph (d) of this Rule.
(d) The primary one-hour annual ambient air quality standard for oxides of sulfur shall be 75 parts per billion (ppb), measured in the ambient air as sulfur dioxide.
(e) The one-hour primary standard shall be met at an ambient air quality monitoring site when the three-year average of the annual (99th percentile) of the daily maximum one-hour average concentrations is less than or equal to 75 ppb, as determined in accordance with Appendix T of 40 CFR Part 50.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. February 1, 1976;
Amended Eff. September 1, 2011; July 1, 1984; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0403 TOTAL SUSPENDED PARTICULATES

(a) The ambient air quality standards for total suspended particulate matter are:
(1) 75 micrograms per cubic meter annual geometric mean; and
(2) 150 micrograms per cubic meter maximum 24-hour concentration not to be exceeded more than once per year.

(b) Sampling and analysis shall be in accordance with procedures in 40 CFR Part 50, Appendix B or equivalent methods established pursuant to 40 CFR Part 53.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. February 1, 1976;
Amended Eff. July 1, 1988; July 1, 1984; October 15, 1981;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0404 CARBON MONOXIDE

(a) The ambient air quality standards for carbon monoxide shall be:

(1) 9 parts per million (10 milligrams per cubic meter) maximum eight-hour average concentration not to be exceeded more than once per year; and

(2) 35 parts per million (40 milligrams per cubic meter) maximum one-hour average concentration not to be exceeded more than once per year.

(b) Sampling and analysis shall be in accordance with procedures in Appendix C of 40 CFR Part 50 or equivalent methods established under 40 CFR Part 53.

(c) An eight-hour average shall be considered valid if at least 75 percent of the hourly averages for the eight-hour period are available. In the event that only six or seven hourly averages are available, the eight-hour average shall be computed on the basis of the hours available using six or seven as the divisor.

(d) When summarizing data for comparison with the standards, averages shall be stated to one decimal place. Comparison of the data to the standards in parts per million shall be made in terms of integers with fractional parts of 0.5 or greater rounded up.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. February 1, 1976;
Amended Eff. October 1, 1989; July 1, 1984; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0405 OZONE

The ambient air quality standard for ozone measured by a reference method based on Appendix D of 40 CFR Part 50 and designated according to 40 CFR Part 53 shall be 0.070 parts per million (ppm), daily maximum eight-hour average. The standard shall be deemed attained at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum eight-hour average ozone concentration is less than or equal to 0.070 parts per million (ppm) as determined by Appendix U of 40 CFR Part 50, or equivalent methods established under 40 CFR Part 53.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. February 1, 1976;
Amended Eff. January 1, 2010; April 1, 1999; July 1, 1984; July 1, 1979; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0406 HYDROCARBONS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. February 1, 1976;
Amended Eff. December 1, 1976;
Repealed Eff. July 1, 1984.

15A NCAC 02D .0407 NITROGEN DIOXIDE

(a) The primary annual ambient air quality standard for oxides of nitrogen shall be 53 parts per billion annual average concentration measured in the ambient air as nitrogen dioxide.

(b) The primary one-hour ambient air quality standard for oxides of nitrogen shall be 100 parts per billion one hour annual average concentration measured in the ambient air as nitrogen dioxide.

(c) The secondary ambient air quality standard for nitrogen dioxide shall be 0.053 parts per million (100 micrograms per cubic meter) annual arithmetic mean concentration.

(d) Sampling and analysis shall be in accordance with:

(1) procedures in Appendix F of 40 CFR Part 50; or
(2) by a Federal Equivalent Method (FEM) designated in accordance with 40 CFR Part 53.

(e) The annual primary standard shall be deemed attained when the annual average concentration in a calendar year is less than or equal to 53 parts per billion, as determined in accordance with Appendix S of 40 CFR Part 50 for the annual standard.

(f) The one hour primary standard shall be deemed attained when the three-year average of the annual 98th percentile of the daily maximum one-hour average concentration is less than or equal to 100 ppb, as determined in accordance with Appendix S of 40 CFR Part 50 for one-hour standard.

(g) The secondary standard shall be deemed attained when the annual arithmetic mean concentration in a calendar year is less than or equal to 0.053 parts per million, rounded to three decimal places (fractional parts equal to or greater than 0.0005 parts per million are rounded up). To demonstrate attainment, an annual mean shall be based on hourly data that are at least 75 percent complete or on data derived from manual methods that are at least 75 percent complete for the scheduled sampling days in each calendar quarter.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. February 1, 1976;
Amended Eff. September 1, 2011; October 1, 1989; July 1, 1984; December 1, 1976;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0408 LEAD

The ambient air quality standard for lead and its compounds, measured as elemental lead by a reference method based on Appendix G of 40 CFR Part 50 or by an equivalent method established under 40 CFR Part 53, shall be 0.15 micrograms per cubic meter. The standard shall be deemed met when the maximum arithmetic three-month mean concentration for a three-year period, as determined in accordance with Appendix R of 40 CFR Part 50, is less than or equal to 0.15 micrograms per cubic meter.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. June 1, 1980;
Amended Eff. January 1, 2010; July 1, 1984;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0409 PM10 PARTICULATE MATTER

(a) The ambient air quality standard for PM10 particulate matter shall be 150 micrograms per cubic meter ($\mu g/m^3$), 24-hour average concentration. This standard shall be deemed attained when 150 ($\mu g/m^3$), as determined according to Appendix N of 40 CFR Part 50, is not exceeded more than once per year on average over a three-year period.

(b) For the purpose of determining attainment of the standards in Paragraph (a) of this Rule, particulate matter shall be measured in the ambient air as PM10 (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) by either:
(1) a reference method based on Appendix M of 40 CFR Part 50 and designated according to 40 CFR Part 53; or
(2) an equivalent method designated according to 40 CFR Part 53.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. July 1, 1988;
Amended Eff. January 1, 2010; April 1, 1999;
Readopted Eff. January 1, 2018.

15A NCAC 02D .0410 PM2.5 PARTICULATE MATTER

(a) The national primary ambient air quality standards for PM2.5 shall be 12.0 micrograms per cubic meter ($\mu g/m^3$) annual arithmetic mean concentration and 35 $\mu g/m^3$ 24-hour average concentration measured in the ambient air as PM2.5 (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either:
(1) A reference method based on appendix L to 40 CFR Part 50 and designated in accordance with 40 CFR Part 53; or
(2) An equivalent method designated in accordance with 40 CFR Part 53.

(b) The primary annual PM2.5 standard shall be deemed met when the annual arithmetic mean concentration, as determined in accordance with Appendix N of 40 CFR Part 50, is less than or equal to 12.0 $\mu g/m^3$.

(c) The primary 24-hour PM2.5 standard shall be deemed met when the 98th percentile 24-hour concentration, as determined in accordance with Appendix N of 40 CFR Part 50, is less than or equal to 35 µg/m^3.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3);*
Eff. April 1, 1999;
Amended Eff. September 1, 2015; January 1, 2010;
Readopted Eff. January 1, 2018.

SECTION .0500 - EMISSION CONTROL STANDARDS

15A NCAC 02D .0501 COMPLIANCE WITH EMISSION CONTROL STANDARDS

(a) Purpose and Scope. The purpose of this Rule is to assure compliance with emission control standards found in this Section. This Rule shall apply to all air pollution sources, both combustion and non-combustion.
(b) New sources shall be in compliance prior to beginning operations.
(c) The owner or operator of an air pollution source shall operate or control the source in a manner to meet emission standards in this Section and not cause the ambient air quality standards pursuant to 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than those named in the applicable emission standards in this Section are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.
(d) The Bubble Concept. As provided in this Paragraph, a facility with multiple emission sources or multiple facilities within the same area may choose to meet the total emission limitation for a given pollutant through a different mix of controls than those required by the rules in 15A NCAC 02D .0500 or .0900.

(1) In order for this mix of alternative controls to be permitted, the Director shall determine that the following conditions are met:
    (A) Sources pursuant to which 15A NCAC 02D .0524, .0530, .0531, .1110, or .1111, the federal New Source Performance Standards (NSPS), the federal National Emission Standards for Hazardous Air Pollutants (NESHAP), regulations established pursuant to Section 111(d) of the federal Clean Air Act, or state or federal Prevention of Significant Deterioration (PSD) requirements apply shall have emissions no larger than if there were not an alternative mix of controls;
    (B) The facility or facilities is located in an attainment area, an unclassifiable area, or in an area that has been demonstrated to be attainment by the statutory deadlines with reasonable further progress toward attainment for those pollutants being considered;
    (C) All of the emission sources affected by the alternative mix are in compliance with applicable regulations or are in compliance with established compliance agreements; and
    (D) The review of an application for the proposed mix of alternative controls and the enforcement of the resulting permit shall not require expenditures of State funds in excess of five times that which would otherwise be required for the review and enforcement of permits without an alternative mix of controls.
(2) The owners or operators of the facility or facilities shall demonstrate the alternative mix of controls is equivalent in total allowed emissions, reliability, enforceability, and environmental impact to the aggregate of the individual emission standards to which the facility would be subject without the alternative mix of controls; and
    (A) that the alternative mix approach does not interfere with the attainment and maintenance of the ambient air quality standards and does not interfere with the Prevention of Significant Deterioration (PSD) program, which shall include modeled calculations of the amount, if any, of PSD increment consumed or created as defined in Clean Air Act Section 163;
    (B) that the alternative mix approach conforms with reasonable further progress requirements as defined in Clean Air Act Section 171(1) if the source is located in a nonattainment area;
    (C) that the emissions pursuant to the alternative mix approach are quantifiable, and emission trades among the sources involved in the alternative mix approach are equivalent; and
    (D) that the pollutants controlled pursuant to the alternative mix approach are of the same criteria pollutant categories, except that emissions of criteria pollutants that contain hazardous pollutants and are used in alternative emission control strategies are subject to

the limitations as defined in 44 Fed. Reg. 71784 (December 11, 1979), Subdivision D.1.c.ii. The Federal Register referenced in this Part is incorporated by reference and does not include subsequent amendments or editions. A copy of 44 Fed. Reg. 71784 may be obtained free of charge and found online at https://www.govinfo.gov/content/pkg/FR-1979-12-11/pdf/FR-1979-12-11.pdf.

The demonstrations of equivalence shall be performed with at least the same level of detail as State Implementation Plan (SIP) demonstration of attainment for the area. A copy of the SIPs may be found on the Division of Air Quality (DAQ) website at https://deq.nc.gov/about/divisions/air-quality/air-quality-planning/state-implementation-plans. If the facility involves another facility in the alternative strategy, it shall complete a modeling demonstration to ensure that air quality is protected. Demonstrations of equivalency shall take into account differences in the level of reliability of the control measures or other uncertainties.

(3) The emission rate limitations or control techniques of each source within the facility or facilities subjected to the alternative mix of controls shall be specified in the facility's permit or facilities' permits.

(4) Compliance schedules and enforcement actions shall not be affected because an application for an alternative mix of controls is being prepared or is being reviewed.

(5) The Director may waive or reduce requirements in this Paragraph up to the extent allowed by the Emissions Trading Policy Statement published in the Federal Register of April 7, 1982, pages 15076-15086, provided that the analysis required by Paragraph (e) of this Rule supports the waiver or reduction of requirements. The Federal Register referenced in this Subparagraph is incorporated by reference and does not include subsequent amendments or editions.

(e) In a permit application for an alternative mix of controls pursuant to Paragraph (d) of this Rule, the owner or operator of the facility shall demonstrate the proposal is equivalent to the existing requirements of the SIP in total allowed emissions, enforceability, reliability, and environmental impact. The Director shall provide for public notice with an opportunity to request a public hearing following the procedures pursuant to 15A NCAC 02Q .0300 or .0500, as applicable.

(1) If a permit containing these conditions is issued pursuant to 15A NCAC 02Q .0300, it shall become a part of the state implementation plan (SIP) as an appendix available for inspection as specified in 15A NCAC 02Q .0105. Until the U.S. Environmental Protection Agency (EPA) approves the SIP revision embodying the permit containing an alternative mix of controls, the facility shall continue to meet the otherwise applicable existing SIP requirements.

(2) If a permit containing these conditions is issued pursuant to 15A NCAC 02Q .0500 it shall be available for inspection as specified in 15A NCAC 02Q .0105. Until the EPA approves the Title V permit containing an alternative mix of controls, the facility shall continue to meet the otherwise applicable existing SIP requirements.

The revision shall be submitted for approval by the EPA on the basis of the revision's consistency with EPA's "Policy for Alternative Emission Reduction Options Within State Implementation Plans" as promulgated in the Federal Register of December 11, 1979, pages 71780-71788, and subsequent rulings.

(f) If the owner or operator of a combustion or noncombustion source or control equipment subject to the requirements of this Section is required to demonstrate compliance with a rule in this Section, source testing procedures pursuant to 15A NCAC 02D .2600 shall be used.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. August 1, 1991; October 1, 1989;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Amended Eff. June 1, 2008; April 1, 2001; April 1, 1999; July 1, 1996; February 1, 1995; July 1, 1994;
Readopted Eff. November 1, 2020;
Amended Eff. September 1, 2023.

15A NCAC 02D .0502 PURPOSE

The purpose of the emission control standards set out in this Section is to establish maximum limits on the rate of emission of air contaminants into the atmosphere.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. June 1, 1981;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0503 PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Functionally dependent" means that structures, buildings, or equipment are interconnected through common process streams, supply lines, flues, or stacks.

(2) "Indirect heat exchanger" means any equipment used for the alteration of the temperature of one fluid by the use of another fluid in which the two fluids are separated by an impervious surface such that there is no mixing of the two fluids.

(3) "Plant site" means any single or collection of structures, buildings, facilities, equipment, installations, or operations that:

(A) are located on one or more adjacent properties;

(B) are under common legal control; and

(C) are functionally dependent in their operations.

(b) The definition contained in Subparagraph (a)(3) of this Rule does not affect the calculation of the allowable emission rate of any indirect heat exchanger permitted prior to April 1, 1999.

(c) The emissions of particulate matter from the combustion of a fuel that are discharged from any indirect heat exchanger through a stack or chimney into the atmosphere shall not exceed:

Maximum Heat Input In Million Btu/Hour	Allowable Emission Limit For Particulate Matter In lb/Million Btu
Up to and Including 10	0.60
100	0.33
1,000	0.18
10,000 and Greater	0.10

For a heat input between any two consecutive heat inputs stated in the table set forth in this Paragraph, the allowable emissions of particulate matter shall be calculated by the equation $E= 1.090*Q^{-0.2594}$. "E" equals the allowable emission limit for particulate matter in lb/million Btu. "Q" equals the maximum heat input in million Btu/hour.

(d) This Rule applies to installations in which fuel is burned for the purpose of producing heat or power by indirect heat transfer. For the purpose of this Rule, the term "fuels" includes all fuels that generate particulate matter emissions from indirect heat exchangers excluding wood and refuse not burned as a fuel. When any refuse, products, or by-products of a manufacturing process are burned as a fuel rather than refuse, or in conjunction with any fuel, this allowable emission limit shall apply.

(e) For the purpose of this Rule, the maximum heat input shall be the total heat content of all fuels which are burned in a fuel burning indirect heat exchanger, of which the combustion products are emitted through a stack or stacks. The sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted pursuant to 15A NCAC 02Q, shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each fuel burning indirect heat exchanger. Fuel burning indirect heat exchangers constructed or permitted after February 1, 1983, shall not change the allowable emission limit of any other fuel burning indirect heat exchanger whose allowable emission limit has previously been set. The removal of a fuel burning indirect heat exchanger shall not change the allowable emission limit of any other fuel burning indirect heat exchanger whose allowable emission limit has previously been established. However, for any fuel burning indirect heat exchanger constructed after, or in conjunction with, the removal of another fuel burning indirect heat exchanger at the plant site, the maximum heat input of the removed fuel burning indirect heat exchanger shall no longer be considered in the determination of the allowable emission limit of any fuel burning indirect heat exchanger constructed after or in conjunction with the removal. For the purposes of this Paragraph, refuse not burned as a fuel and wood shall not be considered a fuel. For residential facilities or institutions, such as military and educational, whose primary fuel burning capacity is for comfort heat, only those fuel burning indirect heat exchangers located in the same power plant or building or otherwise physically

interconnected, such as common flues, steam, or power distribution line, shall be used to determine the total heat input.

(f) The emission limit for fuel burning equipment that burns both wood and other fuels in combination, or for wood and other fuel burning equipment that is operated such that emissions are measured on a combined basis, shall be calculated by the equation Ec = [(EW)(Qw) + (Eo)(Qo)] /Qt.

(1) Ec = the emission limit for combination or combined emission source(s) in lb/million Btu.
(2) Ew = plant site emission limit for wood only as determined pursuant to 15A NCAC 02D .0504 in lb/million Btu.
(3) Eo = the plant site emission limit for other fuels only as determined by Paragraphs (a), (b) and (c) of this Rule in lb/million Btu.
(4) Qw = the actual wood heat input to the combination or combined emission source(s) in Btu/hr.
(5) Qo = the actual other fuels heat input to the combination or combined emission source(s) in Btu/hr.
(6) Qt = Qw + Qo and is the actual total heat input to combination or combined emission source(s) in Btu/hr.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Amended Eff. April 1, 1999; July 1, 1994; August 1, 1991; June 1, 1985; February 1, 1983;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0504 PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS

(a) This Rule applies to fuel burning equipment that burns 100 percent wood. All other fuel burning equipment that burns both wood and other fuels in combination shall be subject to 15A NCAC 02D .0503. For the purpose of this Rule, the following definitions shall apply:

(1) "Functionally dependent" means that structures, buildings or equipment are interconnected through common process streams, supply lines, flues, or stacks.
(2) "Indirect heat exchanger" means any equipment used for the alteration of the temperature of one fluid by the use of another fluid in which the two fluids are separated by an impervious surface such that there is no mixing of the two fluids.
(3) "Plant site" means any single or collection of structures, buildings, facilities, equipment, installations, or operations that:
    (A) are located on one or more adjacent properties;
    (B) are under common legal control; and
    (C) are functionally dependent in their operations.

(b) The definition contained in Subparagraph (a)(3) of this Rule does not affect the calculation of the allowable emission rate of any indirect heat exchanger permitted prior to April 1, 1999.

(c) Emissions of particulate matter from the combustion of wood shall not exceed:

Maximum Heat Input In Million Btu/Hour	Allowable Emission Limit For Particulate Matter In lb/Million Btu
Up to and Including 10	0.70
100	0.41
1,000	0.25
10,000 and Greater	0.15

For a heat input between any two consecutive heat inputs stated in the table set forth in this Paragraph, the allowable emissions of particulate matter shall be calculated by the equation $E=1.1698*Q^{-.2230}$. "E" equals the allowable emission limit for particulate matter in lb/million Btu. "Q" equals the Maximum heat input in million Btu/hour.

(d) This Rule applies to installations in which wood is burned for the primary purpose of producing heat or power by indirect heat transfer.

(e) For the purpose of this Rule, the heat content of wood shall be 8,000 Btu per pound (dry-weight basis). The sum of maximum heat inputs of all wood burning indirect heat exchangers at a plant site that are in operation, under construction, or permitted pursuant to 15A NCAC 02Q, shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each wood burning indirect heat exchanger. Wood burning indirect heat exchangers constructed or permitted after February 1, 1983, shall not change the allowable emission limit of any wood burning indirect heat exchanger whose allowable emission limit has previously been set. The removal of a wood burning indirect heat exchanger shall not change the allowable emission limit of any wood burning indirect heat exchanger subject to this Rule whose allowable emission limit has previously been established. However, for any wood burning indirect heat exchanger subject to this Rule constructed after, or in conjunction with, the removal of another wood burning indirect heat exchanger at the plant site, the maximum heat input of the removed wood burning indirect heat exchanger shall no longer be considered in the determination of the allowable emission limit of any wood burning indirect heat exchanger subject to this Rule constructed after or in conjunction with the removal. For facilities or institutions, such as military and educational, whose primary wood burning capacity is for comfort heat, only those wood burning indirect heat exchangers subject to this Rule located in the same power plant or building or otherwise physically interconnected, such as common flues, steam, or power distribution line shall be used to determine the total heat input.

History Note: *Authority G.S. 143-213; 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(h)(1);*
Eff. February 1, 1976;
Amended Eff. August 1, 2002; April 1, 1999; June 1, 1985; February 1, 1983;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0505 CONTROL OF PARTICULATES FROM INCINERATORS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 1987; June 1, 1985; February 1, 1983;
Repealed Eff. October 1, 1991.

15A NCAC 02D .0506 PARTICULATES FROM HOT MIX ASPHALT PLANTS

(a) The allowable emission rate for particulate matter resulting from the operation of a hot mix asphalt plant that are discharged from any stack or chimney into the atmosphere shall not exceed the level calculated with the equation

$$E = 4.9445(P)^{0.4376}$$

calculated to three significant figures, for process rates less than 300 tons per hour, where "E" equals the maximum allowable emission rate for particulate matter in pounds per hour and "P" equals the process rate in tons per hour. The allowable emission rate shall be 60.0 pounds per hour for process rates equal to or greater than 300 tons per hour.

(b) Visible emissions from stacks or vents at a hot mix asphalt plant shall not exceed 20 percent opacity when averaged over a six-minute period.

(c) All hot mix asphalt batch plants shall be equipped with a scavenger process dust control system for the drying, conveying, classifying, and mixing equipment. The scavenger process dust control system shall exhaust through a stack or vent and shall be operated and maintained in such a manner as to comply with Paragraphs (a) and (b) of this Rule.

(d) Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.

(e) Fugitive emissions for sources at a hot mix asphalt plant not covered by Paragraphs (a) through (d) of this Rule shall not exceed 20 percent opacity averaged over six minutes.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. August 1, 2004; July 1, 1998; January 1, 1985;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0507 PARTICULATES FROM CHEMICAL FERTILIZER MANUFACTURING PLANTS

The allowable emissions rate for particulate matter resulting from the manufacture, mixing, handling, or other operations in the production of chemical fertilizer materials that are discharged from any stack or chimney into the atmosphere shall not exceed the level calculated with the equation $E = 9.377(P)^{0.3067}$ calculated to three significant figures, where "E" equals the maximum allowable emission rate for particulate matter in pounds per hour and "P" equals the process rate as the sum of the production rate and the recycle rate in tons per hour.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. April 1, 2003; July 1, 1998; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0508 PARTICULATES FROM PULP AND PAPER MILLS

(a) Emissions of particulate matter from the production of pulp and paper that are discharged from any stack or chimney into the atmosphere shall not exceed:

(1) 3.0 pounds per equivalent ton of air dried pulp from a recovery furnace stack;
(2) 0.6 pounds per equivalent ton of air dried pulp from a dissolving tank vent; and
(3) 0.5 pounds per equivalent ton of air dried pulp from a lime kiln stack.

(b) Emissions from any kraft pulp recovery boiler established after July 1, 1971, shall not exceed an opacity of 35 percent when averaged over a six-minute period. Six-minute averaging periods may exceed 35 percent opacity if:

(1) no six-minute period exceeds 89 percent opacity;
(2) no more than one six-minute period exceeds 35 percent opacity in any one hour; and
(3) no more than four six-minute periods exceed 35 percent opacity in any 24-hour period.

Where the presence of uncombined water vapor is the only reason for failure to meet this opacity limitation, the opacity limitation set forth in this Paragraph shall not apply.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 1998; August 1, 1987; April 1, 1986; January 1, 1985; May 30, 1978;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0509 PARTICULATES FROM MICA OR FELDSPAR PROCESSING PLANTS

(a) The allowable emission rate for particulate matter resulting from the processing of mica or feldspar that are discharged from any chimney, stack, vent, or outlet into the atmosphere shall not exceed the level calculated with the equation $E = 4(P)^{0.677}$ calculated to three significant figures for process rates less than or equal to 30 tons per hour. For process rates greater than 30 tons per hour but less than 1,000 tons per hour, the allowable emission rate for particulate matter shall not exceed the level calculated with the equation $E = 20.421(P)^{0.1977}$ calculated to three significant figures. For process rates greater than or equal to 1,000 tons per hour but less than 3,000 tons per hour, the allowable emission rate for particulate matter shall not exceed the level calculated with the equation $E = 38.147(P)^{0.1072}$ calculated to three significant figures. The allowable emission rate shall be 90.0 pounds per hour for process weight rates equal to or greater than 3,000 tons per hour. For the purpose of these equations, "E" equals the maximum allowable emission rate for particulate matter in pounds per hour and "P" equals the process weight rate in tons per hour.

(b) Fugitive non-process dust emissions shall meet the requirements of 15A NCAC 02D .0540.

(c) The owner or operator of any mica or feldspar plant shall control process-generated emissions:

(1) from crushers with wet suppression, and
(2) from conveyors, screens, and transfer points,

such that the applicable opacity standards in 15A NCAC 02D .0521 or .0524 are not exceeded.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. April 1, 2003; July 1, 1998; April 1, 1986; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0510 PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS

(a) The owner or operator of a sand, gravel, or crushed stone operation shall not cause, allow, or permit any material to be produced, handled, transported or stockpiled without taking measures, such as application of a dust or wet suppressant, soil stabilizers, covers, or add-on particulate control devices, to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM10 and total suspended particulates.
(b) Fugitive non-process dust emissions from sand, gravel, or crushed stone operations shall be controlled by 15A NCAC 02D .0540.
(c) The owner or operator of any sand, gravel, or crushed stone operation shall control process-generated emissions:
(1) from crushers with wet suppression; and
(2) from conveyors, screens, and transfer points,
such that the applicable opacity standards in 15A NCAC 02D .0521 or .0524 are not exceeded.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 1998; January 1, 1985;
Readopted. Eff. November 1, 2020.

15A NCAC 02D .0511 PARTICULATES FROM LIGHTWEIGHT AGGREGATE PROCESSES
(a) The owner or operator of a lightweight aggregate process shall not cause, allow, or permit any material to be produced, handled, transported or stockpiled without taking measures, such as wet suppression, to reduce to a minimum any particulate matter from becoming airborne to prevent the ambient air quality standards for particulate matter, both PM10 and total suspended particulates, from being exceeded beyond the property line.
(b) Fugitive non-process dust emissions from lightweight aggregate processes subject to this Rule shall meet the requirement of 15A NCAC 02D .0540.
(c) The owner or operator of any lightweight aggregate process shall control process-generated emissions:
(1) from crushers with wet suppression; and
(2) from conveyors, screens, and transfer points,
such that the applicable opacity standards in 15A NCAC 02D .0521 or .0524 are not exceeded.
(d) Particulate matter from any stack serving any lightweight aggregate kiln or lightweight aggregate dryer shall be reduced by at least 95 percent by weight before being discharged to the atmosphere.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 1998; October 1, 1989; January 1, 1985; April 1, 1977;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0512 PARTICULATES FROM WOOD PRODUCTS FINISHING PLANTS
A person shall not cause, allow, or permit particulate matter caused by the working, sanding, or finishing of wood to be discharged from any stack, vent, or building into the atmosphere without providing, as a minimum for its collection, duct work and collectors that are properly designed and adequate to collect particulate to the maximum extent practicable, or such other devices as approved by the Commission. Commission approval of other devices proposed to meet the requirements of this Rule shall occur on a case-by-case basis. In no case shall the ambient air quality standards be exceeded beyond the property line. Collection efficiency shall be determined on the basis of weight.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0513 PARTICULATES FROM PORTLAND CEMENT PLANTS
(a) Particulate matter from any Portland cement kiln shall:
(1) be reduced by at least 99.7 percent by weight before being discharged to the atmosphere; and
(2) not exceed 0.327 pounds per barrel.
(b) The emissions of particulate matter from any stacks, vent, or outlets from all processes except Portland cement kilns shall be controlled pursuant to 15A NCAC 02D .0515.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 1998; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0514 PARTICULATES FROM FERROUS JOBBING FOUNDRIES

Particulate emissions from any ferrous jobbing foundry cupola existing before January 2, 1972 shall not exceed:

Process Weight In lb/hr	Maximum Allowable Emission Rate For Particulate In lb/hr
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.65
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10

Any foundry existing before January 2, 1972, having a capacity greater than shown in the table and any new foundry, regardless of size, shall comply with the particulate emission limits pursuant to 15A NCAC 02D .0515(a).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 1998; April 1, 1986; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0515 PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

(a) The allowable emission rates for particulate matter from any stack, vent, or outlet, resulting from any industrial process for which no other emission control standards are applicable, shall not exceed the level calculated with the equation $E = 4.10(P)^{0.67}$ calculated to three significant figures for process rates less than or equal to 30 tons per hour. For process rates greater than 30 tons per hour, the allowable emission rates for particulate matter shall not exceed the level calculated with the equation $E = 55.0(P)^{0.11} - 40$ calculated to three significant figures. For the purpose of these equations "E" equals the maximum allowable emission rate for particulate matter in pounds per hour and "P" equals the process rate in tons per hour.

(b) Process rate means the total weight of all materials introduced into any specific process that may cause any emission of particulate matter. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not. For a cyclical or batch operation, the process rate is derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process rate is derived by dividing the process weight for a typical period of time by the number of hours in that typical period of time.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. April 1, 2003; July 1, 1998; January 1, 1985; December 1, 1976;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0516 SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

(a) Emissions of sulfur dioxide from any source of combustion, including air pollution control devices, discharged from any vent, stack, chimney, or flare shall not exceed 2.3 pounds of sulfur dioxide per million Btu input.

(b) When determining compliance with this standard:

(1) the sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included;

(2) the sulfur dioxide formed or reduced as a result of treating flue gases with sulfur trioxide or other materials shall be included in the computation of emissions; and

(3) the determination of Btu input shall not include the contribution from any portion of fuels used exclusively to inflate the heat input value used to demonstrate compliance with the emission standard in Paragraph (a) of this Rule.

(c) The standard set forth in Paragraph (a) of this Rule shall not apply to sulfur dioxide emission sources already subject to an emission standard for sulfur dioxide in 15A NCAC 02D .0524, .0527, .1110, .1111, .1206, or .1210.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 2007; April 1, 2003; July 1, 1996; February 1, 1995; October 1, 1989; January 1, 1985; April 1, 1977;
Readopted Eff. November 1, 2020;
Amended Eff. June 1, 2023.

15A NCAC 02D .0517 EMISSIONS FROM PLANTS PRODUCING SULFURIC ACID

Emissions of sulfur dioxide or sulfuric acid mist from the manufacture of sulfuric acid shall not exceed:

(1) 27 pounds of sulfur dioxide per ton of sulfuric acid produced; and

(2) 0.5 pounds of acid mist, expressed as sulfuric acid, per ton of sulfuric acid produced.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0518 MISCELLANEOUS VOLATILE ORGANIC COMPOUND EMISSIONS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. April 1, 1997; July 1, 1996; September 1, 1994; December 1, 1993; February 1, 1993;
Repealed Eff. July 1, 2000.

15A NCAC 02D .0519 CONTROL OF NITROGEN DIOXIDE AND NITROGEN OXIDES EMISSIONS

(a) The emissions of nitrogen dioxide shall not exceed 5.8 pounds per ton of acid produced from any nitric acid manufacturing plant.

(b) The emissions of nitrogen oxides shall not exceed:

(1) 0.8 pounds per million BTU of heat input from any oil or gas-fired boiler with a capacity of 250 million BTU per hour or more; or

(2) 1.8 pounds per million BTU of heat input from any coal-fired boiler with a capacity of 250 million BTU per hour or more.

(c) The emission limit for a boiler burning coal, oil, or gas in combination shall be calculated by the equation:

$$E = \frac{(E_c * Q_c) + (E_o * Q_o)}{Q_t}$$

(1) E = the emission limit for combination in pounds per million BTU.

(2) Ec = emission limit for coal only as determined by Paragraph (b) of this Rule in pounds per million BTU.

(3) Eo = emission limit for oil or gas as determined by Paragraph (b) of this Rule in pounds per million BTU.

(4) Qc = the actual coal heat input to the combination in BTU per hour.
(5) Qo = the actual oil and gas heat input to the combination in BTU per hour.
(6) Qt = Qc + Qo and is the actual total heat input to the combination in BTU per hour.

(d) If a boiler is subject to an emission standard for nitrogen oxides pursuant to 15A NCAC 02D .0524 or 15A NCAC 02D .1418, then the boiler shall meet the standard in that particular rule instead of the standard in Paragraph (b) of this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 2007; January 1, 2005; July 1, 1996; October 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0520 CONTROL AND PROHIBITION OF OPEN BURNING

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. January 1, 1985; November 1, 1978; December 1, 1976;
Repealed Eff. July 1, 1996.

15A NCAC 02D .0521 CONTROL OF VISIBLE EMISSIONS

(a) Purpose. The intent of this Rule is to prevent, abate, and control emissions generated from fuel burning operations and industrial processes where an emission can be expected to occur, except during startups, shutdowns, and malfunctions approved according to procedures in 15A NCAC 02D .0535.

(b) Scope. This Rule shall apply to all fuel burning sources and to other industrial processes having a visible emission. Sources subject to a specific visible emission standard in 15A NCAC 02D .0506, .0508, .0524, .1110, .1111, .1206, or .1210 shall meet that standard instead of the standard contained in this Rule. This Rule does not apply to engine maintenance, rebuild, and testing activities where controls are infeasible, but it does apply to the testing of peak shaving and emergency generators. In deciding if controls are infeasible, the Director shall consider emissions, capital cost of compliance, annual incremental compliance cost, and environmental and health impacts.

(c) For sources manufactured as of July 1, 1971, visible emissions shall not be more than 40 percent opacity when averaged over a six-minute period. However, except for sources required to comply with Paragraph (g) of this Rule, six-minute averaging periods may exceed 40 percent opacity if:

(1) no six-minute period exceeds 90 percent opacity;
(2) no more than one six-minute period exceeds 40 percent opacity in any hour; and
(3) no more than four six-minute periods exceed 40 percent opacity in any 24-hour period.

(d) For sources manufactured after July 1, 1971, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period. Except for sources required to comply with Paragraph (g) of this Rule, six-minute averaging periods may exceed 20 percent opacity if:

(1) no six-minute period exceeds 87 percent opacity;
(2) no more than one six-minute period exceeds 20 percent opacity in any hour; and
(3) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

(e) Where the presence of uncombined water contributes solely to the failure of an emission to meet the limitations of Paragraph (c) or (d) of this Rule, those requirements shall not apply.

(f) Exception from Opacity Standard in Paragraph (d) of this Rule. Sources subject to Paragraph (d) of this Rule shall be allowed to comply with Paragraph (c) of this Rule if:

(1) the owner or operator of the source demonstrates compliance with applicable particulate mass emissions standards; and
(2) the owner or operator of the source submits data to show that emissions up to those allowed by Paragraph (c) of this Rule shall not violate any national ambient air quality standard.

The burden of proving these conditions shall be on the owner or operator of the source and shall be approached in accordance with this Paragraph. The owner or operator of a source seeking an exception shall apply to the Director requesting this modification in its permit. The applicant shall submit the results of a source test within 90 days of application. Source testing shall be by the appropriate procedure as designated by rules in this Subchapter. During this 90-day period the applicant shall submit data necessary to show that emissions up to those allowed by Paragraph (c) of this Rule will not contravene ambient air quality standards. This evidence shall include an inventory of past and projected emissions from the facility. In its review of ambient air quality, the Division may require additional

information that it considers necessary to assess the resulting ambient air quality. If the applicant can thus show that it will be in compliance both with particulate mass emissions standards and ambient air quality standards, the Director shall modify the permit to allow emissions up to those allowed by Paragraph (c) of this Rule.

(g) For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the numerical opacity limits in this Rule shall be determined as follows excluding startups, shutdowns, maintenance periods when fuel is not being combusted, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535:

(1) no more than four six-minute periods shall exceed the opacity standard in any one day; and

(2) the percent of excess emissions, defined as the percentage of monitored operating time in a calendar quarter above the opacity limit, shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately prior to this quarter until 500 operational hours are obtained.

In no instance shall excess emissions exempted pursuant to this Paragraph cause or contribute to a violation of any emission standard in this Subchapter or 40 CFR Part 60, 61, or 63 or any ambient air quality standard in 15A NCAC 02D .0400 or 40 CFR Part 50.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. January 1, 2009; July 1, 2007; January 1, 2005; June 1, 2004; April 1, 2003; April 1, 2001; July 1, 1998; July 1, 1996; December 1, 1992; August 1, 1987; January 1, 1985; May 30, 1978;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0522 CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. January 1, 1985;
Repealed Eff. April 1, 2001.

15A NCAC 02D .0523 CONTROL OF CONICAL INCINERATORS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. January 1, 1985;
Repealed Eff. July 1, 2000.

15A NCAC 02D .0524 NEW SOURCE PERFORMANCE STANDARDS

(a) With the exception of Paragraph (b) and (c) of this Rule, sources subject to new source performance standards promulgated in 40 CFR Part 60 shall comply with emission standards, monitoring and reporting requirements, maintenance requirements, notification and record keeping requirements, performance test requirements, test method and procedural provisions, and any other provisions, as required therein, rather than with any otherwise-applicable rule in this Section that would be in conflict therewith.

(b) The following are not included pursuant to this Rule:

(1) 40 CFR Part 60, Subpart AAA;
(2) 40 CFR Part 60, Subpart B;
(3) 40 CFR Part 60, Subpart C;
(4) 40 CFR Part 60, Subpart Cb;
(5) 40 CFR Part 60, Subpart Cc;
(6) 40 CFR Part 60, Subpart Cd;
(7) 40 CFR Part 60, Subpart Ce;
(8) 40 CFR Part 60, Subpart BBBB;
(9) 40 CFR Part 60, Subpart DDDD;
(10) 40 CFR Part 60, Subpart FFFF; or
(11) 40 CFR Part 60, Subpart HHHH.

(c) Along with the notice appearing in the North Carolina Register for a public hearing to amend this Rule to exclude a standard from this Rule, the Director shall state whether or not the new source performance standards promulgated under 40 CFR Part 60, or part thereof, shall be enforced. If the Environmental Management Commission does not adopt the amendment to this Rule to exclude or amend the standard within 12 months after the close of the comment period on the proposed amendment, the Director shall begin enforcing that standard when 12 months has elapsed after the end of the comment period on the proposed amendment.
(d) New sources of volatile organic compounds that are located in an area designated in 40 CFR 81.334 as nonattainment for ozone or an area identified in accordance with 15A NCAC 02D .0902 as being in violation of the ambient air quality standard for ozone shall comply with the requirements of 40 CFR Part 60 are not excluded by this Rule, as well as with any applicable requirements in 15A NCAC 02D .0900.
(e) All requests, reports, applications, submittals, and other communications to the administrator required under Paragraph (a) of this Rule shall be submitted to the Director rather than to the Environmental Protection Agency.
(f) In the application of this Rule, definitions contained in 40 CFR Part 60 shall apply rather than those in 15A NCAC 02D .0100.
(g) With the exceptions allowed in 15A NCAC 02Q .0102, Activities Exempted from Permit Requirements, the owner or operator of the source shall apply for and receive a permit as required in 15A NCAC 02Q .0300 or .0500.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. June 18, 1976;
Temporary Amendment Eff. January 3, 1988, for a period of 180 days to expire on June 30, 1988;
Amended Eff. December 1, 1992; July 1, 1992;
Temporary Amendment Eff. March 8, 1994, for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Amended Eff. July 1, 2007; January 1, 2007; July 1, 2000; April 1, 1997; July 1, 1996; July 1, 1994;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0525 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

History Note: *Filed as a Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;*
Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 150B-21.6;
Eff. June 18, 1976;
Amended Eff. July 1, 1994; December 1, 1992; July 1, 1992; August 1, 1991;
Repealed Eff. July 1, 1996.

15A NCAC 02D .0526 SULFUR DIOXIDE EMISSIONS FROM FUEL BURNING INSTALLATIONS

History Note: *Filed as an Emergency Regulation Eff. October 28, 1977, for a period of 120 days to expire on February 25, 1978;*
Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 150B-13;
Expired Eff. February 25, 1978.

15A NCAC 02D .0527 EMISSIONS FROM SPODUMENE ORE ROASTING
Emission of sulfur dioxide and sulfuric acid mist from any one kiln used for the roasting of spodumene ore shall not exceed:

(1) 9.7 pounds of sulfur dioxide per ton of ore roasted; and
(2) 1.0 pound of sulfuric acid mist, expressed as H_2SO_4, per ton of ore roasted.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. March 15, 1978;
Amended Eff. January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0528 TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS
(a) For the purpose of this Rule, the following definitions apply:

(1) "Black liquor solids" means the dry weight of the solids that enter the recovery furnace in the black liquor.
(2) "Condensate stripper system" means a column, and associated condensers, used to strip, with air or steam, total reduced sulfur compounds from condensate streams from various processes within a kraft pulp mill.
(3) "Cross recovery furnace" means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than seven percent by weight of the total pulp solids from the neutral sulfite semichemical process and has a green liquor sulfidity of more than 28 percent.
(4) "Digester system" means each continuous digester or each batch digester used for the cooking of wood in white liquor and associated flash tanks, blow tanks, chip steamers, and condensers.
(5) "Green liquor sulfidity" means the sulfidity of the liquor that leaves the smelt dissolving tank.
(6) "Kraft pulp mill" means any facility that produces pulp from wood by "cooking", industry term for digesting, wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of cooking chemicals through a recovery process is also considered part of the kraft pulp mill.
(7) "Lime kiln" means a unit used to calcine lime mud that consists primarily of calcium carbonate, into quicklime, which is calcium oxide.
(8) "Multiple-effect evaporator system" means the multiple-effect evaporators and associated condensers and hot wells used to concentrate the spent cooking liquid that is separated from the pulp, known in the industry as "black liquor".
(9) "Neutral sulfite semichemical pulping operation" means any operation in which pulp is produced from wood by "cooking", industry term for digesting, wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating, also called grinding the wood pulp, to separate into its fibrous constituents.
(10) "New design recovery furnace" means a straight kraft recovery furnace that has both membrane wall or welded wall construction and emission control designed air systems.
(11) "Old design recovery furnace" means a straight kraft recovery furnace that does not have membrane wall or welded wall construction or emission control designed air systems.
(12) "Recovery furnace" means either a straight kraft recovery furnace or a cross recovery furnace and includes the direct-contact evaporator for a direct-contact furnace.
(13) "Smelt dissolving tank" means a vessel used for dissolving the smelt collected from the recovery furnace.
(14) "Straight kraft recovery furnace" means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains seven percent by weight or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.
(15) "Total reduced sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptain, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation.

(b) This Rule shall apply to recovery furnaces, digester systems, multiple-effect evaporator systems, lime kilns, smelt dissolving tanks, and condensate stripping systems of kraft pulp mills not subject to 15A NCAC 02D .0524.

(c) Emissions of total reduced sulfur from any kraft pulp mill subject to this Rule shall not exceed:

(1) 20 parts per million from any old design recovery furnace;
(2) five parts per million from any new design recovery furnace;
(3) 25 parts per million from any cross recovery furnace;
(4) five parts per million from any digester system;
(5) five parts per million from any multiple-effect evaporator system;
(6) 20 parts per million from any lime kiln;
(7) five parts per million from any condensate stripping system; and
(8) 0.032 pounds per ton of black liquor solids (dry weight) from any smelt dissolving tank.

(d) The emission limitations given in Subparagraphs (c)(1) through (c)(7) of this Rule are measured as hydrogen sulfide on a dry gas basis and are averages of discrete contiguous 12-hour time periods. The emission limitations given in Subparagraphs (c)(1) through (c)(3) of this Rule are corrected to eight percent oxygen by volume. The emission limitations given in Subparagraph (c)(6) of this Rule is corrected to 10 percent oxygen by volume.

(e) One percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitations given in Subparagraphs (c)(1) through (c)(3) of this Rule, in the absence of start-ups, shut-downs and malfunctions, shall not be considered in violation. Two percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation given in Subparagraph (c)(6) of this Rule, in the absence of start-ups, shut-downs, and malfunctions, shall not be considered in violation.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. June 1, 1980;
Amended Eff. July 1, 1988; July 1, 1987; January 1, 1985; November 1, 1982;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0529 FLUORIDE EMISSIONS FROM PRIMARY ALUMINUM REDUCTION PLANTS

(a) For the purpose of this Rule, the following definitions apply:
- (1) "Fluoride" means elemental fluorine and all fluoride compounds as measured by the methods specified in 15A NCAC 02D .2616 or by other methods demonstrated to be equivalent to those set forth in Rule 15A NCAC 02D .2616 approved by the Director on a case-by-case basis.
- (2) "Prebake cell" is an aluminum reduction pot using carbon anodes formed, pressed, and baked prior to their placement in the pot.
- (3) "Primary aluminum reduction plant" means any facility manufacturing aluminum by electrolytic reduction.

(b) This Rule shall apply to prebake cells at all primary aluminum reduction plants not subject to 15A NCAC 02D .0524.

(c) An owner or operator of a primary aluminum reduction plant subject to this Rule shall not cause, allow, or permit the use of the prebake cells unless:
- (1) 95 percent of the fluoride emissions are captured; and
- (2) 98.5 percent of the captured fluoride emissions are removed before the exhaust gas is discharged into the atmosphere.

(d) The owner or operator of a primary aluminum reduction plant subject to this Rule shall:
- (1) ensure hood covers are in good repair and positioned over the prebake cells;
- (2) minimize the amount of time hood covers are removed during pot working operations;
- (3) if the hooding system is equipped with a dual low and high hood exhaust rate, use the high rate whenever hood covers are removed and return to the normal exhaust rate when the hood covers are replaced;
- (4) minimize the occurrence of fuming pots and correct the cause of a fuming pot as soon as practical; and
- (5) if the tapping crucibles are equipped with hoses that return aspirator air under the hood, ensure the hoses are in good repair and the air return system is functioning by ensuring operation in accordance with the manufacturer's specifications.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. June 1, 1981;
Amended Eff. June 1, 2008; July 1, 1988; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0530 PREVENTION OF SIGNIFICANT DETERIORATION

(a) The purpose of the Rule is to implement a program for the prevention of significant deterioration of air quality as required by 40 CFR 51.166. The minimum requirements described in the portions of 40 CFR 51.166 are hereby adopted as requirements under this Rule, except as otherwise provided in this Rule. Wherever the language of the portions of 40 CFR 51.166 adopted in this Rule speaks of the "plan," the requirements described therein shall apply to the source to which they pertain, except as otherwise provided in this Rule. Whenever the portions of 40 CFR 51.166 adopted in this Rule provide that the State plan may exempt or not apply certain requirements in certain circumstances, those exemptions and provisions of non-applicability are also hereby adopted under this Rule. However, this provision shall not be interpreted so as to limit information that may be requested from the owner or operator by the Director as specified in 40 CFR 51.166(n)(2).

(b) For the purposes of this Rule, the definitions contained in 40 CFR 51.166(b) and 40 CFR 51.301 shall apply, except the following:

(1) "Baseline actual emissions" means the rate of emissions, in tons per year, of a regulated new source review (NSR) pollutant, as determined in accordance with Parts (A) through (C) of this Subparagraph:

(A) For an existing emissions unit, baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the five year period immediately preceding the date that a complete permit application is received by the Division for a permit required under this Rule. The Director shall allow a different time period, not to exceed 10 years immediately preceding the date that a complete permit application is received by the Division, if the owner or operator demonstrates that it is more representative of normal source operation. For the purpose of determining baseline actual emissions, the following apply:

(i) The average rate shall include fugitive emissions to the extent quantifiable and emissions associated with startups, shutdowns, and malfunctions;

(ii) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period;

(iii) For an existing emission unit (other than an electric utility steam generating unit), the average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply. However, if the State has taken credit in an attainment demonstration or maintenance plan consistent with the requirements of 40 CFR 51.165(a)(3)(ii)(G) for an emission limitation that is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under Part 63 in Title 40 of the Code of Federal Regulations, the baseline actual emissions shall be adjusted to account for such emission reductions;

(iv) For an electric utility steam generating unit, the average rate shall be adjusted downward to reflect any emissions reductions under G.S. 143-215.107D and for which cost recovery is sought pursuant to G.S. 62-133.6;

(v) For a regulated NSR pollutant, if a project involves multiple emissions units, only one consecutive 24-month period shall be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period for each regulated NSR pollutant may be used for each regulated NSR pollutant; and

(vi) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by Subparts (ii) and (iii) of this Part;

(B) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero and thereafter, for all other purposes, shall equal the unit's potential to emit; and

(C) For a plantwide applicability limit (PAL) for a stationary source, the baseline actual emissions shall be calculated for existing emissions units in accordance with the procedures contained in Part (A) of this Subparagraph and, for a new emissions unit, in accordance with the procedures contained in Part (B) of this Subparagraph;

(2) In the definition of "net emissions increase," the reasonable period specified in 40 CFR 51.166(b)(3)(ii) shall be seven years;

(3) The limitation specified in 40 CFR 51.166(b)(15)(ii) shall not apply;

(4) PM2.5 significant levels set forth in 40 CFR 51.166(b)(23)(i) are incorporated by reference. Sulfur dioxide (SO_2) and nitrogen oxides (NO_x) are precursors to PM2.5 in all attainment and unclassifiable areas. Volatile organic compounds are not significant precursors to PM2.5; and

(5) In 40 CFR 51.166(b)(49)(i)(a), starting January 1, 2011, in addition to PM10 and PM2.5, for particulate matter (PM), condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for each of these regulated NSR pollutants in PSD permits.

(c) All areas of the State are classified as Class II, except the following areas, which are designated as Class I:

(1) Great Smoky Mountains National Park;
(2) Joyce Kilmer Slickrock National Wilderness Area;
(3) Linville Gorge National Wilderness Area;
(4) Shining Rock National Wilderness Area; and
(5) Swanquarter National Wilderness Area.

(d) Redesignations of areas to Class I or II may be submitted as state proposals to the Administrator of the Environmental Protection Agency (EPA) if the requirements of 40 CFR 51.166(g)(2) are met. Areas may be proposed to be redesignated as Class III if the requirements of 40 CFR 51.166(g)(3) are met. Redesignations may not, however, be proposed which would violate the restrictions of 40 CFR 51.166(e). Lands within the boundaries of Indian Reservations may be redesignated only by the appropriate Indian Governing Body.

(e) In areas designated as Class I, II, or III, increases in pollutant concentration over the baseline concentration shall be limited to the values set forth in 40 CFR 51.166(c). However, concentration of the pollutant shall not exceed standards set forth in 40 CFR 51.166(d).

(f) Concentrations attributable to the conditions described in 40 CFR 51.166(f)(1) shall be excluded in determining compliance with a maximum allowable increase. However, the exclusions referred to in 40 CFR 51.166(f)(1)(i) or (ii) shall be limited to five years as described in 40 CFR 51.166(f)(2).

(g) Major stationary sources and major modifications shall comply with the requirements contained in 40 CFR 51.166 (a)(7) and (i) and in 40 CFR 51.166(j) through (r) and (w). The transition provisions allowed by 40 CFR 52.21(i)(11)(i) and (ii) and (m)(1)(vii) and (viii) are hereby adopted under this Rule.

(h) New natural gas-fired electrical utility generating units for which cost recovery is sought pursuant to G.S. 62-133.6 shall install best available control technology for NO_X and SO_2, regardless of the applicability of the rest of this Rule.

(i) For the purposes of this Rule, 40 CFR 51.166(w)(10)(iv)(a) shall read: "If the emissions level calculated in accordance with Paragraph (w)(6) of this Section is equal to or greater than 80 percent of the PAL level, the Director shall renew the PAL at the same level." 40 CFR 51.166(w)(10)(iv)(b) is not incorporated by reference.

(j) 15A NCAC 02Q .0102 shall not be applicable to any source to which this Rule applies. The owner or operator of the sources to which this Rule applies shall apply for and receive a permit as required in 15A NCAC 02Q .0300 or .0500.

(k) When a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification to emit a pollutant, such as a restriction on hours of operation, then the provisions of this Rule shall apply to the source or modification as though construction had not yet begun on the source or modification.

(l) For the purposes of this Rule, the provisions of 40 CFR 52.21(r)(2) regarding the period of validity of approval to construct are incorporated by reference except that the term "Administrator" shall be replaced with "Director".

(m) Volatile organic compounds exempted from coverage in 40 CFR 51.100(s) shall be exempted when calculating source applicability and control requirements under this Rule.

(n) The degree of emission limitation required for control of any air pollutant under this Rule shall not be affected by:

(1) that amount of a stack height, not in existence before December 31, 1970, that exceeds good engineering practice; or
(2) any other dispersion technique not implemented before December 31, 1970.

(o) A substitution or modification of a model as provided in 40 CFR 51.166(l) is subject to public comment procedures in accordance with the requirements of 40 CFR 51.102.

(p) Permits may be issued on the basis of innovative control technology as set forth in 40 CFR 51.166(s)(1) if the requirements of 40 CFR 51.166(s)(2) have been met, subject to the condition of 40 CFR 51.166(s)(3), and with the allowance set forth in 40 CFR 51.166(s)(4).

(q) If a source to which this Rule applies impacts an area designated Class I by requirements of 40 CFR 51.166(e), notice to EPA shall be provided as set forth in 40 CFR 51.166(p)(1). If the Federal Land Manager presents a demonstration described in 40 CFR 51.166(p)(3) during the public comment period or public hearing to the Director and if the Director concurs with this demonstration, the permit application shall be denied. Permits may be issued on

the basis that the requirements for variances as set forth in 40 CFR 51.166(p)(4), (p)(5) and (p)(7), or (p)(6) and (p)(7) have been satisfied.

(r) A permit application subject to this Rule shall be processed in accordance with the procedures and requirements of 40 CFR 51.166(q). Within 30 days of receipt of the application, applicants shall be notified if the application is complete as to the initial information submitted. Commencement of construction before full prevention of significant deterioration approval is obtained shall constitute a violation of this Rule.

(s) Approval of an application with regard to the requirements of this Rule shall not relieve the owner or operator of the responsibility to comply with applicable provisions of other rules of this Subchapter, Subchapter 02Q of this Title, or any other requirements under local, state, or federal law.

(t) When a source or modification is subject to this Rule the following procedures apply:

(1) Notwithstanding any other provisions of this Paragraph, the Director shall, no later than 60 days after receipt of an application, notify the Federal Land Manager with the U.S. Department of Interior and U.S. Department of Agriculture of an application from a source or modification subject to this Rule;

(2) If a source or modification may affect visibility of a Class I area, the Director shall provide written notification to all affected Federal Land Managers within 30 days of receiving the permit application or within 30 days of receiving advance notification of an application. The notification shall be given at least 30 days prior to the publication of notice for public comment on the application. The notification shall include a copy of all information relevant to the permit application, including an analysis provided by the source of the potential impact of the proposed source on visibility;

(3) The Director shall consider any analysis concerning visibility impairment performed by the Federal Land Manager if the analysis is received within 30 days of notification. If the Director finds that the analysis of the Federal Land Manager fails to demonstrate that an adverse impact on visibility will result in the Class I area, the Director shall follow the public hearing process described in 40 CFR 51.307(a)(3) on the application and include an explanation of the Director's decision or notice as to where the explanation can be obtained; and

(4) The Director may require monitoring of visibility in or around any Class I area by the proposed new source or modification if the visibility impact analysis indicates possible visibility impairment, pursuant to 40 CFR 51.307.

(u) In lieu of the requirements in 40 CFR 51.166(r)(6) and (7), this Paragraph shall apply. If the owner or operator of a source is using projected actual emissions to determine applicability with prevention of significant deterioration requirements, the owner or operator shall notify the Director of the modification before beginning actual construction. The notification shall include:

(1) a description of the project;

(2) identification of sources whose emissions could be affected by the project;

(3) the calculated projected actual emissions and an explanation of how the projected actual emissions were calculated, including identification of emissions excluded by 40 CFR 51.166(b)(40)(ii)(c);

(4) the calculated baseline actual emissions in Subparagraph (b)(1) of this Rule and an explanation of how the baseline actual emissions were calculated; and

(5) any netting calculations, if applicable.

If, upon reviewing the notification, the Director finds that the project will require a prevention of significant deterioration evaluation, the Director shall notify the owner or operator of his or her findings and the owner or operator shall not make the modification until a prevention of significant deterioration permit has been issued pursuant to this Rule. If the Director finds that the project will not require a prevention of significant deterioration evaluation and the projected actual emissions, calculated pursuant to 40 CFR 51.166(b)(40)(ii)(a) and (b), minus baseline actual emissions, is 50 percent or greater of the amount that is a significant emissions increase, without reference to the amount that is a significant net emissions increase, for the regulated NSR pollutant, then the Director shall require a permit application to include a permit condition for monitoring, recordkeeping and reporting of the annual emissions related to the project in tons per year, for 10 years following resumption of regular operations after the change if the project involves increasing the emissions unit's design capacity or its potential to emit for the regulated NSR pollutant; otherwise, these records shall be maintained for five years following resumption of regular operations after the change. The owner or operator shall submit a report to the Director within 60 days after the end of each year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c). The owner or operator shall make the information documented and maintained under this Paragraph available to the Director and the general public, pursuant to the requirements in 40

CFR 70.4(b)(3)(viii). The monitoring, recordkeeping and reporting requirements in this Paragraph shall not apply if the projected actual emissions, calculated pursuant to 40 CFR 51.166(b)(40)(ii)(a) and (b), minus the baseline actual emissions is less than 50 percent of the amount that is a significant emissions increase, without reference to the amount that is a significant net emissions increase, for the regulated NSR pollutant.

(v) Portions of the regulations in the Code of Federal Regulations (CFR) that are referred to in this Rule are incorporated by reference unless a specific reference states otherwise. The version of the CFR incorporated in this Rule, with respect to 40 CFR 51.166, is that as of July 1, 2019 at https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol2/pdf/CFR-2019-title40-vol2-sec51-166.pdf and does not include any subsequent amendments or editions. Federal regulations referenced in 40 CFR 51.166 shall include subsequent amendments and editions. The publication may be accessed free of charge.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3); 143-215.107(a)(5); 143-215.107(a)(7); 143-215.108(b);*
Eff. June 1, 1981;
Amended Eff. December 1, 1992; August 1, 1991; October 1, 1989; July 1, 1988; October 1, 1987; June 1, 1985; January 1, 1985; February 1, 1983;
Temporary Amendment Eff. March 8, 1994, for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Amended Eff. September 1, 2017; September 1, 2013; January 2, 2011; September 1, 2010; May 1, 2008; July 28, 2006; July 1, 1997; February 1, 1995; July 1, 1994;
Readopted Eff. October 1, 2020.

15A NCAC 02D .0531 SOURCES IN NONATTAINMENT AREAS

(a) The purpose of this Rule is to implement a program for new source review in nonattainment areas as required by 40 CFR 51.165. The definitions contained in 40 CFR 51.165(a)(1) and 40 CFR 51.301 shall apply, except for the following:

(1) "Baseline actual emissions" means the rate of emissions, in tons per year, of a regulated new source review (NSR) pollutant, as determined in accordance with Parts (A) through (C) of this Subparagraph as follows:

(A) For an existing emissions unit, baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the five year period immediately preceding the date that a complete permit application is received by the Division for a permit required under this Rule. The Director shall allow a different time period, not to exceed 10 years immediately preceding the date that a complete permit application is received by the Division, if the owner or operator demonstrates that it is more representative of normal source operation. For the purpose of determining baseline actual emissions, the following apply:

(i) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions;

(ii) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period;

(iii) For an existing emission unit (other than an electric utility steam generating unit), the average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply. However, if the State has taken credit in an attainment demonstration or maintenance plan consistent with the requirements of 40 CFR 51.165(a)(3)(ii)(G) for an emission limitation that is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under Part 63 in Title 40 of the Code of Federal Regulations, the baseline actual emissions shall be adjusted to account for such emission reductions;

(iv) For an electric utility steam generating unit, the average rate shall be adjusted downward to reflect any emissions reductions under G.S. 143-215.107D and for which cost recovery is sought pursuant to G.S. 62-133.6;

(v) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period shall be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant; and

(vi) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by Subparts (ii) and (iii) of this Part;

(B) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit; and

(C) For a plantwide applicability limit (PAL) for a stationary source, the baseline actual emissions shall be calculated for existing emissions units in accordance with the procedures contained in Part (A) of this Subparagraph, and for a new emissions unit in accordance with the procedures contained in Part (B) of this Subparagraph;

(b) In the definition of "net emissions increase," the reasonable period specified in 40 CFR 51.165(a)(1)(vi)(C)(1) is seven years.

(c) PM2.5 significant levels in 40 CFR 51.165(a)(1)(x)(A) are incorporated by reference except as otherwise provided in this Rule. Sulfur dioxide (SO_2) and nitrogen oxides (NO_x) are precursors to PM2.5 in all nonattainment areas. Volatile organic compounds and ammonia are not significant precursors to PM2.5.

(d) In 40 CFR 51.165(a)(1)(xxxvii)(D), starting January 1, 2011, in addition to PM10 and PM2.5, for particulate matter (PM), condensable particulate matter shall be accounted for in applicability determinations and in establishing emission limitations for each of these regulated NSR pollutants in nonattainment major NSR permits.

(e) Redesignation to Attainment. If any county or part of a county to which this Rule applies is later designated in 40 CFR 81.334 as attainment, all sources in that county subject to this Rule before the redesignation date shall continue to comply with this Rule.

(f) Applicability. 40 CFR 51.165(a)(2) is incorporated by reference. This Rule applies to areas designated as nonattainment in 40 CFR 81.334, including any subsequent amendments or editions.

(g) This Rule is not applicable to:

(1) emission of pollutants at the new major stationary source or major modification located in the nonattainment area that are pollutants other than the pollutant or pollutants for which the area is nonattainment. A major stationary source or major modification that is major for volatile organic compounds or nitrogen oxides is also major for ozone;

(2) emission of pollutants for which the source or modification is not major;

(3) a new source or modification that qualifies for exemption under the provision of 40 CFR 51.165(a)(4); or

(4) emission of compounds listed under 40 CFR 51.100(s) as having been determined to have negligible photochemical reactivity except carbon monoxide.

(h) 15A NCAC 02Q .0102 is not applicable to any source to which this Rule applies. The owner or operator of the source shall apply for and receive a permit as required in 15A NCAC 02Q .0300 or .0500.

(i) To issue a permit to a source to which this Rule applies, the Director shall determine that the source meets the following requirements:

(1) The new major stationary source or major modification will emit the nonattainment pollutant at a rate no more than the lowest achievable emission rate;

(2) The owner or operator of the proposed new major stationary source or major modification has demonstrated that all major stationary sources in the State that are owned or operated by this person (or any entity controlling, controlled by, or under common control with this person) are subject to emission limitations and are in compliance, or on a schedule for compliance that is federally enforceable or contained in a court decree, with all applicable emission limitations and standards of this Subchapter that EPA has authority to approve as elements of the North Carolina State Implementation Plan for Air Quality;

(3) The owner or operator of the proposed new major stationary source or major modification will obtain sufficient emission reductions of the nonattainment pollutant from other sources in the nonattainment area so that the emissions from the new major source and any associated new minor sources will be less than the emissions reductions by a ratio of at least 1.00 to 1.15 for volatile

organic compounds and nitrogen oxides and by a ratio of less than one to one for carbon monoxide. The baseline for this emission offset shall be the actual emissions of the source from which offset credit is obtained. Emission reductions shall not include any reductions resulting from compliance (or scheduled compliance) with applicable rules in effect before the application. The difference between the emissions from the new major source and associated new minor sources of carbon monoxide and the emission reductions shall be sufficient to represent reasonable further progress toward attaining the National Ambient Air Quality Standards. The emissions reduction credits shall also conform to the provisions of 40 CFR 51.165(a)(3)(ii)(A) through (G) and (J); and

(4) The North Carolina State Implementation Plan for Air Quality is being carried out for the nonattainment area in which the proposed source is located.

(j) New natural gas-fired electrical utility generating units for which cost recovery is sought pursuant to G.S. 62-133.6 shall install lowest achievable emission rate technology for NO_X and SO_2, regardless of the applicability of the rest of this Rule.

(k) For the purposes of this Rule, 40 CFR 51.165(f) is incorporated by reference except that 40 CFR 51.165(f)(10)(iv)(A) reads: "If the emissions level calculated in accordance with Paragraph (f)(6) of this Section is equal to or greater than 80 percent of the PAL level, the Director shall renew the PAL at the same level." 40 CFR 51.165(f)(10)(iv)(B) is not incorporated by reference.

(l) When a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation established after August 7, 1980, on the capacity of the source or modification to emit a pollutant, such as a restriction on hours of operation, then the provisions of this Rule shall apply to the source or modification as though construction had not yet begun on the source or modification.

(m) To issue a permit to a source of a nonattainment pollutant, the Director shall determine, in accordance with Section 173(a)(5) of the Clean Air Act and in addition to the other requirements of this Rule, that an analysis (produced by the permit applicant) of alternative sites, sizes, production processes, and environmental control techniques for the source demonstrates that the benefits of the source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

(n) For the purposes of this Rule, the provisions of 40 CFR 52.21(r)(2) regarding the period of validity of approval to construct are incorporated by reference except that the term "Administrator" is replaced with "Director."

(o) Approval of an application regarding the requirements of this Rule does not relieve the owner or operator of the responsibility to comply with applicable provisions of other rules of this Chapter and any other requirements in local, State, or federal law.

(p) Except as provided in 40 CFR 52.28(c)(6), for a source or modification subject to this Rule the following procedures shall be followed:

(1) Notwithstanding any other provisions of this Paragraph, the Director shall, no later than 60 days after receipt of an application, notify the Federal Land Manager with the U.S. Department of Interior and U.S. Department of Agriculture of an application from a source or modification subject to this Rule;

(2) The owner or operator of the source shall provide an analysis of the impairment to visibility that would occur because of the source or modification and general commercial, industrial and other growth associated with the source or modification;

(3) When a source or modification may affect the visibility of a Class I area, the Director shall provide written notification to all affected Federal Land Managers within 30 days of receiving the permit application or within 30 days of receiving advance notification of an application. The notification shall be given at least 30 days before the publication of the notice for public comment on the application. The notification shall include a copy of all information relevant to the permit application, including an analysis provided by the source of the potential impact of the proposed source on visibility;

(4) The Director shall consider any analysis concerning visibility impairment performed by the Federal Land Manager if the analysis is received within 30 days of notification. If the Director finds that the analysis of the Federal Land Manager fails to demonstrate to the Director's satisfaction that an adverse impact on visibility will result in the Class I area, the Director shall follow the public hearing process described in 40 CFR 51.307(a)(3) on the application and include an explanation of the Director's decision or notice where the explanation can be obtained;

(5) The Director shall issue permits only to those sources whose emissions will be consistent with making reasonable progress, as defined in Section 169A of the Clean Air Act, toward the national

goal of preventing any future, and remedying any existing, impairment of visibility in mandatory Class I areas when the impairment results from manmade air pollution. In making the decision to issue a permit, the Director shall consider the cost of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the useful life of the source; and

(6) The Director may require monitoring of visibility in or around any Class I area by the proposed new source or modification when the visibility impact analysis indicates possible visibility impairment.

The requirements of this Paragraph do not apply to nonprofit health or nonprofit educational institutions.

(q) In lieu of the requirements in 40 CFR 51.165(a)(6) and (7), this Paragraph shall apply. If the owner or operator of a source is using projected actual emissions to determine applicability with nonattainment new source review requirements, the owner or operator shall notify the Director of the modification before beginning actual construction. The notification shall include:

(1) a description of the project;
(2) identification of sources whose emissions could be affected by the project;
(3) the calculated projected actual emissions and an explanation of how the projected actual emissions were calculated, including identification of emissions excluded by 40 CFR 51.165(a)(1)(xxviii)(B)(3);
(4) the calculated baseline actual emissions in Subparagraph (a)(1) of this Rule and an explanation of how the baseline actual emissions were calculated; and
(5) any netting calculations, if applicable.

If upon reviewing the notification, the Director finds that the project will require a nonattainment new source review evaluation, the Director shall notify the owner or operator of his or her findings and the owner or operator shall not make the modification until a nonattainment new source review permit has been issued pursuant to this Rule. If the Director finds that the project will not require a nonattainment new source review evaluation and the projected actual emissions, calculated pursuant to 40 CFR 51.165(a)(1)(xxviii)(B)(1) and (2) minus the baseline actual emissions is 50 percent or greater of the amount that is a significant emissions increase, without reference to the amount that is a significant net emissions increase, for the regulated NSR pollutant, then, the Director shall require a permit application to include a permit condition for the monitoring, recordkeeping, and reporting of the annual emissions related to the project in tons per years, for 10 years following resumption of regular operations after the change if the project involves increasing the emissions unit's design capacity or its potential to emit for the regulated NSR pollutant; otherwise these records shall be maintained for five years following resumption of regular operations after the change. The owner or operator shall submit a report to the Director within 60 days after the end of each year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.165(a)(6)(v)(A) through (C). The owner or operator shall make the information documented and maintained under this Paragraph available to the Director and the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii). The monitoring, recordkeeping, and reporting requirements in this Paragraph shall not apply if the projected actual emissions calculated pursuant to 40 CFR 51.165(a)(1)(xxviii)(B)(1) and (2), minus the baseline actual emissions, is less than 50 percent of the amount that is a significant emissions increase, without reference to the amount that is a significant net emissions increase, for the regulated NSR pollutant.

(r) Portions of the regulations in the Code of Federal Regulations (CFR) that are referred to in this Rule are incorporated by reference unless a specific reference states otherwise. The version of the CFR incorporated in this Rule, with respect to 40 CFR 51.165, is that as of July 1, 2019, at https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol2/pdf/CFR-2019-title40-vol2-sec51-165.pdf and does not include any subsequent amendments or editions. Federal regulations referenced in 40 CFR 51.165 shall include subsequent amendments and editions. The publication may be accessed free of charge.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.108(b);*
Eff. June 1, 1981;
Amended Eff. December 1, 1993; December 1, 1992; August 1, 1991; December 1, 1989; October 1, 1989; July 1, 1988; October 1, 1987; June 1, 1985; January 1, 1985; February 1, 1983;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Amended Eff. September 1, 2013; January 2, 2011; September 1, 2010; May 1, 2008; May 1, 2005; July 1, 1998; July 1, 1996; July 1, 1995; July 1, 1994;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0532 SOURCES CONTRIBUTING TO AN AMBIENT VIOLATION

(a) This Rule applies to new major stationary sources and major modifications to which 15A NCAC 02D .0531 does not apply and which would contribute to a violation of a national ambient air quality standard, but which would not cause a new violation.

(b) For the purpose of this Rule the definitions contained in Section II.A. of Appendix S of 40 CFR Part 51 shall apply.

(c) The Rule is not applicable to:

(1) emission of a pollutant from a new or modified source located in an area designated as nonattainment for that pollutant in 40 CFR 81.334;

(2) emission of pollutants for which the source or modification is not major;

(3) emission of pollutants other than sulfur dioxide, PM2.5, nitrogen oxides, carbon monoxide, and PM10;

(4) a new or modified source whose impact will not increase more than:

(A) 1.0 $\mu g/m^3$ of SO_2 on an annual basis;

(B) 5 $\mu g/m^3$ of SO_2 on a 24-hour basis;

(C) 25 $\mu g/m^3$ of SO_2 on a 3-hour basis;

(D) 0.3 $\mu g/m^3$ of PM2.5 on an annual basis;

(E) 1.2 $\mu g/m^3$ of PM2.5 on a 24-hour basis;

(F) 1.0 $\mu g/m^3$ of NO_2 on an annual basis;

(G) 0.5 mg/m^3 of carbon monoxide on an 8-hour basis;

(H) 2 mg/m^3 of carbon monoxide on a one-hour basis;

(I) 1.0 $\mu g/m^3$ of PM10 on an annual basis; or

(J) 5 $\mu g/m^3$ of PM10 on a 24-hour basis

at any locality that does not meet a national ambient air quality standard;

(5) sources which are not major unless secondary emissions are included in calculating the potential to emit;

(6) sources which are exempted by the provision in Section II.F. of Appendix S of 40 CFR Part 51;

(7) temporary emission sources which will be relocated within two years; and

(8) emissions resulting from the construction phase of the source.

(d) 15A NCAC 02Q .0102 is not applicable to any source to which this Rule applies. The owner or operator of the source shall apply for and receive a permit as required in 15A NCAC 02Q .0300 or .0500.

(e) To issue a permit to a new or modified source to which this Rule applies, the Director shall determine that the source will meet the following conditions:

(1) The sources will emit the nonattainment pollutant at a rate no more than the lowest achievable emission rate;

(2) The owner or operator of the proposed new or modified source has demonstrated that all major stationary sources in the State that are owned or operated by this person, or any entity controlling, controlled by, or under common control with this person, are subject to emission limitations and are in compliance, or on a schedule for compliance which is federally enforceable or contained in a court decree, with all applicable emission limitations and standards of this Subchapter which EPA has authority to approve as elements of the North Carolina State Implementation Plan for Air Quality; and

(3) The source will satisfy one of the following conditions:

(A) The source will comply with 15A NCAC 02D .0531(i) when the source is evaluated as if it were in the nonattainment area; or

(B) The source will have an air quality offset, i.e., the applicant will have caused an air quality improvement in the locality where the national ambient air quality standard is not met by causing reductions in impacts of other sources greater than any additional impact caused by the source for which the application is being made. The emissions reductions creating the air quality offset shall be placed as a condition in the permit for the source reducing emissions. The requirements of this Part may be waived for the following sources, as specified in Section IV.B of Appendix S to 40 CFR Part 51, incorporated as specified in Paragraph (g) of this Rule:

(i) resource recovery facilities burning municipal solid waste; and

(ii) sources that must switch fuels due to lack of adequate fuel supplies, or sources that are required to be modified as a result of EPA regulations where no exemption from such regulations is available to the source, if the permit applicant demonstrates that it made its best efforts to obtain sufficient air quality offsets to comply with this Part, the applicant has secured all available air quality offsets, and the applicant will continue to seek the necessary air quality offsets and apply them when they become available.

(f) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation established after August 7, 1980, on the capacity of the source or modification to emit a pollutant, such as a restriction on hours of operation, then the provisions of this Rule shall apply to the source or modification as though construction had not yet begun on the source or modification.

(g) The version of the Code of Federal Regulations incorporated in this Rule is that as of July 1, 2019, at https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol2/pdf/CFR-2019-title40-vol2-part51-appS.pdf and does not include any subsequent amendments or editions to the referenced material. The publication may be accessed free of charge.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.108(b);*
Eff. June 1, 1981;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. July 1, 1994; December 1, 1993; December 1, 1992; October 1, 1989;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0533 STACK HEIGHT

(a) For the purpose of this Rule, the following definition shall apply:

(1) "A stack in existence" means that the owner or operator had:

(A) begun, or caused to begin, a continuous program of physical on-site construction of the stack; or

(B) entered into binding agreements or contractual obligations, which could not be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in the time that is normally required to construct such a stack.

(2) "Dispersion technique":

(A) "Dispersion technique" means any technique which attempts to affect the concentration of a pollutant in the ambient air by:

(i) using that portion of a stack that exceeds good engineering practice stack height;

(ii) varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or

(iii) increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.

(B) "Dispersion technique" does not include:

(i) the reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

(ii) the using of smoke management in agricultural or silvicultural prescribed burning programs;

(iii) the merging of exhaust gas streams where:

(I) the facility owner or operator demonstrates that the source was originally designed and constructed with such merged gas streams;

(II) after July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a

pollutant. This exclusion from the definition of "dispersion techniques" shall apply only to the emission limitation for the pollutant affected by such change in operation; or

(III) before July 8, 1985, such merging was part of a change in operation at the source that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emission limitation or in the event that no emission limitation was in existence prior to the merging, an increase in the quantity of pollutants actually emitted prior to the merging, the Director shall presume that merging was significantly motivated by an intent to gain emissions credit for greater dispersion. Absent a demonstration by the source owner or operator that merging was not significantly motivated by such intent, the Director shall deny credit for the effects of such merging in calculating the allowable emissions for the source;

(iv) episodic restrictions on residential woodburning and open burning; or

(v) techniques pursuant to Subpart (A)(iii) of this Subparagraph which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year.

(3) "Emission limitation" means a requirement established by this Subchapter or a local air quality program certified by the Commission that limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements that limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

(4) "Excessive concentrations" means, for the purpose of determining good engineering practice stack height in Part (5)(D) of this Paragraph:

(A) for sources seeking credit for stack height exceeding that established in Part (5)(B) or (C) of this Paragraph, a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all sources that is greater than an ambient air quality standard. For sources subject to 15A NCAC 02D .0530, an excessive concentration alternatively means a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations in this Part shall be prescribed by the new source performance standard that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the Director, an alternative emission rate shall be established in consultation with the source owner or operator;

(B) for sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established in 15A NCAC 02D .0533(a)(5)(B) or (C);

(i) a maximum ground-level concentration due in whole or part to downwash, wakes or eddy effects as provided in Part (A) of this Subparagraph, except that the emission rate specified by any applicable Rule in this Subchapter (or, in the absence of such a limit, the actual emission rate) shall be used; or

(ii) the actual presence of a local nuisance (odor, visibility impairment, or pollutant concentration) caused by the existing stack, as determined by the Director; and

(C) for sources seeking credit after January 12, 1979, for a stack height determined by 15A NCAC 02D .0533(a)(5)(B) or (C) where the Director requires the use of a field study or fluid model to verify GEP stack height, for sources seeking stack height credit after November 9, 1984 based on the aerodynamic influence of cooling towers, and for sources

seeking stack height credit after December 31, 1970 based on the aerodynamic influence of structures not adequately represented by 15A NCAC 02D .0533(a)(5)(B) or (C), a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects that is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

(5) "Good engineering practice (GEP) stack height" means the greater of:

(A) 65 meters measured from the ground-level elevation at the base of the stack;

(B) 2.5 times the height of nearby structure(s) measured from the ground-level elevation at the base of the stack for stacks in existence on January 12, 1979 and for which the owner or operator had obtained all applicable permit or approvals required pursuant to 15A NCAC 02Q and 40 CFR Parts 51 and 52, provided the owner or operator produces evidence that this equation was relied on in establishing an emission limitation;

(C) for stacks not covered by Part (B) of this Subparagraph, the height of nearby structures measured from the ground-level elevation at the base of the stack plus 1.5 times the lesser dimension (height or projected width) of nearby structure(s) provided that the Director may require the use of a field study or fluid model to verify GEP stack height for the source; or

(D) the height demonstrated by a fluid model or a field study approved by the Director, which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, nearby structures or nearby terrain features.

(6) "Nearby" means, for a specific structure or terrain feature:

(A) in Parts (5)(B) and (C) of this Subparagraph, that distance up to five times the lesser of the height or the width dimension of a structure but not greater than one-half mile. The height of the structure is measured from the ground-level elevation at the base of the Stack; and

(B) in Part (5)(D) of this Subparagraph, not greater than one-half mile, except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to 10 times the maximum height [ht] of the feature, not to exceed two miles if such feature achieves a height [ht] one-half mile from the stack that is at least 40 percent of the GEP stack height determined by Part (5)(C) of this Subparagraph or 26 meters, whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.

(7) "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

(b) With the exception stated in Paragraphs (c) and (d) of this Rule, the degree of emission limitations required by any rule in this Subchapter shall not be affected by:

(1) that amount of a stack height that exceeds good engineering practice; or

(2) any other dispersion technique.

(c) Paragraph (b) shall not apply to:

(1) stack heights in existence or dispersion techniques implemented before December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion techniques by sources, as defined in Section 111(a)(3) of the Clean Air Act, which were constructed, or reconstructed, or for which major modifications, as defined in 15A NCAC 02D .0530(b) and .0531(b) were carried out after December 31, 1970; or

(2) coal-fired steam electric generating units, subject to provisions of Section 118 of the federal Clean Air Act, which began operation before July 1, 1957, and whose stacks were constructed by a construction contract awarded before February 8, 1974.

However, these exemptions shall not apply to a new stack that replaces a stack that is exempted by Subparagraphs (1) and (2) of this Paragraph. These exemptions shall not apply to a new source using a stack that is exempted by Subparagraphs (1) and (2) of this Paragraph.

(d) This Rule shall not restrict the actual stack height of any source.

History Note:

Authority G.S. 143-215.3(a)(1);

Eff. November 1, 1982;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. July 1, 1994; July 1, 1987; April 1, 1986;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0534 FLUORIDE EMISSIONS FROM PHOSPHATE FERTILIZER INDUSTRY

(a) Emissions of total fluorides shall not exceed:

(1) 0.020 pounds per ton of phosphorus-bearing material fed to any wet-process phosphoric acid plant;
(2) 0.010 pounds per ton of phosphorus-bearing material fed to any superphosphoric acid plant;
(3) 0.40 pounds per ton of phosphorus-bearing material fed to any granular diammonium phosphate plant;
(4) 0.20 pounds per ton of phosphorus-bearing material fed to any run-of-pile triple superphosphate plant including curing and storing process;
(5) 0.20 pounds per ton of phosphorus-bearing material fed to any granular triple superphosphate plant that began operating after December 31, 1969;
(6) 0.40 pounds per ton of phosphorus-bearing material fed to any granular triple superphosphate plant that began operating before January 1, 1970; and
(7) 0.00050 pounds per hour per ton of phosphorus-bearing material cured or stored at any curing or storage facility associated with a granular triple superphosphate plant.

(b) The phosphorus-bearing material mentioned in Paragraph (a) of this Rule shall be expressed as phosphorus pentoxide.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. November 1, 1982;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0535 EXCESS EMISSIONS REPORTING AND MALFUNCTIONS

(a) For this Rule the following definitions apply:

(1) "Excess Emissions" means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in 15A NCAC 02D .0500, .0900, .1200, or 1400; or by a permit condition; or that exceeds an emission limit established in a permit issued pursuant to 15A NCAC 02Q .0700.
(2) "Malfunction" means any unavoidable failure of air pollution control equipment, process equipment, or process to operate in a normal and usual manner that results in excess emissions. Excess emissions during periods of routine start-up and shut-down of process equipment are not considered a malfunction. Failures caused entirely or in part by poor maintenance, careless operations or any other upset condition within the control of the emission source are not considered a malfunction.
(3) "Start-up" means the commencement of operation of any source that has shut-down or ceased operation for a period sufficient to cause temperature, pressure, process, chemical, or a pollution control device imbalance that would result in excess emission.
(4) "Shut-down" means the cessation of the operation of any source for any purpose.

(b) This Rule does not apply to sources to which 15A NCAC 02D .0524, .1110, or .1111 applies unless excess emissions exceed an emission limit established in a permit issued under 15A NCAC 02Q .0700 that is more stringent than the emission limit set by 15A NCAC 02D .0524, .1110 or .1111.

(c) Any excess emissions that do not occur during start-up or shut-down are considered a violation of the appropriate rule unless the owner or operator of the source of excess emissions demonstrates to the Director, that the excess emissions are the result of a malfunction. To determine if the excess emissions are the result of a malfunction, the Director shall consider, along with any other pertinent information, the following:

(1) the air cleaning device, process equipment, or process has been maintained and operated, to the maximum extent practicable, consistent with good practice for minimizing emissions;
(2) repairs have been made expeditiously when the emission limits have been exceeded;
(3) the amount and duration of the excess emissions, including any bypass, have been minimized to the maximum extent practicable;

(4) all practical steps have been taken to minimize the impact of the excess emissions on ambient air quality;
(5) the excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
(6) the requirements of Paragraph (f) of this Rule have been met; and
(7) if the source is required to have a malfunction abatement plan, it has followed that plan. All malfunctions shall be repaired as expeditiously as practicable. However, the Director shall not excuse excess emissions caused by malfunctions from a source for more than 15 percent of the operating time during each calendar year. The owner or operator of a facility shall maintain records of the time that a source operates when it or its air pollution control equipment is malfunctioning or otherwise has excess emissions.

(d) All electric utility boiler units shall have a malfunction abatement plan approved by the Director as satisfying the requirements of Subparagraphs (1) through (3) of this Paragraph. In addition, the Director may require any other source to have a malfunction abatement plan approved by the Director as satisfying the requirements of Subparagraphs (1) through (3) of this Paragraph. If the Director requires a malfunction abatement plan for a source other than an electric utility boiler, the owner or operator of that source shall submit a malfunction abatement plan within 60 days after receipt of the Director's request. The malfunction plans of electric utility boiler units and of other sources required to have them shall be implemented when a malfunction or other breakdown occurs. The purpose of the malfunction abatement plan is to prevent, detect, and correct malfunctions or equipment failures that could result in excess emissions. A malfunction abatement plan shall contain:

(1) a complete preventive maintenance program including:
  (A) the identification of individuals or positions responsible for inspecting, maintaining and repairing air cleaning devices;
  (B) a description of the items or conditions that will be inspected and maintained;
  (C) the frequency of the inspection, maintenance services, and repairs; and
  (D) an identification and quantities of the replacement parts that shall be maintained in inventory for quick replacement;
(2) an identification of the source and air cleaning operating variables and outlet variables, such as opacity, grain loading, and pollutant concentration, that may be monitored to detect a malfunction or failure; the normal operating range of these variables and a description of the method of monitoring or surveillance procedures and of informing operating personnel of any malfunctions, including alarm systems, lights or other indicators; and
(3) a description of the corrective procedures that the owner or operator will take in case of a malfunction or failure to achieve compliance with the applicable rule as expeditiously as practicable but no longer than the next boiler or process outage that would provide for an orderly repair or correction of the malfunction or 15 days, whichever is shorter. If the owner or operator anticipates that the malfunction would continue for more than 15 days, a case-by-case repair schedule shall be established by the Director with the source. The owner or operator shall maintain logs to show that the operation and maintenance parts of the malfunction abatement plan are implemented. These logs are subject to inspection by the Director or his designee upon request during business hours.

(e) The owner or operator of any source required by the Director to have a malfunction abatement plan shall submit a malfunction abatement plan to the Director within six months after it has been required by the Director. The malfunction abatement plan and any amendment to it shall be reviewed by the Director or his designee. If the plan carries out the objectives described by Paragraph (d) of this Rule, the Director shall approve it. If the plan does not carry out the objectives described by Paragraph (d) of this Rule, the Director shall disapprove the plan. The Director shall state his reasons for his disapproval. The person who submits the plan shall submit an amendment to the plan to satisfy the reasons for the Director's disapproval within 30 days of receipt of the Director's notification of disapproval. Any person having an approved malfunction abatement plan shall submit to the Director for his approval amendments reflecting changes in any element of the plan required by Paragraph (d) of this Rule or amendments when requested by the Director. The malfunction abatement plan and amendments to it shall be implemented within 90 days upon receipt of written notice of approval.

(f) The owner or operator of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

(1) notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the Division's next business day of becoming aware of the occurrence and describe:

(A) name and location of the facility,
(B) the nature and cause of the malfunction or breakdown;
(C) the time when the malfunction or breakdown is first observed;
(D) the expected duration; and
(E) an estimated rate of emissions.

(2) notify the Director or his designee after the corrective measures have been accomplished;

(3) submit to the Director within 15 days after the request a written report that includes:
(A) name and location of the facility,
(B) identification or description of the processes and control devices involved in the malfunction or breakdown;
(C) the cause and nature of the event;
(D) time and duration of the violation or the expected duration of the excess emission if the malfunction or breakdown has not been fixed;
(E) estimated quantity of pollutant emitted;
(F) steps taken to control the emissions and to prevent recurrences and if the malfunction or breakdown has not been fixed, steps planned to be taken; and
(G) any other pertinent information requested by the Director. After the malfunction or breakdown has been corrected, the Director may require the owner or operator of the source to test the source in accordance with 15A NCAC 02D .2600 to demonstrate compliance.

(g) Start-up and shut-down. Excess emissions during start-up and shut-down are considered a violation of the applicable rule if the owner or operator cannot demonstrate that the excess emissions are unavoidable. To determine if excess emissions are unavoidable during startup or shutdown the Director shall consider the items listed in Subparagraphs (c)(1), (c)(3), (c)(4), (c)(5), and (c)(7) of this Rule along with any other pertinent information. The Director may specify for a particular source the amount, time, and duration of emissions allowed during start-up or shut down if necessary to limit excess emissions and protect the NAAQS. The owner or operator shall, to the extent practicable, operate the source and any associated air pollution control equipment or monitoring equipment in a manner consistent with best practicable air pollution control practices to minimize emissions during start-up and shut-down.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4); 143-215.107(a)(5);*
Eff. March 1, 1983;
Amended Eff. June 1, 2008; April 1, 2001; July 1, 1998; July 1, 1996; October 1, 1991; May 1, 1990; April 1, 1986; July 1, 1984;
Amendment approved by RRC October 20, 2016 with a delayed effective date. Effective date delayed by Codifier upon May 15, 2018 request from the Environmental Management Commission. Rendered void May 28, 2020 by final action of the EPA withdrawing SIP Call for North Carolina, 85 Fed. Reg. 23700 (April 28, 2020) and the State's withdrawal of its SIP submittal to EPA on August 25, 2022;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0536 PARTICULATE EMISSIONS FROM ELECTRIC UTILITY BOILERS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. March 1, 1983;
Amended Eff. June 1, 2008; April 1, 2001; August 1, 1991; August 1, 1987; February 1, 1986;
Repealed Eff. November 1, 2020.

15A NCAC 02D .0537 CONTROL OF MERCURY EMISSIONS

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Mercury" means the element mercury, excluding any associated elements, and includes mercury in particulates, vapors, aerosols, and compounds.

(2) "Stationary source" means the total plant site. This includes all emissions, such as stacks, ducts, vents, openings, and fugitives to the atmosphere within the property boundary.

(b) This Rule shall apply to all new and existing stationary sources engaged in the handling or processing of mercury and not subject to standards on emissions for mercury in 15A NCAC 02D .0530, .1110, or .1111.

(c) An owner or operator of a stationary source engaged in the handling or processing of mercury shall not cause, allow, or permit particulate or gaseous mercury emissions of more than 2300 grams per day into the atmosphere.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. June 1, 1985;
Amended Eff. July 1, 1996;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0538 CONTROL OF ETHYLENE OXIDE EMISSIONS

(a) For purposes of this Rule, "medical devices" means instruments, apparatus, implements, machines, implants, in vitro reagents, or other similar or related articles including their components, parts, and accessories, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; or intended to affect the structure or any function of the body of man or other animals.

(b) This Rule applies to emissions at facilities for which construction began after August 31, 1992 of ethylene oxide resulting from use as a sterilant in:

(1) the production and subsequent storage of medical devices; or

(2) the packaging and subsequent storage of medical devices for sale.

(c) This Rule does not apply to hospital or medical facilities.

(d) Facilities subject to this Rule shall comply with the following standards:

(1) for sterilization chamber evacuation, a closed loop liquid ring vacuum pump, or equipment demonstrated to be as effective at reducing emissions of ethylene oxide shall be used;

(2) for sterilizer exhaust, a reduction in the weight of uncontrolled emissions of ethylene oxide of at least 99.8 percent by weight shall be achieved;

(3) for sterilizer unload and backdraft valve exhaust:

(A) a reduction in uncontrolled emissions of ethylene oxide of at least 99 percent by weight shall be achieved; or

(B) a concentration of no more than one part per million by volume of ethylene oxide shall be achieved;

(4) sterilized product ethylene oxide residual emissions shall be reduced by:

(A) a heated degassing room to aerate the products after removal from the sterilization chamber. The temperature of the degassing room shall be maintained at a minimum of 95 degrees Fahrenheit during the degassing cycle and product hold time in the aeration room shall be at least 24 hours; or

(B) a process demonstrated to be as effective as Part (d)(4)(A) of this Rule.

(5) emissions of ethylene oxide from the degassing area or equivalent process shall be vented to a control device capable of reducing uncontrolled ethylene oxide emissions by at least 99 percent by weight or to no more than one part per million by volume of ethylene oxide. The product aeration room and the product transfer area shall be maintained under a negative pressure.

(e) Before installation of the controls required by Paragraph (d) of this Rule, and annually thereafter, a written description of waste reduction, elimination, or recycling plan shall be submitted to the Director to determine if ethylene oxide use can be reduced or eliminated through alternative sterilization methods or process modifications.

(f) The owner or operator of the facility shall conduct a performance test to verify initial efficiency of the control devices. The owner or operator shall maintain temperature records to demonstrate proper operation of the degassing room. For the purposes of this Paragraph, "proper operation" means in accordance with the manufacturer's specifications. Such records shall be retained for a period of at least two calendar years and shall be made available for inspection by Division personnel.

(g) If the owner or operator of a facility subject to the Rule demonstrates, using the procedures in 15A NCAC 02D .1106, that the emissions of ethylene oxide from all sources at the facility do not cause the acceptable ambient level of ethylene oxide in 15A NCAC 02D .1104 to be exceeded, then the requirements of Paragraphs (d) through (e) of this Rule shall not apply. This demonstration shall be at the option of the owner or operator of the facility. If this option is chosen, the Director shall write the facility's permit to satisfy the requirements of 15A NCAC 02D .1104(a).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4),(5); 143-215.108(c);*
Eff. September 1, 1992;
Amended Eff. June 1, 2004; August 1, 2002;

Readopted Eff. November 1, 2020;
Amended Eff. October 1, 2022.

15A NCAC 02D .0539 ODOR CONTROL OF FEED INGREDIENT MANUFACTURING PLANTS

(a) Applicability. The requirements of this Rule apply to any facility that produces feed-grade animal proteins or feed-grade animal fats and oils, but do not apply to any portions of such facilities engaged exclusively in the processing of food for human consumption.

(b) This Rule does not apply to those facilities solely engaged in the processing of marine byproducts. Those facilities shall control their odorous emissions pursuant to 15A NCAC 02D .1806.

(c) A person shall not allow, cause, or permit the operation or use of any device, machine, equipment, or other contrivance to process material to be used in the production of feed-grade animal proteins or feed-grade animal fats and oils unless all gases, vapors, and gas-entrained effluents from these processes are passed through condensers to remove all steam and other condensible materials. All noncondensibles passing through the condensers shall then be incinerated at 1200 degrees Fahrenheit for a period of not less than 0.3 seconds, or treated in an equally effective manner.

(d) Measurement and Recording Requirements. Any person processing or incinerating gases, vapors, or gas-entrained matter as required by Paragraph (c) of this Rule shall install, operate, and maintain in good working order and calibration continuous measuring and recording devices for equipment operational parameters to document equipment operation in accordance with this Rule. In addition, the owner or operator of the facility shall:

(1) demonstrate the measuring and recording devices are capable of verifying the compliance status of the equipment on a continuous basis;
(2) describe the parameters to be used to determine the compliance status and how these parameters:
    (A) are to be measured;
    (B) are to be used to determine compliance status; and
(3) provide a quality assurance program approved by the Director for all monitoring devices and systems that includes:
    (A) procedures and frequencies for calibration;
    (B) standards traceability;
    (C) operational checks;
    (D) maintenance schedules and procedures;
    (E) auditing schedules and procedures;
    (F) data validation; and
    (G) schedule for implementing the quality assurance program.

These data shall be available to the Director upon request.

(e) A person shall not allow, cause, or permit the installation or operation of expeller units unless they are properly hooded to ensure that all exhaust gases are collected or ducted to odor control equipment.

(f) A person subject to this Rule shall not cause or permit any raw material to be handled, transported, or stored, or to undertake the preparation of any raw material without taking reasonable precautions to prevent odors from being discharged. For the purpose of this Rule, such raw material is in "storage" after it has been unloaded at a facility or after it has been located at the facility for at least 36 hours. Reasonable precautions shall include the following:

(1) storage of all raw material before or in the process of preparation, in properly enclosed and vented equipment or areas, together with the use of effective devices and methods to prevent the discharge of odor bearing gases;
(2) use of covered vehicles or containers of watertight construction for the handling and transporting of any raw material; and
(3) use of hoods and fans to enclose and vent the storage, handling, preparation, and conveying of any odorous materials together with effective devices or methods, or both, to prevent emissions of odors or odor bearing gases.

(g) A vehicle or container holding raw material, which has not been unloaded inside or parked inside an odor controlled area within the facility, shall be unloaded for processing of the raw material prior to the expiration of the following time limits:

(1) for feathers with only trace amounts of blood, such as those obtained from slaughtering houses that separate blood from offal and feathers, no later than 48 hours after being weighed upon arrival at the facility; and
(2) for used cooking oil in sealed tankers, no later than 96 hours after being weighed upon arrival at the facility.

(h) The owner or operator shall notify the regional supervisor of the appropriate regional office within two business days after the provisions of Paragraph (g) of this Rule are not met and the conditions that are encountered that cause or may cause release of excessive and malodorous gases or vapors.
(i) The owner or operator of a facility shall be in compliance with this Rule before beginning operation.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(5);*
Eff. July 1, 1996;
Amended Eff. June 1, 2018; April 1, 2001;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0540 PARTICULATES FROM FUGITIVE DUST EMISSION SOURCES

(a) For the purpose of this Rule the following definitions apply:
- (1) "Excess fugitive dust emissions" means:
  - (A) fugitive dust is visible extending beyond the facility's property line; or
  - (B) upon inspection of settled dust on adjacent property, the Division finds that the dust came from the adjacent facility.
- (2) "Fugitive dust emissions" means particulate matter that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as unloading and loading areas, process areas, stockpiles, stockpile working, plant parking lots, and plant roads, including access roads and haul roads.
- (3) "Production of crops" means:
  - (A) cultivation of land for crop planting;
  - (B) crop irrigation;
  - (C) harvesting;
  - (D) on site curing, storage, or preparation of crops; or
  - (E) protecting crops from damage or disease conducted according to practices acceptable to the North Carolina Department of Agriculture and Consumer Services.
- (4) "Public parking" means an area dedicated to or maintained for the parking of vehicles by the general public.
- (5) "Public road" means any road that is part of the State highway system or any road, street, or right-of-way dedicated or maintained for public use.
- (6) "Substantive complaints" means complaints that are verified by the Division with physical evidence of excess fugitive dust emissions.

(b) This Rule does not apply to:
- (1) abrasive blasting covered by 15A NCAC 02D .0541;
- (2) cotton ginning operations covered by 15A NCAC 02D .0542;
- (3) non-production military base operations;
- (4) land disturbing activities that do not require a permit pursuant to 15A NCAC 02Q or are not subject to a requirement pursuant to 15A NCAC 02D, such as clearing, grading, or digging, and related activities such as hauling fill and cut material, building material, or equipment; or
- (5) public roads, public parking, timber harvesting, or production of crops.

(c) The owner or operator of a facility required to have a permit pursuant to 15A NCAC 02Q or a source subject to a requirement pursuant to 15A NCAC 02D shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or visible emissions in excess of that allowed pursuant to Paragraph (e) of this Rule.
(d) If fugitive dust emissions from a facility required to comply with this Rule cause or contribute to substantive complaints, the owner or operator of the facility shall:
- (1) within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written report that includes the identification of the probable sources of the fugitive dust emissions causing complaints and what measures can be made to abate the fugitive emissions;
- (2) within 60 days of the initial report submitted pursuant to Subparagraph (1) of this Paragraph, submit to the Director a fugitive dust control plan as described in Paragraph (f) of this Rule; and
- (3) within 30 days after the Director approves the plan pursuant to Paragraph (g) of this Rule, be in compliance with the plan.

(e) The Director shall require that the owner or operator of a facility covered by Paragraph (c) of this Rule develop and submit a fugitive dust control plan as described in Paragraph (f) of this Rule if:

(1) ambient air quality measurements or dispersion modeling as provided in 15A NCAC 02D .1106(e) show that the excess fugitive dust emissions cause the ambient air quality standard for particulates in 15A NCAC 02D .0400 to be exceeded; or
(2) the Division observes excess fugitive dust emissions from the facility beyond the property boundaries for six minutes in any one hour using Reference Method 22 in 40 CFR 60, Appendix A.

(f) The fugitive dust control plan shall:
(1) identify the sources of fugitive dust emissions within the facility;
(2) describe how fugitive dust will be controlled from each identified source;
(3) contain a schedule by which the plan will be implemented;
(4) describe how the plan will be implemented, including training of facility personnel; and
(5) propose any methods that will be used to verify compliance with the plan.

(g) The Director shall approve the plan if he or she finds that:
(1) the plan contains all required elements in Paragraph (f) of this Rule;
(2) the proposed schedule contained in the plan will reduce fugitive dust emissions;
(3) the methods used to control fugitive dust emissions prevent fugitive dust emissions from causing or contributing to a violation of the ambient air quality standards for particulates; and
(4) the proposed compliance verification methods verify compliance with the fugitive dust control plan.

If the Director finds that the proposed plan does not meet the requirements of this Paragraph, he or she shall notify the owner or operator of the facility of any deficiencies in the proposed plan. The owner or operator shall have 30 days after receiving written notification from the Director to correct the deficiencies or submit a schedule describing actions to be taken and the time by which they will be implemented.

(h) If after a plan has been implemented, the Director finds that the plan fails to control excess fugitive dust emissions, he or she shall require the owner or operator of the facility to correct the deficiencies in the plan. Within 90 days after receiving written notification from the Director identifying the deficiency, the owner or operator of the facility shall submit a revision to his or her plan to correct the deficiencies.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.108(c)(7);*
Eff. July 1, 1998;
Amended Eff. July 10, 2010; August 1, 2007;
Readopted Eff. September 1, 2019.

15A NCAC 02D .0541 CONTROL OF EMISSIONS FROM ABRASIVE BLASTING

(a) For the purpose of this Rule, the following definitions apply:
(1) "Abrasives" means any material used in abrasive blasting operations.
(2) "Abrasive blasting" means the operation of cleaning or preparing a surface by forcibly propelling a stream of abrasive material against the surface. Sandblasting is one form of abrasive blasting.
(3) "Abrasive blasting equipment" means any equipment used in abrasive blasting operations.
(4) "Building" means a structure with four or more sides and a roof used, in whole or in part, to house or contain abrasive blasting.
(5) "Fugitive dust emissions" means emissions of particulate matter into the outdoor atmosphere that is not vented or captured by a stack or chimney.

(b) The owner or operator shall ensure that any abrasive blasting operation conducted outside a building or conducted indoors and vented to the atmosphere is performed in accordance with the requirements set forth in 15A NCAC 02D .0521, Control of Visible Emissions. For the purposes of this Rule, the visible emissions reading for abrasive blasting performed outside a building shall be taken at a spot approximately one meter above the point of abrasive blasting with a viewing distance of approximately five meters.

(c) Except as provided in Paragraph (d) of this Rule, all abrasive blasting operations shall be conducted within a building.

(d) An abrasive blasting operation conducted under one or more of the following conditions is not required to be conducted within a building:
(1) when the item to be blasted exceeds eight feet in any dimension;
(2) when the surface being blasted is situated at its permanent location or not further away from its permanent location than is necessary to allow the surface to be blasted; or

(3) when the abrasive blasting operation is conducted at a private residence or farm and the visible emissions created by this abrasive blasting operation do not migrate beyond the property boundary of the private residence or farm on which the abrasive blasting operation is being conducted.

(e) The owner or operator of any abrasive blasting operation conducted in accordance with Subparagraphs (d)(1) and (d)(2) of this Rule, outside a building, shall take appropriate measures to ensure that the fugitive dust emissions created by the abrasive blasting operation do not migrate beyond the property boundaries in which the abrasive blasting operation is being conducted. Appropriate measures include the following:

(1) the addition of a suppressant to the abrasive blasting material;
(2) wet abrasive blasting;
(3) hydroblasting;
(4) vacuum blasting;
(5) shrouded blasting; or
(6) shrouded hydroblasting.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.108(c)(7); 143-215.108(d)(1);*
Eff. July 1, 2000;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0542 CONTROL OF PARTICULATE EMISSIONS FROM COTTON GINNING OPERATIONS

(a) Purpose. The purpose of this Rule is to establish control requirements for particulate emissions from cotton ginning operations.

(b) Definitions. For the purposes of this Rule, the following definitions apply:

(1) "1D-3D cyclone" means any cyclone-type collector of the 1D-3D configuration. This designation refers to the ratio of the cylinder to cone length, where D is the diameter of the cylinder portion. A 1D-3D cyclone has a cylinder length of 1xD and a cone length of 3xD.
(2) "2D-2D cyclone" means any cyclone-type collector of the 2D-2D configuration. This designation refers to the ratio of the cylinder to cone length, where D is the diameter of the cylinder portion. A 2D-2D cyclone has a cylinder length of 2xD and a cone length of 2xD.
(3) "Bale" means a compressed and bound package of cotton lint, approximately weighing 500 pounds.
(4) "Existing facility" means a cotton ginning operation site operating prior to July 1, 2002.
(5) "Ginning operation" means any facility or plant removing seed, lint, trash, or any combination of these from raw cotton or bales of lint cotton.
(6) "Ginning season" means the period of time during which the gin is in operation, which is generally from September of the current year through January of the following year.
(7) "High pressure exhausts" means the exhaust air systems at a cotton gin not defined as "low pressure exhausts."
(8) "Low pressure exhausts" means the exhaust cotton handling systems located at a cotton gin that handle air from the cotton lint handling system and battery condenser.

(c) Applicability. This rule applies to all new, existing, and modified cotton ginning operations. Existing facilities with a maximum rated capacity of less than 20 bales per hour that do not have cyclones on lint cleaners and battery condensers as of July 1, 2002 are not required to add:

(1) the emission control devices in Subparagraph (d)(1) of this Rule to lint cleaning exhausts if emissions from the lint cleaning are controlled by fine mesh screens; and
(2) the emission control devices in Subparagraph (d)(2) of this Rule to battery condenser exhausts if the emissions from the battery condenser are controlled by fine mesh screens.

(d) Emission Control Requirements. The owner or operator of each cotton ginning operation shall control particulate emissions from the facility by controlling:

(1) all high pressure exhausts and lint cleaning exhausts with an emission control system including:
    (A) one or more 1D-3D or 2D-2D cyclones to achieve 95 percent efficiency; or
    (B) a device with a minimum of 95 percent efficiency.
(2) low pressure exhausts, except lint cleaning exhausts, by an emission control system including:
    (A) one or more 1D-3D or 2D-2D cyclones to achieve 90 percent efficiency; or
    (B) a device with at least a 90 percent efficiency.

Efficiency is based on the removal of particulate matter between the cyclone's inlet and outlet; it is measured using test methods in 15A NCAC 02D .2600.

(e) Exhaust Rain Caps. Exhausts from emission points or control devices shall not be equipped with exhaust rain caps or other devices that deflect the emissions downward or outward.

(f) Operation and Maintenance. To ensure optimum control efficiency is maintained, the owner or operator shall establish, based on manufacturers recommendations, an inspection and maintenance schedule for the control devices, other emission processing equipment, and monitoring devices used pursuant to this Rule. The inspection and maintenance schedule shall be followed throughout the ginning season. The results of the inspections and any maintenance performed on the control equipment, emission processing equipment, or monitoring devices shall be recorded in the log book required in Paragraph (k) of this Rule.

(g) Fugitive Emissions. The owner or operator shall minimize fugitive emissions from cotton ginning operations in accordance with this Paragraph:

(1) The owner or operator of a
  (A) trash stacker shall:
    (i) install, maintain, and operate a three-sided enclosure with a roof whose sides are high enough above the opening of the dumping device to prevent wind from dispersing dust or debris; or
    (ii) install, maintain, and operate a device to provide wet suppression at the dump area of the trash cyclone and minimize free fall distance of waste material exiting the trash cyclone.
  (B) trash stacker and composting system shall: install, maintain, and operate a wet suppression system providing dust suppression in the auger box assembly and at the dump area of the trash stacker system. The owner or operator shall keep the trash material wet and compost it in place until the material is removed from the dump area for additional composting or disposal.

(2) Gin Yard. The owner or operator shall clean and dispose of accumulations of trash or lint on the non-storage areas of the gin yard daily.

(3) Traffic areas. The owner or operator shall clean paved roadways, parking, and other traffic areas at the facility as necessary to prevent re-entrainment of dust or debris. The owner or operator shall treat unpaved roadways, parking, and other traffic areas at the facility with wet or chemical dust suppressant as necessary to prevent dust from leaving the facility's property and shall install and maintain signs limiting vehicle speed to 10 miles per hour where chemical suppression is used and to 15 miles per hour where wet suppression is used.

(4) Transport of Trash Material. The owner or operator shall ensure all trucks transporting gin trash material are covered and the trucks are cleaned of over-spill material before trucks leave the trash hopper dump area. The dump area shall be cleaned daily.

(h) Alternative Control Measures. The owner or operator of a ginning operation may petition for use of alternative control measures to those specified in this Rule. The petition shall include:

(1) the name and address of the petitioner;
(2) the location and description of the ginning operation;
(3) a description of the alternative control measure; and
(4) a demonstration the alternative control measure's effectiveness is equal to or greater than the control device or method specified in this Rule.

(i) Approval of Alternative Control Measure. The Director shall approve the alternative control measure if he or she finds:

(1) all the information required by Paragraph (h) of this Rule has been submitted; and
(2) the alternative control measure's effectiveness is equal to or greater than the control device or method specified in this Rule.

(j) Monitoring.

(1) The owner or operator of each ginning operation shall install, maintain, and calibrate monitoring devices measuring pressures, rates of flow, and other operating conditions necessary to determine if the control devices function in accordance with the engineering specifications set forth in the permit.

(2) Before or during the first week of operation of the 2002-2003 ginning season, the owner or operator of each gin shall conduct a baseline study of the entire dust collection system, without cotton being processed, to ensure air flows stay within the design range for each collection device.

For 2D-2D cyclones the air flow design range is 2600 to 3600 feet per minute. For 1D-3D cyclones the design range is 2800 to 3600 feet per minute. For other control devices the air flow design range is that found in the manufacturer's specifications. Gins constructed after the 2002-2003 ginning season shall conduct the baseline study before or during the first week of operation of the first ginning season following construction. During the baseline study the owner or operator shall measure or determine according to the methods specified in this Paragraph and record in a logbook:

(A) the calculated inlet velocity for each control device; and

(B) the pressure drop across each control device.

The owner or operator shall use Method 1 and Method 2 of 40 CFR Part 60 Appendix A to measure flow and static pressure and determine inlet velocity or the USDA method for determining duct velocity and static pressure in Agricultural Handbook Number 503, Cotton Ginners Handbook, dated December 1994. The Cotton Ginners Handbook method shall only be used where test holes are located a minimum of eight and one-half pipe diameters downstream and one and one-half pipe diameters upstream from elbows, valves, dampers, changes in duct diameter or any other flow disturbances. Where Method 2 is used a standard pitot tube may be used in lieu of the s-pitot specified in Method 2 subject to the conditions specified in Paragraph 2.1 of Method 2.

(3) On a monthly basis following the baseline study, the owner or operator shall measure and record in the logbook the static pressure at each port where the static pressure was measured in the baseline study. Measurements shall be made using a manometer, a Magnahelic® gauge, or other device the Director approves as being equivalent to a manometer. If the owner or operator measures a change in static pressure of 20 percent or more from that measured in the baseline study, the owner or operator shall initiate corrective action. Corrective action shall be recorded in the logbook. If corrective action will take more than 48 hours to complete, the owner or operator shall notify the regional supervisor of the region in which the ginning operation is located as soon as possible, but by no later than the end of the day such static pressure is measured.

(4) When any design changes to the dust control system are made, the owner or operator shall conduct a new baseline study for that portion of the system and shall record the new values in the logbook required in Paragraph (k) of this Rule. Thereafter monthly static pressure readings for that portion of the system shall be compared to the new values.

(5) During the ginning season, the owner or operator shall daily inspect for structural integrity of the control devices and other emissions processing systems and shall ensure that the control devices and emission processing systems conform to normal and proper operation of the gin. If a problem is found, corrective action shall be taken and recorded in the logbook required in Paragraph (k) of this Rule.

(6) At the conclusion of the ginning season, the owner or operator shall conduct an inspection of the facility to identify all scheduled maintenance activities and repairs needed relating to the maintenance and proper operation of the air pollution control devices for the next season. Any deficiencies identified through the inspection shall be corrected before beginning operation of the gin for the next season.

(k) Recordkeeping. The owner operator shall establish and maintain on-site a logbook documenting the following items:

(1) results of the baseline study as specified in Subparagraph (j)(2) of this Rule;

(2) results of new baseline studies as specified in Subparagraph (j)(4) of this Rule;

(3) results of monthly static pressure checks and any corrective action taken as specified in Subparagraph (j)(3) of this Rule;

(4) observations from daily inspections of the facility and any resulting corrective actions taken as required in Subparagraph (j)(5) of this Rule; and

(5) a copy of the manufacturer's specifications for each type of control device installed.

The logbook shall be maintained on site and made available to Division representatives upon request.

(l) Reporting. The owner or operator shall submit by March 1 of each year a report containing the following:

(1) the name and location of the cotton gin;

(2) the number of bales of cotton produced during the previous ginning season;

(3) a maintenance and repair schedule based on inspection of the facility at the conclusion of the previous cotton ginning season required in Subparagraph (j)(6) of this Rule; and

(4) signature of the responsible official as identified in 15A NCAC 02Q .0303.

(m) Compliance Schedule. Existing sources shall comply as specified in Paragraph (d) of this Rule. New and modified sources shall be in compliance upon start-up.

(n) Record retention. The owner or operator shall retain all records required to be kept by this Rule for three years from the date of recording.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. August 1, 2002;
Amended Eff. June 1, 2008;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0543 BEST AVAILABLE RETROFIT TECHNOLOGY

(a) For the purposes of this Rule, the definitions at 40 CFR 51.301 shall apply.

(b) Mandatory Class I Federal areas are identified in 40 CFR Part 81, Subpart D.

(c) The Director shall have the maximum flexibility allowed pursuant to 40 CFR 51.308 or 40 CFR Part 51, Appendix Y.

(d) This Rule applies to BART-eligible sources meeting the requirements of 40 CFR Part 51, Appendix Y causing or contributing to any visibility impairment in a mandatory Class I Federal area as determined using 40 CFR Part 51, Subpart P.

(e) Unless exempted pursuant to 40 CFR 51.303, the owner or operator of a BART-eligible emission unit subject to this Rule shall perform a best available retrofit technology (BART) evaluation. Pursuant to 40 CFR 51.308, the evaluation shall include:

(1) the technology available;
(2) the cost of compliance;
(3) the energy and non-air quality environmental impacts of compliance;
(4) any pollution control equipment in use at the source;
(5) the remaining useful life of the source; and
(6) the degree of improvement in visibility reasonably anticipated to result from the use of such technology.

(f) The owner or operator of a BART-subject emission unit shall install, operate, and maintain BART as approved by the Director after considering the factors listed in Paragraph (e) of this Rule and incorporated in the unit's permit issued pursuant to 15A NCAC 02Q.

(g) BART shall be determined using "Guidelines for Determining Best Available Retrofit Technology for Coal-fired Power Plants and Other Existing Stationary Facilities" (1980), 40 CFR 51.308(e)(1)(ii), and 40 CFR Part 51, Appendix Y.

(h) "Guidelines for Determining Best Available Retrofit Technology for Coal-fired Power Plants and Other Existing Stationary Facilities" is incorporated by reference, exclusive of appendix E, and shall include any later amendments or editions. This document, which was published in the Federal Register on February 6, 1980 (45 FR 8210), is EPA publication No. 450/3–80–009b and can be obtained from the National Service Center for Environmental Publications (NSCEP) available for free through their online publication search tool at: https:/www.epa.gov/nscep. The document is also available through the U.S. Department of Commerce, National Technical Information Service located at 5301 Shawnee Road Alexandria, VA 22312.

History Note: *Authority G.S.143-215.3(a)(1); 143-215.107(a)(5),(10);*
Eff. September 1, 2006;
Amended Eff. May 1, 2007;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0544 PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS FOR GREENHOUSE GASES

(a) The purpose of this Rule is to implement a program for the prevention of significant deterioration of air quality for greenhouse gases as required by 40 CFR 51.166. The minimum requirements described in the portions of 40 CFR 51.166 are hereby adopted as requirements under this Rule, except as otherwise provided in this Rule. Wherever the language of the portions of 40 CFR 51.166 adopted in this Rule speaks of the "plan," the requirements described therein shall apply to the source to which they pertain, except as otherwise provided in this Rule. Whenever the portions of 40 CFR 51.166 adopted in this Rule provide that the State plan may exempt or not apply

certain requirements in certain circumstances, those exemptions and provisions of non-applicability are also hereby adopted under this Rule. However, this provision shall not be interpreted so as to limit information that may be requested from the owner or operator by the Director as specified in 40 CFR 51.166(n)(2). For purposes of greenhouse gases, the provisions of this Rule shall apply rather than the provisions in 15A NCAC 02D .0530. For all other regulated new source review (NSR) pollutants, the provisions in 15A NCAC 02D .0530 shall apply. A major stationary source or major modification shall not be required to obtain a prevention of significant deterioration (PSD) permit on the sole basis of its greenhouse gases emissions.

(b) For the purposes of this Rule, the definitions contained in 40 CFR 51.166(b) and 40 CFR 51.301 shall apply except the definition of "baseline actual emissions." "Baseline actual emissions" means the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance with Subparagraphs (1) through (3) of this Paragraph:

(1) For an existing emissions unit, baseline actual emissions means the average rate, in tons per year, at which the emissions unit emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period preceding the date that a complete permit application is received by the Division for a permit required under this Rule. The Director shall allow a different time period, not to exceed 10 years preceding the date that a complete permit application is received by the Division, if the owner or operator demonstrates that it is more representative of normal source operation. For the purpose of determining baseline actual emissions, the following shall apply:

(A) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions;

(B) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period;

(C) For an existing emission unit, other than an electric utility steam generating unit, the average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source shall currently comply. However, if the State has taken credit in an attainment demonstration or maintenance plan consistent with the requirements of 40 CFR 51.165(a)(3)(ii)(G) for an emission limitation that is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under part 63 of the Code of Federal Regulations, the baseline actual emissions shall be adjusted to account for such emission reductions;

(D) For an electric utility steam generating unit, the average rate shall be adjusted downward to reflect any emissions reductions under G.S. 143-215.107D and for which cost recovery is sought pursuant to G.S. 62-133.6;

(E) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period shall be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period for each regulated NSR pollutant can be used for each regulated NSR pollutant; and

(F) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by Parts (B) and (C) of this Subparagraph;

(2) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit; and

(3) For a plantwide applicability limit (PAL) for a stationary source, the baseline actual emissions shall be calculated for existing emissions units in accordance with the procedures contained in Subparagraph (1) of this Paragraph and for a new emissions unit in accordance with the procedures contained in Subparagraph (2) of this Paragraph.

(c) In the definition of "net emissions increase," the reasonable period specified in 40 CFR 51.166(b)(3)(ii) shall be seven years.

(d) In the definition of "subject to regulation", a greenhouse gas's global warming potential is the global warming potential published at Table A-1 of Subpart A of 40 CFR Part 98 and shall include subsequent amendments and editions.

(e) The limitation specified in 40 CFR 51.166(b)(15)(ii) shall not apply.

(f) Major stationary sources and major modifications shall comply with the requirements contained in 40 CFR 51.166(i) and (a)(7) and by extension in 40 CFR 51.166(j) through (r) and (w).
(g) 40 CFR 51.166(w)(10)(iv)(a) is changed to read: "If the emissions level calculated in accordance with Paragraph (w)(6) of this Section is equal to or greater than 80 percent of the PAL [plant wide applicability limit] level, the Director shall renew the PAL at the same level." 40 CFR 51.166(w)(10)(iv)(b) is not incorporated by reference.
(h) 15A NCAC 02Q .0102 is not applicable to any source to which this Rule applies. The owner or operator of the sources to which this Rule applies shall apply for and receive a permit as required in 15A NCAC 02Q .0300 or .0500.
(i) When a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation that was established after August 7, 1980, on the capacity of the source or modification to emit a pollutant, such as a restriction on hours of operation, then the provisions of this Rule shall apply to the source or modification as though construction had not yet begun on the source or modification.
(j) The provisions of 40 CFR 52.21(r)(2) regarding the period of validity of approval to construct are incorporated by reference except that the term "Administrator" is replaced with "Director".
(k) Permits may be issued based on innovative control technology as set forth in 40 CFR 51.166(s)(1) if the requirements of 40 CFR 51.166(s)(2) have been met, subject to the condition of 40 CFR 51.166(s)(3), and with the allowance set forth in 40 CFR 51.166(s)(4).
(l) A permit application subject to this Rule shall be processed in accordance with the procedures and requirements of 40 CFR 51.166(q). Within 30 days of receipt of the application, applicants shall be notified if the application is complete as to initial information submitted. Commencement of construction before full prevention of significant deterioration approval is obtained constitutes a violation of this Rule.
(m) Approval of an application with regard to the requirements of this Rule shall not relieve the owner or operator of the responsibility to comply with applicable provisions of other rules of this Subchapter or 15A NCAC 02Q and any other requirements under local, State, or federal law.
(n) In lieu of the requirements in 40 CFR 51.166(r)(6) and (7), this Paragraph shall apply. If the owner or operator of a source is using projected actual emissions to determine applicability with prevention of significant deterioration requirements, the owner or operator shall notify the Director of the modification before beginning actual construction. The notification shall include:

(1) a description of the project;
(2) identification of sources whose emissions could be affected by the project;
(3) the calculated projected actual emissions and an explanation of how the projected actual emissions were calculated, including identification of emissions excluded by 40 CFR 51.166(b)(40)(ii)(c);
(4) the calculated baseline actual emissions in Subparagraph (b)(1) of this Rule an explanation of how the baseline actual emissions were calculated; and
(5) any netting calculations, if applicable.

If upon reviewing the notification, the Director finds that the project will require a prevention of significant deterioration evaluation, then the Director shall notify the owner or operator of his or her findings and the owner or operator shall not make the modification until a prevention of significant deterioration permit has been issued pursuant to this Rule. If the Director finds that the project will not require a prevention of significant deterioration evaluation and the projected actual emissions, calculated pursuant to 40 CFR 51.166(b)(40)(ii)(a) and (b), minus the baseline actual emissions, is 50 percent or greater of the amount that is a significant emissions increase, without reference to the amount that is a significant net emissions increase, for the regulated NSR pollutant, then, the Director shall require a permit application to include a permit condition for the monitoring, recordkeeping, and reporting of the annual emissions related to the project in tons per year, for 10 years following resumption of regular operations after the change if the project involves increasing the emissions unit's design capacity or its potential to emit for the regulated NSR pollutant; otherwise these records shall be maintained for five years following resumption of regular operations after the change. The owner or operator shall submit a report to the Director within 60 days after the end of each year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c). The owner or operator shall make the information documented and maintained under this Paragraph available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii). The monitoring, recordkeeping, and reporting requirements in this Paragraph shall not apply if the projected actual emissions, calculated pursuant to 40 CFR 51.166(b)(40)(ii)(a) and (b), minus the baseline actual emissions, is less than 50 percent of the amount that is a significant emissions increase, without reference to the amount that is a significant net emissions increase, for the regulated NSR pollutant.

(o) Portions of the regulations in the Code of Federal Regulations (CFR) that are referred to in this Rule are incorporated by reference unless a specific reference states otherwise. The version of the CFR incorporated in this Rule, with respect to 40 CFR 51.166, is that as of July 1, 2019 at https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol2/pdf/CFR-2019-title40-vol2-sec51-166.pdf and does not include any subsequent amendments or editions. Federal regulations referenced in 40 CFR 51.166 shall include subsequent amendments and editions. This Rule is applicable in accordance with 40 CFR 51.166(b)(48) and (b)(49)(iv) and (v). The publication may be accessed free of charge.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3); 143-215.107(a)(5); 143-215.107(a)(7); 143-215.108(b); 150B-21.6;*
Eff. January 28, 2011 pursuant to E.O. 81, Beverly E. Perdue;
Pursuant to G.S. 150B-21.3(c), a bill was not ratified by the General Assembly to disapprove this rule;
Temporary Amendment Eff. December 23, 2011;
Amended Eff. July 1, 2012;
Temporary Amendment Eff. December 2, 2014;
Amended Eff. September 1, 2015;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0545 (RULE VOID) TREATMENT OF MALFUNCTION EVENTS AND WORK PRACTICES FOR START-UP AND SHUT-DOWN OPERATIONS

(a) Applicability. In the event that United States Environmental Protection Agency's regulation, State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction, published in the Code of Federal Regulations (CFR) at 40 CFR 52 on June 12, 2015, is:

(1) declared or adjudged to be invalid or unconstitutional or stayed by the United States Court of Appeals for the Fourth Circuit, by the District of Columbia Circuit, or by the United States Supreme Court; or

(2) withdrawn, repealed, revoked, or otherwise rendered of no force and effect by the United States Environmental Protection Agency, Congress, or Presidential Executive Order;

such action shall render this Rule as invalid, void, stayed, or otherwise without force and effect upon the date such action becomes final and effective. At the time of such action, sources that were subject to this Rule shall be subject to Rule .0535 of this Subchapter. This Rule shall not apply to sources to which Rule .0524, .1110, or .1111 of this Subchapter applies.

(b) For the purposes of this Rule, the following definitions apply:

(1) "excess emissions" means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of this Subchapter; by a permit condition; or that exceeds an emission limit established in a permit issued pursuant to 15A NCAC 02Q .0700;

(2) "malfunction" means any unavoidable failure of air pollution control equipment, process equipment, or process to operate in a normal and usual manner. Failures caused entirely or in part by poor maintenance, careless operations or any other upset condition within the control of the emission source shall not be considered a malfunction.

(3) "start-up" means the initial commencement of operation or subsequent commencement of operation of any source that has shut-down or ceased operation for a period sufficient to cause temperature, pressure, process, chemical, or a pollution control device imbalance that would result in excess. emissions; and

(4) "shut-down" means the cessation of the operation of any source for any purpose.

(c) Malfunctions. All facilities subject to this Rule shall:

(1) comply with the otherwise applicable emissions limits; or

(2) comply with the source specific malfunction work practice standard permit condition described in Paragraph (d) of this Rule.

(d) Source Specific Malfunction Work Practice Standard Permit Condition.

(1) A facility may request a source specific malfunction work practice standard to be included in the state and federal enforceable section of its air permit, after review by EPA and the public.

(2) The source specific malfunction work practice standard shall minimize emissions during the malfunction event and require the malfunction duration to be minimized.

(3) Subparagraphs (e)(1) and (e)(5) of this Rule shall be addressed in the source specific malfunction work practice standard. Any facility requesting a source specific malfunction work practice standard shall meet the requirements of Subparagraphs (f)(1) through (f)(3) of this Rule.

(4) Requests shall be made through the application for a permit, permit modification, or permit renewal pursuant to the permit application requirements in 15A NCAC 02Q .0300 or .0500. The public notice requirements specified in 15A NCAC 02Q .0306 and .0307 shall be followed for all proposed work practice standards in non-Title V permits. Public notice requirements specified in 15A NCAC 02Q .0521 shall be followed for all proposed work practice standards in Title V permits.

(5) At all times, the source shall be operated in a manner consistent with good practice for minimizing emissions and the owner or operator shall use their best efforts regarding planning, design, and operating procedures. The owner or operator's actions during malfunction periods shall be documented by properly signed, contemporaneous operating logs or other relevant evidence.

(6) Failure to implement or follow the Source Specific Malfunction Work Practice Standard Permit Condition shall be a violation of this Paragraph.

(7) Facilities that follow a Source Specific Malfunction Work Practice Standard Permit Condition during a malfunction that has been addressed in the Source Specific Malfunction Work Practice Standard Permit Condition shall be deemed in compliance.

(e) The Director shall determine the appropriate enforcement response for excess emissions due to a malfunction. The Director shall consider the following:

(1) The air cleaning device, process equipment, or process has been maintained and operated, to the maximum extent practicable, consistent with good practice for minimizing emissions;

(2) Repairs have been made expeditiously when the emission limits have been exceeded;

(3) The amount and duration of the excess emissions, including any bypass, have been minimized to the maximum extent practicable;

(4) All practical steps have been taken to minimize the impact of the excess emissions on ambient air quality;

(5) The excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(6) The requirements of Paragraph (h) of this Rule have been met;

(7) If the source is required to have a malfunction abatement plan, the source has followed that plan; and

(8) any other pertinent information.

All malfunctions shall be repaired as expeditiously as practicable. The facility shall maintain records of the time that a source operates when it or its air pollution control equipment is malfunctioning or otherwise has excess emissions.

(f) All electric utility boiler units shall have a malfunction abatement plan approved by the Director as satisfying the requirements of Subparagraphs (f)(1) through (f)(3) of this Rule. In addition, the Director may require any other source to have a malfunction abatement plan approved by the Director as satisfying the requirements of Subparagraphs (f)(1) through (f)(3) of this Rule. If the Director requires a malfunction abatement plan for a source other than an electric utility boiler, the owner or operator of that source shall submit a malfunction abatement plan within 60 days after receipt of the Director's request. The malfunction abatement plans of electric utility boiler units and of other sources required to have malfunction abatement plans shall be implemented at all times. The objectives of the malfunction abatement plan are to prevent, detect, and correct malfunctions that may result in excess emissions. A malfunction abatement plan shall contain:

(1) a preventive maintenance program including:

(A) the identification of individuals or positions responsible for inspecting, maintaining, and repairing air cleaning devices;

(B) a description of the items or conditions that will be inspected and maintained;

(C) the frequency of the inspection, maintenance services, and repairs; and

(D) an identification and quantities of the replacement parts that shall be maintained in inventory for quick replacement;

(2) an identification of the source and air cleaning operating variables and outlet variables that may be monitored to detect a malfunction; the normal operating range of these variables and a description of the method of monitoring and of informing operating personnel of any malfunctions; and

(3) a description of the corrective procedures that the owner or operator will take in case of a malfunction or failure to achieve compliance with the applicable rule as expeditiously as practicable. The owner or operator shall maintain logs to show that the operation and maintenance parts of the malfunction abatement plan are implemented.

(g) The owner or operator of any source required by the Director to have a malfunction abatement plan shall submit a malfunction abatement plan to the Director within 60 days after it has been required by the Director. The malfunction abatement plan and any amendment to it shall be reviewed by the Director. If the plan carries out the objectives described by Paragraph (f) of this Rule, the Director shall approve it. If the plan does not carry out the objectives described by Paragraph (f) of this Rule, the Director shall disapprove the plan. The owner or operator shall submit an amendment to the plan to satisfy the plan requirements within 30 days of receipt of the Director's notification of disapproval. Any owner or operator of any source having an approved malfunction abatement plan shall submit to the Director for approval amendments reflecting changes in any element of the malfunction abatement plan required by Paragraph (f) of this Rule or amendments when requested by the Director. The malfunction abatement plan and amendments to it shall be implemented within 90 days upon receipt of written notice of approval.

(h) The owner or operator of a source of excess emissions that last for more than four hours and that results from a malfunction shall:

(1) notify the Director of any such occurrence by 9:00 a.m. Eastern time of the Division's next business day of becoming aware of the occurrence and describe:
  (A) name and location of the facility;
  (B) the nature and cause of the malfunction;
  (C) the time when the malfunction is first observed;
  (D) the expected duration; and
  (E) an estimated rate of emissions;

(2) notify the Director by 9:00 a.m. Eastern time of the Division's next business day when the corrective measures have been accomplished;

(3) submit to the Director, within 15 days after the notification in Subparagraph (h)(1) of this Rule, a written report that includes:
  (A) name and location of the facility;
  (B) identification or description of the processes and control devices involved in the malfunction;
  (C) the cause and nature of the event;
  (D) time and duration of the violation or the expected duration of the excess emission if the malfunction has not been fixed;
  (E) estimated quantity of pollutant emitted;
  (F) steps taken to control the emissions and to prevent recurrences and if the malfunction has not been fixed, steps planned to be taken; and
  (G) any other pertinent information requested by the Director.

After the malfunction has been corrected, the Director may require the owner or operator of the source to test the source in accordance with Section .2600 of this Subchapter to demonstrate compliance.

(i) Start-up and Shut-down: During periods of start-up and shut-down, sources at facilities subject to this Rule shall comply with any one of the following:

(1) the applicable SIP emission limit in the 15A NCAC 02D rules, or a permit limit established in a permit issued pursuant to 15A NCAC 02Q .0700;

(2) the applicable work practice standards in Subparagraphs (j)(1) though (j)(13) of this Rule;

(3) work practice standards currently in effect for federal rules promulgated since 2009 that address compliance during start-up and shut-down operations for equipment that would be subject to the federal rule except for rule applicability exemptions; or

(4) source specific start-up and shut-down work practice standard permit conditions described in Paragraph (k) of this Rule.

Excess emissions during start-up and shut-down shall be considered a violation of the applicable rule if the owner or operator cannot demonstrate that the work practice standards in Subparagraphs (i)(2), (i)(3), or (i)(4) of this Rule were followed. Facilities may comply with Subparagraphs (i)(1) or (i)(2) of this Rule during start-up and shut-down without a specific permit condition. Facilities that choose to comply with Subparagraph (i)(3) of this Rule during start-up and shut-down shall apply for and receive a permit condition that indicates the specific federal work practice

standard that shall be followed. Facilities that choose to comply with Subparagraph (i)(4) of this Rule during start-up and shut-down shall apply for and receive a permit condition described in Paragraph (k) of this Rule.

(j) Generally Available Work Practices for Start-Up and Shut-Down Operations. The owner or operator shall, to the extent practicable, operate the source and any associated air pollution control equipment or monitoring equipment in a manner consistent with best practicable air pollution control practices to minimize emissions during start-up and shut-down. The following generally available work practice standards shall be followed:

(1) Periods of start-up and shut-down shall be documented in a permanent form suitable for inspection and submission to the Division. Documentation of start-ups and shut-downs shall include specific identification of each period of start-up or shut-down where a work practice standard is used and information required to demonstrate compliance with the applicable work practices. Start-up and shut-down operations shall occur as expeditiously as possible while minimizing emissions.

(2) Boilers and other combustion sources. All combustion sources shall commence operations while firing on the cleanest permitted fuel, to the extent practicable. The source shall minimize the start-up and shut-down periods to the extent practicable.

(A) For sources for which the manufacturer has established recommended procedures for start-ups and shut-downs, the source shall follow the manufacturer's recommended procedures.

(B) For sources for which there is no manufacturer-recommended procedures for start-ups and shut-downs, the source shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available.

(3) Baghouses shall be operated upon start-up of emission unit, or when baghouse temperature exceeds the dew point, whichever occurs later, or as specified by manufacturer.

(4) Cyclones shall be operated at all times, including start-up and shut-down of the emission unit.

(5) Electrostatic precipitators (ESP) shall be operated upon start-up of emission unit, or when effluent temperature exceeds the dew point, whichever occurs later, or as specified by manufacturer.

(6) Selective catalytic reduction (SCR) units shall be operated if catalyst bed temperature is greater than 400°F, or as specified by manufacturer.

(7) Non-selective catalytic reduction (NSCR) units shall be operated when the effluent temperature is between 700°F and 1500°F, or as specified by manufacturer.

(8) Scrubbers shall be operated at all times from initialization of start-up to completion of shut-down.

(9) Carbon adsorption shall be operated at all times from initialization of start-up to completion of shut-down.

(10) Biofilters shall be operated at all times from initialization of start-up to completion of shut-down.

(11) Sorbent injection shall be operated at all times the gas stream temperature is greater than 300°F, or as specified by manufacturer.

(12) Regenerative Thermal Oxidizers (RTO), thermal, and catalytic oxidizers shall be operated at all times from initialization of start-up to completion of shut-down.

(13) Safety and fire protection protocols shall be followed during start-up and shut-down of all sources.

(k) Source Specific Start-Up and Shut-Down Work Practice Standard Permit Condition. A facility may request a source specific start-up and shut-down work practice standard be included in the state and federal enforceable section of their air permit, after review by EPA and the public. Such requests shall be made through the application for a permit, permit modification, or permit renewal pursuant to the permit application requirements in 15A NCAC 02Q .0300 or .0500. The public notice requirements specified in 15A NCAC 02Q .0306 and .0307 shall be followed for all proposed work practice standards in non-Title V permits. Public notice requirements specified in 15A NCAC 02Q .0521 shall be followed for all proposed work practice standards in Title V permits. Requests for work practice standards for periods of start-up and shut-down shall include the following considerations:

(1) the work practice standard is specific to a source and the associated control strategy;

(2) demonstration that the use of the control strategy for the source is technically infeasible during start-up or shut-down periods;

(3) the work practice standard requires that the frequency and duration of operation in start-up or shut-down mode are minimized to the greatest extent practicable;

(4) at all times, the source shall be operated in a manner consistent with good practice for minimizing emissions and the source uses best efforts regarding planning, design, and operating procedures; and

(5) the owner or operator's actions during start-up and shut-down periods shall be documented by properly signed, contemporaneous operating logs or other relevant evidence.

Any source without a start-up and shut-down work practice standard permit condition shall be required to comply with any applicable emission limit. Facilities that follow a source specific start-up and shut-down work practice standard permit condition during start-up and shut-down shall be deemed in compliance.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4); 143-215.107(a)(5);*
Adoption approved by RRC October 20, 2016 with a delayed effective date. Effective date delayed by Codifier upon May 15, 2018 request from the Environmental Management Commission. Rendered void May 28, 2020 by final action of EPA withdrawing SIP Call for North Carolina, 85 Fed. Reg. 23700 (April 28, 2020) and the State's withdrawal of its SIP submittal to EPA on August 25, 2022.

15A NCAC 02D .0546 CONTROL OF EMISSIONS FROM LOG FUMIGATION OPERATIONS

(a) Purpose. The purpose of this Rule is to establish emission control requirements for hazardous air pollutants and toxic air pollutants from log fumigation operations.

(b) Definitions. For the purpose of this Rule, the following definitions and definitions in this Subchapter or 15A NCAC 02Q apply:

(1) "Bulk or tarpaulin log fumigation" means the fumigation of logs that are placed in piles on an impermeable surface and covered with a weighted-down tarpaulin.

(2) "Chamber log fumigation" means the fumigation of logs inside a sealed building or structure that is specifically used for fumigation. Chambers used for fumigation may be either atmospheric or vacuum type.

(3) "Container log fumigation" means the fumigation of logs inside a container where the doors of the container are closed and sealed.

(4) "Fumigant" means the hazardous air pollutant or toxic air pollutant that is used to eliminate the pests within the logs.

(5) "Fumigation operation" means the period of time that the fumigant is injected and retained in the container, chamber, or bulk piles for the purposes of treating the logs for insects and other pests to prevent the transfer of exotic organisms.

(6) "Hazardous air pollutant" means a pollutant listed under Section 112(b) of the federal Clean Air Act in 42 U.S.C. 7412(b).

(7) "Public right-of-way" means an area where people may reasonably be expected to be present for any part of a 24-hour period.

(8) "Toxic air pollutant" means a carcinogen, chronic toxicant, acute systemic toxicant, or acute irritant that is listed in 15A NCAC 02D .1104.

(c) Applicability. This Rule shall apply to new, existing, and modified bulk, chamber, and container log fumigation operations that use a hazardous air pollutant or toxic air pollutant as a fumigant.

(d) Emission Control Requirements. The owner or operator of a log fumigation operation shall comply with the Toxic Air Pollutant Guidelines specified in 15A NCAC 02D .1104 and follow the procedures specified in 15A NCAC 02D .1106, 15A NCAC 02Q .0709, and .0710.

(e) The owner or operator shall post signs notifying the public of fumigation operations. The signs shall be visible and legible to the public at the fence or property line closest to a public right-of-way. The signs shall remain in place permanently and shall conform to the format for placards mandated by the federally approved fumigant label.

(f) Monitoring, Recordkeeping, and Reporting. The owner or operator of a bulk, chamber, or container log fumigation operation shall comply with the requirements pursuant to 15A NCAC 02D .0600 and the following requirements:

(1) The owner or operator shall send an initial notification of commencement of operations to the Division of Air Quality regional office within 15 days of initial fumigation start-up.

(2) The owner or operator shall submit quarterly summary reports, signed by the permittee or the authorized responsible official, of the monitoring and recordkeeping activities. Within 30 days after the end of the calendar year quarter, reports shall be postmarked or received by the Division in accordance with 15A NCAC 02D .0605(i). The report shall contain the following:

(A) the company name, address, and facility ID number;

(B) the calendar year quarter represented by the report;

(C) the daily and total fumigant usage in pounds for the quarter;

(D) a summary of the monitoring data required by the permit that was collected during the quarter; and

(E) a summary of deviations from the monitoring parameters or allowable operating levels established in the permit.

(g) Compliance Schedule. The owner or operator of an existing log fumigation operation subject to this Rule shall achieve compliance within 60 days after the Rule is effective or in accordance with an alternate compliance schedule approved by the Director. In establishing an alternate compliance schedule, the Director shall consider whether the compliance approach chosen by the facility involves the purchase and installation of a control device. New and modified facilities shall achieve compliance with this Rule upon start-up.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4); 143-215.107(a)(5);*
Eff. November 1, 2020;
Amended Eff. September 1, 2023.

SECTION .0600 - MONITORING: RECORDKEEPING: REPORTING

15A NCAC 02D .0601 PURPOSE AND SCOPE

(a) The purpose of this Section is to set forth the requirements of the Commission for monitoring air pollution emissions and filing reports covering their discharge into the outdoor atmosphere of the state.
(b) This Section shall apply to all persons subject to the provisions of Subchapters 02D or 02Q of this Chapter.
(c) Monitoring, recordkeeping, and reporting may also be required by other rules including 15A NCAC 02D .0524, .0536, .1110, or .1111.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*
Eff. February 1, 1976;
Amended Eff. July 1, 1984; June 18, 1976;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Amended Eff. April 1, 1999; July 1, 1996; July 1, 1994;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0602 DEFINITIONS

For the purpose of this Section, the following definitions apply:

(1) "Applicable requirement" means any rule, standard, or requirement established in Subchapters 02D or 02Q of this Chapter or Article 21 of the North Carolina General Statutes.
(2) "Calendar quarter" means:
  (a) the time period from January 1 through March 31;
  (b) the time period from April 1 through June 30;
  (c) the time period from July 1 through September 30; or
  (d) the time period from October 1 through December 31.
(3) "Capacity factor" means the ratio of the average load on a machine or equipment for a defined time period considered to the capacity rating of the machine or equipment.
(4) "Distillate oils" means fuel oil, including recycled oil, that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D-396, "Standard Specification for Fuel Oils."
(5) "Emission standard" means a State rule or federal regulation setting forth:
  (a) an allowable rate of emissions, level of opacity, or prescribing equipment;
  (b) fuel specifications;
  (c) workplace standards; or
  (d) material usage that result in control of air pollution emissions.
(6) "Excess emissions" means emissions of an air pollutant in excess of an emission standard.
(7) "Fossil fuel-fired steam generator" means a furnace or boiler used in the process of burning fossil fuel for the primary purpose of producing steam by heat transfer.
(8) "Good operation and maintenance" means minimizing air pollutant emissions from air pollution control equipment, reducing equipment malfunctions, and ensuring continued compliance with State rules, federal regulations, and permit requirements.
(9) "Nitric acid plant" means any facility producing nitric acid 30 to 70 percent in strength by either the pressure or atmospheric pressure process.

(10) "Permit condition" means:
  (a) a condition set to comply with or to avoid any applicable requirement; or
  (b) a condition set to maintain compliance with toxic air pollutant acceptable ambient levels or ambient air quality standards.

(11) "Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate oils, residual oils, lubricants, or other products through the distillation of petroleum or through the redistillation, cracking, or reforming of unfinished petroleum derivatives.

(12) "Residual oils" means crude oil, fuel oil that does not comply with the specifications according to the definition of distillate oil, or all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D-396, "Standard Specification for Fuel Oils."

(13) "Sulfuric acid plant" means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, or acid sludge, but does not include facilities where conversion to sulfuric acid is used primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*
Eff. February 1, 1976;
Amended Eff. April 1, 1999; July 1, 1984; June 18, 1976;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0603 SOURCES COVERED BY NATIONAL STANDARDS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68;*
Eff. February 1, 1976;
Amended Eff. November 1, 1982; June 1, 1980; June 18, 1976;
Repealed Eff. July 1, 1984.

15A NCAC 02D .0604 EXCEPTIONS TO MONITORING AND REPORTING REQUIREMENTS

(a) Unless a rule specifies otherwise, during a period of monitoring system malfunction the owner or operator of a source shall not be required to monitor or report emissions if the owner or operator of the source shows that the malfunction was unavoidable, is being repaired as expeditiously as practicable, and no applicable requirements are violated. The owner or operator of the source shall, upon request of the Director, provide documentation of continuous monitoring system performance when system repairs or adjustments have been made. Malfunctions of the monitoring system that result from inadequate or poor operation and maintenance practices shall not be exempted from monitoring and reporting requirements. Operation and maintenance practices may be specified by the manufacturer, federal regulation, Rule, or a permit condition.

(b) The owner or operator of a source that operates less than 30 days per 12-month period shall not be required to monitor emissions from that source unless Subchapters 02D and 02Q of this Chapter specifies otherwise. However, the owner or operator shall maintain records to document that the source was operated less than 30 days per 12-month period.

(c) The owner or operator of a source exempted from needing a permit by 15A NCAC 02Q .0102 shall not be required to monitor emissions from that source unless;

(1) required by a specific rule in Subchapters 02D and 02Q of this Chapter, or

(2) required as a part of an enforcement settlement.

However, the owner or operator shall maintain records to document that the source qualifies for the permit exemption.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66;143-215.107(a)(4);*
Eff. February 1, 1976;
Amended Eff. April 1, 1999; July 1, 1996; July 1, 1988; July 1, 1984; June 18, 1976;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0605 GENERAL RECORDKEEPING AND REPORTING REQUIREMENTS

(a) The owner or operator of a source subject to a requirement of Subchapters 02D or 02Q of this Chapter shall maintain:

(1) records detailing malfunctions pursuant to 15A NCAC 02D .0535;

(2) records of testing conducted pursuant to rules in Subchapter 02D;
(3) records of monitoring conducted pursuant to Subchapters 02D or 02Q of this Chapter;
(4) records detailing activities relating to compliance schedules in this Subchapter; and
(5) for unpermitted sources, records needed to determine compliance with rules in Subchapters 02D or 02Q of this Chapter.

(b) The permit shall specify:
(1) the type of monitoring required and the frequency of the monitoring;
(2) the type of records to be maintained; and
(3) the type of reports to be submitted and the frequency of submitting these reports needed to determine compliance with rules in Subchapters 02D or 02Q of this Chapter or with an emission standard or permit condition.

(c) The Director may require the owner or operator of the source subject to the requirements in Subchapters 02D or 02Q of this Chapter to submit to the Director information needed to determine the compliance status of the source.

(d) The owner or operator of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment, or other abnormal conditions shall report excess emissions in accordance with the requirements of 15A NCAC 02D .0535.

(e) Copies of records and reports required to demonstrate compliance with the requirements of 15A NCAC 02D .0600 shall be retained by the owner or operator for a period of two years after the date that the record was made or the report submitted, except that the retention period shall be extended if needed to comply with other State or federal requirements.

(f) Records and reports required to demonstrate compliance with the requirements of 15A NCAC 02D .0600 shall be made available to personnel of the Division for inspection.

(g) The owner or operator of a source subject to the requirements of 15A NCAC 02D .0600 shall comply with the requirements of 15A NCAC 02D .0600 at his or her own cost.

(h) No person shall falsify information required by a rule in Subchapter 02D or a permit issued pursuant to Subchapter 02Q. No person shall knowingly submit falsified information required by a rule in Subchapter 02D or a permit issued pursuant to Subchapter 02Q of this Chapter.

(i) Reports, notifications, records, or other documentation required by 15A NCAC 02D and 02Q to be provided to the Division or a regional office shall be submitted as follows:
(1) Except as specified in Subparagraph (2) of this Paragraph, submit the documents in hard copy format to the Director, Division of Air Quality, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641, or regional office in accordance with 15A NCAC 02D .0103.
(2) After the Division makes available a system for receiving electronic submittals, as identified in 15A NCAC 02Q .0104(c)(1), documents may be submitted in electronic format through the electronic reporting system in lieu of the procedures in Subparagraph (1) of this Paragraph.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*
Eff. February 1, 1976;
Amended Eff. January 1, 2007; April 1, 1999; July 1, 1984; June 18, 1976;
Readopted Eff. November 1, 2019;
Amended Eff. September 1, 2023.

15A NCAC 02D .0606 SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51

(a) The following sources shall be monitored as described in 40 CFR Part 51, Appendix P:
(1) fossil fuel-fired steam generators;
(2) nitric acid plants;
(3) sulfuric acid plants; and
(4) petroleum refineries.

Sources covered by 15A NCAC 02D .0524 shall be exempt from this Rule.

(b) The monitoring systems required by Paragraph (a) of this Rule shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51.

(c) The excess emissions recorded by the monitoring systems required to be installed by this Rule shall be reported no later than 30 days after the end of the quarter to the Division in the manner described in Paragraphs 4 and 5.1 through 5.3.3 of Appendix P of 40 CFR Part 51 except that a six-minute time period shall be an appropriate alternative opacity averaging period as described in Paragraph 4.2 of Appendix P of 40 CFR Part 51. The owner or operator of any source subject to this Rule that is required to monitor emissions of sulfur dioxide or nitrogen oxides

pursuant to any other State rule or federal regulation with continuous emission monitoring systems, shall monitor compliance with the sulfur dioxide emission standard in 15A NCAC 02D .0516, shall monitor the nitrogen oxide emission standard in 15A NCAC 02D .0519 or 15A NCAC 02D .1400 with a continuous emission monitoring system. Compliance with sulfur dioxide and nitrogen oxide emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values shall be added and the sum shall be divided by 24. With the exception of opacity monitoring, a minimum of four data points containing one data point in each of the 15-minute quadrants of the hour shall be required to determine a valid hour value unless the continuous emission monitoring system is installed to meet the provisions of 40 CFR Part 75. If a continuous emission monitoring system is installed that meets the requirements of 40 CFR Part 75, the minimum number of data points shall be determined by 40 CFR Part 75.

(d) For emissions of sulfur dioxide, fuel analysis may be used in place of a continuous emissions monitoring system if the source is not required to monitor emissions of sulfur dioxide using a continuous emissions monitoring system pursuant to another State rule or federal regulation. If fuel analysis is used as an alternative method to determine emissions of sulfur dioxide, the test methods described in 15A NCAC 02D .2600 shall be used except that gross or composite samples, gross caloric value, moisture content, and sulfur content shall be determined per shipment. Alternatively, gross or composite samples, gross caloric value, moisture content, and sulfur content may be determined by sampling the fuel as fired if the owner or operator demonstrates that sampling as fired provides a more accurate estimate of sulfur dioxide emissions than sampling each shipment. If sulfur dioxide emissions are determined by sampling fuel as fired, then a fuel sample shall be taken every four hours. These four-hour samples shall be composited into a daily sample, and the daily sample shall be composited into a weekly sample. This weekly sample shall be analyzed using the procedures in 15A NCAC 02D .2600. The sulfur dioxide emission rate shall also be determined using fuel analysis data. Sulfur retention credit shall be granted and used for computing sulfur dioxide emission rates if a source, on a case-by-case basis, quantitatively and empirically demonstrates the sulfur retention.

(e) If a referenced portion of Appendix P of 40 CFR Part 51 speaks of the "state" or "state plan," the requirements described in Appendix P of 40 CFR Part 51 shall apply to those sources to which the requirements pertain.

(f) The owner or operator of the source shall conduct a daily zero and span check of the continuous opacity monitoring system and continuous emission monitoring system following the manufacturer's recommendations and shall comply with the requirements 15A NCAC 02D .0613.

(g) The owner or operator of the source may request to use a different procedure or methodology than that required by this Rule if one of the conditions identified in 40 CFR Part 51, Appendix P, Section 3.9 exists. The person requesting to use a different procedure or methodology shall submit the request to the Director along with a description of the different procedure or methodology proposed to be used, an explanation of why the procedure or methodology required by this Rule will not work, and a showing that the proposed procedure or methodology is equivalent to the procedure or methodology being replaced. The Director shall approve the use of this procedure or methodology if one of the conditions identified in 40 CFR Part 51, Appendix P, Section 3.9 exists, the procedure or methodology required by this Rule will not work, and that the proposed procedure or methodology is equivalent to the procedure or methodology that it will replace.

(h) The owner or operator of the source shall report to the Director no later than 30 days following the end of the quarter the following information:

(1) for fuel analysis per shipment:
    (A) the quantity and type of fuels burned;
    (B) the BTU value;
    (C) the sulfur content in percent by weight; and
    (D) the calculated sulfur dioxide emission rates expressed in the same units as the applicable standard.
(2) for continuous monitoring of emissions:
    (A) the daily calculated sulfur dioxide and nitrogen oxide emission rates expressed in the same units as the applicable standard for each day; and
    (B) other information required by Appendix P of 40 CFR Part 51.

(i) If emission testing for compliance with the sulfur dioxide emission standard is required, the testing shall be done according to 40 CFR Part 60, Appendix A, Method 6, 6C, or other approved methods in 15A NCAC 02D .2600.

(j) If emission testing for compliance with the nitrogen oxide emission standard is required, the testing shall be done according to 40 CFR Part 60, Appendix A, Method 7, 7E, or other approved methods in 15A NCAC 02D .2600.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*
Eff. February 1, 1976;
Amended Eff. June 1, 2008; January 1, 2005; April 1, 2003; April 1, 1999; May 1, 1985; July 1, 1983; December 1, 1976; June 18, 1976;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0607 LARGE WOOD AND WOOD-FOSSIL FUEL COMBINATION UNITS

(a) This Rule shall apply to wood-fired steam generator units with a heat input from wood fuels, or the sum of the heat inputs from wood fuels and liquid or solid fossil fuels for generators not covered by 15A NCAC 02D .0524 or .0606, that exceeds 250 million Btu per hour and with an annual average capacity factor greater than 30 percent as demonstrated to the Director by the owner or operator of the source.

(b) The owner or operator of a wood-fired steam generator unit governed by this Rule shall install, calibrate, maintain, and operate, as specified in 40 CFR Part 60 Appendix B Performance Specification 1, opacity continuous emission monitoring systems on all stacks discharging the flue gases from one or more steam generator units governed by this Rule.

(c) The owner or operator of the source shall conduct a daily zero and span check of the opacity continuous emission monitoring system following the manufacturer's recommendations and shall comply with the requirements of 15A NCAC 02D .0613.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5);*
Eff. February 1, 1976;
Amended Eff. July 1, 1999; July 1, 1984; June 18, 1976;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0608 OTHER LARGE COAL OR RESIDUAL OIL BURNERS

(a) The owner or operator of a fuel burning unit shall determine sulfur dioxide emissions into the ambient air if the unit:

(1) burns coal or residual oil;
(2) is not required to monitor sulfur dioxide emissions by 15A NCAC 02D .0524 or 02D .0606;
(3) has a total heat input of more than 250 million Btu per hour from coal and residual oil; and
(4) has an annual average capacity factor greater than 30 percent as determined from the three most recent calendar year reports to the Federal Power Commission or as otherwise demonstrated by the owner or operator. If the unit has not been in existence for three calendar years, its three-calendar-year average capacity factor shall be determined by estimating its annual capacity factors for enough future years to allow a three-calendar-year average capacity factor to be computed. If this three-calendar-year average capacity factor exceeds 30 percent, the unit shall be monitored. If this three-calendar-year average capacity factor does not exceed 30 percent, the unit is not required to be monitored.

(b) Once the unit is being monitored in accordance with Paragraph (a) of this Rule, it shall continue to be monitored until its most recent three-calendar-year average capacity factor does not exceed 25 percent. If the unit is not being monitored in accordance with Subparagraph (a) of this Rule, it need not be monitored until its most recent three-calendar-year average capacity factor exceeds 35 percent.

(c) If units required to be monitored have a common exhaust or if units required to be monitored have a common exhaust with units not required to be monitored, then the common exhaust may be monitored and the sulfur dioxide emissions are not required to be apportioned among the units with the common exhaust.

(d) The owner or operator of the source shall determine sulfur dioxide emissions by:

(1) an instrument for continuous monitoring and recording of sulfur dioxide emissions; or
(2) analyses of representative samples of fuels to determine Btu value and percent sulfur content.

(e) The owner or operator of a source subject to this Rule that is required to monitor emissions of sulfur dioxide pursuant to any State rule or federal regulation with continuous emission monitoring systems shall monitor compliance with the sulfur dioxide emission standard in 15A NCAC 02D .0516 with a continuous emission monitoring system. Compliance with sulfur dioxide emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values are added and the sum shall be divided by 24. With the exception of opacity monitoring, a minimum of four data points, containing one data point in each of the 15-minute quadrants of the hour is required to determine a valid hour value unless the continuous emission monitoring system is installed

that meets the requirements of 40 CFR Part 75. If a continuous emission monitoring system is installed that meets the requirements of 40 CFR Part 75, the minimum number of data points shall be determined by 40 CFR Part 75.

(f) For emissions of sulfur dioxide, fuel analysis may be used in place of a continuous emissions monitoring system if the source is not required to monitor emissions of sulfur dioxide using a continuous emissions monitoring system pursuant to a State rule or federal regulation. If fuel analysis is used as an alternative method to determine emissions of sulfur dioxide, then:

(1) for coal, the test methods described in 15A NCAC 02D .2600 shall be used except that gross or composite samples, gross caloric value, moisture content, and sulfur content shall be determined per shipment. Alternatively, gross or composite samples, gross caloric value, moisture content, and sulfur content may be determined by sampling the fuel as fired if the owner or operator demonstrates that sampling as fired provides a more accurate estimate of sulfur dioxide emissions than sampling each shipment. If sulfur dioxide emissions are determined by sampling fuel as fired, then a fuel sample shall be taken every four hours. These four-hour samples shall be composited into a daily sample and the daily sample shall be composited into a weekly sample. This weekly sample shall be analyzed using the procedures in 15A NCAC 02D .2600. The sulfur dioxide emission rate shall also be determined using fuel analysis data. Sulfur retention credit shall be granted and used for computing sulfur dioxide emission rates if a source, on a case-by-case basis, quantitatively and empirically demonstrates the sulfur retention.

(2) for residual oil, the test methods described in 15A NCAC 02D .2600 shall be used except that sulfur content shall be determined per shipment. Alternatively, gross or composite samples, gross caloric value, moisture content, and sulfur content may be determined sampling the fuel as fired if the owner or operator demonstrates that by sampling as fired provides a more accurate estimate of sulfur dioxide emissions than sampling each shipment. If sulfur dioxide emissions are determined by sampling fuel as fired, then a fuel sample shall be taken every four hours. These four-hour samples shall be composited into a daily sample and the daily sample shall be composited into a weekly sample. This weekly sample shall be analyzed using the procedures in Section .2600 of this Subchapter. Residual oil shall be collected in accordance with ASTM D4177 or D4057.

(g) The owner or operator of the source may request to use a different procedure or methodology than that required by this Rule if one of the conditions identified in 40 CFR Part 51, Appendix P, Section 3.9 exists. The person requesting to use a different procedure or methodology shall submit the request to the Director along with a description of the different procedure or methodology proposed to be used, an explanation of why the procedure or methodology required by this Rule will not work, and a showing that the proposed procedure or methodology is equivalent to the procedure or methodology being replaced. The Director shall approve the use of this procedure or methodology if he or she finds that one of the conditions identified in 40 CFR Part 51, Appendix P, Section 3.9 exists, that the procedure or methodology required by this Rule will not work, and that the proposed procedure or methodology is equivalent to the procedure or methodology that it will replace.

(h) The owner or operator of the source shall report to the Director no later than 30 days following the end of the quarter the following information:

(1) for fuel analysis per shipment:
  (A) the quantity and type of fuels burned;
  (B) the Btu value;
  (C) the sulfur content in percent by weight; and
  (D) the calculated sulfur dioxide emission rates expressed in the same units as the applicable standard.

(2) for continuous monitoring of emissions:
  (A) the daily calculated sulfur dioxide emission rates expressed in the same units as the applicable standard for each day; and
  (B) other information required by Appendix P of 40 CFR Part 51.
    (i) The owner or operator of the source shall conduct a daily zero and span check of the continuous emission monitoring system, following the manufacturer's recommendations, and shall comply with the requirements of 15A NCAC 02D .0613.

(j) If emission testing for compliance with the sulfur dioxide emission standard is required, the testing shall be done according to 40 CFR Part 60, Appendix A, Method 6, 6C, or other approved methods in 15A NCAC 02D .2600.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*

Eff. June 18, 1976;
Amended Eff. June 1, 2008; January 1, 2005; April 1, 2003; April 1, 1999; July 1, 1996; July 1, 1988; July 1, 1984;
Readopted Eff. November 1, 2019;
Amended Eff. October 1, 2022.

15A NCAC 02D .0609 MONITORING CONDITION IN PERMIT

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68;*
Eff. June 18, 1976;
Repealed Eff. January 1, 1985.

15A NCAC 02D .0610 FEDERAL MONITORING REQUIREMENTS

(a) This Rule shall apply to sources subject to monitoring, recordkeeping, or reporting requirements contained in:

(1) 40 CFR Part 60, New Source Performance Standards (NSPS);
(2) 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP);
(3) 40 CFR Part 63, Maximum Achievable Control Technology (MACT) or Generally Available Control Technology (GACT);
(4) 40 CFR Part 75, Acid Rain; or
(5) 40 CFR Part 97, Cross State Air Pollution Rule CSAPR.

(b) An air pollutant from sources governed pursuant to Paragraph (a) of this Rule for which monitoring is not required by Paragraph (a) of this Rule shall comply with the requirements set forth in 15A NCAC 02D .0611 if the pollutant from this source is subject to an emission standard.

(c) Sources that are not subject to any monitoring, recordkeeping, or reporting requirements set forth in Paragraph (a) of this Rule shall comply with the requirements in 15A NCAC 02D .0611.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*
Eff. June 18, 1976;
Amended Eff. April 1, 1999; July 1, 1984;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0611 MONITORING EMISSIONS FROM OTHER SOURCES

(a) This Rule shall apply to sources of air pollutants, including toxic air pollutants, from sources that are not covered by 15A NCAC 02D .0606, .0607, .0608, or .0610(a).

(b) The owner or operator of a source shall maintain records of production rates, throughputs, material usage, and other process operational information necessary to determine compliance with the facility's permit and all applicable requirements. The Director shall specify in the facility's permit, pursuant to 15A NCAC 02D .0605, the types of records that the owner or operator shall maintain.

(c) If the records maintained under Paragraph (b) of this Rule are inadequate to determine compliance with the facility's permit and all applicable requirements, the Director may require the owner or operator to use monitoring instruments, and if monitoring instruments are necessary to demonstrate compliance with rules in Subchapters 02D or 02Q of this Chapter or with an emission standard or permit condition, the owner or operator of a source shall:

(1) install, calibrate, operate, and maintain, in accordance with applicable performance specifications in 40 CFR Part 60 Appendix B, process and control equipment monitoring instruments or procedures necessary to demonstrate compliance with the emission standards in Subchapters 02D and 02Q of this Chapter;
(2) comply with the requirements of 15A NCAC 02D .0613; and
(3) maintain, in writing, data and reports of any monitoring instruments or procedures necessary to comply with Subparagraph (1) of this Paragraph that will document the compliance status of the sources or control equipment.

(d) If monitoring instruments are necessary to demonstrate good operation and maintenance, the owner or operator of a source shall:

(1) install, calibrate, operate, and maintain, in accordance with applicable performance specifications in 40 CFR Part 60 Appendix B, process and control equipment monitoring instruments or procedures necessary to demonstrate good operation and maintenance;

(2) comply with the requirements of 15A NCAC 02D .0613 unless otherwise specified in any other applicable State rule or federal regulation, including 40 CFR Part 75 and 40 CFR 60.13. The Director shall determine that compliance with the quality assurance provisions of 40 CFR Part 51, Appendix P, is adequate if the data demonstrates that good operation and maintenance is being achieved; and

(3) maintain, in writing, data and reports of any monitoring instruments or procedures necessary to comply with Subparagraph (1) of this Paragraph that will document that good operation and maintenance is being achieved.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*
Eff. April 1, 1999;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0612 ALTERNATIVE MONITORING AND REPORTING PROCEDURES

(a) Except as set forth in Paragraph (b) of this Rule, the owner or operator of a source may petition the Director to allow monitoring or data reporting procedures varying from those prescribed by Subchapters 02D or 02Q of this Chapter.

(b) This Rule shall not apply to monitoring or reporting requirements of 40 CFR Part 60, 61, 62, 63, 75, or 97.

(c) To petition to use alternative monitoring or data reporting procedures in place of those procedures in Rules 15A NCAC 02D .0606, .0607, or .0608 or Sections 15A NCAC 02D .0900, .1200, or .1400, the owner or operator of the source shall submit a written petition to the Director containing the following:

(1) the name and address of the company and the name and telephone number of a responsible official, as defined by 15A NCAC 02Q .0303:

(2) a description of the sources at the facility to which the petition applies;

(3) identification of the rule or rules for which the alternative is sought;

(4) the basis or reason that alternative monitoring and reporting procedure is more desirable than those prescribed by the rule;

(5) a proposal of alternative monitoring and reporting procedure;

(6) a demonstration that the alternative procedure is at least as accurate as that prescribed by the rule;

(7) a showing that one or more of the following conditions exist:

(A) a continuous monitoring system or other device prescribed by the rule would not provide accurate determinations of emissions;

(B) the emissions from two or more sources of different design and operating characteristics are combined before release to the atmosphere or the emissions are released to the atmosphere, through more than one point;

(C) the requirements prescribed by the rule would impose an extreme economic burden on the source owner or operator. The determination of an extreme economic burden shall be made on the basis of whether meeting the requirements prescribed by the rule would produce serious hardship without equal or greater benefit to the public;

(D) the monitoring systems prescribed by the rule cannot be installed because of physical limitations at the facility. The determination of such limitations shall be made on the basis of whether meeting the requirements prescribed by this Rule would necessitate reconstruction of the facility; or

(E) the alternative monitoring or reporting procedure is more accurate and precise than that prescribed by the rule;

(8) any other information that the petitioner believes would be helpful to the Director in evaluating the application.

(d) The Director may require the petitioner to submit other information that is necessary to evaluate the proposed monitoring or reporting procedures.

(e) The Director may approve the petition for alternative monitoring and reporting procedures if:

(1) the petition is submitted in accordance with this Rule and contains all the information required by Paragraph (c) of this Rule;

(2) the petition satisfies the showing required by Subparagraph (c)(7) of this Rule;

(3) the proposed alternative monitoring or data reporting procedures provide information of sufficient quality to determine the amount of emissions or the adequacy of the emission control device or

practice, such that the compliance status of the source can be determined by reviewing this information; and

(4) the facility is in compliance with, or under a schedule for compliance with, all applicable air quality rules.

(f) If monitoring or reporting requirements that differ from those specified in the appropriate rule in Subchapters 02D or 02Q of this Chapter are approved by the Director, the permit shall contain a condition stating such monitoring or reporting requirements.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*
Eff. April 1, 1999;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0613 QUALITY ASSURANCE PROGRAM

(a) Any owner or operator of a facility required to operate a monitoring device by this Subchapters 02D or 02Q of this Chapter shall develop and implement a quality assurance program for the monitoring device.

(b) The Director shall require the owner or operator of a facility required to operate a monitoring device by Subchapters 02D or 02Q of this Chapter to submit a description of the quality assurance program if:

(1) the maximum actual emission rate is more than 75 percent of the applicable emission standard;

(2) the facility has violated an emission standard or a permit condition; or

(3) the facility has failed to obtain quality assured data.

A description of the quality assurance program shall be submitted to the Director within 60 days upon receipt of request.

(c) Except for gaseous continuous emission monitoring systems, the quality assurance program required by Paragraph (a) or (b) of this Rule shall include, if applicable:

(1) procedures and frequencies for calibration;

(2) standards traceability;

(3) operational checks;

(4) maintenance;

(5) auditing;

(6) data validation; and

(7) a schedule for implementing the quality assurance program.

Continuous opacity monitoring systems may satisfy the requirements of Paragraph (a) of this Rule by complying with 40 CFR Part 51, Appendix M, Method 203, as proposed in 57 FR 46114, or 40 CFR Part 60, Appendix F, Procedure 3. Except for opacity monitors and gaseous continuous emission monitoring systems, a manufacturer's recommended quality assurance procedure may be used as a quality assurance program if it includes the applicable requirements in Subparagraphs (c)(1) through (c)(7) of this Paragraph.

(d) Owners or operators that operate continuous emission monitoring systems for a gaseous pollutant may satisfy the requirements of Paragraphs (a) or (b) of this Rule by developing and implementing a written quality assurance program containing information required by 40 CFR Part 60, Appendix F, Section 3, Quality Assurance Procedures.

(e) The owner or operator of a facility shall certify all opacity and gaseous continuous emission monitoring systems following applicable performance specifications in 40 CFR Part 60, Appendix B, within 60 days of monitor installation unless otherwise specified in permit or any other applicable rules. The owner or operator of a facility required to install an opacity or gaseous continuous emission monitoring systems shall notify the Director at least 60 days before installation unless otherwise specified in permit or in 40 CFR Part 60, 61, 63, or 75. The notification shall include plans or schematic diagrams of the proposed monitor location.

(f) Quality assurance programs for ambient monitors shall comply with the requirements in 40 CFR Part 58.

(g) A description of the quality assurance program shall be available on-site for inspection within 30 days of monitor certification.

(h) The Director shall approve the quality assurance program within 30 days of submittal if he or she finds that the quality assurance program will assure that the precision and accuracy of the data for the pollutants being measured are within the design limits of the instruments being used. If the Director finds that the proposed quality assurance program does not meet the requirements of this Paragraph, he or she shall notify the owner or operator of the facility of any deficiencies in the proposed quality assurance program. The owner or operator shall have 30 days after receiving written notification from the Director to correct the deficiencies.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4);*

Eff. April 1, 1999;
Readopted Eff. November 1, 2019.

15A NCAC 02D .0614 COMPLIANCE ASSURANCE MONITORING

(a) General Applicability. Except as set forth in Paragraph (b) of this Rule, the requirements of this Rule shall apply to a pollutant-specific emissions unit, as defined in 40 CFR 64.1, at a facility required to obtain a permit pursuant to 15A NCAC 02Q .0500 if the unit:

(1) is subject to an emission limitation or standard for the applicable regulated air pollutant, or a surrogate thereof, other than an emission limitation or standard that is exempt pursuant to Subparagraph (b)(1) of this Rule;

(2) uses a control device to achieve compliance with any such emission limitation or standard; and

(3) has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. For purposes of this Rule, "potential pre-control device emissions" means the same as "potential to emit" as defined in 40 CFR 64.1, except that emission reductions achieved by the applicable control device shall not be taken into account.

(b) The following exemptions to this Rule shall apply.

(1) Exempt emission limitations or standards. The requirements of this Rule shall not apply to any of the following emission limitations or standards:

(A) emission limitations or standards proposed by the Administrator of the Environmental Protection Agency after November 15, 1990, pursuant to section 111 or 112 of the federal Clean Air Act;

(B) stratospheric ozone protection requirements pursuant to Title VI of the federal Clean Air Act;

(C) Acid Rain Program requirements pursuant to sections 404, 405, 406, 407(a), 407(b), or 410 of the federal Clean Air Act;

(D) emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved under the rules of Subchapters 02D and 02Q of this Chapter and that are incorporated in a permit issued pursuant to 15A NCAC 02Q .0500;

(E) an emissions cap that is approved pursuant to the rules of Subchapters 02D and 02Q of this Chapter and incorporated in a permit issued pursuant to 15A NCAC 02Q .0500; or

(F) emission limitations or standards for which a permit issued pursuant to 15A NCAC 02Q .0500 specifies a continuous compliance determination method, as defined in 40 CFR 64.1. This exemption shall not apply if the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device. Note: for example, a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test. In this example, 15A NCAC 02D .0614 would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage.

(2) Exemption for backup utility power emissions units. The requirements of this Rule shall not apply to a utility unit, as defined in 40 CFR 72.2, that is municipally-owned if the owner or operator provides documentation in a permit application submitted pursuant to 15A NCAC 02Q .0500 that:

(A) the utility unit is exempt from all monitoring requirements in 40 CFR Part 75, including the appendices thereto;

(B) the utility unit is operated for the sole purpose of providing electricity during periods of peak electrical demand or emergency situations and will be operated consistent with that purpose throughout the permit term. The owner or operator shall provide historical operating data and relevant contractual obligations to document that this criterion is satisfied; and2

(C) the actual emissions from the utility unit, based on the average annual emissions over the last three calendar years of operation, or such shorter time period that is available for units with fewer than three years of operation, are less than 50 tons per year and are expected to remain so.

(c) For the purposes of this Rule, the definitions in 40 CFR 64.1 shall apply with the following exceptions:

(1) "Applicable requirement" and "regulated air pollutant" shall have the same definition as in 15A NCAC 02Q .0103.

(2) "Part 70 or 71 permit application" means an application, or any supplement to a previously submitted application, submitted by the owner or operator to obtain a permit under 15A NCAC 02Q .0500.

(3) "Part 70 or 71 permit" means a permit issued under 15A NCAC 02Q .0500.

(4) "Permitting authority" means the Division of Air Quality.

(d) The owner or operator subject to the requirements of this rule shall comply with these requirements:

(1) 40 CFR 64.3, Monitoring Design Criteria;

(2) 40 CFR 64.4, Submittal Requirements;

(3) 40 CFR 64.5, Deadlines for Submittals;

(4) 40 CFR 64.7, Operation of Approved Monitoring; and

(5) 40 CFR 64.9, Reporting and Recordkeeping Requirements.

(e) The Division shall follow the procedures and requirements in 40 CFR Part 64.6, Approval of Monitoring, in reviewing and approving or disapproving monitoring plans and programs submitted under this Rule.

(f) Based on the result of a determination made pursuant to 40 CFR 64.7(d)(2), the Director may require the owner or operator to develop and implement a quality improvement plan. If a quality improvement plan is required, the quality improvement plan shall be developed and implemented according to the procedures and requirements of 40 CFR 64.8, Quality Improvement Plan (QIP) Requirements.

History Note: *Authority G.S. 143-215.3(a)(3); 143-215.65; 143-215.66; 143-215.107(a)(4); 143-215.107(a)(10); Eff. April 1, 1999; Amended Eff. January 1, 2009; Readopted Eff. November 1, 2019; Amended Eff. November 1, 2023.*

15A NCAC 02D .0615 DELEGATION

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(4); Eff. April 1, 1999; Repealed Eff. November 1, 2020.*

SECTION .0700 - POST ATTAINMENT POLICY

15A NCAC 02D .0701 APPLICABILITY
15A NCAC 02D .0702 DEFINITIONS
15A NCAC 02D .0703 SOURCE CATEGORIES
15A NCAC 02D .0704 ENFORCEMENT PROCEDURES
15A NCAC 02D .0705 DOCUMENTATION FOR SPECIAL ORDERS
15A NCAC 02D .0706 PUBLIC PARTICIPATION

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.110; Eff. February 1, 1976; Amended Eff. December 1, 1976; Readopted Eff. March 15, 1978; Repealed Eff. June 1, 1981.*

15A NCAC 02D .0707 EXTENSIONS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.110; Eff. December 1, 1976; Repealed Eff. June 1, 1981.*

SECTION .0800 - COMPLEX SOURCES

15A NCAC 02D .0801 PURPOSE AND SCOPE
15A NCAC 02D .0802 DEFINITIONS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.109;*
Eff. February 1, 1976;
Amended Eff. July 1, 1984; December 1, 1976;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. February 1, 2005; July 1, 1994;
Repealed Eff. January 1, 2015.

15A NCAC 02D .0803 HIGHWAY PROJECTS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.109;*
Eff. February 1, 1976;
Amended Eff. July 1, 1984;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. July 1, 1994;
Repealed Eff. February 1, 2005.

15A NCAC 02D .0804 AIRPORT FACILITIES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.109;*
Eff. February 1, 1976;
Amended Eff. July 1, 1984;
Temporary Amendment Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. July 1, 1996; July 1, 1994;
Repealed Eff. January 1, 2015.

15A NCAC 02D .0805 PARKING FACILITIES
15A NCAC 02D .0806 AMBIENT MONITORING AND MODELING ANALYSIS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.109;*
Temporary Rule Eff. March 8, 1994 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Eff. July 1, 1994;
Amended Eff. July 1, 1996;
Repealed Eff. January 1, 2015.

SECTION .0900 - VOLATILE ORGANIC COMPOUNDS

15A NCAC 02D .0901 DEFINITIONS
For the purpose of this Section, the following definitions shall apply:

(1) "Coating" means a functional, protective, or decorative film applied in a thin layer to a surface.
(2) "Coating applicator" means an apparatus used to apply a surface coating.
(3) "Coating line" means one or more apparatus or operations in a single line at which point a surface coating is applied, dried, or cured and that include a coating applicator and flashoff area and may include an oven or associated control devices.
(4) "Continuous vapor control system" means a vapor control system that treats vapors displaced from tanks during filling on a demand basis without intermediate accumulation.
(5) "Delivered to the applicator" means the condition of coating after dilution by the user just before application to the substrate.
(6) "Flashoff area" means the space between the application area and the oven.

(7) "High solids coating" means a coating that contains a higher percentage of solids and a lower percentage of volatile organic compounds and water than conventional organic solvent borne coatings.

(8) "Hydrocarbon" means any organic compound of carbon and hydrogen only.

(9) "Incinerator" means a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid, or gaseous combustible wastes are ignited and burned efficiently and from which the solid and gaseous residues contain little or no combustible material.

(10) "Intermittent vapor control system" means a vapor control system that employs an intermediate vapor holder to accumulate vapors displaced from tanks during filling. The control device shall treat the accumulated vapors only during automatically controlled cycles.

(11) "Loading rack" means an aggregation or combination of loading equipment arranged so that all loading outlets in the equipment can be connected to a cargo tank parked in a specified loading space.

(12) "Low solvent coating" means a coating that contains a substantially lower amount of volatile organic compounds than conventional organic solvent borne coatings; it typically falls into one of three major groups of high solids, waterborne, or powder coatings.

(13) "Organic material" means a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

(14) "Oven" means a chamber used to bake, cure, polymerize, or dry a surface coating using heat.

(15) "Potential emissions" means the quantity of a pollutant that would be emitted at the maximum capacity of a stationary source to emit the pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is described or contained as a condition in the federally enforceable permit. Secondary emissions do not count in determining potential emissions of a stationary source. Fugitive emissions count, to the extent quantifiable, in determining the potential emissions only in these cases:

(a) petroleum refineries;

(b) chemical process plants; and

(c) petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels.

(16) "Prime coat" means the first film of coating applied to a surface to protect it or to prepare it to receive subsequent coatings.

(17) "Reasonably available control technology" also denoted as "RACT," means the lowest emission limit a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. It may require technology that has been applied to similar source categories.

(18) "Reid vapor pressure" means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids, except liquefied petroleum gases as determined by American Society for Testing and Materials test method D323-15A.

(19) "Shutdown" means the cessation of operation of a source or a part thereof or emission control equipment.

(20) "Solvent" means organic materials that are liquid at standard conditions and used as dissolvers, viscosity reducers, or cleaning agents.

(21) "Standard conditions" means a temperature of 68 degrees Fahrenheit and pressure of 29.92 inches of mercury.

(22) "Stage I" means vapor control systems that minimize, collect, and transfer vapors in a gasoline storage tank that have been displaced by the incoming gasoline. The vapors are routed through pipes and hoses back into the cargo tank to be transported to where the tank is loaded and the vapors are recovered or destroyed. Vent lines on storage tanks with vapor control systems shall use pressure release valves or flow restrictors to minimize releases to the atmosphere.

(23) "Startup" means the setting in operation of a source or emission control equipment.

(24) "Substrate" means the surface to which a coating is applied.

(25) "Topcoat" means the final films of coating applied in a multiple or single coat operation.

(26) "True vapor pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Manual of Petroleum Measurement Standards, Chapter 19.2, Evaporative Loss From Floating-Roof Tanks. This American Petroleum Institute document is incorporated by reference and shall include any subsequent amendments or editions. This document may be obtained at https://www.apiwebstore.org/publications/item.cgi?43bface1-2adf-4234-90a8-ee6089c04f9a at a cost of two hundred ten dollars ($210.00).

(27) "Vapor collection system" means a vapor transport system that uses direct displacement by the liquid loaded into the tank to force vapors from the tank into a vapor control system.

(28) "Vapor control system" means a system that prevents release to the atmosphere of 90 percent or more by weight of organic compounds in the vapors displaced from a tank during the transfer of gasoline.

(29) "Volatile organic compound" also denoted as "VOC," means any compound of carbon whose volatile content can be determined by the procedure described in 15A NCAC 02D .2600, excluding any compound that is listed under 40 CFR 51.100(s) as having been determined to have negligible photochemical reactivity.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. January 1, 2009; June 1, 2008; July 1, 1996; December 1, 1993; July 1, 1991; March 1, 1991; December 1, 1989;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0902 APPLICABILITY

(a) The rules in this Section shall not apply except as specifically set out in this Rule.

(b) This Section applies to sources that emit greater than or equal to 15 pounds of volatile organic compounds per day unless specified otherwise in this Section.

(c) Rules 15A NCAC 02D .0925, .0926, .0927, .0928, .0931, .0932, .0933, and .0958 apply regardless of the level of emissions of volatile organic compounds unless the provisions specified in Paragraph (d) of this Rule are applied.

(d) This Section does not apply to:

(1) sources that emit less than 800 pounds of volatile organic compounds per calendar month and that are:

(A) bench-scale, on-site equipment used exclusively for chemical or physical analysis for quality control purposes, staff instruction, water or wastewater analyses, or non-production environmental compliance assessments;

(B) bench-scale experimentation, chemical or physical analyses, training or instruction from not-for-profit, non-production educational laboratories;

(C) bench-scale experimentation, chemical or physical analyses, training or instruction from hospitals or health laboratories pursuant to the determination or diagnoses of illness; or

(D) research and development laboratory activities, provided the activity produces no commercial product or feedstock material; or

(2) emissions of volatile organic compounds during startup or shutdown operations from sources that use incineration or other types of combustion to control emissions of volatile organic compounds whenever the off-gas contains an explosive mixture during the startup or shutdown operation if the exemption is approved by the Director as meeting the requirements of this Subparagraph.

(e) The following rules of this Section apply to facilities located statewide:

(1) 15A NCAC 02D .0925, Petroleum Liquid Storage in Fixed Roof Tanks, for fixed roof tanks at gasoline bulk plants and gasoline bulk terminals;

(2) 15A NCAC 02D .0926, Bulk Gasoline Plants;

(3) 15A NCAC 02D .0927, Bulk Gasoline Terminals;

(4) 15A NCAC 02D .0928, Gasoline Service Stations Stage I;

(5) 15A NCAC 02D .0932, Gasoline Cargo Tanks and Vapor Collection Systems;

(6) 15A NCAC 02D .0933, Petroleum Liquid Storage in External Floating Roof Tanks, for external floating roof tanks at bulk gasoline plants and bulk gasoline terminals;

(7) 15A NCAC 02D .0948, VOC Emissions from Transfer Operations; and

(8) 15A NCAC 02D .0949, Storage of Miscellaneous Volatile Organic Compounds.

(f) Except as provided in Paragraphs (c) and (e) of this Rule, the rules in this Section apply to facilities subject to Section 182(b)(2) of the Clean Air Act with potential to emit 100 or more tons per year of VOC and to facilities with potential to emit less than 100 tons per year of volatile organic compounds in categories for which the United States Environmental Protection Agency has issued Control Technique Guidelines that are located in the following moderate nonattainment areas for the 1997 8-hour ambient air quality standard for ozone as designated in 40 CFR 81.334 prior to January 2, 2014:

(1) Cabarrus County;
(2) Gaston County;
(3) Lincoln County;
(4) Mecklenburg County;
(5) Rowan County;
(6) Union County; and
(7) Davidson Township and Coddle Creek Township in Iredell County.

These facilities are subject to reasonably available control technology requirements under this Section and shall comply with the requirements in 15A NCAC 02D .0909 through .0951 and with 15A NCAC 02D .0958.

(g) If any county or part of a county to which this Section applies is later designated in 40 CFR 81.334 as attainment and becomes a maintenance area for the 1997 8-hour ambient air quality standard for ozone, all sources in that county or part of county subject to Paragraph (f) of this Rule that achieved compliance in accordance with 15A NCAC 02D .0909 shall continue to comply with this Section. Facilities with potential to emit less than 100 tons of volatile organic compounds per year, where the compliance date in 15A NCAC 02D .0909 has not passed before redesignation of the area to attainment for the 1997 ozone standard, shall comply in accordance with Paragraph (h) of this Rule.

(h) If a violation of the 1997 ambient air quality standard for ozone occurs when the areas listed in Paragraph (f) of this Rule become ozone maintenance area, no later than 10 days after the violation occurs, the Director shall initiate technical analyses to determine the control measures needed to attain and maintain the 1997 8-hour ambient air quality standard for ozone. By the following May 1, the Director shall implement the specific stationary source control measures contained in this Section that are required as part of the control strategy necessary to bring the area into compliance and to maintain compliance with the 1997 8-hour ambient air quality standard for ozone. The Director shall implement the rules in this Section identified as being necessary by the analyses by notice in the North Carolina Register. The notice shall identify the rules that are to be implemented and shall identify whether the Rules implemented are to apply in the areas listed in Paragraph (f) of this Rule. At least one week before the scheduled publication date of the North Carolina Register containing the Director's notice implementing rules in this Section, the Director shall send written notification to all permitted facilities within the counties in which the rules of this Section are being implemented notifying them that they are or may be subject to the requirements defined in 15A NCAC 02D .0909.

For the purpose of notifying permitted facilities in Mecklenburg County, "Director" means the Director of the Mecklenburg County local air pollution control program.

(i) Sources whose emissions of volatile organic compounds are not subject to limitation under this Section may still be subject to emission limits on volatile organic compounds in 15A NCAC 02D .0524, .1110, and .1111.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(a)(7)*
Eff. July 1, 1979;
Amended Eff. November 1, 2016; May 1, 2013; September 1, 2010; January 1, 2009; July 1, 2007; March 1, 2007; August 1, 2004; July 1, 2000; April 1, 1997; July 1, 1996; July 1, 1995; May 1, 1995; July 1, 1994;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0903 RECORDKEEPING: REPORTING: MONITORING

(a) The owner or operator of any volatile organic compound emission source or control equipment shall:

(1) install, operate, and maintain process and control equipment monitoring instruments or procedures as necessary to comply with the requirements of this Section; and
(2) maintain written data and reports relating to monitoring instruments or procedures that document the compliance status of the volatile organic compound emission source or control equipment. Such data and reports shall be maintained daily unless otherwise specified in this Section.

(b) The owner or operator of any volatile organic compound emission source or control equipment subject to the requirements of this Section shall comply with the monitoring, recordkeeping, and reporting requirements in 15A NCAC 02D .0600.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. May 1, 2013; April 1, 1999; July 1, 1993; July 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0904 MALFUNCTIONS: BREAKDOWNS: UPSETS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68; 143-215.107(a)(5);*
Eff. July 1, 1979;
Repealed Eff. March 1, 1983.

15A NCAC 02D .0905 PETITION FOR ALTERNATIVE CONTROLS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68; 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. January 1, 1985; July 1, 1980;
Repealed Eff. July 1, 1988.

15A NCAC 02D .0906 CIRCUMVENTION

(a) An owner or operator subject to this Section shall not build, erect, install, or use any article, machine, equipment, process, or method that conceals an emission that would otherwise constitute a violation of an applicable rule in this Section.

(b) Paragraph (a) of this Rule includes the use of gaseous dilutants to achieve compliance and the piecemeal carrying out of an operation to avoid coverage by a rule that applies only to operations larger than a specified size.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0907 COMPLIANCE SCHEDULES FOR SOURCES IN NONATTAINMENT AREAS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. May 1, 1995; July 1, 1994; January 1, 1985; July 1, 1980;
Repealed Eff. April 1, 1997.

15A NCAC 02D .0908 EQUIPMENT MODIFICATION COMPLIANCE SCHEDULES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68; 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. January 1, 1985; July 1, 1980;
Repealed Eff. July 1, 1988.

15A NCAC 02D .0909 COMPLIANCE SCHEDULES FOR SOURCES IN OZONE NONATTAINMENT AND MAINTENANCE AREAS

(a) Applicability. This Rule applies to sources located at any facility covered by Paragraphs (f) and (h) of 15A NCAC 02D .0902.

(b) Exceptions. This Rule does not apply to facilities subject to 15A NCAC 02D .0902(e). Facilities subject to 15A NCAC 02D .0902(e) shall comply with the provisions of those Rules rather than the schedule in Paragraphs (c) and (d) of this Rule.

(c) Maintenance area contingency plan. The owner or operator of any source subject to this Rule shall adhere to the following increments of progress and schedules:

(1) If compliance with applicable rules in this Section is to be achieved by installing emission control equipment, replacing process equipment, or modifying existing process equipment:
    (A) The owner or operator shall submit a permit application and a compliance schedule within six months after the Director notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone;
    (B) The compliance schedule shall contain the following increments of progress:
        (i) a date by which contracts for the emission control system and process equipment shall be awarded or orders shall be issued for purchase of component parts;
        (ii) a date by which on-site construction or installation of the emission control and process equipment shall begin; and
        (iii) a date by which on-site construction or installation of the emission control and process equipment shall be completed; and
    (C) Final compliance with applicable rules in this Section shall be achieved within three years after the Director notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone.

(2) If compliance with applicable rules in this Section is to be achieved by using low solvent coating technology:
    (A) The owner or operator shall submit a permit application and a compliance schedule within six months after the Director notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone;
    (B) The compliance schedule shall contain the following increments of progress:
        (i) a date by which purchase orders shall be issued for low solvent coatings and process modifications;
        (ii) a date by which process modifications shall be initiated; and
        (iii) a date by which process modifications shall be completed and use of low solvent coatings shall begin; and
    (C) Final compliance with applicable rules in this Section shall be achieved within two years after the Director notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone.

(3) The owner or operator shall certify to the Director within five days after each increment deadline of progress defined in this Paragraph, whether the required increment of progress has been met.

(d) Moderate nonattainment areas. The owner or operator of any source subject to this Rule shall adhere to the following increments of progress and schedules:

(1) If compliance with applicable rules in this Section is to be achieved by installing emission control equipment, replacing process equipment, or modifying existing process equipment:
    (A) The owner or operator shall submit a permit application and a compliance schedule by August 1, 2007;
    (B) The compliance schedule shall contain the following increments of progress:
        (i) a date by which contracts for the emission control system and process equipment shall be awarded or orders shall be issued for purchase of component parts;
        (ii) a date by which on-site construction or installation of the emission control and process equipment shall begin; and
        (iii) a date by which on-site construction or installation of the emission control and process equipment shall be completed; and
    (C) For facilities with potential to emit 100 tons or more of volatile organic compounds per year, final compliance with applicable rules in this Section shall be achieved no later than April 1, 2009.
    (D) For facilities with potential to emit less than 100 tons of volatile organic compounds per year, final compliance with applicable rules in this Section shall be achieved no later than May 1, 2016.

(2) If compliance with applicable rules in this Section is to be achieved by using low solvent coating technology:
    (A) The owner or operator shall submit a permit application and a compliance schedule by August 1, 2007;

(B) The compliance schedule shall contain the following increments of progress:
(i) a date by which purchase orders shall be issued for low solvent coatings and process modifications;
(ii) a date by which process modifications shall be initiated; and
(iii) a date by which process modifications shall be completed and use of low solvent coatings shall begin; and
(C) Final compliance with applicable rules in this Section shall be achieved no later than April 1, 2009;
(D) For facilities with potential to emit less than 100 tons of volatile organic compounds per year, final compliance with applicable rules in this Section shall be achieved no later than May 1, 2015.

(3) The owner or operator shall certify to the Director within five days after the deadline, for each increment of progress defined in this Paragraph, whether the required increment of progress has been met.

(e) If the Director requires a test in accordance with 15A NCAC 02D .2600 to demonstrate that compliance has been achieved, the owner or operator of sources subject to this Rule shall conduct a test and submit a final test report within six months after the stated date of final compliance.

(f) Sources already in compliance.

(1) Maintenance area contingency plan. Paragraph (c) of this Rule shall not apply to any source subject to this Rule that is in compliance with applicable rules of this Section when the Director notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone and that have determined and certified compliance by the Director within six months after the Director notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone.

(2) Moderate nonattainment areas. Paragraph (d) of this Rule does not apply to sources subject to this Rule if they are in compliance with applicable rules of this Section on March 1, 2007.

(g) New sources.

(1) Maintenance area contingency plan. The owner or operator of any source subject to this Rule not in existence or under construction before the date that the Director notices in the North Carolina Register pursuant to 15A NCAC 02D .0902(h) the implementation of rules that resolves a violation of the ambient air quality standard for ozone shall comply with all applicable rules in this Section upon start-up of the source.

(2) Moderate nonattainment areas. The owner or operator of any new source subject to this Rule not in existence or under construction before March 1, 2007 in an area identified in 15A NCAC 02D .0902(f) shall comply with all applicable rules in this Section upon start-up of the source.

History Note *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. May 1, 2013; September 1, 2010; January 1, 2009; July 1, 2007; March 1, 2007; July 1, 2000; April 1, 1997; July 1, 1995; July 1, 1994; July 1, 1988; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0910 ALTERNATIVE COMPLIANCE SCHEDULES
15A NCAC 02D .0911 EXCEPTION FROM COMPLIANCE SCHEDULES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. May 1, 1995; July 1, 1994; January 1, 1985; July 1, 1980;
Repealed Eff. April 1, 1997.

15A NCAC 02D .0912 GENERAL PROVISIONS ON TEST METHODS AND PROCEDURES

(a) The owner or operator of any volatile organic compound source required to comply with rules in this Section shall demonstrate compliance by the methods described in 15A NCAC 02D .2600, if the test method is not stated in the Rule governing that source. The owner or operator of a volatile organic compound source shall demonstrate compliance when the Director requests such demonstration.

(b) If the volatile organic compound emissions test shows noncompliance, the owner or operator of the volatile organic source shall submit, along with the final test report, the proposed corrective action.
(c) Compliance shall be determined on a line-by-line basis using the more stringent of the following two:
(1) Compliance shall be determined on a daily basis for each coating line using a weighted average by dividing the sum of the mass in pounds of volatile organic compounds in coatings consumed on that coating line, as received, and the mass in pounds of volatile organic compound solvents added to the coatings on that coating line by the volume in gallons of coating solids consumed during that day on that coating line; or
(2) Compliance shall be determined as follows:
(A) When low solvent or high solids coatings are used to reduce emissions of volatile organic compounds, compliance shall be determined instantaneously.
(B) When add on control devices, such as solvent recovery systems or incinerators, are used to reduce emissions of volatile organic compounds, compliance shall be determined by averaging emissions over a one-hour period.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. June 1, 2008; April 1, 2003; July 1, 1993; July 1, 1991; March 1, 1991; December 1, 1989; January 1, 1985; July 1, 1980;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0913 DETERMINATION OF VOLATILE CONTENT OF SURFACE COATINGS
15A NCAC 02D .0914 DETERMINATION OF VOC EMISSION CONTROL SYSTEM EFFICIENCY
15A NCAC 02D .0915 DETERMINATION OF SOLVENT METAL CLEANING VOC EMISSIONS
15A NCAC 02D .0916 DETERMINATION: VOC EMISSIONS FROM BULK GASOLINE TERMINALS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68; 143-215.107(a)(5); 150B-14(c);*
Eff. July 1, 1979;
Amended Eff. July 1, 1998; March 1, 1991; December 1, 1989; July 1, 1988; April 1, 1986; January 1, 1985;
Repealed Eff. June 1, 2008.

15A NCAC 02D .0917 AUTOMOBILE AND LIGHT DUTY TRUCK MANUFACTURING

History Note: *Authority G.S. 143-215.3(a)(1); 143 215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. July 1, 1996; July 1, 1991; December 1, 1989; April 1, 1986; January 1, 1985;
Repealed Eff. September 1, 2010.

15A NCAC 02D .0918 CAN COATING
(a) For the purpose of this Rule, the following definitions shall apply:
(1) "End sealing compound" means a synthetic rubber compound that is coated onto can ends and functions as a gasket when the end is assembled on the can.
(2) "Exterior base coating" means a coating applied to the exterior of a can to provide exterior protection to the metal and to provide background for the lithographic or printing operation.
(3) "Interior base coating" means a coating applied by roller coater or spray to the interior of a can to provide a protective lining between the can metal and product.
(4) "Interior body spray" means a coating sprayed on the interior of the can body to provide a protective film between the product and the can.
(5) "Overvarnish" means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss, and to protect the finish against abrasion and corrosion.
(6) "Three-piece can side-seam spray" means a coating sprayed on the exterior and interior of a welded, cemented, or soldered seam to protect the exposed metal.
(7) "Two-piece can exterior end coating" means a coating applied by roller coating or spraying to the exterior end of a can to provide protection to the metal.

(b) This Rule applies to volatile organic compound emissions from coating applicators and ovens of sheet, can, or end coating lines involved in sheet exterior and interior basecoat and overvarnish; two-piece can interior body spray; two-piece spray or roll coat can exterior; and three-piece can side-seam spray and end sealing compound operations.
(c) Unless the exception in Paragraph (d) of this Rule applies, emissions of volatile organic compounds from any can coating line subject to this Rule shall not exceed:

(1) 4.5 pounds of volatile organic compounds per gallon of solids delivered to the coating applicator from sheet exterior and interior basecoat and overvarnish or two-piece can exterior basecoat and overvarnish operations;
(2) 9.8 pounds of volatile organic compounds per gallon of solids delivered to the coating applicator from two and three-piece can interior body spray and two-piece spray or roll coat can exterior end operations;
(3) 21.8 pounds of volatile organic compounds per gallon of solids delivered to the coating applicator from a three-piece can side seam spray operation; or
(4) 7.4 pounds of volatile organic compounds per gallon of solids delivered to the coating applicator from end sealing compound operations.

(d) Any source that has controlled emissions pursuant to 15A NCAC 02D .0518(e) prior to July 1, 2000 and that has installed air pollution control equipment in accordance with an air quality permit pursuant to 15A NCAC 02Q .0300 or .0500 in order to comply with this Rule before December 1, 1989 may comply with the limits contained in this Paragraph instead of those contained in Paragraph (c) of this Rule. Emissions of volatile organic compounds from any can coating line subject to this Paragraph shall not exceed:

(1) 2.8 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds, delivered to the coating applicator from sheet exterior and interior basecoat and overvarnish or two-piece can exterior basecoat and overvarnish operations;
(2) 4.2 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds, delivered to the coating applicator from two and three-piece can interior body spray and two-piece can spray or roll coat exterior end operations;
(3) 5.5 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds, delivered to the coating applicator from a three-piece can side-seam spray operation; or
(4) 3.7 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds, delivered to the coating applicator from end sealing compound operations.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. July 1, 1996; July 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0919 COIL COATING

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Coil coating" means the coating of any flat metal sheet or strip that comes in rolls or coils.
(2) "Quench area" means a chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

(b) This Rule applies to volatile organic compound emissions from the coating applicators, ovens, and quench areas of coil coating lines involved in prime and top coat or single coat operations.
(c) Unless the exception in Paragraph (d) of this Rule applies, emissions of volatile organic compounds from any coil coating line subject to this Rule shall not exceed 4.0 pounds of volatile organic compounds per gallon of solids delivered to the coating applicator from prime and topcoat or single coat operations.
(d) Any source that has controlled emissions of volatile organic compounds pursuant to .0518(e) prior to July 1, 2000 and that has installed air pollution control equipment in accordance with an air quality permit in order to comply with this Rule before December 1, 1989 may comply with the limits contained in this Paragraph instead of those contained in Paragraph (c) of this Rule. Emissions of volatile organic compounds from any coil coating line subject to this Rule shall not exceed 2.6 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds, delivered to the coating applicator from prime and topcoat or single coat operations.

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

Eff. July 1, 1979;
Amended Eff. July 1, 1996; July 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0920 PAPER COATINGS
15A NCAC 02D .0921 FABRIC AND VINYL COATING

History Note: *Authority G.S. 143 215.3(a)(1); 143 215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. July 1, 1996; July 1, 1991; December 1, 1989; January 1, 1985;
Repealed Eff. September 1, 2010.

15A NCAC 02D .0922 METAL FURNITURE COATINGS

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Application area" means the area where the coating is applied by spraying, dipping, or flowcoating techniques.

(2) "Coating unit" means one or more coating areas and any associated drying area or oven wherein a coating is applied, dried, or cured.

(3) "Metal furniture coatings" means paints, sealants, caulks, inks, adhesives, and maskants.

(b) This Rule applies to each metal furniture surface coating unit source whose emissions of volatile organic compounds meet the threshold established in 15A NCAC 02D .0902(b).

(c) Unless the exception in Paragraph (f) of this Rule applies, emissions of all volatile organic compounds from metal furniture coating unit subject to this Rule shall not exceed:

(1) 2.3 pounds of volatile organic compounds per gallon of coating excluding water and exempt compounds or 3.3 pounds of volatile organic compounds per gallon of solids delivered from general, one component or general, multi-component types of coating operations; and

(2) 3.0 pounds of volatile organic compounds per gallon of coating excluding water and exempt compounds or 5.1 pounds of volatile organic compounds per gallon of solids delivered from any other types of coating operations.

(d) EPA Method 24 of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coating materials used at metal furniture surface coating units unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.

(e) Emissions limits established in Subparagraph (c)(2) of this Rule do not apply to stencil coatings, safety-indicating coatings, solid film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, coating application utilizing hand-held aerosol cans, or cleaning operations.

(f) Any coating unit that has chosen to use add-on control for coating operations rather than the emission limits established in Paragraph (c) of this Rule shall install control equipment with an overall control efficiency of 90 percent or use a combination of coating and add-on control equipment on a coating unit to meet limits established in Paragraph (c) of this Rule.

(g) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. September 1, 2010; July 1, 1996; July 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0923 SURFACE COATING OF LARGE APPLIANCE PARTS

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Application area" means the area where the coating is applied by spraying, dipping, or flowcoating techniques.

(2) "Coating" means paints, sealants, caulks, inks, adhesives, and maskants.

(3) "Coating unit" means a unit that consists of a series of one or more coating applicators and any associated drying area or oven where a coating is dried or cured.

(4) "Large appliance part" means any organic surface-coated metal lid, door, casing, panel, or other interior or exterior metal part or accessory that is assembled to form a large appliance product.

(5) "Large appliance product" means any organic surface-coated metal range, oven, microwave oven, refrigerator, freezer, washer, dryer, dishwasher, water heater, or trash compactor manufactured for household, commercial, or recreational use.

(b) This Rule applies to each large appliance coating unit source whose volatile organic compounds emissions meet the threshold established in 15A NCAC 02D .0902.

(c) Emissions of all volatile organic compounds from any large appliance coating unit subject to this Rule shall not exceed:

(1) 2.3 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds or 3.3 pounds of volatile organic compounds per gallon of solids delivered from general, one component coating or general, multi-component types of coating operations; and

(2) 2.8 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds or 4.5 pounds of volatile organic compounds per gallon of solids delivered from any other types of coating operations.

(d) EPA Method 24 of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coating materials used at surface coating of large appliances parts facilities unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.

(e) Emissions limits established in Subparagraph (c)(2) of this Rule do not apply to stencil coatings, safety-indicating coatings, solid film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, coating applications utilizing hand- held aerosol cans, or any cleaning material.

(f) Any coating unit that has chosen to use add-on controls for coating operations rather than the emission limits established in Paragraph (c) of this Rule shall install control equipment with an overall control efficiency of 90 percent or use a combination of coating and add-on control equipment on a coating unit to meet limits established in Paragraph (c) of this Rule.

(g) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. September 1, 2010; July 1, 1996; July 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0924 MAGNET WIRE COATING

(a) For the purpose of this Rule, "magnet wire coating" means the process of applying a coating of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

(b) This Rule applies to volatile organic compound emissions from the oven(s) of magnet wire coating operations.

(c) With the exception stated in Paragraph (d) of this Rule, emissions of volatile organic compounds from any magnet wire coating oven subject to this Rule shall not exceed 2.2 pounds of volatile organic compounds per gallon of solids delivered to the coating applicator from magnet wire coating operations.

(d) Any source that has controlled emissions of volatile organic compounds pursuant to 15A NCAC 02D .0518(e) prior to July 1, 2000 and installed air pollution control equipment in accordance with an air quality permit in order to comply with this Rule before December 1, 1989 may comply with the limits contained in this Paragraph instead of those contained in Paragraph (c) of this Rule. Emissions of volatile organic compounds from any magnet wire coating oven subject to this Rule shall not exceed 1.7 pounds of volatile organic compounds per gallon of coating, excluding water and exempt compounds, delivered to the coating applicator from magnet wire coating operations.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. July 1, 1996; July 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0925 PETROLEUM LIQUID STORAGE IN FIXED ROOF TANKS

(a) For the purpose of this Rule, the following definitions apply:

(1) "Condensate" means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure and remains liquid at standard conditions.

(2) "Crude oil" means a naturally occurring mixture that consists of hydrocarbons or sulfur, nitrogen or oxygen derivatives of hydrocarbons or mixtures thereof that is a liquid at standard conditions.

(3) "Custody transfer" means the transfer of produced crude oil or condensate, after processing or treating in the producing operations, from storage tanks or automatic transfer facilities to pipeline or any other forms of transportation.
(4) "External floating roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck that rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
(5) "Internal floating roof" means a cover or roof in a fixed roof tank that rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
(6) "Petroleum liquids" means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.
(7) "Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of crude oils, or through redistillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(b) This Rule applies to all fixed roof storage vessels with capacities greater than 39,000 gallons containing volatile petroleum liquids whose true vapor pressure is greater than 1.52 pounds per square inch.

(c) This Rule does not apply to volatile petroleum liquid storage vessels:
(1) equipped with external floating roofs; or
(2) having capacities less than 416,000 gallons used to store produced crude oil and condensate prior to lease custody transfer.

(d) With the exceptions stated in Paragraph (c) of this Rule, the owner or operator of any fixed roof storage vessel subject to this Rule shall not use the storage vessel unless:
(1) The storage vessel has been retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall;
(2) The storage vessel is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials;
(3) All openings except stub drains are equipped with covers, lids, or seals such that:
(A) the cover, lid, or seal is in the closed position at all times except when in actual use;
(B) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
(C) rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting;
(4) Planned routine visual inspections are conducted through roof hatches once per month;
(5) A complete inspection of cover and seal is conducted whenever the tank is emptied for maintenance, shell inspection, cleaning, or for other nonoperational reasons or whenever excessive vapor leakage is observed; and
(6) Records are maintained in accordance with 15A NCAC 02D .0903 and shall include:
(A) reports of the results of inspections conducted pursuant to Subparagraphs (d)(4) and (d)(5) of this Rule;
(B) a record of the average monthly storage temperature, and true vapor pressures of petroleum liquids stored; and
(C) records of the throughput quantities and types of petroleum liquids for each storage vessel.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. March 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0926 BULK GASOLINE PLANTS

(a) For the purpose of this Rule, the following definitions apply:
(1) "Average daily throughput" means annual throughput of gasoline divided by 312 days per year.
(2) "Bottom filling" means the filling of a cargo tank or stationary storage tank through an opening flush with the tank bottom.

(3) "Bulk gasoline plant" means a gasoline storage and distribution facility with an average daily throughput of less than 20,000 gallons of gasoline and that typically receives gasoline from bulk terminals by cargo tank transport, stores it in tanks, and subsequently dispenses it via account cargo tanks to farms, businesses, and service stations.

(4) "Bulk gasoline terminal" means a gasoline storage facility that typically receives gasoline from refineries primarily by pipeline, ship, or barge; delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by cargo tank; and has an average daily throughput of greater than or equal to 20,000 gallons of gasoline.

(5) "Cargo tank" means the storage vessels of freight trucks or trailers used to transport gasoline from sources of supply to stationary storage tanks of bulk gasoline terminals, bulk gasoline plants, gasoline dispensing facilities, and gasoline service stations.

(6) "Gasoline" means any petroleum distillate having a Reid Vapor Pressure (RVP) of 4.0 psi or greater.

(7) "Incoming vapor balance system" means a combination of pipes or hoses that create a closed system between the vapor spaces of an unloading cargo tank and a receiving stationary storage tank such that vapors displaced from the receiving stationary storage tank are transferred to the cargo tank being unloaded.

(8) "Outgoing vapor balance system" means a combination of pipes or hoses that create a closed system between the vapor spaces of an unloading stationary storage tank and a receiving cargo tank such that vapors displaced from the receiving cargo tank are transferred to the stationary storage tank being unloaded.

(9) "Splash filling" means the filling of a cargo tank or stationary storage tank through a pipe or hose whose discharge opening is above the surface level of the liquid in the tank being filled.

(10) "Submerged filling" means the filling of a cargo tank or stationary tank through a pipe or hose whose discharge opening is entirely submerged when the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid, or whose discharge opening is entirely submerged when the liquid level is six inches above the bottom of the tank.

(b) This Rule applies to the unloading, loading, and storage facilities of all bulk gasoline plants, and of all cargo tanks delivering or receiving gasoline at bulk gasoline plants except stationary storage tanks with capacities less than 528 gallons.

(c) The owner or operator of a bulk gasoline plant shall not transfer gasoline to a stationary storage tank unless the unloading cargo tank and the receiving stationary storage tank are equipped with an incoming vapor balance system as described in Paragraph (i) of this Rule and the receiving stationary storage tank is equipped with a fill line whose discharge opening is flush with the bottom of the tank such that bottom filling can be achieved.

(d) The owner or operator of a bulk gasoline plant with an average daily gasoline throughput of 4,000 gallons or more shall not load a cargo tank at such plant unless the unloading stationary storage tank and the receiving cargo tank are equipped with an outgoing vapor balance system as described in Paragraph (i) of this Rule and the receiving cargo tank is equipped for bottom filling.

(e) The owner or operator of a bulk gasoline plant with an average daily throughput of more than 2,500 gallons but less than 4,000 gallons located in an area with a housing density exceeding the limits in this Paragraph shall not load any cargo tank at such bulk gasoline plant unless the unloading stationary storage tank and receiving cargo tank are equipped with an outgoing vapor balance system as described in Paragraph (i) of this Rule and the receiving cargo tank is equipped for bottom filling. In the counties of Alamance, Buncombe, Cabarrus, Catawba, Cumberland, Davidson, Durham, Forsyth, Gaston, Guilford, Mecklenburg, New Hanover, Orange, Rowan, and Wake, the specified limit on housing density is 50 residences in a square one mile on a side with the square centered on the loading rack at the bulk gasoline plant and with one side oriented in a true North-South direction. In all other counties the specified limit on housing density is 100 residences per square mile. The housing density shall be determined by counting the number of residences using aerial photographs or other methods approved by the Director to provide equivalent accuracy.

(f) The owner or operator of a bulk gasoline plant not subject to the outgoing vapor balance system requirements of Paragraph (d) or (e) of this Rule shall not load cargo tanks at such plants unless:

(1) equipment is available and used at the bulk gasoline plant to provide for submerged filling of each cargo tank; or

(2) each receiving cargo tank is equipped for bottom filling.

(g) For gasoline bulk plants located in a nonattainment area for ozone, the owner or operator shall continue to comply with Paragraph (d) or (e) of this Rule even if the average daily throughput falls below the applicable threshold if ever the facility throughput triggered compliance.
(h) The owner or operator of a bulk gasoline plant shall ensure a cargo tank that is required to be equipped with a vapor balance system pursuant to Paragraphs (c), (d), or (e) of this Rule shall not transfer gasoline between the cargo tank and the stationary storage tank unless:

(1) the vapor balance system is connected, operating, and working as designed in accordance with the manufacturer's specifications and the definition of "good operation and maintenance" in 15A NCAC 02D .0602;
(2) cargo tank hatches are closed at all times during loading and unloading operations; and
(3) the cargo tank's pressure/vacuum relief valves, hatch covers, and the cargo tank's and storage tank's associated vapor and liquid lines are vapor-tight, as defined in 40 CFR 60.501 and 63.11132, as applicable, during loading or unloading.

(i) Vapor balance systems required under Paragraphs (c), (d), and (e) of this Rule shall consist of the following major components:

(1) a vapor space connection on the stationary storage tank equipped with fittings that are vapor tight and will be automatically and immediately closed upon disconnection to prevent release of volatile organic material;
(2) a connecting pipe or hose equipped with fittings that are vapor tight and will be automatically and immediately closed upon disconnection to prevent release of volatile organic material; and
(3) a vapor space connection on the cargo tank equipped with fittings that are vapor tight and will be automatically and immediately closed upon disconnection to prevent release of volatile organic material.

(j) The owner or operator of a bulk gasoline plant shall paint all tanks used for gasoline storage white or silver.
(k) The pressure relief valves on cargo tanks loading or unloading at bulk gasoline plants shall be set to release at the highest possible pressure in accordance with State or local fire codes or the National Fire Prevention Association Guidelines. The pressure relief valves on stationary storage tanks shall be set at 0.5 psi for storage tanks placed in service on or after November 1, 1992, and 0.25 psi for storage tanks existing before November 1, 1992.
(l) No owner or operator of a bulk gasoline plant may permit gasoline to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation.
(m) The owner or operator of a bulk gasoline plant shall observe loading and unloading operations and shall discontinue the transfer of gasoline:

(1) if any liquid leaks are observed; or
(2) if any vapor leaks are observed where a vapor balance system is required under Paragraphs (c), (d), or (e) of this Rule.

(n) The owner or operator of a bulk gasoline plant shall not load, or allow to be loaded, gasoline into any cargo tank unless the cargo tank has been certified leak tight in accordance with 15A NCAC 02D .0932.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. July 1, 1996; May 1, 1993; March 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0927 BULK GASOLINE TERMINALS

(a) For the purpose of this Rule, the following definitions apply:

(1) "Bulk gasoline terminal" means:
  (A) a pipeline breakout station of an interstate oil pipeline facility; or
  (B) a gasoline storage facility that typically receives gasoline from refineries primarily by pipeline, ship, or barge; delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by cargo tank; and has an average daily throughput of more than 20,000 gallons of gasoline.
(2) "Cargo tank" means the storage vessels of freight trucks or trailers used to transport gasoline from sources of supply to stationary storage tanks of bulk gasoline terminals, bulk gasoline plants, gasoline dispensing facilities, and gasoline service stations.

(3) "Contact deck" means a deck in an internal floating roof tank that rises and falls with the liquid level and floats in direct contact with the liquid surface.

(4) "Degassing" means the process by which a tank's interior vapor space is decreased to below the lower explosive limit for the purpose of cleaning, inspection, or repair.

(5) "Gasoline" means a petroleum distillate having a Reid Vapor Pressure (RVP) of 4.0 psi or greater.

(6) "Leak" means a crack or hole letting petroleum product vapor or liquid escape that is identifiable through sight, sound, smell, an explosimeter, or the use of a meter that measures volatile organic compounds. When an explosimeter or meter is used to detect a leak, a leak is a measurement that is equal to or greater than 100 percent of the lower explosive limit, as detected by a combustible gas detector using the test procedure described in Appendix B of EPA-450/2-78-051. This test procedure is incorporated by reference, including any subsequent amendments and editions. A copy of this test procedure may be obtained free of charge at https://nepis.epa.gov/Exe/ZyPDF.cgi/2000M9RD.PDF?Dockey=2000M9RD.PDF.

(7) "Liquid balancing" means a process used to degas floating roof gasoline storage tanks with a liquid whose vapor pressure is below 1.52 psi. This is done by removing as much gasoline as possible without landing the roof on its internal supports, pumping in the replacement fluid, allowing mixing, removing as much mixture as possible without landing the roof, and repeating these steps until the vapor pressure of the mixture is below 1.52 psi.

(8) "Liquid displacement" means a process by which gasoline vapors remaining in an empty tank are displaced by a liquid with a vapor pressure below 1.52 psi.

(9) "Pipeline breakout station" means a facility along a pipeline containing storage tanks used to:

(A) relieve surges in a hazardous liquid pipeline system; or

(B) receive and store hazardous liquids transported by pipeline for reinjection and continued transport by pipeline.

For the purposes of this definition, "hazardous liquid" means the materials listed in 49 CFR 195.2.

(b) This Rule applies to bulk gasoline terminals and the appurtenant equipment necessary to load the cargo tank compartments.

(c) Gasoline shall not be loaded into any cargo tank from any bulk gasoline terminal unless:

(1) the bulk gasoline terminal is equipped with a vapor control system that prevents the emissions of volatile organic compounds from exceeding 35 milligrams per liter. The owner or operator shall obtain from the manufacturer and maintain in the cargo tank's records a pre-installation certification stating the vapor control efficiency of the system in use;

(2) displaced vapors and gases are vented only to the vapor control system or to a flare;

(3) a means is provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected; and

(4) all loading and vapor lines are equipped with fittings that make vapor-tight connections and that are automatically and immediately closed upon disconnection.

(d) Sources regulated by this Rule shall not:

(1) allow gasoline to be discarded in sewers or stored in open containers or handled in any manner that would result in evaporation; or

(2) allow the pressure in the vapor collection system to exceed the cargo tank pressure relief settings.

(e) The owner or operator of a bulk gasoline terminal shall paint all tanks used for gasoline storage white or silver.

(f) The owner or operator of a bulk gasoline terminal shall install on each external floating roof tank with an inside diameter of 100 feet or less used to store gasoline a self-supporting roof, such as a geodesic dome.

(g) The following equipment shall be required on all tanks storing gasoline at a bulk gasoline terminal:

(1) rim-mounted secondary seals on all external and internal floating roof tanks;

(2) gaskets on deck fittings; and

(3) floats in the slotted guide poles with a gasket around the cover of the poles.

(h) Decks shall be required on all above ground tanks with a capacity greater than 19,800 gallons storing gasoline at a bulk gasoline terminal. All decks installed after June 30, 1998 shall comply with the following requirements:

(1) deck seams shall be welded, bolted, or riveted; and

(2) seams on bolted contact decks and on riveted contact decks shall be gasketed.

(i) If, upon facility or operational modification of a bulk gasoline terminal that existed before December 1, 1992, an increase in benzene emissions results such that:

(1) emissions of volatile organic compounds increase by more than 25 tons cumulative at any time during the five years following modifications; and

(2) annual emissions of benzene from the cluster, which includes the bulk gasoline terminal, the pipeline, and marketing terminals served by the pipeline, exceed benzene emissions from that cluster based upon calendar year 1991 gasoline throughput and application of the requirements of this Subchapter,

then, the annual increase in benzene emissions due to the modification shall be offset within the cluster by reduction in benzene emissions beyond that otherwise achieved from compliance with this Rule, in the ratio of at least 1.3 to 1.

(j) To qualify for exemption from the requirements under Paragraphs (e) through (i) of this Rule, the owner or operators of a bulk gasoline terminal that received an air quality permit before December 1, 1992 to emit toxic air pollutants under 15A NCAC 02Q .0700 to comply with 15A NCAC 02D .1100 shall continue to follow all terms and conditions of the permit issued under 15A NCAC 02Q .0700 and to bring the terminal into compliance with 15A NCAC 02D .1100 according to the terms and conditions of the permit, and shall maintain this permit to emit toxic air pollutants.

(k) The owner or operator of a bulk gasoline terminal shall not load, or allow to be loaded, gasoline into any cargo tank unless the cargo tank has been certified leak tight according to 15A NCAC 02D .0932.

(l) The owner or operator of a bulk gasoline terminal shall have on file at the terminal a copy of the certification test conducted according to 15A NCAC 02D .0932 for each gasoline cargo tank loaded at the terminal.

(m) Emissions of gasoline from degassing of external or internal floating roof tanks at a bulk gasoline terminal shall be collected and controlled by at least 90 percent by weight. Liquid balancing shall not be used to degas gasoline storage tanks at bulk gasoline terminals. Bulk gasoline storage tanks containing not more than 138 gallons of liquid gasoline or the equivalent of gasoline vapor and gasoline liquid are exempted from the degassing requirements if gasoline vapors are vented for at least 24 hours. Documentation of degassing external or internal floating roof tanks shall be made according to 15A NCAC 02D .0903.

(n) The owner or operator of a bulk gasoline terminal shall visually inspect the following for leaks each day that the terminal is both manned and open for business:

(1) the vapor collection system;
(2) the vapor control system; and
(3) each lane of the loading rack while a gasoline cargo tank is being loaded.

In accordance with 15A NCAC 02D .1903, the owner or operator shall maintain records of the visual inspections. If no leaks are found, the owner or operator shall record that no leaks were found. If a leak is found, the owner or operator shall record the information specified in Paragraph (p) of this Rule. The owner or operator shall repair all leaks found according to Paragraph (q) of this Rule.

(o) The owner or operator of a bulk gasoline terminal shall inspect weekly for leaks:

(1) the vapor collection system;
(2) the vapor control system; and
(3) each lane of the loading rack while a gasoline cargo tank is being loaded.

The weekly inspection shall be done using sight, sound, or smell; a meter used to measure volatile organic compounds; or an explosimeter. An inspection using either a meter used to measure volatile organic compounds or an explosimeter shall be conducted every month. If no leaks are found, the owner or operator shall record the date that the inspection was done and that no leaks were found. If a leak is found, the owner or operator shall record the information specified in Paragraph (p) of this Rule. The owner or operator shall repair all leaks found according to Paragraph (q) of this Rule.

(p) For each leak found under Paragraph (n) or (o) of this Rule, the owner or operator of a bulk gasoline terminal shall record:

(1) the date of the inspection;
(2) the findings detailing the location, nature, and severity of each leak;
(3) the corrective action taken;
(4) the date when corrective action was completed; and
(5) any other information that the terminal deems necessary to demonstrate compliance with this Rule.

(q) The owner or operator of a bulk gasoline terminal shall repair all leaks as follows:

(1) The vapor collection hose that connects to the cargo tank shall be repaired or replaced before another cargo tank is loaded at that rack after a leak has been detected originating with the terminal's equipment rather than from the gasoline cargo tank.
(2) All other leaks shall be repaired as expeditiously as possible but no later than 15 days from their detection. If more than 15 days are required to make the repair, the reasons that the repair cannot be made shall be documented, and the leaking equipment shall not be used after the fifteenth day from when the leak detection was found until the repair is made.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. January 1, 2007; April 1, 2003; August 1, 2002; July 1, 1998; July 1, 1996; July 1, 1994; December 1, 1992; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0928 GASOLINE SERVICE STATIONS STAGE I

(a) Definitions. For the purpose of this Rule, the following definitions apply:

(1) "Coaxial vapor recovery system" means the delivery of the gasoline and recovery of vapors occurring through a single coaxial fill tube, which is a tube within a tube. Gasoline is delivered through the inner tube, and vapor is recovered through the annular space between the walls of the inner tube and outer tube.

(2) "Delivery vessel" means cargo tanks used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.

(3) "Dual point vapor recovery system" means the delivery of the product to the stationary storage tank and the recovery of vapors from the stationary storage tank occurring through two separate openings in the storage tank and two separate hoses between the cargo tank and the stationary storage tank.

(4) "Gasoline" means a petroleum distillate having a Reid vapor pressure of four psi or greater.

(5) "Gasoline dispensing facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(6) "Gasoline service station" means any gasoline dispensing facility where gasoline is sold to the motoring public from stationary storage tanks.

(7) "Line" means any pipe suitable for transferring gasoline.

(8) "Motor Vehicle" means every vehicle which is self-propelled and every vehicle designed to run upon the highways which is pulled by a self-propelled vehicle. This term shall not include mopeds or electric assisted bicycles in accordance with G.S. 20-4.01.

(9) "Operator" means any person who leases, operates, controls, or supervises a facility at which gasoline is dispensed.

(10) "Owner" means any person who has legal or equitable title to the gasoline storage tank at a facility.

(11) "Poppeted vapor recovery adaptor" means a vapor recovery adaptor that automatically and immediately closes itself when the vapor return line is disconnected and maintains a tight seal when the vapor return line is not connected.

(12) "Stationary storage tank" means a gasoline storage container that is a permanent fixture.

(13) "Submerged fill pipe" means any fill pipe with a discharge opening that is entirely submerged when the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid, or that is entirely submerged when the level of the liquid is:

(A) six inches above the bottom of the tank if the tank does not have a vapor recovery adaptor; or

(B) 12 inches above the bottom of the tank if the tank has a vapor recovery adaptor. If the opening of the submerged fill pipe is cut at a slant, the distance is measured from the top of the slanted cut to the bottom of the tank.

(14) "Throughput" means the amount of gasoline dispensed at a facility during a calendar month after November 15, 1990.

(b) Applicability. This Rule applies to all gasoline dispensing facilities and gasoline service stations, and to delivery vessels delivering gasoline to a gasoline dispensing facility or gasoline service station.

(c) Exemptions. This Rule does not apply to:

(1) transfers made to storage tanks at gasoline dispensing facilities or gasoline service stations equipped with floating roofs or technology that achieves equivalent or greater emission reductions as a floating roof;

(2) stationary tanks with a capacity of not more than 2,000 gallons that are in place before July 1, 1979, if the tanks are equipped with a permanent or portable submerged fill pipe;

(3) stationary storage tanks with a capacity of not more than 550 gallons that are installed after June 30, 1979, if tanks are equipped with a permanent or portable submerged fill pipe;
(4) stationary storage tanks with a capacity of not more than 2,000 gallons located on a farm or a residence and used to store gasoline for farm equipment or residential use if gasoline is delivered to the tank through a permanent or portable submerged fill pipe. This exemption does not apply in ozone non-attainment areas;
(5) stationary storage tanks at a gasoline dispensing facility or gasoline service station where the combined annual throughput of gasoline at the facility or station does not exceed 50,000 gallons, if the tanks are permanently equipped with submerged fill pipes; or
(6) any tanks used exclusively to test the fuel dispensing meters.

(d) With exceptions stated in Paragraph (c) of this Rule, gasoline shall not be transferred from any delivery vessel into any stationary storage tank unless:
(1) the tank is equipped with a submerged fill pipe, and the vapors displaced from the storage tank during filling are controlled by a vapor control system as described in Paragraph (e) of this Rule;
(2) the vapor control system is connected and operating with a vapor tight connection, and working as designed in accordance with the manufacturer's specifications;
(3) the vapor control system is maintained in accordance with the manufacturer's specifications and the definition of "good operation and maintenance" in 15A NCAC 02D .0602, and all damaged or malfunctioning components or elements of design are repaired, replaced, or modified;
(4) the gauges, meters, or other specified testing devices are maintained in accordance with the manufacturer's specifications and the definition of "good operation and maintenance" in 15A NCAC 02D .0602;
(5) the delivery vessel and vapor collection system comply with 15A NCAC 02D .0932; and
(6) the following records are kept in accordance with 15A NCAC 02D .0903:
(A) the scheduled date for maintenance or the date that a malfunction was detected;
(B) the date the maintenance was performed or the malfunction corrected; and
(C) the component or element of design of the control system repaired, replaced, or modified.

(e) The vapor control system required by Paragraph (d) of this Rule shall include one or more of the following:
(1) a vapor-tight line from the storage tank to the delivery vessel, and:
(A) for a coaxial vapor recovery system, either a poppeted or unpoppeted vapor recovery adaptor;
(B) for a dual point vapor recovery system, a poppeted vapor recovery adaptor; or
(2) a refrigeration-condensation system or equivalent system designed to recover at least 90 percent by weight of the volatile organic compounds in the displaced vapor.

(f) If an unpoppeted vapor recovery adaptor is used pursuant to Part (e)(1)(A) of this Rule, the tank liquid fill connection shall remain covered either with a vapor-tight cap or a vapor return line, except when the vapor return line is being connected or disconnected.

(g) If an unpoppeted vapor recovery adaptor is used pursuant to Part (e)(1)(A) of this Rule, the unpoppeted vapor recovery adaptor shall be replaced with a poppeted vapor recovery adaptor when the tank is replaced or is removed and upgraded.

(h) Where vapor lines from the storage tanks are manifolded, poppeted vapor recovery adapters shall be used. No more than one tank is to be loaded at a time if the manifold vapor lines are size 2.5 inches and smaller. If the manifold vapor lines are 3.0 inches and larger, then two tanks at a time may be loaded.

(i) Vent lines on tanks with Stage I controls shall have pressure release valves or restrictors.

(j) The vapor-laden delivery vessel:
(1) shall be designed and maintained to be vapor-tight during loading and unloading operations and during transport with the exception of normal pressure/vacuum venting as required by the Department of Transportation; and
(2) if it is refilled in North Carolina, shall be refilled only at:
(A) bulk gasoline plants complying with 15A NCAC 02D .0926; or
(B) bulk gasoline terminals complying with 15A NCAC 02D .0927 or .0524.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. July 1, 1996; July 1, 1994; March 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020;

Amended Eff. November 1, 2023.

15A NCAC 02D .0929 PETROLEUM REFINERY SOURCES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. March 1, 1991; December 1, 1989; January 1, 1985;
Repealed Eff. July 1, 1996.

15A NCAC 02D .0930 SOLVENT METAL CLEANING

(a) For the purpose of this Rule, the following definitions apply:
- (1) "Cold cleaning" means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing, or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.
- (2) "Conveyorized degreasing" means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized solvents.
- (3) "Freeboard height" means for vapor degreasers the distance from the top of the vapor zone to the top of the degreaser tank. For cold cleaners, freeboard height means the distance from liquid solvent level in the degreaser tank to the top of the tank.
- (4) "Freeboard ratio" means the freeboard height divided by the width of the degreaser.
- (5) "Open top vapor degreasing" means the batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.
- (6) "Solvent metal cleaning" means the process of cleaning soils from metal surfaces by cold cleaning, open top vapor degreasing, or conveyorized degreasing.

(b) This Rule applies to cold cleaning, open top vapor degreasing, and conveyorized degreasing operations.

(c) The provisions of this Rule shall apply with the following exceptions:
- (1) Open top vapor degreasers with an open area smaller than 10.8 square feet shall be exempt from Subparagraph (e)(3) of this Rule; and
- (2) Conveyorized degreasers with an air/vapor interface smaller than 21.6 square feet shall be exempt from Subparagraph (f)(2) of this Rule.

(d) The owner or operator of a cold cleaning facility shall:
- (1) equip the cleaner with a cover and the cover shall be designed so that it can be easily operated with one hand, if:
  - (A) the solvent volatility is greater than 15 millimeters of mercury or 0.3 pounds per square inch measured at 100°F;
  - (B) the solvent is agitated; or
  - (C) the solvent is heated;
- (2) equip the cleaner with a facility for draining cleaned parts. The drainage facility shall be constructed internally so that parts are enclosed under the cover while draining if the solvent volatility is greater than 32 millimeters of mercury or 0.6 pounds per square inch measured at 100°F. However, the drainage facility may be external for applications where an internal type cannot fit into the cleaning system;
- (3) install one of the following control devices if the solvent volatility is greater than 33 millimeters of mercury or 0.6 pounds per square inch measured at 100°F, or if the solvent is heated above 120°F:
  - (A) freeboard that gives a freeboard ratio greater than or equal to 0.7;
  - (B) water cover if the solvent is insoluble in and heavier than water; or
  - (C) other systems of equivalent control, such as refrigerated chiller or carbon adsorption, approved by the Director;
- (4) provide a permanent, conspicuous label, summarizing the operating requirements;
- (5) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere;
- (6) close the cover whenever parts are not being handled in the cleaner;
- (7) drain the cleaned parts for at least 15 seconds or until dripping ceases; and
- (8) if used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower type spray) at a pressure that does not cause excessive splashing.

(e) With the exception stated in Paragraph (c) of this Rule the owner or operator of an open top vapor degreaser shall:

(1) equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;

(2) provide the following safety switches or devices:

(A) a condenser flow switch and thermostat or other device that prevents heat input if the condenser coolant is either not circulating or too warm;

(B) a spray safety switch or other device that shuts off the spray pump if the vapor level drops more than 10 inches; and

(C) a vapor level control thermostat or other device that prevents heat input when the vapor level rises too high;

(3) install one of the following control devices:

(A) freeboard ratio greater than or equal to 0.75. If the degreaser opening is greater than 10.8 square feet, the cover must be powered;

(B) refrigerated chiller;

(C) enclosed design where the cover or door opens only when the dry part is actually entering or exiting the degreaser; or

(D) carbon adsorption system with ventilation greater than or equal to 50 cubic feet per minute per square foot of air/vapor area, when cover is open, and exhausting less than 25 parts per million of solvent averaged over one complete adsorption cycle;

(4) keep the cover closed at all times except when processing workloads through the degreaser; and

(5) minimize solvent carryout by:

(A) racking parts to allow complete drainage;

(B) moving parts in and out of the degreaser at less than 11 feet per minute;

(C) holding the parts in the vapor zone at least 30 seconds or until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and

(E) allowing parts to dry within the degreaser for at least 15 seconds or until visually dry;

(6) not degrease porous or absorbent materials, such as cloth, leather, wood, or rope;

(7) not occupy more than half of the degreaser's open top area with a workload;

(8) not load the degreaser to the point where the vapor level would drop more than 10 inches when the workload is removed from the vapor zone;

(9) always spray below the vapor level;

(10) repair solvent leaks immediately or shutdown the degreaser;

(11) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere;

(12) not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator;

(13) not use ventilation fans near the degreaser opening, nor provide exhaust ventilation exceeding 65 cubic feet per minute per square foot of degreaser open area, unless necessary to meet OSHA requirements (OSHA is the U.S. Occupational Safety and Health Administration; in North Carolina the N.C. Labor Department has delegation of OSHA programs); and

(14) provide a permanent, conspicuous label, summarizing the operating procedures of Subparagraph (4) through (12) of this Paragraph.

(f) With the exception stated in Paragraph (c) of this Rule, the owner or operator of a conveyorized degreaser shall:

(1) not use workplace fans near the degreaser opening, nor provide exhaust ventilation exceeding 65 cubic feet per minute per square foot of degreaser opening, unless necessary to meet OSHA requirements;

(2) install one of the following control devices:

(A) refrigerated chiller; or

(B) carbon adsorption system with ventilation greater than or equal to 50 cubic feet per minute per square foot of air/vapor area, when downtime covers are open, and exhausting less than 25 parts per million of solvent by volume averaged over a complete adsorption cycle;

(3) equip the cleaner with equipment, such as a drying tunnel or rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor;
(4) provide the following safety switches or devices:
    (A) a condenser flow switch and thermostat or other device that prevents heat input if the condenser coolant is either not circulating or too warm;
    (B) a spray safety switch or other device that shuts off the spray pump or the conveyor if the vapor level drops more than 10 inches; and
    (C) a vapor level control thermostat or other device that prevents heat input when the vapor level rises too high;
(5) minimize openings during operation so that entrances and exits will silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than four inches or less than 10 percent of the width of the opening;
(6) provide downtime covers for closing off the entrance and exit during shutdown hours;
(7) minimize carryout emissions by:
    (A) racking parts for best drainage; and
    (B) maintaining the vertical conveyor speed at less than 11 feet per minute;
(8) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere;
(9) repair solvent leaks immediately, or shut down the degreaser;
(10) not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator; and
(11) place downtime covers over entrances and exits or conveyorized degreasers immediately after the conveyors and exhausts are shutdown and not remove them until just before start-up.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1979;
Amended Eff. March 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0931 CUTBACK ASPHALT

(a) For the purpose of this Rule, the following definitions apply:
(1) "Asphalt" means a dark-brown to black cementitious material, solid, semisolid, or liquid in consistency, in which the predominating constituents are bitumens that occur in nature as such or that are obtained as residue in refining petroleum.
(2) "Cutback asphalt" means asphalt cement that has been liquefied by blending with petroleum solvents or diluents. Upon exposure to atmospheric conditions, the diluents evaporate, leaving the asphalt cement to perform its function.
(3) "Penetrating prime coat" means an application of low-viscosity liquid asphalt to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind it to the overlying asphalt course. It also reduces the necessity of maintaining an untreated base course prior to placing the asphalt pavement.

(b) This Rule applies to the manufacture and use of cutback asphalts for the purpose of paving or maintaining roads, highways, streets, parking lots, driveways, curbs, sidewalks, airfields, such as runways, taxiways, and parking aprons, recreational facilities, such as tennis courts, playgrounds, and trails, and other similar structures.

(c) Cutback asphalt shall not be manufactured, mixed, stored, used, or applied except where:
(1) long-life, of one month or more, stockpile storage is necessary;
(2) the use or application at ambient temperatures less than 50°F, as measured at the nearest National Weather Service Field Local Office or Federal Aviation Administration Surface Weather Observation Station, is necessary;
(3) the cutback asphalt is to be used solely as a penetrating prime coat; or
(4) the user can demonstrate to the Director that there are no volatile organic compound emissions under conditions of normal use.

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

Eff. July 1, 1979;
Amended Eff. December 1, 1989; January 1, 1985; June 1, 1980;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0932 GASOLINE CARGO TANKS AND VAPOR COLLECTION SYSTEMS

(a) For the purposes of this Rule, the following definitions apply:

(1) "Bottom filling" means the filling of a cargo tank or stationary storage tank through an opening flush with the tank bottom.

(2) "Bulk gasoline plant" means a gasoline storage and distribution facility with an average daily throughput of less than 20,000 gallons of gasoline and that typically receives gasoline from bulk terminals by cargo tank transport, stores it in tanks, and subsequently dispenses it via account cargo tanks to local farms, businesses, and service stations.

(3) "Bulk gasoline terminal" means:

(A) a pipeline breakout station of an interstate oil pipeline facility; or

(B) a gasoline storage facility that typically receives gasoline from refineries primarily by pipeline, ship, or barge; delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by cargo tank; and has an average daily throughput of more than 20,000 gallons of gasoline.

(4) "Cargo tank" means the storage vessels of freight trucks or trailers used to transport gasoline from sources of supply to stationary storage tanks of bulk gasoline terminals, bulk gasoline plants, gasoline dispensing facilities, and gasoline service stations.

(5) "Cargo tank testing facility" means any facility complying with registration in 49 CFR Part 107, Subpart F.

(6) "Cargo tank vapor collection equipment" means any piping, hoses, and devices on the cargo tank used to collect and route gasoline vapors in the tank to or from the bulk gasoline terminal, bulk gasoline plant, gasoline dispensing facility, or gasoline service station vapor control system or vapor balance system.

(7) "Gasoline" means any petroleum distillate having a Reid Vapor Pressure (RVP) of 4.0 psi or greater.

(8) "Gasoline dispensing facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks. For the purposes of this definition, "motor vehicle" has the meaning defined in 15A NCAC 02D .0928,

(9) "Gasoline service station" means any gasoline dispensing facility where gasoline is sold to the motoring public from stationary storage tanks.

(10) "Vapor balance system" means a combination of pipes or hoses that create a closed system between the vapor spaces of an unloading tank and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.

(11) "Vapor collection system" means a vapor balance system or any other system used to collect and control emissions of volatile organic compounds.

(b) This Rule applies to gasoline cargo tanks that are equipped for vapor collection and to vapor control systems at bulk gasoline terminals, bulk gasoline plants, gasoline dispensing facilities, and gasoline service stations equipped with vapor balance or vapor control systems.

(c) For cargo tanks, the following requirements shall apply:

(1) Gasoline cargo tanks and their vapor collection systems shall be tested annually by a cargo tank testing facility. The facility shall follow the test procedure as defined by 15A NCAC 02D .2615 to certify the gasoline cargo tank leak tight. The gasoline cargo tank shall not be used unless it is certified leak tight.

(2) Each gasoline cargo tank that has been certified leak tight according to Subparagraph (c)(1) of this Rule shall display a sticker near the Department of Transportation certification plate required by 49 CFR 180.415.

(3) There shall be no liquid leaks from any gasoline cargo tank.

(4) Any cargo tank with a leak equal to or greater than 100 percent of the lower explosive limit, as detected by a combustible gas detector using the test procedure described in 15A NCAC 02D .2615 shall not be used beyond 15 days after the leak has been discovered, unless the leak has been repaired and the cargo tank has been certified to be leak tight according to Subparagraph (c)(1) of this Rule.

(5) The owner or operator of a gasoline cargo tank with a vapor collection system shall maintain records of all leak testing and repairs. The records shall identify the gasoline cargo tank, the date of the test or repair, and, if applicable, the type of repair and the date of retest. The records of leak tests shall include:
   (A) the name, address, and telephone number of cargo tank testing facility performing the leak test;
   (B) the name and signature of the individual performing the leak test;
   (C) the name and address of the owner of the tank;
   (D) the identification number of the tank;
   (E) the documentation of tests performed including the date and summary of results;
   (F) the continued qualification statement and returned to service status; and
   (G) a list or description of identified corrective repairs to the tank. If none are performed then the report shall state "no corrective repairs performed."

(6) A copy of the most recent leak testing report shall be kept with the cargo tank. The owner or operator of the cargo tank shall also file a copy of the most recent leak testing report with each bulk gasoline terminal that loads the cargo tank. The owner or operator shall maintain records for at least two years after the date of the testing or repair and make copies of such records available to the Director upon written request.

(d) For bulk gasoline terminals and bulk gasoline plants equipped with vapor balance or vapor control systems, the following requirements shall apply:

(1) The vapor collection system and vapor control system shall be designed and operated to prevent gauge pressure in the cargo tank from exceeding 18 inches of water and to prevent a vacuum of greater than six inches of water.

(2) During loading and unloading operations there shall be:
   (A) no vapor leakage from the vapor collection system such that a reading equal to or greater than 100 percent of the lower explosive limit at one inch around the perimeter of each potential leak source as detected by a combustible gas detector using the test procedure described in 15A NCAC 02D .2615; and
   (B) no liquid leaks.

(3) If a leak is discovered that exceeds the limit in Subparagraph (d)(2) of this Rule:
   (A) For bulk gasoline plants, the vapor collection system or vapor control system shall not be used beyond 15 days after the leak has been discovered, unless the leak has been repaired and the system has been retested and found to comply with Subparagraph (d)(2) of this Rule;
   (B) For bulk gasoline terminals, the vapor collection system or vapor control system shall be repaired following the procedures in 15A NCAC 02D .0927.

(4) The owner or operator of a vapor collection system at a bulk gasoline plant or a bulk gasoline terminal shall test, according to Rule 15A NCAC 02D .0912, the vapor collection system at least once per year. If after two complete annual checks no more than 10 leaks are found, the Director shall allow less frequent monitoring. If more than 20 leaks are found, the Director shall require the frequency of monitoring be increased.

(5) The owner or operator of vapor control systems at bulk gasoline terminals, bulk gasoline plants, gasoline dispensing facilities, and gasoline service stations equipped with vapor balance or vapor control systems shall maintain records of all certification testing and repairs. The records shall identify each vapor collection system, or vapor control system; the date of the test or repair; and, if applicable, the type of repair and the date of retest.

History Note: *Authority G.S. 143-215.3(a)(1), (a)(4); 143-215.107; 143-215.66;*
Eff. July 1, 1980;
Amended Eff. August 1, 2008; June 1, 2008; January 1, 2007; April 1, 2003; August 1, 2002; July 1, 1994; December 1, 1989; January 1, 1985;
Readopted Eff. October 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0933 PETROLEUM LIQUID STORAGE IN EXTERNAL FLOATING ROOF TANKS

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Condensate" means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure and remains liquid at standard conditions.
(2) "Crude oil" means a naturally occurring mixture consisting of hydrocarbons or sulfur, nitrogen or oxygen derivatives of hydrocarbons or mixtures thereof that is a liquid in the reservoir at standard conditions.
(3) "Custody transfer" means the transfer of produced crude oil or condensate, after processing or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.
(4) "External floating roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck that rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
(5) "Internal floating roof" means a cover or roof in a fixed roof tank that rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
(6) "Liquid-mounted seal" means a primary seal mounted so the bottom of the seal covers the liquid surface between the tank shell and the floating roof.
(7) "Petroleum liquids" means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.
(8) "Vapor-mounted seal" means a primary seal mounted so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank shell, the liquid surface, and the floating roof.

(b) This Rule applies to all external floating roof tanks with capacities greater than 950 barrels containing petroleum liquids whose true vapor pressure exceed 1.52 pounds per square inch absolute.

(c) This Rule does not apply to petroleum liquid storage vessels:
(1) that have external floating roofs that have capacities less than 10,000 barrels and that are used to store produced crude oil and condensate prior to custody transfer;
(2) that have external floating roofs and that store waxy, heavy-pour crudes;
(3) that have external floating roofs, and that contain a petroleum liquid with a true vapor pressure less than 4.0 pounds per square inch absolute; and:
(A) the tanks are of welded construction; and
(B) the primary seal is a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted filled type seal, or any other closure device of demonstrated equivalence; or
(4) that have fixed roofs with or without internal floating roofs.

(d) With the exceptions stated in Paragraph (c) of this Rule, an external floating roof tank subject to this Rule shall not be used unless:
(1) The tank has:
(A) a continuous secondary seal extending from the floating roof to the tank wall, known as a rim-mounted secondary seal;
(B) a metallic-type shoe primary seal and a secondary seal from the top of the shoe seal to the tank wall, known as a shoe-mounted secondary seal; or
(C) a closure or other control device demonstrated to have an efficiency equal to or greater than that required under Part (A) or (B) of this Subparagraph;
(2) The seal closure devices meet the following requirements:
(A) There shall be no visible holes, tears, or other openings in the seal or seal fabric;
(B) The seal shall be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and
(C) For vapor mounted primary seals, any gaps exceeding 0.125 inch in width between the secondary seal and the tank wall shall not exceed 1.0 square inch per foot of tank diameter;
(3) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:
(A) provided with a projection below the liquid surface; and
(B) equipped with covers, seals, or lids that remain in a closed position at all times except when in actual use;

(4) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
(5) Rim vents are set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting;
(6) Any emergency roof drains are provided with slotted membrane fabric covers or equivalent covers that cover at least 90 percent of the area at the opening;
(7) Planned routine visual inspections to verify the conditions of the seal are conducted once per month;
(8) For tanks equipped with a vapor-mounted primary seal, the secondary seal gap measurements are made annually in accordance with Paragraph (e) of this Rule; and
(9) Records are maintained pursuant to 15A NCAC 02D .0903, including:
    (A) reports of the results of inspections conducted under Subparagraphs (7) and (8) of this Paragraph;
    (B) a record of the average monthly storage temperature and the true vapor pressures or Reid vapor pressures of the petroleum liquids stored; and
    (C) records of the throughput quantities and types of petroleum liquids for each storage vessel.

(e) The secondary seal gap area shall be determined by measuring the length and width of the gaps around the entire circumference of the secondary seal. Only gaps equal to or greater than 0.125 inch shall be used in computing the gap area. The area of the gaps shall be accumulated to determine compliance with Part (d)(2)(C) of this Rule.
(f) The owner or operator of a petroleum liquid storage vessel with an external floating roof that is not equipped with a secondary seal or approved alternative and contains a petroleum liquid with a true vapor pressure greater than 1.0 pound per square inch shall maintain records of the average monthly storage temperature, the type of liquid, throughput quantities, and the maximum true vapor pressure for all petroleum liquids with a true vapor pressure greater than 1.0 pound per square inch.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1980;
Amended Eff. June 1, 2004; July 1, 1994; March 1, 1991; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0934 COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1980;
Amended Eff. July 1, 1996; July 1, 1991; December 1, 1989; January 1, 1985;
Repealed Eff. September 1, 2010.

15A NCAC 02D .0935 FACTORY SURFACE COATING OF FLAT WOOD PANELING

(a) For the purpose of this Rule, the following definitions shall apply:
(1) "Flat wood paneling coatings" means wood paneling product that are any interior, exterior, or tileboard (class I hardboard) panel to which a protective, decorative, or functional material or layer has been applied.
(2) "Hardboard" is a panel manufactured primarily from inter felted lignocellulosic fibers that are consolidated under heat and pressure in a hot-press.
(3) "Tileboard" means a premium interior wall paneling product made of hardboard that is used in high moisture area or areas of the home.

(b) This Rule applies to each flat wood paneling coatings source whose volatile organic compounds emissions meet the threshold established in 15A NCAC 02D .0902(b) at the facilities with flat wood paneling coating applications for the following products:
(1) class II finishes on hardboard panels;
(2) exterior siding;
(3) natural finish hardwood plywood panels;
(4) printed interior panels made of hardwood, plywood, and thin particleboard; and
(5) tileboard made of hardboard.

(c) Emissions of volatile organic compounds from any facility finished flat wood product operation subject to this Rule shall not exceed 2.1 pounds of volatile organic compounds per gallon material, excluding water and exempt compounds or 2.9 pounds of volatile organic compounds per gallon solids.
(d) EPA Method 24 of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coating materials used at surface coating of flat wood paneling facilities, unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.
(e) Any facility meeting applicability requirements of Paragraph (b) of this Rule that has chosen to use add-on controls for flat wood paneling coating operation rather than the emission limits established in Paragraph (c) of this Rule shall install control equipment with an overall control efficiency of 90 percent or use a combination of coating and add-on control equipment on a flat wood paneling coating operation to meet limits established in Paragraph (c) of this Rule.
(f) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1980;
Amended Eff. September 1, 2010; July 1, 1996; December 1, 1989; January 1, 1985;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0936 GRAPHIC ARTS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1980;
Amended Eff. December 1, 1993; December 1, 1989; January 1, 1985; June 1, 1981;
Repealed Eff. September 1, 2010.

15A NCAC 02D .0937 MANUFACTURE OF PNEUMATIC RUBBER TIRES
(a) For the purpose of this Rule, the following definitions shall apply:
(1) "Bead dipping" means the dipping of an assembled tire bead into a solvent-based cement.
(2) "Green tires" means assembled tires before molding and curing.
(3) "Green tire spraying" means spray coating release compounds inside and outside of green tires to remove air during the molding process and prevent the tire from sticking to the mold after curing completion.
(4) "Pneumatic rubber tire manufacture" means the production of passenger car tires, light and medium truck tires, and other tires manufactured on assembly lines.
(5) "Tread end cementing" means the application of a solvent-based cement to the tire tread ends.
(6) "Undertread cementing" means the application of a solvent-based cement to the underside of a tire tread.
(b) This Rule applies to undertread cementing, tread end cementing, bead dipping, and green tire spraying operations of pneumatic rubber tire manufacturing.
(c) Emissions of volatile organic compounds from any pneumatic rubber tire manufacturing plant shall not exceed:
(1) 25 grams of volatile organic compounds per tire from each undertread cementing operation;
(2) 4.0 grams of volatile organic compounds per tire from each tread end cementing operation;
(3) 1.9 grams of volatile organic compounds per tire from each bead dipping operation; or
(4) 24 grams of volatile organic compounds per tire from each green tire spraying operation.
(d) If the total volatile organic compound emissions from all undertread cementing, tread end cementing, bead dipping, and green tire spraying operations at a pneumatic rubber tire manufacturing facility does not exceed 50 grams per tire, Paragraph (c) of this Rule shall not apply.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1980;
Amended Eff. July 1, 1996; December 1, 1989; January 1, 1985.
Readopted Eff. November 1, 2020.

15A NCAC 02D .0938 PERCHLOROETHYLENE DRY CLEANING SYSTEM

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

Eff. July 1, 1980;
Amended Eff. December 1, 1989; January 1, 1985;
Repealed Eff. July 1, 1998.

15A NCAC 02D .0939 DETERMINATION OF VOLATILE ORGANIC COMPOUND EMISSIONS
15A NCAC 02D .0940 DETERMINATION OF LEAK TIGHTNESS AND VAPOR LEAKS
15A NCAC 02D .0941 ALTERNATIVE METHOD FOR LEAK TIGHTNESS
15A NCAC 02D .0942 DETERMINATION OF SOLVENT IN FILTER WASTE

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.68; 143-215.107(a)(5);*
Eff. July 1, 1980;
Amended Eff. December 1, 1989; July 1, 1988; May 1, 1985; January 1, 1985;
Repealed Eff. June 1, 2008.

15A NCAC 02D .0943 SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING

(a) For the purposes of this Rule, the following definitions shall apply:

(1) "Closed vent system" means a system that is not open to the atmosphere and is composed of piping, connections, and if necessary, flow inducing devices that transport gas or vapor from a fugitive emission source to an enclosed combustion device or vapor recovery system.

(2) "Enclosed combustion device" means any combustion device that is not open to the atmosphere such as a process heater or furnace, but not a flare.

(3) "Fugitive emission source" means each pump, valve, safety/relief valve, open-ended valve, flange or other connector, compressor, or sampling system.

(4) "In gas vapor service" means that the fugitive emission source contains process fluid that is in the gaseous state at operating conditions.

(5) "In light liquid service" means that the fugitive emission source contains a liquid having:

(A) a vapor pressure of one or more of the components greater than 0.3 kilopascals at 20 degrees C; and

(B) a total concentration of the pure components having a vapor pressure greater than 0.3 kilopascals at 20 degrees C equal to or greater than 10 percent by weight, and the fluid is a liquid at operating conditions.

(6) "Open-ended valve" means any valve, except safety/relief valves, with one side of the valve seat in contact with process fluid and one side that is open to the atmosphere, either directly or through open piping.

(7) "Polymer manufacturing" means the industry that produces, as intermediates or final products, polyethylene, polypropylene, or polystyrene.

(8) "Process unit" means equipment assembled to produce, as intermediates or final products, polyethylene, polypropylene, polystyrene, or one or more of the chemicals listed in 40 CFR 60.489. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the final product.

(9) "Quarter" means a three-month period. The first quarter concludes at the end of the last full month during the 180 days following initial start-up.

(10) "Synthetic organic chemical manufacturing" means the industry that produces, as intermediates or final products, one or more of the chemicals listed in 40 CFR Part 60.489.

(b) This Rule applies to synthetic organic chemicals manufacturing facilities and polymer manufacturing facilities.

(c) The owner or operator of a synthetic organic chemical manufacturing facility or a polymer manufacturing facility shall not cause, allow, or permit:

(1) any liquid leakage of volatile organic compounds; or

(2) any gaseous leakage of volatile organic compound of 10,000 ppm or greater from any fugitive emission source.

The owner or operator of these facilities shall control emissions of volatile organic compounds from open-ended valves as described in Paragraph (f) of this Rule.

(d) The owner or operator shall visually inspect each week every pump in light liquid service. If there are indications of liquid leakage, the owner or operator shall repair the pump within 15 days after detection, except as provided in Paragraph (k) of this Rule.

(e) Using procedures in 15A NCAC 02D .2600, the owner or operator shall monitor each pump, valve, compressor and safety/relief valve in gas/vapor service or in light liquid service for gaseous leaks at least once each quarter. The owner or operator shall monitor safety/relief valves after each overpressure relief to ensure the valve has properly reseated. If a volatile organic compound concentration of 10,000 ppm or greater is measured, the owner or operator shall repair the component within 15 days after detection, except as provided in Paragraph (k) of this Rule. Exceptions to the quarterly monitoring frequency are provided for in Paragraphs (h), (i), and (j) of this Rule.
(f) The owner or operator shall install on each open-ended valve:

(1) a cap;
(2) a blind flange;
(3) a plug; or
(4) a second closed valve that shall remain attached to seal the open end at all times except during operations requiring process fluid flow through the opened line.

(g) If any fugitive emission source appears to be leaking on the basis of sight, smell, or sound, it shall be repaired within 15 days after detection, except as provided in Paragraph (k) of this Rule.
(h) If after four consecutive quarters of monitoring, no more than two percent of the valves in gas/vapor service or in light liquid service are found leaking more than 10,000 ppm of volatile organic compounds, then the owner or operator may monitor valves for gaseous leaks only every third quarter. If the number of these valves leaking more than 10,000 ppm of volatile organic compounds remains at or below two percent, these valves need only be monitored for gaseous leaks every third quarter. However, if more than two percent of these valves are found leaking more than 10,000 ppm of volatile organic compounds, they shall be monitored every quarter until four consecutive quarters are monitored that have no more than two percent of these valves leaking more than 10,000 ppm of volatile organic compounds.
(i) When a fugitive emission source is unsafe to monitor because of extreme temperatures, pressures, or other reasons, the owner or operator of the facility shall monitor the fugitive emission source only when process conditions are such that the fugitive emission source is not operating under extreme conditions. The Director may allow monitoring of these fugitive emission sources less frequently than each quarter, provided they are monitored at least once per year.
(j) Any fugitive emission source more than 12 feet above a permanent support surface shall be monitored once per year.
(k) The repair of a fugitive emission source may be delayed until the next turnaround if the repair is technically infeasible without a complete or partial shutdown of the process unit.
(l) The owner or operator of the facility shall maintain records in accordance with 15A NCAC 02D .0903, which shall include:

(1) an identification of the source being inspected or monitored;
(2) the dates of inspection or monitoring;
(3) the results of inspection or monitoring;
(4) the action taken if a leak was detected;
(5) the type of repair made and when it was completed; and
(6) if the repair was delayed, an explanation as to why.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. May 1, 1985;
Amended Eff. June 1, 2008; March 1, 1991; December 1, 1989;
Readopted Eff. November 1, 2020;
Amended Eff. October 1, 2022.

15A NCAC 02D .0944 MANUFACTURE OF POLYETHYLENE: POLYPROPYLENE AND POLYSTYRENE

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "By-product and diluent recovery operation" means the process that separates the diluent from the by-product (atactic) and purifies and dries the diluent for recycle.
(2) "Continuous mixer" means the process that mixes polymer with anti-oxidants.
(3) "Decanter" means the process that separates the diluent/crude product slurry from the alcohol-water solution by decantation.
(4) "Ethylene recycle treater" means the process that removes water and other impurities from the recovered ethylene.

(5) "High-density polyethylene plants using liquid phase slurry processes" means plants that produce high-density polyethylene in which the product, polyethylene, is carried as a slurry in a continuous stream of process diluent, usually pentane or isobutane.
(6) "Neutralizer" means the process that removes catalyst residue from the diluent/crude product slurry.
(7) "Polypropylene plants using liquid phase process" means plants that produce polypropylene in which the product, polypropylene, is carried as a slurry in a continuous stream of process diluent, usually hexane.
(8) "Polystyrene plants using continuous processes" means plants that produce polystyrene in which the product, polystyrene, is transferred in a continuous stream in a molten state.
(9) "Product devolatilizer system" means the process that separates unreacted styrene monomer and by products from the polymer melt.
(10) "Reactor" means the process in which the polymerization takes place.

(b) This Rule applies to:
(1) polypropylene plants using liquid phase processes;
(2) high-density polyethylene plants using liquid phase slurry processes; and
(3) polystyrene plants using continuous processes.

(c) For polypropylene plants subject to this Rule, the emissions of volatile organic compounds shall be reduced by 98 percent by weight or to 20 ppm, whichever is less stringent, from:
(1) reactor vents;
(2) decanter vents;
(3) neutralizer vents;
(4) by-product and diluent recovery operation vents;
(5) dryer vents; and
(6) extrusion and pelletizing vents.

(d) For high-density polyethylene plants subject to this Rule, the emissions of volatile organic compounds shall be reduced by 98 percent by weight or to 20 ppm, whichever is less stringent, from:
(1) ethylene recycle treater vents;
(2) dryer vents; and
(3) continuous mixer vents.

(e) For polystyrene plants subject to this Rule, the emissions of volatile organic compounds shall not exceed 0.24 pounds per ton of product from the product devolatilizer system.

(f) If flares are used to comply with this Rule, all of the following conditions shall be met:
(1) visible emissions shall not exceed five minutes in any two-hour period;
(2) a flame in the flare shall be present;
(3) if the flame is steam-assisted or air-assisted, the net heating value shall be at least 300 Btu per standard cubic foot. If the flame is non-assisted, the net heating value shall be at least 200 Btu per standard cubic foot; and
(4) if the flare is steam-assisted or non-assisted, the exit velocity shall be no more than 60 feet per second. If the flare is air-assisted, the exit velocity shall be no more than (8.706 + 0.7084 HT) feet per second, where HT is the net heating value.

A flare that meets the conditions given in Subparagraphs (1) through (4) of this Paragraph are presumed to achieve 98 percent destruction of volatile organic compounds by weight. If the owner or operator of the source chooses to use a flare that fails to meet one or more of these conditions, he or she shall demonstrate to the Director that the flare shall destroy at least 98 percent of the volatile organic compounds by weight. To determine if the specifications for the flare are being met, the owner or operator of a source using the flare to control volatile organic compound emissions shall install, operate, and maintain necessary monitoring instruments and shall keep records as required by 15A NCAC 02D .0903.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. May 1, 1985;
Readopted Eff. November 1, 2020;
Amended Eff. October 1, 2022.

15A NCAC 02D .0945 PETROLEUM DRY CLEANING

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Cartridge filter" means perforated canisters containing filtration paper or filter paper and activated carbon that are used in a pressurized system to remove solid particles and fugitive dyes from soil-laden solvent, together with the piping and ductwork used in the installation of this device.

(2) "Containers and conveyors of solvent" means piping, ductwork, pumps, storage tanks, and other ancillary equipment that are associated with the installation and operation of washers, dryers, filters, stills, and settling tanks.

(3) "Dry cleaning" means a process for the cleaning of textiles and fabric products in which articles are washed in a non-aqueous solution or solvent and then dried by exposure to a heated air stream.

(4) "Dryer" means a machine used to remove petroleum solvent from articles of clothing or other textile or leather goods, after washing and removing of excess petroleum solvent, together with the piping and ductwork used in the installation of this device.

(5) "Perceptible leaks" means any petroleum solvent vapor or liquid leaks that are visible, such as pools or droplets of liquid, open containers of solvent, or solvent laden waste standing open to the atmosphere, or bubble after application of a soap solution.

(6) "Petroleum solvent" means organic material produced by petroleum distillation comprising of a hydrocarbon range of eight to 12 carbon atoms per organic molecule that exists as a liquid under standard conditions.

(7) "Petroleum solvent dry cleaning" means a dry cleaning facility that uses petroleum solvent in a combination of washers, dryers, filters, stills, and settling tanks.

(8) "Settling tank" means a container that gravimetrically separates oils, grease, and dirt from petroleum solvent, together with the piping and ductwork used in the installation of the device.

(9) "Solvent filter" means a discrete solvent filter unit containing a porous medium which traps and removes contaminants from petroleum solvent, together with the piping and ductwork used in the installation of this device.

(10) "Solvent recovery dryer" means a class of dry cleaning dryers that employs a condenser to condense and recover solvent vapors evaporated in a closed-loop stream of heated air, together with the piping and ductwork used in the installation of this device.

(11) "Still" means a device used to volatilize, separate, and recover petroleum solvent from contaminated solvent, together with the piping and ductwork used in the installation of this device.

(12) "Washer" means a machine that agitates fabric articles in a petroleum solvent bath and spins the articles to remove the solvent, together with the piping and ductwork used in the installation of this device.

(b) This Rule applies to petroleum solvent washers, dryers, solvent filters, settling tanks, stills, and other containers and conveyors of petroleum solvent that are used in petroleum solvent dry cleaning facilities that consume 32,500 gallons or more of petroleum solvent annually.

(c) The owner or operator of a petroleum solvent dry cleaning dryer subject to this Rule shall:

(1) limit emissions of volatile organic compounds to the atmosphere to an average of 3.5 pounds of volatile organic compounds per 100 pounds dry weight of articles dry cleaned; or

(2) install and operate a solvent recovery dryer in a manner such that the dryer remains closed and the recovery phase continues until a final recovered solvent flow rate of 50 milliliters per minute is attained.

(d) The owner or operator of a petroleum solvent filter subject to this Rule shall:

(1) reduce the volatile organic compound content in all filter wastes to 1.0 pound or less per 100 pounds dry weight of articles dry cleaned, before disposal and exposure to the atmosphere; or

(2) install and operate a cartridge filter and drain the filter cartridges in their sealed housings for eight hours or more before their removal.

(e) The owner or operator of a petroleum solvent dry cleaning facility subject to this Rule shall inspect the facility every 15 days and shall repair all perceptible leaks within 15 business days after identifying the sources of the leaks. If the necessary repair parts are not on hand, the owner or operator shall order these parts within 15 business days and repair the leaks no later than 15 business days following the arrival of the necessary parts. The owner or operator shall maintain records, in accordance with 15A NCAC 02D .0903, of when the inspections were performed, what equipment was inspected, leaks found, repairs made, and when the repairs were completed.

(f) To determine compliance with Subparagraph (c)(1) of this Rule, the owner or operator shall use the appropriate test method in 15A NCAC 02D .2613(g) and shall:

(1) field calibrate the flame ionization analyzer with propane standards;

(2) determine in a laboratory the ratio of the flame ionization analyzer response to a given parts per million by volume concentration of propane to the response to the same parts per million concentration of the volatile organic compounds to be measured;
(3) determine the weight of volatile organic compounds vented to the atmosphere by:
(A) multiplying the ratio determined in Subparagraph (2) of this Paragraph by the measured concentration of volatile organic compound gas, as propane, as indicated by the flame ionization analyzer response output record;
(B) converting the parts per million by volume value calculated in Part (A) of this Subparagraph into a mass concentration value for the volatile organic compounds present; and
(C) multiplying the mass concentration value calculated in Part (B) of this Subparagraph by the exhaust flow rate; and
(4) calculate and record the dry weight of articles dry cleaned. The test shall be repeated for normal operating conditions that encompass at least 30 dryer loads that total not less than 4,000 pounds dry weight and represent a normal range of variation in fabrics, solvents, load weights, temperatures, flow rates, and process deviations.

(g) To determine compliance with Subparagraph (c)(2) of this Rule, the owner or operator shall verify that the flow rate of recovered solvent from the solvent recovery dryer at the termination of the recovery phase is no greater than 50 milliliters per minute. This one-time procedure shall be conducted for a duration of not less than two weeks during which not less than 50 percent of the dryer loads shall be monitored for their final recovered solvent flow rate. Near the end of the recovery cycle, the flow of recovered solvent shall be diverted to a graduated cylinder. The cycle shall continue until the minimum flow of solvent is 50 milliliters per minute. The type of articles cleaned and the total length of the cycle shall be recorded and retained in accordance with 15A NCAC 02D .0903.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. May 1, 1985;
Amended Eff. June 1, 2008;
Readopted Eff. November 1, 2020;
Amended Eff. October 1, 2022.

15A NCAC 02D .0946 COMPLIANCE SCHEDULE: GASOLINE HANDLING

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. May 1, 1990;
Repealed Eff. April 1, 1997.

15A NCAC 02D .0947 MANUFACTURE OF SYNTHESIZED PHARMACEUTICAL PRODUCTS

(a) For the purpose of this Rule, the following definitions shall apply:
(1) "Production equipment exhaust system" means a device for collecting and directing out of the work area fugitive emissions of volatile organic compounds from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting workers from excessive exposure to volatile organic compounds.
(2) "Synthesized pharmaceutical products manufacturing" means manufacture of pharmaceutical products by chemical synthesis.

(b) This Rule applies to synthesized pharmaceutical products manufacturing facilities.

(c) The owner or operator of a synthesized pharmaceutical products manufacturing facility shall control the emissions of volatile organic compounds from:
(1) reactors, distillation operations, crystallizers, centrifuges, and vacuum dryers that have the potential to emit 15 pounds per day or more of volatile organic compounds with surface condensers that meet the requirements of Paragraph (e) of this Rule or equivalent controls;
(2) air dryers and production equipment exhaust system by reducing emissions of volatile organic compounds:
(A) by 90 percent if they are 330 pounds per day or more; or
(B) to 33 pounds per day if they are less than 330 pounds per day;
(3) storage tanks by:

(A) providing a vapor balance system or equivalent control that is at least 90 percent effective in reducing emissions from truck or railcar deliveries to storage tanks with capacities greater than 2,000 gallons storing volatile organic compounds with a vapor pressure greater than 4.1 pounds per square inch at 68° F; and

(B) installing pressure/vacuum conservation vents, which shall be set at plus or minus 0.8 inches of water unless a more effective control system is used, on all storage tanks that store volatile organic compounds with a vapor pressure greater than 1.5 pounds per square inch at 68°F;

(4) centrifuges containing volatile organic compounds, rotary vacuum filters processing liquid containing volatile organic compounds, and other filters having an exposed liquid surface where the liquid contains volatile organic compounds by enclosing those centrifuges and filters that contain or process volatile organic compounds with a vapor pressure of 0.5 pounds per square inch or more at 68°F; and

(5) in-process tanks by installing covers, which shall remain closed except when production, sampling, maintenance, or inspection procedures require operator access.

(d) The owner or operator of a synthesized pharmaceutical products manufacturing facility shall repair as expeditiously as possible all leaks from which liquid volatile organic compounds can be seen running or dripping. This repair shall take place at least within 15 days after which said leak is discovered, unless the leaking component cannot be repaired before the process is shutdown, in which case the leaking component must be repaired before the process is restarted.

(e) If surface condensers are used to comply with Subparagraph (c)(1) of this Rule, the condenser outlet temperature shall not exceed:

(1) -13°F when condensing volatile organic compounds of vapor pressure greater than 5.8 pounds per square inch at 68°F;

(2) 5°F when condensing volatile organic compounds of vapor pressure greater than 2.9 pounds per square inch at 68°F;

(3) 32°F when condensing volatile organic compounds of vapor pressure greater than 1.5 pounds per square inch at 68°F;

(4) 50°F when condensing volatile organic compounds of vapor pressure greater than 1.0 pounds per square inch at 68°F; or

(5) 77°F when condensing volatile organic compounds of vapor pressure greater than 0.5 pounds per square inch at 68°F.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1994;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0948 VOC EMISSIONS FROM TRANSFER OPERATIONS

(a) This Rule applies to operations transferring volatile organic compounds from a storage tank to cargo tanks or railroad tank cars not specified by 15A NCAC 02D .0926, .0927, or .0928.

(b) The owner or operator of a facility to which this Rule applies shall not load in any one day more than 20,000 gallons of volatile organic compounds with a vapor pressure of 1.5 pounds per square inch or greater under actual conditions into any cargo tank or railroad tank car from any loading operation unless the loading uses submerged loading through boom loaders extending down into the compartment being loaded or by other methods at least as efficient based on source testing or engineering calculations.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1994;
Amended Eff. July 1, 2000;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0949 STORAGE OF MISCELLANEOUS VOLATILE ORGANIC COMPOUNDS

(a) This Rule applies to the storage of volatile organic compounds in stationary tanks, reservoirs, or other containers with a capacity greater than 50,000 gallons not regulated by 15A NCAC 02D .0925 or .0933.

(b) The owner or operator of any source shall not place, store, or hold in any stationary tank, reservoir, or other container with a capacity greater than 50,000 gallons, any liquid volatile organic compound with a vapor pressure of

1.5 pounds per square inch absolute or greater under actual storage conditions unless such tank, reservoir, or other container:

(1) is a pressure tank capable of maintaining working pressures to prevent vapor gas loss into the atmosphere at all times; or

(2) is designed and equipped with one of the following vapor loss control devices:

(A) a floating pontoon, double deck type floating roof, or internal pan type floating roof equipped with closure seals to enclose any space between the cover's edge and compartment wall. This control equipment shall not be permitted for volatile organic compounds with a vapor pressure of 11.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging or sampling devices shall be gas-tight except when tank gauging or sampling is taking place; or

(B) a vapor recovery system or other equipment or means of air pollution control that reduces the emission of organic materials into the atmosphere by at least 90 percent by weight. All tank gauging or sampling devices shall be gas-tight except when tank gauging or sampling is taking place.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1994;
Amended Eff. July 1, 2000;
Readopted Eff. November 1, 2020;
Amended Eff. October 1, 2022.

15A NCAC 02D .0950 INTERIM STANDARDS FOR CERTAIN SOURCE CATEGORIES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1994;
Amended Eff. May 1, 1995;
Repealed Eff. July 1, 2000.

15A NCAC 02D .0951 RACT FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

(a) Facilities required to install reasonably available control technology pursuant to 15A NCAC 02D .0902(f) shall determine the emissions control level according to this Rule. If the only other applicable emissions control rule in this Section for the facility is 15A NCAC 02D .0958, then both this Rule and 15A NCAC 02D .0958 apply.

(b) This Rule does not apply to architectural or maintenance coatings.

(c) The owner or operator of any facility to which this Rule applies shall comply by either of the following:

(1) install and operate reasonably available control technology as set forth by category-specific emission standards defined in this Section; or

(2) install and operate alternative reasonably available control technology based on the Division's technical analysis of the information provided in Paragraph (d) of this Rule. All reasonably available control technology demonstrations, and any modifications or changes to those determinations, approved or determined by the Division pursuant to this Subparagraph and Paragraph (d) of this Rule, shall be submitted by the Division to the U.S. EPA as a revision to the State Implementation Plan. No reasonably available control technology demonstration, nor any modification or change to a demonstration, approved or determined by the Division pursuant to this Subparagraph, shall revise the State Implementation Plan or be used as a State Implementation Plan credit, until it is approved by the U.S. EPA as a state implementation plan revision.

(d) If the owner or operator of a facility chooses to install reasonably available control technology under Subparagraph (c)(2) of this Rule, the owner or operator shall submit to the Director:

(1) the name and location of the facility;

(2) information identifying the source for which a reasonably available control technology limitation or standard is being proposed;

(3) a demonstration that shows the proposed reasonably available control technology limitation or standard advances attainment equivalent to or better than application of requirements under Subparagraph (c)(1) of this Rule; and

(4) a proposal for demonstrating compliance with the proposed reasonably available control technology limitation or standard.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1994;
Amended Eff. May 1, 2013; September 1, 2010; July 1, 2000; July 1, 1996;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0952 PETITION FOR ALTERNATIVE CONTROLS FOR RACT

(a) This Rule applies to all sources regulated by this Section.

(b) If the owner or operator of any source of volatile organic compounds subject to the requirements of this Section can demonstrate that compliance with rules in this Section would be technologically or economically infeasible, he or she may petition the Director to allow the use of alternative operational or equipment controls for the reduction of volatile organic compound emissions.

(c) The petition shall include:

(1) the name and address of the company and the name and telephone number of the petitioner;

(2) a description of all operations conducted at the location to which the petition applies and the purpose that the volatile organic compound emitting equipment serves within the operations;

(3) reference to the specific operational and equipment controls under the rules of this Section for which alternative operational or equipment controls are proposed;

(4) a description of the proposed alternative operational or equipment controls, the magnitude of volatile organic compound emission reduction that will be achieved, and the quantity and composition of volatile organic compounds that will be emitted if the alternative operational or equipment controls are instituted;

(5) a plan, which will be instituted in addition to the proposed alternative operational or equipment controls, to reduce, where technologically and economically feasible, volatile organic compound emissions from other source operations at the facility, further than that required by the rules of this Section, if these sources exist at the facility, such that aggregate volatile organic compound emissions from the facility will in no case be greater through application of the alternative control than would be allowed through conformance with the rules of this Section;

(6) a schedule for the installation or institution of the alternative operational or equipment controls in conformance with 15A NCAC 02D .0909, as applicable; and

(7) certification that emissions of all other air contaminants from the subject source are in compliance with all applicable local, State, and federal laws and regulations.

The petition may include a copy of the permit application.

(d) The Director shall approve a petition for alternative control if:

(1) the petition is submitted in accordance with Paragraph (c) of this Rule;

(2) the Director determines that the petitioner cannot comply with the rules in question because of technological or economical infeasibility;

(3) all other air contaminant emissions from the facility are in compliance with, or under a schedule for compliance as expeditiously as practicable with, all applicable local, State, and federal regulations; and

(4) the petition contains a schedule for achieving and maintaining reduction of volatile organic compound emissions to the maximum extent feasible and as expeditiously as practicable.

(e) When controls different from those specified in the appropriate emission standards in this Section are approved by the Director, the permit shall contain a condition stating such controls.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1994;
Amended Eff. September 1, 2010; January 1, 2009; April 1, 2003; July 1, 1995; May 1, 1995;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0953 VAPOR RETURN PIPING FOR STAGE II VAPOR RECOVERY

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a); 150B-21.6;*
Eff. July 1, 1994;
Amended Eff. July 1, 1998; July 1, 1996;
Repealed Eff. January 1, 2009.

15A NCAC 02D .0954 STAGE II VAPOR RECOVERY

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a); 150B-21.6;*
Eff. May 1, 1995;
Amended Eff. April 1, 2003; April 1, 1997; July 1, 1996; April 1, 1996; May 1, 1995;
Repealed Eff. January 1, 2009.

15A NCAC 02D .0955 THREAD BONDING MANUFACTURING

(a) For the purpose of this Rule, the following definitions apply:

(1) "Capture hoods" means any device designed to remove emissions from the solution bath tray areas during the manufacturing process.
(2) "Curing" means exposing coated threads to high temperatures in an oven until the nylon solution mixture hardens, vaporizing the solvents, and bonds to the threads.
(3) "Day tanks" means holding tanks that contain nylon solution mixture ready for use.
(4) "Drying ovens" means any apparatus through which the coated threads are conveyed while curing.
(5) "Enclose" means to construct an area within the plant that has a separate ventilation system and is maintained at a slightly negative pressure.
(6) "Fugitive emissions" means emissions that cannot be collected and routed to a control system.
(7) "Nylon thread coating process" means a process in which threads are coated with a nylon solution and oven cured.
(8) "Permanent label" means a label that cannot be easily removed or defaced by any person.
(9) "Polyester solution mixture" means a mixture of polyester and solvents that is used for thread coating.
(10) "Storing" means reserving material supply for future use.
(11) "Thread bonding manufacturing" means coating single or multi-strand threads with plastic (nylon or polyester solution mixture) to impart properties such as additional strength and durability, water resistance, and moth repellency.
(12) "Transporting" means moving material supply from one place to another.

(b) This Rule shall apply to any thread bonding manufacturing facility with total uncontrolled exhaust emissions from nylon thread coating process collection hoods and drying ovens of volatile organic compounds (VOC) equal to or greater than 100 tons per year.

(c) Annual VOC emissions from each nylon thread coating process shall be determined by multiplying the hourly amount of VOC consumed by the total scheduled operating hours per year.

(d) Emissions from each nylon thread coating process subject to this Rule shall be reduced:

(1) by at least 95 percent by weight; or
(2) by installing a thermal incinerator with a temperature of at least 1600°F and a residence time of at least 0.75 seconds.

(e) The owner or operator of any thread bonding manufacturing facility shall:

(1) enclose the nylon thread coating process area of the plant to prevent fugitive emissions from entering other plant areas;
(2) store all VOC-containing materials in covered tanks or containers;
(3) ensure that equipment used for transporting or storing VOC containing material does not leak and that all lids and seals used by the equipment are kept in the closed position at all times except when in actual use;
(4) not cause or allow VOC-containing material to be splashed, spilled, or discarded in sewers;
(5) hold only enough nylon solution mixture in the day tanks to accommodate daily process times measured in hours; and
(6) place permanent and conspicuous labels on all equipment affected by Subparagraphs (3) through (5) of this Paragraph summarizing handling procedures described in these Subparagraphs for VOC-contaminated materials at the nylon thread coating process.

(f) The owner or operator of a thread bonding manufacturing facility shall notify the Director within 30 days after the calculated annual emissions of VOC from nylon thread coating processes equal or exceed 100 tons per year. The owner or operator shall submit within six months after such calculation a permit application including a schedule to bring the facility into compliance with this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a);*
Eff. May 1, 1995;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0956 GLASS CHRISTMAS ORNAMENT MANUFACTURING

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Coating" means the application of a layer of material, either by dipping or spraying, in a relatively unbroken film onto glass Christmas ornaments.

(2) "Curing ovens" means any apparatus through which the coated glass Christmas ornaments are conveyed while drying.

(3) "Glass Christmas ornament" means any glass ornament that is coated with decorative exterior and is traditionally hung on Christmas trees.

(4) "Glass Christmas ornament manufacturing facility" means a facility that coats glass Christmas ornaments through the process of interior coating or exterior coating that uses either mechanical or hand-dipping methods, drying (curing), cutting, and packaging operations.

(5) "Mechanical coating lines" means equipment that facilitates mechanized dipping or spraying of a coating onto glass Christmas ornaments in which the neck of each ornament is held mechanically during the coating operation.

(6) "Solvent-borne coating" means a coating that uses organic solvents as an ingredient.

(b) This Rule applies to any curing ovens servicing the mechanical coating lines in the coating of glass Christmas ornaments at glass Christmas tree ornament manufacturing facilities with potential volatile organic compound (VOC) emissions of 100 tons per year or more.

(c) This Rule does not apply to glass Christmas ornament manufacturing facilities that do not use solvent-borne coating materials.

(d) Emissions of VOC from each curing oven shall be reduced by at least 90 percent by weight.

(e) If the owner or operator of a facility subject to this Rule chooses to use low VOC content, solvent-borne coatings to reduce emissions, the emission reduction from the use of these coatings shall be equivalent to that achieved using add-on controls.

(f) The owner or operator of a Christmas tree ornament manufacturing facility shall notify the Director within 30 days after the calculated annual emissions of VOC from the facility equal or exceed 100 tons per year. The owner or operator shall submit within six months after such calculation a permit application including a schedule to bring the facility into compliance with this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a);*
Eff. May 1, 1995;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0957 COMMERCIAL BAKERIES

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Baking Oven" means an oven used at any time for the purpose of baking yeast-leavened products, including bread and rolls.

(2) "Commercial Bakery" means an establishment where bread and baked goods are produced.

(b) This Rule applies in accordance with 15A NCAC 02D .0902 to any baking oven at a commercial bakery with potential volatile organic compound (VOC) emissions of 100 tons per year or more. Daily volatile organic compound emissions shall be determined according to the calculation procedures in Paragraph (d) of this Rule.

(c) Emissions of VOC from baking ovens subject to this Rule shall be reduced by at least:

(1) 90 percent by weight; or

(2) 60 percent by weight, if biofiltration is used.

(d) Daily volatile organic compound emissions from each commercial baking oven in a commercial bakery shall be determined according to the following: $EtOH = 0.40425 + 0.444585[(Y \times T) + (S \times t)]$, where:

(1) EtOH = pounds ethanol per ton of baked bread;

(2) Y = baker's percent yeast in sponge to the nearest tenth of a percent;

(3) T = total time of fermentation in hours to the nearest tenth of an hour;

(4) S = baker's percent of yeast added to dough to the nearest tenth of a percent; and

(5) t = proof time plus floor time in hours to the nearest tenth of an hour.

(e) The owner or operator of a commercial bakery shall notify the Director within 30 days after the calculated emissions of VOC from the bakery equal or exceed 100 tons per year. The owner or operator shall submit within six months after such calculation a permit application including a schedule to bring the facility into compliance with this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a);*
Eff. May 1, 1995;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0958 WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

(a) This Rule applies to all facilities that use volatile organic compounds as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions.

(b) This Rule does not apply to:

(1) architectural or maintenance coatings; or

(2) sources subject to 40 CFR Part 63, Subpart JJ.

(c) The owner or operator of any facility subject to this Rule shall:

(1) store all material, including waste material, containing volatile organic compounds in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use;

(2) clean up spills as soon as possible following proper safety procedures;

(3) store wipe rags in closed containers;

(4) not clean sponges, fabric, wood, paper products, and other absorbent materials;

(5) drain solvents used to clean supply lines and other coating equipment into closable containers and close containers immediately after each use;

(6) clean mixing, blending, and manufacturing vats and containers by adding cleaning solvent and closing the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be poured into a closed container.

(d) When cleaning parts, the owner or operator of any facility subject to this Rule shall:

(1) flush parts in the freeboard area;

(2) take precautions to reduce the pooling of solvent on and in the parts;

(3) tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer;

(4) not fill cleaning machines above the fill line;

(5) not agitate solvent to the point of causing splashing.

(e) The owner or operator of a source on which a control device has been installed shall continue to maintain and operate the control device unless the Director determines that the removal of the control device shall not cause or contribute to a violation of the ozone ambient air quality standard, as set forth in 15A NCAC 02D .0405.

(f) The owner or operator of a source that has complied with 15A NCAC 02D .0518 prior to July 1, 2000, by complying with a rule in this Section, shall continue to comply with that Rule unless the Director determines that if the source ceases to comply with that rule, it shall not cause or contribute to a violation of the ozone ambient air quality standard, as set forth in 15A NCAC 02D .0405.

(g) All sources at a facility subject to this Rule shall be permitted unless they are exempted from permitting by 15A NCAC 02Q .0102.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 2000;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0959 PETITION FOR SUPERIOR ALTERNATIVE CONTROLS

(a) This Rule applies to all sources regulated by this Section.

(b) If the owner or operator of any source of volatile organic compounds subject to the requirements of this Section can demonstrate that an alternative operational or equipment control is superior to the required control, he or she may petition the Director to allow the use of alternative operational or equipment controls for the reduction of volatile organic compound emissions.

(c) The petition shall include:

(1) the name and address of the company and the name and telephone number of the petitioner;

(2) a description of all operations conducted at the location to which the petition applies and the purpose that the volatile organic compound emitting equipment serves within the operations;
(3) reference to the specific operational and equipment controls under the rules of this Section for which alternative operational or equipment controls are proposed;
(4) a description of the proposed alternative operational or equipment controls, the magnitude of volatile organic compound emission reduction that will be achieved, and the quantity and composition of volatile organic compounds that will be emitted if the alternative operational or equipment controls are instituted; and
(5) certification that emissions of all other air contaminants from the subject source are in compliance with all applicable local, State, and federal laws and regulations.

The petition may include a copy of the permit application.

(d) The Director shall approve a petition for alternative control if:
(1) the petition is submitted in accordance with Paragraph (c) of this Rule;
(2) the Director determines that the proposed alternative operational or equipment control is superior to the required controls;
(3) all other air contaminant emissions from the facility are in compliance with, or under a schedule for compliance as expeditiously as practicable with, all applicable local, State, and federal regulations; and
(4) the petition contains a schedule for achieving and maintaining reduction of volatile organic compound emissions to the maximum extent feasible and as expeditiously as practicable.

(e) When controls different from those specified in the appropriate emission standards in this Section are approved by the Director, the permit shall contain a condition stating such controls.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. April 1, 2003;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0960 CARGO TANK LEAK TESTER REPORT

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5), (13);*
Eff. April 1, 2003;
Amended Eff. July 1, 2007;
Readopted Eff. October 1, 2020;
Repealed Eff. November 1, 2023.

15A NCAC 02D .0961 OFFSET LITHOGRAPHIC PRINTING AND LETTERPRESS PRINTING

(a) For the purposes of this Rule, the definitions listed in this Paragraph and 15A NCAC 02D .0101 and .0902 shall apply.

(1) "Composite partial vapor pressure" means the sum of the partial pressure of the compounds defined as volatile organic compounds. Volatile organic compounds composite partial vapor pressure is calculated as follows:

$$PP_c = \sum_{i=1}^{n} \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \frac{W_c}{MW_c} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where:
Wi = Weight of the "i" volatile organic compound, in grams
Ww = Weight of water, in grams
Wc = Weight of exempt compound, in grams
MWi = Molecular weight of the "i" volatile organic compound, in g/g-mole
MWw = Molecular weight of water, in g/g-mole
MWc = Molecular weight of exempt compound, in g/g-mole
PPc = Volatile organic compounds composite partial vapor pressure at 20 degrees Celsius (68 degrees Fahrenheit), in mm Hg

VPi = Vapor pressure of the "i" volatile organic compound at 20 degrees Celsius (68 degrees Fahrenheit), in mm Hg

(2) "First installation date" means the actual date when this control device becomes operational. This date does not change if the control device is later redirected to a new press.

(3) "Fountain solution" means water-based solution that applies to lithographic plate to render the non-image areas unreceptive to the ink.

(4) "Heatset" means any operation in which heat is required to evaporate ink oils from the printing ink, excluding ultraviolet (UV) curing, electron beam curing, and infrared drying.

(5) "Letterpress printing" means a printing process in which the image area is raised relative to the non-image area and the paste ink is transferred to the substrate directly from the image surface.

(6) "Non-heatset," also referred to as "coldset," means a lithographic printing process where the printing inks are set by absorption or oxidation of the ink oil, not by evaporation of the ink oils in a dryer. For the purposes of this Rule, use of an infrared heater or printing conducted using ultraviolet-cured or electron beam-cured inks is considered non-heatset.

(7) "Offset lithography" means a printing process that uses sheet-fed or web method of press feeding and transfers ink from the lithographic plate to a rubber-covered intermediate "blanket" cylinder and then from the blanket cylinder to the substrate.

(8) "Press" means a printing production assembly composed of one or more units used to produce a printed substrate including any associated coating, spray powder application, heatset web dryer, ultraviolet or electron beam curing units, or infrared heating units.

(9) "Sheet-fed printing" means offset lithographic printing when individual sheets of paper or other substrate are fed to the press.

(10) "Web printing" means offset lithographic printing when continuous rolls of substrate material are fed to the press and rewound or cut to size after printing.

(b) This Rule applies to any offset lithographic and any letterpress printing operations sources that are not covered by 15A NCAC 02D .0966(c)(1) and whose emissions of volatile organic compounds exceed:

(1) the threshold established in 15A NCAC 02D .0902(b) and (f); or

(2) an equivalent level of three tons per 12-consecutive month rolling period.

(c) Volatile organic compounds content in the fountain solution for on-press (as-applied) heatset web offset lithographic printing shall meet one of the following requirements or the owner or operator may demonstrate a different method that achieves an equivalent or greater level of control to those listed in Subparagraphs (1) through (3) of this Paragraph, as determined in permit conditions:

(1) contain 1.6 percent alcohol or less, by weight, as applied, in the fountain solution:

(2) contain three percent alcohol or less, by weight, on-press (as-applied) in the fountain solution if the fountain solution is refrigerated to below 60 degrees Fahrenheit; or

(3) contain five percent alcohol substitute or less, by weight, on-press (as-applied) and no alcohol in the fountain solution.

(d) Volatile organic compounds content in the fountain solution for on-press (as-applied) sheet-fed lithographic printing shall meet one of the following requirements or the owner or operator may demonstrate a different method that achieves an equivalent or greater level of control to those listed in Subparagraphs (1) through (3) of this Paragraph, as determined in permit conditions:

(1) contain five percent alcohol or less, by weight, on-press (as-applied) in the fountain solution;

(2) contain 8.5 percent alcohol or less, by weight, on-press (as-applied) in the fountain solution if the fountain solution is refrigerated to below 60 degrees Fahrenheit; or

(3) contain five percent alcohol substitute or less, by weight, on-press (as-applied) and no alcohol in the fountain solution.

(e) Volatile organic compounds content in emissions from fountain solution from non-heatset web offset lithographic printing shall not exceed five percent alcohol substitute (by weight) on-press (as-applied) and contain no alcohol in the fountain solution.

(f) An owner or operator of an individual web offset lithographic printing press dryer or letterpress-printing heatset press subject to this Rule that has potential emissions of 25 or more tons per year of volatile organic compounds shall:

(1) use an enforceable limitation on potential emissions to keep individual heatset press below 25 tons per year potential to emit volatile organic compounds (petroleum ink oil) threshold, which shall be achieved by using inks and coatings that contain less than 31.25 tons per year volatile organic

compound (petroleum ink oil) where 20 percent retention factor of petroleum ink oil applies, or by using other methods established by permit conditions; or

(2) use an add-on control system that meets one of the following requirements:

(A) reduces volatile organic compounds emissions from each dryer by at least 90 percent volatile organic compounds emissions control efficiency established by procedures defined in Paragraph (h) of this Rule for a control device from heatset dryers whose first installation date was prior to July 1, 2010, at facilities with potential to emit 100 tons or more of volatile organic compounds per year;

(B) reduces volatile organic compounds emissions from each dryer by at least 90 percent volatile organic compounds emissions control efficiency established by procedures defined in Paragraph (h) of this Rule for a control device from heatset dryers whose first installation date was prior to May 1, 2013, at facilities with potential to emit less than 100 tons of volatile organic compounds per year;

(C) reduces volatile organic compounds emissions from each dryer by at least 95 percent volatile organic compounds emissions control efficiency established by procedures defined in Paragraph (h) of this Rule for a control device from heatset dryers whose first installation date was on or after July 1, 2010, at facilities with potential to emit 100 tons or more of volatile organic compounds per year;

(D) reduces volatile organic compounds emissions from each dryer by at least 95 percent volatile organic compounds emissions control efficiency established by procedures defined in Paragraph (h) of this Rule for a control device from heatset dryers whose first installation date was on or after May 1, 2013, at facilities with potential to emit less than 100 tons of volatile organic compounds per year; or

(E) maintains a maximum volatile organic compounds outlet concentration of 20 parts per million by volume (ppmv), as hexane (C_6H_{14}) on a dry basis.

(g) The control limits established in:

(1) Paragraphs (c), (d), and (e) of this Rule shall not be applied to any press with total fountain solution reservoir of less than one gallon;

(2) Paragraph (d) of this Rule shall not be applied to sheet-fed presses with maximum sheet size 11x 17 inches or smaller; and

(3) Subparagraph (f)(2) of this Rule shall not be applied to a heatset press used for book printing, or to a heatset press with maximum web width of 22 inches or less.

(h) If the owner or operator of a printing press is required by permit conditions to determine:

(1) the volatile organic compounds content, Method 24 of Appendix A to 40 CFR Part 60 or approved alternative methods pursuant to 15A NCAC 02D .2602(h) shall be used; and

(2) the control efficiency by measuring volatile organic compounds at the control device inlet and outlet, Methods 18, 25, or 25A of Appendix A to 40 CFR Part 60, or approved alternative methods pursuant to 15A NCAC 02D .2602(h) shall be used.

(i) All test methods defined in Paragraph (h) of this Rule shall be conducted at typical operating conditions and flow rates using the same day-to-day production prior to the test to ensure that the test results are representative of routine operations.

(j) The owner or operator of any facility subject to this Rule shall demonstrate compliance with RACT applicability requirements by calculating volatile organic compounds emissions and keep records of the basis of the calculations required by 15A NCAC 02D .0605 and .0903. Volatile organic compounds emissions from offset lithographic printing and letterpress printing shall be determined by permit condition requirements or by using the following retention and capture efficiency factors:

(1) the retention factors are:

(A) 20 percent for heatset petroleum ink oils;

(B) 100 percent for heatset vegetable ink oils;

(C) 95 percent for sheet-fed and coldset web petroleum ink oils; and

(D) 100 percent for sheet-fed and coldset web vegetable ink oils.

(2) the retention factor is 50 percent for low volatile organic compounds composite vapor pressure cleaning materials in shop towels where:

(A) volatile organic compounds composite vapor pressure of the cleaning material is less than 10 mm Hg at 20 degrees Celsius; and

(B) cleaning materials and used shop towels are kept in closed containers.

(3) carryover (capture) factors of volatile organic compounds from automatic blanket wash and fountain solution to offset lithographic heatset dryers are:
    (A) 40 percent VOC carryover (capture) factor for automatic blanket washing when the volatile organic compounds composite vapor pressure of the cleaning material is less than 10mm Hg at 20 degrees Celsius.
    (B) 70 percent VOC carryover (capture) factor for alcohol substitutes in fountain solution.
(4) capture efficiency for volatile organic compounds (petroleum ink oils) from oil-based paste inks and oil-based paste varnishes (coatings) in heatset web offset lithographic presses and heatset web letterpress presses shall be demonstrated by showing that the dryer is operating at negative pressure relative to the surrounding pressroom. As long as the dryer is operated at negative pressure, the capture efficiency for VOC from the heatset lithographic inks and varnishes (coatings) formulated with low volatility ink oils is 100 percent of the VOC (ink oils) volatilized in the dryer. Capture efficiency test is not required in this situation.

(k) Except as specified in this Paragraph, all cleaning materials used for cleaning a press, press parts, or to remove dried ink from areas around the press shall meet one of the following requirements:
(1) the volatile organic compounds content shall be less than 70 percent by weight; or
(2) composite partial vapor pressure of volatile organic compounds shall be less than 10 mm Hg at 20 degrees Celsius.

No more than 110 gallons per year of cleaning materials that do not meet the requirements of Subparagraph (k)(1) or (k)(2) of this Rule shall be used during any 12 consecutive months.

(l) The owner or operator of any facility subject to this Rule shall maintain the following records for a minimum of five years:
(1) parametric monitoring for processes and control devices as determined and at the frequency specified in the permit or by Paragraph (f) of this Rule;
(2) the total amount of each individual or class of fountain solution and ink used monthly for the printing operations and the percentage of volatile organic compounds, alcohol, and alcohol substitute as applied in it;
(3) the total amount of each individual or class of cleaning solutions used monthly with vapor pressure and the percentage of volatile organic compounds as applied in it;
(4) the total amount of cleaning solutions used monthly with the vapor pressure and the percentage of volatile organic compounds as applied not meeting the vapor pressure or percentage of volatile organic compounds as required in Paragraph (k) of this Rule;
(5) the temperature of fountain solutions for lithographic printing presses using alcohol at the frequency specified in the permit; and
(6) any other parameters required by the permit in accordance with 15A NCAC 02D .0605 and .0903.

(m) The owner or operator of any source subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1), (a)(4); 143-215.66; 143-215.107(a)(5);*
Eff. September 1, 2010;
Amended Eff. May 1, 2013;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0962 INDUSTRIAL CLEANING SOLVENTS

(a) For the purpose of this Rule, the following definitions shall apply:
(1) "Organic solvent" means a liquid hydrocarbon, such as methyl ethyl ketone or toluene, used to dissolve paints, varnishes, grease, oil, or other hydrocarbons.
(2) "Solvent cleaning" means the process of removing the excess penetrant from the surface or a part by wiping, flushing, or spraying with a solvent for the penetrant.
(3) "Wipe cleaning" means the method of cleaning that utilizes a material such as a rag wetted with a solvent, prior to a physical rubbing process to remove contaminants from surfaces.

(b) This Rule applies, with exemptions defined in Paragraphs (c) and (d) of this Rule, to sources whose volatile organic compound emissions exceed the threshold in 15A NCAC 02D .0902(b) from the following cleaning operations:
(1) spray gun cleaning;
(2) spray booth cleaning;

(3) large manufactured components cleaning;
(4) parts cleaning;
(5) equipment cleaning;
(6) line cleaning;
(7) floor cleaning;
(8) tank cleaning; and
(9) small manufactured components cleaning.

(c) Paragraph (e) of this Rule does not apply to any cleaning material used for cleaning operations covered by 15A NCAC 02D .0918, .0919, .0923, .0924, .0930, .0935, .0961, .0963, .0964, .0965, .0966, .0967, and .0968.

(d) Cleaning operations of portable or stationary mixing vats, high dispersion mills, grinding mills, tote tanks, and roller mills for manufacturing of coating, ink, or adhesive shall apply one or more of the following methods:

(1) use industrial cleaning solvents that either contain less than 1.67 pounds VOC per gallon or have an initial boiling point greater than 120 degrees Celsius, and where the initial boiling point exceeds the maximum operating temperature by at least 100 degrees Celsius. The industrial cleaning solvents shall be collected and stored in closed containers;
(2) implement the following work practices:
  (A) maintain the equipment being cleaned as leak free;
  (B) drain volatile organic compounds containing cleaning materials from the cleaned equipment upon completion of cleaning;
  (C) store or dispose of volatile organic compounds containing cleaning materials, including waste solvent, in a manner that will prevent evaporation into atmosphere; and
  (D) store all volatile organic containing cleaning materials in closed containers;
(3) collect and vent the emissions from equipment cleaning to an add-on control system as set forth in Paragraph (g) of this Rule; or
(4) use organic solvents other than listed in Subparagraph (d)(1) of this Rule if no more than 60 gallons of fresh solvent shall be used per month. Organic solvent reused or recycled either onsite or offsite for further use in equipment cleaning or the manufacture of coating, ink, or adhesive shall not be included in this limit.

(e) Any cleaning material of the cleaning operations listed in Paragraph (b) of this Rule shall have:

(1) volatile organic compounds content that does not exceed 0.42 pounds per gallon; or
(2) composite vapor limit of eight millimeters of mercury at 20 degrees Celsius.

(f) Method 24 of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coating materials used in industrial cleaning solvents operations, unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.

(g) Facilities that have chosen to use add-on control shall install control equipment with 85 percent overall efficiency.

(h) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. September 1, 2010;
Amended Eff. May 1, 2013;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0963 FIBERGLASS BOAT MANUFACTURING MATERIALS

(a) For the purpose of this Rule, the following definitions shall apply:

(1) "Closed molding" means any fabrication techniques in which pressure is used to distribute the resin through the reinforcing fabric placed between two mold surfaces to either saturate the fabric or fill the mold cavity.
(2) "Monomer" means a volatile organic compound that partly combines with itself, or other similar compounds, by a cross-linking reaction to become part of the cured resin.
(3) "Open molding" means the open mold that is first spray-coated with a clear or pigmented polyester resin known as a gel coat. The gel coat will become the outer surface of the finished part.

(b) This Rule applies to a facility that manufactures hulls or decks of boats and related parts, builds molds to make fiberglass boat hulls or decks and related parts from fiberglass, or makes polyester resin putties for assembling fiberglass parts; and whose volatile organic compounds emissions meet the threshold established in 15A NCAC 02D .0902(b) from sources for the following operations:

(1) open molding and gel coat operation, including pigmented gel coat, clear gel coat, production resin, tooling gel coat, and tooling resin;
(2) resins and gel coat mixing operations; and
(3) resins and gel coat application equipment cleaning operations.

(c) The following activities are exempted from the provisions of this Rule:
(1) surface coatings applied to fiberglass boats;
(2) surface coatings for fiberglass and metal recreational boats; and
(3) industrial adhesives used in the assembly of fiberglass boats.

(d) Volatile organic compounds content limits in resin and gel coat that are used for any molding operations listed in Paragraph (b) of this Rule and closed molding operations that do not meet the definition of monomer established in Subparagraph (a)(2) of this Rule, such as vacuum bagging operations, shall not exceed monomer volatile organic compounds limits established in Table 1:

Table 1. Organic Hazardous Air Pollutants Content Requirements for Open Molding Resin and Gel Coat Operations (40 CFR 63, Subpart VVVV)

Material	Application Method	Limit of Weighted-Average Monomer VOC Content (weight percent)
Production resin	Atomized (spray)	28
Production resin	Nonatomized	35
Pigmented gel coat	Any method	33
Clear gel coat	Any method	48
Tooling resin	Atomized	30
Tooling resin	Nonatomized	39
Tooling gel coat	Any method	40

The average monomer volatile organic compounds contents listed in the Table 1 shall be determined by using Equation 1 below:

$$\text{Weighted Average Monomer VOC Content} = \frac{\sum_{i=1}^{n}(M_i * VOC_i)}{\sum_{i=1}^{n}(M_i)}$$

Where: M_i = mass of open molding resin or gel coat i used in the past 12 month in an operation in megagrams;
VOC_i = monomer volatile organic compounds content, by weight percent, of open molding resin or gel coat i used in the past 12 month in an operation;
n = number of different open molding resins or gel coats used in the past 12 months in an operation.

(e) The volatile organic compounds limits established in Paragraph (d) of this Rule are not applicable to:
(1) production resins, including skin coat resins, that meet specifications for use in military vessels or are approved by the U.S. Coast Guard for the use in the construction of lifeboats, rescue boats, and other lifesaving appliances approved under 46 CFR Subchapter Q, or the construction of small passenger vessels regulated by 46 CFR Subchapter T. Production resins that meet these criteria shall be applied with non-atomizing resin application equipment;
(2) production and tooling resins; and pigmented, clear, and tooling gel coat used for part or mold repair and touch up. Total resin and gel coat materials that meet these criteria shall not exceed one percent by weight of all resin and gel coat used at a facility on a 12-month rolling-average basis; or
(3) pure, 100-percent vinyl ester resin used for skin coats that are applied with non-atomizing resin application equipment and with the total amount of the resin materials not exceeding five percent by weight of all resin used at a factory on 12-month rolling-average basis.

(f) Any molding resin and gel coat operations listed in Paragraph (b) of this Rule that a facility chooses to include into average emissions among different operations to meet numerical monomer volatile organic compounds emission rate limits rather than to comply with the emission limits established in Paragraph (d) of this Rule shall use the following equations:
(1) to estimate a facility-specific monomer volatile organic compounds mass emission limit (12-month rolling average) use Equation 2 below:

$$\text{Monomer VOC Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

Where:

Monomer VOC Limit = total allowable monomer volatile organic compounds that can be emitted from the open molding operations included in the average, in kilograms per 12-month period.
M_R = mass of production resin in megagrams used in the past 12 months, excluding any materials that are exempt;
M_{PG} = mass of pigmented gel coat in megagrams used in the past 12 months, excluding any materials that are exempt;
M_{CG} = mass of clear gel coat in megagrams used in the past 12 months, excluding any materials that are exempt;
M_{TR}= mass of tooling resin coat in megagrams used in the past 12 months, excluding any materials that are exempt;
M_{TG} = mass of tooling gel coat in megagrams used in the past 12 months, excluding any materials that are exempt.
Estimates of average emissions shall be determined on a 12-month rolling average basis at the end of every month. The numerical coefficients associated with each term on the right hand side of Equation 2 are the allowable monomer volatile organic compounds emission rate for that particular material in units of kilograms of VOC per megagrams of material used.

(2) to determine if the monomer volatile organic compounds emissions from the operations included in the average do not exceed the emission limit calculated using Equation 2 from Subparagraph (f)(1) of this Rule for the same 12-month period use Equation 3 below:
Monomer VOC emissions = $(PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$
Where:
Monomer VOC emissions = monomer volatile organic compounds emissions calculated using the monomer volatile organic compounds emission equation for each operation included in the average in kilograms;
PV_R = weighted-average monomer volatile organic compounds emission rate in kilograms per megagram for production resin used in the past 12 months;
M_R = Mass of production resin in megagrams used in the past 12 months;
PV_{PG} = weighted-average monomer volatile organic compounds emission rate in kilograms per megagram for pigmented gel coat used in the past 12 months;
M_{PG} = mass of pigmented gel coat in megagrams used in the past 12 months;
PV_{CG} = weighted-average monomer volatile organic compounds emission rate in kilograms per megagram for clear gel coat used in the past 12 months;
M_{CG} = Mass of clear gel coat in megagrams used in the past 12 months;
PV_{TR} = Weighted-average monomer volatile organic compounds emission rate in kilograms per megagram for tooling resin used in the past 12 months;
M_{TR} = Mass of tooling resin in megagrams used in the past 12 months;
PV_{TG} = Weighted-average monomer volatile organic compounds emission rate in kilograms per megagram for tooling gel coat used in the past 12 months;
M_{TG} = Mass of tooling gel coat in megagrams used in the past 12 months.
This demonstration shall be conducted at the end of the first 12-month averaging period and at the end of every subsequent month for only those operations that are included in the average.

(3) to compute the weighted-average monomer volatile organic compounds emission rate for the previous 12 months for each open molding resin and gel coat operation use Equation 4 below:

$$PV_{OP} = \frac{\sum_{i=1}^{n}(M_i \cdot PV_i)}{\sum_{i=1}^{n} M_i}$$

Where:
PV_{OP} = weighted-average monomer volatile organic compounds emission rate in kilograms of monomer volatile organic compounds per megagram of material applied for each open molding operation (PV_R, PV_{PG}, PV_{CG}, PV_{TR}, and PV_{TG}) included in the average;
M_i = mass or resin or gel coat i in megagrams used within an operation in the past 12 months;
n = number of different open molding resins and gel coats used within an operation in the past 12 months;
PV_i = the monomer volatile organic compounds emission rate for resin or gel coat i in kilograms of monomer volatile organic compounds per megagram of material applied used within an operation in the past 12 months. Equations in Table 2 shall be used to compute PV. The calculated

averages from Equation 4 shall be used as the weighted-average values in Equation 3 in Subparagraph (f)(2) of this Rule.

Table 2. Compliant Materials Monomer Volatile Organic Compounds Content for Open Molding Resin and Gel Coat

For this material	and this application method	Use this formula to calculate the monomer VOC emission rate
1. Production resin, tooling resin	a. Atomized	$0.014 \times (\text{Resin VOC\%})^{2.425}$
	b. Atomized, plus vacuum bagging with roll-out	$0.01185 \times (\text{Resin VOC\%})^{2.425}$
	c. Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin VOC\%})^{2.425}$
	d. Nonatomized	$0.014 \times (\text{Resin VOC\%})^{2.275}$
	e. Nonatomized, plus vacuum bagging with roll-out	$0.0110 \times (\text{Resin VOC\%})^{2.275}$
	f. Nonatomized, plus vacuum bagging without roll-out	$0.0076 \times (\text{Resin VOC\%})^{2.275}$
2. Pigmented gel coat, clear gel coat, tooling gel coat	All methods	$0.445 \times (\text{Gel coat VOC\%})^{1.675}$

(g) If the owner or operator of any facility with molding resin and gel coat operations listed in Paragraph (b) of this Rule chooses to use higher-monomer volatile organic compound materials rather than to comply with the emission limits established in Paragraph (d) of this Rule, they shall:

(1) install control equipment to meet the emission limit determined by Equation 2 in Subparagraph (f)(1) of this Rule, by applying the mass of each material used during the control device performance test in Equation 2 to determine the emission limit, in kilogram of monomer VOC, that is applicable during the test, instead of using the mass of each material as established in Subparagraph (f)(1) of this Rule;

(2) monitor and record relevant control device and capture system operating parameters during the control device performance test to use the recorded values to establish operating limits for those parameters; and

(3) monitor the operating parameters for the control device and emissions capture system and maintain the parameters within the established limits.

(h) Any molding resin and gel coat operations that use a filled production resin or filled tooling resin shall calculate the emission rate for the filled production resin or filled tooling resin on as-applied basis using Equation 5. If the filled resin:

(1) is used as a production resin then the value of PV_F calculated by Equation 5 shall not exceed 46 kilograms of monomer VOC per megagram of filled resin applied;

(2) is used as a tooling resin then the value of PV_F calculated by Equation 5 shall not exceed 54 kilograms of monomer VOC per megagram of filled resin applied; and

(3) is included in the emissions averaging procedure then the facility shall use the value of PV_F calculated by Equation 5 below for the value PV_i in Equation 4 in Subparagraph (f)(3) of this Rule.

$$PV_F = \frac{PV_U \cdot (100 - \%Filler)}{100}$$

Where:

PV_F = The as-applied monomer volatile organic compounds emission rate in kilograms monomer VOC per megagram of filled material for the filled production resin or tooling resin;

PV_U = The monomer volatile organic compounds emission rate for the neat (unfilled) resin before filler is added, as calculated using the formulas in Table 2 of Subparagraph (f)(3) of this Rule.

%Filler = The weight-percent of filler in the as-applied filled resin system.

(i) All resins and gel coats included in volatile organic compounds limits described in Paragraphs (d) through (h) of this Rule shall meet the non-monomer volatile organic compounds content limit of five percent.
(j) If the non-monomer volatile organic compounds content of a resin or gel coat exceeds five percent, then the excess non-monomer volatile organic compounds over the five percent shall be counted toward the monomer volatile organic compounds content.
(k) SCAQMD Method 312-91, Determination of Percent Monomer in Polyester Resins, revised April 1996 shall be used to determine the monomer volatile organic compounds content of resin and gel coat materials unless the facility maintains records to document the volatile organic compounds content of resin and gel coat materials from the manufacturer. This test method was developed by the South Coast Air Quality Management District and is incorporated by reference, excluding subsequent amendments or editions, and may be obtained free of charge online at http://www.aqmd.gov/docs/default-source/laboratory-procedures/methods-procedures/312-91.pdf.
(l) All resin and gel coat mixing containers with a capacity equal to or greater than 55 gallons, including those used for on-site mixing of putties and polyputties, shall have a cover with no visible gaps in place at all times except for the following operations:

(1) when material is being manually added to or removed from a container; or
(2) when mixing or pumping equipment is being placed or removed from a container.

(m) Volatile organic compounds cleaning solvents for routine application equipment cleaning shall contain no more than five percent volatile organic compounds by weight, or have a composite vapor pressure of no more than 0.50 mm Hg at 68 degrees Fahrenheit.
(n) Only non-volatile organic compounds solvents shall be used to remove cured resin and gel coat from application equipment.
(o) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. September 1, 2010;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0964 MISCELLANEOUS INDUSTRIAL ADHESIVES
(a) For the purpose of this Rule, the following definitions apply:

(1) "Air-assisted airless spray" means a system that consists of an airless spray gun with a compressed air jet at the gun tip to atomize the adhesive.
(2) "Airless spray" means the application using a pump forcing an adhesive through an atomizing nozzle at high pressure of 1,000 to 6,000 pounds per square inch.
(3) "Application process" means a process that consists of a series of one or more adhesive applicators and any associated drying area or oven where an adhesive is applied, dried, and cured.
(4) "Dip coating" means application where substrates are dipped into a tank containing the adhesive. The substrates are then withdrawn from the tank and any excess adhesive is allowed to drain.
(5) "Electrocoating" means a specialized form of dip coating where opposite electric charges are applied to the waterborne adhesive and the substrate.
(6) "Electrostatic spray" means application where the adhesive and substrate are oppositely charged.
(7) "Flow coating" means conveying the substrate over an enclosed sink where the adhesive is applied at low pressure as the item passes under a series of nozzles.
(8) "HVLP" means a system with specialized nozzles that provides better air and fluid flow than conventional air atomized spray systems at low air pressure, shape spray pattern, and guides high volumes of atomized adhesive particles to the substrate using lower air pressure of 10 pounds per square inch or less at the spray cap.
(9) "Miscellaneous industrial adhesives" means adhesives, including adhesive primers used in conjunction with certain types of adhesives, used at industrial manufacturing and repair facilities for a wide variety of products and equipment that operate adhesives application processes.
(10) "Roll coating," "brush coating," and "hand application" means application of high viscosity adhesives onto small surface areas.

(b) Control of volatile organic compounds emissions from miscellaneous industrial adhesives product categories covered by 15A NCAC 02D .0923, .0935, .0961, .0962, .0963, .0965, .0966, .0967, and .0968 are exempted from the requirements of this Rule.
(c) This Rule applies to miscellaneous industrial adhesive application sources whose volatile organic compounds emissions meet the threshold established in 15A NCAC 02D .0902(b).

(d) With the exception established in Paragraph (b) of this Rule, all volatile organic compounds containing materials applied by each miscellaneous industrial adhesive application processes before control shall:

(1) not exceed limits established in Tables 1, 2, and 3 of this Rule; and

(2) be used in one of the following application methods in conjunction with using low volatile organic compounds adhesives or adhesive primers:

(A) electrostatic spray;

(B) HVLP spray;

(C) flow coat;

(D) roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;

(E) dip coat including electrodes position;

(F) airless spray;

(G) air-assisted airless spray; or

(H) any other adhesive application method capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

(e) Emission limits established in Subparagraph (d)(1) of this Rule shall be:

(1) met by calculating the arithmetic mean of the volatile organic compounds content of materials used on a single application unit for each day; and

(2) calculated as mass of volatile organic compounds per volume of adhesive primer, excluding water and exempt compounds, as applied.

(f) If an adhesive is used to bond dissimilar substrates together in a general adhesive application process as set forth in Tables 1, 2, or 3, then the applicable substrate category with the highest volatile organic compounds emission limit shall be established as the limit for such application.

Table 1. Volatile Organic Compounds Emission Limits for General Adhesive Application Processes.

General Adhesive Application Processes	VOC Emission Limit (lb/gal)
Reinforced Plastic Composite	1.7
Flexible vinyl	2.1
Metal	0.3
Porous Material (Except Wood)	1
Rubber	2.1
Wood	0.3
Other Substrates	2.1

Table 2. Volatile Organic Compounds Emission Limits for Specialty Adhesive Application Processes.

Specialty Adhesive Application Processes	VOC Emission Limit (lb/gal)
Ceramic Tile Installation	1.1
Contact Adhesive	2.1
Cove Base Installation	1.3
Floor Covering Installation (Indoor)	1.3
Floor Covering Installation (Outdoor)	2.1
Floor Covering Installation (Perimeter Bonded Sheet Vinyl)	5.5
Metal to Urethane/Rubber Molding or Casting	7.1
Motor Vehicle Adhesive	2.1
Motor Vehicle Weatherstrip Adhesive	6.3
Multipurpose Construction	1.7
Plastic Solvent Welding (ABS)	3.3
Plastic Solvent Welding (Except ABS)	4.2
Sheet Rubber Lining Installation	7.1

Single-Ply Roof Membrane Installation/Repair (Except EPDM)	2.1
Structural Glazing	0.8
Thin Metal Laminating	6.5
Tire Repair	0.8
Waterproof Resorcinol Glue	1.4

Table 3. Volatile Organic Compounds Emission Limits for Adhesive Primer Application Processes.

Adhesive Primer Application Processes	VOC Emission Limit (lb/gal)
Motor Vehicle Glass Bonding Primer	7.5
Plastic Solvent Welding Adhesive Primer	5.4
Single-Ply Roof Membrane Adhesive Primer	2.1
Other Adhesive Primer	2.1

(g) Any miscellaneous industrial adhesive application process subject to this Rule, which chooses to use add-on control for adhesive application processes rather than to comply with the emission limits established in Paragraph (d) of this Rule, shall install control equipment with overall control efficiency of 85 percent or use a combination of adhesives and add-on control equipment on an application process to meet limits established in Paragraph (d) of this Rule.
(h) EPA Method 24 or 25A of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of adhesives, other than reactive adhesives, as defined in 40 CFR 63.3981, and the procedure established in Appendix A of the NESHAP for surface coating of plastic parts (40 CFR Part 63, Subpart PPPP) shall be used to determine the volatile organic compounds content of reactive adhesives unless the facility maintains records to document the volatile organic compounds content of adhesives from the manufacturer.
(i) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. September 1, 2010;
Readopted Eff. November 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .0965 FLEXIBLE PACKAGE PRINTING

(a) For the purpose of this Rule, the following definitions apply:
- (1) "First installation date" means the actual date when the equipment or control device becomes operational. This date does not change if the equipment or control device is later moved to a new location.
- (2) "Flexible Packaging" means any package or part of a package whose shape can be readily changed.
- (3) "Flexographic printing" means a printing process in which an image is raised above the printing plate, and the image carrier is made of rubber or other elastomeric materials.
- (4) "Rotogravure press" means an unwind or feed section, which may include:
  - (A) more than one unwind or feed station, such as on a laminator;
  - (B) a series of individual work stations, one or more of which is a rotogravure print station;
  - (C) any dryers associated with the work stations; and
  - (D) a rewind, stack, or collection section.
- (5) "Rotogravure printing" means a printing process in which an image type and art is etched or engraved below the surface of a plate or cylinder.

(b) This Rule applies to flexible packaging printing press sources whose emissions of volatile organic compounds meet the threshold established in 15A NCAC 02D .0902(b).
(c) The volatile organic compounds content of materials used on any single flexible packaging printing press subject to this Rule shall not exceed 0.8 pounds volatile organic compounds per one pound of solids applied, or 0.16 pounds volatile organic compounds per one pound of materials applied limits. These volatile organic compounds content limits are consistent with 80 percent overall emissions reduction level and reflect similar control levels as the capture and control option.

(d) Any flexible packaging printing press that has chosen to use add-on control for coating operations rather than comply with the emission limits established in Paragraph (c) of this Rule shall install control equipment with:

(1) 65 percent overall control based on a capture efficiency of 75 percent and a control device efficiency of 90 percent for a press that was first installed prior to March 14, 1995 and that is controlled by an add-on control device whose first installation date was prior to July 1. 2010;

(2) 70 percent overall control based on a capture efficiency of 75 percent and a control device efficiency of 95 percent for a press that was first installed prior to March 14, 1995 and that is controlled by an add-on control device whose first installation date was on or after July 1, 2010;

(3) 75 percent overall control based on a capture efficiency of 85 percent and a control device efficiency of 95 percent for a press that was first installed on or after March 14, 1995 and that is controlled by an add-on control device whose first installation date was prior July 1, 2010; and

(4) 80 percent overall control based on a capture efficiency of 85 percent and a control device efficiency of 95 percent for a press that was first installed on or after March 14, 1995 and that is controlled by an add-on control device whose first installation date was on or after July 1, 2010.

(e) EPA Method 24 or 25A of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coating materials used at flexible package printing facilities, unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.

(f) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. September 1, 2010;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0966 PAPER, FILM AND FOIL COATINGS

(a) For the purpose of this Rule, the following definitions apply:

(1) "Paper, film, and foil coating line" means a series of coating applicators, flash-off areas, and any associated curing/drying equipment between one or more unwind/feed stations and one or more rewind/cutting stations.

(2) "Flexographic coating" means that the area to be coated is delineated by a raised surface on a flexible plate.

(3) "Rotary screen or flat screen coating" means the application of a coating material to a substrate by means of masking the surface and applying a color or finish using a screen either in flat form or rotary form.

(4) "Rotogravure coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(b) This Rule applies to paper, film and foil surface coating operations sources, including related cleaning activity, whose emissions of volatile organic compounds meet the threshold established in 15A NCAC 02D .0902(b), at a facility that applies:

(1) paper, film, or foil surfaces in the manufacturing of products for pressure sensitive tape and labels, including fabric coated for use in pressure sensitive tapes and labels; photographic film; industrial and decorative laminates; abrasive products, including fabric coated for use in abrasive products; and flexible packaging, including coating of non-woven polymer substrates for use in flexible packaging; and

(2) coatings during coating applications for production of corrugated and solid fiber boxes; die-cut paper paperboard and cardboard; converted paper and paperboard not elsewhere classified; folding paperboard boxes, including sanitary boxes; manifold business forms and related products; plastic aseptic packaging; and carbon paper and inked ribbons.

(c) The following types of coatings are not covered by this Rule:

(1) coatings performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press; or

(2) size presses and on-machine coaters that function as part of an in-line papermaking system.

(d) Emissions of volatile organic compounds from:

(1) pressure sensitive tape and label surface coating lines with the potential to emit, prior to controls, less than 25 tons per year of volatile organic compounds from coatings shall not exceed 0.20

pounds volatile organic compounds per pound of solids applied (0.067 pounds volatile organic compounds per pound of coating applied); and

(2) paper, film, and foil surface coating lines with the potential to emit, prior to controls, less than 25 tons per year of volatile organic compounds from coatings shall not exceed 0.40 pounds of volatile organic compounds per pound of solids (0.08 pounds volatile organic compounds per pound of coating applied).

Compliance shall be determined pursuant to 15A NCAC 02D .0912(c).

(e) EPA Method 24 or 25A of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coating materials used at paper, film, and foil coatings facilities, unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.

(f) Any individual paper, film, and foil coating line with the potential to emit, prior to controls, at least 25 tons per year of volatile organic compounds from coatings shall apply control with overall volatile organic compounds efficiency of 90 percent rather than the emission limits established in Paragraph (d) of this Rule or use a combination of coating and add-on control equipment on a coating unit to meet limits that are equivalent to 90 percent overall control efficiency.

(g) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. September 1, 2010;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0967 MISCELLANEOUS METAL AND PLASTIC PARTS COATINGS

(a) For the purpose of this Rule, the following definitions apply:

(1) "Air dried coating" means a coating that is cured at a temperature below 90 degrees Celsius (194 degrees Fahrenheit).

(2) "Baked coating" means a coating that is cured at a temperature at or above 90 degrees Celsius (194 degrees Fahrenheit).

(3) "Clear coat" means a colorless coating that contains binders, but no pigment, and is formulated to form a transparent film.

(4) "Coating unit" means a series of one or more coating applicators and any associated drying area and oven where a coating is applied, dried, and cured.

(5) "Drum" means any cylindrical metal shipping container with a capacity greater than 12 gallons but less than 110 gallons.

(6) "Electric dissipating coating" means a coating that rapidly dissipates a high voltage electric charge.

(7) "Electric-insulating varnish" means a nonconvertible type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

(8) "Etching filler" means a coating that contains less than 23 percent solids by weight and at least 1/2-percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

(9) "Extreme high-gloss coating" means a coating which, when tested by the American Society for Testing Material Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60 degrees meter.

(10) "Extreme-performance coating" means a coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to the following:

(A) Chronic exposure to corrosive, caustic, or acidic agents, chemicals, chemical fumes, chemical mixtures or solutions;

(B) Repeated exposure to temperatures in excess of 250 degrees Fahrenheit; or

(C) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

Extreme performance coatings include coatings applied to locomotives, railroad cars, farm machinery, and heavy duty trucks.

(11) "High-performance architectural coating" means a coating used to protect architectural subsections that meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05: Voluntary Specification, Performance Requirements and

Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels or AAMA 2605-05: Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels. These performance requirements and test procedures are incorporated by reference, including subsequent amendments and editions. A copy of AAMA 2604-05 may be obtained free of charge at http://www.starrail.com/wp-content/docs/AAMA2604-05.pdf. A copy of AAMA 2605-05 may be obtained free of charge at http://www.starrail.com/wp-content/docs/AAMA2605-05.pdf.

(12) "Miscellaneous metal product and plastic parts surface coatings" means the coatings that are applied to the surfaces of a varied range of metal and plastic parts and products that are constructed either entirely or partially from metal or plastic. These miscellaneous metal products and plastic parts include metal and plastic components of the following types of products, as well as the products themselves: fabricated metal products, molded plastic parts, small and large farm machinery, commercial and industrial machinery and equipment, automotive or transportation equipment, interior or exterior automotive parts, construction equipment, motor vehicle accessories, bicycles and sporting goods, toys, recreational vehicles, pleasure craft (recreational boats), extruded aluminum structural components, railroad cars, heavy duty trucks, lawn and garden equipment, business machines, laboratory and medical equipment, electronic equipment, steel drums, metal pipes, and other industrial and household products.

(13) "Multi-component coating" means a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form a dry film.

(14) "One-component coating" means a coating that is ready for application as it comes out of its container to form a dry film. A thinner, necessary to reduce the viscosity, shall not be considered a component.

(b) This Rule applies to miscellaneous metal and plastic parts surface coating units whose volatile organic compounds emissions meet the threshold established in 15A NCAC 02D .0902(b) for coating and related cleaning activities of the following types of products:

(1) fabricated metal products, molded plastic parts, small and large farm machinery, commercial and industrial machinery and equipment;

(2) automotive or transportation equipment, interior or exterior automotive parts, construction equipment, motor vehicle accessories, bicycles and sporting goods;

(3) toys, recreational vehicles, pleasure craft (recreational boats), extruded aluminum structural components, railroad cars, heavy duty trucks, lawn and garden equipment;

(4) business machines, laboratory and medical equipment; and

(5) electronic equipment, steel drums metal pipes, and other industrial and household products.

(c) This Rule does not apply to:

(1) coatings that are applied to test panels and coupons as part of research and development, quality control;

(2) performance testing activities at paint research or manufacturing facility; or

(3) sources covered by 15A NCAC 02D .0922, .0923, .0935, .0961, .0962, .0963, .0964, .0965, .0966, and .0968.

(d) With the exception stated in Paragraph (c) of this Rule, emissions of volatile organic compounds before control for surface coating of:

(1) Metal parts and products shall not exceed limits as established in Table 1;

Table 1. Metal Parts and Products Volatile Organic Compounds Content Limits

Coating Category	Air Dried lb VOC/gal coating	Baked lb VOC/gal coating
General One Component; General Multi Component; Military Specification	2.8	2.3
Camouflage; Electric-Insulating Varnish; Etching Filler; High Temperature; Metallic; Mold-Seal; Pan Backing; Pretreatment Coatings; Drum Coating, New, Interior; Drum Coating, Reconditioned, Exterior; Silicone Release; Vacuum-Metalizing	3.5	3.5
Extreme High-Gloss; Extreme Performance; Heat-Resistant; Repair and Touch Up; Solar-Absorbent	3.5	3.0

High Performance Architectural	6.2	6.2
Prefabricated Architectural Multi-Component; Prefabricated Architectural One-Component	3.5	2.3
Drum Coating, New, Exterior	2.8	2.8
Drum Coating, Reconditioned, Interior	4.2	4.2

(2) Plastic parts and products shall not exceed limits as established in Table 2;

Table 2. Plastic Parts and Products Volatile Organic Compounds Content Limits

Coating Category	lbs VOC/gal coating
General One Component	2.3
General Multi Component; Metallic	3.5
Electric Dissipating Coatings and Shock-Free Coatings; Optical Coatings; Vacuum-Metalizing	6.7
Extreme Performance	3.5 (2-pack coatings)
Military Specification	2.8 (1 pack) 3.5 (2 pack)
Mold-Seal	6.3
Multi-colored Coatings	5.7

(3) automotive/transportation and business machine plastic parts shall not exceed limits as established in Table 3;

Table 3. Automotive/Transportation and Business Machine Plastic Parts Volatile Organic Compounds Content Limits

Coating Category	lbs VOC/gal coating
Automotive/Transportation Coatings	
I. High Bake Coatings – Interior and Exterior Parts	
Non-flexible Primer	3.5
Base Coats; Non-basecoat/clear coat; Flexible Primer	4.3
Clear Coat	4.0
II. Low Bake/Air Dried Coatings – Exterior Parts	
Primers; Basecoat; Non-basecoat/clearcoat	4.8
Clearcoats	4.5
III. Low Bake/Air Dried Coatings – Interior Parts	5.0
IV. Touchup and Repair Coatings	5.2
Business Machine Coatings	
Primers; Topcoat Texture Coat; Touchup and repair	2.9
Fog Coat	2.2

(4) pleasure craft shall not exceed limits as established in Table 4;

Table 4. Pleasure Craft Surface Coating Volatile Organic Compounds Content Limits

Coating Category	lbs VOC/gal coating
Extreme High Gloss Topcoat	4.1
High Gloss Topcoat Finish; Primer/Surfacer; All other pleasure craft surface coatings for metal or plastic	3.5
Pretreatment Wash Primers	6.5
High Build Primer Surfacer; Other Substrate Antifoulant Coating	2.8
Aluminum Substrate Antifoulant Coating	4.7

(5) motor vehicle materials shall not exceed limits as established in Table 5.

Table 5. Motor Vehicle Materials Volatile Organic Compounds Content Limits

Coating Category	lbs VOC/gal coating
Motor vehicle cavity wax; Motor vehicle sealer; Motor vehicle deadener; Motor vehicle underbody coating; Motor vehicle trunk interior coating	5.4
Motor vehicle gasket/gasket sealing material; Motor vehicle bedliner	1.7
Motor vehicle lubricating wax/compound	5.8

(e) With the exception of motor vehicle materials coatings, any miscellaneous metal and plastic parts coatings operations facility may choose a combination of low volatile organic compounds coatings and add-on control equipment on a coating unit. Emissions of volatile organic compounds before control with such combination shall not exceed limits for surface coating of:

(1) Metal parts and products as established in Table 6;

Table 6. Metal Parts and Products Volatile Organic Compounds Content Limits

Coating Category	Air Dried	Baked
	lb VOC/gal solids	lb VOC/gal solids
General One Component; General Multi Component; Military Specification	4.52	3.35
Etching Filler; High Temperature; Metallic; Mold-Seal; Pan Backing; Pretreatment Coatings; Silicone Release; Drum Coating, New, Interior; Drum Coating, Reconditioned, Exterior; Vacuum-Metalizing	6.67	6.67
Extreme High-Gloss; Extreme Performance; Heat-Resistant; Solar-Absorbent	6.67	5.06
High Performance Architectural	38.0	38.0
Prefabricated Architectural Multi-Component	6.67	3.35
Prefabricated Architectural One-Component	6.67	3.35
Solar-Absorbent	6.67	5.06
Drum Coating, New, Exterior	4.52	4.52
Drum Coating, Reconditioned, Interior	6.67	9.78

(2) plastic parts and products as established in Table 7;

Table 7. Plastic Parts and Products Volatile Organic Compounds Content Limits

Coating Category	lbs VOC/gal solids
General One Component	3.35
General Multi Component; Metallic	6.67
Electric Dissipating Coatings and Shock-Free Coatings Optical Coatings; Vacuum-Metalizing	74.7
Extreme Performance	6.67 (2-pack)
Military Specification	4.52 (1 pack) 6.67 (2 pack)
Mold-Seal	43.7
Multi-colored Coatings	25.3

(3) automotive/transportation and business machine plastic parts as established in Table 8;

Table 8. Automotive/Transportation and Business Machine Plastic Parts Volatile Organic Compounds Content Limits

Coating Category	lbs VOC/gal solids

Automotive/Transportation Coatings	
I. High Bake Coatings – Interior and Exterior Parts	
Flexible Primer	11.58
Non-flexible Primer; Non-basecoat/clear coat	6.67
Base Coats	10.34
Clear Coat	8.76
II. Low Bake/Air Dried Coatings – Exterior Parts	
Primers	13.8
Basecoat; Non-basecoat/clearcoat	15.59
Clearcoats:	11.58
III. Low Bake/Air Dried Coatings – Interior Parts	15.59
IV. Touchup and Repair Coatings	17.72
Business Machine Coatings	
Primers; Topcoat; Texture Coat; Touchup and repair	4.8
Fog Coat	3.14

(4) pleasure craft surface coatings as established in Table 9.

Table 9. Pleasure Craft surface Coatings Volatile Organic Compounds Content Limits

Coating Category	lbs VOC/gal solids
Extreme High Gloss Topcoat	9.2
High Gloss Topcoat; Finish Primer/Surfacer; All other pleasure craft surface coatings for metal or plastic	6.7
Pretreatment Wash Primers	55.6
Aluminum Substrate Antifoulant Coating	12.8
High Build Primer Surfacer; Other Substrate Antifoulant Coating	4.4

(f) EPA Method 24 or 25A of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coating materials used at miscellaneous metal and plastic part coating facilities, unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.
(g) With the exception of motor vehicle materials coatings, any miscellaneous metal and plastic parts coatings operations facility may choose to use add-on control equipment with an overall control efficiency of 90 percent in lieu of using low-VOC coatings and specified application methods.
(h) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and 0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. September 1, 2010;
Readopted Eff. November 1, 2020.

15A NCAC 02D .0968 AUTOMOBILE AND LIGHT DUTY TRUCK ASSEMBLY COATINGS

(a) For the purpose of this Rule, the following definitions apply:

(1) "Automobile" means a motor vehicle designed to carry up to eight passengers, excluding vans, sport utility vehicles, and motor vehicles designed primarily to transport light loads of property.

(2) "Automobile Topcoat Protocol" means Protocol For Determining The Daily Volatile Organic Compound Emission Rate Of Automobile and Light-duty Truck Topcoat Operations (EPA-453/R-08-002) or 40 CFR Part 60, Subpart MM, Standards of Performance for Automobile and Light-Duty Truck Surface Coating Operations. The protocol document can be obtained free of charge at https://www3.epa.gov/airquality/ctg_act/200809_voc_epa453_r-08-002_auto_ldtruck_vocemisrate_protocol.pdf.

(3) "Electrodeposition" means a process of applying a protective, corrosion-resistant waterborne primer on exterior and interior surfaces that provides coverage of recessed areas. It is a dip coating method that uses an electrical field to apply or deposit the conductive coating onto the part. The

object being painted acts as an electrode that is oppositely charged from the particles of paint in the dip tank.

(4) "Final repair" means the operations performed and coating(s) applied to completely assembled motor vehicles or to parts that are not yet on a completely assembled vehicle to correct damage or imperfections in the coating.

(5) "Light-duty truck" means vans, sport utility vehicles, and motor vehicles designed primarily to transport light loads of property with a gross vehicle weight rating of 8,500 pounds or less.

(6) "Primer-surfacer" means an intermediate protective coating applied over the electrodeposition primer (EDP) and under the topcoat. Primer-surfacer provides adhesion, protection, and appearance properties to the total finish.

(7) "Solids turnover ratio (R_T)" means the ratio of total volume of coating solids that is added to the EDP system in a calendar month divided by the total volume design capacity of the EDP system.

(b) This Rule applies to automobile and light-duty truck assembly coating operations and related cleaning activities whose emissions of volatile organic compounds meet the threshold established in 15A NCAC 02D .0902(b) at:

(1) automobile or light-duty assembly plants during the vehicle assembly processes with the following primary coating product applications:

(A) new automobile or new light-duty truck bodies, or body parts for new automobiles or new light-duty trucks;

(B) other parts that are coated along with these bodies or body parts; or

(C) additional coatings that include glass bonding primer, adhesives, cavity wax, sealer, deadener, gasket/gasket sealing material, underbody coating, trunk interior coating, bedliner, weatherstrip adhesive, and lubricating waxes/compounds; and

(2) facilities that perform coating operations on a contractual basis other than plastic or composites molding facilities.

(c) This Rule does not apply to:

(1) aerosol coatings of automobile and light-truck assembly coatings;

(2) coatings that are applied to other parts intended for use in new automobiles or new light-duty trucks, such as application of spray primer, color and clear coat to fascia or bumpers, on coating lines that are not related to the vehicle assembly process at automobile or light-duty assembly plants. Those coatings are regulated by 15A NCAC 02D .0964 and .0967; and

(3) aftermarket repair or replacement parts for automobiles or light-duty trucks that are regulated by 15A NCAC 02D .0964 and .0967.

(d) With the exception of materials supplied in containers with a net volume of 16 ounces or less, or a net weight of one pound or less, emissions of volatile organic compounds before control for:

(1) automobile and light-duty truck assembly coatings shall not exceed limits established in Table 1.

Table 1. Volatile Organic Compounds emission limits for automobile and light-duty truck assembly coatings.

Assembly Coating Process	Volatile Organic Compounds Emission Limit		
Electrodeposition primer (EDP) operations, including application area, spray/rinse stations, and curing oven	When solids turnover ratio $R_T \geq 0.160$;	When $0.040 \leq R_T < 0.160$	When $R_T < 0.040$;
	0.7 lb/gal coatings solids applied.	$0.084^{0.160-R_T}$ x 8.34 lb/gal coating solids applied.	No VOC emission limit.
Primer-surfacer operations, including application area, flash-off area, and oven	12.0 lb VOC/gal deposited solids on a daily weighted average basis as determined by following the procedures in the Automobile Topcoat Protocol		
Topcoat operations, including application area, flash-off area, and oven	12.0 lb VOC/gal deposited solids on a daily weighted average basis as determined by following the procedures in the Automobile Topcoat Protocol		
Final repair operations	4.8 lb VOC/gallon of coating less water and less exempt solvents on a daily weighted average basis or as an occurrence weighted average.		
Combined primer-surfacer and topcoat operations	12.0 lb VOC/gal deposited solids on a daily weighted average basis as determined by following the procedures in the Automobile Topcoat Protocol		

(2) materials used at automobile and light-duty truck assembly coatings facilities shall not exceed limits established in Table 2.

Table 2. Volatile Organic Compounds emission limits for miscellaneous materials used at automobile and light-duty truck assembly coatings facilities.

Material	VOC Emission Limit (grams of VOC per liter of coating excluding water and exempt compounds, as applied)
Automobile and light-duty truck glass bonding primer	900
Automobile and light-duty truck adhesive	250
Automobile and light-duty truck cavity wax	650
Automobile and light-duty truck sealer	650
Automobile and light-duty truck deadener	650
Automobile and light-duty truck gasket/gasket sealing material	200
Automobile and light-duty truck underbody coating	650
Automobile and light-duty truck trunk interior coating	650
Automobile and light-duty truck bedliner	200
Automobile and light-duty truck weatherstrip adhesive	750
Automobile and light-duty truck lubricating wax/compound	700

(e) EPA Method 24 or 25A of Appendix A to 40 CFR Part 60 shall be used to determine the volatile organic compounds content of coatings, other than reactive adhesives used at automobile and light-duty truck coating facilities, unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.
(f) The emission limits established in Paragraph (d) of this Rule may be achieved with a combination of higher-solid solvent-borne coatings, efficient application equipment, and bake oven exhaust control.
(g) The owner or operator of any facility subject to this Rule shall comply with 15A NCAC 02D .0903 and .0958.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. September 1, 2010;
Readopted Eff. November 1, 2020.

SECTION .1000 - MOTOR VEHICLE EMISSION CONTROL STANDARD

15A NCAC 02D .1001 PURPOSE

This Section sets forth motor vehicle emission control standards in areas where a motor vehicle inspection and maintenance program is implemented pursuant to State law.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3); 143-215.107(a)(6); 143-215.107(a)(7);*
Eff. December 1, 1982;
Amended Eff. August 1, 2002;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1002 APPLICABILITY

(a) Until the events described in Paragraph (b) of this Rule occur, 15A NCAC 02D .1002 through .1006 shall be applicable to all light-duty gasoline vehicles for model years 1996 or more recent model years, excluding vehicles from the three most recent model years with less than 70,000 miles on their odometers, and shall apply to all vehicles that are:

(1) required to be registered by the North Carolina Division of Motor Vehicles in the counties identified in Paragraph (d) of this Rule;
(2) part of a fleet primarily operated within the counties identified in Paragraph (d) of this Rule; or
(3) otherwise required under G.S. 20-183.2(b)(5).

(b) On the first day of the month that is 60 days after the Secretary of the Department of Environmental Quality certifies to the Revisor of Statutes that the United States Environmental Protection Agency has approved an

amendment to the North Carolina State Implementation Plan, 15A NCAC 02D .1002 through .1006 shall apply to all light-duty gasoline vehicles that are a model year within 20 years of the current year, excluding vehicles from the three most recent model years with less than 70,000 miles on their odometers, and to all vehicles that are:

(1) required to be registered by the North Carolina Division of Motor Vehicles in the counties identified in Paragraph (d) of this Rule;
(2) part of a fleet primarily operated within the counties identified in Paragraph (d) of this Rule; or
(3) otherwise required under G.S. 20-183.2(b)(5).

(c) 15A NCAC 02D .1002 through .1006 shall not apply to motorcycles, plug-in electric vehicles or fuel cell electric vehicles as specified in G.S. 20-183.2(b).

(d) The emission control standards of this Section shall become effective in the counties identified in G.S. 143-215.107A.

History Note: *Authority G.S. 20-128.2(a); 20-183.2; 143-215.3(a)(1); 143-215.107(a)(3); 143-215.107(a)(6); 143-215.107(a)(7); 143-215.107A;*
Eff. December 1, 1982;
Amended Eff. July 1, 1992; April 1, 1991;
Temporary Amendment Eff. January 1, 1993 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. January 1, 2014; August 1, 2002; July 1, 1994; July 1, 1993;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1003 DEFINITIONS

The following definitions of terms apply to 15A NCAC 02D .1002 through .1006 regulating either gasoline-powered or hybrid-powered motor vehicles:

(1) "Fuel Cell Electric Vehicle" means as defined in G.S. 20-4.01.
(2) "Gasoline-powered Motor Vehicle" means a four-wheeled motor vehicle designed primarily to be propelled by the burning of gasoline in an internal combustion engine.
(3) "Heavy-duty Gasoline Vehicle" means either a gasoline-powered or hybrid-powered motor vehicle which is designed primarily for:
    (a) transportation of property and has a Gross Vehicle Weight Rating (GVWR) of more than 8,500 pounds but less than 14,001 pounds;
    (b) transportation of persons and has a capacity of more than 12 persons; or
    (c) use as a recreational motor vehicle that is designed primarily to provide temporary or permanent living quarters for travel, camping, or other recreational use and has a GVWR of more than 8,500 pounds.
(4) "Hybrid-powered Motor Vehicle" means a four-wheeled motor vehicle designed to be propelled by a combination of one or more electric motors and the burning of gasoline in an internal combustion engine.
(5) "Light-duty Gasoline Vehicle" means either a gasoline-powered or hybrid-powered motor vehicle which is designed primarily for:
    (a) transportation of property and has a GVWR of 8,500 pounds or less; or
    (b) transportation of persons and has a capacity of 12 persons or less.
(6) "Model year" means the year used to designate a discrete vehicle model, irrespective of the calendar year in which the vehicle was actually produced, provided that the production period does not exceed 24 months.
(7) "Motorcycle" means as defined in G.S. 20-4.01.
(8) "Motor Vehicle" means as defined in G.S. 20-4.01.
(9) "Plug-in Electric Vehicle" means as defined in G.S. 20-4.01.
(10) "Three most recent model years." For the purposes of 15A NCAC 02D .1002 through .1006, the term "three most recent model years" shall be calculated by adding three years to the vehicle's Vehicle Identification Number (VIN) or the registration card model year to determine the first calendar year an emissions inspection is required.
(11) "Vendor" means any person who sells or leases equipment to inspection stations that is used to perform on-board diagnostic tests to show compliance with 15A NCAC 02D .1005.

History Note: *Authority G.S. 20-4.01; 143-215.3(a)(1);*

Eff. December 1, 1982;
Amended Eff. February 1, 2014;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1004 TAILPIPE EMISSION STANDARDS FOR CO AND HC

History Note: *Authority G.S. 20-128.2(a); 20-183.5; 143-215.3(a)(1); 143-215.107(a)(3); 143-215.107(a)(6); 143-215.107(a)(7);*
Eff. December 1, 1982;
Amended Eff. August 1, 2002; July 1, 1993; April 1, 1991; November 1, 1986; July 1, 1984;
Repealed Eff. July 1, 2007.

15A NCAC 02D .1005 ON-BOARD DIAGNOSTIC STANDARDS

(a) This Rule shall apply to vehicles as set forth in 15A NCAC 02D 1002.

(b) Vehicles covered under this Rule shall pass annually the on-board diagnostic test described in 40 CFR 85.2222. The vehicle shall fail the on-board diagnostic test if any of the conditions of 40 CFR 85.2207 are met. Equipment used to perform on-board diagnostic tests shall meet the requirements of 40 CFR 85.2231.

(c) The tester shall provide the owner of a vehicle that fails the on-board diagnostic test described in Paragraph (b) of this Rule a report of the test results. This report shall include the codes retrieved per 40 CFR 85.2223(a), the status of the malfunction indicator light illumination command, and the customer alert statement described in 40 CFR 85.2223(c).

(d) Persons performing on-board diagnostic tests shall provide the Division of Air Quality the data required by 40 CFR 51.365, Data Collection; 40 CFR 51.366, Data Analysis and Reporting; and 40 CFR 51.358, Test Equipment.

(e) Federal regulations cited in this Rule are incorporated by reference, including subsequent amendments and editions. All federal regulations referenced in this Rule can be accessed free of charge at http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR.

History Note: *Authority G.S. 20-128.2(a); 143-215.3(a)(1); 143-215.107(a)(6); 143-215.107(a)(7); 143-215.107A(b);*
Eff. December 1, 1982;
Amended Eff. January 1, 2014; August 1, 2002; July 1, 1998; April 1, 1991; November 1, 1986;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1006 SALE AND SERVICE OF ANALYZERS

(a) Requirements. A vendor shall not sell or lease equipment unless it meets the requirements of 40 CFR 85.2231 Onboard Diagnostic Test Equipment Requirements, and has the software necessary to record and transmit the data required by the Division of Motor Vehicles and the Division of Air Quality to determine compliance with the inspection and maintenance program requirements of this Section.

(b) Hardware repair. When equipment hardware fails to meet the requirements of Paragraph (a) of this Rule for a particular analyzer, the vendor, after receiving a call from an inspection station to its respective service call center, shall communicate with the affected station within 24 hours and:

(1) If the hardware problem is stopping 20 percent or more inspections for a particular analyzer or is compromising the security of the inspection system, the vendor shall repair the problem within 48 hours after the initial call to its respective service call center.

(2) If the hardware problem is stopping less than 20 percent of all inspections for a particular analyzer and is not compromising the security of the inspection system, the vendor shall repair the problem within 72 hours after the initial call to its respective service call center.

(3) If the hardware problem is not stopping inspections and is not compromising the security of the inspection system, the vendor shall repair the problem within 96 hours after the initial call to its respective service call center.

(c) Software repair revisions. If analyzer software fails to meet the requirements of Paragraph (a) of this Rule, the vendor, after receiving a call from an inspection station to its respective service call center, shall communicate with the station within 24 hours. The vendor shall identify and characterize the software problem within five days. The vendor shall, within that same five-day period, inform the station owner and the Division as to the nature of the problem and the proposed corrective course of action; and:

(1) If the software problem is stopping 20 percent or more inspections for a particular analyzer or is compromising the security of the inspection system, the vendor shall submit a new revision of the software to the Division for approval within 19 days after receiving the initial call to its service call center.

(2) If the software problem is stopping less than 20 percent of all inspections for a particular analyzer and is not compromising the security of the inspection system, the vendor shall submit a new revision of the software to the Division for approval within 33 days after receiving the initial call to its service call center.

(3) The vendor shall distribute the new revision of the software to all affected stations within 14 days after the vendor receives written notification from the Division that the software has been approved as meeting the requirements of Paragraph (a) of this Rule.

(d) Documentation of the initial service call. The vendor's service call center shall assign a unique service response number to every reported new hardware or software problem. The time and date of the initial call shall be recorded and identified with the service response number. The service response number shall be communicated to the inspection station operator at the time of the initial contact.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(6),(14);*
Eff. January 1, 2007;
Amended Eff. January 1, 2014;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1008 HEAVY DUTY DIESEL ENGINE REQUIREMENTS

(a) Definitions. For the purposes of this Rule, the following definitions apply:

(1) "Heavy duty diesel engine," means any diesel engine used in a vehicle with a gross vehicle weight rating of 14,001 pounds and greater.

(2) "Model year" means model year as defined in 40 CFR Section 85.2302.

(b) Requirement. No model year 2005 or 2006 heavy duty diesel engine may be sold, leased, or registered within North Carolina unless it has been certified by the California Air Resources Board as meeting the requirements of Title 13 of the California Code of Regulations, Section 1956.8.

(c) Referenced Regulation. Title 13, Section 1956.8 of the California Code of Regulation is incorporated by reference, including subsequent amendments and editions. A copy of Title 13 of the California Code of Regulations, Section 1956.8, may be obtained free of charge via the internet from the Office of Administrative Law California Code of Regulations website at http://ccr.oal.ca.gov/, or a hard copy may be obtained at a cost of five dollars ($5.00) from the Public Information Office, California Air Resources Board, P.O. Box 2815, Sacramento, CA, 95812.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(6)-(7);*
Eff. December 31, 2001 by Exec. Order No. 15;
Amended Eff. July 18, 2002;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1009 MODEL YEAR 2008 AND SUBSEQUENT MODEL YEAR HEAVY-DUTY DIESEL VEHICLE REQUIREMENTS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(6)-(7);*
Eff. December 1, 2004;
Repealed Eff. January 1, 2014.

15A NCAC 02D .1010 HEAVY-DUTY VEHICLE IDLING RESTRICTIONS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(a)(7); 143-215.107(b);*
Eff. July 10, 2010;
Repealed Eff. November 1, 2016.

SECTION .1100 - CONTROL OF TOXIC AIR POLLUTANTS

15A NCAC 02D .1101 PURPOSE

This Section sets forth the rules for the control of toxic air pollutants to protect human health.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(1),(3),(4),(5); 143B-282; S.L. 1989, c. 168, s. 45; Eff. May 1, 1990; Readopted Eff. July 1, 2018.*

15A NCAC 02D .1102 APPLICABILITY

(a) 15A NCAC 02D .1103 through .1108 apply to all facilities that emit a toxic air pollutant that are required to have a permit pursuant to 15A NCAC 02Q .0700. All other rules in this Section apply as specified therein.

(b) Sources at facilities subject to this Section shall comply with the requirements of this Section as well as with all applicable requirements in 15A NCAC 02D .0500, .0900, and .1200 with such exceptions as may be allowed pursuant to 15A NCAC 02Q .0700.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(1),(3),(4),(5); 143B-282; S.L. 1989, c. 168, s. 45; Eff. May 1, 1990; Amended Eff. July 1, 1998; December 1, 1991; Readopted Eff. July 1, 2018.*

15A NCAC 02D .1103 DEFINITION

For the purpose of this Section, the following definitions apply:

(1) "Asbestos" means asbestos fibers as defined in 40 CFR 61.141.

(2) "Bioavailable chromate pigments" means the group of chromium (VI) compounds consisting of calcium chromate (CAS No.13765-19-0), calcium dichromate (CAS No. 14307-33-6), strontium chromate (CAS No. 7789-06-2), strontium dichromate (CAS No. 7789-06-2), zinc chromate (CAS No. 13530-65-9), and zinc dichromate (CAS No. 7789-12-0).

(3) "CAS Number" means the Chemical Abstract Service registry number identifying a particular substance.

(4) "Chromium (VI) equivalent" means the molecular weight ratio of the chromium (VI) portion of a compound to the total molecular weight of the compound multiplied by the associated compound emission rate or concentration at the facility.

(5) "Non-specific chromium (VI) compounds" means the group of compounds consisting of any chromium (VI) compounds not specified in this Section as a bioavailable chromate pigment or a soluble chromate compound.

(6) "Cresol" means o-cresol, p-cresol, m-cresol or any combination of these compounds.

(7) "GACT" means any generally available control technology emission standard applied to an area source or facility pursuant to Section 112 of the federal Clean Air Act.

(8) "Hexane isomers except n-hexane" means 2-methyl pentane, 3-methyl pentane, 2,2-dimethyl butane, 2,3-dimethyl butane, or any combination of these compounds.

(9) "MACT" means any maximum achievable control technology emission standard applied to a source or facility pursuant to Section 112 of the federal Clean Air Act.

(10) "Nickel, soluble compounds" means the soluble nickel salts of chloride ($NiCl_2$, CAS No. 7718-54-9), sulfate ($NiSO_4$, CAS No. 7786-81-4), and nitrate ($Ni(NO_3)_2$, CAS No. 13138-45-9).

(11) "Polychlorinated biphenyls" means any chlorinated biphenyl compound or mixture of chlorinated biphenyl compounds.

(12) "Soluble chromate compounds" means the group of chromium (VI) compounds consisting of ammonium chromate (CAS No. 7788-98-9), ammonium dichromate (CAS No. 7789-09-5), chromic acid (CAS No. 7738-94-5), potassium chromate (CAS No. 7789-00-6), potassium dichromate (CAS No. 7778-50-9), sodium chromate (CAS No. 7775-11-3), and sodium dichromate (CAS No. 10588-01-9).

(13) "Toxic air pollutant" means any of those carcinogens, chronic toxicants, acute systemic toxicants, or acute irritants listed in 15A NCAC 02D .1104.

History Note: *Authority G.S. 143-213; 143-215.3(a)(1); 143B-282; S.L. 1989, c. 168, s. 45; Eff. May 1, 1990; Amended Eff. April 1, 2001; July 1, 1998; Readopted Eff. July 1, 2018.*

15A NCAC 02D .1104 TOXIC AIR POLLUTANT GUIDELINES

A facility shall not emit any of the following toxic air pollutants in such quantities that may cause or contribute beyond the facility's premises to any significant ambient air concentration that may adversely affect human health, except as allowed pursuant to 15A NCAC 02Q .0700. In determining these significant ambient air concentrations, the Division shall be governed by the following list of acceptable ambient levels in milligrams per cubic meter at 77° F (25° C) and 29.92 inches (760 mm) of mercury pressure, except for asbestos:

Acceptable Ambient Levels (AAL) in Milligrams per Cubic Meter (mg/m^3) Except Where Noted				
Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
acetaldehyde (75-07-0)				27
acetic acid (64-19-7)				3.7
acrolein (107-02-8)				0.08
acrylonitrile (107-13-1)		0.03	1	
ammonia (7664-41-7)				2.7
aniline (62-53-3)			1	
arsenic and inorganic arsenic compounds	2.1×10^{-6}			
asbestos (1332-21-4)	2.8×10^{-6} fibers/ml			
aziridine (151-56-4)		0.006		
benzene (71-43-2)	1.2×10^{-4}			
benzidine and salts (92-87-5)	1.5×10^{-8}			
benzo(a)pyrene (50-32-8)	3.3×10^{-5}			
benzyl chloride (100-44-7)			0.5	
beryllium (7440-41-7)	4.1×10^{-6}			
beryllium chloride (7787-47-5)	4.1×10^{-6}			
beryllium fluoride (7787-49-7)	4.1×10^{-6}			
beryllium nitrate (13597-99-4)	4.1×10^{-6}			
bioavailable chromate pigments, as chromium (VI) equivalent	8.3×10^{-8}			
bis-chloromethyl ether (542-88-1)	3.7×10^{-7}			
bromine (7726-95-6)				0.2
1,3-butadiene (106-99-0)	4.4×10^{-4}			
cadmium (7440-43-9)	5.5×10^{-6}			
cadmium acetate (543-90-8)	5.5×10^{-6}			
cadmium bromide (7789-42-6)	5.5×10^{-6}			
carbon disulfide (75-15-0)		0.186		
carbon tetrachloride (56-23-5)	6.7×10^{-3}			
chlorine (7782-50-5)		0.0375		0.9
chlorobenzene (108-90-7)		2.2		
chloroform (67-66-3)	4.3×10^{-3}			
chloroprene (126-99-8)		0.44	3.5	
cresol (1319-77-3)			2.2	
p-dichlorobenzene (106-46-7)				66
di(2-ethylhexyl)phthalate (117-81-7)		0.03		
dimethyl sulfate (77-78-1)		0.003		
1,4-dioxane (123-91-1)		0.56		
epichlorohydrin (106-89-8)	8.3×10^{-2}			

Acceptable Ambient Levels (AAL) in Milligrams per Cubic Meter (mg/m^3) Except Where Noted				
Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
ethyl acetate (141-78-6)			140	
ethylenediamine (107-15-3)		0.3	2.5	
ethylene dibromide (106-93-4)	4.0×10^{-4}			
ethylene dichloride (107-06-2)	3.8×10^{-3}			
ethylene glycol monoethyl ether (110-80-5)		0.12	1.9	
ethylene oxide (75-21-8)	2.7×10^{-5}			
ethyl mercaptan (75-08-1)			0.1	
fluorides		0.016	0.25	
formaldehyde (50-00-0)				0.15
hexachlorocyclopentadiene (77-47-4)		0.0006	0.01	
hexachlorodibenzo-p-dioxin (57653-85-7)	7.6×10^{-8}			
n-hexane (110-54-3)		1.1		
hexane isomers except n-hexane				360
hydrazine (302-01-2)		0.0006		
hydrogen chloride (7647-01-0)				0.7
hydrogen cyanide (74-90-8)		0.14	1.1	
hydrogen fluoride (7664-39-3)		0.03		0.25
hydrogen sulfide (7783-06-4)		0.12		
maleic anhydride (108-31-6)		0.012	0.1	
manganese and compounds		0.031		
manganese cyclopentadienyl tricarbonyl (12079-65-1)		0.0006		
manganese tetroxide (1317-35-7)		0.0062		
mercury, alkyl		0.00006		
mercury, aryl and inorganic compounds		0.0006		
mercury, vapor (7439-97-6)		0.0006		
methyl bromide (74-83-9)	0.005[a]	1.0		
methyl chloroform (71-55-6)		12		245
methylene chloride (75-09-2)	2.4×10^{-2}		1.7	
methyl ethyl ketone (78-93-3)		3.7		88.5
methyl isobutyl ketone (108-10-1)		2.56		30
methyl mercaptan (74-93-1)			0.05	
nickel carbonyl (13463-39-3)		0.0006		
nickel metal (7440-02-0)		0.006		
nickel, soluble compounds, as nickel		0.0006		
nickel subsulfide (12035-72-2)	2.1×10^{-6}			
nitric acid (7697-37-2)				1
nitrobenzene (98-95-3)		0.06	0.5	
n-nitrosodimethylamine (62-75-9)	5.0×10^{-5}			
non-specific chromium (VI) compounds, as chromium (VI) equivalent	8.3×10^{-8}			
pentachlorophenol (87-86-5)		0.003	0.025	
perchloroethylene (127-18-4)	1.9×10^{-1}			

Acceptable Ambient Levels (AAL) in Milligrams per Cubic Meter (mg/m^3) Except Where Noted				
Pollutant (CAS Number)	Annual (Carcinogens)	24-hour (Chronic Toxicants)	1-hour (Acute Systemic Toxicants)	1-hour (Acute Irritants)
phenol (108-95-2)			0.95	
phosgene (75-44-5)		0.0025		
phosphine (7803-51-2)				0.13
polychlorinated biphenyls (1336-36-3)	8.3×10^{-5}			
soluble chromate compounds, as chromium (VI) equivalent		6.2×10^{-4}		
styrene (100-42-5)			10.6	
sulfuric acid (7664-93-9)		0.012	0.1	
tetrachlorodibenzo-p-dioxin (1746-01-6)	3.0×10^{-9}			
1,1,2,2-tetrachloroethane (79-34-5)	6.3×10^{-3}			
toluene (108-88-3)		4.7		56
toluene diisocyanate, 2,4- (584-84-9) and 2,6- (91-08-7) isomers		0.0002		
trichloroethylene (79-01-6)	5.9×10^{-2}			
vinyl chloride (75-01-4)	3.8×10^{-4}			
vinylidene chloride (75-35-4)		0.12		
xylene (1330-20-7)		2.7		65

[a] This compound has not been defined as a carcinogen.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3); 143-215.107(a)(4); 143-215.107(a)(5); 143B-282;*
Eff. May 1, 1990;
Amended Eff. September 1, 1992; March 1, 1992;
Temporary Amendment Eff. July 20, 1997;
Amended Eff. July 7, 2014; May 1, 2014; March 1, 2010; June 1, 2008; April 1, 2005; April 1, 2001; July 1, 1998;
Readopted Eff. July 1, 2018;
Amended Eff. November 1, 2020.

15A NCAC 02D .1105 FACILITY REPORTING, RECORDKEEPING

The Director may require, pursuant to 15A NCAC 02D .0600, the owner or operator of a source subject to this Section to monitor emissions of toxic air pollutants, to maintain records of these emissions, and to report these emissions. The owner or operator of any toxic air pollutant emission source subject to the requirements of this Section shall comply with the monitoring, recordkeeping, and reporting requirements in 15A NCAC 02D .0600.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4),(5); 143B-282;*
Eff. May 1, 1990;
Amended Eff. April 1, 1999; October 1, 1991;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1106 DETERMINATION OF AMBIENT AIR CONCENTRATION

(a) Modeling shall not be used for enforcement. Modeling shall be used to determine process operational and air pollution control parameters and emission rates for toxic air pollutants to place in the air quality permit for that facility that will prevent any of the acceptable ambient levels in 15A NCAC 02D .1104 from being exceeded, except as allowed pursuant to 15A NCAC 2Q .0700. Enforcing these permit stipulations and conditions shall be the mechanism used to ensure that the requirements of 15A NCAC 02D .1104, except as allowed by 15A NCAC 2Q .0700, are met.

(b) The owner or operator of the facility may provide a modeling analysis or may request the Division to perform a modeling analysis of the facility. If the owner or operator of the facility requests the Division to perform the modeling analysis, the owner or operator shall provide emissions rates, stack parameters, and other information that the Division needs to conduct the modeling. The data that the owner or operator of the facility provides the Division to use in the model or in deriving the data used in the model shall be the process, operational, and air pollution control equipment parameters and emission rates that will be contained in the facility's permit. If the Division's initial review of the modeling request indicates extensive or inappropriate use of state resources, or if the Division's modeling analysis fails to show compliance with the acceptable ambient levels in 15A NCAC 02D .1104, the modeling demonstration shall become the responsibility of the owner or operator of the facility.

(c) When the owner or operator of the facility is responsible for providing the modeling demonstration and the data used in the modeling, the owner or operator of the facility shall use in the model or in deriving data used in the model the process operational and air pollution control equipment parameters and emission rates that will be contained in his or her permit. Sources that are not required to be included in the model shall not be included in the permit to emit toxic air pollutants.

(d) For the following pollutants, modeled emission rates shall be based on the highest emissions occurring in any 15-minute period. The resultant modeled one-hour concentrations shall then be compared to the applicable one-hour acceptable ambient levels to determine compliance:

(1) acetaldehyde (75-07-0);
(2) acetic acid (64-19-7);
(3) acrolein (107-02-8);
(4) ammonia (7664-41-7);
(5) bromine (7726-95-6);
(6) chlorine (7782-50-5);
(7) formaldehyde (50-00-0);
(8) hydrogen chloride (7647-01-0);
(9) hydrogen fluoride (7664-39-3); and
(10) nitric acid (7697-37-2).

(e) The owner or operator of the facility and the Division may use any model allowed by 40 CFR Part 51, Appendix W, if the model is appropriate for the facility being modeled. The owner or operator or the Division may use a model other than one allowed by 40 CFR Part 51, Appendix W if the model is equivalent to the model allowed by 40 CFR Part 51, Appendix W.

(f) Ambient air concentrations shall be evaluated for annual periods over a calendar year, for 24-hour periods from midnight to midnight, and for one-hour periods beginning on the hour.

(g) The owner or operator of the facility shall identify each toxic air pollutant emitted and its corresponding emission rate using mass balancing analysis, source testing, or other methods that provides an equivalently accurate estimate of the emission rate.

(h) The owner or operator of the facility shall either submit a modeling plan prior to submitting modeling or submit a model protocol checklist with modeling to the Director. The modeling plan or protocol checklist shall include:

(1) a diagram of the plant site, including locations of all stacks and associated buildings;
(2) on-site building dimensions;
(3) a diagram showing property boundaries, including a scale, key, and north indicator;
(4) the location of the site on a United States Geological Survey (USGS) map;
(5) discussion of good engineering stack height and building wake effects for each stack;
(6) discussion of cavity calculations, impact on rolling and complex terrain, building wake effects, and urban or rural considerations;
(7) discussion of reasons for model selection;
(8) discussion of meteorological data to be used;
(9) discussion of sources emitting the pollutant that are not to be included in the model with an explanation of why they are being excluded, including why the source will not affect the modeling analysis; and
(10) any other pertinent information.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(5); 143B-282; S.L. 1989, c. 168, s. 45;*
Eff. May 1, 1990;
Amended Eff. July 1, 1998;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1107 MULTIPLE FACILITIES

(a) If an acceptable ambient level in 15A NCAC 02D .1104 is exceeded because of emissions of two or more facilities and if public exposure is such that human health may be adversely affected, the Commission shall require the subject facilities to apply additional controls or to otherwise reduce emissions. In considering whether human health may be adversely affected, the Commission shall consider one or more of the following:

(1) an emission inventory;
(2) ambient monitoring;
(3) modeling; or
(4) an epidemiological study.

(b) The allocation to the facilities of additional controls or reductions shall be based on their relative contributions to the pollutant concentrations unless the owners or operators agree otherwise.

(c) The owner or operator of a facility shall not be required to conduct the multi-facility ambient impact analysis described in Paragraph (a) of this Rule. This type of analysis shall be done by the Division. In performing its analysis, the Division shall:

(1) develop a modeling plan that includes the elements set out in 15A NCAC 02D .1106(h);
(2) use for the source modeling parameters:
    (A) the modeling parameters used by the owner or operator of the source in his or her modeling demonstration; or
    (B) parameters contained in or derived from data contained in the source's permit if a modeling demonstration has not been done or if a needed parameter has not been used in the modeling demonstration;
(3) use a model allowed by 15A NCAC 02D .1106(e);
(4) use the time periods required by 15A NCAC 02D .1106(f); and
(5) only consider impacts of a facility's emissions beyond the premises of that facility.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(5); 143B-282;*
Eff. May 1, 1990;
Amended Eff. July 1, 1998;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1108 MULTIPLE POLLUTANTS

If the Commission has evidence that two or more toxic air pollutants being emitted from a facility or combination of facilities act in the same way to affect human health so that their effects may be additive or enhanced and that public exposure is such that human health may be adversely affected, then the Commission shall consider developing acceptable ambient levels for the combination of toxic air pollutants or other appropriate control measures.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(5); 143B-282;*
Eff. May 1, 1990;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1109 112(J) CASE-BY-CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

(a) Applicability. This Rule shall apply only to sources of hazardous air pollutants required to have a permit pursuant to 15A NCAC 02Q .0500 and as described in 40 CFR 63.50. This Rule does not apply to research or laboratory activities as defined in Paragraph (b) of this Rule.

(b) Definitions. For the purposes of this Rule, the definitions in 40 CFR 63.2, 63.51, 15A NCAC 02Q .0526, and the following apply:

(1) "Affected source" means the collection of equipment, activities, or both within a single contiguous area and under common control that is in a Section 112(c) source category or subcategory for which the Administrator has failed to promulgate an emission standard by the Section 112(j) deadline, and that is addressed by an applicable MACT emission limitation established pursuant to 40 CFR Part 63 Subpart B.
(2) "Control technology" means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants including measures that:
    (A) reduce the quantity or eliminate the emissions of such pollutants through process changes, substitution of materials, or other modifications;

(B) enclose systems or processes to eliminate emissions;
(C) collect, capture, or treat such pollutants when released from a process, stack, storage, or fugitive emission point;
(D) are design, equipment, work practice, or operational standards, including requirements for operator training or certification, as provided in 42 USC 7412(h); or
(E) are a combination of Parts (A) through (D) of this definition.

(3) "EPA" means the United States Environmental Protection Agency or its Administrator.

(4) "Hazardous air pollutant" means any pollutant listed pursuant to Section 112(b) of the federal Clean Air Act.

(5) "MACT" means maximum achievable control technology.

(6) "Maximum achievable control technology" means:
(A) for existing sources,
(i) a MACT standard that EPA has proposed or promulgated for a particular category of facility or source;
(ii) the average emission limitation achieved by the best performing 12 percent of the existing facilities or sources for which EPA has emissions information if the particular category of source contains 30 or more sources; or
(iii) the average emission limitation achieved by the best performing five facilities or sources for which EPA has emissions information if the particular category of source contains fewer than 30 sources; or
(B) for new sources, the maximum degree of reduction in emissions that is deemed achievable but not less stringent than the emission control that is achieved in practice by the best controlled similar source.

(7) "MACT floor" means:
(A) for existing sources:
(i) the average emission limitation achieved by the best performing 12 percent of the existing sources for which EPA has emissions information, excluding those sources that have, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction that complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate, as defined in Section 171 of the federal Clean Air Act, applicable to the source category or subcategory for categories and subcategories with 30 or more sources; or
(ii) the average emission limitation achieved by the best performing five sources for which EPA has emissions or could reasonably obtain emissions information in the category or subcategory for categories or subcategories with fewer than 30 sources;
(B) for new sources, the emission limitation achieved in practice by the best controlled similar source.

(8) "New affected source" means a collection of equipment, activities, or both that was constructed after the issuance of a Section 112(j) permit for the source pursuant to 40 CFR 63.52 and is subject to the applicable MACT emission limitation for new sources. Each permit shall define the term "new affected source" that will be the same as the "affected source" unless a different collection is warranted based on consideration of factors including:
(A) the emission reduction impacts of controlling individual sources versus groups of sources;
(B) the cost effectiveness of controlling individual equipment;
(C) the flexibility to accommodate common control strategies;
(D) the cost and benefits of emissions averaging;
(E) the incentives for pollution prevention;
(F) the feasibility and cost of controlling processes that share common equipment such as product recovery devices; and
(G) the feasibility and cost of monitoring.

(9) "New facility" means a facility for which construction is commenced after the Section 112(j) deadline or after the proposal of a relevant standard pursuant to Section 112(d) or (h) of the Federal Clean Air Act, whichever comes first.

(10) "Research or laboratory activities" means activities whose primary purpose is to conduct research and development into new processes and products if the activities are operated under the supervision of technically trained personnel and are not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner, and if the source is not in a source category specifically addressing research or laboratory activities that is listed pursuant to Section 112(c)(7) of the Clean Air Act.

(11) "Section 112(j) deadline" means the date 18 months after the date for which a relevant standard is scheduled to be promulgated pursuant to 40 CFR Part 63, except that for all major sources listed in the source category schedule for which a relevant standard is scheduled to be promulgated by November 15, 1994, the Section 112(j) deadline is November 15, 1996, and for all major sources listed in the source category schedule for which a relevant standard is scheduled to be promulgated by November 15, 1997, the Section 112(j) deadline is December 15, 1999.

(12) "Similar source" means that equipment or collection of equipment that, by virtue of its structure, operability, type of emissions, and volume and concentration of emissions, is substantially equivalent to the new affected source and employs control technology for control of emissions of hazardous air pollutants that is practical for use on the new affected source.

(c) Missed promulgation dates: 112(j). If EPA fails to promulgate a standard for a category of source pursuant to Section 112 of the Federal Clean Air Act by the date established pursuant to Sections 112(e)(1) or (3) of the federal Clean Air Act, the owner or operator of any source in such category shall submit, within 18 months after such date, a permit application, in accordance with the procedures in 15A NCAC 02Q .0526, to the Director and to EPA to apply MACT to such sources. Sources subject to this Paragraph shall be in compliance with this Rule within three years after the date that the permit is issued.

(d) New facilities. The owner or operator of any new facility that is a major source of hazardous air pollutants (HAP) that is subject to this Rule shall apply MACT in accordance with the provisions of 15A NCAC 02D .1112, 15A NCAC 02Q .0528, and .0526(e)(2).

(e) Case-by-case MACT determination. The Director shall determine MACT according to 40 CFR 63.55(a).

(f) Monitoring and recordkeeping. The owner or operator of a source subject to this Rule shall install, operate, and maintain monitoring capable of detecting deviations from each applicable emission limitation or other standards with sufficient reliability and timeliness to determine continuous compliance over the applicable reporting period. Such monitoring data may be used as a basis for enforcing emissions limitations established pursuant to this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5),(10);*
Temporary Adoption Eff. March 8, 1994 for a period of 180 days or until the permanent rule is effective, whichever is sooner;
Eff. July 1, 1994;
Amended Eff. February 1, 2004; July 1, 1998; July 1, 1996;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1110 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

(a) With the exception of Paragraph (b) of this Rule, sources subject to national emission standards for hazardous air pollutants promulgated in 40 CFR Part 61 shall comply with emission standards, monitoring and reporting requirements, maintenance requirements, notification and record keeping requirements, performance test requirements, test method and procedural provisions, and all other provisions, as required therein, rather than with any otherwise-applicable Rule in 15A NCAC 02D .0500 that would be in conflict therewith.

(b) Along with the notice appearing in the North Carolina Register for a public hearing to amend this Rule to exclude a standard from this Rule, the Director shall state whether or not the national emission standards for hazardous air pollutants promulgated in 40 CFR Part 61, or part thereof, will be enforced. If the Commission does not adopt the amendment to this Rule to exclude or amend the standard within 12 months after the close of the comment period on the proposed amendment, the Director shall begin enforcing that standard when 12 months has elapsed after the end of the comment period on the proposed amendment.

(c) All requests, reports, applications, submittals, and other communications to the administrator required under Paragraph (a) of this Rule shall be submitted to the Director of the Division of Air Quality rather than to the

Environmental Protection Agency; except that all such reports, applications, submittals, and other communications to the administrator required by 40 CFR 61.145 shall be submitted to the Director, Division of Epidemiology.
(d) In the application of this Rule, definitions contained in 40 CFR Part 61 shall apply rather than those in 15A NCAC 02D .0100.
(e) 15A NCAC 02Q .0102 shall not be applicable to any source to which this Rule applies. The owner or operator of the source shall apply for and receive a permit if required pursuant to 15A NCAC 02Q .0300 or .0500.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 150B-21.6;*
Eff. July 1, 1996;
Amended Eff. June 1, 2008; July 1, 1997;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
(a) With the exception of Paragraph (b) or (c) of this Rule, sources subject to national emission standards for hazardous air pollutants for source categories promulgated in 40 CFR Part 63 shall comply with emission standards, monitoring and reporting requirements, maintenance requirements, notification and record keeping requirements, performance test requirements, test method and procedural provisions, and other provisions, as required therein, rather than with any otherwise-applicable rule in 15A NCAC 02D .0500 which would be in conflict therewith.
(b) This Rule shall not apply to:
(1) the approval of state programs and delegation of federal authorities (40 CFR 63.90 to 63.96, Subpart E); and
(2) the requirements for control technology determined for major sources in accordance with Clean Air Act Sections 112(g) and 112(j) (40 CFR 63.50 to 63.57, Subpart B).
(c) Along with the notice appearing in the North Carolina Register for a public hearing to amend this Rule to exclude a standard from this Rule, the Director shall state whether or not the national emission standard for hazardous air pollutants for source categories promulgated in 40 CFR Part 63, or part thereof, will be enforced. If the Commission does not adopt the amendment to this Rule to exclude or amend the standard within 12 months after the close of the comment period on the proposed amendment, the Director shall begin enforcing that standard when 12 months has elapsed after the end of the comment period on the proposed amendment.
(d) All requests, reports, applications, submittals, and other communications to the administrator required pursuant to Paragraph (a) of this Rule shall be submitted to the Director of the Division of Air Quality rather than to the Environmental Protection Agency; except that all such reports, applications, submittals, and other communications to the administrator required by 40 CFR Part 63, Subpart M for dry cleaners covered by Chapter 143, Article 21A, Part 6 of the General Statutes shall be submitted to the Director of the Division of Waste Management.
(e) In the application of this Rule, definitions contained in 40 CFR Part 63 shall apply rather than those of Section .0100 of this Subchapter when conflict exists.
(f) 15A NCAC 02Q .0102 shall not be applicable to any source to which this Rule applies if the source is required to be permitted pursuant to 15A NCAC 02Q .0500, Title V Procedures. The owner or operator of the source shall apply for and receive a permit if required pursuant to 15A NCAC 02Q .0300 or .0500. Sources that have heretofore been exempted from permit requirements and have become subject to requirements promulgated in 40 CFR 63 shall apply for a permit in accordance to 15A NCAC 02Q .0109.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 150B-21.6;*
Eff. July 1, 1996;
Amended Eff. January 1, 2007; April 1, 1997;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1112 112(G) CASE BY CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
(a) Applicability. This Rule applies to the construction or reconstruction of major sources of hazardous air pollutants unless:
(1) the major source has been regulated or exempted from regulation pursuant to:
(A) 15A NCAC 02D .1109 or .1111; or
(B) a standard issued pursuant to Section 112(d), 112(h), or 112(j) of the federal Clean Air Act and incorporated in another Subpart of 40 CFR Part 63; or
(2) the owner or operator of the major source has received all necessary air quality permits for the construction or reconstruction project before July 1, 1998.

(b) Exclusions. The requirements of this Rule shall not apply to:
    (1) electric utility steam generating units unless and until such time as these units are added to the source category list pursuant to Section 112(c)(5) of the federal Clean Air Act;
    (2) stationary sources that are within a source category that has been deleted from the source category list pursuant to Section 112(c)(9) of the federal Clean Air Act; or
    (3) research and development activities.
(c) Definitions. For the purposes of this Rule, the following definitions apply:
    (1) "Affected source" means the stationary source or group of stationary sources that, when fabricated on site, erected, or installed meets the definition of "construct a major source" or the definition of "reconstruct a major source" contained in this Paragraph.
    (2) "Affected States" means all States or local air pollution agencies whose areas of jurisdiction are:
        (A) contiguous to North Carolina and located less than D=Q/12.5 from the facility, where:
            (i) Q = emissions of the pollutant emitted at the highest permitted rate in tons per year; and
            (ii) D = distance from the facility to the contiguous state or local air pollution control agency in miles; or
        (B) within 50 miles of the permitted facility.
    (3) "Available information" means, for purposes of identifying control technology options for the affected source, information contained in the following information sources as of the date of approval of the MACT determination by the Division:
        (A) a relevant proposed regulation, including all supporting information;
        (B) background information documents for a draft or proposed regulation;
        (C) data and information available from the Control Technology Center developed pursuant to Section 113 of the federal Clean Air Act;
        (D) data and information contained in the Aerometric Informational Retrieval System including information in the MACT data base;
        (E) additional information that can be expeditiously provided by the Division and EPA; and
        (F) for the purpose of determinations by the Division, additional information provided by the applicant or others and additional information available to the Division.
    (4) "Construct a major source" means:
        (A) To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources that is located within a contiguous area and under common control and that emits or has the potential to emit 10 tons per year of any HAP's or 25 tons per year of any combination of HAP; or
        (B) To fabricate, erect, or install at any developed site a new process or production unit that in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, unless the process or production unit satisfies Subparts (i) through (vi) of this Paragraph:
            (i) all HAP emitted by the process or production unit that would otherwise be subject to the requirements of this Rule will be controlled by emission control equipment that was previously installed at the same site as the process or production unit;
            (ii) the Division:
                (I) has determined within a period of five years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT) pursuant to 15A NCAC 02D .0530 or lowest achievable emission rate (LAER) pursuant to15A NCAC 02D .0531 for the category of pollutants that includes those HAP's to be emitted by the process or production unit; or
                (II) determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT, LAER, or MACT determination pursuant to 15A NCAC 02D .1109);

(iii) the Division determines that the percent control efficiency for emissions of HAP from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;

(iv) the Division has provided notice and an opportunity for public comment concerning its determination that criteria in Subparts (i), (ii), and (iii) of this Subparagraph apply and concerning the continued adequacy of any prior LAER, BACT, or MACT determination pursuant to 15A NCAC 02D .1109;

(v) if any commenter has asserted that a prior LAER, BACT, or MACT determination pursuant to 15A NCAC 02D .1109 is no longer adequate, the Division has determined that the level of control required by that prior determination remains adequate; and

(vi) any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the Division are predicated will be construed by the Division as applicable requirements pursuant to Section 504(a) of the federal Clean Air Act and either have been incorporated into an existing permit issued pursuant to 15A NCAC 02Q .0500 for the affected facility or will be incorporated into such a permit upon issuance.

(5) "Control technology" means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants, including measures that:

(A) reduce the quantity of, or eliminate emissions of, such pollutants through process changes, substitution of materials, or other modifications;

(B) enclose systems or processes to eliminate emissions;

(C) collect, capture, or treat such pollutants when released from a process, stack, storage, or fugitive emissions point;

(D) are design, equipment, work practice, or operational standards, including requirements for operator training or certification, as provided in 42 U.S.C. 7412(h); or

(E) are a combination of Parts (A) through (D) of this definition.

(6) "Electric utility steam generating unit" means any fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A unit that co-generates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electric output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.

(7) "Greenfield site" means a contiguous area under common control that is an undeveloped site.

(8) "HAP" means hazardous air pollutants.

(9) "Hazardous air pollutant" means any pollutant listed pursuant to Section 112(b) of the federal Clean Air Act.

(10) "List of source categories" means the source category list required by Section 112(c) of the federal Clean Air Act.

(11) "MACT" means maximum achievable control technology.

(12) "Maximum achievable control technology emission limitation for new sources" means the emission limitation that is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and that reflects the maximum degree of reduction in emissions that the permitting authority determines is achievable by the constructed or reconstructed source, taking into consideration the cost of achieving such emission reduction, non-air quality health and environmental impacts, and energy requirements.

(13) "Process or production unit" means any collection of structures or equipment that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit.

(14) "Reconstruct a major source" means the replacement of components at an existing process or production unit that emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, if:

(A) the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable process or production unit; and

(B) it is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established pursuant to 40 CFR Part 63, Subpart B.

(15) "Research and development activities" means activities conducted at a research or laboratory facility whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner.

(16) "Similar source" means a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed major source, such that the source could be controlled using the same control technology.

(d) Principles of MACT determinations. The following general principles shall be used to make a case-by-case MACT determination concerning construction or reconstruction of a major source pursuant to this Rule:

(1) The MACT emission limitation or MACT requirements recommended by the applicant and approved by the Division shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Division.

(2) Based upon available information, the MACT emission limitation and control technology, including any requirements pursuant to Subparagraph (3) of this Paragraph, recommended by the applicant and approved by the Division shall achieve the maximum degree of reduction in emissions of HAP that can be achieved by using those control technologies that can be identified from the available information, taking into consideration the costs of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements associated with the emission reduction.

(3) The owner or operator may recommend a specific design, equipment, work practice, or operational standard, or a combination thereof, and the Director may approve such a standard if it is not feasible to prescribe or enforce an emission limitation pursuant to the criteria set forth in Section 112(h)(2) of the federal Clean Air Act.

(4) If the EPA has either proposed a relevant emission standard pursuant to Section 112(d) or 112(h) of the federal Clean Air Act or adopted a presumptive MACT determination for the source category that includes the constructed or reconstructed major source, the MACT requirements applied to the constructed or reconstructed major source shall have considered those MACT emission limitations and requirements of the proposed standard or presumptive MACT determination.

(e) Effective date of MACT determination. The effective date of a MACT determination shall be the date of issuance of a permit pursuant to procedures of 15A NCAC 02Q .0300 or .0500 incorporating a MACT determination.

(f) Compliance date. On and after the date of start-up, a constructed or reconstructed major source that is subject to the requirements of this Rule shall be in compliance with all applicable requirements specified in the MACT determination.

(g) Compliance with MACT determinations. The owner or operator of a constructed or reconstructed major source that:

(1) is subject to a MACT determination shall comply with all requirements set forth in the permit issued pursuant to 15A NCAC 02Q .0300 or .0500, including any MACT emission limitation or MACT work practice standard, and any notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements; or

(2) has obtained a MACT determination shall be deemed to be in compliance with Section 112(g)(2)(B) of the federal Clean Air Act only to the extent that the constructed or reconstructed major source is in compliance with all requirements set forth in the permit issued pursuant to 15A NCAC 02Q .0300 or .0500. Any violation of such requirements by the owner of operator shall be deemed by the Division to be a violation of the prohibition on construction or reconstruction in Section 112(g)(2)(B) of the federal Clean Air Act for whatever period the owner or operator is determined to be in violation of such requirements, and shall subject the owner or operator to appropriate enforcement action pursuant to the General Statutes and the federal Clean Air Act.

(h) Requirements for constructed or reconstructed major sources subject to a subsequently-promulgated MACT standard or MACT requirement. If EPA promulgates an emission standard pursuant to Section 112(d) or 112(h) of

the federal Clean Air Act or the Division issues a determination pursuant to 15A NCAC 02D .1109 that is applicable to a stationary source or group of sources that is a constructed or reconstructed major source pursuant to this Rule:

(1) before the date that the owner or operator has obtained a final and legally effective MACT determination pursuant to 15A NCAC 02Q .0300 or .0500, the owner or operator of the sources shall comply with the promulgated standard or determination rather than any MACT determination pursuant to this Rule by the compliance date in the promulgated standard; or

(2) after the source has been subject to a prior case-by-case MACT pursuant to this Rule, and the owner or operator obtained a final and legally effective case-by-case MACT determination prior to the promulgation date of such emission standard, and if the initial permit has not yet been issued pursuant to 15A NCAC 02Q .0500, the Division shall issue an initial permit that incorporates the emission standard or determination, or if the initial permit has been issued pursuant to 15A NCAC 02Q .0500, the Division shall revise the permit according to the reopening procedures in 15A NCAC 02Q .0517, Reopening for Cause, whichever is relevant, to incorporate the emission standard or determination.

(i) Compliance with subsequent 112(d), 112(h), or 112(j) standards. If EPA includes in the emission standard established pursuant to Section 112(d) or 112(h) of the federal Clean Air Act a specific compliance date for those sources that have obtained a final and legally effective MACT determination pursuant to this Rule and that have submitted the information required by 40 CFR 63.43 to EPA before the close of the public comment period for the standard established pursuant to section 112(d) of the federal Clean Air Act, the Division shall incorporate that compliance date in the permit issued pursuant to 15A NCAC 02Q .0500. If no compliance date has been established in the promulgated 112(d) or 112(h) standard or determination pursuant to 15A NCAC 02D .1109 for those sources that have obtained a final and legally effective MACT determination pursuant to this Rule, the Director shall establish a compliance date in the permit that assures that the owner or operator complies with the promulgated standard or determination as expeditiously as practicable, but not longer than eight years after the standard is promulgated or a determination is made pursuant to 15A NCAC 02D .1109.

(j) Revision of permit to incorporate less stringent control. Notwithstanding the requirements of Paragraph (h) of this Rule, if the Administrator of EPA promulgates an emission standard pursuant to Section 112(d) or Section 112(h) of the federal Clean Air Act or the Division issues a determination pursuant to 15A NCAC 02D .1109 that is applicable to a stationary source or group of sources that was deemed to be a constructed or reconstructed major source pursuant to this Rule and that is the subject of a prior case-by-case MACT determination pursuant to 40 CFR 63.43, and the level of control required by the emission standard issued pursuant to Section 112(d) or 112(h) or the determination issued pursuant to 15A NCAC 02D .1109 is less stringent than the level of control required by any emission limitation or standard in the prior MACT determination, the Division shall not be required to incorporate any less stringent terms of the promulgated standard in the permit issued pursuant to 15A NCAC 02Q .0500 applicable to such sources after considering the effects on air quality. The Division may consider any more stringent provision of the prior MACT determination to be applicable legal requirements, as necessary to protect air quality, when issuing or revising such an operating permit.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5),(10);*
Eff. July 1, 1998;
Readopted Eff. July 1, 2018.

SECTION .1200 - CONTROL OF EMISSIONS FROM INCINERATORS AND COMBUSTION UNITS

15A NCAC 02D .1201 PURPOSE AND SCOPE

(a) The rules in this Section shall apply to incinerators and combustor units as defined in 15A NCAC 02D .1202 or regulated pursuant to 15A NCAC 02D .1208.

(b) The rules in this Section shall not apply to:

(1) afterburners, flares, fume incinerators, or other similar devices used to reduce the emissions of air pollutants from processes whose emissions shall be regulated as process emissions;

(2) boilers or industrial furnaces that burn waste as a fuel, except solid waste as defined in 40 CFR 241.2;

(3) air curtain burners, which shall comply with 15A NCAC 02D .1900; or

(4) incinerators used to dispose of dead animals or poultry that meet all of the following requirements:

(A) the incinerator is located on a farm and is operated by the farm owner or by the farm operator;

(B) the incinerator is used solely to dispose of animals or poultry originating on the farm where the incinerator is located;
(C) the incinerator is not charged at a rate that exceeds its design capacity; and
(D) the incinerator complies with 15A NCAC 02D .0521 (visible emissions).

(c) Referenced document SW-846 "Test Methods for Evaluating Solid Waste," Third Edition, cited by rules in this Section is incorporated by reference, not including subsequent amendments or editions, and may be obtained free of charge online at https://www.epa.gov/hw-sw846.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(1), (3), (4), (5);*
Eff. October 1, 1991;
Amended Eff. July 1, 2000; July 1, 1999; July 1, 1998; April 1, 1995; December 1, 1993;
Temporary Amendment Eff. March 1, 2002;
Amended Eff. July 1, 2007; December 1, 2005; August 1, 2002;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1202 DEFINITIONS

(a) For the purposes of this Section, the definitions in 40 CFR 60.5250, 40 CFR 60.2875, and 40 CFR 60.51c shall apply in addition to the following definitions:

(1) "Air curtain incinerator," also referred to as an "air curtain burner," means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs as defined in 40 CFR 60.2875.
(2) "Commercial and industrial solid waste incinerator" (CISWI) or "commercial and industrial solid waste incineration unit" is defined in 40 CFR 60.2875.
(3) "Co-fired combustor" is defined in 40 CFR 60.51c. For the purposes of this definition, pathological waste, chemotherapeutic waste, and low-level radioactive waste shall be deemed "other" wastes when calculating the percentage of hospital, medical, or infectious waste combusted.
(4) "Crematory incinerator" means any incinerator located at a crematory regulated pursuant to 21 NCAC 34C that is used solely for the cremation of human remains.
(5) "Dioxin and Furan" (also referred to as "dioxins/furans") means tetra- through octa- chlorinated dibenzo-p-dioxins and dibenzofurans.
(6) "Hospital, medical, and infectious waste incinerator (HMIWI)" means any device that combusts any amount of hospital, medical, and infectious waste.
(7) "Large HMIWI" means:
    (A) a HMIWI whose maximum design waste burning capacity is more than 500 pounds per hour;
    (B) a continuous or intermittent HMIWI whose maximum charge rate is more than 500 pounds per hour; or
    (C) a batch HMIWI whose maximum charge rate is more than 4,000 pounds per day.
(8) "Hospital waste" means discards generated at a hospital, except unused items returned to the manufacturer. The definition of hospital waste does not include human corpses, remains, and anatomical parts that are intended for interment or cremation.
(9) "Medical and Infectious Waste" means any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals that is listed in Part (A)(i) through (A)(vii) of this Subparagraph.
    (A) The definition of medical and infectious waste includes:
        (i) cultures and stocks of infectious agents and associated biologicals, including:
            (I) cultures from medical and pathological laboratories;
            (II) cultures and stocks of infectious agents from research and industrial laboratories;
            (III) wastes from the production of biologicals;
            (IV) discarded live and attenuated vaccines; and
            (V) culture dishes and devices used to transfer, inoculate, and mix cultures;
        (ii) human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery, autopsy, or other medical procedures, and specimens of body fluids and their containers;

(iii) human blood and blood products including:
(I) liquid waste human blood;
(II) products of blood;
(III) items saturated or dripping with human blood; or
(IV) items that were saturated or dripping with human blood that are now caked with dried human blood, including serum, plasma, other blood components, and their containers, that were used or intended for use in either patient care, testing and laboratory analysis, or the development of pharmaceuticals. Intravenous bags are also included in this category;
(iv) sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips;
(v) animal waste, including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals, or testing of pharmaceuticals;
(vi) isolation wastes, including biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from highly communicable diseases, or isolated animals known to be infected with highly communicable diseases; and
(vii) unused sharps, including the following unused or discarded sharps;
(I) hypodermic needles;
(II) suture needles;
(III) syringes; and
(IV) scalpel blades.

(B) The definition of medical and infectious waste shall not include:
(i) hazardous waste identified or listed in 40 CFR Part 261;
(ii) household waste, as defined in 40 CFR 261.4(b)(1);
(iii) ash from incineration of medical and infectious waste after the incineration process has been completed;
(iv) human corpses, remains, and anatomical parts that are intended for interment or cremation; and
(v) domestic sewage materials identified in 40 CFR 261.4(a)(1).

(10) "Medium HMIWI" means:
(A) a HMIWI whose maximum design waste burning capacity is more than 200 pounds per hour but less than or equal to 500 pounds per hour;
(B) a continuous or intermittent HMIWI whose maximum charge rate is more than 200 pounds per hour but less than or equal to 500 pounds per hour; or
(C) a batch HMIWI whose maximum charge rate is more than 1,600 pounds per day but less than or equal to 4,000 pounds per day.

(11) "POTW" means a publicly owned treatment works as defined in 40 CFR 501.2.

(12) "Sewage sludge" is defined in 40 CFR 60.5250.

(13) "Sewage sludge incineration (SSI) unit" is defined in 40 CFR 60.5250.

(14) "Small HMIWI" means:
(A) a HMIWI whose maximum design waste burning capacity is less than or equal to 200 pounds per hour;
(B) a continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 pounds per hour; or
(C) a batch HMIWI whose maximum charge rate is less than or equal to 1,600 pounds per day.

(15) "Small remote HMIWI" means any small HMIWI that is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (SMSA) and that burns less than

2,000 pounds per week of hospital, medical and infectious waste. The 2,000 pound per week limitation does not apply during performance tests.

(16) "Solid waste" means the term solid waste as defined in 40 CFR 241.2.

(17) "Standard Metropolitan Statistical Area (SMSA)" means any area listed in Office of Management and Budget (OMB) Bulletin No. 93-17, entitled "Revised Statistical Definitions for Metropolitan Areas" dated July 30, 1993, incorporated by reference not including subsequent amendments or editions. A copy of this document may be obtained through the internet at http://www.census.gov/population/estimates/metro-city/93mfips.txt.

(b) Whenever reference is made to the Code of Federal Regulations in this Section, the definition in the Code of Federal Regulations shall apply unless specifically stated otherwise in a particular rule. The Code of Federal Regulations is available in electronic form free of charge at https://www.gpo.gov/fdsys/search/home.action.

History Note: *Authority G.S. 143-213; 143-215.3(a)(1);*
Eff. October 1, 1991;
Amended Eff. July 1, 2000; July 1, 1999; July 1, 1998; July 1, 1996; April 1, 1995; December 1, 1993;
Temporary Amendment Eff. March 1, 2002;
Amended Eff. July 1, 2007; August 1, 2002;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1203 HAZARDOUS WASTE INCINERATORS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. October 1, 1991;
Amended Eff. June 1, 2008; August 1, 2002; July 1, 2000; July 1, 1999; July 1, 1998; April 1, 1995;
Repealed Eff. July 1, 2018.

15A NCAC 02D .1204 SEWAGE SLUDGE INCINERATION UNITS

(a) Applicability. This Rule shall apply to sewage sludge incineration units that meet all three requirements listed in 40 CFR 60.5060(a) through (c).

(b) The provisions of this Rule shall apply to any incinerator subject to this Rule. However, when the provisions of this Rule and provisions of 15A NCAC 02D .0524, .1110, or .1111 or provisions of 40 CFR Part 61, Subpart C; 40 CFR Part 61, Subpart E; or 40 CFR Part 503, Subpart E, regulate the same pollutant, the provisions of the more restrictive standards established in Paragraphs (e) and (f) of this Rule shall apply, notwithstanding provisions of 15A NCAC 02D .0524, .1110, or .1111 or provisions of 40 CFR Part 61, Subpart C; 40 CFR Part 61, Subpart E; or 40 CFR Part 503, Subpart E to the contrary.

(c) Exemptions. Sewage sludge incineration units shall be exempted from this Rule if they are subject to:

(1) 40 CFR Part 60 Subpart LLLL by:
  (A) commencing construction after October 14, 2010; or
  (B) commencing modification after September 21, 2011; or

(2) Rule 15A NCAC 02D .1210, if they are not located at a wastewater treatment facility designed to treat domestic sewage sludge as defined in 40 CFR 60.5065.

(d) Definitions. For the purpose of this Rule, the definitions in 40 CFR 503.41, 40 CFR 60.5250, and 40 CFR 60.2 shall apply in addition to the definitions in 15A NCAC 02D .1202.

(e) Emission Standards. Any incinerator subject to this Rule shall comply with all of the following emission standards:

(1) Emissions of particulate matter from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165 or 40 CFR 60.152 as defined in Paragraph (b) of this Rule.

(2) Fugitive emissions from a sewage sludge incineration unit ash handling process shall meet the requirements established in 40 CFR 60.5165. All other visible emissions from a sewage sludge incineration unit shall comply with 15A NCAC 02D .0521.

(3) Emissions of hydrogen chloride from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165.

(4) Emissions of carbon monoxide from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165.

(5) Emissions of dioxin and furan (total mass basis) from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165.

(6) Emissions of dioxin and furan (toxic equivalency basis) from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165.

(7) Emissions of mercury from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165 and in 40 CFR 61.52(b) as referenced in 15A NCAC 02D .1110(a), (d), and (e).

(8) Emissions of nitrogen oxides from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165.

(9) Emissions of sulfur dioxide from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165.

(10) Emissions of cadmium from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165.

(11) Emissions of lead from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 60.5165. The daily concentration of lead in sewage sludge fed to a sewage sludge incinerator shall meet the requirements specified in 40 CFR 503.43(c).

(12) Emissions of beryllium from a sewage sludge incineration unit shall meet the requirements established in 40 CFR 61.32(a) through (c) as referenced in 15A NCAC 02D .1110(a), (d), and (e).

(13) The daily concentration of arsenic, cadmium, chromium, and nickel in sewage sludge fed to a sewage sludge incinerator shall meet the requirements specified in 40 CFR 503.43(d).

(14) Emissions of toxic air pollutants from a sewage sludge incineration unit shall meet the requirements specified in 15A NCAC 02D .1100 in accordance with 15A NCAC 02Q .0700.

(15) The monthly average concentration for total hydrocarbons, or for carbon monoxide as provided in 40 CFR 503.40(c), in the exit gas from a sewage sludge incinerator stack, corrected to zero percent moisture and seven percent oxygen as specified in 40 CFR 503.44, shall not exceed 100 parts per million on a volumetric basis using the continuous emission monitoring required in Paragraph (k) of this Rule.

(f) Operating limits. The owner or operator of a sewage sludge incineration unit shall meet:

(1) as applicable, the operating limits and requirements specified in 40 CFR 60.5170 including Subparagraphs (a) through (d) and (h) according to the schedule specified in 40 CFR 60.5170(e);

(2) the operating limits and requirements specified in 40 CFR 60.5170 including Subparagraphs (a) through (d) by the final compliance date specified in Paragraph (n) of this Rule;

(3) monitor the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, as specified in 40 CFR 60.5170(f)(1) and (f)(2); and

(4) the operating requirements in 40 CFR 60.5170(a) through (d) and (h) shall meet any new operating limits, re-established in accordance with 40 CFR 60.5210.

(g) Emission and operational standards and limits established in Paragraphs (e) and (f) of this Rule and in accordance with provisions in Paragraph (b) of this Rule shall apply at all times that sewage sludge is in the combustion chamber before the sewage sludge feed to the combustor is cut off for a period of time not less than the sewage sludge incineration residence time and during periods of malfunction as specified in 40 CFR 60.5180.

(h) Initial Compliance:

(1) Requirements with the emission standards specified in the Paragraph (e) of this Rule shall be demonstrated by using the procedures specified in 40 CFR 60.5185(a) through (e).

(2) Requirements with the site-specific operating limits specified in 40 CFR 60.5190(a) shall be established in accordance with the requirements specified 40 CFR 60.5190(a) through (f).

(3) Initial air pollution control device inspection specified 40 CFR 60.5220(c) shall be conducted by the date established in accordance with 40 CFR 60.5195(a). All necessary repairs shall be completed in accordance with 40 CFR 60.5195(b).

(4) A site-specific monitoring plan for continuous monitoring, bag leak detection, ash handling systems, and an initial performance evaluation date shall be developed in accordance with the requirements specified in 40 CFR 60.5200(a) and (d) through (h).

(i) Continuous Compliance Requirements. The owner or operator of a sewage sludge incineration unit subject to this Rule shall demonstrate compliance with the emissions standards in Subparagraphs (e)(1) through (13) and (15) of this Rule by:

(1) demonstrating continuous compliance as specified in 40 CFR 60.5205(a) through (f);

(2) demonstrating continuous compliance with the operating limits as specified in 40 CFR 60.5210(a)(1) and (b) through (d);
(3) demonstrating continuous compliance with the total hydrocarbon concentration of the incinerator stack exit gas according to 40 CFR 503.45(a) unless the requirements for continuously monitoring carbon monoxide as provided in 40 CFR 503.40(c) are satisfied;
(4) demonstrating continuous compliance with the oxygen content of the incinerator stack exit gas as provided in 40 CFR 503.45(b);
(5) demonstrating continuous compliance with the moisture content of the incinerator stack exit gas as provided in 40 CFR 503.45(c);
(6) conducting an annual air pollution control device inspection as specified in 40 CFR 60.5215(a);
(7) making all necessary repairs within the time periods specified in 40 CFR 60.5215(b);
(8) monitoring the concentration of beryllium and mercury from the sewage sludge fed to the incinerator as frequently as specified in 40 CFR 503.46(a)(1); and
(9) monitoring the concentrations of arsenic, cadmium, chromium, lead, and nickel in the sewage sludge fed to the incinerator as frequently as specified in 40 CFR 503.46(a)(2) and (3).

(j) Performance Testing, Monitoring, and Calibration Requirements. The owner or operator of a sewage sludge incineration unit subject to this Rule shall demonstrate compliance with the emissions standards in Subparagraphs (e)(1) through (13) and (15) of this Rule by:

(1) meeting the performance testing requirements specified in 40 CFR 60.5220(a)(1) through (11), 40 CFR 61.53(d) or 40 CFR 61.54, 40 CFR 503.43(e), and 40 CFR 61.33;
(2) meeting the monitoring requirements specified in 40 CFR 60.5220(b)(1) through (7), 40 CFR 61.55, 40 CFR 503.55, 40 CFR 503.46; and 40 CFR 60.153;
(3) performing the air pollution control device inspection requirements specified in 40 CFR 60.5220(b)(1) through (3); and
(4) meeting the bypass stack provisions specified in 40 CFR 60.5220(d).

(k) The owner or operator of a sewage sludge incineration unit, subject to this Rule, shall install, operate, calibrate, and maintain the continuous parameter monitoring systems to ensure compliance with the operational limits set forth in Paragraph (f) of this Rule as specified in 40 CFR 503.45, 40 CFR 60.5225 (a)(1), (2), and 40 CFR 60.153.

(l) Recordkeeping and Reporting. The owner or operator of a sewage sludge incineration unit subject to this Rule shall:

(1) maintain on site in either paper copy or electronic format that can be printed upon request for a period of five years the following;
  (A) the calendar date of each record as specified in 40 CFR 60.5230(a);
  (B) increments of progress as specified in 40 CFR 60.5230(b);
  (C) operator training records as specified in 40 CFR 60.5230(c)(1) through (4);
  (D) air pollution control device inspections as specified in 40 CFR 60.5230(d);
  (E) performance test reports as specified in 40 CFR 60.5230(e)(1) through (4);
  (F) continuous monitoring data as specified in 40 CFR 60.5230(f)(1) through (4) and 40 CFR 60.153;
  (G) other records for continuous monitoring systems as specified in 40 CFR 60.5230(g)(1) through (3) and 40 CFR 60.153;
  (H) deviation reports as specified in 40 CFR 60.5230(h);
  (I) equipment specifications and operation and maintenance requirements as specified in 40 CFR 60.5230(i);
  (J) inspections, calibrations, and validation checks of monitoring devices as specified in 40 CFR 60.5230(j);
  (K) monitoring plan and performance evaluations for continuous monitoring systems as specified in 40 CFR 60.5230(k);
  (L) records indicating use of the bypass stack as specified in 40 CFR 60.5230(m);
  (M) malfunction occurrence records shall as specified in 40 CFR 60.5230(n); and
  (N) records showing compliance with standards for the use or disposal of sewage sludge listed in 40 CFR 503.47(b) through (n).
(2) Submit to the Director in the format specified in 40 CFR 60.5235(h)(1) and by due dates established in Table 6 of 40 CFR Part 60 Subpart MMMM the following:
  (A) the initial compliance report as specified in 40 CFR 60.5235(b);
  (B) the annual compliance report as specified in 40 CFR 60.5235(c);

(C) deviation reports (deviations from emission limits, emission standards, or operating limits, as specified in 40 CFR 60.5235(e)(1)) when it is required by 40 CFR 60.5235(d);
(D) notification of qualified operator deviation and notification of status of qualified operator deviation as specified in 40 CFR 60.5235(e)(1);
(E) notification of resumed operation pursuant to 40 CFR 60.5155(b)(2)(i) following shutdown (due to qualified operator deviation) as specified in 40 CFR 60.5235(e)(2);
(F) notification of a force majeure as specified in 40 CFR 60.5235(f);
(G) notification of intent to start or stop use of a continuous monitoring system, notification of intent to conduct a performance test, and notification of intent to conduct a rescheduled performance test as specified in 40 CFR 60.5235(g);
(H) performance test relative accuracy audit data (test reference method) and performance test data in the manner specified in 40 CFR 60.5235(h)(2); and
(I) semiannual reports as specified in 40 CFR 60.155.

(3) With the Director's approval, the owner or operator may change the semiannual or annual reporting dates of the reports listed in Subparagraph (l)(2) of this Rule in accordance with the procedures established in 40 CFR 60.19(c) pursuant to 40 CFR 60.5235(i).

(m) Operator Training and Qualification.

(1) A sewage sludge incineration unit subject to this Rule shall not be operated unless a fully trained and qualified sewage sludge incineration unit operator is at the facility or can be at the facility within one hour. The trained and qualified sewage sludge incineration unit operator may operate the sewage sludge incineration unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified sewage sludge incineration unit operators are temporarily not accessible, the procedures in 40 CFR 60.5155 shall apply.

(2) Operator training and qualification shall be obtained by completing the requirements specified in 40 CFR 60.5130(c).

(3) The owner or operator of a sewage sludge incineration unit subject to this Rule shall complete an annual review or refresher course covering the five topics specified in 40 CFR 60.5145(a) through (e) to maintain an operator qualification.

(4) The owner or operator of a sewage sludge incineration unit subject to this Rule shall renew a lapsed operator qualification before he or she begins operation of the unit by one of the two methods specified in 40 CFR 60.5150(a) and (b).

(5) When a qualified operator of a sewage sludge incineration unit subject to this Rule is not at the facility and cannot be at the facility within one hour, the owner shall meet the criteria specified in 40 CFR 60.5155.

(6) The owner or operator of a sewage sludge incineration unit subject to this Rule shall maintain and review the operator training documentation as specified in 40 CFR 60.5160 (a) and (b).

(n) Final compliance. The owner or operator of a sewage sludge incineration unit subject to this Rule shall achieve final compliance by the dates specified in 40 CFR 60.5035(a) or (b).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4),(5);*
Eff. October 1, 1991;
Amended Eff. June 1, 2008; August 1, 2002; July 1, 2000; July 1, 1999; July 1, 1998; July 1, 1996; April 1, 1995; December 1, 1993;
Readopted Eff. March 1, 2018;
Amended Eff. December 1, 2021.

15A NCAC 02D .1205 LARGE MUNICIPAL WASTE COMBUSTORS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(4),(5); 40 CFR 60.35b; 40 CFR 60.34e; 40 CFR 60.1515;*
Eff. October 1, 1991;
Amended Eff. July 1, 2000; July 1, 1999; July 1, 1998; July 1, 1996; April 1, 1995;
Temporary Amendment Eff. March 1, 2002;
Amended Eff. August 1, 2002;
Temporary Amendment Eff. March 1, 2003;
Temporary Amendment Expired December 12, 2003;

Amended Eff. July 1, 2010; April 1, 2004;
Repealed Eff. July 1, 2018.

15A NCAC 02D .1206 HOSPITAL, MEDICAL, AND INFECTIOUS WASTE INCINERATORS

(a) Applicability. This Rule shall apply to any hospital, medical, and infectious waste incinerator (HMIWI), except:
- (1) a HMIWI required to have a permit pursuant to Section 3005 of the Solid Waste Disposal Act;
- (2) a pyrolysis unit;
- (3) a cement kiln firing hospital waste or medical and infectious waste;
- (4) a physical or operational change made to an existing HMIWI solely for the purpose of complying with the emission standards for HMIWIs in this Rule. These physical or operational changes shall not be deemed a modification and shall not result in an existing HMIWI becoming subject to the provisions of 40 CFR Part 60, Subpart Ec;
- (5) a HMIWI during periods when only pathological waste, low-level radioactive waste, or chemotherapeutic waste is burned, provided that the owner or operator of the HMIWI:
  - (A) notifies the Director of an exemption claim; and
  - (B) keeps records on a calendar-quarter basis of the periods of time when only pathological waste, low-level radioactive waste, or chemotherapeutic waste was burned; or
- (6) a co-fired HMIWI, if the owner or operator of the co-fired HMIWI:
  - (A) notifies the Director of an exemption claim;
  - (B) provides an estimate of the relative weight of hospital, medical, and infectious waste and other fuels or wastes to be combusted; and
  - (C) keeps records on a calendar-quarter basis of the weight of hospital, medical, and infectious waste combusted and the weight of all other fuels and wastes combusted at the co-fired HMIWI.

(b) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 60.51c shall apply in addition to the definitions in 15A NCAC 02D .1202.

(c) Emission Standards.
- (1) The emission standards in this Paragraph apply to all HMIWIs except if 15A NCAC 02D .0524, .1110, or .1111 applies. However, when Subparagraphs (6) or (7) of this Paragraph and 15A NCAC 02D .0524, .1110, or .1111 regulate the same pollutant, the more restrictive provision for each pollutant shall apply, notwithstanding provisions of 15A NCAC 02D .0524, .1110, or .1111 to the contrary.
- (2) Each HMIWI for which construction was commenced on or before June 20, 1996, or for which modification is commenced on or before March 16, 1998, shall not exceed the requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60.
- (3) Each HMIWI for which construction was commenced after June 20, 1996, but no later than December 1, 2008, or for which modification is commenced after March 16, 1998, but no later than April 6, 2010, shall not exceed the more stringent of the requirements listed in Table 1B of Subpart Ce and Table 1A of Subpart Ec of 40 CFR Part 60.
- (4) Each small remote HMIWI shall not exceed emission standards listed in Table 2B of Subpart Ce of 40 CFR Part 60.
- (5) Visible Emissions. The owner or operator of any HMIWI shall not cause to be discharged into the atmosphere from the stack of the HMIWI any gases that exhibit greater than six percent opacity (six-minute block average).
- (6) Toxic Air Pollutants. The owner or operator of any HMIWI subject to this Rule shall demonstrate compliance with 15A NCAC 02D .1100 according to 15A NCAC 02Q .0700.

(d) Operational Standards.
- (1) The operational standards in this Rule shall not apply to a HMIWI if applicable operational standards in 15A NCAC 02D .0524, .1110, or .1111 apply;
- (2) Annual Equipment Inspection.
  - (A) Each HMIWI shall undergo an annual equipment inspection no more than 12 months following the previous annual equipment inspection;
  - (B) The equipment inspection shall include all the elements listed in 40 CFR 60.36e(a)(1)(i) through (xvii);

(C) Necessary repairs found during the inspection shall be completed within 10 operating days after the inspection unless the owner or operator submits a written request to the Director for an extension of the 10 operating day period; and

(D) The Director shall grant an extension to a small remote HMIWI if the owner or operator submits a written request to the Director for an extension of the 10 operating day period, if the owner or operator demonstrates that achieving compliance by the time allowed under this Part is not feasible, if the Director does not extend the time allowed for compliance by more than 30 days following the receipt of the written request, and if the Director concludes that the emission control standards would not be exceeded if the repairs were delayed;

(3) Air Pollution Control Device Inspection.

(A) Each HMIWI shall undergo air pollution control device inspections annually, no more than 12 months following the previous annual air pollution control device inspection, to inspect air pollution control devices for proper operation, if applicable: to ensure proper calibration of thermocouples, sorbent feed systems, and all other monitoring equipment; and to observe that the equipment is maintained in good operating condition. Necessary repairs found during the inspection shall be completed within 10 operating days of the inspection unless the owner or operator submits a written request to the Director for an extension of the 10 operating day period; and

(B) The Director shall grant the extension if the owner or operator of the HMIWI demonstrates that achieving compliance by the 10 operating day period is not feasible, the Director does not extend the time allowed for compliance by more than 30 days following the receipt of the written request, and the Director concludes that the emission control standards would not be exceeded if the repairs were delayed.

(4) Any HMIWI, except for a small HMIWI for which construction was commenced on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998, and subject to the requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60, shall comply with 40 CFR 60.56c except sources subject to the emissions limits pursuant to Table 1B of Subject Ce of 40 CFR Part 60 or the more stringent of the requirements listed in Table 1B of Subpart 1B of Subpart Ce of 40 CFR Part 60 and Table 1A of Subpart Ec of 40 CFR Part 60 may elect to use CO CEMS as specified in 40 CFR 60.56c(c)(4) or bag detection systems as specified in 40 CFR 60.57c(h);

(5) A small remote HMIWI constructed on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998, shall be subject to the requirements listed in Table 2B of Subpart Ce of 40 CFR Part 60. The owner or operator shall comply with:

(A) the compliance and performance testing requirements of 40 CFR 60.56c, excluding test methods listed in 40 CFR 60.56c(b)(7), (8), (12), (13) (Pb and Cd), and (14);

(B) the annual PM, CO, and HCl emissions testing requirements pursuant to 40 CFR 60.56c(c)(2);

(C) the annual fugitive emissions testing requirements pursuant to 40 CFR 60.56c(c)(3);

(D) the CO CEMS requirements pursuant to 40 CFR 60.56c(c)(4); and

(E) the compliance requirements for monitoring listed in 40 CFR 60.56c(c)(5) through (7), and (d) through (k).

(6) A small remote HMIWI for which construction was commenced on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998, that is subject to the requirements listed in Table 2A or 2B of Subpart Ce of 40 CFR Part 60 and not equipped with an air pollution control device shall meet the following compliance and performance testing requirements:

(A) establish maximum charge rate and minimum secondary chamber temperature as site-specific operating parameters during the initial performance test to determine compliance with applicable emission limits. The 2,000 pounds per week limitation shall not apply during performance tests;

(B) the owner or operator shall not operate the HMIWI above the maximum charge rate or below the minimum secondary chamber temperature measured as three-hour rolling averages, calculated each hour as the average of the previous three operating hours, at all times. Operating parameter limits shall not apply during performance tests. Operation

above the maximum charge rate or below the minimum secondary chamber temperature shall constitute a violation of the established operating parameters; and

(C) operation of a HMIWI above the maximum charge rate and below the minimum secondary chamber temperature, each measured on a three-hour rolling average, simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emissions limits. The owner or operator of a HMIWI may conduct a repeat performance test within 30 days of violation of applicable operating parameters to demonstrate that the designated facility is not in violation of the applicable emissions limits. Repeat performance tests shall be conducted under process and control device operating conditions duplicating as nearly as possible those that indicated during the violation.

(7) A small HMIWI for which construction was commenced after June 20, 1996, but no later than December 1, 2008, or for which modification is commenced after March 16, 1998, but no later than April 6, 2010, shall comply with:

(A) the compliance and performance testing requirements of 40 CFR 60.56c, excluding the annual fugitive emissions testing requirements pursuant to 40 CFR 60.56c(c)(3);

(B) the CO CEMS requirements pursuant to 40 CFR 60.56c(c)(4); and

(C) the compliance requirements for monitoring listed in 40 CFR 60.56c(c)(5)(ii) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), and (g)(6) through (10).

The owner or operator may elect to use CO CEMS as specified in 40 CFR 60.56c(c)(4) or bag leak detection systems as specified in 40 CFR 60.57c(h).

(8) The owner or operator of a HMIWI equipped with selective noncatalytic reduction technology shall:

(A) establish the maximum charge rate, the minimum secondary chamber temperature, and the minimum reagent flow rate as site-specific operating parameters during the initial performance test to determine compliance with the emissions limits;

(B) ensure that the affected facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature or the minimum reagent flow rate measured as three-hour rolling averages, calculated each hour as the average of the previous three operating hours, at all times. Operating parameter limits shall not apply during performance tests; and

(C) operation of any HMIWI above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum reagent flow rate simultaneously shall constitute a violation of the NO_X emissions limit. The owner or operator may conduct a repeat performance test within 30 days of a violation of applicable operating parameters to demonstrate that the affected facility is not in violation of the applicable emissions limits. Repeat performance tests shall be conducted using the identical operating parameters that indicated a violation.

(e) Test Methods and Procedures.

(1) The test methods and procedures described in 15A NCAC 02D .2600, 40 CFR Part 60 Appendix A, and 40 CFR Part 61 Appendix B shall be used to determine compliance with emission rates. Method 29 of 40 CFR Part 60 shall be used to determine emission rates for metals. However, Method 29 shall be used to sample for chromium (VI) and SW 846 Method 0060 shall be used for the analysis.

(2) The Director shall require the owner or operator to test the HMIWI to demonstrate compliance with the emission standards listed in Paragraph (c) of this Rule if necessary to assure compliance.

(f) Monitoring, Recordkeeping, and Reporting.

(1) The owner or operator of an HMIWI subject to the requirements of this Rule shall comply with the monitoring, recordkeeping, and reporting requirements in 15A NCAC 02D .0600.

(2) The owner or operator of an HMIWI subject to the requirements of this Rule shall maintain and operate a continuous temperature monitoring and recording device for the primary chamber, and if there is a secondary chamber, for the secondary chamber. The owner or operator of an HMIWI that has installed air pollution abatement equipment to reduce emissions of hydrogen chloride shall install, operate, and maintain continuous monitoring equipment to measure the pH for wet scrubber systems and the rate of alkaline injection for dry scrubber systems. The Director shall require the owner or operator of an HMIWI with a permitted charge rate of 750 pounds per hour or more to install, operate, and maintain continuous monitors for oxygen, carbon monoxide, or both

as necessary to determine proper operation of the HMIWI. The Director may require the owner or operator of an HMIWI with a permitted charge rate of less than 750 pounds per hour to install, operate, and maintain monitors for oxygen or for carbon monoxide or both if necessary to determine proper operation of the HMIWI.

(3) In addition to the requirements of Subparagraphs (1) and (2) of this Paragraph, the owner or operator of a HMIWI shall comply with the reporting and recordkeeping requirements in 40 CFR 60.58c(b) through (g), excluding 40 CFR 60.58c(b)(2)(ii) and (b)(7).

(4) In addition to the requirements of Subparagraphs (1), (2) and (3) of this Paragraph, the owner or operator of a small remote HMIWI shall:

(A) maintain records of the annual equipment inspections, all required maintenance, and all repairs not completed within 10 days of an inspection;

(B) submit an annual report containing information recorded in Part (A) of this Subparagraph to the Director no later than 60 days following the year in which data were collected. Subsequent reports shall be sent no later than 12 calendar months following the previous report. The report shall be signed by the HMIWI manager; and

(C) submit the reports required by Parts (A) and (B) of this Subparagraph to the Director semiannually if the HMIWI is subject to the permitting procedures of 15A NCAC 02Q .0500, Title V Procedures.

(5) Waste Management Guidelines. The owner or operator of a HMIWI shall comply with the requirements of 40 CFR 60.55c for the preparation and submittal of a waste management plan.

(6) Except as provided in Subparagraph (7) of this Paragraph, the owner or operator of any HMIWI shall comply with the monitoring requirements in 40 CFR 60.57c.

(7) The owner or operator of a small remote HMIWI shall:

(A) install, calibrate, maintain, and operate a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum, once every minute throughout operation;

(B) install, calibrate, maintain, and operate a device that automatically measures and records the date, time, and weight of each charge fed into the HMIWI; and

(C) obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. Valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating hours per calendar quarter that the HMIWI is combusting hospital, medical, and infectious waste.

(8) An HMIWI, except for small remote HMIWI not equipped with an air pollution control device, that is subject to the emissions requirements in Table 1B or Table 2B of Subpart Ce of 40 CFR Part 60 or the more stringent of the requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60 and Table 1A of Subpart Ec of 40 CFR Part 60 shall perform the monitoring requirements listed in 40 CFR 60.57c.

(9) The owner or operator of a small remote HMIWI, not equipped with an air pollution control device and subject to the emissions requirements in Table 2B of Subpart Ce of 40 CFR Part 60 shall:

(A) install, calibrate to manufacturers' specifications, maintain, and operate a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum, once every minute throughout operation;

(B) install, calibrate to manufacturers' specifications, maintain, and operate a device which automatically measures and records the date, time, and weight of each charge fed into the HMIWI; and

(C) obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. Valid monitoring data shall be obtained for 75 percent of the operating hours per day for 90 percent of the operating hours per calendar quarter that the designated facility is combusting hospital, medical and infectious waste.

(10) An HMIWI for which construction commenced on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998, and is subject to requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60 or any HMIWI for which construction was

commenced after June 20, 1996, but no later than December 1, 2008, or for which modification is commenced after March 16, 1998, but no later than April 6, 2010, and that is subject to the requirements of Table 1B of this Subpart and Table 1A of Subpart Ec of 40 CFR Part 60 may use the results of previous emissions tests to demonstrate compliance with the emissions limits, provided that:

(A) previous emissions tests had been conducted using the applicable procedures and test methods listed in 40 CFR 60.56c(b);

(B) the HMIWI is currently operated in a manner that would be expected to result in the same or lower emissions than observed during the previous emissions test and has not been modified such that emissions would be expected to exceed; and

(C) the previous emissions tests had been conducted in 1996 or later.

(11) An HMIWI, (with the exception of small remote HMIWI and HMIWIs for which construction was commenced no later than December 1, 2008, or for which modification is commenced no later than April 6, 2010, and that is subject to the requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60 or the more stringent of the requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60 and Table 1A of Subpart Ec), shall include the reporting and recordkeeping requirements listed in 40 CFR 60.58c(b) through (g) in Subpart Ec.

(12) An HMIWI for which construction was commenced no later than December 1, 2008, or for which modification is commenced no later than April 6, 2010, and that is subject to the requirements listed in Table 1B or the more stringent of the requirements listed in Table 1B of Subpart Ce of 40 CFR Part 60 and Table 1A of Subpart Ec of 40 CFR Part 60 shall not be required to maintain records required in 40 CFR 60.58c(b)(2)(xviii) (bag leak detection system alarms), (b)(2)(xix) (CO CEMS data), and (b)(7) (siting documentation).

(g) Operator Training and Certification.

(1) The owner or operator of a HMIWI shall not allow the HMIWI to operate at any time unless a fully trained and qualified HMIWI operator is available at the facility or is available within one hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators.

(2) Operator training and qualification shall be obtained by completing the requirements of 40 CFR 60.53c(c) through (g).

(3) The owner or operator of a HMIWI shall maintain, at the facility, all items required by 40 CFR 60.53c(h)(1) through (h)(10).

(4) The owner or operator of a HMIWI shall establish a program for reviewing the information required by Subparagraph (3) of this Paragraph annually with each HMIWI operator.

(5) The information required by Subparagraph (3) of this Paragraph shall be kept in a readily accessible location for all HMIWI operators. This information, along with records of training, shall be available for inspection by Division personnel upon request.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 40 CFR 60.34e;*
Eff. October 1, 1991;
Amended Eff. January 1, 2011; June 1, 2008; August 1, 2002; July 1, 2000; July 1, 1999; July 1, 1998; July 1, 1996; April 1, 1995; December 1, 1993;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1207 CONICAL INCINERATORS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4),(5);*
Eff. October 1, 1991;
Amended Eff. July 1, 2000; July 1, 1998;
Repealed Eff. July 1, 2018.

15A NCAC 02D .1208 OTHER INCINERATORS

(a) Applicability.

(1) This Rule shall apply to an incinerator not regulated by 15A NCAC 02D .1204, .1206, or 1210.

(2) An incinerator shall be exempt from Subparagraphs (b)(6) through (b)(9) and Paragraph (c) of this Rule if:

(A) the incinerator is used solely to cremate pets; or

(B) the emissions of all toxic air pollutants from an incinerator subject to this Rule and associated waste handling and storage are less than the levels listed in 15A NCAC 02Q .0711.

(b) Emission Standards.

(1) The emission standards in this Rule shall apply to an incinerator subject to this Rule except if 15A NCAC 02D .0524, 1110, or .1111 apply. However, if Subparagraphs (8) or (9) of this Paragraph and 15A NCAC 02D .0524, .1110, or .1111 regulate the same pollutant, the more restrictive provision for each pollutant shall apply notwithstanding provisions of 15A NCAC 02D .0524, .1110, or .1111 to the contrary.

(2) Particulate Matter. An incinerator subject to this Rule shall comply with one of the following emission standards for particulate matter:

(A) For refuse charge rates between 100 and 2000 pounds per hour, the allowable emissions rate for particulate matter from each stack or chimney of an incinerator subject to this Rule shall not exceed the level calculated with the equation E=0.002P calculated to two significant figures, where "E" equals the allowable emission rate for particulate matter in pounds per hour and "P" equals the refuse charge rate in pounds per hour. For refuse charge rates of 0 to 100 pounds per hour the allowable emission rate shall not exceed 0.2 pounds per hour. For refuse charge rates of 2000 pounds per hour or greater the allowable emission rate shall not exceed 4.0 pounds per hour. Compliance with this Part shall be determined by averaging emissions over a three-hour block period.

(B) Instead of meeting the standards in Part (A) of this Subparagraph, the owner or operator of an incinerator subject to this Rule may choose to limit particulate emissions from the incinerator to 0.08 grains per dry standard cubic foot corrected to 12 percent carbon dioxide. In order to choose this option, the owner or operator of the incinerator shall demonstrate that the particulate ambient air quality standards will not be violated. To correct to 12 percent carbon dioxide, the measured concentration of particulate matter shall be multiplied by 12 and divided by the measured percent carbon dioxide. Compliance with this Part shall be determined by averaging emissions over a three-hour block period.

(3) Visible Emissions. An incinerator subject to this Rule shall comply with 15A NCAC 02D .0521 for the control of visible emissions.

(4) Sulfur Dioxide. An incinerator subject to this Rule shall comply with 15A NCAC 02D .0516 for the control of sulfur dioxide emissions.

(5) Odorous Emissions. An incinerator subject to this Rule shall comply with 15A NCAC 02D .1806 for the control of odorous emissions.

(6) Hydrogen Chloride. An incinerator subject to this Rule shall control emissions of hydrogen chloride such that they do not exceed four pounds per hour unless they are reduced by at least 90 percent by weight or to no more than 50 parts per million by volume corrected to seven percent oxygen (dry basis). Compliance with this Subparagraph shall be determined by averaging emissions over a one-hour period.

(7) Mercury Emissions. Emissions of mercury and mercury compounds from the stack or chimney of an any incinerator subject to this Rule shall not exceed 0.032 pounds per hour. Compliance with this Subparagraph shall be determined by averaging emissions over a one-hour period.

(8) Toxic Emissions. The owner or operator of an incinerator subject to this Rule shall demonstrate compliance with 15A NCAC 02D .1100 according to 15A NCAC 02Q .0700.

(9) Ambient Standards.

(A) In addition to the ambient air quality standards in 15A NCAC 02D .0400, the following ambient air quality standards, measured by an annual average in milligrams per cubic meter at 77 degrees Fahrenheit (25 degrees Celsius) and 29.92 inches (760 mm) of mercury pressure and in increments above background concentrations, shall apply aggregately to all incinerators at a facility subject to this Rule:

(i)	arsenic and its compounds	2.1×10^{-6}
(ii)	beryllium and its compounds	4.1×10^{-6}
(iii)	cadmium and its compounds	5.5×10^{-6}
(iv)	chromium (VI) and its compounds	8.3×10^{-8}

(B) The owner or operator of a facility with incinerators subject to this Rule shall demonstrate compliance with the ambient standards in Subparts (i) through (iv) of Part (A) of this Subparagraph by following the procedures set out in 15A NCAC 02D .1106. Modeling demonstrations shall comply with the requirements of 15A NCAC 02D .0533.

(C) The emission rates computed or used under Part (B) of this Subparagraph that demonstrate compliance with the ambient standards under Part (A) of this Subparagraph shall be specified as a permit condition for the facility with incinerators subject to this Rule as their allowable emission limits unless 15A NCAC 02D .0524, .1110 or .1111 requires more restrictive rates.

(c) Operational Standards.

(1) The operational standards in this Rule shall not apply to any incinerator subject to this Rule when applicable operational standards in 15A NCAC 02D .0524, .1110, or .1111 apply.

(2) Crematory Incinerators. Gases generated by the combustion in a crematory incinerator shall be subjected to a minimum temperature of 1600 degrees Fahrenheit for a period of not less than one second.

(3) Other Incinerators. An incinerator not subject to any other rule in this Section shall meet the following requirement: Gases generated by the combustion shall be subjected to a minimum temperature of 1800 degrees Fahrenheit for a period of not less than one second. The temperature of 1800 degrees Fahrenheit shall be maintained at least 55 minutes out of each 60-minute period, but at no time shall the temperature go below 1600 degrees Fahrenheit.

(4) Except during a start-up procedure that has been approved pursuant to 15A NCAC 02D .0535(g), waste material shall not be loaded into any incinerator subject to this Rule when the temperature is below the minimum required temperature. Start-up procedures may be determined on a case-by-case basis pursuant to 15A NCAC 02D .0535(g). An incinerator subject to this Rule shall have automatic auxiliary burners that are capable of maintaining the required minimum temperature in the secondary chamber excluding the heat content of the wastes.

(d) Test Methods and Procedures.

(1) The test methods and procedures described in 15A NCAC 02D .2600 and in 40 CFR Part 60 Appendix A and 40 CFR Part 61 Appendix B shall be used to determine compliance with emission rates. Method 29 of 40 CFR Part 60 shall be used to determine emission rates for metals. However, Method 29 shall be used to sample for chromium (VI), and SW 846 Method 0060 shall be used for the analysis.

(2) The Director shall require the owner or operator to test his incinerator to demonstrate compliance with the emission standards listed in Paragraph (b) of this Rule if necessary to determine compliance with the emission standards of Paragraph (b) of this Rule.

(e) Monitoring, Recordkeeping, and Reporting.

(1) The owner or operator of an incinerator subject to the requirements of this Rule shall comply with the monitoring, recordkeeping, and reporting requirements in 15A NCAC 02D .0600.

(2) The owner or operator of an incinerator, except an incinerator meeting the requirements of 15A NCAC 02D .1201(b)(4)(A) through (D), shall maintain and operate a continuous temperature monitoring and recording device for the primary chamber and, if there is a secondary chamber, for the secondary chamber. The Director shall require a temperature monitoring device for incinerators meeting the requirements of 15A NCAC 02D .1201(b)(4)(A) through (D) if the incinerator is in violation of the requirements of 15A NCAC 02D .1201(b)(4)(D). The owner or operator of an incinerator that has installed air pollution abatement equipment to reduce emissions of hydrogen chloride shall install, operate, and maintain continuous monitoring equipment to measure the pH for wet scrubber systems and the rate of alkaline injection for dry scrubber systems. The Director shall require the owner or operator of an incinerator with a permitted charge rate of 750 pounds per hour or more to install, operate, and maintain continuous monitors for oxygen or for carbon monoxide or both as necessary to determine proper operation of the incinerator. The Director shall require the owner or operator of an incinerator with a permitted charge rate of less than 750 pounds per hour to install, operate, and maintain monitors for oxygen or for carbon monoxide or both if necessary to determine proper operation of the incinerator.

(f) Excess Emissions and Start-up and Shut-down. An incinerator subject to this Rule shall comply with 15A NCAC 02D 0535.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. July 1, 1998;
Amended Eff. August 1, 2008; June 1, 2008; July 1, 2007; January 1, 2005; August 1, 2002; July 1, 2000; July 1, 1999;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1209 COMPLIANCE SCHEDULES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4),(5);*
Eff. October 1, 1991;
Amended Eff. July 1, 1999; July 1, 1998; April 1, 1995; December 1, 1993; March 2, 1992;
Repealed Eff. July 1, 2000.

15A NCAC 02D .1210 COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATION UNITS

(a) Applicability. Unless exempt pursuant to Paragraph (b) of this Rule, this Rule shall apply to existing commercial and industrial solid waste incineration (CISWI) units, including energy recovery units, kilns, small remote incinerators, and air curtain incinerators that burn solid waste, pursuant to 40 CFR 60.2550 and as defined in 40 CFR 60.2875. An "existing CISWI unit" means a unit that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010, but no later than August 7, 2013.

(b) Exemptions. The following types of combustion units shall be exempted from this Rule:

(1) incineration units subject to Rules 15A NCAC 02D .1203 through 15A NCAC 02D .1206 and 15A NCAC 02D .1212;

(2) pathological waste incineration units burning 90 percent or more by weight on a calendar-quarter basis, excluding the weight of auxiliary fuel and combustion air, of pathological waste, low-level radioactive waste, or chemotherapeutic waste, as defined in 40 CFR 60.2875, if the owner or operator of the unit:
  (A) notifies the Director that the unit qualifies for this exemption; and
  (B) keeps records on a calendar-quarter basis of the weight of pathological waste, low-level radioactive waste, or chemotherapeutic waste burned and the weight of all other fuels and wastes burned in the unit;

(3) small power production or cogeneration units if:
  (A) the unit qualifies as a small power-production facility pursuant to Section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) or as a cogeneration facility pursuant to Section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B));
  (B) the unit burns homogeneous waste, not including refuse-derived fuel, to produce electricity, steam, or other forms of energy used for industrial, commercial, heating, or cooling purposes;
  (C) the owner or operator of the unit notifies the Director that the unit qualifies for this exemption; and
  (D) the owner or operator of the unit maintains the records specified in 40 CFR 60.2740(v) for a small power-production facility or 40 CFR 60.2740(w) for a cogeneration facility;

(4) units that combust waste for the primary purpose of recovering metals;

(5) cyclonic barrel burners;

(6) rack, part, and drum reclamation units that burn the coatings off racks used to hold small items for application of a coating;

(7) chemical recovery units as defined in 40 CFR 60.2875;

(8) laboratory analysis units that burn samples of materials for the purpose of chemical or physical analysis;

(9) air curtain incinerators that meet the requirements specified in 15A NCAC 02D .1904 and that burn only the following materials:
  (A) 100 percent wood waste;
  (B) 100 percent clean lumber; or
  (C) 100 percent mixture of only wood waste, clean lumber, and/or yard waste;

(10) sewage treatment plants that are subject to 40 CFR 60 Subpart O Standards of Performance for Sewage Treatment Plants;

(11) space heaters that meet the requirements of 40 CFR 279.23;

(12) soil treatment units that thermally treat petroleum contaminated soils for the sole purpose of site remediation; and

(13) the owner or operator of a combustion unit that is subject to this Rule may petition for an exemption to this Rule by obtaining a determination that the material being combusted is;

(A) not a solid waste pursuant to the legitimacy criteria of 40 CFR 241.3(b)(1);

(B) a non-waste pursuant to the petition process submitted pursuant to 40 CFR 241.3(c); or

(C) a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241.3(b)(4).

(c) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 60.2875 shall apply in addition to the definitions in 15A NCAC 02D .1202. Solid waste is defined pursuant to 40 CFR 60.2875 and 40 CFR Part 241 Standards for Combustion of Non-Hazardous Secondary Materials (NHSM).

(d) Compliance Schedule. All CISWI units subject to this Rule shall be in compliance with this Rule no later than February 7, 2018.

(e) Emission Standards. The emission standards in this Rule shall apply to all CISWI units subject to this Rule except if 15A NCAC 02D .0524, .1110, or .1111 applies. If Subparagraph (4) of this Paragraph and 15A NCAC 02D .0524, .1110, or .1111 regulate the same pollutant, the more restrictive provision for each pollutant shall apply, notwithstanding provisions of 15A NCAC 02D .0524, .1110, or .1111 to the contrary.

(1) CISWI units subject to this Rule, including bypass stacks or vents, must meet the emissions limits specified in Tables 6 through 9 of 40 CFR 60 Subpart DDDD. The emission limitations shall apply at all times the unit is operating, including and not limited to startup, shutdown, or malfunction.

(2) Units that do not use wet scrubbers shall maintain opacity to less than or equal to 10 percent opacity using an averaging time of three 1-hour blocks consisting of ten 6-minute average opacity values as measured by 40 CFR 60 Appendix A-4 Test Method 9 pursuant to Table 2 of 40 CFR 60 Subpart DDDD.

(3) Odorous Emissions. An incinerator subject to this Rule shall comply with 15A NCAC 02D .1806 for the control of odorous emissions.

(4) Toxic Emissions. The owner or operator of a CISWI unit subject to this Rule shall demonstrate compliance with 15A NCAC 02D .1100 according to 15A NCAC 02Q .0700.

(f) Operational Standards.

(1) The operational standards in this Rule shall not apply to any CISWI unit subject to this Rule if applicable operational standards in 15A NCAC 02D .0524, .1110, or .1111 apply.

(2) The owner or operator of a CISWI unit subject to this Rule shall operate the CISWI unit according to the provisions in 40 CFR 60.2675.

(3) If an air pollution control device other than a wet scrubber, activated carbon sorbent injection, selective non-catalytic reduction, fabric filter, electrostatic precipitator, or dry scrubber is used to comply with this Rule or if emissions are limited in some other manner, including mass balances, to comply with the emission standards of Subparagraph (e)(1) of this Rule, the owner or operator shall petition the EPA Administrator in accordance with the requirements in 40 CFR 60.2680 for specific operating limits that shall be established during the initial performance test and be continuously monitored thereafter.

(g) Test Methods and Procedures.

(1) For the purposes of this Paragraph, "Administrator" in 40 CFR 60.8 means "Director."

(2) The test methods and procedures described in 15A NCAC 02D .2600, in Tables 6 through 9 of 40 CFR 60 Subpart DDDD, in 40 CFR 60.2670(b), and in 40 CFR 60.2690 shall be used to determine compliance with emission standards in Subparagraph (e)(1) of this Rule.

(3) Compliance with the opacity limit in Subparagraph (e)(2) of this Rule shall be determined using 40 CFR 60 Appendix A-4 Test Method 9.

(h) Initial Compliance Requirements.

(1) The owner or operator of a CISWI unit subject to this Rule shall demonstrate initial compliance with the emission limits in Subparagraph (e)(1) of this Rule and establish the operating standards in Paragraph (f) of this Rule according to the provisions in 40 CFR 60.2700 through 40 CFR 60.2706. If an owner or operator commences or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility, the owner or operator shall comply with the requirements of this Paragraph.

(2) The owner or operator of a CISWI unit subject to this Rule shall conduct an initial performance test pursuant to 40 CFR 60.2670, 40 CFR 60.2690, and Paragraph (g) of this Rule. The initial performance test shall be conducted no later than 180 days after February 7, 2018, or according to 40 CFR 60.2705(b) or (c). The use of the bypass stack during a performance test shall invalidate the performance test. The initial performance test shall be used to:

(A) determine compliance with the emission standards in Subparagraph (e)(1) of this Rule;

(B) establish compliance with opacity operating limits in 40 CFR 60.2675(h);

(C) establish the kiln-specific emission limit in 40 CFR 60.2710(y), as applicable; and

(D) establish operating limits using the procedures in 40 CFR 60.2675 or 40 CFR 60.2680 and in Paragraph (f) of this Rule.

(3) The owner or operator of a CISWI unit subject to this Rule shall also conduct:

(A) a performance evaluation of each continuous emissions monitoring system (CEMS) or continuous monitoring system within 60 days of installation of the monitoring system; and

(B) an initial air pollution control device inspection no later than 180 days after February 7, 2018, pursuant to 40 CFR 60.2706.

(i) Continuous Compliance Requirements.

(1) The owner or operator of a CISWI unit subject to this Rule shall demonstrate continuous compliance with the emission limits in Subparagraph (e)(1) of this Rule and the operating standards in Paragraph (f) of this Rule according to the provisions in 40 CFR 60.2710 through 40 CFR 60.2725.

(2) If an existing CISWI unit that combusted a fuel or non-waste material commences or recommences combustion of solid waste, the owner or operator shall:

(A) be subject to the provisions of 40 CFR 60 Subpart DDDD on the first day solid waste is introduced or reintroduced into the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch;

(B) complete all initial compliance demonstrations for any Section 112 standards that are applicable to the facility before commencing or recommencing combustion of solid waste; and

(C) provide 30 days prior notice of the effective date of the waste-to-fuel switch identifying the parameters listed in 40 CFR 60.2710(a)(4)(i) through (v).

(3) Pursuant to 40 CFR 60.2710(v), the use of a bypass stack at any time shall be an emissions standards deviation for particulate matter, hydrogen chloride, lead, cadmium, mercury, nitrogen oxides, sulfur dioxide, and dioxin/furans.

(4) The owner or operator of a CISWI unit subject to this Rule shall conduct an annual performance test for the pollutants listed in Subparagraph (e)(1) of this Rule, including opacity and fugitive ash, to determine compliance with the emission standards in 40 CFR 60 Subpart DDDD Tables 6 through 9. The annual performance test shall be conducted according to the provisions in Paragraph (g) of this Rule. Annual performance tests shall not be required if CEMS or continuous opacity monitoring systems are used to determine compliance.

(5) The owner or operator shall continuously monitor the operating parameters established in Paragraph (f) of this Rule and as specified in 40 CFR 60.2710(c) and 40 CFR 60.2735.

(6) The owner or operator of an energy recovery unit subject to this Rule shall only burn the same types of waste and fuels used to establish applicability to this Rule and to establish operating limits during the performance test.

(7) The owner or operator shall comply with the monitoring system-specific, unit-specific, and pollutant-specific provisions pursuant to 40 CFR 60.2710(e) through (j), (m) through (u), and (w) through (y).

(8) The owner or operator shall conduct an annual inspection of air pollution control devices used to meet the emission limitations in this Rule, as specified in 40 CFR 60.2710(k).

(9) The owner or operator shall develop and submit to the Director for approval a site-specific monitoring plan pursuant to the requirements in 40 CFR 60.2710(l). This plan shall be submitted at least 60 days before the initial performance evaluation of a continuous monitoring system. The owner or operator shall conduct a performance evaluation of each continuous monitoring system in accordance with the site-specific monitoring plan. The owner or operator shall operate and

maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(10) The owner or operator shall meet all applicable monitoring system requirements specified in 40 CFR 60.2710(m) through (u) and (w) through (y).

(j) Monitoring.

(1) The owner or operator of a CISWI unit subject to this Rule shall comply with the monitoring requirements in 15A NCAC 02D .0600 and 40 CFR 60.2730 through 60.2735.

(2) For each continuous monitoring system required or optionally allowed pursuant to 40 CFR 60.2730, the owner or operator shall monitor and collect data according to 40 CFR 60.2735.

(3) The owner or operator of a CISWI unit subject to this Rule shall establish, install, calibrate to manufacturers specifications, maintain, and operate:

(A) devices or methods for monitoring parameters used to determine compliance with the operating parameters established under Subparagraph (f)(2) of this Rule, as specified in 40 CFR 60.2730;

(B) devices or methods necessary to monitor compliance with the site-specific operating parameters established pursuant to Subparagraph (f)(3) of this Rule, as specified by 40 CFR 60.2730(c).

(4) To demonstrate continuous compliance with an emissions limit, a facility may substitute use of a CEMS, a continuous automated sampling system, or other device specified by 40 CFR 60.2730 for conducting the annual emissions performance test and for monitoring compliance with operating parameters, as specified by 40 CFR 60.2730.

(5) The owner or operator of a CISWI unit subject to this Rule with a bypass stack shall install, calibrate to manufacturers' specifications, maintain, and operate a device or method for measuring the use of the bypass stack. including date, time, and duration.

(6) The owner or operator of a CISWI unit subject to this Rule shall conduct all monitoring at all times the CISWI unit is operating, except during:

(A) monitoring system malfunctions and associated repairs specified in 40 CFR 60.2735;

(B) monitoring system out-of-control periods specified in 40 CFR 60.2770(o);

(C) required monitoring system quality assurance or quality control activities, including calibrations checks and required zero and span adjustments of the monitoring system; and

(D) scheduled maintenance as defined in the site-specific monitoring plan required by Subparagraph (i)(9) of this Rule.

(7) The data recorded during monitoring malfunctions, out-of-control periods, repairs associated with malfunctions or out-of-control periods, required quality assurance or quality control activities, and site-specific scheduled maintenance shall not be used in assessing compliance with the operating standards in Paragraph (f) of this Rule. Owners and operators of a CISWI unit subject to this Rule shall use all the data collected during all other periods, including data normalized for above-scale readings, in assessing the operation of the control device and the associated control system.

(8) Owners or operators of a CISWI unit subject to this Rule shall perform monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and return the monitoring system to operation as expeditiously as practicable.

(9) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments, failure to collect required monitoring data shall constitute a deviation from the monitoring requirements.

(k) Deviations, Malfunctions, and Out of Control Periods.

(1) Owners and operators of a CISWI unit subject to this Rule shall report all deviations as defined in 40 CFR 60.2875 including the following:

(A) a deviation from operating limits in Table 3 of 40 CFR 60 Subpart DDDD or a deviation from other operating limits established pursuant to Paragraph (f), 40 CFR 60.2675(c) through (g), or 40 CFR 60.2680, including any recorded 3-hour average parameter level that is above the established maximum operating limit or below the established minimum operating limit;

(B) a deviation from the emission limitations established pursuant to Tables 6 through 9 of 40 CFR 60 Subpart DDDD that is detected through monitoring or during a performance test;

(C) a deviation from the CISWI operator qualification and accessibility requirements established pursuant to 40 CFR 60.2635; or

(D) a deviation from any term or condition included in the operating permit of the CISWI unit.

(2) Owners and operators of a CISWI unit subject to this Rule shall submit all required deviation reports as specified by Paragraph (l) of this Rule. The deviation report shall be submitted by August 1 of the year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data collected during the second half of the calendar year (July 1 to December 31). In addition, the owner and operator shall report the deviation in the annual report specified by Paragraph (l) of this Rule.

(3) Owners and operators of a CISWI unit subject to this Rule shall report all malfunctions, as defined in 40 CFR 60.2875, in the annual report specified by Paragraph (j) and Paragraph (l) of this Rule.

(4) Owners and operators of a CISWI unit subject to this Rule shall report all periods during which a continuous monitoring system, including a CEMS, was out of control in the annual report specified by Paragraph (j) and Paragraph (l) of this Rule.

(l) Recordkeeping and Reporting.

(1) The owner or operator of a CISWI unit subject to this Rule shall maintain records required by this Rule on site for a period of five years in either paper copy, electronic format that can be printed upon request, or an alternate format that has been approved by the Director.

(2) Combustion units that are exempt units pursuant to Paragraph (b) of this Rule shall be subject to the recordkeeping and reporting requirements in 40 CFR 60.2740(u) through 40 CFR 60.2740(w).

(3) The owner or operator of a CISWI unit subject to this Rule shall maintain all records required by 40 CFR 60.2740 through 60.2800.

(4) The owner or operator of a CISWI unit subject to this Rule shall submit the following reports with the required information and by the required due dates specified in Table 5 of 40 CFR 60, Subpart DDDD:

(A) the waste management plan specified in 40 CFR 60.2755;

(B) the initial test report specified in 40 CFR 60.2760;

(C) the annual report specified in 40 CFR 60.2765 and 60.2770;

(D) the emission limitation or operating limit deviation report specified in 40 CFR 60.2775 and 60.2780;

(E) the qualified operator deviation notification specified in 40 CFR 60.2785(a)(1);

(F) the qualified operator deviation status report, specified in 40 CFR 60.2785(a)(2);

(G) the qualified operator deviation notification of resuming operation specified in 40 CFR 60.2785(b).

(5) The owner or operator shall maintain CISWI unit operator records specified by 40 CFR 60.2660, 60.2665, and 60.2740(g) through (i). If the CISWI unit has been shut down by the Director pursuant to 40 CFR 60.2665(b)(2) due to failure to provide an accessible qualified operator, the owner or operator shall notify the Director that the operations have resumed after a qualified operator is accessible.

(6) The owner or operator of a CISWI unit subject to this Rule may request changing semiannual or annual reporting dates specified in this Paragraph, and the Director shall review the requested change using the procedures specified in 40 CFR 60.19(c).

(7) Reports shall be submitted to US EPA as specified in 40 CFR 60.2795.

(A) The owner or operator of the CISWI unit shall submit initial, annual, and deviation reports electronically on or before the submittal due dates specified in 40 CFR 60.2795(a) via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). Reports required pursuant to this Rule shall be submitted electronically or in paper format and postmarked on or before the submittal due dates.

(B) The owner or operator shall submit results of each performance test and CEMS performance evaluation within 60 days of the test or evaluation following the procedure specified in 40 CFR 60.2795(b).

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, the

owner or operator shall submit the results of the performance test to the EPA via the CEDRI.

(ii) For data collected using test methods that are not supported by the EPA's ERT listed on the EPA's ERT Web site at the time of the test, the owner or operator shall submit the results of the performance test to the Director.

(m) Operator Training and Certification.

(1) The owner or operator of the CISWI unit subject to this Rule shall not allow the CISWI unit to operate at any time unless a fully trained and qualified CISWI unit operator is present at the facility or can be present at the facility within one hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more plant personnel who operate the unit.

(2) Operator training and qualification shall be obtained by completing the requirements of 40 CFR 60.2635(c) by the later of:

(A) six months after CISWI unit startup;

(B) six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit; or

(C) February 7, 2018.

(3) Operator qualification shall be valid from the date on which the training course is completed and the operator passes the examination required by 40 CFR 60.2635(c)(2).

(4) Operator qualification shall be maintained by completing an annual review or refresher course covering, at a minimum, the topics specified in 40 CFR 60.2650(a) through (e).

(5) Lapsed operator qualification shall be renewed by:

(A) completing a standard annual refresher course as specified in Subparagraph (4) of this Paragraph for a lapse less than three years; or

(B) repeating the initial qualification requirements as specified in Subparagraph (2) of this Paragraph for a lapse of three years or more.

(6) The owner or operator of a CISWI unit subject to this Rule shall:

(A) have documentation specified in 40 CFR 60.2660(a)(1) through (10) and (c)(1) through (c)(3) available at the facility, accessible for all CISWI unit operators, and suitable for inspection upon request;

(B) establish a program for reviewing the documentation specified in Part (A) of this Subparagraph with each CISWI unit operator. The initial review of the documentation specified in Part (A) of this Subparagraph shall be conducted no later than February 7, 2018, or no later than six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit; and

(C) conduct subsequent annual reviews of the documentation specified in Part (A) of this Subparagraph no later than twelve months following the previous review.

(7) The owner or operator of a CISWI unit subject to this Rule shall meet one of the two criteria specified in 40 CFR 60.2665(a) and (b), if all qualified operators are temporarily not at the facility and not able to be at the facility within one hour.

(n) Prohibited waste. The owner or operator of a CISWI subject to this Rule shall not incinerate any of the wastes listed in G.S. 130A-309.10(f1).

(o) Waste Management Plan.

(1) The owner or operator of a CISWI unit subject to this Rule shall submit a written waste management plan to the Director that identifies the feasibility and the methods used to reduce or separate components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

(2) The waste management plan shall include:

(A) consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals and the use of recyclable materials;

(B) a description of how the materials listed in G.S. 130A-309.10(f1) are to be segregated from the waste stream for recycling or proper disposal;

(C) identification of any additional waste management measures; and

(D) implementation of those measures considered practical and feasible based on the effectiveness of waste management measures already in place, the costs of additional

measures, the emissions reductions expected to be achieved, and the environmental or energy impacts that the measures may have.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4),(5); 40 CFR 60.215(a)(4);*
Eff. August 1, 2002;
Amended Eff. June 1, 2008; January 1, 2005;
Readopted Eff. July 1, 2018.

15A NCAC 02D .1211 OTHER SOLID WASTE INCINERATION UNITS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4), (5), (10); 40 CFR 60.3014 through 60.3020;*
Eff. August 1, 2007;
Repealed Eff. July 1, 2018.

15A NCAC 02D .1212 SMALL MUNICIPAL WASTE COMBUSTORS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(4),(5); 40 CFR 60.35b; 40 CFR 60.34e; 40 CFR 60.1515;*
Eff. July 1, 2010;
Repealed Eff. July 1, 2018.

SECTION .1300 - OXYGENATED GASOLINE STANDARD

15A NCAC 02D .1301 PURPOSE
15A NCAC 02D .1302 APPLICABILITY
15A NCAC 02D .1303 DEFINITIONS
15A NCAC 02D .1304 OXYGEN CONTENT STANDARD
15A NCAC 02D .1305 MEASUREMENT AND ENFORCEMENT

History Note: *Authority G.S. 119-26; 143-213; 143-215.3(a)(1); 143-215.107(a)(3),(7); 143-215.108(c)(7); 150B-21.6;*
Eff. September 1, 1992;
Amended Eff. November 1, 1994;
Temporary Amendment Eff. October 23, 1995 for a period of 180 days or until the permanent rule becomes effective, whichever is sooner;
Amended Eff. July 1, 1998; September 1, 1996;
Repealed Eff. January 1, 2018.

SECTION .1400 – NITROGEN OXIDES

15A NCAC 02D .1401 DEFINITIONS

(a) For the purpose of this Section, in addition to the definitions in G.S. 143-212, G.S. 143-213, and 15A NCAC 02D .0101, the following definitions shall apply. If a term in this Rule is also defined at 15A NCAC 02D .0101, then the definition in this Rule controls.

(1) "Acid Rain Program" means the federal program for the reduction of acid rain including 40 CFR Parts 72, 75, 76, and 77.

(2) "Actual emissions" means for 15A NCAC 02D .1418, emissions of NOx as measured and calculated pursuant to 40 CFR Part 75, Subpart H.

(3) "Actual heat input" means for 15A NCAC 02D .1418, heat input as measured and calculated pursuant to 40 CFR Part 75, Subpart H.

(4) "Averaging set of sources" means all the stationary sources included in an emissions averaging plan pursuant to 15A NCAC 02D .1410.

(5) "Averaging source" means a stationary source that is included in an emissions averaging plan pursuant to 15A NCAC 02D .1410.

(6) "Boiler" means an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

(7) "Combined cycle system" means a system consisting of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

(8) "Combustion turbine" means an enclosed fossil or other fuel-fired device that is comprised of a compressor, a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

(9) "Diesel engine" means a compression ignited two- or four-stroke engine in which liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition.

(10) "Dual fuel engine" means a compression ignited stationary internal combustion engine that is burning liquid fuel and gaseous fuel simultaneously.

(11) "EGU" or electric generating unit means a stationary, fossil fuel-fired boiler or combustion turbine that serves a generator with a nameplate capacity greater than 25 MWe producing electricity for sale at any time, except a large non-EGU.

(12) "Emergency generator" means a stationary internal combustion engine used to generate electricity only during:

(A) the loss of primary power at the facility that is beyond the control of the owner or operator of the facility; or

(B) maintenance when maintenance is being performed on the power supply to equipment that is essential in protecting the environment or to such equipment itself.

An emergency generator may be operated periodically to ensure that it will operate.

(13) "Emergency use internal combustion engines" means stationary internal combustion engines used to drive pumps, aerators, and other equipment only during:

(A) the loss of primary power at the facility that is beyond the control of the owner or operator of the facility; or

(B) maintenance when maintenance is being performed on the power supply to equipment that is essential in protecting the environment or to such equipment itself.

An emergency use internal combustion engine may be operated periodically to ensure that it will operate.

(14) "Excess emissions" means an emission rate that exceeds the applicable limitation or standard; for the purposes of this definition, NOx emitted by a source regulated by 15A NCAC 02D .1418 during the ozone season above its allocation are not considered excess emissions.

(15) "Fossil fuel fired" means:

(A) For sources that began operation before January 1, 1996, where fossil fuel combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during 1995, or, if a source had no heat input in 1995, during the last year of operation of the unit before 1995;

(B) For sources that began operation on or after January 1, 1996 and before January 1, 1997, where fossil fuel combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during 1996; or

(C) For sources that began operation on or after January 1, 1997:

(i) Where fossil fuel combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during any year; or

(ii) Where fossil fuel combusted either alone or in combination with any other fuel, is projected to comprise more than 50 percent of the annual heat input on a Btu basis during any year, provided that the unit shall be "fossil fuel-fired" as of the date, during such year, on which the source begins combusting fossil fuel.

(16) "Indirect-fired process heater" means an enclosed device using controlled flame where the device's primary purpose is to transfer heat by indirect heat exchange to a process fluid, a process material that is not a fluid, or a heat transfer material, instead of steam, for use in a process.

(17) "Large non-EGU" or large non-electric generating unit means a stationary fossil fuel fired boiler or combustion turbine with a maximum heat input greater than 250 MMBtu/hr that either:

(A) does not serve at any time a generator producing electricity for sale; or

(B) serves at any time a generator producing electricity for sale and qualifies under 40 CFR 72.6(b)(4), that addresses certain cogeneration facilities, as an unaffected unit for purposes of the Acid Rain Program.

(18) "Lean-burn internal combustion engine" means a spark ignition internal combustion engine originally designed and manufactured to operate with an exhaust oxygen concentration greater than one percent.

(19) "NOx" means nitrogen oxides.

(20) "NOx SIP Call control period" for the purposes of the NOx SIP Call budgets in 15A NCAC 02D .1425 means the period May 1 through the end of September 30.

(21) "Ozone season" means the period beginning May 1 and ending September 30.

(22) "Potential emissions" means the quantity of NOx that would be emitted at the maximum capacity of a stationary source to emit NOx under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit NOx shall be treated as a part of its design if the limitation is federally enforceable. Such physical or operational limitations include air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed.

(23) "Projected seasonal energy input" means the maximum design heat input per hour times 3300 hours.

(24) "Projected seasonal energy output" means the maximum design energy output per hour times 3300 hours.

(25) "Reasonable assurance" means a demonstration to the Director that a method, procedure, or technique is possible and practical for a source or facility under the expected operating conditions.

(26) "Reasonably Available Control Technology" or "RACT" means the lowest emission limitation for NOx that a particular source can meet by the application of control technology that is reasonably available considering technological and economic feasibility.

(27) "Reasonable effort" means the proper installation of technology designed to meet the requirements of 15A NCAC 02D .1407, .1408, or .1409 and the utilization of this technology according to the manufacturer's recommendations or other similar guidance for not less than six months, in an effort to meet the applicable limitation for a source.

(28) "Rich-burn internal combustion engine" means a spark ignition internal combustion engine originally designed and manufactured to operate with an exhaust oxygen concentration less than or equal to one percent.

(29) "Seasonal energy input" means the total energy input of a combustion source during the period beginning May 1 and ending September 30.

(30) "Seasonal energy output" means the total energy output of a combustion source during the period beginning May 1 and ending September 30.

(31) "Shutdown" means the cessation of operation of a source or its emission control equipment.

(32) "Source" means a stationary boiler, combustion turbine, combined cycle system, reciprocating internal combustion engine, indirect-fired process heater, or a stationary article, machine, process equipment, or other contrivance, or combination thereof, from which NOx emanate or are emitted.

(33) "Startup" means the commencement of operation of any source that has shutdown or ceased operation for a period sufficient to cause temperature, pressure, process, chemical, or pollution control device imbalance that would result in excess emissions.

(34) "Stationary internal combustion engine" means a reciprocating internal combustion engine that is not self-propelled; however, it may be mounted on a vehicle for portability.

(b) Whenever reference is made to the Code of Federal Regulations in this Section, the definitions in the Code of Federal Regulations shall apply unless specifically stated otherwise in a particular rule in this Section.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(a)(7); 143-215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 18, 2002;
Readopted Eff. October 1, 2020;
Amended Eff. May 1, 2022.

15A NCAC 02D .1402 APPLICABILITY

(a) The rules in this Section do not apply except as specifically set out in this Rule.
(b) The requirements of this Section apply to all sources May 1 through September 30 of each year.
(c) Rules 15A NCAC 02D .1409(c), .1418, .1423, .1424, and .1425 apply Statewide.
(d) Rules 15A NCAC 02D .1407 through .1409(b) and .1413 apply to facilities with potential emissions of NOx greater than or equal to 100 tons per year or 560 pounds per calendar day beginning May 1 through September 30 of any year in the following areas:

(1) Cabarrus County;
(2) Gaston County;
(3) Lincoln County;
(4) Mecklenburg County;
(5) Rowan County;
(6) Union County; and
(7) Davidson Township and Coddle Creek Township in Iredell County.

(e) If a violation of the ambient air quality standard for ozone is measured according to 40 CFR 50.9 in Davidson, Forsyth, or Guilford County or that part of Davie County bounded by the Yadkin River, Dutchmans Creek, North Carolina Highway 801, Fulton Creek and back to Yadkin River, the Director shall initiate analysis to determine the control measures needed to attain and maintain the ambient air quality standard for ozone. By the following May 1, the Director shall implement the specific stationary source control measures contained in this Section that are required as part of the control strategy necessary to bring the area into compliance and to maintain compliance with the ambient air quality standard for ozone. The Director shall implement the rules in this Section identified as necessary by the analysis by notice in the North Carolina Register. The notice shall identify the rules that are to be implemented and shall identify whether the rules implemented are to apply in Davidson, Forsyth, or Guilford County or that part of Davie County bounded by the Yadkin River, Dutchmans Creek, North Carolina Highway 801, Fulton Creek and back to Yadkin River or any combination thereof. At least one week before the scheduled publication date of the North Carolina Register containing the Director's notice implementing rules in this Section, the Director shall send written notification to all permitted facilities within the county where the Rules are being implemented that are or may be subject to the requirements of this Section, informing them that they are or may be subject to the requirements of this Section. For the purposes of notifying permitted facilities in Forsyth County, "Director" means the Director of the Forsyth County local air pollution control program. Compliance shall be determined by 15A NCAC 02D .1403.
(f) If a violation of the ambient air quality standard for ozone is measured according to 40 CFR 50.9 in Durham County, Wake County, or Dutchville Township in Granville County, the Director shall initiate analysis to determine the control measures needed to attain and maintain the ambient air quality standard for ozone. By the following May 1, the Director shall implement the specific stationary source control measures contained in this Section that are required as part of the control strategy necessary to bring the area into compliance and to maintain compliance with the ambient air quality standard for ozone. The Director shall implement the rules in this Section identified as necessary by the analysis by notice in the North Carolina Register. The notice shall identify the rules that are to be implemented and shall identify whether the rules implemented are to apply in Durham County, Wake County, or Dutchville Township in Granville County or any combination thereof. At least one week before the scheduled publication date of the North Carolina Register containing the Director's notice implementing 15A NCAC 02D .1407 through .1409(b) and 15A NCAC 02D .1413, the Director shall send written notification to all permitted facilities within the county where the Rules are being implemented that are or may be subject to the requirements of this Section, informing them that they are or may be subject to the requirements of this Section. Compliance shall be according to 15A NCAC 02D .1403.
(g) If the State nonattainment plan for ozone has failed to attain the ambient air quality standard for ozone in 40 CFR 50.9 and does not qualify for an extension of the attainment date in the Charlotte-Gastonia-Rock Hill ozone nonattainment area, the rules in this Section shall apply to facilities in Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan, and Union Counties and Davidson and Coddle Creek townships in Iredell County with the potential to emit at least 50 tons of NOx per year. Once the nonattainment plan for ozone has failed and the area does not qualify for an extension of the attainment date, the Director shall notice the applicability of these Rules to those sources in the North Carolina Register and shall send written notification to all permitted facilities within the counties where the Rules are being implemented that are or may be subject to the requirements of this Section, informing them that they are or may be subject to the requirements of this Section. For the purposes of notifying permitted facilities in Mecklenburg County, "Director" means the Director of the Mecklenburg County local air pollution control program. Compliance shall be according to 15A NCAC 02D .1403.
(h) Regardless of any other statement of applicability of this Section, this Section does not apply to any:

(1) source not required to obtain an air permit pursuant to 15A NCAC 02Q .0102 or is an insignificant activity as defined in 15A NCAC 02Q .0103;
(2) incinerator or thermal or catalytic oxidizer used primarily for the control of air pollution;
(3) emergency generator;
(4) emergency use internal combustion engine; or
(5) stationary internal combustion engine less than 2400 brake horsepower that operates no more than the following hours between May 1 and September 30:
(A) for diesel engines:

$$t = \frac{833,333}{ES}$$

(B) for natural gas-fired engines:

$$t = \frac{700,280}{ES}$$

where t equals time in hours and ES equals engine size in horsepower.

History Note: *Authority G.S. 143-215.3(a)(1); 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Amended Eff. April 1, 1997; July 1, 1995; April 1, 1995;
Temporary Amendment Eff. November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. June 1, 2008; July 1, 2007; March 1, 2007; July 18, 2002;
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009;
Amended Eff. January 1, 2010;
Readopted Eff. October 1, 2020;
Amended Eff. May 1, 2022.

15A NCAC 02D .1403 COMPLIANCE SCHEDULES

(a) Applicability. This Rule applies to sources regulated by 15A NCAC 02D .1402(d), (e), (f), or (g).

(b) Maintenance area and Charlotte ozone nonattainment area contingency plan. The owner or operator of a source subject to this Rule because of the applicability of 15A NCAC 02D .1402(d), (e), (f), or (g) shall adhere to the following increments of progress and schedules:

(1) If compliance with this Section is to be achieved through a demonstration to certify compliance without source modification:
(A) The owner or operator shall notify the Director in writing within six months after the Director's notice in the North Carolina Register that the source is in compliance with the applicable limitation or standard;
(B) The owner or operator shall perform any required testing, pursuant to 15A NCAC 02D .1415, within 12 months after the Director's notice in the North Carolina Register to demonstrate compliance with the applicable limitation; and
(C) The owner or operator shall implement any required recordkeeping and reporting requirements pursuant to 15A NCAC 02D .1404, within 12 months after the Director's notice in the North Carolina Register to demonstrate compliance with the applicable limitation.
(2) If compliance with this Section is to be achieved through the installation of combustion modification technology or other source modification:
(A) The owner or operator shall submit a permit application pursuant to 15A NCAC 02Q and a compliance schedule within six months after the Director's notice in the North Carolina Register.
(B) The compliance schedule shall contain the following increments of progress:
(i) a date by which contracts for installation of the modification shall be awarded or orders shall be issued for purchase of component parts;
(ii) a date by which installation of the modification shall begin;
(iii) a date by which installation of the modification shall be completed; and
(iv) if the source is subject to a limitation in a permit, a date by which compliance testing shall be completed.

(C) Final compliance shall be achieved within three years after the Director's notice in the North Carolina Register unless the owner or operator of the source petitions the Director for an alternative limitation pursuant to 15A NCAC 02D .1412. If a petition has been submitted and approved, final compliance shall be achieved within four years after the Director's notice in the North Carolina Register.

(3) If compliance with this Section is to be achieved through the implementation of an emissions averaging plan pursuant to 15A NCAC 02D .1410;

(A) The owner or operator shall abide by the applicable requirements of Subparagraphs (b)(1) or (b)(2) of this Rule for certification or modification of each source to be included under the averaging plan.

(B) The owner or operator shall submit a plan to implement an emissions averaging plan pursuant to 15A NCAC 02D .1410 within six months after the Director's notice in the North Carolina Register.

(C) Final compliance shall be achieved within one year after the Director's notice in the North Carolina Register unless implementation of the emissions averaging plan requires the modification of one or more of the averaging sources. If modification of one or more of the averaging sources is required, final compliance shall be achieved within three years.

(4) If compliance with this Section is to be achieved through the implementation of a seasonal fuel switching program pursuant to 15A NCAC 02D .1411:

(A) The owner or operator shall make all necessary modifications according to Subparagraph (b)(2) of this Rule.

(B) The owner or operator shall include a plan for complying with the requirements of 15A NCAC 02D .1411 with the permit application required in Part (b)(2)(A) of this Rule.

(C) Final compliance shall be achieved within three years after the Director's notice in the North Carolina Register.

(5) Increments of progress certification. The owner or operator shall certify to the Director, within five days after each increment deadline of progress in this Paragraph, whether the required increment of progress has been met.

(c) Nonattainment areas. The owner or operator of a source subject to this Rule because of the applicability of 15A NCAC 02D .1402(d), shall adhere to the following:

(1) If compliance with this Section is to be achieved through a demonstration to certify compliance without source modification:

(A) The owner or operator shall notify the Director in writing by August 1, 2007;

(B) The owner or operator shall perform any required testing, according to 15A NCAC 02D .1415, by January 1, 2008; and

(C) The owner or operator shall implement any required recordkeeping and reporting requirements, according to 15A NCAC 02D .1404, by January 1, 2008.

(2) If compliance with this Section is to be achieved through the installation of combustion modification technology or other source modification:

(A) The owner or operator shall submit a permit application and a compliance schedule by August 1, 2007.

(B) The compliance schedule shall contain a date by which contracts for installation of the modification shall be awarded or orders shall be issued for purchase of component parts.

(C) The compliance schedule shall contain a date by which installation of the modification shall begin.

(D) The compliance schedule shall contain a date by which installation of the modification shall be completed.

(E) If the source is subject to a limitation, the compliance schedule shall contain, a date by which compliance testing shall be completed.

(F) Final compliance shall be achieved no later than April 1, 2009.

(3) If compliance with this Section is to be achieved through the implementation of an emissions averaging plan as provided for in 15A NCAC 02D .1410:

(A) The owner or operator shall abide by the applicable requirements of Subparagraphs (c)(1) or (c)(2) of this Rule for certification or modification of each source to be included under the averaging plan.

(B) The owner or operator shall submit a plan to implement an emissions averaging plan according to 15A NCAC 02D .1410 by August 1, 2007.

(C) Final compliance shall be achieved within one year no later than January 1, 2008.

(4) If compliance with this Section is to be achieved through the implementation of a seasonal fuel switching program as provided for in 15A NCAC 02D .1411:

(A) The owner or operator shall make all necessary modifications according to Subparagraph (c)(2) of this Rule.

(B) The owner or operator shall include a plan for complying with the requirements of 15A NCAC 02D .1411 with the permit application required in Part (c)(2)(A) of this Rule.

(C) Final compliance shall be achieved no later than April 1, 2009.

(5) Increments of progress certification. The owner or operator shall certify to the Director, within five days after the deadline for each increment of progress in this Paragraph, whether the required increment of progress has been met.

(d) Sources already in compliance.

(1) Maintenance area and Charlotte ozone nonattainment area contingency plan. Paragraph (b) of this Rule shall not apply to sources that:

(A) are in compliance with the applicable rules of this Section when the Director notices in the North Carolina Register the implementation of rules that resolves a violation of the ambient air quality standard for ozone; and

(B) have determined and certified compliance to the Director within six months after the Director notices in the North Carolina Register the implementation of rules that resolves a violation of the ambient air quality standard for ozone.

(2) Nonattainment areas. Paragraph (c) of this Rule shall not apply to sources in an area named in 15A NCAC 02D .1402(d) that are in compliance with applicable rules of this Section on March 1, 2007.

(e) New sources.

(1) Maintenance area and Charlotte ozone nonattainment area contingency plan. The owner or operator of any new source of nitrogen oxides not permitted before the date the Director notices in the North Carolina Register according to 15A NCAC 02D .1402(e), (f), or (g) shall comply with all applicable rules in this Section upon start-up of the source. The owner or operator of any new source covered by 15A NCAC 02D .1407, .1408, .1409, .1413, or .1418 shall comply with all applicable rules in this Section upon start-up of the source.

(2) Nonattainment areas. The owner or operator of any new source of nitrogen oxides not permitted before March 1, 2007 in an area identified in 15A NCAC 02D .1402(d) shall comply with all applicable rules in this Section upon start-up of the source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Amended Eff. April 1, 1997;
Temporary Amendment Eff. November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. July 1, 2007; March 1, 2007; July 18, 2002;
Readopted Eff. October 1, 2020;
Amended Eff. November 1, 2023.

15A NCAC 02D .1404 RECORDKEEPING: REPORTING: MONITORING:

(a) General requirements. The owner or operator of any source shall comply with the monitoring, recordkeeping and reporting requirements in 15A NCAC 02D .0600 and shall maintain all records necessary for determining compliance with all applicable limitations and standards of this Section for five years.

(b) Submittal of information to show compliance status. The owner or operator of any source shall maintain, and when requested by the Director, submit any information required by this Section to determine the compliance status of an affected source.

(c) Excess emissions reporting. The owner or operator shall report excess emissions following the procedures in 15A NCAC 02D .0535.

(d) Continuous emissions monitors.

(1) The owner or operator shall install, operate, and maintain a continuous emission monitoring system according to 40 CFR Part 75, Subpart H, with such exceptions as may be allowed under 40 CFR Part 75, Subpart H or 40 CFR Part 96 if the source is covered by 15A NCAC 02D .1418, with the exception of internal combustion engines.

(2) The owner or operator of a source that is subject to the requirements of this Section but not covered under Subparagraph (1) of this Paragraph and uses a continuous emissions monitoring system to measure emissions of nitrogen oxides shall operate and maintain the continuous emission monitoring system according to 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F or 40 CFR Part 75, Subpart H. If diluent monitoring is required, 40 CFR Part 60, Appendix B, Performance Specification 3, shall be used. If flow monitoring is required, 40 CFR Part 60, Appendix B, Performance Specification 6, shall be used.

(3) The owner or operator of the following sources are not required to use continuous emission monitors unless the Director determines that a continuous emission monitor is necessary pursuant to 15A NCAC 02D .0611 to show compliance with this Section:

(A) a boiler or indirect-fired process heater regulated by 15A NCAC 02D .1407 with a maximum heat input less than or equal to 250 million Btu per hour;

(B) stationary internal combustion engines regulated by 15A NCAC 02D .1409 except for those engines regulated by 15A NCAC 02D .1409(b) and .1418.

(e) Missing data.

(1) If data from continuous emission monitoring systems required to meet the requirements of 40 CFR Part 75 are not available at a time that the source is operated, the procedures in 40 CFR Part 75, Subpart D shall be used to supply the missing data.

(2) For continuous emissions monitors not covered under Subparagraph (1) of this Paragraph, data shall be available for at least 95 percent of the emission source's operating hours for the applicable averaging period, where four equally spaced readings constitute a valid hour. If data from continuous emission monitoring systems are not available for at least 95 percent of the time that the source is operated, the owner or operator of the monitor shall:

(A) use the procedures in 40 CFR 75.33 through 75.37 to supply the missing data; or

(B) document that the combustion source or process equipment and the control device were being properly operated when the monitoring measurements were missing. For purposes of this Rule, "properly operated" means that operating and maintenance procedures being used complied with permit conditions, operating and maintenance procedures, preventative maintenance procedures, monitoring results, and compliance history.

(f) Quality assurance for continuous emissions monitors.

(1) The owner or operator of a continuous emission monitor required to meet 40 CFR Part 75, Subpart H, shall follow the quality assurance and quality control requirements of 40 CFR Part 75, Subpart H.

(2) For a continuous emissions monitor not covered under Subparagraph (1) of this Paragraph, the owner or operator of the continuous emissions monitor shall follow the quality assurance and quality control requirements of 40 CFR Part 60, Appendix F, if the monitor is required to be operated annually under another rule. If the continuous emissions monitor is being operated only to satisfy the requirements of this Section, then the quality assurance and quality control requirements of 40 CFR Part 60, Appendix F, shall apply except that:

(A) A relative accuracy test audit shall be conducted after January 1 and before May 1 of each year;

(B) One of the following shall be conducted at least once between May 1 and September 30 of each year:

(i) a linearity test, in accordance with 40 CFR Part 75, Appendix A, Section 3.2, 6.2, and 7.1;

(ii) a relative accuracy audit, in accordance with 40 CFR Part 60, Appendix F, Section 5 and 6; or

(iii) a cylinder gas audit in accordance with 40 CFR Part 60, Appendix F, Section 5.0 and 6.0; and

(C) A daily calibration drift test shall be conducted in accordance with 40 CFR Part 60, Appendix F, Section 4.0.

(g) Averaging time for continuous emissions monitors. When compliance with a limitation established for a source subject to the requirements of this Section is determined using a continuous emissions monitoring system, a 24-hour block average as described in 15A NCAC 02D .0606 shall be recorded for each day beginning May 1 through September 30, unless a specific rule requires a different averaging time or procedure. A 24-hour block average as defined in 15A NCAC 02D .0606 shall be used when a continuous emissions monitoring system is used to determine compliance with a short-term pounds per million Btu standard in 15A NCAC 02D .1418.
(h) Heat input. Heat input shall be determined:

(1) for sources required to use a monitoring system meeting the requirements of 40 CFR Part 75, using the procedures in 40 CFR Part 75; or
(2) for sources not required to use a monitoring system meeting the requirements of 40 CFR Part 75 using:
    (A) 40 CFR Part 75;
    (B) a method in 15A NCAC 02D .0501; or
    (C) the best available heat input data if approved by the Director. The Director shall grant approval on a case-by-case basis if he or she finds that the heat input data is the best available.

(i) Source testing. When compliance with a limitation established for a source subject to the requirements of this Section is determined using source testing, the source testing shall follow the procedures in 15A NCAC 02D .1415.
(j) Alternative monitoring and reporting procedures. The owner or operator of a source covered under this Rule may request alternative monitoring or reporting procedures pursuant to 15A NCAC 02D .0612.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Amended Eff. April 1, 1999;
Temporary Amendment Eff. November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amendment Eff. August 1, 2001;
Amendment Eff. December 1, 2005; January 1, 2005; May 1, 2004; July 15, 2002;
Temporary Amendment Eff. December 31, 2008(this amendment replaces the amendment approved by RRC on May 15, 2008);
Amended Eff. September 29, 2009(amendment approved by RRC on May 15, 2008);
Readopted Eff. October 1, 2020.

15A NCAC 02D .1405 CIRCUMVENTION

(a) An owner or operator subject to this Section shall not build, erect, install or use any article, machine, equipment, process, or method that conceals an emission that would otherwise constitute a violation of a rule in this Section.
(b) Paragraph (a) of this Rule includes the use of gaseous dilutants to achieve compliance and the piecemeal carrying out of an operation to avoid coverage by a rule that applies only to operations larger than a specified size.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. April 1, 1995;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1406 UTILITY BOILERS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. April 1, 1995;
Temporary Repeal Eff. November 1, 2000;
Repealed Eff. July 18, 2002.

15A NCAC 02D .1407 BOILERS AND INDIRECT-FIRED PROCESS HEATERS

(a) This Rule applies geographically pursuant to 15A NCAC 02D .1402.
(b) The owner or operator of a boiler or indirect-fired process heater with a maximum heat input rate of less than or equal to 50 million Btu per hour shall comply with the annual tune-up requirements of 15A NCAC 02D .1414. The

owner or operator of a boiler or indirect-fired process heater subject to the requirements of this Paragraph shall maintain records of all tune-ups performed for each source as required by 15A NCAC 02D .1404.

(c) The owner or operator of a fossil fuel-fired boiler with a maximum heat input rate less than or equal to 250 million Btu per hour but greater than 50 million Btu per hour, a boiler with a maximum heat input greater than 50 million Btu per hour that is not a fossil fuel-fired boiler, or an indirect-fired process heater with a maximum heat input greater than 50 million Btu per hour shall comply by:

(1) installation of, if necessary, combustion modification technology or other NO_x control technology and maintenance, including annual tune-ups and recordkeeping; and

(2) compliance through source testing or continuous emission monitoring that the source complies with the following applicable limitation:

MAXIMUM ALLOWABLE NO_X EMISSION RATES FOR BOILERS AND INDIRECT PROCESS HEATERS
(POUNDS PER MILLION BTU)

	Firing Method		
Fuel/Boiler Type	Tangential	Wall	Stoker or Other
Coal (Wet Bottom)	1.0	1.0	N/A
Coal (Dry Bottom)	0.45	0.50	0.40
Wood or Refuse	0.20	0.30	0.20
Oil	0.30	0.30	0.30
Gas	0.20	0.20	0.20

(d) If the emissions are greater than the applicable limitation in Paragraph (c) of this Rule after reasonable effort as defined in 15A NCAC 02D .1401, or if the requirements of this Rule are not RACT, the owner or operator may petition the Director for an alternative limitation or standard pursuant to 15A NCAC 02D .1412.

(e) Compliance with the limitation established for a boiler or indirect-fired process heater under this Rule shall be determined:

(1) using a continuous emission monitoring system if the boiler or indirect-fired process heater is required to use a continuous emissions monitoring system as required by 15A NCAC 02D .0524 or 40 CFR Part 60 to measure emissions of nitrogen oxides; or

(2) using annual source testing pursuant to 15A NCAC 02D .1415 for boilers or indirect-fired process heaters with a maximum heat input rate less than or equal to 250 million Btu per hour but greater than 50 million Btu per hour with the exception allowed under Paragraph (f) of this Rule.

(f) If a source covered under this Rule can burn more than one fuel, the owner or operator of the source may choose not to burn one or more of these fuels during the ozone season. If the owner or operator chooses not to burn a particular fuel, the sources testing required under Subparagraph (e)(2) this Rule shall not be required for that fuel.

(g) If two consecutive annual source tests show compliance, the Director may reduce the frequency of testing up to once every five years. In years that a source test is not done, the boiler or indirect-fired process heater shall comply with the annual tune-up requirements of 15A NCAC 02D .1414. If after the Director reduces the frequency of testing, a source test shows that the emission limit in this Rule is exceeded, the Director shall require the boiler or indirect-fired process heater to be tested annually until two consecutive annual tests show compliance. Then the Director may again reduce the frequency of testing up to once every five years.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. June 1, 2008; July 18, 2002;
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1408 STATIONARY COMBUSTION TURBINES

(a) This Rule applies geographically pursuant to 15A NCAC 02D .1402.

(b) Unless the owner or operator chooses the option of emission averaging in 15A NCAC 02D .1410, the owner or operator of a stationary combustion turbine with a heat input rate greater than 100 million Btu per hour but less than or equal to 250 million Btu per hour shall comply with the following limitations:

(1) Emissions of NOx shall not exceed 75 ppm by volume corrected to 15 percent oxygen for gas-fired turbines; or
(2) Emissions of NOx shall not exceed 95 ppm by volume corrected to 15 percent oxygen for oil-fired turbines.

If necessary, the owner or operator shall install combustion modification technology or other NOx control technology to comply with the applicable limitation set forth in this Paragraph.

(c) If the emissions are greater than the applicable limitation in Paragraph (b) of this Rule after reasonable effort as defined in 15A NCAC 02D .1401, or if the requirements of this Rule are not RACT for the particular stationary combustion turbine, the owner or operator may petition the Director for an alternative limitation or standard in accordance with 15A NCAC 02D .1412.

(d) Compliance with the limitation established for a stationary combustion turbine under this Rule shall be determined by using:

(1) a continuous emissions monitoring system; or
(2) annual source testing in accordance with 15A NCAC 02D .1415.

(e) If a source covered under this Rule can burn more than one fuel, the owner or operator of the source may choose not to burn one or more of these fuels during the ozone season. If the owner or operator chooses not to burn a particular fuel, the sources testing required under this Rule is not required for that fuel.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. June 1, 2008; July 18, 2002;
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1409 STATIONARY INTERNAL COMBUSTION ENGINES

(a) This Rule applies geographically pursuant to 15A NCAC 02D .1402.

(b) The owner or operator of a stationary internal combustion engine with a rated capacity of greater than or equal to 650 horsepower that is not covered under Paragraph (c) of this Rule or 15A NCAC 02D .1418 shall not allow emissions of NOx from the stationary internal combustion engine to exceed the following limitations:

MAXIMUM ALLOWABLE NOx EMISSION RATES FOR
STATIONARY INTERNAL COMBUSTION ENGINES
(GRAMS PER HORSEPOWER HOUR)

Engine Type	Fuel Type	Limitation
Rich-burn	Gaseous	2.5
Lean-burn	Gaseous	2.5
Compression Ignition	Liquid	8.0

(c) Engines identified in the table in this Paragraph shall not exceed the emission limit in the table during the ozone season.

SUM OF MAXIMUM ALLOWABLE OZONE SEASON NOx EMISSIONS
(tons per ozone season)

FACILITY	REGULATED SOURCES	ALLOWABLE EMISSIONS
Transcontinental Gas Pipeline Station 150	Mainline engines #12, 13, 14, and 15	76
Transcontinental Gas Pipeline Station 155	Mainline engines #2, 3, 4, 5, and 6	127
Transcontinental Gas Pipeline Station 160	Mainline engines #11, 12, 13, 14, and 15	149

Compliance shall be determined by summing the actual emissions from the engines listed in the table at each facility for the ozone season and comparing those sums to the limits in the table. Compliance may be achieved through trading under Paragraph (h) of this Rule if the trades are approved before the ozone season.

(d) If the emissions from a stationary internal combustion engine are greater than the applicable limitation in Paragraph (b) of this Rule after applying a reasonable effort as defined in 15A NCAC 02D .1401, or if the requirements of this Rule are not RACT for the particular stationary internal combustion engine, the owner or operator may petition the Director for an alternative limitation or standard pursuant to 15A NCAC 02D .1412.

(e) For the engines identified in Paragraph (c) of this Rule and any engine involved in emissions trading with one or more of the engines identified in Paragraph (c) of this Rule, the owner or operator shall determine compliance using:

(1) a continuous emissions monitoring system that meets the applicable requirements of Appendices B and F of 40 CFR part 60 and 15A NCAC 02D .1404; or

(2) an alternate monitoring and recordkeeping procedure based on actual emissions testing and correlation with operating parameters.

The installation, implementation, and use of an alternate procedure allowed under Subparagraph (2) of this Paragraph shall be approved by the Director before it may be used. The Director shall approve the alternative procedure if he or she finds that it can show the compliance status of the engine.

(f) If a stationary internal combustion engine is permitted to operate more than 475 hours during the ozone season, compliance with the limitation established for a stationary internal combustion engine under Paragraph (b) of this Rule shall be determined using annual source testing pursuant to 15A NCAC 02D .1415. If a source covered under this Rule can burn more than one fuel, then the owner or operator of the source may choose not to burn one or more of these fuels during the ozone season. If the owner or operator chooses not to burn a particular fuel, the source testing required under this Rule is not required for that fuel.

(g) If a stationary internal combustion engine is permitted to operate no more than 475 hours during the ozone season, the owner or operator of the stationary internal combustion engine shall show compliance with the limitation under Paragraph (b) of this Rule with source testing during the first ozone season of operation pursuant to 15A NCAC 02D .1415. Each year after that, the owner or operator of the stationary internal combustion engine shall comply with the annual tune-up requirements of 15A NCAC 02D .1414.

(h) The owner or operator of a source covered under Paragraph (c) of this Rule may offset part or all of the emissions of that source by reducing the emissions of another stationary internal combustion engine at that facility by an amount equal to or greater than the emissions being offset. Only actual decreased emissions that have not previously been relied on to comply with 15A NCAC 02D or 02Q or Title 40 of the Code of Federal Regulations may be used to offset the emissions of another source. The person requesting the offset shall submit the following information to the Director:

(1) identification of the source, including permit number, providing the offset and what the new allowable emission rate for the source will be;

(2) identification of the source, including permit number, receiving the offset and what the new allowable emission rate for the source will be;

(3) the amount of allowable emissions in tons per ozone season being offset;

(4) a description of the monitoring, recordkeeping, and reporting that shall be used to show compliance; and

(5) documentation that the offset is an actual decrease in emissions that has not previously been relied on to comply with 15A NCAC 02D or 02Q or Title 40 of the Code of Federal Regulations.

The Director may approve the offset if he or she finds that all the information required by this Paragraph has been submitted and that the offset is an actual decrease in emissions that have not previously been relied on to comply with 15A NCAC 02D or 02Q or Title 40 of the Code of Federal Regulations. If the Director approves the offset, he or she shall put the new allowable emission rates in the respective permits.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. June 1, 2008; June 1, 2004; July 18, 2002;
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1410 EMISSIONS AVERAGING

(a) This Rule shall not apply to sources regulated by 15A NCAC 02D .1418. Sources that have obtained an alternative limitation pursuant to 15A NCAC 02D .1412 or that apply seasonal fuel switching pursuant to 15A NCAC 02D .1411 are not eligible to participate in an emissions averaging plan under this Rule.

(b) With the exceptions in Paragraph (a) of this Rule, the owner or operator of a facility with two or more sources with comparable plume rise and subject to the requirements of this Section for all such sources as determined by 15A NCAC 02D .1402 may elect to apply an emissions averaging plan according to Paragraph (c) of this Rule. An emissions averaging plan may be used if the total NOx emissions from the averaged set of sources based on the total heat input are equal to or less than the NOx emissions that would have occurred if each source complied with the applicable limitation.

(c) To request approval of an emissions averaging plan to comply with the requirements of this Section, the owner or operator of a facility shall submit a written request to the Director including the following information:

(1) the name and location of the facility;
(2) information identifying each source to be included under the averaging plan;
(3) the maximum heat input rate for each source;
(4) the fuel or fuels combusted in each source;
(5) the maximum allowable NOx emission rate proposed for each averaging source;
(6) a demonstration that the nitrogen oxide emissions of the sources being averaged, when operated together at the maximum daily heat input rate, will be less than or equal to the total NOx emissions if each source complied with the applicable limitation of this Section individually;
(7) an operational plan to provide reasonable assurance that the sources being averaged will satisfy Subparagraph (5) of this Paragraph when the combined maximum daily heat input rate is less than the permitted maximum heat input rate; and
(8) the method to be used to determine the actual NOx emissions from each source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 18, 2002;
Temporary Amendment Eff. December 31, 2008(this amendment replaces the amendment approved by RRC on May 15, 2008);
Amended Eff. September 29, 2009(amendment approved by RRC on May 15, 2008);
Readopted Eff. October 1, 2020.

15A NCAC 02D .1411 SEASONAL FUEL SWITCHING

(a) This Rule shall not apply to sources regulated by 15A NCAC 02D .1418.

(b) The owner or operator of a coal-fired or oil-fired boiler subject to the requirements of 15A NCAC 02D .1407 may elect to comply by applying seasonal combustion of natural gas according to Paragraph (c) of this Rule. This option is not available to a boiler that used natural gas as its primary fuel beginning in 1990. Compliance with this Section according to this Rule does not remove or reduce any applicable requirement of the Acid Rain Program.

(c) The owner or operator electing to comply with the requirements of this Section through the seasonal combustion of natural gas shall establish a NOx emission limit beginning October 1 and ending April 30 that will result in annual NOx emissions of less than or equal to the NOx that would have been emitted if the source complied with the applicable limitation for the combustion of coal for the entire calendar year. Compliance with this Section according to this Rule does not remove or reduce any applicable requirement of the Acid Rain Program.

(d) To comply with the requirements of this Section through the seasonal combustion of natural gas, the owner or operator shall submit to the Director the following information:

(1) the name and location of the facility;
(2) information identifying the source to use seasonal combustion of natural gas for compliance;
(3) the maximum heat input rate for each source;
(4) a demonstration that the source will comply with the applicable limitation for the combustion of coal during the ozone season;
(5) a demonstration that the source will comply with the NOx emission limitation established under Paragraph (c) of this Rule beginning October 1 and ending April 30; and

(6) a written statement from the natural gas supplier providing reasonable assurance that the fuel will be available throughout the ozone season.

History Note: *Authority G.S. 143-215.3(a)(1) 143-215.65; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amendment Eff August 1, 2001;
Amended Eff. June 1, 2008; July 18, 2002;
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1412 PETITION FOR ALTERNATIVE LIMITATIONS

(a) The owner or operator may petition the Director for an alternative limitation according to Paragraph (b) or (c) of this Rule if the owner or operator of a source subject to the requirements of 15A NCAC 02D .1407, .1408, or .1409(b):

(1) cannot achieve compliance with the applicable limitation after reasonable effort to satisfy the requirements of 15A NCAC 02D .1407, .1408, or .1409(b) or if the requirements in these Rules are not RACT for the particular source; and

(2) cannot provide reasonable assurance for overall compliance at a facility through the implementation of an emissions averaging plan pursuant to 15A NCAC 02D .1410.

(b) To petition the Director for an alternative limitation, the owner or operator of the source shall submit:

(1) the name and location of the facility;

(2) information identifying the source for which an alternative limitation is being requested;

(3) the maximum heat input rate for the source;

(4) the fuel or fuels combusted in the source;

(5) the maximum allowable NOx emission rate proposed for the source for each fuel;

(6) a demonstration that the source has satisfied the requirements to apply for an alternative limitation under Paragraph (a) of this Rule; and

(7) a demonstration that the proposed alternative limitation is RACT for that source.

(c) If the source is required to comply with best achievable control technology pursuant to 15A NCAC 02D .0530, the owner or operator of the source shall provide the information required under Subparagraphs (b)(1) through (6) of this Rule and documentation that the source is required to use best available control technology and is complying with that requirement. For this source, its best available control technology shall be considered RACT without any further demonstrations.

(d) The Director shall approve the alternative limitation if he or she finds that:

(1) all the information required by Paragraph (b) of this Rule has been submitted;

(2) the requirements of Paragraph (a) of this Rule have been satisfied; and

(3) the proposed alternative limitation is RACT for that source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. June 1, 2008; July 18, 2002;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1413 SOURCES NOT OTHERWISE LISTED IN THIS SECTION

(a) The owner or operator of any source of NOx, except boilers, indirect-fired process heaters, stationary combustion turbines, or stationary internal combustion engines, at a facility that has the potential to emit 100 tons per year or more of NOx or 560 pounds per calendar day or more of NOx from May 1 through September 30, shall apply RACT pursuant to Paragraph (b) of this Rule.

(b) To apply RACT to a source of NOx regulated pursuant to this Rule, the owner or operator of the source shall submit;

(1) the name and location of the facility;
(2) information identifying the source for which RACT is being proposed;
(3) a demonstration that shows the proposed limitation is RACT for the source; and
(4) a proposal for demonstrating compliance with the proposed RACT.

(c) The Director shall approve the proposed limitation if he or she finds that:
(1) the owner or operator of the source has submitted all the information required under Paragraph (b) of this Rule;
(2) the source is regulated under this Rule; and
(3) the proposed limitation is RACT for this source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 18, 2002;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1414 TUNE-UP REQUIREMENTS

(a) This Rule applies to boilers and indirect-fired process heaters subject to the requirements of 15A NCAC 02D .1407 or stationary internal combustion engines subject to the requirements of 15A NCAC 02D .1409 that are complying with the annual tune-up requirement.

(b) When a tune-up to a boiler or indirect-fired process heater is required for compliance with this Section, the owner or operator shall at least annually and according to the manufacturer's recommendations:
(1) inspect each burner and clean or replace any component of the burner as required;
(2) inspect the flame pattern and make any adjustments to the burner, or burners, necessary to optimize the flame pattern to minimize total emissions of NOx and carbon monoxide;
(3) inspect the combustion control system to ensure proper operation and correct calibration of components that control the air to fuel ratio and adjust components to meet the manufacturer's established operating parameters; and
(4) inspect any other component of the boiler or indirect-fired process heater and make adjustments or repairs as necessary to improve combustion efficiency.

The owner or operator shall perform the tune-up according to a unit-specific protocol approved by the Director. The Director shall approve the protocol if it meets the requirements of this Rule.

(c) When a tune-up to a stationary internal combustion engine is required for compliance with this Section, the owner or operator shall at least annually inspect, adjust, and repair or replace according to the manufacturer's recommendation, the following, as equipped:
(1) engine air cleaners, fuel filters, and water traps;
(2) turbochargers and superchargers;
(3) spark plugs;
(4) valve lash;
(5) ignition systems, including ignition coils and wiring;
(6) aftercooler cores;
(7) any other component of the engine as necessary to improve engine efficiency; and
(8) emission control systems.

The owner or operator shall perform the tune-up according to a unit-specific protocol, including inspection, maintenance, and performance procedures as recommended by the manufacturer and approved by the Director. The Director shall approve the protocol if it meets the requirements of this Rule.

(d) The owner or operator shall maintain records of tune-ups performed to comply with this Section pursuant to 15A NCAC 02D .1404. The following information shall be included for each source:
(1) identification of the source;
(2) the date and time the tune-up started and ended;
(3) the person responsible for performing the tune-up;
(4) for boilers and indirect-fired process heaters, the checklist for inspection of the burner, flame pattern, combustion control system, and all other components of the boiler or indirect-fired process heater identified in the protocol, noting any repairs or replacements made;

(5) for stationary internal combustion engines, the checklist for engine air cleaners, turbochargers, sparkplugs, valve lash, ignition coils and wiring, aftercooler cores, and all other components of the engine identified in the protocol, noting any repairs or replacements made;

(6) any stack gas analyses performed after the completion of all adjustments to show that the operating parameters of the boiler, indirect-fired process heater, or stationary internal combustion engine have been optimized with respect to fuel consumption and output. These parameters shall be within the range established by the equipment manufacturer to ensure that the emission limitation for nitrogen oxides has not been exceeded; and

(7) any other information requested by the Director to show that the boiler, indirect-fired process heater, or stationary internal combustion engine is being operated and maintained in a manner to minimize the emissions of nitrogen oxides.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 18, 2002;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1415 TEST METHODS AND PROCEDURES

(a) When source testing is used to determine compliance with rules in this Section, the methods and procedures in 15A NCAC 02D .2600 shall be used.

(b) The owner or operator shall maintain records of tests performed to demonstrate compliance with this Section as required by 15A NCAC 02D .1404.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. June 1, 2008; July 18, 2002;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1416 EMISSION ALLOCATIONS FOR UTILITY COMPANIES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. November 1, 2000;
Eff. April 1, 2001;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. June 1, 2004; July 18, 2002;
Temporary Amendment Eff. December 31, 2008(this amendment replaces the repeal approved by RRC on May 15, 2008);
Repealed Eff. September 29, 2009(repeal approved by RRC on May 15, 2008).

15A NCAC 02D .1417 EMISSION ALLOCATIONS FOR LARGE COMBUSTION SOURCES

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. November 1, 2000;
Temporary Adoption Eff. August 1, 2001;
Eff. July 18, 2002;
Amended Eff. June 1, 2004;
Temporary Amendment Eff. December 31, 2008(this amendment replaces the repeal approved by RRC on May 15, 2008);
Repealed Eff. September 29, 2009(repeal approved by RRC on May 15, 2008).

15A NCAC 02D .1418 NEW ELECTRIC GENERATING UNITS, BOILERS, COMBUSTION TURBINES, AND I/C ENGINES

(a) Electric generating units. Emissions of NOx from any fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system permitted after October 31, 2000, serving a generator with a nameplate capacity greater than 25 megawatts electrical and selling any amount of electricity shall meet the applicable requirement:

(1) 0.15 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels if it is not regulated by 15A NCAC 02D .0530 or .0531;

(2) if regulated by 15A NCAC 02D .0530, meet the best available control technology requirements in 15A NCAC 02D .0530 or 0.15 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels, whichever requires the greater degree of reduction; or

(3) if regulated by 15A NCAC 02D .0531, meet the lowest available emission rate technology requirements in 15A NCAC 02D .0531.

(b) Boilers and combustion turbines. Emissions of NOx from any fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system having a maximum design heat input greater than 250 million Btu per hour permitted after October 31, 2000, and not regulated under Paragraph (a) of this Rule, shall meet the applicable requirement:

(1) 0.17 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels if it is not regulated by 15A NCAC 02D .0530 or .0531;

(2) if regulated by 15A NCAC 02D .0530, meet the best available control technology requirements in 15A NCAC 02D .0530 or 0.17 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels, whichever requires the greater degree of reduction; or

(3) if regulated by 15A NCAC 02D .0531, meet the lowest achievable emission rate technology requirements in 15A NCAC 02D .0531.

(c) Internal combustion engines. The following reciprocating internal combustion engines permitted after October 31, 2000, shall comply with the applicable requirements in 15A NCAC 02D .1423 if the engine is not regulated by 15A NCAC 02D .0530 or .0531:

(1) rich burn stationary internal combustion engines rated at greater than or equal to 2,400 brake horsepower;

(2) lean burn stationary internal combustion engines rated at greater than or equal to 2,400 brake horsepower;

(3) diesel stationary internal combustion engines rated at greater than or equal to 3,000 brake horsepower; or

(4) dual fuel stationary internal combustion engines rated at greater than or equal to 4,400 brake horsepower.

If the engine is regulated by 15A NCAC 02D .0530, it shall comply with the requirements of 15A NCAC 02D .1423 or the best available control technology requirements of 15A NCAC 02D .0530, whichever requires the greater degree of reduction. If the engine is regulated by 15A NCAC 02D .0531, it shall comply with lowest achievable emission rate technology requirements of 15A NCAC 02D .0531.

(d) Monitoring. The owner or operator of a source subject to this Rule, except for internal combustion engines, shall show compliance using a continuous emission monitor that meets the requirements of 15A NCAC 02D .1404(d). Internal combustion engines shall comply with the monitoring requirements in 15A NCAC 02D .1423. Monitors shall be installed before the first ozone season in which the source will operate and shall be operated each day during the ozone season that the source operates.

History Note: *Authority G.S. 143-215.3(a)(1); 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Temporary Adoption Eff. August 1, 2001; November 1, 2000;
Eff. July 18, 2002;
Amended Eff. June 1, 2004;
Temporary Amendment Eff. December 31, 2008(this amendment replaces the amendment approved by RRC on May 15, 2008);
Amended Eff. September 29, 2009(amendment approved by RRC on May 15, 2008);
Readopted Eff. October 1, 2020;
Amended Eff. October 1, 2022.

15A NCAC 02D .1419 NITROGEN OXIDE BUDGET TRADING PROGRAM
15A NCAC 02D .1420 PERIODIC REVIEW AND REALLOCATIONS
15A NCAC 02D .1421 ALLOCATIONS FOR NEW GROWTH OF MAJOR POINT SOURCES
15A NCAC 02D .1422 COMPLIANCE SUPPLEMENT POOL CREDITS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. August 1, 2001; November 1, 2000;
Eff. July 18, 2002;
Amended Eff. June 1, 2004;
Temporary Amendment Eff. December 31, 2008(this amendment replaces the repeal approved by RRC on May 15, 2008);
Repealed Eff. September 29, 2009(repeal approved by RRC on May 15, 2008).

15A NCAC 02D .1423 LARGE INTERNAL COMBUSTION ENGINES

(a) Applicability. This Rule applies to the following internal combustion engines permitted after October 30, 2000 that are subject to 15A NCAC 02D .1418 but are not subject to 15A NCAC 02D .0530 or .0531:

(1) rich burn stationary internal combustion engines rated at greater than or equal to 2,400 brake horsepower;

(2) lean burn stationary internal combustion engines rated at greater than or equal to 2,400 brake horsepower;

(3) diesel stationary internal combustion engines rated at greater than or equal to 3,000 brake horsepower; or

(4) dual fuel stationary internal combustion engines rated at greater than or equal to 4,400 brake horsepower.

(b) Emission limitation. The owner or operator of a stationary internal combustion engine shall not cause to be emitted into the atmosphere NOx in excess of the following applicable limit, expressed as NOx in parts per million by volume corrected to 15 percent oxygen on a dry basis, averaged over a rolling 30-day period, as may be adjusted pursuant to Paragraph (c) of this Rule:

MAXIMUM ALLOWABLE NOx EMISSION CONCENTRATION FOR
STATIONARY INTERNAL COMBUSTION ENGINES
(parts per million)

Engine Type	Limitation
Rich-burn	110
Lean-burn	125
Diesel	175
Dual fuel	125

(c) Adjustment. Each emission limit expressed in Paragraph (b) of this Rule may be multiplied by X, where X equals the engine efficiency (E) divided by a reference efficiency of 30 percent. Engine efficiency (E) shall be determined using one of the methods specified in Subparagraphs (1) or (2) of this Paragraph, whichever provides a higher value. However, engine efficiency (E) shall not be less than 30 percent. An engine with an efficiency lower than 30 percent shall be assigned an efficiency of 30 percent.

(1)

$$E = \frac{(\text{Engine output}) \cdot (100)}{\text{Energy input}}$$

where energy input is determined by a fuel measuring device accurate to plus or minus 5 percent and is based on the higher heating value (HHV) of the fuel. Percent efficiency (E) shall be averaged over 15 consecutive minutes and measured at peak load for the applicable engine.

(2)

$$E = \frac{(\text{Manufacturer's rated efficiency at LHV}) \cdot (\text{LHV})}{\text{HHV}}$$

where LHV is the lower heating value of the fuel; and HHV is the higher heating value of the fuel.

(d) Compliance determination and monitoring. The owner or operator of an internal combustion engine subject to the requirements of this Rule shall determine compliance using:

(1) a continuous emissions monitoring system that meets the applicable requirements of 40 CFR part 60, Appendices B and F, excluding data obtained during periods specified in Paragraph (g) of this Rule and 15A NCAC 02D .1404; or

(2) an alternate calculated and recordkeeping procedure based on actual emissions testing and correlation with operating parameters. The installation, implementation, and use of this alternate procedure shall be approved by the Director before it may be used. The Director shall approve the alternative procedure if he or she finds that it can show the compliance status of the engine.

(e) Reporting requirements. The owner or operator of a stationary internal combustion engine subject to this Rule shall submit:

(1) a report documenting the engine's total nitrogen oxide emissions beginning May 1 and ending September 30 of each year to the Director by October 31 of each year, beginning with the year of first ozone season that the engine operates; and

(2) an excess emissions and monitoring systems performance report, according to the requirements of 40 CFR 60.7(c) and 60.13, if a continuous emissions monitoring system is used.

(f) Recordkeeping requirements. The owner or operator of a stationary internal combustion engine subject to this Rule shall maintain all records necessary to demonstrate compliance with the Rule for two calendar years at the facility at which the engine is located. The records shall be made available to the Director upon request. The owner or operator shall maintain records of the following information for each day the engine operates:

(1) identification and location of the engine;

(2) calendar date of record;

(3) the number of hours the engine operated during each day, including startups, shutdowns, and malfunctions, and the type and duration of any maintenance and repairs;

(4) the date and results of each emissions inspection;

(5) a summary of any emissions corrective maintenance taken;

(6) the results of all compliance tests; and

(7) if a unit is equipped with a continuous emission monitoring system:

(A) identification of time periods during which nitrogen oxide standards were exceeded, the reason for the excess emissions, and action taken to correct the excess emissions and to prevent similar future excess emissions; and

(B) identification of the time periods for which operating conditions and pollutant data were not obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(g) Exemptions. The emission standards of this Rule shall not apply to the following periods of operation:

(1) start-up and shut-down periods and periods of malfunction, not to exceed 36 consecutive hours; and

(2) regularly scheduled maintenance activities.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Temporary Adoption Eff. August 1, 2001;
Eff. July 18, 2002;
Readopted Eff. October 1, 2020.

15A NCAC 02D .1424 LARGE NON-ELECTRIC GENERATING UNITS

(a) General requirements. The owner or operator of a large non-EGU shall comply with the monitoring, recordkeeping and reporting requirements in 15A NCAC 02D .0600, with the exception of .0604 and .0612. For a period of five years, the owner or operator shall maintain all records necessary for determining compliance with all applicable limitations and standards of this Section.

(b) The owner or operator of a large non-EGU covered by this Rule may request alternative monitoring procedures if the source is not required by 15A NCAC 02D .1418 or any other federal regulation to comply with 40 CFR Part 75.

(c) For a source subject to 40 CFR Part 60 Subpart D or Subpart Db, the source shall determine NOx mass emissions using the NOx emission rate, total heat input derived, and time interval from each type of fuel during the NOx SIP Call control period.

(d) For a large non-EGU requesting an alternative monitoring procedure, one of the following monitoring options shall be used to determine NOx emissions.

(1) For sources with at least five years of historical CEMS operational data, the NOx mass emissions shall be determined using the following formula:

M = K*C*Q*t/2000

where;
M is the NOx mass emissions in tons;
K is the conversion constant equal to 1.194E-7 pounds per standard cubic feet-parts per million volume (lb/scf-ppmv);
C is the average NOx concentration of the unit as demonstrated by previous 40 CFR Part 75 monitoring in parts per million volume (ppmv);
Q is the average flow rate of the unit under normal operating conditions as demonstrated by previous 40 CFR Part 75 monitoring in standard cubic feet per hour (scf/hr);
t is the total operating time in hours during the ozone season; and
2000 pounds per ton (2000 lb/ton).

(2) For sources with at least five years of historical CEMS emissions data, the NOx mass emissions shall be determined as follows:
M = R*HI*t/2000
where;
M is the NOx mass emissions in tons,
R is the average NOx mass emission rate in pounds per million Btu (lb/MMBtu),
HI is the average heat input rate per hour in million British thermal units per hour (MMBtu/hr),
t is the operating time in hours during ozone season, and
2000 pounds per ton (2000 lb/ton).

(3) For sources without historical CEMS operational data or the CEMS data do not represent current operating conditions, the large non-EGU source shall test utilizing 40 CFR Part 60, Appendix A, Methods 1-4 and 7 or 7e to determine initial NOx concentration and flow rate factors prior to the ozone season.

(A) The NOx concentration and flow rate factors determined from the testing and the number of hours operated during the ozone season will be used to determine NOx emissions for that ozone season.

(B) After a total of three years of testing, the source shall use the average NOx concentration and flow rate factors for subsequent ozone season NOx emissions reporting.

(C) Sources shall use the equation in Subparagraph (1) of this Paragraph to calculate their NOx mass emissions in tons.

(e) A stack test shall be performed periodically in accordance with 40 CFR 51.121(i)(2) to verify NOx concentration and flow factors for use in computing NOx mass emissions.

(f) If the approved alternative monitoring or reporting requirements differ from those specified in a corresponding rule in Subchapters 02D or 02Q of this Chapter, the permit shall contain conditions stating the monitoring or reporting requirements.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. May 1, 2022.

15A NCAC 02D .1425 NOX SIP CALL BUDGET

(a) This Rule establishes general provisions and reporting requirements for the NOx SIP Call control period budgets pursuant to 40 CFR 51.121 through 51.122.

(b) The owner or operator of an EGU or large non-EGU as defined in 15A NCAC 02D .1401 shall submit a report to the Division no later than January 30 of the calendar year after the NOx SIP Call control period listing the NOx emissions from these sources during the NOx SIP Call control period. The NOx emissions in this report shall be determined in accordance with 40 CFR Part 75 for EGUs and large non-EGUs subject to 15A NCAC 02D .1418, and in accordance with 15A NCAC 02D .1424 for large non-EGUs using alternative monitoring.

(c) The information provided by the EGU and large non-EGU sources will be used to evaluate state level NOx budgets in Paragraph (d) of this Rule. The sum of the tons of NOx emitted from all such units in each control period beginning after the effective date of this rule shall not exceed this budget amount.

(d) For North Carolina's NOx Budget Program, the following budgets shall apply:

(1) The total NOx SIP Call control period budget for EGUs is 31,212 tons; and

(2) The total NOx SIP Call control period budget for large non-EGUs is 2,329 tons.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143.215.107(a)(5); 143.215.107(a)(7); 143.215.107(a)(10);*
Eff. May 1, 2022.

SECTION .1500 - TRANSPORTATION CONFORMITY

15A NCAC 02D .1501 PURPOSE, SCOPE AND APPLICABILITY
15A NCAC 02D .1502 DEFINITIONS
15A NCAC 02D .1503 TRANSPORTATION CONFORMITY DETERMINATION
15A NCAC 02D .1504 DETERMINING TRANSPORTATION-RELATED EMISSIONS

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. April 1, 1995;
Amended Eff. July 1, 1998;
Repealed Eff. April 1, 1999.

SECTION .1600 - GENERAL CONFORMITY

15A NCAC 02D .1601 PURPOSE, SCOPE AND APPLICABILITY
15A NCAC 02D .1602 DEFINITIONS
15A NCAC 02D .1603 GENERAL CONFORMITY DETERMINATION

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. April 1, 1995;
Amended Eff. April 1, 1999; July 1, 1998;
Expired Eff. February 1, 2016 pursuant to G.S. 150B-21.3A.

SECTION .1700 - MUNICIPAL SOLID WASTE LANDFILLS

15A NCAC 02D .1701 DEFINITIONS
The definitions in 40 CFR 60.41f apply to this Section.

History Note: *Authority G.S. 143-215.3(a)(1);*
Eff. July 1, 1998;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

15A NCAC 02D .1702 APPLICABILITY
(a) This Section applies to each existing Municipal Solid Waste (MSW) landfill that accepted waste since November 8, 1987 and that commenced construction, reconstruction, or modification on or before July 17, 2014.
(b) Physical or operational changes made to an existing MSW landfill solely to comply with an emission standard under this Section are not considered a modification or reconstruction, and do not subject an existing MSW landfill to the requirements of 40 CFR 60, Subpart XXX or 15A NCAC 02D .0524.
(c) An MSW landfill shall follow the permitting and reporting requirements of 40 CFR 60.31f(c) through (e).

History Note: *Authority 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(a)(10);*
Eff. July 1, 1998;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

15A NCAC 02D .1703 EMISSION STANDARDS
(a) Any MSW landfill subject to this Section and having a design capacity greater than or equal to 2.5 million megagrams by mass and 2.5 million cubic meters by volume shall be required to collect and control MSW landfill emissions if the following conditions apply:
(1) The landfill has accepted waste at any time since November 8, 1987 or has additional design capacity available for future waste deposition.

(2) The landfill commenced construction, reconstruction, or modification on or before July 17, 2014.

(3) The landfill has an NMOC emission rate greater than or equal to 34 megagrams per year or Tier 4 surface emissions monitoring shows a surface emission concentration of 500 parts per million methane or greater.

(4) The landfill is in the closed landfill subcategory and has an NMOC emission rate greater than or equal to 50 megagrams per year or Tier 4 surface emissions monitoring shows a surface emission concentration of 500 parts per million methane or greater.

(b) Each owner or operator of a MSW landfill meeting the conditions of Paragraph (a) of this Rule shall install and start-up a collection and control system that captures the gas within the landfill within 30 months after:

(1) the first annual report in which the NMOC emission rate equals or exceeds 34 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 34 megagrams per year, as specified in 40 CFR 60.38f(d)(4);

(2) the first annual NMOC emission rate report for a landfill in the closed landfill subcategory in which the NMOC emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 50 megagrams per year, as specified in 40 CFR 60.38f(d)(4); or

(3) the most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2, if the Tier 4 surface emissions monitoring shows a surface methane emission concentration of 500 parts per million methane or greater as specified in 40 CFR 60.38f(d)(4)(iii).

(c) Each owner or operator of a MSW landfill meeting the conditions of Paragraph (a) of this Rule shall collect and control the gas from the landfill through the use of control devices where the following applies, except as provided in 40 CFR 60.24:

(1) a non-enclosed flare designed and operated in accordance with the parameters established in 40 CFR 60.18 except as noted in 40 CFR 60.37f(d);

(2) a control system designed and operated to reduce NMOC by 98 weight percent; or when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at three percent oxygen or less. The reduction efficiency or concentration in parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in 40 CFR 60.35f(d). The performance test is not required for boilers and process heaters with design heat input capacities equal to or greater than 44 megawatts that burn landfill gas for compliance with this Rule.

(A) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

(B) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored shall be those specified in 40 CFR 60.37f.

(C) For the closed landfill subcategory, the initial or most recent performance test conducted by the facility to comply with 40 CFR Part 60, Subpart WWW; 40 CFR Part 62, Subpart GGG; or 40 CFR Part 60, Subpart Cc on or before July 17, 2014; shall be used for compliance with 40 CFR Part, Subpart Cf; or

(3) route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas shall be controlled pursuant to either Subparagraph (c)(1) or (2) of this Rule. All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of Paragraph (b) or (c) of this Rule. For purposes of this Subparagraph, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of Paragraph (b) or (c) of this Rule.

(d) Each owner or operator of a MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit to the Division a design capacity report as defined in 40 CFR 60.38f(a). Submittal of the initial design capacity report fulfills the requirements of this Rule, except as provided in Subparagraphs (d)(1) and (2) of this Rule, as follows:

(1) The owner or operator shall submit an amended design capacity report as provided in 40 CFR 60.38f(b). If the design capacity increase is the result of a modification, as defined in 15A NCAC 02D .1701, that was commenced after July 17, 2014, then the landfill becomes subject to 40 CFR Part 60 Subpart XXX instead of 40 CFR Part 60 Subpart Cf. If the design capacity increase is the result of a change in operating practices, density, or some other change that is not a modification as defined in 40 CFR 60.41f, then the landfill remains subject to Subpart Cf.

(2) When an increase in the maximum design capacity of a landfill with an initial design capacity less than 2.5 million megagrams or 2.5 million cubic meters results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator shall comply with Paragraph (e) of this Rule.

(e) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters shall either install a collection and control system as provided in Paragraphs (b) and (c) of this Rule or calculate an initial NMOC emission rate for the landfill using the procedures specified in 40 CFR 60.35f(a). The NMOC emission rate shall be recalculated annually, except as provided in 40 CFR 60.38f(c)(3), as follows:

(1) If the calculated NMOC emission rate is less than 34 megagrams per year, the owner or operator shall submit an annual NMOC emission rate report according to 40 CFR 60.38f(c), and recalculate the NMOC emission rate annually using the procedures specified in 40 CFR 60.35f(a) until such time as the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, or the landfill is closed. This annual NMOC emission rate reporting requirement shall not apply to the facilities that elected to submit their reports as provided in 40 CFR 60.38f(c)(3):

(A) if the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, the owner or operator shall either: comply with Paragraphs (b) and (c) of this Rule; calculate NMOC emissions using the next higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6);

(B) if the landfill is permanently closed, a closure report shall be submitted to the Division as provided in 40 CFR 60.38f(f), except for exemption allowed pursuant to 40 CFR 60.31f(e)(4); and

(C) for the closed landfill subcategory, if the most recently calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall either: submit a gas collection and control system design plan as specified in 40 CFR 60.38f(d), except for exemptions allowed pursuant to 40 CFR 60.31f(e)(3), and install a collection and control system as provided in Paragraphs (b) and (c) of this Rule; calculate NMOC emissions using the next higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6).

(2) If the calculated NMOC emission rate is equal to or greater than 34 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator shall either: submit a collection and control system design plan prepared by a professional engineer to the Division within one year as specified in 40 CFR 60.38f(d), except for exemptions allowed in 40 CFR 60.31f(e)(3); calculate NMOC emissions using a higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6). Submitted design plans shall be reviewed by the Division pursuant to the procedures in 40 CFR 60.38f(d)(5) and (6).

(3) For the closed landfill subcategory, if the calculated NMOC emission rate is equal to or greater than 50 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator shall either: submit a collection and control system design plan as specified in 40 CFR 60.38f(d), except for exemptions allowed pursuant to 40 CFR 60.31f(e)(3); calculate NMOC emissions using a higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6). Submitted design plans shall be reviewed by the Division pursuant to the procedures in 40 CFR 60.38f(d)(5) and (6).

(f) The collection and control system may be capped, removed, or decommissioned if the following criteria are met:

(1) The landfill is a closed landfill as defined in 40 CFR 60.41f. A closure report shall be submitted to the Division as provided in 15A NCAC 02D .1708(f).

(2) The collection and control system has been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flow.

(3) Following the procedures specified in 40 CFR 60.35f(b), the calculated NMOC emission rate at the landfill is less than 34 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

(4) For the closed landfill subcategory as defined in 40 CFR 60.41f, following the procedures specified in 40 CFR 60.35f(b), the calculated NMOC emission rate at the landfill is less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(a)(10);*
Eff. July 1, 1998;
Amended Eff. July 1, 2000;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

15A NCAC 02D .1704 TEST METHODS AND PROCEDURES

The MSW landfill NMOC emission rate shall be calculated, or a surface emission monitoring demonstration be conducted, by following the procedures in 40 CFR 60.35f, as applicable, to determine whether the landfill meets the conditions of 15A NCAC 02D .1703(a)(3) or (4). The owner or operator shall submit reports following the procedures pursuant to 60.38f(j).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(5); 143-215.107(a)(10);*
Eff. July 1, 1998;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

15A NCAC 02D .1705 OPERATIONAL STANDARDS

The owner and operator of a MSW landfill required to install a landfill gas collection and control system to comply with 15A NCAC 02D .1703(b) and (c) shall:

(1) operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
  (a) five years or more if active; or
  (b) two years or more if closed or at final grade;

(2) operate the collection system with negative pressure at each wellhead except under the following conditions:
  (a) for a fire or increased well temperature, the owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60.38f(h)(1);
  (b) for the use of a geomembrane or synthetic cover, the owner or operator shall develop acceptable pressure limits in the design plan; and
  (c) for a decommissioned well, a well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Division as specified in 40 CFR 60.38f(d);

(3) operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit). The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration shall be submitted to the Division for approval and shall include supporting data demonstrating that the elevated parameter neither causes fires nor inhibits anaerobic decomposition by killing methanogens;

(4) operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner and operator shall conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 60.36f(d). The owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover and all cover penetrations. The owner or operator shall monitor any openings that are within an area of the landfill where waste has been placed and a gas collection

system is required. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded upon request of the owner or operator from the surface testing;

(5) operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60.33f(c). In the event that the gas collection and control system is not operating, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour of the collection or control system not operating;

(6) operate the control system at all times when the collected gas is routed to the system; and

(7) if monitoring demonstrates that the operational requirements in Item (2), (3), or (4) of this Rule are not met, corrective action shall be taken as specified in 40 CFR 60.36f(a)(3) and (a)(5) or (c). If corrective actions are taken as specified in 40 CFR 60.36f, the monitored exceedance shall not be a violation of the operational requirements in this Rule.

The owner or operator may choose to comply with the provisions of 40 CFR 63.1958 in lieu of Items (1) through (7) of this Rule. Once the owner or operator begins to comply with the provisions of 40 CFR 63.1958, the owner or operator shall continue to operate the collection and control device according to those provisions and shall not return to the provisions of this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(a)(10);*
Eff. July 1, 1998;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

15A NCAC 02D .1706 COMPLIANCE PROVISIONS

(a) Compliance with 15A NCAC 02D .1703(b) shall be determined using the gas collection system compliance provisions of 40 CFR 60.36f(a).

(b) Compliance with 15A NCAC 02D .1705(1) shall be determined using the controlled landfill gas well and design component provisions of 40 CFR 60.36f(b).

(c) Compliance with the surface methane operational standards of 15A NCAC 02D .1705(4) shall be determined using the procedures of 40 CFR 60.36f(c).

(d) To comply with the provisions in Paragraph (c) of this Rule or 40 CFR 60.35f(a)(6), the owner or operator shall comply with the instrumentation specifications and procedures for surface emission monitoring devices provisions of 40 CFR 60.36f(d).

(e) The provisions of this Rule apply, except during periods of start-up, shutdown, or malfunction. During periods of startup, shutdown, and malfunction, the owner or operator shall comply with the work practice specified in 40 CFR 60.34f(e) in lieu of the compliance provisions in 40 CFR 60.36f.

(f) The owner or operator may choose to comply with the provisions of 40 CFR 63.1960 in lieu of Paragraphs (a) through (e) of this Rule. Once the owner or operator begins to comply with the provisions of 40 CFR 63.1960, the owner or operator shall continue to operate the collection and control device according to those provisions and shall not return to the provisions of this Rule.

(g) Compliance with the specifications for active collection systems in 15A NCAC 02D .1703(b) shall be determined using the provisions of 40 CFR 60.40f(a) and (b).

(h) Compliance with the specifications for active collection systems in 15A NCAC 02D .1703(c) shall be determined using the provisions of 40 CFR 60.40f(c).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(5); 143-215.107(a)(10);*
Eff. July 1, 1998;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

15A NCAC 02D .1707 MONITORING PROVISIONS

(a) The owner or operator of a MSW landfill who is required to comply with 15A NCAC 02D .1703(b) for an active gas collection system shall perform the monitoring requirements as outlined in 40 CFR 60.37f(a).

(b) The owner or operator of an MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1703(c) using an enclosed combustor shall perform the monitoring requirements as outlined in 40 CFR 60.37f(b).
(c) The owner or operator of an MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1703(c) using a non-enclosed flare shall perform the monitoring requirements as outlined in 40 CFR 60.37f(c).
(d) The owner or operator of an MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1703(c) using a device other than a non-enclosed flare, an enclosed combustor, or treatment system shall comply with the provisions of 40 CFR 60.37f(d).
(e) The owner or operator of an MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1703(b) by installing a collection system that does not meet the specifications of 40 CFR 60.40f, or seeking to monitor alternative parameters to those required by 15A NCAC 02D .1704 through .1707 shall comply with the provisions of 40 CFR 60.37f(e).
(f) The owner or operator of an MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1705(4) for demonstrating compliance with the 500 parts per million surface methane operational standard shall do so in accordance with 40 CFR 60.37(f).
(g) The owner or operator of an MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1703(c) shall do so in accordance with the provisions of 40 CFR 60. 37f(g).
(h) The monitoring requirements of Paragraphs (b), (c), (d), and (g) of this Rule apply at all times the affected source
is operating, except for periods of monitoring system malfunctions, repairs associated with the monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. A "monitoring system malfunction" is defined in 60.37f(h). Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Monitoring system repairs to return the monitoring system to operation in response to malfunctions shall be completed in accordance with 60.37f(h).
(i) The owner or operator may choose to comply with the provisions of 40 CFR 63.19561 in lieu of Paragraphs (a) through (h) of this Rule. Once the owner or operator begins to comply with the provisions of 40 CFR 63.1961, the owner or operator shall continue to operate the collection and control device according to those provisions and shall not return to the provisions of this Rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(5); 143-215.107(a)(10);*
Eff. July 1, 1998;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

15A NCAC 02D .1708 REPORTING REQUIREMENTS

(a) The owner or operator of an existing MSW landfill subject to this Rule according to 15A NCAC 02D .1702 shall submit a design capacity report to the Director as follows:

(1) The initial design capacity report shall be submitted no later than 90 days after the effective date of the EPA approval of the State Plan pursuant to Section 111(d) of the Clean Air Act.
(2) The initial design capacity report shall contain the information given in 40 CFR 60.38f(a)(1) and 40 CFR 60.38f(a)(2).

(b) The owner or operator of an existing MSW landfill subject to this Section shall submit an amended design capacity report providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to meet or exceed 2.5 million megagrams and 2.5 million cubic meters. An increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in 15A NCAC 02D .1709(j).
(c) The owner or operator of an existing MSW landfill subject to this Rule shall submit a NMOC emission rate report to the Director no later than 90 days after the effective date of EPA approval of the State plan pursuant to Section 111(d) of the Clean Air Act and annually thereafter, except as provided for in 40 CFR 60.38f(c). The NMOC emission rate report shall:

(1) contain an annual or five-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 60.35f(a) or (b), as applicable;
(2) include all the data, calculations, sample reports, and measurements used to estimate the annual or five-year emissions; and
(3) if the estimated NMOC emission rate as reported in the annual report is less than 34 megagrams per year in each of the next five consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next five-year period in lieu of the annual report. This

estimate shall include the current amount of solid waste-in-place and the estimate waste acceptance rate for each year of the five years for which an NMOC emission rate is estimated. All data and calculations shall be provided. This estimate shall be revised at least once every five years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five-year estimate, a revised five-year estimate shall be submitted. The revised estimate shall cover the five-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

Each owner and operator subject to the requirements of this Rule shall be exempted from the requirements to submit an NMOC emission rate report, after installing a compliant collection and control system, during such time as the collection and control system is in operation and in compliance with 15A NCAC 02D .1705 and .1706.

(d) The owner or operator of an existing MSW landfill subject to 15A NCAC 02D .1703(b) shall submit a collection and control system design plan to the Director within one year of the first NMOC emission rate report, required under Paragraph (c) of this Rule, in which the emission rate equals or exceeds 34 megagrams per year, except as provided for in 40 CFR 60.38f(d)(4)(i), 60.38f(d)(4)(ii), and 60.38f(d)(4)(iii). The collection and control system design plan shall include:

(1) a description of the collection and control system;

(2) a description of any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions provided in this Rule; and

(3) a description indicating how the plan conforms to specifications for active collection systems or a demonstration of sufficient alternative provisions as given in 40 CFR 60.40f.

(e) The owner or operator of an existing MSW landfill who previously submitted a design plan pursuant to Paragraph (d) of this Rule, pursuant to 40 CFR Part 60, Subpart WWW, or a State plan implementing 40 CFR Part 60, Subpart Cc, shall submit a revised design plan that includes the information in Subparagraphs (d)(1) through (d)(3) of this Rule as follows:

(1) at least 90 days before expanding operations to an area not covered by the previously approved design plan; and

(2) prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to the Director in Paragraph (d) of this Rule.

(f) The owner or operator of a controlled MSW landfill shall submit a closure report meeting the requirements of 40 CFR 258.60 to the Director within 30 days of cessation of waste acceptance. If a closure report has been submitted to the Director, no additional waste shall be placed into the landfill without first filing a notification of modification as described pursuant to 40 CFR 60.7(a)(4). The Director may request such additional information to verify that permanent closure of the MSW landfill has taken place pursuant to the requirements of 40 CFR 258.60.

(g) The owner or operator of a controlled MSW landfill shall submit an equipment removal report 30 days prior to removal or cessation of operation of the control equipment according to 15A NCAC 02D .1703(f). The report shall contain the items listed in 40 CFR 60.38f(g). The Director may request such additional information to verify that all the conditions for removal in 40 CFR 60.33f(f) have been met.

(h) The owner or operator of a MSW landfill seeking to comply with 15A NCAC 02D .1703(b) using an active collection system designed in accordance with 40 CFR 60.33f(b) shall submit, following the procedures pursuant to 40 CFR 60.38f(j)(2), annual reports of the recorded information in 40 CFR 60.38f(h)(1) through (h)(7). The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. The initial performance test report shall be submitted by following the procedures pursuant to 40 CFR 60.38f(j)(1). Each owner or operator that chooses to comply with the operational provisions of 40 CFR 63.1958, 63.1960, and 63.1961, as allowed by 15A NCAC 02D .1705, .1706, and .1707 shall follow the semi-annual reporting requirements in 40 CFR 63.1981(h) in lieu of this Paragraph.

(i) The owner or operator of an existing MSW landfill required to comply with 15A NCAC 02D .1703(b) shall include the information given in 40 CFR 60.38f(i)(1) through (i)(6) with the initial performance test report required pursuant to 40 CFR 60.8.

(j) The owner or operator of an existing MSW landfill shall submit a report within 60 days after the date of completing each performance test pursuant to 40 CFR 60.38f(j).

(k) The owner or operator of an existing MSW landfill required to implement corrective action, shall submit reports to the Director pursuant to 40 CFR 60.38f(k)(1) and (k)(2). Each owner or operator that chooses to comply with the operational provisions of 40 CFR 63.1958, 63.1960, and 63.1961, as allowed by 15A NCAC 02D .1705, .1706, and .1707 shall follow the corrective action and the corresponding timeline reporting requirements in 40 CFR 63.1981(j) in lieu of this Paragraph.

(l) The owner or operator of an affected MSW landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters that has employed leachate recirculation or added liquids based on a Research, Development, and Demonstration permit within the last 10 years shall submit an annual report to the Director that includes the information pursuant to 40 CFR 60.38f(l)(1) through (l)(10). The annual report shall be submitted by following the procedures pursuant to 40 CFR 60.38f(j)(2).
(m) The owner or operator of an affected MSW landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters that intends to demonstrate site-specific surface methane emissions are below 500 parts per million methane, based on Tier 4 provisions of 40 CFR 60.35f(a)(6), shall provide notifications to the Director in accordance with 40 CFR 60.38f(m)(1) and (m)(2).
(n) Each owner or operator that chooses to comply with the operational provisions of 40 CFR 63.1958, 63.1960, and 63.1961, as allowed by 15A NCAC 02D .1705, .1706, and .1707, shall submit the 24-hour high temperature report according to 40 CFR 63.1981(k).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5); 143-215.107(a)(10); Eff. July 1, 1998;*
Amended Eff. July 1, 2000;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021;
Amended Eff. November 1, 2023.

15A NCAC 02D .1709 RECORDKEEPING REQUIREMENTS
(a) The owner or operator of a MSW landfill subject to this Section shall keep on-site, readily accessible, for at least five years a copy of the design capacity report that triggered 40 CFR 60.33f(e), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats of the records shall be acceptable.
(b) The owner or operator of a controlled landfill shall keep up-to-date records for the life of the control equipment of the data listed in 40 CFR 60.39f(b)(1) through (b)(5) as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five years. Records of the control device vendor specifications shall be maintained until removal.
(c) Each owner or operator of a controlled MSW landfill subject to this Section shall keep for five years up-to-date records pursuant to 40 CFR 60.768(c) of the equipment operating parameters specified to be monitored in 15A NCAC 02D .1707 and records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The parameter boundaries considered in excess of those established during the performance test are defined in 40 CFR 60.39f(c)(1)(i) and (ii) and are also required to be reported pursuant to 15A NCAC 02D .1708(j).
(d) The owner or operator of a MSW landfill subject to this Section shall keep up-to-date, readily accessible continuous records of the indication of flow to the control system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configuration used to seal bypass lines as specified in 40 CFR 60.37f.
(e) The owner or operator of a MSW landfill subject to this Section who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 40 CFR 60.33f(c) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater.
(f) The owner or operator of a MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1703(c) by use of a non-enclosed flare shall keep up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.
(g) The owner or operator of a MSW landfill seeking to comply with the provisions of 15A NCAC 02D .1703(b) using an active collection system designed pursuant to 40 CFR 60.33f(b) shall keep records of periods of when the collection system or control device is not operating.
(h) The owner or operator of a MSW landfill subject to 15A NCAC 02D .1703(b) shall keep for the life of the collection system an up-to-date plot map pursuant to 40 CFR 60.768(d) showing existing and planned collectors in the system and provide unique identification location labels for each collector. Records of newly installed collectors shall be maintained pursuant to 40 CFR 60.36f(b) and documentation of asbestos-containing or nondegradable waste excluded from collection shall be kept pursuant to 40 CFR 60.40(a)(3)(i) and records of any nonproductive areas excluded from collection shall be kept pursuant to 40 CFR 60.40f(a)(3)(ii).
(i) The owner or operator of a MSW landfill subject to 15A NCAC 02D .1703(b) shall keep for at least five years accessible records of the following:

(1) for each owner or operator that chooses to comply with the operational provisions of 40 CFR 63.1958, 63.1960, and 63.1961, as allowed by 15A NCAC 02D .1705, .1706, and .1707, the date upon which the owner or operator started complying with the provisions in 40 CFR 63.1958, 63.1960, and 63.1961, and records according to 40 CFR 63.1983(e)(1) through (e)(5) in lieu of Subparagraphs (2) through (4) of this Paragraph;
(2) records of emissions from the collection and control system exceeding the operational standards pursuant to 40 CFR 60.34f, including the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance;
(3) records of each wellhead temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit) or above, each well head nitrogen level at or above 20 percent, and each wellhead oxygen level at or above five percent; and
(4) records for any root cause analysis as provided in 40 CFR 60.39f(e)(3) through (e)(5).

(j) The owner or operator of a MSW landfill who converts design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", shall keep readily accessible, on-site records of the annual recalculation of site specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats are acceptable.

(k) The owner or operator of a MSW landfill seeking to demonstrate that site-specific surface methane emissions are below 500 parts per million by conducting surface emissions monitoring under the Tier 4 procedures shall follow the recordkeeping provisions provided in 40 CFR 60.39f(g).

(l) The owner or operator of a MSW landfill subject to the provisions of this Section shall keep for at least five years up-to-date, readily accessible records of all collection and control system monitoring data for the parameters measured in 40 CFR 60.37f(a)(1) through (a)(3).

(m) The owner or operator of a MSW landfill reporting leachate or other liquids addition pursuant to 15A NCAC 02D .1708(k) shall keep records of any engineering calculations or company records used to estimate the quantities or leachate or liquids added, the surface areas for which the leachate or liquids were applied, and the estimates of annual waste acceptance or total waste in place in the areas where leachate or liquids were applied.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(4); 143-215.107(a)(5); 143-215.107(a)(10);*
Eff. July 1, 1998;
Amended Eff. July 1, 2000;
Readopted Eff. October 1, 2020;
Amended Eff. October 1, 2022; July 1, 2021.

15A NCAC 02D .1710 COMPLIANCE SCHEDULES

For each existing MSW landfill subject to this Section as specified in 15A NCAC 02D .1702 and meeting the design capacity condition of 15A NCAC 02D .1703(a) whose NMOC emission rate is less than 34 megagrams per year on or after the most recent effective date of this Rule, shall:

(1) submit a site-specific design plan for the gas collection and control system to the Director within 12 months of first exceeding the NMOC emission rate of 34 megagrams per year and 50 megagrams per year for the closed landfill subcategory; and
(2) plan, award contracts, and install MSW landfill air emission collection and control system capable of meeting the emission standards established pursuant to 15A NCAC 02D .1703 within 30 months of the date when the conditions in 15A NCAC 02D .1703 (a)(3) are met.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4); 143-215.107(a)(5);*
Eff. July 1, 1998;
Readopted Eff. October 1, 2020;
Amended Eff. July 1, 2021.

SECTION .1800 - CONTROL OF ODORS

15A NCAC 02D .1801 DEFINITIONS

For the purpose of this Section, the following definitions apply:

(1) "Animal operation" means animal operation as defined in G.S. 143-215.10B.

(2) "Child care center" means child care centers as defined in G.S. 110-86 and licensed pursuant to G.S. 110, Article 7.

(3) "Construction" means any physical change, including fabrication, erection, installation, replacement, demolition, excavation, or other modification, at any contiguous area in common control.

(4) "Control technology" means economically feasible control devices installed to reduce objectionable odors from animal operations.

(5) "Existing animal operation" means an animal operation that is in operation or commences construction on or before February 28, 1999.

(6) "Historic properties" means historic properties acquired by the State pursuant to G.S. 121-9 or listed in the North Carolina Register of Historic Places pursuant to G.S. 121-4.1.

(7) "Modified animal operation" means an animal operation that commences construction after February 28, 1999, to increase the steady state live weight that can be housed at that animal operation. Modified animal operation does not include renovating existing barns, relocating barns, or replacing existing lagoons or barns if the new barn or lagoon is no closer to the nearest property and if the new barn or lagoon does not increase the steady state live weight that can be housed at that animal operation.

(8) "New animal operation" means an animal operation that commences construction after February 28, 1999.

(9) "Objectionable odor" means any odor present in the ambient air that by itself, or in combination with other odors, is or may be harmful or injurious to human health or welfare, or may unreasonably interfere with the comfortable use and enjoyment of life or property. Odors are harmful or injurious to human health if they tend to lessen human food and water intake, interfere with sleep, upset appetite, produce irritation of the upper respiratory tract, cause symptoms of nausea, or if their chemical or physical nature is, or may be, detrimental or dangerous to human health.

(10) "Occupied residence" means occupied residence as defined in G.S. 106-802.

(11) "State Parks" means the State Parks System as defined in G.S. 143B-135.44.

(12) "Technologically feasible" means that an odor control device or a proposed solution to an odor problem has previously been demonstrated to accomplish its intended objective, and is generally accepted within the technical community. It is possible for technologically feasible solutions to have demonstrated their suitability on similar, but not identical, sources for which they are proposed to control.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(11);*
Temporary Adoption Eff. April 27, 1999; March 1, 1999;
Eff. July 1, 2000;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1802 CONTROL OF ODORS FROM ANIMAL OPERATIONS USING LIQUID ANIMAL WASTE MANAGEMENT SYSTEMS

(a) Purpose. The purpose of this Rule is to control objectionable odors from animal operations beyond the boundaries of animal operations.

(b) Applicability. This Rule shall apply to all animal operations using liquid animal waste management systems.

(c) Required management practices. All animal operations shall be required to implement applicable management practices for the control of odors as follows:

(1) the carcasses of dead animals shall be disposed in accordance with G.S. 106-403 and 02 NCAC 52C .0102. The Rule 02 NCAC 52C .0102 is hereby incorporated by reference and includes subsequent amendments or editions;

(2) waste from animal wastewater application spray systems shall be applied in such a manner and pursuant to such conditions to prevent drift from the irrigation field of the wastewater spray beyond the boundary of the animal operation, except waste from application spray systems may be applied in an emergency to maintain safe lagoon freeboard if the owner or operator notifies the Department and resolves the emergency with the Department as written in the Swine Waste Operation General Permit;

(3) animal wastewater application spray system intakes shall be located near the liquid surface of the animal wastewater lagoon;
(4) ventilation fans shall be maintained according to the manufacturer's specifications; and
(5) animal feed storage containers located outside of animal containment buildings shall be covered except when removing or adding feed. This Subparagraph shall not apply to the storage of silage or hay or to commodity boxes with roofs.

(d) Odor management plan (OMP) for existing animal operations for swine. Animal operations for swine that meet the criteria in the table in this Paragraph shall submit an odor management plan to the Director. The animal operation shall be required to submit its odor management plan only once. The odor management plan shall:

(1) identify the name, location, and owner of the animal operation;
(2) identify the name, title, address, and telephone number of the owner or operator filing the plan;
(3) identify the sources of odor within the animal operation;
(4) describe how odor will be controlled from:
  (A) the animal houses;
  (B) the animal wastewater lagoon, if used;
  (C) the animal wastewater application lands, if used;
  (D) waste conveyances and temporary accumulation points; and
  (E) other possible sources of odor within the animal operation;
(5) contain a diagram showing all structures and lagoons at the animal operation, forced air directions, and approximate distances to structures or groups of structures within 3,000 feet of the property line of the animal operation; an aerial photograph may be provided instead of a diagram provided the items required by this Subparagraph are shown;
(6) for existing animal operations, contain a schedule not to exceed six months by which the plan will be implemented;
(7) describe how the plan will be implemented, including training of personnel;
(8) describe inspection and maintenance procedures;
(9) describe methods of monitoring and recordkeeping to verify compliance with the plan; and
(10) describe how odors are currently being controlled and how these odors will be controlled in the future.

100 pounds steady state live weight of swine		Distance in feet to the boundary of the nearest neighboring occupied property with an inhabitable structure, business, school, hospital, church, outdoor recreational facility, national park, State Park, historic property, or child care center
at least	but less than	
10,000	20,000	less than or equal to 3,000
20,000	40,000	less than or equal to 4,000
40,000		less than or equal to 5,000

For the purposes of this Rule, the distance shall be measured from the edge of the barn or lagoon, whichever is closer, to the boundary of the neighboring occupied property with an inhabitable structure, business, school, hospital, church, outdoor recreational facility, national park, State Park, historic property, or child care center. All animal operations for swine that are of the capacity in the table in this Paragraph shall submit either an odor management plan or documentation that no neighboring occupied property with an inhabitable structure, business, school, hospital, church, outdoor recreational facility, national park, State Park, historic property, or child care center is within the distances specified in the table. The Director may require existing animal operations for swine with a steady state live weight of swine between 100,000 to 1,000,000 pounds steady state live weight to submit an odor management plan if the Director determines pursuant to Paragraph (g) of this Rule that these animal operations cause or contribute to an objectionable odor. The Director may require an existing animal operation to submit a best management plan pursuant to 15A NCAC 02D .1803, then submit the best management plan pursuant to Paragraph (h) of this Rule if the existing animal operation fails to submit an odor management plan.

(e) Location of objectionable odor determinations.

(1) For an existing animal operation that does not meet the following siting requirements:
  (A) at least 1,500 feet from any occupied residence not owned by the owner of the animal operation;

(B) at least 2,500 feet from any school, hospital, church, outdoor recreation Facility, national park, State Park, historic property, or child care center; and

(C) at least 500 feet from any property boundary;

objectionable odors shall be determined at neighboring occupied property not owned by the owner of the animal operation, such as businesses, schools, hospitals, churches, outdoor recreation facilities, national parks, State Parks, historic properties, or child care centers that are affected.

(2) For a new animal operation or existing animal operation that meets the siting requirements in Subparagraph (1) of this Paragraph, objectionable odors shall be determined beyond the boundary of the animal operation.

(f) Complaints. The Director shall respond to complaints about objectionable odors from animal operations as follows:

(1) Complaints shall be investigated;

(2) Complaints may be used to assist in determination of a best management plan failure or a control technology failure;

(3) The Director shall respond to complaints within 30 days of receipt of the complaint;

(4) Complaint response shall include the Director's evaluation of the complaint;

(5) The investigation of a complaint shall be completed as expeditiously as possible considering the meteorology, activities at the animal operation, and other conditions occurring at the time of the complaint.

(g) Determination of the existence of an objectionable odor. In determining if an animal operation is causing or contributing to an objectionable odor, the factors the Director may consider include:

(1) the nature, intensity, frequency, pervasiveness, and duration of the odors from the animal operation;

(2) complaints received about objectionable odors from the animal operation;

(3) emissions from the animal operation of known odor causing compounds, such as ammonia, total volatile organics, hydrogen sulfide, or other sulfur compounds at levels that could cause or contribute to an objectionable odor;

(4) any epidemiological studies associating health problems with odors from the animal operation or documented health problems associated with odors from the animal operation provided by the State Health Director; or

(5) any other evidence, including records maintained by neighbors, that show that the animal operation is causing or contributing to an objectionable odor.

(h) Requirements for a best management plan for control of odors from existing animal operations. If the Director determines that an existing animal operation is causing or contributing to an objectionable odor, the owner or operator of the animal operation shall:

(1) submit to the Director as soon as practical, but not to exceed 90 days after receipt of written notification from the Director that the animal operation is causing or contributing to an objectionable odor, a best management plan for odor control as described in 15A NCAC 02D .1803; and

(2) comply with the terms of the best management plan within 30 days after the Director approves the best management plan, or the Director may approve an alternate compliance schedule based upon the complexity of the best management plan (approved compliance schedule is an alternate schedule to 30 days).

(i) Requirement for amendment to the best management plan. No later than 60 days from completion of a compliance schedule in an approved best management plan or if the best management plan contains no compliance schedule, no later than 60 days from the implementation date of the best management plan, the Director shall determine whether the plan has been implemented. If the Director determines at any time that a plan submitted pursuant to Paragraph (h) of this Rule does not control objectionable odors from the animal operation, the Director shall require the owner or operator of the animal operation to amend the plan to incorporate additional or alternative measures to control objectionable odors from the animal operation. The owner or operator shall:

(1) submit a revised best management plan to the Director as soon as practical but not later than 60 days after receipt of written notification from the Director that the plan is inadequate; and

(2) comply with the revised best management plan within 30 days after the Director approves the revisions to the best management plan (approved compliance schedule is an alternate schedule to 30 days).

(j) Requirements for control technology. After the best management plan has been implemented and revised no more than one time excluding voluntary revisions and revisions made pursuant to 15A NCAC 02D .1803(c), a plan failure shall constitute a finding by the Director, using the criteria pursuant to Paragraph (g) of this Rule. If a plan failure occurs, the Director shall require the owner or operator of the animal operation to install control technology to control odor from the animal operation. Within 90 days from receipt of written notification from the Director of a plan failure, the owner or operator shall submit a permit application for control technology and an installation schedule. If the owner or operator demonstrates to the Director that a permit application cannot be submitted within 90 days, the Director shall extend the time for submittal up to an additional 90 days if the owner or operator demonstrates the delay in submitting the application was beyond his or her control. Control technology shall be determined according to Subparagraph (1) of this Paragraph. The installation schedule shall contain the increments of progress described in Subparagraph (2) of this Paragraph. The owner or operator may at any time request adjustments in the installation schedule and shall in his or her request explain why the schedule cannot be met. If the Director finds the request to be accurate, the Director shall revise the installation schedule as requested; however, the Director shall not extend the final compliance date beyond 24 months from the date that the permit was first issued for the control technology. The owner or operator shall certify to the Director within five days after the deadline for each increment of progress described in Subparagraph (2) of this Paragraph whether the required increment of progress has been met.

(1) Control technology. The owner or operator of an animal operation shall identify control technologies that are technologically feasible for his or her animal operation and shall select the control technology or control technologies that results in the greatest reduction of odors considering human health, energy, environmental, and economic impacts and other costs. The owner or operator shall explain the reasons for selecting the control technology or control technologies. If the Director finds that the selected control technology or control technologies will control objectionable odors following the procedures in 15A NCAC 02Q .0300 or .0500, he or she shall approve the installation of the control technology or control technologies for this animal operation upon permit issuance. The owner or operator of the animal operation shall comply with all terms and conditions in the permit.

(2) Installation schedule. The installation schedule for control technology shall contain the following increments of progress:

(A) a date by which contracts for odor control technology shall be awarded or orders shall be issued for purchase of component parts or materials;

(B) a date by which on-site construction or installation of the odor control technology shall begin;

(C) a date by which on-site construction or installation of the odor control technology shall be completed; and

(D) a date by which final compliance shall be achieved.

Control technology shall be in place and operating as soon as practical but not to exceed 12 months from the date that the permit is issued for control technology.

(k) The following requirements shall apply to new or modified animal operations:

(1) Before beginning construction, the owner or operator of a new or modified animal operation raising or producing swine shall submit and have an approved best management plan and shall meet the following setbacks. A house or lagoon that is a component of an animal operation shall be constructed:

(A) at least 1,500 feet from any occupied residence not owned by the owner of the animal operation;

(B) at least 2,500 feet from any school, hospital, church, outdoor recreation facility, national park, State Park, historic property, or child care center; and

(C) at least 500 feet from any property boundary;

(2) Before beginning construction, the owner or operator of a new or modified animal operation other than swine shall submit and have an approved best management plan.

(3) For new or modified animal operations raising or producing swine, the outer perimeter of the land area onto which waste is applied that is a component of an animal operation shall be:

(A) at least 75 feet from any boundary of property on which an occupied residence not owned by the owner of the animal operation is located; and

(B) at least 200 feet from any occupied residence not owned by the owner of the animal operation.

(4) The Director shall either approve or disapprove the best management plan submitted pursuant to this Paragraph within 90 days after receipt of the plan. If the Director disapproves the plan, he or she shall identify the plan's deficiency.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(11); 143-215.108(a); 150B-21.6;*
Temporary Adoption Eff. April 27, 1999; March 1, 1999;
Eff. July 1, 2000;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1803 BEST MANAGEMENT PLANS FOR ANIMAL OPERATIONS

(a) Contents of a best management plan. The best management plan for animal operations shall:

(1) identify the name, location, and owner of the animal operation;
(2) identify the name, title, address, and telephone number of the person filing the plan;
(3) identify the sources of odor within the animal operation;
(4) describe how odor will be controlled from:
  (A) the animal houses;
  (B) the animal wastewater lagoon, if used;
  (C) the animal wastewater application lands, if used;
  (D) waste conveyances and temporary accumulation points; and
  (E) other possible sources of odor within the animal operation;
(5) contain a diagram showing all structures and lagoons at the animal operation, forced air directions, and approximate distances to structures or groups of structures within 3000 feet of the property line of the animal operation; an aerial photograph may be submitted in place of a diagram provided the items required in accordance with this Subparagraph of this Rule are shown;
(6) for existing animal operations, contain a schedule not to exceed six months by which the plan will be implemented. A new animal operation shall and be in compliance with its best management plan when it begins operations. For an amended best management plan, the implementation schedule shall not exceed six months;
(7) describe how the plan will be implemented, including training of personnel;
(8) describe inspection and maintenance procedures; and
(9) describe methods of monitoring and recordkeeping to verify compliance with the plan.

(b) The Division shall review all best management plan submittals within 30 days of receipt to determine if the submittal is complete or incomplete for processing purposes. To be complete, the submittal shall contain all the elements listed in Paragraph (a) of this Rule. The Division shall notify the person submitting the plan by letter stating that:

(1) the submittal is complete;
(2) the submittal is incomplete and identifying the missing elements and a date by which the missing elements need to be submitted to the Division; or
(3) the best management plan is incomplete and requesting that the person rewrite and resubmit the plan.

(c) Approval of the best management plan. The Director shall approve the plan if he or she finds that:

(1) the plan contains all the required elements in Paragraph (a) of this Rule;
(2) the proposed schedule contained in the plan will reduce objectionable odors;
(3) the methods used to control objectionable odors will prevent objectionable odors beyond the property lines of the animal operation. The Director shall not consider impacts of objectionable odors on neighboring property if the owner of the neighboring property agrees in writing that he or she does not object to objectionable odors on his or her property and this written statement is included with the proposed best management plan. This agreement becomes void if the neighboring property changes ownership. If the neighboring property changes ownership, the plan shall be revised, if necessary, to prevent objectionable odors on this property unless the new owner agrees in writing that he or she does not object to objectionable odors on his property; and
(4) the described methods verify compliance with the plan.

Within 90 days after receipt of a plan, the Director shall determine whether the proposed plan meets the requirements of this Paragraph. If the Director finds that the proposed plan does not meet the requirements of this Paragraph, he or she shall notify the owner or operator of the animal operation in writing of the deficiencies in the proposed plan. The owner or operator shall have 30 days after receiving written notification from the Director to

correct the deficiencies. If the Director finds that the proposed plan is acceptable, he or she shall notify the owner or operator in writing that the proposed plan has been approved.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(11);*
Temporary Adoption Eff. April 27, 1999; March 1, 1999;
Eff. July 1, 2000;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1804 REPORTING REQUIREMENTS FOR ANIMAL OPERATIONS

If the Department receives an odor complaint about an animal operation, the Department may require the owner or operator of the animal operation to submit the following information to investigate the odor compliant:

(1) the name and location of the animal operation;
(2) the name, title, address, and telephone number of the person reporting;
(3) the type and number of animals at the animal operation;
(4) potential sources of odors, such as animal housing structures, lagoons, collection and handling devices, and storage containers, with a physical description of these sources;
(5) waste water land application procedures; and
(6) measures taken to reduce odors.

The owner or operator shall submit this information to the Division within 15 days after receipt of the request.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(11)*
Temporary Adoption Eff. March 1, 1999;
Eff. July 1, 2000;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1805 IMPLEMENTATION PLAN

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(11);*
Temporary Adoption Eff. March 1, 1999;
Temporary Repeal Eff. May 25, 1999.

15A NCAC 02D .1806 CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

(a) Purpose. The purpose of this Rule is to provide for the control and prohibition of objectionable odorous emissions.

(b) Definitions. For the purpose of this Rule, the following definitions shall apply:

(1) "Commercial purposes" means activities that require a State or local business license to operate.
(2) "Temporary activities or operations" means activities or operations that are less than 30 days in duration during the course of a calendar year and do not require an air quality permit.

(c) Applicability. With the exemptions in Paragraph (d) of this Rule, this Rule shall apply to all operations that produce odorous emissions that can cause or contribute to objectionable odors beyond the facility's boundaries.

(d) Exemptions. The requirements of this Rule do not apply to:

(1) processes at kraft pulp mills identified in 15A NCAC 02D .0528 and subject to 15A NCAC 02D .0524 or .0528;
(2) processes at facilities that produce feed-grade animal proteins or feed-grade animal fats and oils identified in 15A NCAC 02D .0539;
(3) motor vehicles and transportation facilities;
(4) all on-farm animal and agricultural operations, including dry litter operations and operations subject to 15A NCAC 02D .1804;
(5) municipal wastewater treatment plants and municipal wastewater handling systems;
(6) restaurants and food preparation facilities that prepare and serve food on site;
(7) single family dwellings not used for commercial purposes;
(8) materials odorized for safety purposes;
(9) painting and coating operations that do not require a business license;
(10) all temporary activities or operations; or
(11) any facility that stores products that are grown, produced, or generated on one or more agricultural operations and that are "renewable energy resources," as defined in G.S. 62-133.8(a)(8) if the

facility identifies the sources of potential odor emissions and specifies odor management practices in their permit pursuant to 15A NCAC 02Q .0300 or .0500 to minimize objectionable odor beyond the property lines.

(e) Control Requirements. The owner or operator of a facility subject to this Rule shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

(f) Odor management plan. If the Director determines that a source or facility subject to this Rule is causing or contributing to objectionable odors beyond its property boundary by the procedures described in Paragraph (i) of this Rule, the owner or operator shall develop and submit an odor management plan within 60 days of receipt of written notification from the Director of an objectionable odor determination. The odor management plan shall:

(1) identify the sources of odorous emissions;
(2) describe how odorous emissions will be controlled from each identified source;
(3) describe how the plan will be implemented; and
(4) contain a schedule by which the plan will be implemented.

Upon receipt of an approval letter from the Director for the odor management plan, the source or facility shall implement the approved plan within 30 days, unless an alternative schedule of implementation is approved as part of the odor management plan submittal. If the Director finds that the odor management plan does not meet the requirements of this Paragraph or address the specific odor concerns, he or she shall notify the owner or operator of any deficiencies in the proposed plan. The owner or operator shall have 30 days after receipt of written notification from the Director to resubmit the odor management plan correcting the stated deficiencies with the plan or the schedule of implementation. If the owner or operator fails to correct the plan deficiencies with the second draft plan submittal or repeatedly fails to meet the deadlines set forth in this Paragraph or Paragraph (g) of this Rule, the Director shall notify the owner or operator in writing that they are required to comply with the maximum feasible control requirements in Paragraph (h) of this Rule.

(g) Odor management plan revision. If after the odor management plan has been implemented, the Director determines that the plan fails to eliminate objectionable odor emissions from a source or facility using the procedures described in Paragraph (i) of this Rule, he or she shall require the owner or operator of the facility to submit a revised plan. Within 60 days after receiving written notification from the Director of a new objectionable odor determination, the owner or operator of the facility shall submit a revision to their odor management plan following the procedures and timelines in Paragraph (f) of this Rule. If the revised plan, once implemented, fails to eliminate objectionable odors, then the source or facility shall comply with requirements in Paragraph (h) of this Rule.

(h) Maximum feasible controls. If an amended odor management plan does not prevent objectionable odors beyond the facility's boundary, the Director shall require the owner or operator to implement maximum feasible controls for the control of odorous emissions. Maximum feasible controls shall be determined according to the procedures in 15A NCAC 02D .1807. The owner or operator shall:

(1) complete the process outlined in 15A NCAC 02D .1807 and submit a complete permit application according to 15A NCAC 02Q .0300 or 15A NCAC 02Q .0500, as applicable, within 180 days of receipt of written notice from the Director requiring implementation of maximum feasible controls. The application shall include a compliance schedule containing the following increments of progress:
    (A) a date by which contracts for the odorous emission control systems and equipment shall be awarded or orders shall be issued for purchase of component parts;
    (B) a date by which on-site construction or installation of the odorous emission control systems and equipment shall begin;
    (C) a date by which on-site construction or installation of the odorous emission control systems and equipment shall be completed; and
    (D) a date by which final compliance shall be achieved.
(2) install and begin operating maximum feasible controls within 18 months after receiving written notification from the Director of the requirement to implement maximum feasible controls. The owner or operator may request an extension to implement maximum feasible controls. The Director shall approve an extension request if he or she finds that the extension request is the result of circumstances beyond the control of the owner or operator.

The owner or operator shall certify to the Director within five days after the deadline for each increment of progress in this Paragraph whether the required increment of progress has been met.

(i) Determination of the existence of an objectionable odor. A source or facility is causing or contributing to an objectionable odor when:

(1) a member of the Division staff determines by field investigation that an objectionable odor is present by taking into account the nature, intensity, pervasiveness, duration, and source of the odor and other pertinent such as wind direction, meteorology, and operating parameters of the facility;

(2) the source or facility emits known odor-causing compounds such as ammonia, total volatile organics, hydrogen sulfide, or other sulfur compounds at levels that cause objectionable odors beyond the property line of that source or facility; or

(3) the Division receives from the State Health Director epidemiological studies associating health problems with odors from the source or facility.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. April 1, 2001;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1807 DETERMINATION OF MAXIMUM FEASIBLE CONTROLS FOR ODOROUS EMISSIONS

(a) Scope. This Rule sets out procedures for determining maximum feasible controls for odorous emissions. The owner or operator of the facility shall be responsible for providing the maximum feasible control determination.

(b) Process for maximum feasible control determinations. The following sequential process shall be used on a case-by-case basis to determine maximum feasible controls:

(1) Identify all available control technologies. In the first step, all available options for the control of odorous emissions shall be listed. Available options include all possible control technologies or techniques with a potential to control, reduce, or minimize odorous emissions. For the purposes of this document, a comprehensive and effective odor control plan may be listed among the possible odor control technologies as a viable and satisfactory maximum feasible control technology option. All available control technologies shall be included on this list regardless of their technical feasibility or potential energy, human health, economic, or environmental impacts.

(2) Eliminate technically infeasible options. In the second step, the technical feasibility of all the control options identified pursuant to Subparagraph (b)(1) of this Rule shall be evaluated with respect to source specific factors. A demonstration of technical infeasibility shall be documented and shall show, based on physical, chemical, or engineering principles, that technical difficulties preclude the successful use of the control option under review. Technically infeasible control options shall then be eliminated from further consideration as maximum feasible controls.

(3) Rank remaining control technologies by control effectiveness. All the remaining control technologies, which have not been eliminated pursuant to Subparagraph (b)(2) of this Rule, shall be ranked and then listed in order of their ability to control odorous emissions, with the most effective control option at the top of the list. The list shall present all the control technologies that have not been previously eliminated and shall include the following information:

(A) control effectiveness;

(B) economic impacts, including cost effectiveness;

(C) environmental impacts: this shall include any media impacts (for example, water or solid waste), at a minimum the impact of each control alternative on emissions of toxic or hazardous air pollutants;

(D) human health impacts; and

(E) energy impacts.

However, an owner or operator proposing to implement the most stringent alternative, in terms of control effectiveness, need not provide detailed information concerning the other control options. In such cases, the owner or operator shall provide documentation to the Director the proposed control option is the most efficient, in terms of control effectiveness, and provide a review of collateral environmental impacts.

(4) Evaluate most effective controls and document results. Following the delineation of all available and technically feasible control technology options pursuant to Subparagraph (b)(3) of this Rule, the energy, human health, environmental, and economic impacts shall be considered in order to arrive at the maximum feasible controls. An analysis of the predicted and associated impacts for each option shall be conducted. The owner or operator shall present an objective evaluation of the

impacts of each alternative. Beneficial and adverse impacts shall be analyzed and, if possible, quantified. If the owner or operator proposed to select the most stringent alternative, in terms of control effectiveness, as maximum feasible controls, he or she shall evaluate whether impacts of unregulated air pollutants or environmental impacts in other media would justify selection of an alternative control technology. If there are no concerns regarding collateral environmental impacts, the analysis is ended and this proposed option is selected as maximum feasible controls. In the event the most stringent alternative is inappropriate, due to energy, human health, environmental, or economic impacts, the justification for this conclusion shall be documented. The next most stringent option, in terms of control effectiveness, shall become the primary alternative and be similarly evaluated. This process shall continue until the control technology evaluated cannot be eliminated due to source-specific environmental, human health, energy, or economic impacts.

(5) Select maximum feasible controls. The most stringent option, in terms of control effectiveness, that is not eliminated pursuant to Subparagraph (b)(4) of this Rule shall be selected as maximum feasible controls.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. April 1, 2001;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1808 EVALUATION OF NEW OR MODIFIED SWINE FARMS

(a) Purpose. The purpose of this Rule is to specify the methods for evaluating new or modified swine farms for compliance with the performance standard in G.S. 143-215.10I (b)(3).

(b) Applicability. This Rule applies to new or modified swine farms required by G.S. 143-215.10I to meet the performance standard in G.S. 143-215.10I (b)(3).

(c) Requirements. New or modified swine farms subject to this Rule shall comply with the requirements in this Section.

(d) Evaluation of new or modified swine farms. For the purpose of evaluating odor at new or modified swine farms for compliance with the performance standard in G.S. 143-215.10I (b)(3), the following shall apply:

(1) When a field olfactometry method and instrumentation is used to determine odor intensity at the designated evaluation location, as specified in 15A NCAC 02D .1802(e), the measured dilution-to-threshold ratio shall be less than or equal to 7:1 as determined using the manufacturer's instrument procedures and instructions; or

(2) When odor intensity is determined using an Odor Intensity Referencing Scale (OIRS) as specified in ASTM 544-99, the instantaneous observed level shall be less than the equivalent of 225 parts per million n-butanol in air. In addition, the average of 30 consecutive observations conducted over a minimum of 30-minutes at designated evaluation locations shall be less than the equivalent of 75 parts per million n-butanol in air and a minimum of 4 readings out of the minimum 30 readings shall be less than or equal to the equivalent 25 parts per million n-butanol in air.

History Note: *Authority G.S. 143-215.10I; 143-215.3(a)(1); 143-215.107(a)(11); 143-215.108(a);*
Eff. January 1, 2009;
Readopted Eff. September 1, 2019.

SECTION .1900 – OPEN BURNING

15A NCAC 02D .1901 OPEN BURNING: PURPOSE: SCOPE

(a) Open Burning Prohibited. A person shall not cause, allow, or permit open burning of combustible material except as allowed by 15A NCAC 02D .1903 and .1904.

(b) Purpose. The purpose of this Section is to control air pollution resulting from the open burning of combustible materials and to protect the air quality in the immediate area of the open burning.

(c) Scope. This Section applies to all operations involving open burning. This Section does not authorize any open burning that is a crime pursuant to G.S. 14-136, G.S. 14-137, G.S. 14-138.1 and G.S. 14-140.1, or affect the authority of the North Carolina Forest Service to issue or deny permits for open burning in or adjacent to woodlands as provided in G.S. 106-940 through G.S. 106-950. This Section does not affect the authority of any local government to regulate open burning through its fire codes or other ordinances. The issuance of any open burning

permit by the North Carolina Forest Service or any local government does not relieve any person from the necessity of complying with this Section or any other air quality rule.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 1996;
Amended Eff. January 1, 2015; July 1, 2007; June 1, 2004;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1902 DEFINITIONS

For the purpose of this Section, the following definitions apply:

(1) "Air Curtain Incinerator" means a stationary or portable combustion device that operates by directing a plane of high velocity forced draft air through a manifold head onto an open chamber, pit, or container with vertical walls to maintain a curtain of air over the surface of the pit and a recirculating motion of air under the curtain. These incinerators can be built above or below ground and be constructed with or without refractory walls and floors. These shall not include conventional combustion devices with enclosed fireboxes or controlled air technology such as mass burn, modular, or fluidized bed combustors.

(2) "Air Quality Action Day Code 'Orange' or above" means an air quality index of 101 or greater as defined in 40 CFR Part 58, Appendix G. This includes Codes Orange, Red, Purple, and Maroon.

(3) "Dangerous materials" means explosives or containers used in the holding or transporting of explosives.

(4) "Initiated" means to start or ignite a fire or reignite or rekindle a fire.

(5) "Land clearing" means the uprooting or clearing of vegetation in connection with construction for buildings; agricultural, residential, commercial, institutional, or industrial development; mining activities; or the initial clearing of vegetation to enhance property value. This term does not include regularly scheduled maintenance or property clean-up activities.

(6) "Log" means any limb or trunk whose diameter exceeds six inches.

(7) "Nonattainment area" means an area designated in 40 CFR 81.334 as nonattainment.

(8) "Nuisance" means causing physical irritation exacerbating a documented medical condition, visibility impairment, or evidence of soot or ash on property or structure other than the property on which the burning is done.

(9) "Occupied structure" means a building where people can be reasonably expected to be present or a building used for housing farm or domestic animals.

(10) "Off-site" means any area not on the premises of the land-clearing activities.

(11) "Open burning" means the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the atmosphere without passing through a stack, chimney, or a permitted air pollution control device.

(12) "Person" as used in 15A NCAC 02D .1901 means:
   (a) the person in operational control over the open burning; or
   (b) the landowner or person in possession or control of the land when he or she has directly or indirectly allowed the open burning or the Division determined, based upon an investigation into the open burn, that the land owner has benefited from it.

(13) "Pile" means a quantity of combustible material assembled together in one place.

(14) "Public pick-up" means the removal of refuse, yard trimmings, limbs, or other plant material from a residence by a governmental agency, private company contracted by a governmental agency, or municipal service.

(15) "Public road" means any road that is part of the State highway system or any road, street, or right-of-way dedicated or maintained for public use.

(16) "Refuse" means any garbage, rubbish, or trade waste.

(17) "Regional Office Supervisor" means the supervisor of personnel of the Division of Air Quality in a regional office of the Department of Environmental Quality.

(18) "Right-of-way maintenance" means vegetation management, including grass cutting, weed abatement, tree trimming, and tree and brush removal of existing streets, highways, and public places.

(19) "Salvageable items" means any product or material that was first discarded or damaged and then all or part was recovered for future use. Examples of these items include insulated wire, electric motors, and electric transformers.

(20) "Smoke management plan" means the plan developed following the North Carolina Forest Service's smoke management program and approved by the North Carolina Forest Service. The purpose of the smoke management plan is to manage smoke from prescribed burns of public and private forests to minimize the impact of smoke on air quality and visibility.

(21) "Synthetic material" means man-made material, including tires, asphalt materials such as shingles or asphaltic roofing materials, construction materials, packaging for construction materials, wire, electrical insulation, and treated or coated wood.

History Note: *Authority G.S. 143-215.3(a)(1);*
Eff. July 1, 1996;
Amended Eff. January 1, 2015; July 1, 2007; December 1, 2005; June 1, 2004; July 1, 1998;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1903 OPEN BURNING WITHOUT AN AIR QUALITY PERMIT

(a) Open burning is prohibited except open burning allowed pursuant to Paragraph (b) of this Rule or 15A NCAC 02D .1904. Except as allowed pursuant to Subparagraphs (b)(3) through (b)(9) of this Rule, open burning shall not be initiated in a county that the Department or the Forsyth County Office of Environmental Assistance and Protection, has forecasted to be in an Air Quality Action Day Code "Orange" or above during the 24-hour time period covered by that Air Quality Action Day.

(b) The following types of open burning are permissible without an air quality permit.

(1) The open burning of leaves, logs, stumps, tree branches, or yard trimmings, if the following conditions are met:

(A) the material burned originates on the premises of private residences and is burned on those premises and does not include material collected from multiple private residences and combined for burning;

(B) there are no public pickup services available;

(C) non-vegetative materials, such as household garbage, treated or coated wood, or any other synthetic materials are not burned;

(D) the burning is initiated no earlier than 8:00 a.m. and no additional combustible material is added to the fire between 6:00 p.m. on one day and 8:00 a.m. on the following day;

(E) the burning does not create a nuisance; and

(F) material is not burned when the North Carolina Forest Service or other government agencies have banned burning for that area.

The burning of logs or stumps of any size shall not be considered to create a nuisance for purposes of the application of the open burning air quality permitting exception described in this Subparagraph;

(2) The open burning for land clearing or right-of-way maintenance if the following conditions are met:

(A) The wind direction at the time that the burning is initiated and the wind direction as forecasted by the National Weather Service at the time that the burning is initiated are away from any area, including public roads within 250 feet of the burning as measured from the edge of the pavement or other roadway surface, which may be affected by smoke, ash, or other air pollutants from the burning;

(B) The location of the burning is at least 500 feet from any dwelling, group of dwellings, or commercial or institutional establishment, or other occupied structure not located on the property where the burning is conducted. The regional office supervisor may grant exceptions to the setback requirements if:

(i) a signed, written statement waiving objections to the open burning associated with the land clearing operation is obtained and submitted to, and the exception granted by, the regional office supervisor before the burning begins from a resident or an owner of each dwelling, commercial or institutional establishment, or other occupied structure within 500 feet of the open burning

site. In the case of a lease or rental agreement, the lessee or renter shall be the person from whom permission shall be gained prior to any burning; or

(ii) an air curtain incinerator that complies with 15A NCAC 02D .1904 is utilized at the open burning site.

Factors that the regional supervisor shall consider in deciding to grant the exception include: all the persons who need to sign the statement waiving the objection have signed it; the location of the burn; and the type, amount, and nature of the combustible substances. The regional supervisor shall not grant a waiver if a college, school, licensed day care, hospital, licensed rest home, or other similar institution is less than 500 feet from the proposed burn site when such institution is occupied;

(C) Only land-cleared plant growth is burned. Heavy oils, items containing natural or synthetic rubber, synthetic materials, or materials other than plant growth shall not be burned; however, kerosene, distillate oil, or diesel fuel may be used to start the fire;

(D) Initial burning begins only between the hours of 8:00 a.m. and 6:00 p.m., and no combustible material is added to the fire between 6:00 p.m. on one day and 8:00 a.m. on the following day;

(E) No fires are initiated or vegetation added to existing fires when the North Carolina Forest Service or other government agencies have banned burning for that area; and

(F) Materials are not carried off-site or transported over public roads for open burning unless the materials are carried or transported to:

(i) Facilities permitted in accordance with 15A NCAC 02D .1904 for the operation of an air curtain incinerator at a permanent site; or

(ii) A location, where the material is burned not more than four times per calendar year, which meets all of the following criteria:

(I) at least 500 feet from any dwelling, group of dwellings, or commercial or institutional establishment, or other occupied structure not located on the property on which the burning is conducted;

(II) there are no more than two piles, each no more than 20 feet in diameter, being burned at one time; and

(III) the location is not a permitted solid waste management facility;

(3) camp fires and fires used solely for outdoor cooking and other recreational purposes, ceremonial occasions, or for human warmth and comfort and that do not create a nuisance and do not use synthetic materials, refuse, or salvageable materials for fuel;

(4) fires purposely set to public or private forest land for forest management practices for which burning is the accepted practice of the North Carolina Forest Service;

(5) fires purposely set to agricultural lands for disease and pest control and fires set for other agricultural or apicultural practices for which burning is the accepted practice of the North Carolina Department of Agriculture and Consumer Services;

(6) fires purposely set for wildlife management practices for which burning is the accepted practice of the Wildlife Resource Commission;

(7) fires for the disposal of dangerous materials when the Division has determined that it is the safest and most practical method of disposal;

(8) fires purposely set by manufacturers of fire-extinguishing materials or equipment, testing laboratories, or other persons, to test or develop these materials or equipment in accordance with a written protocol for the testing or development process;

(9) fires purposely set for the instruction and training of fire-fighting personnel at permanent fire-fighting training facilities;

(10) fires purposely set for the instruction and training of fire-fighting personnel when conducted under the supervision of or with the cooperation of one or more of the following agencies:

(A) the North Carolina Forest Service;

(B) the North Carolina Department of Insurance; or

(C) North Carolina Community Colleges;

(11) fires not described in Subparagraphs (9) or (10) of this Paragraph, purposely set for the instruction and training of fire-fighting personnel, provided that:

(A) the regional office supervisor has been notified according to the procedures and deadlines contained in the notification form and the regional office supervisor has granted

permission for the burning. The information required to be submitted in the form includes:

(i) the address of the fire department that is requesting the training exercise;

(ii) the location of the training exercise;

(iii) a description of the type of structure or object and amount of materials to be burned at the location of the training exercise;

(iv) the dates that the training exercise will be performed; and

(v) an inspection from a North Carolina Asbestos Inspector that the structure being burned is free of asbestos.

The form shall be submitted 10 days prior to commencement of the burn. This form may be obtained in electronic format at https://deq.nc.gov/about/divisions/air-quality/air-quality-enforcement/open-burning/firefighter-information or by contacting the regional office as specified in 15A NCAC 02D .1905 and requesting it.

(B) Factors that the regional office supervisor shall consider in granting permission for the burning include:

(i) type, amount, and nature of combustible substances. The regional office supervisor shall not grant permission for the burning of salvageable items or if the primary purpose of the fire is to dispose of synthetic materials or refuse;

(ii) the burning of previously demolished structures. The regional office supervisor shall not consider these structures as having training value;

(iii) the burning of motor vehicles. The regional office supervisor may allow an exercise involving the burning of motor vehicles burned over a period of time by a training unit or by several related training units if he or she determines that they have training value; and

(iv) the distance from the location of the fire training to residential, commercial, or institutional buildings or properties.

Deviations from the dates and times of exercises, including additions, postponements, and deletions, submitted in the schedule in the approved plan shall be communicated verbally to the regional office supervisor a minimum of one hour before the burn is scheduled.

(12) fires for the disposal of vegetative material generated as a result of a natural disaster, including tornado, hurricane, or flood, if the regional office supervisor grants permission for the burning. The person desiring to do the burning shall document and provide written notification to the regional office supervisor that there is no other practical method of disposal of the waste. Factors that the regional office supervisor shall consider in granting permission for the burning include type, amount, location of the burning, and nature of combustible substances. The regional office supervisor shall not grant permission for the burning if the primary purpose of the fire is to dispose of synthetic materials or refuse or recovery of salvageable materials. Fires authorized under this Subparagraph shall comply with the conditions of Parts (b)(2)(A) through (E) of this Rule.

(c) The authority to conduct open burning pursuant to this Section does not exempt or excuse a person from the consequences, damages, or injuries that may result from this conduct. It does not excuse or exempt a person from complying with laws, ordinances, rules or orders of other governmental entities having jurisdiction even though the open burning is conducted in compliance with this Section.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); S.L. 2011-394, s.2;*
Eff. July 1, 1996;
Amended Eff. June 13, 2016; March 19, 2015; July 3, 2012; July 1, 2007; December 1, 2005; June 1, 2004; July 1, 1998;
Readopted Eff. September 1, 2019;
Amended Eff. September 1, 2023.

15A NCAC 02D .1904 AIR CURTAIN INCINERATORS

(a) Applicability. This Rule applies to the following air curtain incinerators:

(1) new and existing air curtain incinerators subject to 40 CFR 60.2245 through 60.2260 or 60.2970 through 60.2974 that combust the following materials:

(A) 100 percent wood waste;

(B) 100 percent clean lumber;
(C) 100 percent yard waste; or
(D) 100 percent mixture of only wood waste, clean lumber, and yard waste.

(2) new and existing temporary air curtain incinerators used at industrial, commercial, institutional, or municipal sites.

(b) Definitions. For the purpose of this Rule, the following definitions apply:

(1) "Clean lumber" means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood or wood products that have been painted, pigment-stained, or pressure treated, or manufactured wood products that contain adhesives or resins.

(2) "Malfunction" means an unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures caused entirely or in part by poor maintenance, careless operations, or another upset condition within the control of the emission source are not considered a malfunction.

(3) "New air curtain incinerator" means an air curtain incinerator that began operating on the effective date of this Rule or later.

(4) "Operator" means the person in operational control over the open burning.

(5) "Permanent air curtain incinerator" means an air curtain incinerator whose owner or operator operates the air curtain incinerator at one facility or site during the term of the permit.

(6) "Temporary air curtain incinerator" means an air curtain incinerator whose owner or operator moves the air curtain incinerator to another site and operates it for land clearing or right-of-way maintenance at that site on one or more occasions during the term of its permit.

(7) "Temporary-use air curtain incinerator used in disaster recovery" means an air curtain incinerator that meets the following requirements:

(A) combusts less than 35 tons per day of debris consisting of the materials listed in Parts (a)(1)(A) through (C) of this Rule;

(B) combusts debris within the boundaries of an area officially declared a disaster or emergency by federal, state, or local government; and

(C) combusts debris for less than 16 weeks unless the owner or operator submits a request for additional time no less than 1 week prior to the end of the 16-week period and provides the reasons that the additional time is needed. The Director shall provide written approval for the additional time if he or she finds that the additional time is warranted based on the information provided in the request.

Examples of disasters or emergencies include tornadoes, hurricanes, floods, ice storms, high winds, or acts of bioterrorism.

(8) "Wood waste" means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(A) grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial, institutional, or industrial sources as part of maintaining yards or other private or public lands;

(B) construction, renovation, or demolition wastes;

(C) clean lumber; and

(D) treated wood and treated wood products, including wood products that have been painted, pigment-stained, or pressure treated, or manufactured wood products that contain adhesives or resins.

(9) "Yard waste" means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. Yard waste comes from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include:

(A) construction, renovation, or demolition wastes;

(B) clean lumber; and

(C) wood waste.

(c) Air curtain incinerators shall comply with the following conditions and requirements:

(1) the operation of air curtain incinerators in particulate and ozone nonattainment areas shall cease in a county that the Department or the Forsyth County Office of Environmental Assistance and

Protection has forecasted to be an Air Quality Action Day Code "Orange" or above during the 24-hour time period covered by that Air Quality Action Day;

(2) the wind direction at the time that the burning is initiated and the wind direction as forecasted by the National Weather Service during the time of the burning shall be away from areas, including public roads within 250 feet of the burning as measured from the edge of the pavement or other roadway surface, that may be affected by smoke, ash, or other air pollutants from the burning;

(3) no fires shall be started or material added to existing fires when the North Carolina Forest Service, Fire Marshall, or other governmental agency has banned burning for that area;

(4) burning shall be conducted only between the hours of 8:00 a.m. and 6:00 p.m. No combustible materials shall be added to the air curtain incinerator prior to or after this time period;

(5) The air curtain incinerator shall not be operated more than the maximum source operating hours-per-day and days-per-week. The maximum source operating hours-per-day and days-per-week shall be set to protect the ambient air quality standard and prevention of significant deterioration (PSD) increment for particulate. The maximum source operating hours-per-day and days-per-week shall be determined using the modeling procedures in 15A NCAC 02D .1106(b), (c), and (f). This Subparagraph shall not apply to temporary air curtain incinerators;

(6) air curtain incinerators shall meet manufacturer's specifications for operation and upkeep to ensure complete burning of material charged into the pit. Manufacturer's specifications shall be kept on site and be available for inspection by Division staff;

(7) the owner or operator of an air curtain incinerator shall allow the ashes to cool and water the ash prior to its removal to prevent the ash from becoming airborne;

(8) only distillate oil, kerosene, diesel fuel, natural gas, or liquefied petroleum gas may be used to start the fire; and

(9) the location of the burning shall be at least 300 feet from any dwelling, group of dwellings, or commercial or institutional establishment, or other occupied structure not located on the property on which the burning is conducted. The regional office supervisor may grant exceptions to the setback requirements if a signed, written statement waiving objections to the air curtain burning is obtained from a resident or an owner of each dwelling, commercial or institutional establishment, or other occupied structure within 300 feet of the burning site. In case of a lease or rental agreement, the lessee or renter, and the property owner shall sign the statement waiving objections to the burning. The statement shall be submitted to and approved by the regional office supervisor before initiation of the burn. Factors that the regional supervisor shall consider in deciding to grant the exception include: all the persons who need to sign the statement waiving the objection have signed it; the location of the burn; and the type, amount, and nature of the combustible substances.

(d) Exemptions. Temporary-use air curtain incinerators used in disaster recovery are excluded from the requirements of this Rule if the following conditions are met:

(1) the air curtain incinerator meets the definition of a temporary-use air curtain incinerators used in disaster recovery as specified in Subparagraph (b)(7) of this Rule;

(2) the air curtain incinerator meets requirements pursuant to 40 CFR 60.2969 or 60.3061 to which the air curtain incinerator is subject; and

(3) the air curtain incinerator is operated in a manner consistent with the operations manual for the air curtain incinerator and the charge rate during operation remains less than or equal to the lesser of 35 tons per day or the maximum charge rate specified by the manufacturer of the air curtain incinerator.

(e) Permitting. Air curtain incinerators shall be subject to 15A NCAC 02Q .0500.

(1) The owner or operator of a new or existing permanent air curtain incinerator shall obtain a General Title V Operating Permit pursuant to 15A NCAC 02Q .0509.

(2) The owner or operator of a new or existing temporary air curtain incinerator shall obtain a General Title V Operating Permit pursuant to 15A NCAC 02Q .0510.

(3) The owner or operator of an existing permanent or temporary air curtain incinerator shall complete and submit a permit application within 12 months after the effective date of this Rule.

(4) The owner or operator of a new permanent or temporary air curtain incinerator shall complete and submit a permit application 60 days prior to the date the unit commences operation.

(5) The owner or operator of an existing permanent or temporary air curtain incinerator that is planning to close rather than obtaining a permit pursuant to 15A NCAC 02Q .0509 or 15A NCAC

02Q .0510 shall submit a closure notification to the Director within 12 months after the effective date of this Rule.

(f) Opacity limits.

(1) The owner or operator of an existing air curtain incinerators shall meet the following opacity limits:

(A) Maintain opacity to less than or equal to 35 percent opacity, as determined by the average of 3 1-hour blocks consisting of 10 6-minute average opacity values, during startup of the air curtain incinerator, where startup is defined as the first 30 minutes of operation.

(B) Maintain opacity to less than or equal to 10 percent opacity, as determined by the average of 3 1-hour blocks consisting of 10 6-minute average opacity values, at times of operation other than during startup or during malfunctions.

(2) The owner or operator of a new air curtain incinerator shall meet the opacity limits specified in Subparagraph (f)(1) of this Rule within 60 days after air curtain incinerator reaches the charge rate at which it will operate, but within 180 days after its initial startup.

(g) Performance tests.

(1) Initial and annual opacity tests shall be conducted using 40 CFR 60 Appendix A-4 Test Method 9 to determine compliance with the opacity limitations specified in Subparagraph (f)(1) of this Rule.

(2) The owner or operator of an existing air curtain incinerator shall conduct an initial performance test for opacity as specified in 40 CFR 60.8 within 90 days after the effective date of this rule.

(3) The owner or operator of a new air curtain incinerator shall conduct an initial performance test for opacity as specified in 40 CFR 60.8 within 60 days after achieving the maximum charge rate at which the affected air curtain incinerator will be operated, but not later than 180 days after initial startup of the air curtain incinerator.

(4) After the initial test for opacity, the owner or operator of a new or existing air curtain incinerator subject to this Rule shall conduct annual opacity tests on the air curtain incinerator no more than 12 calendar months following the date of the previous test.

(5) The owner or operator of an existing air curtain incinerator that has ceased operations and is restarting after more than 12 months since the previous test shall conduct an opacity test upon startup of the unit.

(h) Recordkeeping and Reporting Requirements.

(1) Prior to commencing construction of an air curtain incinerator, the owner or operator of a new air curtain incinerator shall submit the following information to the Director:

(A) a notification of intent to construct an air curtain incinerator;

(B) the planned initial startup date of the air curtain incinerator; and

(C) the materials planned to be combusted in the air curtain incinerator.

(2) The owner or operator of a new or existing air curtain incinerator shall do the following:

(A) keep records of results of initial and annual opacity tests onsite in either paper copy or electronic format for five years;

(B) make records available for submission to the Director or for an inspector's onsite review;

(C) report the results of the initial and annual opacity tests as the average of 3 1-hour blocks consisting of 10 6-minute average opacity values;

(D) submit initial opacity test results to the Division within 60 days following the initial test and submit annual opacity test results within 12 months following the previous report;

(E) submit initial and annual opacity test reports to the Division as specified in 15A NCAC 02D .0605(i); and

(F) keep a copy of the initial and annual reports onsite for a period of five years.

(i) In addition to complying with the requirements of this Rule, an air curtain incinerator subject to:

(1) 40 CFR Part 60, Subpart CCCC, shall also comply with 40 CFR 60.2245 through 60.2260; or

(2) 40 CFR Part 60, Subpart EEEE, shall also comply with 40 CFR 60.2970 through 60.2974.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5); 143-215.107(a)(10); 143-215.108; S.L. 2011-394, s.2; 40 CFR 60.2865;*
Eff. July 1, 1996;
Amended Eff. July 3, 2012; July 1, 2007; December 1, 2005; August 1, 2004;
Readopted Eff. September 1, 2019;
Amended Eff. September 1, 2023.

15A NCAC 02D .1905 REGIONAL OFFICE LOCATIONS

The Department of Environmental Quality regional offices shall handle inquiries, requests, and plans for facilities located in their respective regions. Contact information for the regional offices may be found on the Division website at https://deq.nc.gov/about/divisions/air-quality/regional-offices.

History Note: *Authority G.S. 143-215.3(a)(1);*
Eff. July 1, 1996;
Amended Eff. December 1, 2005;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. January 5, 2016;
Amended Eff. September 1, 2023; September 1, 2019.

15A NCAC 02D .1906 DELEGATION TO COUNTY GOVERNMENTS

(a) The governing body of any county or municipality or group of counties or municipalities may establish a partial air pollution control program to implement and enforce this Section provided that the program complies with G.S. 143-215.112.

(b) The governing body shall submit to the Director documentation demonstrating that the requirements of G.S. 143-215.112 have been met. Within 90 days after receiving the submission from the governing body, the Director shall review the documentation to determine if the requirements of G.S. 143-215.112 have been met and shall present his or her findings to the Commission. If the Commission determines that the air pollution program meets the requirements in G.S. 143-215.112, it shall certify the local air pollution program to implement and enforce this Section within its area of jurisdiction.

(c) County and municipal governments shall not have the authority to issue permits for air curtain incinerators at a permanent site as defined in 15A NCAC 02D .1904.

(d) The three certified local air pollution programs, the Western North Carolina Regional Air Quality Agency, the Forsyth County Office of Environmental Assistance and Protection, and Mecklenburg County Air Quality, a Division of Land Use and Environmental Services Agency, shall continue to enforce open burning rules and have the authority to issue permits for air curtain incinerators as part of their local air pollution programs.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.112;*
Eff. July 1, 1996;
Amended Eff. December 1, 2005; June 1, 2004;
Readopted Eff. September 1, 2019.

15A NCAC 02D .1907 MULTIPLE VIOLATIONS ARISING FROM A SINGLE INVESTIGATION

(a) Multiple violations arising from a single investigation of open burning may be assessed multiple penalties using the procedures set forth in G.S. 143-215.3(a)(9). In determining the number of violations of the open burning rules, the Director shall consider:

(1) the type of material burned;
(2) the amount of material burned; and
(3) the location of the burn.

(b) Each pile of land clearing or right-of-way maintenance debris that does not comply with the specifications of 15A NCAC 02D .1903(b)(2) shall constitute a separate violation.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. July 1, 2007;
Readopted Eff. September 1, 2019.

SECTION .2000 - TRANSPORTATION CONFORMITY

15A NCAC 02D .2001 PURPOSE, SCOPE AND APPLICABILITY

(a) The purpose of this Section is to assure the conformity of transportation plans, programs, and projects that are developed, funded, or approved by the United States Department of Transportation and by metropolitan planning organizations or other recipients of funds under Title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 et seq.),

or State or Local only sources of funds, with all plans required of areas designated as nonattainment or maintenance under 40 CFR 81.334 for the pollutants specified therein or listed in Paragraph (c) of this Rule.

(b) This Section shall apply to the emissions of volatile organic compounds and nitrogen oxides in the following areas:

(1) townships of Central Cabarrus, Concord, Georgeville, Harrisburg, Kannapolis, Midland, Mount Pleasant, New Gilead, Odell, Poplar Tent, and Rimertown in Cabarrus County;
(2) townships of Crowders Mountain, Dallas, Gastonia, Riverbend, and South Point in Gaston County;
(3) townships of Davidson and Coddle Creek in Iredell County;
(4) townships of Catawba Springs, Lincolnton, and Ironton in Lincoln County;
(5) all townships in Mecklenburg County;
(6) townships of Atwell, China Grove, Franklin, Gold Hill, Litaker, Locke, Providence, Salisbury, Steele, and Unity in Rowan County; and
(7) townships of Goose Creek, Marshville, Monroe, Sandy Ridge, and Vance in Union County.

(c) This Section shall apply to the emissions of:

(1) particulate matter in areas identified in 40 CFR 81.334 as nonattainment or that have been redesignated attainment and are current maintenance areas for fine particulate (PM2.5); or
(2) volatile organic compounds or nitrogen oxides in areas identified in 40 CFR 81.334 as nonattainment or that have been redesignated attainment and are current maintenance areas for ozone.

(d) For Federal Highway Administration/Federal Transit Administration (FHWA/FTA) projects or regionally-significant State or local projects that meet the standards set forth in Paragraphs (b) and or (c) of this Rule, this Section shall apply to:

(1) the adoption, acceptance, approval, or support of transportation plans and transportation plan amendments developed pursuant to 23 CFR Part 450 or 49 CFR Part 613 by a metropolitan planning organization or the United States Department of Transportation;
(2) the adoption, acceptance, approval, or support of transportation improvement programs or amendments to transportation improvement programs pursuant to 23 CFR Part 450 or 49 CFR Part 613 by a metropolitan planning organization or the United States Department of Transportation; or
(3) the approval, funding, or implementation of FHWA/FTA projects.

Conformity determinations are not required under this Section for individual projects that are not FHWA/FTA projects. However, 40 CFR 93.121 shall apply to these projects if they are regionally significant projects.

(e) This Section applies to maintenance areas for 20 years from the date the Environmental Protection Agency approves the area's request under Section 107(d) of the Clean Air Act for redesignation to attainment or until the effective date of revocation of the conformity requirements for the NAAQS by EPA.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. April 1, 1999;
Amended Eff. December 1, 2005;
Readopted Eff. January 1, 2018.

15A NCAC 02D .2002 DEFINITIONS

For the purposes of this Section, the definitions contained in 40 CFR 93.101 and the following definitions apply:

(1) "Regionally-significant project" means a transportation project (other than an exempt project under 40 CFR 93.126) that is on a facility that serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls and sports complexes, or transportation terminals as well as most terminals themselves) and would be included in the modeling of a metropolitan area's transportation network, including all principal arterial highways and all fixed guide-way transit facilities that offer an alternative to regional highway travel.
(2) "Regionally-significant State or local project" means any highway or transit project that is a regionally significant project and that is proposed to receive only non-federal funding assistance or approval through the State or any local program.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. April 1, 1999;

Readopted Eff. January 1, 2018.

15A NCAC 02D .2003 TRANSPORTATION CONFORMITY DETERMINATION

(a) Conformity analyses, determinations, and redeterminations for transportation plans, transportation improvement programs, FHWA/FTA projects, and State or local regionally-significant projects shall be made according to the requirements of 40 CFR 93.104 and shall comply with the applicable requirements of 40 CFR 93.119, 93.120, 93.124, 93.125, and 93.126. For the purposes of this Rule, regionally-significant State or local projects shall be subject to the same requirements under 40 CFR Part 93 as FHWA/FTA projects except that State Environmental Policy Act procedures and requirements shall be substituted for National Environmental Policy Act procedures and requirements. Regionally-significant State or local projects subject to this Section for which the State Environmental Policy Act process and a conformity determination have been completed may proceed toward implementation without further conformity determination unless more than three years have elapsed since the most recent major step (State Environmental Policy Act process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications, and estimates) occurred. All phases of these projects considered in the conformity determination shall also be included if these phases were for the purpose of funding final design, right-of-way acquisition, construction, or any combination of these phases.

(b) Before making a conformity determination, the metropolitan planning organizations, local transportation departments, North Carolina Department of Transportation, United States Department of Transportation, Division of Air Quality, local air pollution control agencies, and United States Environmental Protection Agency shall consult with each other on matters described in 15A NCAC 02D .2005. Consultation shall begin as early as possible in the development of the emissions analysis used to support a conformity determination. The agency that performs the emissions analysis shall make the analysis available to the Division of Air Quality and at least 21 days shall be allowed for review and comment on the emissions analysis. The 21-day review period shall begin upon receipt of the analysis by the Director of the Division of Air Quality. After review by the Division of Air Quality, the approving agency shall seek public comments in accordance with its public participation policy. The agency making the conformity determination shall address all written comments received prior to close of the public comment period, and these comments and responses thereto shall be included in the final document. If the Division of Air Quality disagrees with the resolution of its comments, the conflict may be escalated to the Governor within 14 days and shall be resolved in accordance with 40 CFR 93.105(d). The 14-day appeal period shall begin upon receipt by the Director of the Division of Air Quality of the metropolitan planning organization's resolution that determines conformity.

(c) The agency that performs the conformity analysis shall notify the Division of Air Quality of:

(1) changes in planning or analysis assumptions, including land use and vehicle miles traveled (VMT) forecasts; and

(2) revisions to transportation plans or transportation improvement plans that add, delete, or change projects that require a new emissions analysis including, design scope and dates that change the transportation network existing in a horizon year.

Comments made by the Division of Air Quality and responses thereto made by the agency shall become part of the final planning document.

(d) Transportation plans shall satisfy the requirements of 40 CFR 93.106. Transportation plans and transportation improvement programs shall satisfy the fiscal constraints specified in 40 CFR 93.108. Transportation plans, programs, and FHWA/FTA projects shall satisfy the applicable requirements of 40 CFR 93.109 through 93.119.

(e) Written commitments to implement control measures that are not included in the transportation plan or transportation improvement program (TIP) shall be obtained before a conformity determination, and these commitments shall be fulfilled. Written commitments to implement mitigation measures shall be obtained before a positive conformity determination, and project sponsors shall comply with these commitments.

(f) A recipient of federal funds designated under Title 23 U.S.C. or the Federal Transit Act shall not adopt or approve a regionally-significant highway or transit project, regardless of funding source, unless the requirements of 40 CFR Part 93 are met.

(g) The degree of specificity required in a transportation plan and the specific travel network assumed for air quality modeling shall not preclude the consideration of alternatives in the National Environmental Policy Act of 1969 process, in accordance with 40 CFR 93.107.

(h) When assisting or approving any action with air quality-related consequence, the Federal Highway Administration and the Federal Transit Administration of the Department of Transportation shall give priority to the implementation of those transportation portions of an applicable implementation plan prepared to attain and

maintain the national ambient air quality standards, as provided under 40 CFR 93.103. This priority shall be consistent with statutory requirements for allocation of funds among states or other jurisdictions.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. April 1, 1999;
Readopted Eff. January 1, 2018.

15A NCAC 02D .2004 DETERMINING TRANSPORTATION-RELATED EMISSIONS

(a) The procedures in 40 CFR 93.122 shall be used to determine regional transportation-related emissions.
(b) The procedures in 40 CFR 93.123 shall be used to determine localized carbon monoxide concentrations (hot-spot analysis).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. April 1, 1999;
Readopted Eff. January 1, 2018.

15A NCAC 02D .2005 MEMORANDUM OF AGREEMENT

(a) The Division of Air Quality shall develop and maintain a memorandum of agreement with the North Carolina Department of Transportation, the metropolitan planning organizations of the areas identified in 15A NCAC 02D .2001, and the United States Department of Transportation to describe the participation and responsibilities of each of these agencies in implementing the requirements of this Section and 40 CFR Part 93. For those areas identified in 15A NCAC 02D .2001 for which there is no metropolitan planning organization, the North Carolina Department of Transportation shall represent those areas for the purposes of the memorandum of agreement. The memorandum of agreement shall include:

(1) consultation procedures described in 40 CFR 93.105;
(2) the projected time allotted for each agency to review and comment on or to respond to comments on transportation improvement programs, transportation plans, and transportation projects; and
(3) consultation procedures for the development of State Implementation Plans that relate to transportation.

The contents of the Memorandum of Agreement shall comply with the criteria and procedures in the federal Clean Air Act Section 176(c) [42 U.S.C. 7401-7671q] and 40 CFR Part 51, Subpart T, 40 CFR Part 93, Subpart A, and 15A NCAC 02D .2001 through .2004.
(b) No recipient of federal funds, defined in 40 CFR 93.101, designated under Title 23 U.S.C. or the Federal Transit Act shall adopt or approve or take any action to develop or implement a regionally-significant highway or transit project unless such recipient has signed the Memorandum of Agreement established under this Rule. This Memorandum of Agreement shall bind the recipient to adhere to the conformity criteria and procedures of this Section.
(c) No agency shall adopt or approve or take any action to implement or develop any transportation plan, transportation improvement program, or federally funded or approved FHWA/FTA highway or transit project unless the agency has signed the Memorandum of Agreement established under this Rule. This Memorandum of Agreement shall bind the recipient to adhere to the conformity criteria and procedures of this Section.
(d) Each federal agency that participates in determinations of conformity to state and federal implementation plans shall sign the Memorandum of Agreement established under this Rule. This Memorandum of Agreement shall bind the recipient to adhere to the conformity criteria and procedures of this Section.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. April 1, 1999;
Readopted Eff. January 1, 2018.

SECTION .2100 – RISK MANAGEMENT PROGRAM

15A NCAC 02D .2101 APPLICABILITY

(a) This Section shall apply to an owner or operator of a stationary source with more than a threshold quantity of a regulated substance in a process as determined by 40 CFR 68.115, except as set forth in Paragraph (b) of this Rule. An owner or operator of a stationary source shall comply with this Section no later than the latest of the following dates:

(1) June 21, 1999;
(2) three years after the date on which a regulated substance is first listed according to 40 CFR 68.130; or
(3) the date on which a regulated substance is first present above a threshold quantity in a process.

(b) The following substances shall be exempt from the provisions of this Section:
(1) ammonia used as an agricultural nutrient, when held by farmers, pursuant to 40 CFR 68.125; and
(2) a flammable substance listed in Tables 3 and 4 of 40 CFR 68.130 that is used as a fuel or held for sale as a fuel at a retail facility pursuant to 40 CFR 68.126.

(c) A covered process that meets the requirements of 40 CFR 68.10(b) is eligible for Program 1 requirements.

(d) A covered process that meets the requirements of 40 CFR 68.10(c) is subject to Program 2 requirements.

(e) A covered process that meets the requirements of 40 CFR 68.10(d) is subject to Program 3 requirements.

(f) If at any time a covered process no longer meets the eligibility criteria of its Program level, the owner or operator of the stationary source shall comply with the requirements of the new Program level as set forth in Paragraphs (c), (d), and (e) of this Rule as it applies to the process and shall update the risk management plan as required by 40 CFR 68.190.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. July 1, 2000;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2102 DEFINITIONS

For the purpose of this Section the definitions set forth in 40 CFR 68.3 shall apply with the following exception: "Implementing agency" means the Division of Air Quality.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. July 1, 2000;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2103 REQUIREMENTS

Except as provided in 40 CFR 68.2 and 15A NCAC 02D .2101(b), the owner or operator of a stationary source governed by this Section shall comply with all the applicable requirements in:
(1) 40 CFR 68.12, General Requirements;
(2) 40 CFR 68.15, Management;
(3) 40 CFR Part 68, Subpart B, Hazard Assessment, including 40 CFR Part 68, Appendix A, Table of Toxic Endpoints;
(4) 40 CFR Part 68, Subpart C, Program 2 Prevention Program;
(5) 40 CFR Part 68, Subpart D, Program 3 Prevention Program;
(6) 40 CFR Part 68, Subpart E, Emergency Response;
(7) 40 CFR Part 68, Subpart G, Risk Management Plan;
(8) 40 CFR 68.200, Recordkeeping; and
(9) 40 CFR 68.220(f).

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. July 1, 2000;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2104 IMPLEMENTATION

(a) The owner or operator of a stationary source governed by this Section shall:
(1) submit a risk management plan, or a revised plan as required by 40 CFR 68.150, to the Environmental Protection Agency; and
(2) submit a source certification or, in its absence, submit a compliance schedule to meet the requirements of 15A NCAC 02Q .0508(h)(2).

(b) The Division shall use one or more mechanisms such as completeness checks, source audits, record reviews, or facility inspections to ensure that facilities covered under this Rule are in compliance with the requirements of this Section. The Division shall conduct periodic audits in accordance with the audit procedures in 40 CFR 68.220.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(10);*
Eff. July 1, 2000;
Readopted Eff. November 1, 2019.

SECTION .2200 – SPECIAL ORDERS

15A NCAC 02D .2201 PURPOSE

The purpose of this Section is to implement the provisions of G.S. 143-215.110 pertaining to the issuance of air quality Special Orders by the Environmental Management Commission.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.110;*
Eff. April 1, 2004;
Readopted Eff. January 1, 2018.

15A NCAC 02D .2202 DEFINITIONS

For the purposes of this Section, the following definitions apply:

(1) "Special Order" means a directive of the Commission to any person whom it finds responsible for causing or contributing to any air pollution in the State. The term includes all orders or instruments issued by the Commission pursuant to G.S. 143-215.110.

(2) "Consent Order" means a Special Order into which the Commission enters with the consent of the person who is subject to the order.

History Note: *Authority G.S. 143-212; 143-213; 143-215.3(a)(1); 143-215.110;*
Eff. April 1, 2004;
Readopted Eff. January 1, 2018.

15A NCAC 02D .2203 PUBLIC NOTICE

(a) The requirements of this Rule for public notice and public hearing shall apply to Consent Orders. The Commission may specify other conditions for Special Orders issued without consent if the conditions are needed to achieve or demonstrate compliance with a requirement under this Subchapter or 15A NCAC 02Q.

(b) Notice of proposed Consent Order:

(1) The Director shall give notice pursuant to G.S. 143-215.110(a1).

(2) The Director shall give notice of a proposed Consent Order 30 days prior to final action regarding the Consent Order.

(3) The notice shall be posted on the North Carolina Division of Air Quality web site at http://deq.nc.gov/about/divisions/air-quality/air-quality-enforcement/special-orders-by-consent and provided to those persons specified in G.S. 143-215.110(a1)(1) for air quality special orders.

(4) The notice shall include the following:

(A) name, address, and telephone number of the Division;

(B) name and address of the person to whom the proposed order is directed;

(C) a brief summary of the conditions of the proposed order, including the period of time during which action must be taken to achieve compliance and the major permit conditions or emission standards that the source will be allowed to exceed during the pendency of the order;

(D) a brief description of the procedures to be followed by the Commission or Director in reaching a final decision on the proposed order, which shall include descriptions of the process for submitting comments and requesting a public hearing. The description shall specify that comments and requests for a public hearing are to be received by the Division within 30 days following the date of public notice; and

(E) a description of the information available for public review, where it can be found, and procedures for obtaining copies of pertinent documents.

(c) Notice of public hearing for proposed Consent Order:

(1) The Director shall consider requests for a public hearing, and if significant public interest for a public hearing exists, then he or she shall hold a public hearing.

(2) The Director shall give notice of the public hearing not less than 30 days before the hearing.

(3) The notice shall be posted on the North Carolina Division of Air Quality web site at http://deq.nc.gov/about/divisions/air-quality/air-quality-enforcement/special-orders-by-consent and provided to those persons specified in G.S. 143-215.110(a1)(2) for air quality special orders.
(4) The notice shall include the information specified in Subparagraph (b)(4) of this Rule. It shall also state the time and location for the hearing and the procedures for providing comment.
(5) The Chairman of the Commission or the Director shall appoint one or more hearing officers to preside over the public hearing and to receive written and oral comments. The hearing officer shall provide the Commission a written report of the hearing, which shall include:
(A) a copy of the public notice;
(B) a copy of the written comments and supporting documentation received;
(C) a summary of the oral comments received;
(D) recommendations of the hearing officer to the Commission; and
(E) a proposed Consent Order for the Commission's consideration.

(d) A person may request to receive copies of notices required by this Rule, and the Director shall provide copies of notices to those who have submitted a request.
(e) A Consent Order may be modified by the Director to incorporate minor modifications, including modification of standard conditions to reflect updated versions of federal or state regulations, correction of typographical errors, or interim date extensions, without public notice provided that the modifications do not extend the final compliance date by more than four months.

History Note: *Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.3(a)(3); 143-215.3(a)(4); 143-215.110;*
Eff. April 1, 2004;
Readopted Eff. February 1, 2018;
Amended Eff. September 1, 2023.

15A NCAC 02D .2204 FINAL ACTION ON CONSENT ORDERS

(a) The Director shall take final action for the Commission on Consent Orders for which a public hearing has not been held as provided in 15A NCAC 02D .2203. The final action on the proposed order shall be taken no later than 60 days following publication of the notice.
(b) The Commission shall take final action on Consent Orders for which a public hearing has been held as provided in 15A NCAC 02D .2203. The final action on the proposed order shall be taken no later than 90 days following the hearing.

History Note: *Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.3(a)(4); 143-215.110;*
Eff. April 1, 2004;
Readopted Eff. January 1, 2018.

15A NCAC 02D .2205 NOTIFICATION OF RIGHT TO CONTEST SPECIAL ORDERS ISSUED WITHOUT CONSENT

For any Special Orders other than Consent Orders, the Commission shall notify the person subject to the order of the procedure set out in G.S. 150B-23 to contest the Special Order.

History Note: *Authority G.S. 143-215.2(b); 143-215.3(a)(1); 143-215.110(b);*
Eff. April 1, 2004;
Readopted Eff. January 1, 2018.

SECTION .2300 – BANKING EMISSION REDUCTION CREDITS

15A NCAC 02D .2301 PURPOSE

This Section provides for the creation, banking, transfer, and use of emission reduction credits for:
(1) nitrogen oxides (NOx);
(2) volatile organic compounds (VOC);
(3) sulfur dioxide (SO2);
(4) fine particulate (PM2.5); and
(5) ammonia (NH3);

for offsets pursuant to 15A NCAC 02D .0531, Sources in Nonattainment Area.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2302 DEFINITIONS

For the purposes of this Section, the following definitions shall apply:

(1) "Air permit" means a construction and operation permit issued pursuant to 15A NCAC 02Q .0300, Construction and Operation Permits, or 15A NCAC 02Q .0500, Title V Procedures.

(2) "Banking" means a system for recording emission reduction credits so that they may be used or transferred in the future.

(3) "Enforceable" means enforceable by the Division. Methods for ensuring that emission reduction credits are enforceable include conditions in air permits issued by the Division.

(4) "Federally designated ozone nonattainment area in North Carolina" means an area designated as nonattainment for ozone and described in 40 CFR 81.334.

(5) "Federally designated fine particulate (PM2.5) nonattainment area in North Carolina" means an area designated as nonattainment for fine particulate (PM2.5) and described in 40 CFR 81.334.

(6) "Netting Demonstration" means the act of calculating a "net emissions increase" pursuant to the preconstruction review requirements of Title I, Part D of the federal Clean Air Act and 15A NCAC 02D .0530, Prevention of Significant Deterioration, or 15A NCAC 02D .0531, Sources in Nonattainment Area.

(7) "Permanent" means assured for the life of the corresponding emission reduction credit through an enforceable mechanism such as a permit condition or revocation.

(8) "Quantifiable" means that the amount, rate, and characteristics of the emission reduction credit can be estimated through a reliable, reproducible method.

(9) "Real" means a reduction in actual emissions emitted into the air.

(10) "Surplus" means not required by any local, State, or federal law, rule, order, or requirement and in excess of reductions used by the Division in issuing any air permit, in excess of any conditions in an air permit to avoid an otherwise applicable requirement, or to demonstrate attainment of ambient air quality standards in 15A NCAC 02D .0400 or reasonable further progress towards achieving attainment of ambient air quality standards. For determining the amount of surplus emission reductions, a seasonal emission limitation or standard shall be assumed to apply throughout the year. The following shall not be considered surplus:

(a) emission reductions that have previously been used to avoid 15A NCAC 02D .0530 or .0531 (new source review) through a netting demonstration;

(b) emission reductions in hazardous air pollutants listed pursuant to Section 112(b) of the federal Clean Air Act to the extent needed to comply with 15A NCAC 02D .1109, .1111, or .1112. However, emission reductions in hazardous air pollutants that are also volatile organic compounds beyond that necessary to comply with 15A NCAC 02D .1109, .1111, or .1112 shall be surplus; or

(c) emission reductions used to offset excess emissions from another source as part of an alternative mix of controls ("bubble") demonstration pursuant to 15A NCAC 02D .0501.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2303 APPLICABILITY AND ELIGIBILITY

(a) Applicability. Any facility that has the potential to emit nitrogen oxides, volatile organic compounds, sulfur dioxide, ammonia, or fine particulate (PM2.5) in amounts greater than 25 tons per year and that is in a federally designated ozone or fine particulate (PM2.5) nonattainment area in North Carolina is eligible to create and bank nitrogen oxides, volatile organic compounds, sulfur dioxide, ammonia, or fine particulate (PM2.5) emission reduction credits.

(b) Eligibility of emission reductions.

(1) To be approved by the Director as an emission reduction credit, a reduction in emissions shall be real, permanent, quantifiable, enforceable, and surplus and shall have occurred:

(A) for ozone after December 31, 2002 for areas previously designated nonattainment according to the 1997 8-hour ozone standard, including the Charlotte-Gastonia-Rock Hill, NC-SC nonattainment area, the Raleigh-Durham-Chapel Hill nonattainment area, the Rocky Mount nonattainment area, and the Haywood and Swain Counties (Great Smoky Mountains National Park) nonattainment area, and after December 31, 2000 for all other nonattainment areas.

(B) for fine particulate (PM2.5) after December 31, 2002 for the areas previously designated nonattainment according to the 1997 PM2.5 standard, including the former Greensboro-Winston-Salem-High Point, NC and Hickory-Morganton-Lenoir, NC nonattainment areas.

(2) To be eligible for consideration as emission reduction credits, emission reductions may be created by any of the following methods:

(A) installation of control equipment beyond what is necessary to comply with existing rules;

(B) a change in process inputs, formulations, products or product mix, fuels, or raw materials;

(C) a reduction in the actual emission rate;

(D) a reduction in operating hours;

(E) production curtailment or reduction in throughput;

(F) shutdown of emitting sources or facilities; or

(G) any other enforceable method resulting in real, permanent, quantifiable, enforceable, and surplus reduction of emissions.

(c) Ineligible for emission reduction credit. Emission reductions from the following shall not be eligible to be banked as emission reduction credits:

(1) sources covered by a special order or variance until compliance with the emission standards that are the subject of the special order or variance is achieved;

(2) sources that have operated less than 24 months;

(3) emission allocations and allowances used in a federal emissions budget trading program;

(4) emission reductions outside North Carolina; or

(5) mobile sources.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Amended Eff. July 1, 2007;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2304 QUALIFICATION OF EMISSION REDUCTION CREDITS

For purposes of calculating the amount of emission reduction that can be quantified as an emission reduction credit, the following procedures shall be followed:

(1) The source's average actual annual emissions before the emission reduction shall be calculated in tons per year. In calculating average actual annual emissions before the emission reduction, data from the 24-month period immediately preceding the reduction in emissions shall be used. The Director may allow the use of a different time period, not to exceed seven years immediately preceding the reduction in emissions, if the owner or operator of the source documents that such period is more representative of normal source operation.

(2) The emission reduction credit generated by the emission reduction shall be calculated by subtracting the allowable annual emissions rate following the reduction from the average actual annual emissions prior to the reduction.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2305 CREATING AND BANKING EMISSION REDUCTION CREDITS

(a) The owner or operator of a source seeking to create and bank emission reduction credits shall submit, under signature of the responsible official as defined in 15A NCAC 02Q .0303, the following information, which shall be on an application form provided by the Division:

(1) the company name, contact person and telephone number, and street address of the source seeking the emission reduction credit;
(2) a description of the type of source where the proposed emission reduction occurred or will occur;
(3) a detailed description of the method or methods to be employed to create the emission reduction;
(4) the date that the emission reduction occurred or will occur;
(5) quantification of the emission reduction credit as described in 15A NCAC 02D .2304;
(6) a demonstration that the proposed method for ensuring the reductions are permanent and enforceable, including any necessary application to amend the facility's air permit or, for a shutdown of an entire facility, a request for permit rescission;
(7) whether any portion of the reduction in emissions to be used to create the emission reduction credit has previously been used to avoid the requirements of 15A NCAC 02D .0530 Prevention of Significant Deterioration or .0531 Nonattainment Major New Source Review through a netting demonstration;
(8) other information necessary to demonstrate that the reduction in emissions is real, permanent, quantifiable, enforceable, and surplus; and
(9) a complete permit application if the permit needs to be modified to create or enforce the emission reduction credit.

(b) The Director shall issue the source a certificate of emission reduction credit after the facility's permit is modified, if necessary, to reflect the permanent reduction of emissions, if:
(1) all the information required to be submitted by Paragraph (a) of this Rule has been submitted;
(2) the source is eligible pursuant to 15A NCAC 02D .2303; and
(3) the reduction in emissions is real, permanent, quantifiable, enforceable, and surplus.

The Director shall register the emission reduction credit for use only after the reduction has occurred.

(c) Processing schedule.
(1) The Division shall send written acknowledgement of receipt of the request to create and bank emission credits within 10 days of receipt of the request.
(2) The Division shall review requests to create and bank emission credits within 30 days of receipt to determine whether the application is complete. If the application is incomplete the Division shall notify the applicant of the deficiency. The applicant shall have 90 days to submit the requested information. If the applicant fails to provide the requested information within 90 days, the Division shall deny the application.
(3) The Director shall either approve or disapprove the request within 90 days after receipt of a complete application requesting the banking of emission reduction credits. Upon approval the Director shall issue a certificate of emission reduction credit.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2306 DURATION OF EMISSION REDUCTION CREDITS

Banked emission reduction credits shall be permanent until withdrawn by the owner or operator, or by the Director pursuant to 15A NCAC 02D .2310.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2307 USE OF EMISSION REDUCTION CREDITS

(a) The owner or operator holding emission reduction credits may withdraw the emission reduction credits and may use them in any manner consistent with this Section.

(b) An emission reduction credit may be withdrawn only by the owner of record or the Director pursuant to 15A NCAC 02D .2310 and may be withdrawn in whole or in part. In the case of a partial withdrawal, the Director shall issue a revised certificate of emission reduction credit to the owner of record reflecting the new amount of the credit and shall revoke the original certificate.

(c) Emission reduction credits may be used for the following purposes:

(1) as offsets or netting demonstrations required by 15A NCAC 02D .0531 for a major new source or a major modification to an existing major source of:
    (A) nitrogen oxides or volatile organic compounds in a federally designated ozone nonattainment area, or
    (B) fine particulate (PM2.5) in a federally designated PM2.5 nonattainment area; or
(2) to remove a permit condition that created an emission reduction credit.

(d) Emission reduction credits generated through reducing emissions of one pollutant shall not be used for trading with or offsetting another pollutant. For example, emission reduction credits for volatile organic compounds in an ozone nonattainment area shall not be used to offset nitrogen oxide emissions.

(e) Limitations on use of emission reduction credits.
(1) Emission reduction credits shall not be used to exempt a source from:
    (A) nonattainment major new source review (15A NCAC 02D .0531), unless the emission reduction credits have been banked by the facility at which the new or modified source is located and have been banked during the period specified in 15A NCAC 02D .0531. This Subparagraph shall not preclude the use of emission reductions not banked as emission credits to complete netting demonstrations;
    (B) new source performance standards (15A NCAC 02D .0524), national emission standards for hazardous air pollutants (15A NCAC 02D .1110), or maximum achievable control technology (15A NCAC 02D .1109, .1111, or .1112); or
    (C) any other requirement of 15A NCAC 02D unless the emission reduction credits have been banked by the facility at which the new or modified source is located.
(2) Emission reduction credits shall not be used to allow a source to emit above the limit established by a rule in 15A NCAC 02D. If the owner or operator seeks to permit a source to emit above the limit established by a rule in 15A NCAC 02D, he or she shall follow the procedures in 15A NCAC 02D .0501 for an alternative mix of controls ("bubble").

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2308 CERTIFICATES AND REGISTRY

(a) Certificates of emission reduction credit issued by the Director shall contain the following information:
(1) the pollutant reduced (nitrogen oxides, volatile organic compounds, sulfur dioxide, ammonia, fine particulate);
(2) the amount of the credit in tons per year;
(3) the date the reduction occurred;
(4) company name, the street address, and county of the source where the reduction occurred; and
(5) the date of issuance of the certificate.

(b) The Division shall maintain an emission reduction credit registry that constitutes the official record of all certificates of emission reduction credit issued and all withdrawals made. The registry shall be available for public review. For each certificate issued, the registry shall show the amount of the emission reduction credit, the pollutant reduced, the name and location of the facility generating the emission reduction credit, and the facility contact person. The Division shall maintain records of all deposits, deposit applications, withdrawals, and transactions.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2309 TRANSFERRING EMISSION REDUCTION CREDITS

(a) If the owner of a certificate of emission reduction credit transfers the certificate to a new owner, the Director shall issue a certificate of emission reduction credit to the new owner and shall revoke the certificate held by the current owner of record.

(b) If the owner of a certificate of emission reduction credit transfers part of the emission reduction credits represented by the certificate to a new owner, the Director shall issue a certificate of emission reduction credit to the new owner reflecting the transferred amount and shall issue a certificate of emission reduction credit to the current

owner of record reflecting the amount of emission reduction credit remaining after the transfer. The Director shall revoke the original certificate of emission reduction credit.
(c) For any transferred emission reduction credits, the creator of the emission reduction credit shall comply with the conditions in the appropriate permit that assure permanency of the emission reduction. The user of any transferred emission reduction credits shall not be held liable for any failure of the creator to comply with its permit.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2310 REVOCATION AND CHANGES OF EMISSION REDUCTION CREDITS
(a) The Director may withdraw emission reduction credits if the emission reduction credits:
(1) have already been used;
(2) are incorrectly calculated; or
(3) achieved emission reductions that are less than those claimed in the certificate of emission reduction credit.
(b) If a banked emission reduction credit was calculated using an emission factor and the emission factor changes, the Director shall revise the banked emission reduction credit to reflect the change in the emission factor. If a banked emission reduction credit had been used, then no change shall be made in the used credit.
(c) If a rule is adopted or amended in Subchapters 02D or 02Q of this Chapter, the Director shall adjust the banked emission reduction credits to account for changes in emissions that would be allowed by the new emission limitation with which the source must currently comply. If a source has permanently ceased operations, then the Director shall make no adjustments in its banked emissions reduction credits. If a banked emission reduction credit has been used, no change shall be made in the used credit.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

15A NCAC 02D .2311 MONITORING
The owner or operator of a source whose emissions are being reduced to create an emission reduction credit shall verify the reduction in emissions with a source test, continuous emission monitoring, or other methods that measure the actual emissions as defined in 15A NCAC 02Q .0202, or may require the use of parametric monitoring to show that the source or its control device is being operated in the manner that it is designed or is permitted.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(12);*
Eff. December 1, 2005;
Readopted Eff. November 1, 2019.

SECTION .2400 – CLEAN AIR INTERSTATE RULES

15A NCAC 02D .2401 PURPOSE AND APPLICABILITY
15A NCAC 02D .2402 DEFINITIONS
15A NCAC 02D .2403 NITROGEN OXIDE EMISSIONS
15A NCAC 02D .2404 SULFUR DIOXIDE
15A NCAC 02D .2405 NITROGEN OXIDE EMISSIONS DURING OZONE SEASON
15A NCAC 02D .2406 PERMITTING
15A NCAC 02D .2407 MONITORING, REPORTING, AND RECORDKEEPING
15A NCAC 02D .2408 TRADING PROGRAM AND BANKING
15A NCAC 02D .2409 DESIGNATED REPRESENTATIVE
15A NCAC 02D .2410 COMPUTATION OF TIME
15A NCAC 02D .2411 OPT-IN PROVISIONS
15A NCAC 02D .2412 NEW UNIT GROWTH
15A NCAC 02D .2413 PERIODIC REVIEW AND REALLOCATIONS

History Note: *Authority G.S. 143-215.3(a); 143-215.65; 143-215.66; 143-215.107(a)(5),(10); 143-215.108;*

Eff. July 1, 2006;
Amended Eff. May 1, 2008;
Expired Eff. February 1, 2016 pursuant to G.S. 150B-21.3A.

SECTION .2500 – MERCURY RULES FOR ELECTRIC GENERATORS

15A NCAC 02D .2501 PURPOSE AND APPLICABILITY
15A NCAC 02D .2502 DEFINITIONS
15A NCAC 02D .2503 MERCURY EMISSION
15A NCAC 02D .2504 PERMITTING
15A NCAC 02D .2505 MONITORING, REPORTING, AND RECORDKEEPING
15A NCAC 02D .2506 DESIGNATED REPRESENTATIVE
15A NCAC 02D .2507 COMPUTATION OF TIME
15A NCAC 02D .2508 NEW SOURCE GROWTH
15A NCAC 02D .2509 PERIODIC REVIEW AND REALLOCATIONS
15A NCAC 02D .2510 TRADING PROGRAM AND BANKING
15A NCAC 02D .2511 MERCURY EMISSION LIMITS

History Note: *Authority G.S. 143-215.3(a); 143-215.65; 143-215.66; 143-215.107(a)(5),(10); 143-215.107D; 143-215.108;*
Eff. January 1, 2007;
Expired Eff. February 1, 2016 pursuant to G.S. 150B-23.3A.

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 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;
Amended Eff. October 1, 2022.

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 Detection Procedures. 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 15A NCAC 02D .0932, Gasoline Cargo Tanks And Vapor Collector Systems:

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

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

(b) Annual Testing. The pressure-vacuum test procedures for leak tightness of cargo tanks described in Method 27 of Appendix A to 40 CFR Part 60 or 49 CFR 180.407 shall be used to determine the leak tightness of gasoline cargo tanks in use and equipped with vapor collection equipment. Method 27 of Appendix A to 40 CFR Part 60 is changed for fugitive emissions leak prevention 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 at http://deq.nc.gov/about/divisions/air-quality/air-quality-enforcement/emission-measurement.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);*
Eff. June 1, 2008;
Readopted Eff. October 1, 2020.

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.