

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 .1903 OPEN BURNING WITHOUT AN AIR QUALITY PERMIT

(a) All 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 any 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 currently acceptable to 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 currently acceptable to the North Carolina Department of Agriculture and Consumer Services;
- (6) fires purposely set for wildlife management practices for which burning is currently acceptable to 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, for the purpose of testing or developing these materials or equipment in accordance with a standard qualification program;
- (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 writing the appropriate regional office at the address 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.

Any 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 at least one hour before the burn is scheduled.

- (12) fires for the disposal of vegetative material generated as a result of a natural disaster, such as 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 any person from the consequences, damages, or injuries that may result from this conduct. It does not excuse or exempt any person from complying with all applicable laws, ordinances, rules or orders of any other governmental entity 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.

Commercially Available Portable Incinerators for Large Animal Mortality Events

There are many portable incinerator manufacturers on the market most of which provide small scale units not sufficient for large mortality events. These smaller units were not considered. Only “off-the-shelf” large units were considered in preparing this summary. It is highly recommended that a detailed specification be developed which accomplishes the desired goals. It is likely that a custom incinerator may be required. In fact, many manufactures indicate that these “off-the-shelf” units may be customized to meet individual needs. Only manufacturers advertising portable animal carcass incinerators were included. In the links below, several portable models are available depending the desired characteristics.

No consideration was given to the temperatures and residence time required for bacteria and virus eradication. From an air quality perspective, it is strongly recommended that any incineration unit used for the disposal of carcasses resulting from a large animal mortality event be equipped with a secondary burner and combustion chamber to reduce smoke, odors and particulate matter (PM) emissions. Most manufactures provide accommodations for this and many are designed to EU 142/2011 standard which is highly recommended. Additionally, pathological waste defined in 40 CFR Part 60 as “*waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable)*” is subject to certain notification and recordkeeping requirements under the USEPA’s Hospital, Medical, and Infectious Waste Incinerators (HMIWI) rules. Ideally, as an air quality agency, our preference would be that any unit selected meet the requirements of 15A NCAC 02D .1208 “Other Incinerators”. Many human crematoriums are subject to this rule which requires combustion gasses be subject to a minimum temperature of 1,600 °F for a period of not less than one second.

For the purposes of an HPAI or ASF outbreak, where time is of the utmost importance, and where it has been determined that the application of an incinerator is necessary for the control of the disease, the incinerator is exempt from air permitting requirements and the requirements of 15A NCAC 02D .1200. The exemption, allowed under 02D .1201(b)(4) provided it meets the requirements of subparagraphs (A) through (D) of that paragraph. These requirements are:

- The incinerator is located on a farm and is operated by the farm or farm operator;
- The incinerator is used solely for the disposal of animals on the farm where the incinerator is located;
- The incinerator is not charged at a rate that exceeds the design capacity; and
- The incinerator meets both visible emission and odor regulations.

The following is a limited selection of large, mobile, animal incineration units:

Rapid1000 Mobile



<https://addfield.com/machines/large-scale-mobile-incinerators-rapid1000-mobile/>



High Capacity Incinerator - Hurikan 1000

<https://www.wastespectrum.com/hurikan-1000>



<http://www.incinerators-ati.com/rotary-kilns.php>



<https://www.inciner8.com/animal-incinerator/I8-140A>

EPA, USDA and NCDA&CS conducted field tests of a gasifier designed for use in large animal mortalities. Three test runs were conducted with the unit in Duplin Co., NC. A report of their findings can be found here https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NHSRC&dirEntryId=332890

In addition, a mobile rendering plant designed for high mortality events can be seen here <https://celitron.com/en/products/agri-waste-solution/mobile>