

## SECTION .1200 - CONTROL OF EMISSIONS FROM INCINERATORS

### 15A NCAC 02D .1201 PURPOSE AND SCOPE

- (a) This Section sets forth rules for the control of the emissions of air pollutants from incinerators.
- (b) The rules in this Section apply to all types of incinerators as defined by 15A NCAC 02D .0101(21), including incinerators with heat recovery and industrial incinerators.
- (c) The rules in this Section do not apply to:
- (1) afterburners, flares, fume incinerators, and other similar devices used to reduce the emissions of air pollutants from processes, whose emissions shall be regulated as process emissions;
  - (2) any boilers or industrial furnaces that burn waste as a fuel, except hazardous waste as defined in 40 CFR 260.10;
  - (3) air curtain burners, which shall comply with Section .1900 of this Subchapter; or
  - (4) incinerators used to dispose of dead animals or poultry, that meet 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 Rule .0521 (visible emissions) and .1806 (odorous emissions) of this Subchapter.
- (d) If an incinerator is more than one type of incinerator, then the following order shall be used to determine the standards and requirements to apply:
- (1) hazardous waste incinerators;
  - (2) sewage sludge incinerators;
  - (3) sludge incinerators;
  - (4) municipal waste combustors;
  - (5) commercial and industrial solid waste incinerators;
  - (6) hospital, medical, or infectious waste incinerators (HMIWIs);
  - (7) other solid waste incinerators;
  - (8) conical incinerators;
  - (9) crematory incinerators; and
  - (10) other incinerators.
- (e) In addition to any permit that may be required under 15A NCAC 02Q, Air Quality Permits Procedures, a permit may be required by the Division of Waste Management as determined by the permitting rules enforced by the Division of Waste Management.
- (f) Referenced document SW-846 "Test Methods for Evaluating Solid Waste," Third Edition, cited by rules in this Section is hereby incorporated by reference and does not include subsequent amendments or editions. A copy of this document is available for inspection at the North Carolina Department of Environment and Natural Resources Library located at 512 North Salisbury Street, Raleigh, NC 27603. Copies of this document may be obtained through the US Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, or by calling (202) 783-3238. The cost of this document is three hundred nineteen dollars (\$319.00).

*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.

## 15A NCAC 02D .1202 DEFINITIONS

(a) For the purposes of this Section, the definitions at G.S. 143-212 and 143-213 and 15A NCAC 02D .0101 shall apply, and in addition, 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) "Class I municipal waste combustor" means a small municipal waste combustor located at a municipal waste combustion plant with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste.
- (2) "Commercial and industrial solid waste incinerator" (CISWI) or "commercial and industrial solid waste incineration unit" means any combustion device, except air pollution control devices, that combusts commercial and industrial waste.
- (3) "Commercial and industrial waste" means solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air).
- (4) "Co-fired combustor (as defined in 40 CFR Part 60, Subpart Ec)" means a unit combusting hospital, medical, or infectious waste with other fuels or wastes (e.g., coal, municipal solid waste) and subject to an enforceable requirement limiting the unit to combusting a fuel feed stream, 10 percent or less of the weight of which is comprised, in aggregate, of hospital, medical, or infectious waste as measured on a calendar quarter basis. For the purposes of this definition, pathological waste, chemotherapeutic waste, and low-level radioactive waste are considered "other" wastes when calculating the percentage of hospital, medical, or infectious waste combusted.
- (5) "Crematory incinerator" means any incinerator located at a crematory regulated under 21 NCAC 34C that is used solely for the cremation of human remains.
- (6) "Construction and demolition waste" means wood, paper, and other combustible waste, except for hazardous waste and asphaltic material, resulting from construction and demolition projects.
- (7) "Dioxin and Furan" means tetra- through octa- chlorinated dibenzo-p-dioxins and dibenzofurans.
- (8) "Hazardous waste incinerator" means an incinerator regulated under 15A NCAC 13A .0101 through .0119, 40 CFR 264.340 to 264.351, Subpart O, or 265.340 to 265.352, Subpart O.
- (9) "Hospital, medical and infectious waste incinerator (HMIWI)" means any device that combusts any amount of hospital, medical and infectious waste.
- (10) "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.
- (11) "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.
- (12) "Institutional facility" means a land-based facility owned or operated by an organization having a governmental, educational, civic, or religious purpose, such as a school, hospital, prison, military installation, church, or other similar establishment or facility.
- (13) "Institutional waste" means solid waste that is combusted at any institutional facility using controlled flame combustion in an enclosed, distinct operating unit:
  - (A) whose design does not provide for energy recovery and
  - (B) which is operated without energy recovery or operated with only waste heat recovery.Institutional waste also means solid waste combusted on site in an air curtain incinerator that is a distinct operating unit of any institutional facility.
- (14) "Institutional waste incineration unit" means any combustion unit that combusts institutional waste and is a distinct operating unit of the institutional facility that generated the waste.
- (15) "Large municipal waste combustor" means each municipal waste combustor unit with a combustion capacity greater than 250 tons per day of municipal solid waste.
- (16) "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 or 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, and other blood components, and their containers, which 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 does not include:
- (i) hazardous waste identified or listed under 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, once 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).
- (17) "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.
- (18) "Municipal waste combustor (MWC) or municipal waste combustor unit" means a municipal waste combustor as defined in 40 CFR 60.51b.

- (19) "Municipal waste combustor plant" means one or more designated units at the same location.
- (20) "Municipal waste combustor unit capacity" means the maximum charging rate of a municipal waste combustor unit expressed in tons per day of municipal solid waste combusted, calculated according to the procedures under 40 CFR 60.58b(j). Section 60.58b(j) includes procedures for determining municipal waste combustor unit capacity for continuous and batch feed municipal waste combustors.
- (21) "Municipal-type solid waste (MSW) or Municipal Solid Waste" means municipal-type solid waste defined in 40 CFR 60.51b.
- (22) "POTW" means a publicly owned treatment works as defined in 40 CFR 501.2.
- (23) "Other solid waste incineration unit" or "OSWI unit" means either a very small municipal waste combustion unit or an institutional waste incineration unit, as defined in this Paragraph.
- (24) "Same Location" means the same or contiguous property that is under common ownership or control including properties that are separated only by a street, road, highway, or other public right-of-way. Common ownership or control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, subdivision, or any combination thereof including any municipality or other governmental unit, or any quasi-governmental authority (e.g., a public utility district or regional waste disposal authority).
- (25) "Sewage sludge incinerator" means any incinerator regulated under 40 CFR Part 503, Subpart E.
- (26) "Sludge incinerator" means any incinerator regulated under Rule .1110 of this Subchapter but not under 40 CFR Part 503, Subpart E.
- (27) "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.
- (28) "Small municipal waste combustor" means each municipal waste combustor unit with a combustion capacity that is greater than 11 tons per day but not more than 250 tons per day of municipal solid waste.
- (29) "Small remote HMIWI" means any small HMIWI which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (SMSA) and which 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.
- (30) "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. The referenced document cited by this Item is hereby incorporated by reference and does not include subsequent amendments or editions. A copy of this document may be obtained from the Division of Air Quality, P.O. Box 29580, Raleigh, North Carolina 27626-0580 at a cost of 10 cents (\$0.10) per page or may be obtained through the internet at <http://www.census.gov/population/estimates/metro-city/93mfips.txt>.
- (31) "Very small municipal waste combustion unit" means any municipal waste combustion unit that has the capacity to combust less than 35 tons per day of municipal solid waste or refuse-derived fuel, as determined by the calculations in 40 CFR 60.3076.

(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.

*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.*

**15A NCAC 02D .1203 HAZARDOUS WASTE INCINERATORS**

- (a) Applicability. This Rule applies to hazardous waste incinerators.
- (b) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 260.10, 270.2, and 40 CFR 63.1201 shall apply in addition to the definitions in Rule .1202 of this Section.
- (c) Emission Standards.
  - (1) The emission standards in this Paragraph apply to all incinerators subject to this Rule except where Rule .0524, .1110, or .1111 of this Subchapter applies. However, when Subparagraphs (8) or (9) of this Paragraph or Paragraph (h) of this Rule and Rules .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant shall apply, notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary.
  - (2) Particulate Matter. Any incinerator subject to this Rule shall meet the particulate matter emission requirements of 40 CFR 264.343(c).
  - (3) Visible Emissions. Any incinerator subject to this Rule shall comply with Rule .0521 of this Subchapter for the control of visible emissions.
  - (4) Sulfur Dioxide. Any incinerator subject to this Rule shall comply with Rule .0516 of this Subchapter for the control of sulfur dioxide emissions.
  - (5) Odorous Emissions. Any incinerator subject to this Rule shall comply with Rule .1806 of this Subchapter for the control of odorous emissions.
  - (6) Hydrogen Chloride. Any incinerator subject to this Rule shall meet the hydrogen chloride emission requirements of 40 CFR 264.343(b). Compliance with this Subparagraph shall be determined by averaging emissions over a one-hour period.
  - (7) Mercury Emissions. The emissions of mercury and mercury compounds from the stack or chimney of 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 any incinerator subject to this Rule shall demonstrate compliance with Section .1100 of this Subchapter according to 15A NCAC 02Q .0700 for the control of toxic emissions.
  - (9) Ambient Standards.
    - (A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following ambient air quality standards, which are an annual average, in milligrams per cubic meter at 77 degrees F (25 degrees C) and 29.92 inches (760 mm) of mercury pressure and which are increments above background concentrations, shall apply aggregately to all incinerators at a facility subject to this Rule:

(i)	arsenic and its compounds	$2.3 \times 10^{-7}$
(ii)	beryllium and its compounds	$4.1 \times 10^{-6}$
(iii)	cadmium and its compounds	$5.5 \times 10^{-6}$
(iv)	chromium (VI) and its compounds	$8.3 \times 10^{-8}$
    - (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 Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the requirements of Rule .0533 of this Subchapter.
    - (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 Rules .0524, .1110, or .1111 of this Subchapter requires more restrictive rates.
- (d) Operational Standards.
  - (1) The operational standards in this Rule do not apply to any incinerator subject to this Rule when applicable operational standards in Rules .0524, .1110, or .1111 of this Subchapter apply.
  - (2) Hazardous waste incinerators shall comply with 15A NCAC 13A .0101 through .0119, which are administered and enforced by the Division of Waste Management.
- (e) Test Methods and Procedures.
  - (1) The test methods and procedures described in Section .2600 of this Subchapter 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 may require the owner or operator to test his incinerator to demonstrate compliance with the emission standards listed in Paragraph (c) of this Rule.

(f) 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 Section .0600 of this Subchapter, 40 CFR 270.31, and 40 CFR 264.347.

- (2) The owner or operator of an incinerator subject to the requirements of this Rule shall maintain and operate a continuous temperature monitoring and recording device for the primary chamber and, where there is a secondary chamber, for the secondary chamber. 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 pH for wet scrubber systems and 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 may 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 as necessary to determine proper operation of the incinerator.

(g) Excess Emissions and Start-up and Shut-down. All incinerators subject to this Rule shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter.

(h) Incinerators subject to this Rule shall comply with the emission limits, operational specifications, and other restrictions or conditions determined by the Division of Waste Management under 40 CFR 270.32, establishing Resource Conservation and Recovery Act permit conditions, as necessary to protect human health and the environment.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);  
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Amended Eff. June 1, 2008; August 1, 2002; July 1, 2000; July 1, 1999; July 1, 1998; April 1, 1995.*

## **15A NCAC 02D .1204 SEWAGE SLUDGE AND SLUDGE INCINERATORS**

(a) Applicability. This Rule applies to sewage sludge and sludge incinerators.

(b) Definitions. For the purpose of this Rule, the definitions in 40 CFR Part 503 shall apply in addition to the definitions in Rule .1202 of this Section.

(c) Emission Standards.

- (1) The emission standards in this Paragraph apply to any incinerator subject to this Rule except where Rules .0524, .1110, or .1111 of this Subchapter applies. However when Subparagraphs (11) or (12) of this Paragraph and Rules .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant shall apply, notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary.
- (2) Particulate Matter. Any 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 any stack or chimney of any 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 is 0.2 pounds per hour. For refuse charge rates of 2000 pounds per hour or greater the allowable emission rate shall be 4.0 pounds per hour. Compliance with this Part shall be determined by averaging emissions over a block three-hour period.
  - (B) Instead of meeting the standards in Part (A) of this Subparagraph, the owner or operator of any 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 is multiplied by 12 and divided by the measured percent carbon dioxide. Compliance with this Part shall be determined by averaging emissions over a block three-hour period.
- (3) Visible Emissions. Any incinerator subject to this Rule shall comply with Rule .0521 of this Subchapter for the control of visible emissions.
- (4) Sulfur Dioxide. Any incinerator subject to this Rule shall comply with Rule .0516 of this Subchapter for the control of sulfur dioxide emissions.
- (5) Odorous Emissions. Any incinerator subject to this Rule shall comply with Rule .1806 of this Subchapter for the control of odorous emissions.
- (6) Hydrogen Chloride. Any incinerator subject to this Rule shall control hydrogen chloride emissions 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 from any incinerator subject to this Rule are regulated under 15A NCAC 02D .1110.
- (8) Beryllium Emissions. Emissions of beryllium from any incinerator subject to this Rule are regulated under 15A NCAC 02D .1110.
- (9) Lead Emissions. 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).
- (10) Other Metal Emissions. 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).
- (11) Toxic Emissions. The owner or operator of any incinerator subject to this Rule shall demonstrate compliance with Section .1100 of this Subchapter according to 15A NCAC 02Q .0700.
- (12) Ambient Standards.
  - (A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following ambient air quality standards, which are an annual average, in milligrams per cubic meter at 77 degrees F (25 degrees C) and 29.92 inches (760 mm) of mercury pressure and

which are increments above background concentrations, shall apply aggregately to all incinerators at a facility subject to this Rule:

(i)	arsenic and its compounds	$2.3 \times 10^{-7}$
(ii)	beryllium and its compounds	$4.1 \times 10^{-6}$
(iii)	cadmium and its compounds	$5.5 \times 10^{-6}$
(iv)	chromium (VI) and its compounds	$8.3 \times 10^{-8}$

- (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 Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the requirements of Rule .0533 of this Subchapter.
- (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 Rules .0524, .1110, or .1111 of this Subchapter requires more restrictive rates.

(d) Operational Standards.

- (1) The operational standards in this Rule do not apply to any incinerator subject to this Rule when applicable operational standards in Rules .0524, .1110, or .1111 of this Subchapter apply.
- (2) Sewage Sludge Incinerators.
- (A) The maximum combustion temperature for a sewage sludge incinerator shall be specified as a permit condition and be based on information obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies as needed to comply with .1204(c).
- (B) The values for the operational parameters for the sewage sludge incinerator air pollution control device(s) shall be specified as a permit condition and be based on information obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies as needed to comply with .1204(c).
- (C) The monthly average concentration for total hydrocarbons, or 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 monitor required in Part (f)(3)(A) of this Rule.
- (3) Sludge Incinerators. The combustion temperature in a sludge incinerator shall not be less than 1200°F. The maximum oxygen content of the exit gas from a sludge incinerator stack shall be:
- (A) 12 percent (dry basis) for a multiple hearth sludge incinerator;
- (B) seven percent (dry basis) for a fluidized bed sludge incinerator;
- (C) nine percent (dry basis) for an electric sludge incinerator; and
- (D) 12 percent (dry basis) for a rotary kiln sludge incinerator.

(e) Test Methods and Procedures.

- (1) The test methods and procedures described in Section .2600 of this Subchapter 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 may require the owner or operator to test his incinerator to demonstrate compliance with the emission standards listed in Paragraph (c) of this Rule.
- (3) The owner or operator of a sewage sludge incinerator shall perform testing to determine pollutant control efficiencies of any pollution control equipment and obtain information on operational parameters, including combustion temperature, to be specified as a permit condition.

(f) 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 Section .0600 of this Subchapter.
- (2) The owner or operator of an incinerator subject to the requirements of this Rule shall maintain and operate a continuous temperature monitoring and recording device for the primary chamber and, where



there is a secondary chamber, for the secondary chamber. 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 pH for wet scrubber systems and rate of alkaline injection for dry scrubber systems.

- (3) In addition to the requirements of Subparagraphs (1) and (2) of this Paragraph, the owner or operator of a sewage sludge incinerator shall:
- (A) install, operate, and maintain, for each incinerator, continuous emission monitors to determine the following:
    - (i) 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;
    - (ii) oxygen content of the incinerator stack exit gas; and
    - (iii) moisture content of the incinerator stack exit gas;
  - (B) monitor the concentration of beryllium and mercury from the sludge fed to the incinerator at least as frequently as required by Rule .1110 of this Subchapter but in no case less than once per year;
  - (C) monitor the concentrations of arsenic, cadmium, chromium, lead, and nickel in the sewage sludge fed to the incinerator at least as frequently as required under 40 CFR 503.46(a)(2) and (3);
  - (D) determine mercury emissions by use of Method 101 or 101A of 40 CFR Part 61, Appendix B, where applicable to 40 CFR 61.55(a);
  - (E) maintain records of all material required under Paragraph (e) of this Rule and this Paragraph according to 40 CFR 503.47; and
  - (F) for class I sludge management facilities (as defined in 40 CFR 503.9), POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve a population of 10,000 people or greater, submit the information recorded in Part (D) of this Subparagraph to the Director on or before February 19 of each year.
- (g) Excess Emissions and Start-up and Shut-down. All incinerators subject to this Rule shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter.

*History Note:* Authority G.S. 143-215.3(a)(1); 143-215.107(a)(4),(5);  
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## **15A NCAC 02D .1205 LARGE MUNICIPAL WASTE COMBUSTORS**

- (a) Applicability. This Rule applies to large municipal waste combustors as defined in Rule .1202 of this Section.
- (b) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 60.31b (except administrator means the Director of the Division of Air Quality) apply in addition to the definitions in Rule .1202 of this Section.
- (c) Emission Standards.

- (1) The emission standards in this Paragraph apply to any municipal waste combustor subject to the requirements of this Rule except where Rule .0524, .1110, or .1111 of this Subchapter applies. However, when Subparagraphs (13) or (14) of this Paragraph and Rule .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant apply, notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary.
- (2) Particulate Matter. Emissions of particulate matter from each municipal waste combustor shall not exceed 25 milligrams per dry standard cubic meter corrected to seven percent oxygen.
- (3) Visible Emissions. The emission limit for opacity from any municipal waste combustor shall not exceed 10 percent (6-minute average).
- (4) Sulfur Dioxide. Emissions of sulfur dioxide from each municipal waste combustor shall be reduced by at least 75 percent by weight or volume or to no more than 29 parts per million by volume, whichever is less stringent. Percent reduction shall be determined from continuous emissions monitoring data and according to Reference Method 19, Section 12.5.4 of 40 CFR Part 60 Appendix A-7. Compliance with either standard is based on a 24-hour daily block geometric average of concentration data corrected to seven percent oxygen (dry basis).
- (5) Nitrogen Oxide. Emissions of nitrogen oxides from each municipal waste combustor shall not exceed the emission limits in Table 1 to Subpart Cb of Part 60 "Nitrogen Oxide Guidelines for Designated Facilities." Nitrogen oxide emissions averaging is allowed as specified in 40 CFR 60.33b(d)(1)(i) through (d)(1)(v). If nitrogen oxide emissions averaging is used, the emissions shall not exceed Table 2 to Subpart Cb of Part 60 "Nitrogen Oxides Limits for Existing Designated Facilities Included in an Emission Averaging Plan at a Municipal Waste Combustor Plant."
- (6) Odorous Emissions. Each municipal waste combustor shall comply with Rule .1806 of this Subchapter for the control of odorous emissions.
- (7) Hydrogen Chloride. Emissions of hydrogen chloride from each municipal waste combustor shall be reduced by at least 95 percent (simultaneously at the inlet and outlet data sets with a minimum of three valid test periods, the length of each test period shall be a minimum of one-hour); or shall not exceed, as determined by Reference Method 26 or 26A of 40 CFR Part 60 Appendix A-8, more than 29 parts per million volume, whichever is less stringent. Compliance with this Subparagraph shall be determined by averaging emissions over three 1-hour test runs, with paired data sets for percent reduction and correction to seven percent oxygen (dry basis).
- (8) Mercury Emissions. Emissions of mercury from each municipal waste combustor shall be reduced by at least 85 percent by weight of potential mercury emissions (simultaneously at the inlet and outlet data sets with a minimum of three valid test periods, the length of each test period shall be a minimum of one-hour); or shall not exceed, as determined by Reference Method 29 of 40 CFR Part 60 Appendix A-8 or ASTM D6784-02 (Ontario Hydro method), more than 50 micrograms per dry standard cubic meter, whichever is less stringent. Compliance with this Subparagraph shall be determined by averaging emissions over three 1-hour test runs corrected to seven percent oxygen (dry basis).
- (9) Lead Emissions. Emissions of lead from each municipal waste combustor shall not exceed, as determined by Reference Method 29 of 40 CFR Part 60 Appendix A-8, 400 micrograms per dry standard cubic meter and corrected to seven percent oxygen.
- (10) Cadmium Emissions. Emissions of cadmium from each municipal waste combustor shall not exceed, as determined by Reference Method 29 of 40 CFR Part 60 Appendix A-8, 35 micrograms per dry standard cubic meter and corrected to seven percent oxygen.
- (11) Dioxins and Furans. Emissions of dioxins and furans from each municipal waste combustor:
  - (A) that employs an electrostatic precipitator-based emission control system, shall not exceed 35 nanograms per dry standard cubic meter (total mass dioxins and furans).
  - (B) that does not employ an electrostatic precipitator-based emission control system, shall not exceed 30 nanograms per dry standard cubic meter (total mass dioxins and furans). Compliance with this Subparagraph shall be determined by averaging emissions over three test runs with a minimum of four hour duration per test run, performed in accordance with

Reference Method 23 of 40 CFR Part 60 Appendix A-7, and corrected to seven percent oxygen.

- (12) Fugitive Ash.
    - (A) On or after the date on which the initial performance test is completed, no owner or operator of a municipal waste combustor shall cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of five percent of the observation period (i.e., nine minutes per three-hour block period), as determined by visible emission observations using Reference Method 22 of 40 CFR 60 Appendix A-7, except as provided in Part (B) of this Subparagraph. Compliance with this Part shall be determined from at least three one-hour observation periods when the facility transfers ash from the municipal waste combustor to the area where the ash is stored or loaded into containers or trucks.
    - (B) The emission limit specified in Part (A) of this Subparagraph covers visible emissions discharged to the atmosphere from buildings or enclosures, not the visible emissions discharged inside of the building or enclosures, of ash conveying systems.
  - (13) Toxic Emissions. The owner or operator of a municipal waste combustor shall demonstrate compliance with Section .1100 of this Subchapter according to 15A NCAC 02Q .0700.
  - (14) Ambient Standards.
    - (A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following are annual average ambient air quality standards in milligrams per cubic meter at 77 degrees F (25 degrees C) and 29.92 inches (760 mm) of mercury pressure:
      - (i) arsenic and its compounds 2.3x10<sup>-7</sup>
      - (ii) beryllium and its compounds 4.1x10<sup>-6</sup>
      - (iii) cadmium and its compounds 5.5x10<sup>-6</sup>
      - (iv) chromium (VI) and its compounds 8.3x10<sup>-8</sup>These are increments above background concentrations and apply aggregately to all municipal waste combustors at a facility subject to this Rule.
    - (B) The owner or operator of a facility with municipal waste combustors 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 Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the good engineering practice stack height requirements of Rule .0533 of this Subchapter.
    - (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 municipal waste combustors as their allowable emission limits unless Rule .0524, .1110, or .1111 of this Subchapter requires more restrictive rates.
  - (15) The emission standards of Subparagraphs (1) through (14) of this Paragraph apply at all times except during periods of municipal waste combustor startup, shutdown, or malfunction that last no more than three hours.
- (d) Operational Standards.
- (1) The operational standards in this Rule do not apply to any municipal waste combustor when applicable operational standards in Rule .0524, .1110, or .1111 of this Subchapter apply.
  - (2) Each municipal waste combustor shall meet the following operational standards:
    - (A) The concentration of carbon monoxide at the municipal waste combustor outlet shall not exceed the applicable emissions level contained in Table 3 to Subpart Cb of Part 60 "Municipal Waste Combustor Operating Guidelines."
    - (B) The load level shall not exceed 110 percent of the maximum demonstrated municipal waste combustor load determined from the highest 4-hour block arithmetic average achieved during four consecutive hours in the course of the most recent dioxins and furans stack test that demonstrates compliance with the emission limits of Paragraph (c) of this Rule.
    - (C) The combustor operating temperature measured at the particulate matter control device inlet shall not exceed 63 degrees F above the maximum demonstrated particulate matter control device temperature from the highest 4-hour block arithmetic average measured at the inlet of the particulate matter control device during four consecutive hours in the course of the most

recent dioxins and furans stack test that demonstrates compliance with the emission limits of Paragraph (c) of this Rule.

- (D) The owner or operator of a municipal waste combustor with activated carbon control system to control dioxins and furans or mercury emissions shall maintain an eight-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins and furans or mercury test.
- (E) The owner or operator of a municipal waste combustor is exempted from limits on load level, temperature at the inlet of the particular matter control device, and carbon feed rate during:
  - (i) the annual tests for dioxins and furans;
  - (ii) the annual mercury tests for carbon feed requirements only;
  - (iii) the two weeks preceding the annual tests for dioxins and furans;
  - (iv) the two weeks preceding the annual mercury tests (for carbon feed rate requirements only); and
  - (v) any activities to improve the performance of the municipal waste combustor or its emission control including performance evaluations and diagnostic or new technology testing.

The municipal waste combustor load limit continues to apply and remains enforceable until and unless the Director grants a waiver in writing.

- (F) The limits on load level for a municipal waste combustor are waived when the Director concludes that the emission control standards would not be exceeded based on test activities to evaluate system performance, test new technology or control technology, perform diagnostic testing, perform other activities to improve the performance; or perform other activities to advance the state of the art for emissions controls.
- (3) The operational standards of this Paragraph apply at all times except during periods of municipal waste combustor startup, shutdown, or malfunction that last no more than three hours, with the following exception: For the purpose of compliance with the carbon monoxide emission limits in Subparagraph (2) of this Paragraph, if a loss of boiler water level control (e.g., boiler waterwall tube failure) or a loss of combustion air control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction according to 15A NCAC 02D .0535, the duration of the malfunction period is limited to 15 hours per occurrence. During such periods of malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of Paragraph (f) of this Rule.

(e) Test Methods and Procedures.

- (1) The test methods and procedures described in Section .2600 of this Subchapter and in Parts (A) through (K) in this Subparagraph shall be used to demonstrate compliance:
  - (A) 40 CFR 60.58b(b) for continuous emissions monitoring of oxygen or carbon monoxide at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides are monitored;
  - (B) 40 CFR 60.58b(c) for determination of compliance with particulate and opacity emission limits. The data from the continuous opacity monitoring system shall not be used to determine compliance with the opacity limit.
  - (C) 40 CFR 60.58b(d) for determination of compliance with emission limits for cadmium, lead and mercury;
  - (D) 40 CFR 60.58b(e) for determination of compliance with sulfur dioxide emission limits from continuous emissions monitoring data;
  - (E) 40 CFR 60.58b(f) for determination of compliance with hydrogen chloride emission limits;
  - (F) 40 CFR 60.58b(g) for determination of compliance with dioxin/furan emission limits;
  - (G) 40 CFR 60.58b(h) for determination of compliance with nitrogen oxides limits from continuous emission monitoring data;
  - (H) 40 CFR 60.58b(i) for determination of compliance with operating requirements under Paragraph (d);
  - (I) 40 CFR 60.58b(j) for determination of municipal waste combustor capacity;
  - (J) 40 CFR 60.58b(k) for determination of compliance with the fugitive ash emission limit; and
  - (K) 40 CFR 60.58b(m)(1) to determine parametric monitoring for carbon injection control systems.

- (2) Method 29 of 40 CFR Part 60 Appendix A-8 shall be used to determine emission rates for metals. However, Method 29 shall be used only to collect sample for chromium (VI), and SW 846 Method 0060 shall be used for the analysis.
  - (3) The owner or operator shall conduct initial stack tests to measure the emission levels of dioxins and furans, cadmium, lead, mercury, beryllium, arsenic, chromium (VI), particulate matter, opacity, hydrogen chloride, and fugitive ash. Annual stack tests for the same pollutants except beryllium, arsenic, and chromium (VI) shall be conducted no less than 9 months and no more than 15 months since the previous test and must complete five performance tests in each 5-year calendar period.
  - (4) The testing frequency for dioxin and furan may be reduced to the alternative testing schedule specified in 40 CFR 60.58b(g)(5)(iii) if the owner or operator notifies the Director of the intent to begin the reduced dioxin and furan performance testing schedule during the following calendar year.
  - (5) The owner or operator of an affected facility may request that compliance with the dioxin and furan emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in 40 CFR 60.58b(b)(6). The Director will approve the request after verification of the correct calculations that provides the relationship between oxygen and carbon dioxide levels and of the completeness of stack test data used to establish the relationship between oxygen and carbon dioxide levels.
  - (6) The Director may require the owner or operator of any municipal waste combustor subject to this Rule to test his municipal waste combustor to demonstrate compliance with the emission standards in Paragraph (c) of this Rule.
- (f) Monitoring, Recordkeeping, and Reporting.
- (1) The owner or operator of a municipal waste combustor shall comply with the monitoring, recordkeeping, and reporting requirements in Section .0600 of this Subchapter.
  - (2) The owner or operator of a municipal waste combustor that has installed air pollution abatement equipment to reduce emissions of hydrogen chloride shall install, operate, and maintain continuous monitoring equipment to measure pH for wet scrubber systems and rate of alkaline injection for dry scrubber systems.
  - (3) The owner or operator of a municipal waste combustor shall:
    - (A) install, calibrate, operate, and maintain, for each municipal waste combustor, continuous emission monitors to determine:
      - (i) sulfur dioxide concentration;
      - (ii) nitrogen oxides concentration;
      - (iii) oxygen or carbon dioxide concentration;
      - (iv) opacity according to 40 CFR 60.58b(c); and
      - (v) carbon monoxide at the combustor outlet and record the output of the system and shall follow the procedures and methods specified in 40 CFR 60.58b(i)(3);
    - (B) monitor the load level of each municipal waste combustor according to 40 CFR 60.58b(i)(6);
    - (C) monitor the temperature of each municipal waste combustor flue gases at the inlet of the particulate matter air pollution control device according to 40 CFR 60.58b(i)(7);
    - (D) monitor carbon feed rate of each municipal waste combustor carbon delivery system and total plant predicted quarterly usage if activated carbon is used to abate dioxins and furans or mercury emissions according to 40 CFR 60.58b(m)(2) and (m)(3);
    - (E) maintain records of the information listed in 40 CFR 60.59b(d)(1) through (d)(15) for a period of at least five years;
    - (F) following the first year of municipal combustor operation, submit an annual report specified in 40 CFR 60.59b(g) for municipal waste combustors no later than February 1 of each year following the calendar year in which the data were collected. Once the municipal waste combustor is subject to permitting requirements under 15A NCAC 02Q .0500, Title V Procedures, the owner or operator of an affected facility shall submit these reports semiannually; and
    - (G) submit a semiannual report specified in 40 CFR 60.59b(h) for each municipal waste combustor for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified in this Section, according to the schedule specified in 40 CFR 60.59b(h)(6).

(g) Excess Emissions and Start-up and Shut-down. All municipal waste combustors shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter.

(h) Operator Certification.

- (1) Each facility operator and shift supervisor shall have completed full certification or scheduled a full certification exam with the American Society of Mechanical Engineers (ASME QRO-1-1994).
- (2) The requirement to complete full certification or schedule a full certification exam with the American Society of Mechanical Engineers (ASME QRO-1-1994) does not apply to chief facility operators, shift supervisors, and control room operators who have obtained full certification from the American Society of Mechanical Engineers on or before July 1, 1998.
- (3) No owner or operator of an affected facility shall allow the facility to be operated at any time unless one of the following persons is on duty and at the affected facility;
  - (A) a fully certified chief facility operator;
  - (B) a provisionally certified chief facility operator who is scheduled to take the full certification exam within six months;
  - (C) a fully certified shift supervisor; or
  - (D) a provisionally certified shift supervisor who is scheduled to take the full certification exam within six months.
- (4) Operator Substitution
  - (A) A provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor if both are off site for 12 hours or less and no other certified operator is on site.
  - (B) If the certified chief facility operator and certified shift supervisor are both off site for longer than 12 hours but for two weeks or less, then the owner or operator of the affected facility must record the period when the certified chief facility operator and certified shift supervisor are off site and include that information in the annual report as specified under 60.59b(g)(5).
  - (C) If the certified chief facility operator and certified shift supervisor are off site for more than two weeks, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor. However, the owner or operator of the affected facility must notify the Director in writing and state what caused the absence and actions are being taken to ensure that a certified chief facility operator or certified shift supervisor is on site as expeditiously as practicable. The notice shall be delivered within 30 days of the start date of when the provisionally certified control room operator takes over the duties of the certified chief facility operator or certified shift supervisor. A status report and corrective action summary shall be submitted to the Director every four weeks following the initial notification.
  - (D) If the Director provides notice that the status report or corrective action summary is disapproved, the municipal waste combustor may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Director withdraws the disapproval, municipal waste combustor operation may continue.
  - (E) The Director shall disapprove the status report or corrective action summary report, described in Part (C) of this Subparagraph, if operating permit requirements are not being met, the status and corrective action reports indicate that the effort to have a certified chief facility operator or certified shift supervisor on site as expeditiously as practicable is not being met, or the reports are not delivered in a timely manner.
- (5) A provisionally certified operator who is newly promoted or recently transferred to a shift supervisor position or a chief facility operator position at the municipal waste combustion facility may perform the duties of the certified chief facility operator or certified shift supervisor without notice to, or approval by, the Director for up to six months before taking the ASME QRO - Certification for Municipal Solid Waste Combustion Facilities Operators.
- (6) If the certified chief facility operator and certified shift supervisor are both unavailable, a provisionally certified control room operator who is scheduled to take the full certification exam, may fulfill the requirements of this Subparagraph.

The referenced ASME exam (ASME QRO-1-1994), "Standard for the Qualification and Certification of Resource Recovery Facility Operators," in this Paragraph is hereby incorporated by reference and includes subsequent amendments

and editions. Copies of the referenced ASME exam may be obtained from the American Society of Mechanical Engineers (ASME), 22 Law Drive, Fairfield, NJ 07007, at a cost of forty-nine dollars (\$49.00).

(i) Training.

- (1) The owner or operator of each municipal waste combustor shall develop and update on a yearly basis a site-specific operating manual that shall address the elements of municipal waste combustor operation specified in 40 CFR 60.54b(e)(1) through (e)(11). The operating manual shall be kept in a readily accessible location for all persons required to undergo training under Subparagraph (2) of this Paragraph. The operating manual and records of training shall be available for inspection by the personnel of the Division on request.
- (2) The owner or operator of the municipal waste combustor plant shall establish a training program to review the operating manual according to the schedule specified in Parts (A) and (B) of this Subparagraph with each person who has responsibilities affecting the operation of the facility including chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane and load handlers:
  - (A) A date prior to the day when the person assumes responsibilities affecting municipal waste combustor operation; and
  - (B) Annually, following the initial training required by Part (A) of this Subparagraph.

*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;  
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Temporary Amendment Eff. March 1, 2003;  
Temporary Amendment Expired December 12, 2003;  
Amended Eff. July 1, 2010; April 1, 2004.*

**15A NCAC 02D .1206 HOSPITAL, MEDICAL, AND INFECTIOUS WASTE INCINERATORS**

(a) Applicability. This Rule applies to any hospital, medical, and infectious waste incinerator (HMIWI), except:

- (1) any HMIWI required to have a permit under Section 3005 of the Solid Waste Disposal Act;
- (2) any pyrolysis unit;
- (3) any cement kiln firing hospital waste or medical and infectious waste;
- (4) any 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 are not considered a modification and do not result in an existing HMIWI becoming subject to the provisions of 40 CFR Part 60, Subpart Ec;
- (5) any 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 is burned; or
- (6) any 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 Rule .1202 of this Section.

(c) Emission Standards.

- (1) The emission standards in this Paragraph apply to all HMIWIs subject to this Rule except where Rules .0524, .1110, or .1111 of this Subchapter applies. However, when Subparagraphs (7) or (8) of this Paragraph and Rules .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant shall apply, notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary;
- (2) Prior to July 1, 2013, 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 1A of Subpart Ce of 40 CFR Part 60;
- (3) On or after July 1, 2013, 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;
- (4) 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;
- (5) Each 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, and which burns less than 2,000 pounds per week of hospital waste and medical or infectious waste shall not exceed emission standards listed in Table 2A of Subpart Ce of 40 CFR Part 60 before July 1, 2013. On or after July 1, 2013, each small remote HMIWI shall not exceed emission standards listed in Table 2B of Subpart Ce of 40 CFR Part 60;
- (6) Visible Emissions. Prior to July 1, 2013, 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 10 percent opacity (6-minute block average). On or after July 1, 2013, 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);
- (7) Toxic Emissions. The owner or operator of any HMIWI subject to this Rule shall demonstrate compliance with Section .1100 of this Subchapter according to 15A NCAC 02Q .0700; and
- (8) Ambient Standards.
  - (A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following ambient air quality standards, which are an annual average, in milligrams per cubic



meter at 77 degrees F (25 degrees C) and 29.92 inches (760 mm) of mercury pressure, and which are increments above background concentrations, shall apply aggregately to all HMIWIs at a facility subject to this Rule:

(i)	arsenic and its compounds	$2.3 \times 10^{-7}$
(ii)	beryllium and its compounds	$4.1 \times 10^{-6}$
(iii)	cadmium and its compounds	$5.5 \times 10^{-6}$
(iv)	chromium (VI) and its compounds	$8.3 \times 10^{-8}$ ;

- (B) The owner or operator of a facility with HMIWIs 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 Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the requirements of Rule .0533 of this Subchapter; and
- (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 HMIWIs subject to this Rule as their allowable emission limits unless Rules .0524, .1110, or .1111 of this Subchapter requires more restrictive rates.

(d) Operational Standards.

- (1) The operational standards in this Rule do not apply to any HMIWI subject to this Rule when applicable operational standards in Rule .0524, .1110, or .1111 of this Subchapter apply;
- (2) Annual Equipment Inspection.
  - (A) Each HMIWI shall undergo an equipment inspection initially within 6 months upon this Rule's effective date and 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) Any 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
  - (D) The Director shall grant the extension 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 of the small remote HMIWI demonstrates that achieving compliance by the time allowed under this Part 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;
- (3) Air Pollution Control Device Inspection.
  - (A) Each HMIWI shall undergo air pollution control device inspections, as applicable, initially within six months upon this Rule's effective date and annually (no more than 12 months following the previous annual air pollution control device inspection) to inspect air pollution control device(s) for proper operation, if applicable: ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; and generally observe that the equipment is maintained in good operating condition. Any 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 for:

- (A) Before July 1, 2013, the test methods listed in Paragraphs 60.56c(b)(7) and (8), the fugitive emissions testing requirements under 40 CFR 60.56c(b)(14) and (c)(3), the CO CEMS requirements under 40 CFR 60.56c(c)(4), and 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), (g)(6) through (10), and (h); and
  - (B) On or after July 1, 2013, sources subject to the emissions limits under Table 1B of Subject Ce of 40 CFR Part 60 or 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, however, elect to use CO CEMS as specified under 40 CFR 60.56c(c)(4) or bag detection systems as specified under 40 CFR 60.57c(h);
- (5) Prior to July 1, 2013, the owner or operator of any small remote HMIWI shall comply with the following compliance and performance testing requirements:
- (A) conduct the performance testing requirements in 40 CFR 60.56c(a), (b)(1) through (b)(9), (b)(11)(mercury only), and (c)(1). The 2,000 pound per week limitation does not apply during performance tests;
  - (B) 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; and
  - (C) following the date on which the initial performance test is completed, ensure that the HMIWI does not operate 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 all previous three operating hours, at all times except during periods of start-up, shut-down and malfunction. Operating parameter limits do 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;
- (6) On or after July 1, 2013, any small remote HMIWI constructed on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998, is subject to the requirements listed in Table 2B of Subpart Ce of 40 CFR Part 60. The owner or operator shall comply with 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), the annual PM, CO, and HCl emissions testing requirements under 40 CFR 60.56c(c)(2), the annual fugitive emissions testing requirements under 40 CFR 60.56c(c)(3), the CO CEMS requirements under 40 CFR 60.56c(c)(4), and the compliance requirements for monitoring listed in 40 CFR 60.56c(c)(5) through (7), and (d) through (k);
- (7) On or after July 1, 2013, any 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, 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 does 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 3-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 parameter(s); and
  - (C) Operation of an 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 an HMIWI may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emissions limit(s). Repeat performance tests conducted shall be

conducted under process and control device operating conditions duplicating as nearly as possible those that indicated during the violation;

- (8) On or after July 1, 2013, any small HMIWI constructed commenced emissions guidelines as promulgated on September 15, 1997, meeting all requirements listed in Table 2B of Subpart Ce of 40 CFR Part 60, which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area and which burns less than 2,000 pounds per week of hospital, medical and infectious waste and is subject to the requirements listed in Table 2B of Subpart Ce of 40 CFR Part 60. The 2,000 pounds per week limitation does not apply during performance tests. The owner or operator shall comply with the compliance and performance testing requirements of 40 CFR 60.56c, excluding the annual fugitive emissions testing requirements under 40 CFR 60.56c(c)(3), the CO CEMS requirements under 40 CFR 60.56c(c)(4), and 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 under 40 CFR 60.56c(c)(4) or bag leak detection systems as specified under 40 CFR 60.57c(h); and
  - (9) On or after July 1, 2013, the owner or operator of any 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<sub>x</sub> emissions limit. The owner or operator may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emissions limit(s). Repeat performance tests conducted pursuant to this paragraph 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 Section .2600 of this Subchapter 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; and
  - (2) The Director may require the owner or operator to test the HMIWI to demonstrate compliance with the emission standards listed in Paragraph (c) of this Rule.
- (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 Section .0600 of this Subchapter;
  - (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, where 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 pH for wet scrubber systems and 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 or for 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 as 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 listed in 40 CFR 60.58c(b), (c), (d), (e), and (f), 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, any required maintenance, and any 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 once 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 any 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 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. At a minimum, 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) On or after July 1, 2013, any HMIWI, except for small remote HMIWI not equipped with an air pollution control device, 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) On or after July 1, 2013, 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. At a minimum, 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) On or after July 1, 2013, any 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 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 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 not modified such that emissions would be expected to exceed; and
  - (C) The previous emissions test(s) had been conducted in 1996 or later;
- (11) On or after July 1, 2013, any 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 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); and
- (12) On or after July 1, 2013, any 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 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, is not 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) Excess Emissions and Start-up and Shut-down. All HMIWIs subject to this Rule shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter. Emissions from bypass conditions shall not be exempted as provided under Paragraphs (c) and (g) of Rule 0.535 of this Subchapter.
- (h) 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 accessible, either at the facility or 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. The reviews of the information shall be conducted annually; and
  - (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.*

## **15A NCAC 02D .1207 CONICAL INCINERATORS**

- (a) Purpose. The purpose of this Rule is to set forth the requirements of the Commission relating to the use of conical incinerators in the burning of wood and agricultural waste.
- (b) Scope. This Rule shall apply to all conical incinerators which are designed to incinerate wood and agricultural waste.
- (c) Each conical incinerator subject to this Rule shall be equipped and maintained with:
- (1) an underfire and an overfire forced air system and variable damper which is automatically controlled to ensure the optimum temperature range for the complete combustion of the amount and type of material waste being charged into the incinerator;
  - (2) a temperature recorder for continuously recording the temperature of the exit gas;
  - (3) a feed system capable of delivering the waste to be burned at a sufficiently uniform rate to prevent temperature from dropping below 800°F during normal operation, with the exception of one startup and one shutdown per day.
- (d) The owner of the conical incinerator shall monitor and report ambient particulate concentrations using the appropriate method specified in 40 CFR Part 50 with the frequency specified in 40 CFR Part 58. The Director may require more frequent monitoring if measured particulate concentrations exceed the 24-hour concentration allowed under 15A NCAC 2D .0400. The owner or operator shall report the monitoring data quarterly to the Division.
- (e) In no case shall the ambient air quality standards as defined in Section .0400 of this Subchapter be exceeded.
- (f) The conical incinerator shall not violate the opacity standards in Rule .0521 of this Subchapter.
- (g) The distance a conical incinerator is located and operated from the nearest structure(s) in which people live or work shall be optimized to prevent air quality impact and shall be subject to approval by the Commission.
- (h) New conical incinerators shall be in compliance with this Rule on startup.

*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.*

## 15A NCAC 02D .1208 OTHER INCINERATORS

### (a) Applicability.

- (1) This Rule applies to any incinerator not covered under Rules .1203 through .1207, or .1210 through .1212 of this Section.
- (2) If any incinerator subject to this Rule:
  - (A) is used solely to cremate pets; or
  - (B) if 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; the incinerator is exempt from Subparagraphs (b)(6) through (b)(9) and Paragraph (c) of this Rule.

### (b) Emission Standards.

- (1) The emission standards in this Rule apply to any incinerator subject to this Rule except where Rules .0524, 1110, or .1111 of this Subchapter apply. However, when Subparagraphs (8) or (9) of this Paragraph and Rules .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant applies notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary.
- (2) Particulate Matter. Any 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 any stack or chimney of any 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 is 0.2 pounds per hour. For refuse charge rates of 2000 pounds per hour or greater the allowable emission rate shall be 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 any 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 is 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. Any incinerator subject to this Rule shall comply with Rule .0521 of this Subchapter for the control of visible emissions.
- (4) Sulfur Dioxide. Any incinerator subject to this Rule shall comply with Rule .0516 of this Subchapter for the control of sulfur dioxide emissions.
- (5) Odorous Emissions. Any incinerator subject to this Rule shall comply with Rule .1806 of this Subchapter for the control of odorous emissions.
- (6) Hydrogen Chloride. Any 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 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 any incinerator subject to this Rule shall demonstrate compliance with Section .1100 of this Subchapter according to 15A NCAC 02Q .0700.
- (9) Ambient Standards.
  - (A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following ambient air quality standards, which are an annual average, in milligrams per cubic meter at 77 degrees F (25 degrees C) and 29.92 inches (760 mm) of mercury pressure, and

which are increments above background concentrations, apply aggregately to all incinerators at a facility subject to this Rule:

(i)	arsenic and its compounds	$2.3 \times 10^{-7}$
(ii)	beryllium and its compounds	$4.1 \times 10^{-6}$
(iii)	cadmium and its compounds	$5.5 \times 10^{-6}$
(iv)	chromium (VI) and its compounds	$8.3 \times 10^{-8}$

- (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 Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the requirements of Rule .0533 of this Subchapter.
- (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 Rule .0524, .1110 or .1111 of this Subchapter requires more restrictive rates.

(c) Operational Standards.

- (1) The operational standards in this Rule do not apply to any incinerator subject to this Rule when applicable operational standards in Rule .0524, .1110, or .1111 of this Subchapter apply.
- (2) Crematory Incinerators. Gases generated by the combustion shall be subjected to a minimum temperature of 1600 degrees F for a period of not less than one second.
- (3) Other Incinerators. All incinerators 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 F for a period of not less than one second. The temperature of 1800 degrees F shall be maintained at least 55 minutes out of each 60-minute period, but at no time shall the temperature go below 1600 degrees F.
- (4) Except during start-up where the procedure has been approved according to Rule .0535(g) of this Subchapter, 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 according to Rule .0535(g) of this Subchapter. Any 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 Section .2600 of this Subchapter 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 Section .0600 of this Subchapter.
- (2) The owner or operator of an incinerator, except an incinerator meeting the requirements of Parts .1201(c)(4)(A) through (D) of this Section, shall maintain and operate a continuous temperature monitoring and recording device for the primary chamber and, where there is a secondary chamber, for the secondary chamber. The Director shall require a temperature monitoring device for incinerators meeting the requirements of Parts .1201(c)(4)(A) through (D) of this Section if the incinerator is in violation of the requirements of Part .1201(c)(4)(D) of this Section. 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 pH for wet scrubber systems and 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. Any incinerator subject to this Rule shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter.

*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.

**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. With the exceptions in Paragraph (b) of this Rule, this Rule applies to the commercial and industrial solid waste incinerators (CISWI).

(b) Exemptions. The following types of incineration units are exempted from this Rule:

- (1) incineration units covered under Rules .1203 through .1206 of this Section;
- (2) units, burning 90 percent or more by weight on a calendar-quarter basis, excluding the weight of auxiliary fuel and combustion air, of agricultural waste, pathological waste, low-level radioactive waste, or chemotherapeutic waste, 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 agricultural waste, 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 under Section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) or as a cogeneration facility under 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; and
  - (C) the owner or operator of the unit notifies the Director that the unit qualifies for this exemption;
- (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) cement kilns;
- (8) chemical recovery units burning materials to recover chemical constituents or to produce chemical compounds as listed in 40 CFR 60.2555(n)(1) through (7);
- (9) laboratory analysis units that burn samples of materials for the purpose of chemical or physical analysis;
- (10) air curtain burners covered under Rule .1904 of this Subchapter.

(c) The owner or operator of a chemical recovery unit not listed under 40 CFR 60.2555(n) may petition the Director to be exempted. The petition shall include all the information specified under 40 CFR 60.2559(a). The Director shall approve the exemption if he finds that all the requirements of 40 CFR 60.2555(n) are satisfied and that the unit burns materials to recover chemical constituents or to produce chemical compounds where there is an existing market for such recovered chemical constituents or compounds.

(d) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 60.2875 apply in addition to the definitions in Rule .1202 of this Section.

(e) Emission Standards. The emission standards in this Rule apply to all incinerators subject to this Rule except where Rules .0524, .1110, or .1111 of this Subchapter applies. When Subparagraphs (12) or (13) of this Paragraph and Rules .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant applies, notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary.

- (1) Particulate Matter. Emissions of particulate matter from a CISWI unit shall not exceed 70 milligrams per dry standard cubic meter corrected to seven percent oxygen (dry basis).
- (2) Opacity. Visible emissions from the stack of a CISWI unit shall not exceed 10 percent opacity (6-minute block average).
- (3) Sulfur Dioxide. Emissions of sulfur dioxide from a CISWI unit shall not exceed 20 parts per million by volume corrected to seven percent oxygen (dry basis).
- (4) Nitrogen Oxides. Emissions of nitrogen oxides from a CISWI unit shall not exceed 368 parts per million by volume corrected to seven percent oxygen (dry basis).
- (5) Carbon Monoxide. Emissions of carbon monoxide from a CIWI unit shall not exceed 157 parts per million by volume, corrected to seven percent oxygen (dry basis).
- (6) Odorous Emissions. Any incinerator subject to this Rule shall comply with Rule .1806 of this Subchapter for the control of odorous emissions.
- (7) Hydrogen Chloride. Emissions of hydrogen chloride from a CISWI unit shall not exceed 62 parts per million by volume, corrected to seven percent oxygen (dry basis).

- (8) Mercury Emissions. Emissions of mercury from a CISWI unit shall not exceed 0.47 milligrams per dry standard cubic meter, corrected to seven percent oxygen.
- (9) Lead Emissions. Emissions of lead from a CISWI unit shall not exceed 0.04 milligrams per dry standard cubic meter, corrected to seven percent oxygen.
- (10) Cadmium Emissions. Emissions of cadmium from a CISWI unit shall not exceed 0.004 milligrams per dry standard cubic meter, corrected to seven percent oxygen.
- (11) Dioxins and Furans. Emissions of dioxins and furans from a CISWI unit shall not exceed 0.41 nanograms per dry standard cubic meter (toxic equivalency basis), corrected to seven percent oxygen. Toxic equivalency is given in Table 4 of 40 CFR part 60, Subpart DDDD.
- (12) Toxic Emissions. The owner or operator of any incinerator subject to this Rule shall demonstrate compliance with Section .1100 of this Subchapter according to 15A NCAC 02Q .0700.
- (13) Ambient Standards.

(A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following ambient air quality standards, which are an annual average, in milligrams per cubic meter at 77 degrees F (25 degrees C) and 29.92 inches (760 mm) of mercury pressure, and which are increments above background concentrations, apply aggregately to all incinerators at a facility subject to this Rule:

(i)	arsenic and its compounds	$2.3 \times 10^{-7}$
(ii)	beryllium and its compounds	$4.1 \times 10^{-6}$
(iii)	cadmium and its compounds	$5.5 \times 10^{-6}$
(iv)	chromium (VI) and its compounds	$8.3 \times 10^{-8}$

(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 Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the requirements of Rule .0533 of this Subchapter.

(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 as their allowable emission limits unless Rules .0524, .1110, or .1111 of this Subchapter requires more restrictive rates.

(f) Operational Standards.

- (1) The operational standards in this Rule do not apply to any incinerator subject to this Rule when applicable operational standards in Rules .0524, .1110, or .1111 of this Subchapter apply.
- (2) If a wet scrubber is used to comply with emission limitations:
  - (A) operating limits for the following operating parameters shall be established:
    - (i) maximum charge rate, which shall be measured continuously, recorded every hour, and calculated using one of the following procedures:
      - (I) for continuous and intermittent units, the maximum charge rate is 110 percent of the average charge rate measured during the most recent compliance test demonstrating compliance with all applicable emission limitations; or
      - (II) for batch units, the maximum charge rate is 110 percent of the daily charge rate measured during the most recent compliance test demonstrating compliance with all applicable emission limitations;
    - (ii) minimum pressure drop across the wet scrubber, which shall be measured continuously, recorded every 15 minutes, and calculated as 90 percent of:
      - (I) the average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations, or
      - (II) the average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations;
    - (iii) minimum scrubber liquor flow rate, which shall be measured continuously, recorded every 15 minutes, and calculated as 90 percent of the average liquor flow

- rate at the inlet to the wet scrubber measured during the most recent compliance test demonstrating compliance with all applicable emission limitations; and
        - (iv) minimum scrubber liquor pH, which shall be measured continuously, recorded every 15 minutes, and calculated as 90 percent of the average liquor pH at the inlet to the wet scrubber measured during the most recent compliance test demonstrating compliance with all applicable emission limitations.
      - (B) A three hour rolling average shall be used to determine if operating parameters in Subparts (A)(i) through (A)(iv) of this Subparagraph have been met.
      - (C) The owner or operator of the CISWI unit shall meet the operating limits established during the initial performance test on the date the initial performance test is required or completed.
- (3) If a fabric filter is used to comply with the emission limitations, then it shall be operated as specified in 40 CFR 60.2675(c);
- (4) If an air pollution control device other than a wet scrubber is used or if emissions are limited in some other manner to comply with the emission standards of Paragraph (e) of this Rule, the owner or operator shall petition the Director for specific operating limits that shall be established during the initial performance test and continuously monitored thereafter. The initial performance test shall not be conducted until after the Director approves the petition. The petition shall include:
  - (A) identification of the specific parameters to be used as additional operating limits;
  - (B) explanation of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants;
  - (C) explanation of establishing the upper and lower limits for these parameters, which will establish the operating limits on these parameters;
  - (D) explanation of the methods and instruments used to measure and monitor these parameters, as well as the relative accuracy and precision of these methods and instruments;
  - (E) identification of the frequency and methods for recalibrating the instruments used for monitoring these parameters.

The Director shall approve the petition if he finds that the requirements of this Subparagraph have been satisfied and that the proposed operating limits will ensure compliance with the emission standards in Paragraph (e) of this Rule.

(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 Section .2600 of this Subchapter, in 40 CFR Part 60 Appendix A, 40 CFR Part 61 Appendix B, and 40 CFR 60.2690 shall be used to determine compliance with emission standards in Paragraph (e) this Rule. Method 29 of 40 CFR Part 60 shall be used to determine emission standards for metals. However, Method 29 shall be used to sample for chromium (VI), and SW 846 Method 0060 shall be used for the analysis.
- (3) All performance tests shall consist of a minimum of three test runs conducted under conditions representative of normal operations. Compliance with emissions standards under Subparagraph (e)(1), (3) through (5), and (7) through (11) of this Rule shall be determined by averaging three one-hour emission tests. These tests shall be conducted within 12 months following the initial performance test and within every twelve month following the previous annual performance test after that.
- (4) The owner or operator of CISWI shall conduct an initial performance test as specified in 40 CFR 60.8 to determine compliance with the emission standards in Paragraph (e) of this Rule and to establish operating standards using the procedure in Paragraph (f) of this Rule.
- (5) The owner or operator of the CISWI unit shall conduct an annual performance test for particulate matter, hydrogen chloride, and opacity as specified in 40 CFR 60.8 to determine compliance with the emission standards for the pollutants in Paragraph (e) of this Rule.
- (6) If the owner or operator of CISWI unit has shown, using performance tests, compliance with particulate matter, hydrogen chloride, and opacity for three consecutive years, the Director shall allow the owner or operator of CISWI unit to conduct performance tests for these three pollutants every third year. However, each test shall be within 36 months of the previous performance test. If the CISWI unit continues to meet the emission standards for these three pollutants the Director shall allow the

owner or operator of CISWI unit to continue to conduct performance tests for these three pollutants every three years.

- (7) If a performance test shows a deviation from the emission standards for particulate matter, hydrogen chloride, or opacity, the owner or operator of the CISWI unit shall conduct annual performance tests for these three pollutants until all performance tests for three consecutive years show compliance for particulate matter, hydrogen chloride, or opacity.
- (8) The owner or operator of CISWI unit may conduct a repeat performance test at any time to establish new values for the operating limits.
- (9) The owner or operator of the CISWI unit shall repeat the performance test if the feed stream is different than the feed streams used during any performance test used to demonstrate compliance.
- (10) If the Director has evidence that an incinerator is violating a standard in Paragraph (e) or (f) of this Rule or that the feed stream or other operating conditions have changed since the last performance test, the Director may require the owner or operator to test the incinerator to demonstrate compliance with the emission standards listed in Paragraph (e) of this Rule at any time.

(h) Monitoring.

- (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 Section .0600 of this Subchapter.
- (2) The owner or operator of an incinerator subject to the requirements of this Rule shall establish, install, calibrate to manufacturers specifications, maintain, and operate:
  - (A) devices or methods for continuous temperature monitoring and recording for the primary chamber and, where there is a secondary chamber, for the secondary chamber;
  - (B) devices or methods for monitoring the value of the operating parameters used to determine compliance with the operating parameters established under Paragraph (f)(2) of this Rule;
  - (C) a bag leak detection system that meets the requirements of 40 CFR 60.2730(b) if a fabric filter is used to comply with the requirements of the emission standards in Paragraph (e) of this Rule; and
  - (D) equipment necessary to monitor compliance with the cite-specific operating parameters established under Paragraph (f)(4) of this Rule.
- (3) The Director shall require the owner or operator of a CISWI unit 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 CISWI unit.
- (4) The Director shall require the owner or operator of a CISWI unit with a permitted charge rate of 750 pounds per hour or less to install, operate, and maintain continuous monitors for oxygen or for carbon monoxide or both if necessary to determine proper operation of the CISWI unit.
- (5) The owner or operator of the CISWI unit shall conduct all monitoring at all times the CISWI unit is operating, except;
  - (A) malfunctions and associated repairs;
  - (B) required quality assurance or quality control activities including calibrations checks and required zero and span adjustments of the monitoring system.
- (6) The data recorded during monitoring malfunctions, associated repairs, and required quality assurance or quality control activities shall not be used in assessing compliance with the operating standards in Paragraph (f) of this Rule.

(i) Recordkeeping, and Reporting.

- (1) The owner or operator of CISWI unit shall maintain records required by this Rule on site in either paper copy or electronic format that can be printed upon request for a period of five years.
- (2) The owner or operator of CISWI unit shall maintain all records required under 40 CFR 60.2740.
- (3) The owner or operator of CISWI unit shall submit as specified in Table 5 of 40 CFR 60, Subpart DDDD the following reports:
  - (A) Waste Management Plan;
  - (B) initial test report, as specified in 40 CFR 60.2760;
  - (C) annual report as specified in 40 CFR 60.2770;
  - (D) emission limitation or operating limit deviation report as specified in 40 CFR 60.2780;
  - (E) qualified operator deviation notification as specified in 40 CFR 60.2785(a)(1);
  - (F) qualified operator deviation status report, as specified in 40 CFR 60.2785(a)(2);

- (G) qualified operator deviation notification of resuming operation as specified in 40 CFR 60.2785(b).
- (4) The owner or operator of the CISWI unit shall submit a deviation report if:
  - (A) any recorded three-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under Paragraph (f) of this Rule;
  - (B) the bag leak detection system alarm sounds for more than five percent of the operating time for the six-month reporting period; or
  - (C) a performance test was conducted that deviated from any emission standards in Paragraph (e) 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).
- (5) The owner or operator of the CISWI unit may request changing semiannual or annual reporting dates as specified in this Paragraph, and the Director may approve the request change using the procedures specified in 40 CFR 60.19(c).
- (6) Reports required under this Rule shall be submitted electronically or in paper format, postmarked on or before the submittal due dates.
- (7) If the CISWI unit has been shut down by the Director under the provisions of 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 are resumed once a qualified operator is accessible.
- (j) Excess Emissions and Start-up and Shut-down. All incinerators subject to this Rule shall comply with 15A NCAC 2D .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter.
- (k) Operator Training and Certification.
  - (1) The owner or operator of the CISWI unit shall not allow the CISWI unit to operate at any time unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or available 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 CISWI unit operators.
  - (2) Operator training and qualification shall be obtained by completing the requirements of 40 CFR 60.2635(c) by the later of:
    - (A) six month after CISWI unit startup; or
    - (B) six month after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.
  - (3) Operator qualification is valid from the date on which the training course is completed and the operator passes the examination required in 40 CFR 60.2635(c)(2).
  - (4) Operator qualification shall be maintained by completing an annual review or refresher course covering:
    - (A) update of regulations;
    - (B) incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;
    - (C) inspection and maintenance;
    - (D) responses to malfunctions or conditions that may lead to malfunction;
    - (E) discussion of operating problems encountered by attendees.
  - (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, and
    - (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 the CISWI unit shall:
    - (A) have documentation specified in 40 CFR 60.2660(a)(1) through (10) and (c)(1) through (c)(3) available at the facility and accessible for all CISWI unit operators and are 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:
      - (i) the initial review of the documentation specified in Part (A) of this Subparagraph shall be conducted by the later of the two dates:

- (I) six month after CISWI unit startup; or
    - (II) six month after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit; and
  - (ii) subsequent annual reviews of the documentation specified in Part (A) of this Subparagraph shall be conducted no later than twelve month following the previous review.
- (7) The owner or operator of the CISIWI unit shall meet one of the two criteria specified in 40 CFR 60.2665(a) and (b), depending on the length of time, if all qualified operators are temporarily not at the facility and not able to be at the facility within one hour.
- (l) Prohibited waste. The owner or operator of a CISIW shall not incinerate any of the wastes listed in G.S. 130A-309.10(f1).
- (m) Waste Management Plan.
  - (1) The owner or operator of the CISWI unit shall submit a waste management plan to the Director that identifies in writing 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 and the emissions reductions expected to be achieved and the environmental or energy impacts that the measures may have.
- (n) The final control plan shall contain the information specified in 40 CFR 60.2600(a)(1) through (5), and a copy shall be maintained on site.

*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.*



**15A NCAC 02D .1211 OTHER SOLID WASTE INCINERATION UNITS**

(a) Applicability. With the exceptions in Paragraph (b), this Rule applies to other solid waste incineration (OSWI) units.

(b) Exemptions. The following types of incineration units are exempted from this Rule:

- (1) incineration units covered under Rules .1203 through .1206 and .1210 of this Section;
- (2) units, burning 90 percent or more by weight on a calendar-quarter basis, excluding the weight of auxiliary fuel and combustion air, pathological waste, low-level radioactive waste, or chemotherapeutic waste, 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, pathological waste, low-level radioactive waste, or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit;
- (3) Cogeneration units if:
  - (A) The unit qualifies as a cogeneration facility under 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 and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes; and
  - (C) The owner or operator of the unit notifies the Director that the unit qualifies for this exemption;
- (4) Small power production unit if:
  - (A) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C));
  - (B) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity; and
  - (C) The owner or operator of the unit notifies the Director that the unit qualifies for this exemption.
- (5) units that combust waste for the primary purpose of recovering metals;
- (6) rack, part, and drum reclamation units that burn the coatings off racks used to hold items for application of a coating;
- (7) cement kilns;
- (8) laboratory analysis units that burn samples of materials for the purpose of chemical or physical analysis;
- (9) air curtain burners covered under Rule .1904 of this Subchapter;
- (10) institutional boilers and process heaters regulated under 40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters);
- (11) rural institutional waste incinerators that meet the conditions in 40 CFR 60.2993(h);
- (12) incinerators that combust contraband or prohibited goods if owned or operated by a government agency, such as police, customs, agricultural inspection, or a similar agency, to destroy only illegal or prohibited goods, such as illegal drugs, or agricultural food products that cannot be transported into the country or across state lines to prevent biocontamination. The exclusion does not apply to items either confiscated or incinerated by private, industrial, or commercial entities; or
- (13) Incinerators used for national security and is used solely:
  - (A) to destroy national security materials integral to the field exercises during military training field exercises; or
  - (B) to incinerate national security materials when necessary to safeguard national security if the owner or operator follows to procedures in 40 CFR 60.2993(q)(2) to receive this exemption.

(c) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 60.3078 shall apply in addition to the definitions in Rule .1202 of this Section.

(d) Emission Standards. The emission standards in this Rule apply to all incinerators subject to this Rule except where Rule .0524, .1110, or .1111 of this Subchapter applies. When Subparagraphs (12) or (13) of this Paragraph and Rules .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant shall apply, notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary.

- (1) Particulate Matter. Emissions of particulate matter from an OSWI unit shall not exceed 0.013 grains per dry standard cubic foot corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (2) Opacity. Visible emissions from the stack of an OSWI unit shall not exceed 10 percent opacity (6-minute block average with 1 hour minimum sample time per run).
- (3) Sulfur Dioxide. Emissions of sulfur dioxide from an OSWI unit subject to the requirements of this Rule shall not exceed 3.1 parts per million by volume corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (4) Nitrogen Oxides. Emissions of nitrogen oxides from an OSWI unit shall not exceed 103 parts per million by dry volume corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (5) Carbon Monoxide. Emissions of carbon monoxide from an OSWI unit shall not exceed 40 parts per million by dry volume, corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run) and 12-hour rolling averages measured using continuous emissions monitoring system (CEMS).
- (6) Odorous Emissions. An OSWI unit shall comply with Rule .1806 of this Subchapter for the control of odorous emissions.
- (7) Hydrogen Chloride. Emissions of hydrogen chloride from an OSWI unit shall not exceed 15 parts per million by dry volume, corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (8) Mercury Emissions. Emissions of mercury from an OSWI unit shall not exceed 74 micrograms per dry standard cubic meter, corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (9) Lead Emissions. Emissions of lead from an OSWI unit shall not exceed 226 micrograms per dry standard cubic meter, corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (10) Cadmium Emissions. Emissions of cadmium from an OSWI unit shall not exceed 18 micrograms per dry standard cubic meter, corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (11) Dioxins and Furans. Emissions of dioxins and furans from an OSWI unit shall not exceed 33 nanograms per dry standard cubic meter, corrected to seven percent oxygen, dry basis (3-run average with 1 hour minimum sample time per run).
- (12) Toxic Emissions. The owner or operator of any incinerator subject to the requirements of this Rule shall demonstrate compliance with Section .1100 of this Subchapter according to Section 15A NCAC 02Q .0700.
- (13) Ambient Standards.

(A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following ambient air quality standards, which are an annual average, in milligrams per cubic meter at 77oF (25oC) and 29.92 inches (760 mm) of mercury pressure, and which are increments above background concentrations, shall apply aggregately to all incinerators at a facility subject to this Rule:

POLLUTANT	STANDARD
arsenic and its compounds	2.3x10 <sup>-7</sup>
beryllium and its compounds	4.1x10 <sup>-6</sup>
cadmium and its compounds	5.5x10 <sup>-6</sup>
chromium (VI) and its compounds	8.3x10 <sup>-8</sup>

(B) The owner or operator of a facility with OSWI units subject to this Rule shall demonstrate compliance with the ambient standards in Part (A) of this Subparagraph by following the procedures set out in Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the requirements of Rule .0533 of this Subchapter.

- (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 as their allowable emission limits unless Rule .0524, .1110, or .1111 of this Subchapter requires more restrictive rates.

(e) Operational Standards.

- (1) The operational standards in this Rule do not apply to an OSWI unit when applicable operational standards in Rule .0524, .1110, or .1111 of this Subchapter apply.
- (2) The owner or operator of the OSWI shall meet the emission standards in Paragraph (d) of this Rule by July 1, 2010.
- (3) If a wet scrubber is used to comply with emission limitations, then the owner or operator of the OSWI unit:
  - (A) shall establish operating limits for the four operating parameters as specified in the Table 3 of 40 CFR 60, Subpart FFFF and as described in Paragraphs 40 CFR 60.3023(a) during the initial performance test, and;
  - (B) shall meet the operating limits established during the initial performance test beginning on July 1, 2010.
- (4) If an air pollution control device other than a wet scrubber is used or if emissions are limited in some other manner to comply with the emission standards of Paragraph (d) of this Rule, the owner or operator of the OSWI unit subject to the requirements of this Rule shall petition the US Environmental Protection Agency (EPA) for specific operating limits that shall be established during the initial performance test and continuously monitored thereafter. The initial performance test shall not be conducted until after the EPA approves the petition. The petition shall include the five items listed in the Paragraph 40 CFR 60.3024(a) through (e).

(f) Periods of Startup, Shutdown, and Malfunction. The emission and operating standards apply at all times except during OSWI unit startups, shutdowns, or malfunctions.

(g) Test Methods and Procedures.

- (1) The test methods and procedures described in Rule .0501 of this Subchapter, 40 CFR Part 60, Appendix A, 40 CFR Part 61, Appendix B, and 40 CFR 60.3027 shall be used to determine compliance with the emission standards in Paragraph (d) this Rule.
- (2) The owner or operator of OSWI unit shall conduct:
  - (A) an initial performance test as required under 40 CFR 60.8 and according to 40 CFR 60.3027, no later than July 1, 2010; and after that;
  - (B) annual performance tests according to 40 CFR 60.3027 and 40 CFR 60.3033, within 12 months following the initial performance test and within each 12 months thereafter.
- (3) The owner or operator of OSWI unit shall use the results of these tests:
  - (A) to demonstrate compliance with the emission standards in Paragraph (d) of this Rule, and;
  - (B) to establish operating standards using the procedures in Subparagraphs (e)(3) and (e)(4) of this Rule.
- (4) The owner or operator of OSWI unit may conduct annual performance testing less often if the requirements of 40 CFR 60.3035 are met.
- (5) The owner or operator of OSWI unit may conduct a repeat performance test at any time to establish new values for the operating limits. The Director may request a repeat performance test at any time if he finds that the current operating limits are no longer appropriate.

(h) Monitoring.

- (1) The owner or operator of OSWI unit shall comply with the monitoring, recordkeeping, and reporting requirements in Section .0600 of this Subchapter and in 40 CFR 60.13, Monitoring Requirements.
- (2) The owner or operator of OSWI unit shall:
  - (A) install, calibrate to manufacturers specifications, maintain, and operate continuous emission monitoring systems for carbon monoxide and for oxygen. The oxygen concentration shall be monitored at each location where the carbon monoxide concentrations are monitored;
  - (B) operate the continuous monitoring system according to 40 CFR 60.3039;
  - (C) conduct daily, quarterly, and annual evaluations of the continuous emission monitoring systems according to 40 CFR 60.3040;
  - (D) collect the minimum amount of monitoring data using the procedures in 40 CFR 60.3041(a) through (e) if the continuous emission monitoring system is operating or the procedures in 40

- CFR 60.3041(f) if the continuous emissions monitoring system is temporarily unavailable; and
- (E) convert the one-hour arithmetic averages into the appropriate averaging times and units as specified in 40 CFR 60.3042 to monitor compliance with the emission standards in Paragraph (d) of this Rule.
- (3) The owner or operator of OSWI unit shall:
- (A) install, calibrate to manufacturers specifications, maintain, and operate devices or establish methods for monitoring or measuring the operating parameters as specified in 40 CFR 60.3043; and
- (B) obtain operating parameter monitoring data as specified in 40 CFR 60.3044 to monitor compliance with the operational standards in Paragraph (e) of this Rule.
- (i) Recordkeeping and Reporting. The owner or operators of an OSWI unit:
- (1) shall maintain all records required specified in 40 CFR 60.3046;
- (2) shall keep and submit records according to 40 CFR 60.3047;
- (3) shall submit, as specified in 40 CFR 60.3048, the following reports:
- (A) an initial test report and operating limits, as specified in 40 CFR 60.3049(a) and (b);
- (B) a waste management plan as specified in 40 CFR 60.3049(c); and
- (C) an annual report as specified in 40 CFR 60.3050 and 40 CFR 60.3051;
- (D) a deviation report as specified in 40 CFR 60.3053 if a deviation from the operating limits or the emission limitations occurs according to 40 CFR 60.3052(a); the deviation report shall be submitted following 40 CFR 60.3052(b);
- (E) a deviation report according to 40 CFR 60.3054(a) if a deviation from the requirement to have a qualified operator accessible occurs;
- (4) shall keep records and submit reports and notifications as required by 40 CFR 60.7;
- (5) may request changing semiannual or annual reporting dates as specified in this Paragraph; the Director may approve the request change using the procedures in 40 CFR 60.19(f).
- (6) shall submit reports in electronic or paper format postmarked on or before the submittal due dates.
- (j) Excess Emissions and Start-up and Shut-down. All OSWI units shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter.
- (k) Operator Training and Certification.
- (1) No OSWI unit shall be operated unless a fully trained and qualified OSWI unit operator is accessible, either at the facility or available within one hour. The trained and qualified OSWI unit operator may operate the OSWI unit directly or be the direct supervisor of one or more other plant personnel who operate OSWI unit.
- (2) Operator training and qualification shall be obtained by completing the requirements of 40 CFR 60.3014(c) by the latest of:
- (A) January 1, 2010,
- (B) six month after OSWI unit startup, or
- (C) six month after an employee assumes responsibility for operating the OSWI unit or assumes responsibility for supervising the operation of the OSWI unit.
- (3) Operator qualification shall be valid from the date on which the training course is completed and the operator successfully passes the examination required in 40 CFR 60.3014 (c)(2).
- (4) Operator qualification shall be maintained by completing an annual review or refresher course covering:
- (A) update of regulations;
- (B) incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;
- (C) inspection and maintenance;
- (D) responses to malfunctions or conditions that may lead to malfunction; and
- (E) discussion of operating problems encountered by attendees.
- (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, and
- (B) Repeating the initial qualification requirements as specified in Subparagraph (3) of this Paragraph for a lapse of three years or more.

- (6) The owner or operator of the OSWI unit subject to the requirements of this Rule shall:
  - (A) have documentation specified in 40 CFR 60.3019(a) and (c) available at the facility and readily accessible for all OSWI unit operators and are suitable for inspection upon request;
  - (B) establish a program for reviewing the documentation specified in Part (A) of this Subparagraph with each OSWI unit operator in a manner that the initial review of the information listed in Part (A) of this Subparagraph shall be conducted by the later of the three dates: January 1, 2010, six month after OSWI unit startup, or six month after an employee assumes responsibility for operating the OSWI unit or assumes responsibility for supervising the operation of the OSWI unit; and subsequent annual reviews of the information listed in Part (A) of this Subparagraph shall be conducted no later than twelve month following the previous review.
- (7) The owner or operator of the OSWI unit shall follow the procedures in 40 CFR 60.3020 if all qualified OSWI unit operators are temporarily not at the facility and not able to be at the facility within one hour.
- (l) Waste Management Plan.
  - (1) The owner or operator of the OSWI unit shall submit a waste management plan that identifies in writing 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. A waste management plan shall be submitted to the Director before September 1, 2010.
  - (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) identification of any additional waste management measures;
    - (C) implementation of those measures considered practical and feasible, based on the effectiveness of waste management measures already in place;
    - (D) the costs of additional measures and the emissions reductions expected to be achieved; and
    - (E) any other environmental or energy impacts.
- (m) Compliance Schedule.
  - (1) This Paragraph applies only to OSWI that commenced construction on or before December 9, 2004.
  - (2) The owner or operator of an OSWI unit shall submit a permit application, including a compliance schedule, to the Director before January 1, 2008.
  - (3) All OSWI shall be in compliance with this Rule no later than January 1, 2010.
  - (4) The owner or operator of an CISWI unit shall notify the Director within 10 business days after the OSWI unit is to be in final compliance whether the final compliance has been achieved. The final compliance is achieved by completing all process changes and retrofitting construction of control devices, as specified in the permit application and required by its permit, so that, if the affected OSWI unit is brought on line, all necessary process changes and air pollution control devices would operate as designed and permitted. If the final compliance has not been achieved the owner or operator of the OSWI unit, shall submit a notification informing the Director that the final compliance has not been met and submit reports each subsequent calendar month until the final compliance is achieved.
  - (5) The owner or operator of an OSWI unit who closes the OSWI unit and restarts it before January 1, 2010 shall submit a permit application, including a compliance schedule, to the Director. Final compliance shall be achieved by January 1, 2010.
  - (6) The owner or operator of an OSWI unit who closes the OSWI unit and restarts it after January 1, 2010, shall submit a permit application to the Director and shall complete the emission control retrofit and meet the emission limitations of this Rule by the date that the OSWI unit restarts operation. The initial performance test shall be conducted within 30 days of restarting the OSWI unit.
  - (7) The permit applications for OSWI units shall be processed under 15A NCAC 02Q .0500, Title V Procedures.
  - (8) The owner or operator of an OSWI unit who plans to close it rather than comply with the requirements of this Rule shall submit a closure notification including the date of closure to the Director by January 1, 2008, and shall cease operation by January 1, 2010.

*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.*

## 15A NCAC 02D .1212 SMALL MUNICIPAL WASTE COMBUSTORS

- (a) Applicability. This Rule applies to Class I municipal waste combustors, as defined in Rule .1202 of this Section.
- (b) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 60.1940 (except administrator means the Director of the Division of Air Quality) apply in addition to the definitions in Rule .1202 of this Section.
- (c) Emission Standards.

- (1) The emission standards in this Paragraph apply to any municipal waste combustor subject to the requirements of this Rule except where Rule .0524, .1110, or .1111 of this Subchapter applies. However, when Subparagraphs (13) or (14) of this Paragraph and Rule .0524, .1110, or .1111 of this Subchapter regulate the same pollutant, the more restrictive provision for each pollutant applies, notwithstanding provisions of Rules .0524, .1110, or .1111 of this Subchapter to the contrary.
- (2) Particulate Matter. Emissions of particulate matter from each municipal waste combustor shall not exceed 27 milligrams per dry standard cubic meter corrected to seven percent oxygen.
- (3) Visible Emissions. The emission limit for opacity from each municipal waste combustor shall not exceed 10 percent average during any six-minute period.
- (4) Sulfur Dioxide. Emissions of sulfur dioxide from each municipal waste combustor shall not exceed 31 parts per million by volume, dry basis, or potential sulfur dioxide emissions shall be reduced by at least 75 percent volume, dry basis, whichever is less stringent. Percent reduction shall be determined from continuous emissions monitoring data and in accordance with Reference Method 19, Section 12.5.4 of 40 CFR Part 60, Appendix A-7. Compliance with either standard is based on a 24-hour daily block geometric average of concentration data corrected to seven percent oxygen.
- (5) Nitrogen Oxide. Emissions of nitrogen oxide from each municipal waste combustor shall not exceed the emission limits in Table 3 of 40 CFR Part 60, Subpart BBBB.
- (6) Odorous Emissions. Each municipal waste combustor shall comply with Rule .1806 of this Subchapter for the control of odorous emissions.
- (7) Hydrogen Chloride. Emissions of hydrogen chloride from each municipal waste combustor shall not exceed 31 milligrams per dry standard cubic meter (31 parts per million by weight as determined by Reference Method 26 or 26A of 40 CFR Part 60, Appendix A-8) or potential hydrogen chloride emissions shall be reduced by at least 95 percent of the mass concentration, dry basis, whichever is less stringent. Compliance with this Part shall be determined by averaging emissions over three one-hour test runs, with paired data sets for percent reduction and correction to seven percent oxygen.
- (8) Mercury Emissions. Emissions of mercury from each municipal waste combustor shall not exceed 0.080 milligrams per dry standard cubic meter (as determined by Reference Method 29 of 40 CFR Part 60, Appendix A-8) or potential mercury emissions shall be reduced by at least 85 percent of the mass concentration, basis, whichever is less stringent. Compliance with this Subparagraph shall be determined by averaging emissions over three one-hour test runs, with paired data sets for percent reduction and correction to seven percent oxygen.
- (9) Lead Emissions. Emissions of lead from each municipal waste combustor shall not exceed 0.490 milligrams per dry standard cubic meter and corrected to seven percent oxygen (as determined by Reference Method 29 of 40 CFR Part 60, Appendix A-8).
- (10) Cadmium Emissions. Emissions of cadmium from each municipal waste combustor shall not exceed 0.040 milligrams per dry standard cubic meter, corrected to seven percent oxygen (as determined by Reference Method 29 of 40 CFR Part 60, Appendix A-8).
- (11) Dioxins and Furans. Emissions of dioxins and furans from each municipal waste combustor shall not exceed:
  - (A) 60 nanograms per dry standard cubic meter (total mass) for facilities that employ an electrostatic precipitator-based emission control system, or
  - (B) 30 nanograms per dry standard cubic meter (total mass) for facilities that do not employ an electrostatic precipitator-based emission control system.Compliance with this Subparagraph shall be determined by averaging emissions over three test runs with a minimum four hour run duration, performed in accordance with Reference Method 23 of 40 CFR Part 60, Appendix A-7, and corrected to seven percent oxygen.
- (12) Fugitive Ash.
  - (A) On or after the date on which the initial performance test is completed, no owner or operator of a municipal waste combustor shall cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer

points) in excess of five percent of the observation period as determined by Reference Method 22 (40 CFR Part 60, Appendix A-7), except as provided in Part (B) of this Subparagraph. Compliance with this Part shall be determined from at least three 1-hour observation periods when the facility transfers ash from the municipal waste combustor to the area where the ash is stored or loaded into containers or trucks.

- (B) The emission limit specified in Part (A) of this Subparagraph covers visible emissions discharged to the atmosphere from buildings or enclosures, not the visible emissions discharged inside of the building or enclosures, of ash conveying systems.
- (13) Toxic Emissions. The owner or operator of a municipal waste combustor shall demonstrate compliance with Section .1100 of this Subchapter in accordance with 15A NCAC 02Q .0700.
- (14) Ambient Standards.
- (A) In addition to the ambient air quality standards in Section .0400 of this Subchapter, the following annual average ambient air quality standards in milligrams per cubic meter (77 degrees Fahrenheit, 25 degrees Celsius, and 29.92 inches, 760 millimeters of mercury pressure) are arsenic and its compounds ( $2.3 \times 10^{-7}$ ), beryllium and its compounds ( $4.1 \times 10^{-6}$ ), cadmium and its compounds ( $5.5 \times 10^{-6}$ ), and chromium (VI) and its compounds ( $8.3 \times 10^{-8}$ ). These are increments above background concentrations and apply aggregately to all municipal waste combustors at a facility.
  - (B) The owner or operator of a facility with municipal waste combustors shall demonstrate compliance with the ambient standards in Part (A) of this Subparagraph by following the procedures set out in Rule .1106 of this Subchapter. Modeling demonstrations shall comply with the good engineering practice stack height requirements of Rule .0533 of this Subchapter.
  - (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 municipal waste combustors as their allowable emission limits unless Rule .0524, .1110, or .1111 of this Subchapter requires more restrictive rates.
- (15) The emission standards of Subparagraphs (1) through (14) of this Paragraph apply at all times except during periods of municipal waste combustor startup, shutdown, or malfunction that last no more than three hours.
- (d) Operational Standards.
- (1) The operational standards in this Rule do not apply to any municipal waste combustors subject to this Rule when applicable operational standards in Rule .0524, .1110, or .1111 of this Subchapter apply.
  - (2) Each municipal waste combustor shall meet the following operational standards:
    - (A) The concentration of carbon monoxide at the municipal waste combustor outlet shall not exceed the concentration in Table 5 of 40 CFR Part 60, Subpart BBBB for each municipal waste combustor. The municipal waste combustor technology named in this table is defined in 40 CFR 60.1940.
    - (B) The load level shall not exceed 110 percent of the maximum demonstrated municipal waste combustor load determined from the highest four-hour block arithmetic average achieved during four consecutive hours in the course of the most recent dioxins and furans stack test that demonstrates compliance with the emission limits of Paragraph (c) of this Rule.
    - (C) The temperature at which the combustor operates measured at the particulate matter control device inlet shall not exceed 63 degrees F (17 degrees C) above the maximum demonstrated particulate matter control device temperature determined from the highest 4-hour block arithmetic average measured at the inlet of the particulate matter control device during four consecutive hours in the course of the most recent dioxins and furans stack test that demonstrates compliance with the emission limits of Paragraph (c) of this Rule.
    - (D) The owner or operator of a municipal waste combustor with activated carbon control system to control dioxins and furans or mercury emissions shall maintain an eight-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins and furans or mercury test. The owner or operator of a municipal waste combustor shall calculate the required quarterly usage of carbon using the equation in 40 CFR 60.1935(f).



- (E) The owner or operator of a municipal waste combustor is exempted from limits on load level, temperature at the inlet of the particular matter control device, and carbon feed rate during the annual tests for dioxins and furans, the annual mercury tests (for carbon feed requirements only), the two weeks preceding the annual tests for dioxins and furans, and the two weeks preceding the annual mercury tests (for carbon feed rate requirements only).
  - (F) The limits on load level for a municipal waste combustor are waived when the Director concludes that the emission control standards would not be exceeded based on test activities to evaluate system performance, test new technology or control technology, perform diagnostic testing, perform other activities to improve the performance; or perform other activities to advance the state of the art for emissions controls.
- (3) The operational standards of this Paragraph apply at all times except during periods of municipal waste combustor startup, shutdown, or malfunction that last no more than three hours. For periods of municipal waste combustor startup, shutdown, or malfunction that last more than three hours emission data shall not be discarded from compliance calculations and all provisions of 40 CFR 60.11(d) apply. During all periods of municipal waste combustor startup, shutdown, or malfunction, data shall be recorded and reported in accordance with the provisions of Paragraphs (f) and (g) of this Rule.
- (e) Test Methods and Procedures.
- (1) References contained in Table 8 of 40 CFR Part 60, Subpart BBBB shall be used to determine the sampling location, pollutant concentrations, number of traverse points, individual test methods, and other testing requirements for the different pollutants.
  - (2) Stack tests for all the pollutants shall consist of at least three test runs, as specified in 40 CFR 60.8 and use the average of the pollutant emission concentrations from the three test runs to determine compliance with the applicable emission limits of Paragraph (c).
  - (3) An oxygen (or carbon dioxide) measurement shall be obtained at the same time as pollutant measurements to determine diluent gas levels, as specified in 40 CFR 60.1720.
  - (4) The equations in 40 CFR 60.1935 shall be used to calculate emission levels at seven percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. Other required equations are contained in individual test methods specified in Table 6 of 40 CFR Part 60, Subpart BBBB.
  - (5) The owner or operator may apply to the Director for approval under 40 CFR 60.8(b) to use a reference method with minor changes in methodology, use an equivalent method, use an alternative method the results of which the Director has determined are adequate for demonstrating compliance, waive the requirement for a performance test because the owner or operator have demonstrated compliance by other means, or use a shorter sampling time or smaller sampling volume.
  - (6) The test methods and procedures described in Section 15A NCAC 02D .2600 of this Subchapter, 40 CFR Part 60, Appendix A and 40 CFR Part 61, Appendix B shall be used to determine compliance with emission standards in Paragraph (c) according to table 8 of 40 CFR Part 60, Subpart BBBB.
  - (7) Method 29 of 40 CFR Part 60, Appendix A-8 shall be used to determine emission rates for metals for toxic evaluations except for chromium (VI). Method 29 shall be used only to collect samples and SW 846 Method 0060 shall be used to analyze the samples of chromium (VI).
  - (8) The owner or operator shall conduct initial stack tests to measure the emission levels of dioxins and furans, cadmium, lead, mercury, beryllium, arsenic, chromium (VI), particulate matter, opacity, hydrogen chloride, and fugitive ash. Annual stack tests for the same pollutants except beryllium, arsenic, and chromium (VI) shall be conducted no less than 9 months and no more than 15 months since the previous test and must complete five performance tests in each five-year calendar period.
  - (9) The owner or operator must use results of stack tests for dioxins and furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash to demonstrate compliance with the applicable emission limits in this rule except for carbon monoxide, nitrogen oxides, and sulfur dioxide.
  - (10) The owner or operator must use results of continuous emissions monitoring of carbon monoxide, nitrogen oxides, and sulfur dioxide to demonstrate compliance with the applicable emission limits in this rule. The data from the continuous opacity monitoring system shall not be used to determine compliance with the opacity limit.
  - (11) The testing frequency for dioxin and furan may be reduced if the conditions under 40 CFR 60.1795(b) are met.

- (12) The Director may require the owner or operator of any municipal waste combustor subject to this Rule to test his municipal waste combustor to demonstrate compliance with the emission standards in Paragraph (c) of this Rule.
- (f) Monitoring, Recordkeeping, and Reporting.
- (1) The owner or operator shall comply with the monitoring, recordkeeping, and reporting requirements developed pursuant to Section .0600 of this Subchapter.
  - (2) The owner or operator that has installed air pollution abatement equipment to reduce emissions of hydrogen chloride shall install, operate, and maintain continuous parametric monitoring equipment to measure pH for wet scrubber systems and rate of alkaline injection for dry scrubber systems.
  - (3) The owner or operator shall:
    - (A) install, calibrate, operate, and maintain, for each municipal waste combustor, continuous emission monitors to determine opacity, sulfur dioxide emissions, nitrogen oxides emissions, carbon monoxide, and oxygen (or carbon dioxide) according to 40 CFR 60.1715 through 60.1770;
    - (B) monitor load level of each municipal waste combustor according to 40 CFR 60.1810 and 60.1825;
    - (C) monitor temperature of the flue gases at the inlet of the particulate matter air pollution control device according to 40 CFR 60.1815 and 60.1825;
    - (D) monitor carbon feed rate if activated carbon is used to abate dioxins and furans or mercury emissions according to 40 CFR 60.1820 and 60.1825;
    - (E) maintain records of the information listed in 40 CFR 60.1830 through 60.1855 for a period of at least five years;
    - (F) submit a semiannual report specified in 40 CFR 60.1885, no later than February 1 and August 1 each year; and
    - (G) submit semiannual reports specified in 40 CFR 60.1900 of any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified in this Section using the schedule specified in 40 CFR 60.1895.
- (g) Excess Emissions and Start-up and Shut-down. All municipal waste combustors subject to this Rule shall comply with Rule .0535, Excess Emissions Reporting and Malfunctions, of this Subchapter.
- (h) Operator Certification.
- (1) Each chief facility operator and shift supervisor shall obtain and keep a current provisional certification within six months after he transfers to the municipal waste combustion facility or six months after he is hired to work at the municipal waste combustor facility.
  - (2) Each chief facility operator and shift supervisor shall have obtained a full certification or have scheduled a full certification exam with the American Society of Mechanical Engineers (ASME QRO-1-1994) after he transfers to the municipal waste combustor facility or six months after he is hired to work at the municipal waste combustor facility.
  - (3) The owner or operator of a municipal waste combustor facility shall not allow the facility to be operated at any time unless one of the following persons is on duty at the affected facility:
    - (A) a fully certified chief facility operator;
    - (B) a provisionally certified chief facility operator who is scheduled to take the full certification exam;
    - (C) a fully certified shift supervisor; or
    - (D) a provisionally certified shift supervisor who is scheduled to take the full certification exam.
  - (4) If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the municipal waste combustor may fulfill the certified operator requirement. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, one of three criteria shall be met:
    - (A) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less and no other certified operator is on-site, the provisionally certified control room operator may perform those duties without notice to or approval by the Director.
    - (B) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for two weeks or less, and no other certified operator is on-site, the provisionally certified control room operator may perform those duties without notice to or approval by the Director. However, the owner or operator must record the periods when the

certified chief facility operator and certified shift supervisor are offsite and include the information in the annual report as specified under 40 CFR 60.1885(l).

- (C) When the certified chief facility operator and certified shift supervisor are offsite for more than two weeks and no other certified operator is on-site, the provisionally certified control room operator may perform those duties without notice to or approval by the Director. However, the owner or operator shall notify the Director in writing and submit a status report and corrective action summary to the Director every four weeks. In the notice, the owner or operator shall state what caused the absence and what is being done to ensure that a certified chief facility operator or certified shift supervisor is on-site. If the Director notifies the owner or operator that the status report or corrective action summary is disapproved, the municipal waste combustor may continue operation for 90 days, but then shall cease operation. If corrective actions are taken in the 90-day period such that the Director withdraws the disapproval, municipal waste combustor operations may continue.
- (D) The Director shall disapprove the status report and corrective action summary report, described in Part (C) of this Subparagraph, if operating permit requirements are not being met, the status or corrective action reports indicate that the effort to have a certified chief facility operator or certified shift supervisor on site as expeditiously as practicable is not being met, or the reports are not delivered in a timely manner.

The referenced ASME exam (ASME QRO-1-1994), "Standard for the Qualification and Certification of Resource Recovery Facility Operators," in this Paragraph is hereby incorporated by reference and includes subsequent amendments and editions. Copies of the referenced ASME exam may be obtained from the American Society of Mechanical Engineers (ASME), 22 Law Drive, Fairfield, NJ 07007, at a cost of forty-nine dollars (\$49.00).

(i) Training.

- (1) The owner or operator of each municipal waste combustor shall develop and update on a yearly basis a site-specific operating manual that shall address:
  - (A) a summary of all applicable requirements in this Rule;
  - (B) a description of the basic combustion principles that apply to municipal waste combustors;
  - (C) procedures for receiving, handling, and feeding municipal solid waste;
  - (D) procedures to be followed during periods of startup, shutdown, and malfunction of the municipal waste combustor;
  - (E) procedures for maintaining a proper level of combustion air supply;
  - (F) procedures for operating the municipal waste combustor in compliance with the requirements contained in 40 CFR 60 Subpart JJJ;
  - (G) procedures for responding to periodic upset or off-specification conditions;
  - (H) procedures for minimizing carryover of particulate matter;
  - (I) procedures for handling ash;
  - (J) procedures for monitoring emissions from the municipal waste combustor; and
  - (K) procedures for recordkeeping and reporting.

The operating manual shall be updated continually and be kept in a readily accessible location for all persons required to undergo training under Subparagraph (2) of this Paragraph. The operating manual and records of training shall be available for inspection by the personnel of the Division on request.

- (2) The owner or operator of the municipal waste combustor plant shall establish a training program to review the operating manual according to the schedule specified in Parts (A) and (B) of this Subparagraph with each person who has responsibilities affecting the operation of the facility including chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane and load handlers:
  - (A) A date prior to the day when the person assumes responsibilities affecting municipal waste combustor operation; and
  - (B) Annually, following the initial training required by Part (A) of this Subparagraph.

*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.*