

1 15A NCAC 02D .1212 is proposed for adoption as follows:

2  
3 **15A NCAC 02D .1212 SMALL MUNICIPAL WASTE COMBUSTORS**

4 (a) Applicability. This Rule applies to Class I municipal waste combustors, as defined in Rule  
5 .1202 of this Section.

6 (b) Definitions. For the purpose of this Rule, the definitions contained in 40 CFR 60.1940 (except  
7 administrator means the Director of the Division of Air Quality) shall apply in addition to the  
8 definitions in Rule .1202 of this Section.

9 (c) Emission Standards.

10 (1) The emission standards in this Paragraph apply to any municipal waste  
11 combustor subject to the requirements of this Rule except where Rule .0524,  
12 .1110, or .1111 of this Subchapter applies. However, when Subparagraphs (13)  
13 or (14) of this Paragraph and Rule .0524, .1110, or .1111 of this Subchapter  
14 regulate the same pollutant, the more restrictive provision for each pollutant shall  
15 apply, notwithstanding provisions of Rules .0524, .1110, or .1111 of this  
16 Subchapter to the contrary.

17 (2) Particulate Matter. Emissions of particulate matter from each municipal waste  
18 combustor shall not exceed 27 milligrams per dry standard cubic meter corrected  
19 to seven percent oxygen.

20 (3) Visible Emissions. The emission limit for opacity from each  
21 class I municipal waste combustor shall not exceed 10 percent (average of 30  
22 six-minute averages).

23 (4) Sulfur Dioxide. Emissions of sulfur dioxide from each class I municipal waste  
24 combustor shall not exceed 31 parts per million by volume, dry basis, or potential  
25 sulfur dioxide emissions shall be reduced by at least 75 percent volume, dry  
26 basis. Percent reduction shall be determined from continuous emissions  
27 monitoring data and in accordance with reference method 19, Section 12.5.4 of  
28 40 CFR Part 60, Appendix A-7. Compliance with either standard is based on a  
29 24-hour daily block geometric average of concentration data corrected to seven  
30 percent oxygen.

31 (5) Nitrogen Oxide. Emissions of nitrogen oxide from each class I municipal waste  
32 combustor shall not exceed the emission limits in Table 3 of 40 CFR Part 60,  
33 Subpart BBBB.

34 (6) Odorous Emissions. Any incinerator subject to this Rule shall comply with Rule  
35 .1806 of this Subchapter for the control of odorous emissions.

36 (7) Hydrogen Chloride. Emissions of hydrogen chloride from each class I municipal  
37 waste combustor shall not exceed 31 milligrams per dry standard cubic meter (31  
38 parts per million by weight as determined by reference method 26 or 26A of 40  
39 CFR Part 60, Appendix A-8) or potential hydrogen chloride emissions shall be  
40 reduced by at least 95 percent of the mass concentration, dry basis. Compliance

1 with this Part shall be determined by averaging emissions over three one-hour  
2 test runs, with paired data sets for percent reduction and correction to seven  
3 percent oxygen.

4 (8) Mercury Emissions. Emissions of mercury from each municipal waste combustor  
5 shall not exceed 0.080 milligrams per dry standard cubic meter (as determined  
6 by reference method 29 of 40 CFR Part 60, Appendix A-8) or potential mercury  
7 emissions shall be reduced by at least 85 percent of the mass concentration, dry  
8 basis. Compliance with this Part shall be determined by averaging emissions  
9 over three one-hour test runs, with paired data sets for percent reduction and  
10 correction to seven percent oxygen.

11 (9) Lead Emissions. Emissions of lead from each class I municipal waste combustor  
12 shall not exceed 0.490 milligrams per dry standard cubic meter and corrected to  
13 seven percent oxygen (as determined by reference method 29 of 40 CFR Part  
14 60, Appendix A-8).

15 (10) Cadmium Emissions. Emissions of cadmium from each municipal waste  
16 combustor shall not exceed 0.040 milligrams per dry standard cubic meter,  
17 corrected to seven percent oxygen (as determined by reference method 29 of 40  
18 CFR Part 60, Appendix A-8).

19 (11) Dioxins and Furans. Emissions of dioxins and furans from each municipal waste  
20 combustor shall not exceed:

21 (A) 60 nanograms per dry standard cubic meter (total mass) for facilities that  
22 employ an electrostatic precipitator-based emission control system, or

23 (B) 30 nanograms per dry standard cubic meter (total mass) for facilities that  
24 do not employ an electrostatic precipitator-based emission control  
25 system.

26 Compliance with this Subparagraph shall be determined by averaging emissions  
27 over three test runs with a minimum four hour run duration, performed in  
28 accordance with reference method 23 of 40 CFR Part 60, Appendix A-7, and  
29 corrected to seven percent oxygen.

30 (12) Fugitive Ash.

31 (A) On or after the date on which the initial performance test is completed,  
32 no owner or operator of a municipal waste combustor shall cause to be  
33 discharged to the atmosphere visible emissions of combustion ash from  
34 an ash conveying system (including conveyor transfer points) in excess  
35 of five percent of the observation period as determined by reference  
36 method 22 (40 CFR Part 60, Appendix A-7), except as provided in Part  
37 (B) of this Subparagraph. Compliance with this Part shall be determined  
38 from at least three 1-hour observation periods when the facility transfers  
39 fugitive ash from the municipal waste combustion unit to the area where  
40 the fugitive ash is stored or loaded into containers or trucks.

1           (B) The emission limit specified in Part (A) of this Subparagraph covers  
2           visible emissions discharged to the atmosphere from buildings or  
3           enclosures, not the visible emissions discharged inside of the building or  
4           enclosures, of ash conveying systems.

5           (13) Toxic Emissions. The owner or operator of a municipal waste combustor shall  
6           demonstrate compliance with Section .1100 of this Subchapter in accordance  
7           with 15A NCAC 02Q .0700.

8           (14) Ambient Standards.

9           (A) In addition to the ambient air quality standards in Section .0400 of this  
10           Subchapter, the following annual average ambient air quality standards  
11           in milligrams per cubic meter (77 degrees Fahrenheit, 25 degrees  
12           Celsius, and 29.92 inches, 760 millimeters of mercury pressure):

13 <u>arsenic and its compounds</u>	<u>2.3x10<sup>-7</sup></u>
14 <u>beryllium and its compounds</u>	<u>4.1x10<sup>-6</sup></u>
15 <u>cadmium and its compounds</u>	<u>5.5x10<sup>-6</sup></u>
16 <u>chromium (VI) and its compounds</u>	<u>8.3x10<sup>-8</sup></u>

17           These are increments above background concentrations and shall apply  
18           aggregately to all incinerators at a facility subject to this Rule.

19           (B) The owner or operator of a facility with incinerators subject to this Rule  
20           shall demonstrate compliance with the ambient standards of Part (A) of  
21           this Subparagraph by following the procedures set out in Rule .1106 of  
22           this Subchapter. Modeling demonstrations shall comply with the good  
23           engineering practice stack height requirements of Rule .0533 of this  
24           Subchapter.

25           (C) The emission rates computed or used under Part (B) of this  
26           Subparagraph that demonstrate compliance with the ambient standards  
27           under Part (A) of this Subparagraph shall be specified as a permit  
28           condition for the facility with incinerators as their allowable emission  
29           limits unless Rule .0524, .1110, or .1111 of this Subchapter requires  
30           more restrictive rates.

31           (15) The emission standards of Subparagraphs (1) through (14) of this Paragraph  
32           shall apply at all times except during periods of municipal waste combustion unit  
33           startup, shutdown, or malfunction that last no more than three hours.

34           (d) Operational Standards.

35           (1) The operational standards in this Rule do not apply to any incinerator subject to  
36           this Rule when applicable operational standards in Rule .0524, .1110, or .1111 of  
37           this Subchapter apply.

38           (2) Each municipal waste combustor shall meet the following operational standards:

39           (A) The concentration of carbon monoxide at the municipal waste combustor  
40           outlet shall not exceed the concentration in table 5 of 40 CFR Part 60,

1                    Subpart BBBB for each municipal waste combustor. The municipal waste  
2                    combustor technology named in this table is defined in 40 CFR 60.1940.

3                    (B) The load level shall not exceed 110 percent of the maximum  
4                    demonstrated municipal waste combustor unit load determined from the  
5                    highest four-hour block arithmetic average achieved during four  
6                    consecutive hours in the course of the most recent dioxins and furans  
7                    stack test that demonstrates compliance with the emission limits of  
8                    Paragraph (c) of this Rule.

9                    (C) The temperature at which the combustor operates measured at the  
10                   particulate matter control device inlet shall not exceed 63 degrees F  
11                   above the maximum demonstrated particulate matter control device  
12                   temperature determined from the highest 4-hour block arithmetic  
13                   average measured at the inlet of the particulate matter control device  
14                   during four consecutive hours in the course of the most recent dioxins  
15                   and furans stack test that demonstrates compliance with the emission  
16                   limits of Paragraph (c) of this rule.

17                   (D) The owner or operator of a municipal waste combustor with activated  
18                   carbon control system to control dioxins and furans or mercury emissions  
19                   shall maintain an eight-hour block average carbon feed rate at or above  
20                   the highest average level established during the most recent dioxins and  
21                   furans or mercury test.

22                   (E) The owner or operator of a municipal waste combustor shall be  
23                   exempted from limits on load level, temperature at the inlet of the  
24                   particular matter control device, and carbon feed rate during the annual  
25                   tests for dioxins and furans, the annual mercury tests (for carbon feed  
26                   requirements only), the two weeks preceding the annual tests for dioxins  
27                   and furans, and the two weeks preceding the annual mercury tests (for  
28                   carbon feed rate requirements only).

29                   (F) The owner or operator of a municipal waste combustor shall be  
30                   exempted from limits on load level, temperature at the inlet of the  
31                   particular matter control device, and carbon feed rate when the Director  
32                   approves for any activities to evaluate system performance, test new  
33                   technology or control technology, perform diagnostic testing, perform  
34                   other activities to improve the performance, or perform other activities to  
35                   advance the state of the art for emissions controls.

36                   (3) The operational standards of this Paragraph apply at all times except during  
37                   periods of municipal waste combustor startup, shutdown, or malfunction that last  
38                   no more than three hours.

39                   (e) Test Methods and Procedures.

- 1           (1) References contained in Table 8 of 40 CFR Part 60, Subpart BBBB will be used  
2           to determine the sampling location, pollutant concentrations, number of traverse  
3           points, individual test methods, and other specific testing requirements for the  
4           different pollutants.
- 5           (2) Stack tests for all the pollutants will consist of at least three test runs, as  
6           specified in 40 CFR 60.8 and use the average of the pollutant emission  
7           concentrations from the three test runs to determine compliance with the  
8           applicable emission limits of Paragraph (c) .
- 9           (3) An oxygen (or carbon dioxide) measurement will be obtained at the same time as  
10           pollutant measurements to determine diluent gas levels, as specified in 40 CFR  
11           60.1720.
- 12           (4) The equations in 40 CFR 60.1935 will be used to calculate emission levels at 7  
13           percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in  
14           potential hydrogen chloride emissions, and the reduction efficiency for mercury  
15           emissions. Other required equations are contained in individual test methods  
16           specified in Table 6 of 40 CFR Part 60, Subpart BBBB.
- 17           (5) The owner or operator may apply to the Director for approval under 40 CFR  
18           60.8(b) to use a reference method with minor changes in methodology, use an  
19           equivalent method, use an alternative method the results of which the Director  
20           has determined are adequate for demonstrating compliance, waive the  
21           requirement for a performance test because you have demonstrated by other  
22           means that you are in compliance, or use a shorter sampling time or smaller  
23           sampling volume.
- 24           (6) The test methods and procedures described in 15A NCAC 02D .0501, 40 CFR  
25           Part 60, Appendix A and 40 CFR Part 61, Appendix B shall be used to determine  
26           compliance with emission standards in Paragraph(c) according to table 8 of 40  
27           CFR Part 60, Subpart BBBB.
- 28           (7) Method 29 of 40 CFR Part 60, Appendix A-8 shall be used to determine emission  
29           rates for metals for toxic evaluations except for chromium (VI). Method 29 shall  
30           be used only to collect samples and SW 846 Method 0060 shall be used to  
31           analyze the samples of chromium(VI).
- 32           (8) The owner or operator will conduct initial and annual stack tests to measure the  
33           emission levels of dioxins and furans, cadmium, lead, mercury, beryllium,  
34           arsenic, chromium (VI), particulate matter, opacity, hydrogen chloride, and  
35           fugitive ash. Annual stack tests for the same pollutants will be conducted no later  
36           than 13 months after the previous stack test.
- 37           (9) The owner or operator must use results of stack tests for dioxins and furans,  
38           cadmium, lead, mercury, beryllium, arsenic, chromium (VI), particulate matter,  
39           opacity, hydrogen chloride, and fugitive ash to demonstrate compliance with the

1 applicable emission limits in this rule except for carbon monoxide, nitrogen  
2 oxides, and sulfur dioxide.

3 (10) The owner or operator must use results of continuous emissions monitoring of  
4 carbon monoxide, nitrogen oxides, and sulfur dioxide to demonstrate compliance  
5 with the applicable emission limits in this rule.

6 (11) The testing frequency for dioxin and furan may be reduced if the conditions under  
7 40 CFR 60.1795(b) are met.

8 (12) The Director may require the owner or operator of any incinerator subject to this  
9 Rule to test his incinerator to demonstrate compliance with the emission  
10 standards in Paragraph (c) of this Rule.

11 (f) Monitoring, Recordkeeping, and Reporting.

12 (1) The owner or operator shall comply with the monitoring, recordkeeping, and  
13 reporting requirements developed pursuant to Section .0600 of this Subchapter.

14 (2) The owner or operator that has installed air pollution abatement equipment to  
15 reduce emissions of hydrogen chloride shall install, operate, and maintain  
16 continuous parametric monitoring equipment to measure pH for wet scrubber  
17 systems and rate of alkaline injection for dry scrubber systems.

18 (3) The owner or operator shall:

19 (A) install, calibrate, operate, and maintain, for each municipal waste  
20 combustor, continuous emission monitors to determine sulfur dioxide  
21 emissions, nitrogen oxides emissions, and oxygen or carbon dioxide  
22 according to 40 CFR 60.1715 through 60.1770;

23 (B) monitor load level of each class I municipal waste combustor according  
24 to 40 CFR 60.1810 and 60.1825;

25 (C) monitor temperature of the flue gases at the inlet of the particulate matter  
26 air pollution control device according to 40 CFR 60.1815 and 60.1825;

27 (D) monitor carbon feed rate if activated carbon is used to abate dioxins and  
28 furans or mercury emissions according to 40 CFR 60.1820 and 60.1825;

29 (E) maintain records of the information listed in 40 CFR 60.1830 through  
30 60.1855 for a period of at least five years;

31 (F) following the first year of municipal combustor operation, submit an  
32 annual report specified in 40 CFR 60.1885, no later than February 1 of  
33 each year following the calendar year in which the data were collected.

34 Once the unit is subject to permitting requirements under 15A NCAC  
35 02Q .0500, Title V Procedures, the owner or operator of an affected  
36 facility shall submit these reports semiannually; and

37 (H) submit a semiannual report any recorded pollutant or parameter that  
38 does not comply with the pollutant or parameter limit specified in this  
39 Section according to the schedule specified in 40 CFR 60.1895.

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

4 (h) Operator Certification.

5 (1) Each chief facility operator and shift supervisor shall obtain a provisional  
6 certification within six months after he transfers to the municipal waste  
7 combustion unit or six months after he is hired to work at the municipal waste  
8 combustor unit.

9 (2) Each chief facility operator and shift supervisor shall obtain a full certification or  
10 be scheduled to take the certification exam within six months after he transfers to  
11 the municipal waste combustion unit or six months after he is hired to work at the  
12 municipal waste combustor unit.

13 (3) Each chief facility operator and shift supervisor shall have obtained a full  
14 certification or have scheduled a full certification exam with the American Society  
15 of Mechanical Engineers (ASME QRO-1-1994).

16 (4) The owner or operator of a municipal waste combustor plant shall not allow the  
17 facility to be operated at any time unless one of the following persons is on duty  
18 at the affected facility:

19 (A) a fully certified chief facility operator;

20 (B) a provisionally certified chief facility operator who is scheduled to take  
21 the full certification exam;

22 (C) a fully certified shift supervisor; or

23 (D) a provisionally certified shift supervisor who is scheduled to take the full  
24 certification exam.

25 (6) If the certified chief facility operator and certified shift supervisor both are  
26 unavailable, a provisionally certified control room operator at the municipal waste  
27 combustion unit may fulfill the certified operator requirement. Depending on the  
28 length of time that a certified chief facility operator and certified shift supervisor  
29 are away, one of three criteria shall be met:

30 (A) When the certified chief facility operator and certified shift supervisor are  
31 both offsite for 12 hours or less and no other certified operator is on-site,  
32 the provisionally certified control room operator may perform those duties  
33 without notice to, or approval by the Director.

34 (B) When the certified chief facility operator and certified shift supervisor are  
35 offsite for more than 12 hours, but for two weeks or less, and no other  
36 certified operator is on-site, the provisionally certified control room  
37 operator may perform those duties without notice to, or approval by, the  
38 Director. However, you must record the periods when the certified chief  
39 facility operator and certified shift supervisor are offsite and include the  
40 information in the annual report as specified under 40 CFR 60.1885(l).

1 (C) When the certified chief facility operator and certified shift supervisor are  
2 offsite for more than two weeks and no other certified operator is on-site,  
3 the provisionally certified control room operator may perform those duties  
4 without notice to, or approval by the Director. However, the owner or  
5 operator shall notify the Director in writing and submit a status report and  
6 corrective action summary to the Director every four weeks following the  
7 initial notification. In the notice, the owner or operator shall state what  
8 caused the absence and what is being done to ensure that a certified  
9 chief facility operator or certified shift supervisor is on-site. If the Director  
10 notifies the owner or operators that the status report or corrective action  
11 summary is disapproved, the municipal waste combustion unit may  
12 continue operation for 90 days, but then shall cease operation. If  
13 corrective actions are taken in the 90-day period such that the Director  
14 withdraws the disapproval, municipal waste combustion unit operation  
15 may continue.

16 (D) All chief facility operators, shift supervisors, and control room operators  
17 shall complete the EPA operator training course. These employees must  
18 complete the operator training course before assuming responsibilities  
19 that affect operation of the municipal waste combustion unit. This  
20 requirement does not apply to chief facility operators, shift supervisors  
21 and control room operators who have obtained full certification from the  
22 American Society of Mechanical Engineers on or before July 1, 1998.

23 (i) Training.

24 (1) The owner or operator of each municipal waste combustor shall develop and  
25 update on a yearly basis a site-specific operating manual. The manual shall at  
26 the minimum address:

27 (A) a summary of all applicable requirements in this subsection,

28 (B) a description of the basic combustion principles that apply to municipal  
29 waste combustion units,

30 (C) procedures for receiving, handling, and feeding municipal solid waste.

31 (D) procedures to be followed during periods of startup, shutdown, and  
32 malfuction of the municipal waste combustion unit,

33 (E) procedures for maintaining a proper level of combustion air supply,

34 (F) procedures for operating the municipal waste combustion unit in  
35 compliance with the requirements contained in this subsection,

36 (G) procedures for responding to periodic upset or off-specification  
37 conditions,

38 (H) procedures for minimizing carryover of particulate matter,

39 (I) procedures for handling ash,

1 (J) procedures for monitoring emissions from the municipal waste  
2 combustion unit,

3 (K) procedures for recordkeeping and reporting.

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

9 (3) The owner or operator of the municipal waste combustor plant shall establish a  
10 training program to review the operating manual according to the schedule  
11 specified in Parts (A) and (B) of this Subparagraph with each person who has  
12 responsibilities affecting the operation of the facility including chief facility  
13 operators, shift supervisors, control room operators, ash handlers, maintenance  
14 personnel, and crane and load handlers.

15 (A) a date prior to the day when the person assumes responsibilities  
16 affecting municipal waste combustor unit operation, and

17 (B) annually, following the initial training required by Part (A) of this  
18 Subparagraph.

19 (j) The referenced ASME exam in this Paragraph is hereby incorporated by reference and  
20 includes subsequent amendments and editions. Copies of the referenced ASME exam may be  
21 obtained from the American Society of Mechanical Engineers (ASME), 22 Law Drive, Fairfield, NJ  
22 07007, at a cost of forty nine dollars (\$49.00).

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24 History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(3),(4),(5); 40 CFR 60.35b; 40  
25 CFR 60.34e; 40 CFR 60.1515;  
26 Eff. November 1, 2008