



**AIR QUALITY CONTROL ADVISORY COUNCIL  
AGENDA  
December 11, 2017**

Maryland Department of the Environment  
Aeris Conference Room (1<sup>st</sup> Floor MDE Lobby)  
1800 Washington Boulevard  
Baltimore MD 21230

<https://global.gotomeeting.com/join/804905789>

United States: +1 (408) 650-3123

Access Code: 804-905-789

8:15 a.m. Welcome and Introductions John Quinn, Advisory Council Chair  
Tad Aburn, Air Director

8:25 a.m. Approval of Meeting Minutes John Quinn

**Action Items for Discussion/Approval:**

8:30 a.m. NOx RACT for Municipal Waste Combustors Randy Mosier  
COMAR 26.11.01, 26.11.08 and 26.11.09

**Briefings:**

10:15 a.m. 2017 Path Forward presentation Tad Aburn

11:15 a.m. Adjourn

**Next Meeting Dates:**

March 12, 2018

June 11, 2018

September 17, 2018

December 10, 2018

December 8, 2017

## Amendments to COMAR 26.11.01 – General Administrative Provisions, COMAR 26.11.08 - Control of Incinerators and COMAR 26.11.09 - Control of Fuel Burning Equipment, Stationary Internal Combustion Engines, and Certain Fuel-Burning Installations

### Purpose

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The purpose of this action is to repeal nitrogen oxide (NO<sub>x</sub>) reasonable available control technology (RACT) requirements under COMAR 26.11.09.08H and establish new NO<sub>x</sub> RACT and State Implementation Plan (SIP) strengthening requirements under COMAR 26.11.08.10 for Large municipal waste combustors (MWCs). Additionally, this action amends opacity requirements under 26.11.01, adds definitions, and repeals 26.11.08.08-1 and updates references to 26.11.08.08-2, which is the current emission standards and requirements for hospital, medical and infectious waste incinerators (HMIWIs). The amendments related to Small MWCs and HMIWIs are part of Maryland's 111(d)/129 plan.

### Submission to EPA as Revision to Maryland's State Implementation Plan (SIP)

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The amendments pertaining to Large MWCs will be submitted to the U.S. Environmental Protection Agency (EPA) for approval as part of Maryland's State Implementation Plan (SIP). The amendments pertaining to Small MWCs and HMIWIs will be submitted to the U.S. Environmental Protection Agency (EPA) for approval as part of Maryland's 111(d) and 129 plans.

### Background

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#### *Ozone Standards*

On March 12, 2008, the EPA revised the National Ambient Air Quality Standards (NAAQS) for ozone to a level of 75 parts per billion (ppb) to provide increased protection of public health and the environment. In 2012, EPA designated portions of Maryland as nonattainment for the 75 ppb ozone NAAQS.

On June 1, 2015, the Maryland Department of the Environment (MDE or the Department) demonstrated that the Baltimore area ozone monitor data had achieved the NAAQS. EPA issued a final Clean Data Determination for the Baltimore ozone nonattainment area. In 2017, EPA proposed that the Washington, D.C. and the Philadelphia ozone nonattainment areas, which include portions of Maryland, had clean monitoring data as well. EPA has not yet finalized these proposed determinations of attainment.

Even with the Clean Data Determination, the designation status of the Baltimore Area will remain nonattainment for the 2008 75ppb ozone NAAQS until such time as EPA determines that the Area meets the CAA requirements for re-designation to attainment, including an approved redesignation request and maintenance plan. Additionally, the determination of attainment is separate from, and does not influence or otherwise affect, any future designation determination or requirements for the Baltimore Area based on any new or revised ozone NAAQS.

On October 1, 2015, EPA strengthened the NAAQS for ozone to 70 ppb, based on scientific evidence about ozone's effects on public health and welfare. Reductions in NOx emissions from major sources of NOx are necessary to attain and maintain compliance with the 75 ppb standard and will also be necessary to achieve compliance with the more stringent 70 ppb ozone standard.

### *NOx RACT Requirements*

Under the CAA, 42 U.S.C. § 7401 et seq., sources in ozone nonattainment areas classified as moderate and above are subject to a NOx RACT requirement. Section 182 of the CAA requires MDE to review and revise NOx RACT requirements in the Maryland SIP as necessary to achieve compliance with new, more stringent ambient air quality standards. EPA defines RACT as the lowest emissions limitation (e.g., on a part per million or pound per million Btu basis) that a particular source is capable of meeting by the application of control technology (e.g., installation and operation of low-NOx burners) that is reasonably available considering technological and economic feasibility. In reviewing existing NOx RACT requirements for adequacy, the Department considers technological advances, the stringency of the revised ozone standard and whether new sources subject to RACT requirements are present in the nonattainment area. For inclusion in Maryland's RACT SIP, the Department must examine existing controls on major sources of NOx to determine whether additional controls are economical and technically feasible.

Region-wide, several states have proposed or revised NOx RACT standards for large MWCs. On April 20, 2009, New Jersey adopted Regulation 7:27-19.12 that established a NOx RACT emission rate of 150 parts per million by volume, dry basis (ppmvd) based on a calendar day average. In May of 2013, Massachusetts proposed a NOx RACT of 150 ppmvd for MWCs equivalent to the type of large MWC plants operating in Maryland. To date, Massachusetts proposal has not moved forward for adoption. In 2016, Connecticut adopted a 150 ppm limit for mass burn waterwall combustors on a 24-hour daily average as specified under § 22a-174-38(c)(8) Table

32-a. On April 23, 2016, Pennsylvania updated RACT requirements and established a NOx emission rate of 180 ppmvd for MWCs.

Large MWCs in Maryland have demonstrated the ability to reduce NOx emissions through analysis and optimization of existing controls. Based upon regional NOx RACT amendments, optimization studies, and upgrades performed by Maryland sources, the Department has concluded that Maryland MWCs are capable of meeting more stringent NOx RACT requirements.

#### *Hospital, Medical and Infectious Waste Incinerators*

On April 2, 2012, Maryland adopted COMAR 26.11.08.08-2 - new emission standards and requirements for hospital, medical and infectious waste incinerators. These new requirements went into effect on October 6, 2014, and replaced the existing HMIWI requirements codified under 26.11.08.08-1. Under this action, Maryland repeals 26.11.08.08-1 and updates references throughout the Chapter to 26.11.08.08-2.

#### *Continuous Opacity Monitoring Requirements*

On May 10, 2016, Maryland submitted State Implementation Plan (SIP) Revision #16-04 containing definitions and requirements for the monitoring of opacity for cement kilns, clinker coolers and municipal waste combustors. The U.S. Environmental Protection Agency (EPA) has informed the Department that the existing definitions of "Continuous burning" and "Operating time" in COMAR 26.11.01.01 create an exemption for MWCs which is not permissible under EPA's startup, shutdown and malfunction (SSM) policy; 40 CFR Part 52. Maryland proposes to repeal these definitions as requested by EPA.

#### Sources Affected and Location

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There are two large MWCs in Maryland, Wheelabrator Baltimore, L.P. (Wheelabrator), and Montgomery County Resource Recovery Facility (MCRRF).

There is one small MWC facility in Maryland, the Fort Detrick Solid Waste Management Plant located in Frederick County. There are two HMIWI facilities in Maryland, Curtis Bay Energy, L.P. and Fort Detrick Solid Waste Management Plant.

## Requirements

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### *Large MWC NOx RACT*

This action establishes new NOx RACT standards and requirements for large MWCs with a capacity greater than 250 tons per day. New COMAR 26.11.08.10 requires that as of May 1, 2019, Maryland's two Large MWCs shall meet new, individual NOx 24-hour block average emission rates. The Montgomery County Resource Recovery Facility shall meet a NOx 24-hour block average emission rate of 140 ppmv. The Wheelabrator Baltimore, Inc. facility shall meet a NOx 24-hour block average emission rate of 150 ppmv.

Additionally, to further ensure consistent long-term operation of NOx control technologies, this action establishes a 30-day rolling average emission rate. As of May 1, 2020 Large MWCs are required to meet new, individual NOx 30-day rolling average emission rates. The Montgomery County Resource Recovery Facility shall meet a NOx 30-day rolling average emission rate of 105 ppmv. The Wheelabrator Baltimore, Inc. facility shall meet a NOx 30-day rolling average emission rate of 145 ppmv.

Large MWCs are required to meet the NOx 24-hour block average and NOx 30-day rolling average emission rates, except for periods of startup and shutdown. During periods of startup and shutdown it is technically infeasible for MWCs to comply with the emission rates due to the "7 percent oxygen correction factor" that is required to be applied to the NOx 24-hour and 30-day emission rates. During periods of startup and shutdown, excess ambient air is introduced into the furnace. Applying the correction factor of 7 percent oxygen at this time grossly misrepresents the actual NOx emissions produced. Therefore, concentration-based emission limitations are not a practical limitation during periods of startup and shutdown, and the substitution of equivalent mass-based emission limits are needed. During periods of startup and shutdown the Montgomery County Resource Recovery Facility shall meet a facility wide NOx emission limit of 202 lbs/hr timed average mass loading over a 24-hour block period and the Wheelabrator Baltimore, Inc. facility shall meet a facility wide NOx emission limit of 252 lbs/hr timed average mass loading over a 24-hour block period. When the unit is in periods of startup and shutdown, the NOx 24-hour block average emission rate will apply for the 24-hour period after startup and before shutdown. The duration of startup and shutdown procedures for a Large MWC are not to exceed three hours per occurrence, and the NOx 24-hour block average mass emission limits apply during these times.

The mass emission limits are based upon the 24-hour block average NO<sub>x</sub> RACT rates applicable to each Large MWC (incorporating the NO<sub>x</sub> 24-hour block average emission rates of COMAR 26.11.08.10B into the calculation) and provide equivalent stringency to the concentration limits that apply at all other times. Mass based emission calculations are derived utilizing 40 CFR 60.1460 (Concentration correction to 7 percent oxygen) or 40 CFR 60.45 (Conversion procedures to convert CEM data into applicable standards). EPA Method 19 may also be utilized to determine NO<sub>x</sub> emission rates based upon oxygen concentrations. Facility average flue gas flow rates are also utilized into the calculations. The calculation methodology for the mass emission limits is based upon the Prevention of Significant Deterioration (PSD) Approval for each affected facility.

The new NO<sub>x</sub> RACT further specifies that a Large MWC shall minimize NO<sub>x</sub> emissions by operating and optimizing the use of all installed pollution control technology and combustion controls consistent with the technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 CFR §60.11(d)) for such equipment and the unit at all times the unit is in operation, including periods of startup and shutdown. Large MWCs shall continuously monitor NO<sub>x</sub> emissions with a continuous emission monitoring system (CEM) in accordance with COMAR 26.11.01.11. Large MWCs are also required to submit quarterly reports to the Department containing data, information, and calculations which demonstrate compliance with the NO<sub>x</sub> RACT emission rates and NO<sub>x</sub> mass loading emission limits. The reports shall include flagging of periods of startup and shutdown and exceedance of emission rates, as well as documented actions taken during periods of startup and shutdown in signed, contemporaneous operating logs.

#### *Additional NO<sub>x</sub> Emission Control Requirements*

The proposed NO<sub>x</sub> RACT requirements, when effective, will result in immediate reductions in NO<sub>x</sub> emissions from Large MWCs. This action also contains additional NO<sub>x</sub> emission control requirements, which are needed by Maryland to attain and maintain compliance with federal ozone standards.

No later than January 1, 2020, Wheelabrator Baltimore, Inc. is required to submit a feasibility analysis for control of NO<sub>x</sub> emissions as prepared by an independent, third-party to the Department. This report shall provide a written narrative and schematics detailing the existing facility operations, boiler design, NO<sub>x</sub> control technologies and relevant emission performance. An overview of state of the art

NOx control technologies for achieving additional NOx emission reductions from existing MWCs in consideration of the current boiler configuration at Wheelabrator Baltimore Inc. and an analysis of whether each state of the art control technology could be implemented is also to be included. The report shall also contain a cost-benefit analysis and schedule for installation and implementation of each NOx emission control technology. Concluding the report shall be proposed NOx 24-hour block average emission rate, NOx 30-day rolling average emission rate, and NOx mass loading emission limitation for periods of startup, shutdown, and malfunction based upon the results of the feasibility analysis. The feasibility analysis and the proposed NOx emission limits are to be approved by the Department. Wheelabrator Baltimore, Inc. shall provide the Department with no less than two weeks notice and the opportunity to observe any optimization procedure, including installation or operation of NOx emission control technology, for the express purpose of complying with the additional NOx emission control requirements.

The Department intends to initiate rulemaking in 2020 to adopt the NOx emission control limits for the Wheelabrator Baltimore, Inc. facility that have been identified by the feasibility analysis and approved by the Department. The additional NOx emission control requirements would need to go through full public comment and hearing process as required by Maryland law.

### Projected Emission Reductions

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MDE projects the implementation of the new NOx RACT requirements for Large MWCs will result in approximately 200 tons of NOx emissions reduced on an annual basis.

There are no expected NOx emission reductions for Small MWCs.

Minimal emissions reductions are expected from existing HMIWI sources in Maryland as a result of meeting the requirements of COMAR 26.11.08.08-2. As of October 6, 2014, Maryland sources have already applied control technologies to the incineration process and to post incineration emissions to meet the NOx emission standards, and other requirements, as specified in the 111(d) plan of COMAR 26.11.08.08-2.

## Economic Impact on Affected Sources, the Department, other State Agencies, Local Government, other Industries or Trade Groups, the Public

Large MWCs are expected to incur a small increase in operating costs as a result of optimization of existing control technology and increase of urea consumption. The operating cost increase is projected to be in the range \$1,123 to \$1,269 per ton of NOx reduced based on the increase in urea consumption. Additional capital costs have been incurred at the Wheelabrator Baltimore, Inc. facility in an effort to meet the proposed NOx RACT emission rates. Wheelabrator Baltimore, Inc. has conducted several analyses of existing operating combustion and control systems, and has modified urea injection systems to be optimized for multiple parameters. The facility has also modified interface combustion controls with SNCR operation and control through automation of the urea feed system. Specific cost information has not been made available to the Department.

| There are no expected economic impacts for Small ~~MCWs~~-MWCs and HMIWIs. There will be no impact on the Department or other state agencies or local government as a result of this action.

## Economic Impact on Small Businesses

The proposed action has minimal or no economic impact on small businesses.

## Is there an Equivalent Federal Standard to this Proposed Regulatory Action?

This regulatory action proposes new NOx RACT standards for Large MWCs. There is no equivalent federal RACT standard for Large MWCs. Maryland's existing NOx RACT for Large MWCs is based upon 40 CFR 60, Subpart Eb - New Source Performance Standards for Large Municipal Waste Combustors constructed after September 20, 1994 and 40 CFR 60, Subpart Cb - Emission Guidelines and Compliance Times for Large Municipal Waste Combustors constructed on or before September 20, 1994.

COMAR 26.11.08.08-2 serves as Maryland's HMIWI 111(d)/129 Plan and adopts EPA's EGs as specified under 40 CFR 60, Subpart Ce and 40 CFR 62, Subpart HHH.

# Title 26 DEPARTMENT OF THE ENVIRONMENT

## Subtitle 11 AIR QUALITY

### Chapter 01 General Administrative Provisions

Authority: Environment Article, §§1-101, 1-404, 2-101—2-103, 2-301—2-303, 10-102, and 10-103,  
Annotated Code of Maryland

#### .01 Definitions.

- A. (text unchanged)
- B. Terms Defined.
  - (1) — (8) (text unchanged)
  - (8-1) *Repealed.*
  - (9) — (27) (text unchanged)
  - (27-1) *Repealed.*
  - (28) — (53) (text unchanged)

#### .02 — .11 (text unchanged)

DRAFT 12-8-2017  
DOWNLOAD 02-12-2016 (includes NPA updates from 11-13-2015)

# Title 26 DEPARTMENT OF THE ENVIRONMENT

## Subtitle 11 AIR QUALITY

### Chapter 08 Control of Incinerators

Authority: Environment Article, §§1-404, 2-103, 2-301—2-303, 2-406, Annotated Code of Maryland

#### .01 Definitions.

- A. (text unchanged)
- B. Terms Defined.
  - (1) — (7-1) (text unchanged)
  - (7-2) *Continuous Burning.*
    - (a) *“Continuous burning” means the continuous, semi-continuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production.*
    - (b) *“Continuous burning” begins once municipal solid waste is fed to the combustor.*
  - (8) — (45) (text unchanged)
  - (46) *“Operating day” means a 24-hour period beginning [between 12] midnight of one day and ending the following midnight, or an alternate 24-hour period approved by the Department, during which time an installation consumes fuel or causes emissions. [any amount of hospital waste or medical/infectious waste is combusted at any time in the HMIWI].*
  - (47) — (53) (text unchanged)
  - (54) *Shutdown.*
    - (a) — (d) (text unchanged)
    - (e) *“Shutdown” for the Montgomery County Resource Recovery Facility a Large MWC commences thirty minutes after the chute to the loading hopper of the combustion train is closed or after municipal solid waste feed to the loading hopper has ceased, and ends no later than three hours thereafter.*
    - (f) *“Shutdown” for the Wheelabrator Baltimore Inc. facility commences thirty minutes after municipal solid waste feed to the loading hopper has ceased and ends no later than three hours thereafter.*
  - (55) (text unchanged)
  - (55-1) *“Small MWC” means a municipal waste combustor which has a capacity of at least 35 tons and less than or equal to 250 tons per day.*
  - (56) — (59) (text unchanged)
  - (60) *Startup.*

(a) — (b) (text unchanged)

(c) “Startup” for a Large MWC commences when the unit begins the continuous burning of municipal solid waste and continues for a period of time not to exceed three hours, but does not include any warm-up period when the particular unit is combusting fossil fuel or other non-municipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

(61) “30-day rolling average emission rate” means a value of  $NO_x$  emissions in ppmv, corrected to 7 percent oxygen, calculated by:

(a) Summing the total hourly ppmv of  $NO_x$  emitted from the unit during the current operating day and the previous 29 operating days, excluding periods of startup and shutdown; and

(b) Dividing the total hourly ppmv of  $NO_x$  emitted from the unit during the 30 operating days summed in Regulation .01B(61)(a) of this Chapter by 30.

(62) “24-hour block average emission rate” means a value of  $NO_x$  emissions in ppmv, corrected to 7 percent oxygen, calculated by:

(a) Summing the hourly average ppmv of  $NO_x$  emitted from the unit during 24 hours between midnight of one day and ending the following midnight, excluding periods of startup and shutdown; and

(b) Dividing the total sum of hourly  $NO_x$  ppmv values emitted during 24 hours between midnight of one day and ending the following midnight by 24.

[(61)] (63) “Wet scrubber” means an add-on air pollution control device that utilizes an alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) or to absorb and neutralize acid gases, or both.

## **.02 Applicability.**

A. (text unchanged)

B. Regulation .07 of this chapter applies to [an] a Small MWC that was constructed on or before August 30, 1999 [and has a capacity of at least 35 tons and less than or equal to 250 tons per day].

C. — F. (text unchanged)

G. *Repealed.* [If there is any discrepancy between the terms defined in this chapter and any federal definition in the Clean Air Act, 42 U.S.C. §§7401—7671 (CAA), and 40 CFR Part 60 Subparts A, B, Eb, and Ec, the federal definition applies.]

H. *Repealed.* [The requirements in Regulation .08-1 of this chapter apply to a person who owns or operates an HMIWI for which construction was commenced on or before June 20, 1996, except as provided in 40 CFR §60.50c(b)—(i).]

I. All provisions of Regulation [.08-1] .08-2 of this chapter and the related HMIWI 111(d)/129 plan approval, 40 CFR Part 62, Subpart V, are applicable[, except as amended or revised under Regulation .08-2 of this chapter and approved by EPA as part of the Maryland HMIWI 111(d)/129 plan].

J. Regulation .10 of this chapter applies to Large MWCs.

## **.03 (text unchanged)**

## **.04 Visible Emissions.**

A. In Areas I, II, V, and VI, the following apply:

(1) Except as provided in Regulations .08 and [.08-1] .08-2 of this chapter, a person may not cause or permit the discharge of emissions from any incinerator, other than water in an uncombined form, which is greater than 20 percent opacity;

(2) (text unchanged)

B. — D. (text unchanged)

## **.05 Particulate Matter.**

A. Requirements for Areas I, II, V, and VI.

(1) Calculations. Except as provided in Regulations .08 and [.08-1] .08-2 of this chapter, incinerator or hazardous waste incinerator emissions shall be adjusted to 12 percent carbon dioxide.

(2) Incinerators Constructed Before January 17, 1972. Except as provided in Regulations .08 and [.08-1] .08-2 of this chapter, a person may not cause or permit the discharge into the outdoor atmosphere from any incinerator constructed before January 17, 1972, particulate matter to exceed the following limitations:

(a) — (b) (text unchanged)

(3) Incinerators Constructed on or After January 17, 1972. Except as provided in Regulations .07, .08, and [.08-1] .08-2 of this chapter, a person may not cause or permit the discharge of particulate matter into the outdoor atmosphere from any incinerator or crematory constructed on or after January 17, 1972, to exceed 0.10 grains per standard cubic foot dry 0.10 gr/SCFD (229 mg/dscm).

(4) (text unchanged)

B. Requirements for Areas III and IV.

(1) Calculations. Except as provided in Regulations .08 and [.08-1] .08-2 of this chapter, incinerator or hazardous waste incinerator emissions shall be adjusted to 12 percent carbon dioxide.

(2) Except as provided in Regulations .07, .08, and [.08-1] .08-2 of this chapter, a person may not cause or permit the discharge of particulate matter into the outdoor atmosphere from any incinerator, hazardous waste incinerator, or crematory to exceed the following limitations:

(a) — (b) (text unchanged)

## **.06 (text unchanged)**

**.07 Requirements for *Small Municipal Waste Combustors* [with a Capacity of 35 tons or greater per day and less than or equal to 250 Tons Per Day].**

A person may not operate a *Small MWC* [municipal waste combustor that has a burning capacity of 35 tons or more per day and less than or equal to 250 tons per day] that was constructed on or before August 30, 1999 which results in violation of the provisions of 40 CFR 62 Subpart JJJ.

.08 (text unchanged)

**.08-1 Emission Standards and Requirements for HMIWIs. *Repealed.***

**.08-2 Emission Standards and Requirements for HMIWIs Under 40 CFR 60 Subpart Ce as Revised October 6, 2009.**

A. Applicability and Emission Standards. [Notwithstanding the requirements of Regulation .08-1 of this chapter, the] *The* emission standards and requirements of §B(1)—(7) and §C(1)—(6) of this regulation apply to a person who owns or operates an HMIWI subject to 40 CFR Part 60, Subpart Ce, as revised, October 6, 2009.

B. — H. (text unchanged).

.09 (text unchanged)

**.10 *NO<sub>x</sub>* Requirements for Large Municipal Waste Combustors.**

A. *The owner and operator of a Large MWC shall minimize NO<sub>x</sub> emissions by operating and optimizing the use of all installed pollution control technology and combustion controls consistent with the technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 CFR §60.11(d)) for such equipment and the unit at all times the unit is in operation, including periods of startup and shutdown.*

B. *As of May 1, 2019, the owner or operator of a Large MWC shall meet the following applicable NO<sub>x</sub> emission rates, except for periods of startup and shutdown:*

<i>Affected Sources</i>	<i>NO<sub>x</sub> 24-hour block average emission rate</i>
<i>Montgomery County Resource Recovery Facility</i>	<i>140 ppmv</i>
<i>Wheelabrator Baltimore Inc.</i>	<i>150 ppmv</i>

C. *As of May 1, 2020, the owner or operator of a Large MWC shall meet the requirements of §B of this Regulation and the following applicable NO<sub>x</sub> emission rates, except for periods of startup and shutdown:*

<i>Affected Sources</i>	<i>NO<sub>x</sub> 30-day rolling average emission rate</i>
<i>Montgomery County Resource Recovery Facility</i>	<i>105 ppmv</i>
<i>Wheelabrator Baltimore Inc.</i>	<i>145 ppmv</i>

**D. Startup and Shutdown NO<sub>x</sub> Emission Limitations.**

*As of May 1, 2019, during periods of startup and shutdown the following emission limitations shall apply:*

(1) *For Montgomery County Resource Recovery Facility, a facility wide NO<sub>x</sub> emission limit of 202 lbs/hr timed average mass loading over a 24-hour ~~block~~ period.*

(2) *For Wheelabrator Baltimore Inc., a facility wide NO<sub>x</sub> emission limit of 252 lbs/hr timed average mass loading over a 24-hour ~~block~~ period.*

(3) *When the unit is in periods of startup and shutdown, the NO<sub>x</sub> 24-hour block average emission rate under §B will apply for the 24-hour period after startup and before shutdown.*

**E. Additional NO<sub>x</sub> Emission Control Requirements.**

(1) *Not later than January 1, 2020, the owner or operator of Wheelabrator Baltimore Inc. shall submit a feasibility analysis for additional control of NO<sub>x</sub> emissions from the Wheelabrator Baltimore Inc. facility to the Department. This analysis shall be prepared by an independent third party and include the following:*

(a) *A written narrative and schematics detailing existing facility operations, boiler design, NO<sub>x</sub> control technologies, and relevant emission performance;*

(b) *A written narrative and schematics detailing state of the art NO<sub>x</sub> control technologies for achieving additional NO<sub>x</sub> emission reductions from existing MWCs in consideration of the current boiler configuration at Wheelabrator Baltimore Inc.;*

(c) *An analysis of whether each state of the art control technology identified under §E(1)(b) could be implemented at the Wheelabrator Baltimore Inc. facility;*

(d) *Capital and operating costs, NO<sub>x</sub> emission benefits, and air quality impacts of for installation of each state of the art control technology as identified under §E(1)(b) of this Regulation;*

(e) An estimated timeline for installation of each state of the art control technology as identified under §E(1)(b) of this Regulation which shall include design time, construction, operational testing and start up; and

(f) Any other information that the Department determines is necessary to evaluate the feasibility analysis.

(2) Not later than January 1, 2020, based upon the results of the feasibility analysis as required under §E(1) of this Regulation, the owner or operator of Wheelabrator Baltimore Inc. shall propose and submit a NO<sub>x</sub> 24-hour block average emission rate, NO<sub>x</sub> 30-day rolling average emission rate, and NO<sub>x</sub> mass loading emission limitation for periods of startup, shutdown and malfunction for approval by the Department.

F. The owner or operator of a Large MWC shall continuously monitor NO<sub>x</sub> emissions with a continuous emission monitoring system in accordance with COMAR 26.11.01.11.

G. Not later than 45 days after the effective date of this regulation, the owner or operator of a Large MWC shall submit a plan to the Department and EPA for approval that demonstrates how the Large MWC will operate installed pollution control technology and combustion controls to meet the requirements of §A of this Regulation. The plan shall summarize the data that will be collected to demonstrate compliance with §A of this Regulation. The plan shall cover all modes of operation, including but not limited to normal operations, startup, and shutdown.

H. Beginning July 1, 2019, the owner or operator of a Large MWC shall submit a quarterly report to the Department containing:

(1) Data, information, and calculations which demonstrate compliance with the NO<sub>x</sub> 24-hour block average emission rate as required in §B of this Regulation, ~~as applicable~~;

(2) Data, information, and calculations, including NO<sub>x</sub> continuous emission monitoring data and stack flow data, which demonstrate compliance with the startup and shutdown mass NO<sub>x</sub> emission limits as required in §D(3) of this Regulation, ~~as applicable~~;

(3) Flagging of periods of startup and shutdown and exceedances of emission rates;

(4) NO<sub>x</sub> continuous emission monitoring data and total urea flow rate to the boiler averaged over a 1-hour period, in a Microsoft Excel format; and

(5) Documented actions taken during periods of startup and shutdown in signed, contemporaneous operating logs.

I. Beginning July 1, 2020, the quarterly report to be submitted pursuant to §H of this Regulation shall also include data, information, and calculations which demonstrate compliance with the NO<sub>x</sub> 30-day rolling average emission rate as required in §C of this Regulation, ~~as applicable~~.

J. No less than two weeks advance notice and the opportunity to observe activities shall be provided to the Department prior to any optimization procedure, including installation or operation of NO<sub>x</sub> emission control technology, for the express purpose of complying with the requirements of §E(1) of this Regulation.

~~L~~K. Compliance with the NO<sub>x</sub> emission standards in §B, C, and D of this Regulation shall be demonstrated with a continuous emission monitoring system.

~~M~~L. Compliance with the NO<sub>x</sub> mass loading emission limitation for periods of startup and shutdown in §D(3) of this Regulation shall be demonstrated by calculating the 24-hr block average of all hourly average NO<sub>x</sub> emission concentrations from continuous emission monitoring systems, utilizing stack flow rates derived from flow monitors, for all the hours during the startup or shutdown period.

DRAFT 03-11-2016  
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## Title 26 DEPARTMENT OF THE ENVIRONMENT

### Subtitle 11 AIR QUALITY

#### Chapter 09 Control of Fuel-Burning Equipment, Stationary Internal Combustion Engines, and Certain Fuel-Burning Installations

Authority: Environment Article, §§1-101, 1-404, 2-101—2-103, 2-301—2-303, 10-102, and 10-103, Annotated Code of Maryland

.01 — .07 (text unchanged)

#### .08 Control of NO<sub>x</sub> Emissions for Major Stationary Sources.

A. — G. (text unchanged)

H. *Repealed.* [Requirements for Municipal Waste Combustors, and Hospital, Medical, and Infectious Waste Incinerators.

(1) A person who owns or operates a municipal waste combustor shall install, operate, and maintain a CEM for NO<sub>x</sub> emissions.

(2) NO<sub>x</sub> emissions from municipal waste combustors may not exceed the NO<sub>x</sub> emissions standards in COMAR 26.11.08.07 and COMAR 26.11.08.08 or applicable Prevention of Significant Deterioration limits, whichever is more restrictive.

(3) NO<sub>x</sub> emissions from hospital, medical, and infectious waste incinerators as defined in COMAR 26.11.08.01B(18) may not exceed the NO<sub>x</sub> emission standards in COMAR 26.11.08.08-1A(2) (250 ppm 24-hour average) as applicable.]

I.— K. (text unchanged)

**.09 — .12** (text unchanged)

DRAFT