December 8, 2017

George (Tad) Aburn
Director, Air & Radiation Management Administration
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Submitted via Electronic Mail

RE: Comments on 11.17.2017 Draft NOx RACT Regulation for Large Municipal Waste Combustors (as included in Agenda for December 11, 2017 AQCAC meeting)

Dear Mr. Aburn:

The Chesapeake Bay Foundation (CBF) submits the following preliminary comments regarding the Maryland Department of the Environment’s (MDE) draft regulation, dated November 17, 2017, for the Reasonably Available Control Technology (RACT) limits for nitrogen oxides (NOx) emissions from Maryland’s two large municipal waste combustors (“MWCs”). The draft regulation was released via email attachment on November 22, 2017 as part of the agenda for the December 11, 2017 Air Quality Control Advisory Council (AQCAC) meeting.

AQCAC has the authority to recommend that MDE adopt, reject, or modify any proposed regulation. Md. Envt. Code Ann. § 2-206(b). “The duties of the Council include…[r]eviewing and advising the Department on draft air quality rules and regulations which are being considered for adoption in order to achieve air quality and public health goals and protect the environment.”

CBF appreciates the opportunity to participate in MDE’s stakeholder process thus far and is encouraged by certain aspects of the draft regulation. In particular, CBF supports the framework of an interim NOx RACT limit followed shortly thereafter by a permanent, more stringent NOx limit that recognizes Wheelabrator’s impacts to human health and the environment. However, we are concerned that in the November 17, 2017 draft regulation the second NOx limit will be established by a subsequent rulemaking—to be initiated in 2020—with a delayed and indefinite timeline for implementation and additional emission reductions. In light of this timeline, CBF respectfully cannot support the regulation as

2 “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.” AQCAC Agenda, page 8.
currently drafted and will urge AQCAC, on December 11th, to reject the proposed regulation and ask MDE to consider the following:

- Include a 2020 limit in this proposed regulation rather than delaying it to a future rulemaking. MDE raised this option in its presentation at the September 22, 2017 Stakeholder Meeting. See MDE PPT Presentation, slide 30 (“Option 1 – Establish 2022 limits in current RACT rule: Presumptive limit…”).
- Ensure that the feasibility study submitted by Wheelabrator in 2020 includes all necessary information to avoid further delay of emission reductions and to best protect the health of Baltimore residents and the Chesapeake Bay watershed.
- Share information with the public that has been previously requested by the Environmental Integrity Project (EIP) and CBF, including 1-hour CEMS data.3

The November 17, 2017 draft regulation includes section E, “Additional NOx Emission Control Requirements,” which states that “(1) Not later than January 1, 2020, the owner or operator of Wheelabrator Baltimore, Inc. shall submit a feasibility analysis for additional control of NOx emissions from the Wheelabrator Baltimore Inc. facility to the Department.” The regulation then provides a list of information that shall be included in the feasibility analysis. CBF urges MDE to modify the regulation to explicitly require the following critical information.4

At a minimum, the feasibility study report should include, for each boiler: (a) all NOx baseline characterization data and the corresponding process-related data such as waste volumes burned, temperature profiling and modeling of gas flow path, urea injection rates at each nozzle, and oxygen measurements; (b) all sampling results including sampling for any potential air contaminants that may be detrimental to the technical feasibility of any state-of-the-art NOx controls (such as potential catalyst poisons, etc.) of the exhaust gas streams along the gas flow path for each boiler; (c) all vendor discussions for each of the state of the art NOx reduction technology, including discussions with selective catalytic reduction (SCR) catalyst vendors; and (d) all capital and operating cost data with supporting assumptions and calculations.

It is crucial that the consideration of state of the art NOx reduction technologies (specifically SCR and hybrid selective non-catalytic reduction (SNCR)/SCR) in the feasibility analysis not be constrained by whether or not such technologies are in use at any other incinerators – instead, the focus should be on whether they can work given boiler configuration, temperature profiles, gas path composition, and any other relevant site-specific consideration particular to the Wheelabrator plant. Given that the MDE is allowing approximately two years for Wheelabrator to submit the feasibility report, it is reasonable to

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3 See CBF, Comments on MDE Process for Setting RACT Limits for NOx Emissions from Large Municipal Waste Combustors (May 9, 2017), Attachment B: Ranajit Sahu Expert Report, at 1 (“Data Gaps for Understanding NOx Generation”); Attachment C: “Questions Submitted via Email to Randy Mosier (MDE) from Leah Kelly (EIP) on April 4, 2017; see also, Public Information Act Request #2017-00093 (requesting “[f]rom January 1, 2012 to present, all quarterly continuous emissions monitoring systems (“CEMS”) reports for NOx emissions”); EIP and CBF Comment Letter on Sept. 18, 2017 Draft Rule, at 5, 7 (Oct. 6, 2017) (“Commenters are requesting that MDE order Wheelabrator to immediately begin submitting 1-hour NOx CEMS data in order to provide essential data for the feasibility study.”).

4 This discussion incorporates by reference recommendations for the feasibility study provided in the October 6, 2017 comment letter submitted to MDE jointly by CBF and EIP.
expect that the third-party feasibility report will include actual short-term (i.e., lasting weeks to months) pilot studies of state-of-the-art NOx reduction technologies such as SCR and hybrid SNCR/SCR implemented at Wheelabrator. The feasibility report should not be a consultant-driven paper exercise.

Subsection (d) refers to a consideration of costs and benefits: “Capital and operating costs, NOx emission benefits, and air quality impacts of for [sic] installation of each state of the art control technology as identified under §E(1)(b) of this Regulation.” CBF believes this language is too vague and does not ensure that the feasibility analysis will include consideration of human health and environmental impacts from Wheelabrator’s NOx emissions.

As we urged in our joint comment letter with EIP on October 6, 20175, the feasibility analysis NOx reduction benefit section should include language explicitly requiring the analyses of human health impacts and environmental impacts, using latest air quality modeling and risk analysis tools, as needed. CBF suggests the following modifications to the language in section E (modifications indicated by bold/italics):

(d) Capital and operating costs, NOx emission reduction benefits, and air quality impacts, including improvements in human health and reduction of environmental impacts and/or other benefits of reduction, resulting from installation of each state of the art control technology as identified under §E(1)(b) of this Regulation.”

Over the course of this informal stakeholder process, CBF has submitted to MDE expert evidence of the environmental and human health impacts from Wheelabrator’s emissions.6 We now submit the attached human health report, by Dr. George Thurston, to provide additional context and support for the need to consider human health costs in the feasibility study. Using an EPA-approved model, Dr. Thurston’s report documents the adverse human health effects associated with exposure to particulate emissions (for which NOx is a precursor) from the Wheelabrator Baltimore incinerator, including respiratory symptoms, hospital admissions, asthma symptoms, chronic bronchitis, and lost work days. The report relies upon averaged emissions rates reported by Wheelabrator Baltimore in 2014, 2015, and 2016. CBF recognizes that Wheelabrator is just one of many sources of air pollution in the region and advocates for more protective limits at all sources throughout the region. However, Wheelabrator Baltimore is a very large source of NOx—the fifth largest in the state in 2016—and the focus of this current NOx RACT rulemaking. Its impacts are, therefore, relevant to a complete analysis of the facility.

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5 “Any cost-benefit analysis performed as part of the feasibility study must include the costs of Wheelabrator’s pollution to the public.” EIP and CBF Comment Letter, at page 9.
Furthermore, while the proposed 24-hour block average emission rate of 150 ppmv\(^7\) and 145 ppmv\(^8\) rate over a 30-day period might appear to be reasonable in comparison to the limits imposed on similar facilities in the Northeast, CBF was unable to conduct a thorough analysis of the limits, specifically as they apply to Wheelabrator Baltimore, without the additional information requested from MDE via a Public Information Act (PIA) request and comment letters.\(^9\) CBF was supportive of the 150 ppmv limit as a temporary, stop-gap limit, with a more stringent permanent limit to be applied in 2020. However, now that timeline has been pushed to a new rulemaking to be initiated in 2020. Based on the information available to us, we cannot be confident that the 150/145 ppmv limits are appropriate for what Wheelabrator can achieve until well after 2020.\(^10\)

CBF represents members in the city of Baltimore that are directly affected by this draft regulation. Baltimore City residents already suffer from the highest rates of acute asthma events in the state.\(^11\) While NOx, ozone, and particulate matter pollution is a human health issue, Wheelabrator’s NOx emissions also contribute to the nitrogen load to the Chesapeake Bay, which creates both a human health and water quality concern.

CBF’s focus is primarily on water quality, but we also recognize the inextricable link between a healthy environment and healthy communities. CBF has developed an Environmental Justice program to help further its organizational policies of diversity, equity, and inclusion. The program’s goal is to advocate for communities within the Bay watershed that bear a disproportionate share of pollution that harms the health of the residents and the Bay. Further, Baltimore residents, health and environmental groups, and elected officials have all expressed to MDE that it is essential for MDE to set a much stronger limit than 150/145 ppmv and that it do so quickly. Six additional organizations—EIP, Sierra Club, United Workers, Clean Water Action, Chesapeake Climate Action Network, and Chesapeake Physicians for Social Responsibility—have expressly stated opposition to any approach in which MDE uses a separate rulemaking for achieving the important and necessary reductions beyond the 150/145 ppmv limits. As detailed in the attached human health report, Wheelabrator’s emissions have a significant impact on the health of Baltimore residents.

\(^7\) ppmv = parts per million by volume, corrected to 7 percent oxygen

\(^8\) We note that the draft regulation includes a 145 ppmv 30-day rolling average emission rate; however, the AQCAC Agenda states that Wheelabrator “shall meet a NOx 30-day rolling average emission rate of 140 ppmv.” AQCAC Agenda, at 5. CBF asks MDE to clarify this discrepancy.

\(^9\) See CBF, Comments on MDE Process for Setting RACT Limits for NOx Emissions from Large Municipal Waste Combustors (May 9, 2017), Attachment B: Ranajit Sahu Expert Report, at 1 (“Data Gaps for Understanding NOx Generation”); Attachment C: “Questions Submitted via Email to Randy Mosier (MDE) from Leah Kelly (EIP) on April 4, 2017; see also, Public Information Act Request #2017-00093 (requesting “[f]rom January 1, 2012 to present, all quarterly continuous emissions monitoring systems (“CEMS”) reports for NOx emissions”).

\(^10\) EPA has stated that “a state has discretion to require beyond-RACT reductions from any source, and has an obligation to demonstrate attainment as expeditiously as practicable. Thus, states may require VOC and NOx reductions that are ‘beyond RACT’ if such reductions are needed in order to provide for timely attainment of the ozone NAAQS.” EPA, Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements, 80 Fed. Reg. 12264, 12279 (Mar. 6, 2015).

\(^11\) See 2013 asthma hospitalization and emergency rate data available at Maryland Environmental Public Health Tracking, map function, at https://maps.health.maryland.gov/epht/.
Conclusion

Without the modifications discussed above, CBF cannot support the regulation as currently drafted as it delays the critical reduction of emissions by an uncertain amount and along an extended and uncertain timeline. At the December 11, 2017 meeting, CBF will encourage AQCAC to reject the draft regulation in its current proposed form and request MDE to make necessary modifications.

Sincerely,

Alison Prost, Esq.
Maryland Executive Director
Chesapeake Bay Foundation

cc:
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