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Via E-mail

Mr. Eddie DuRant
Air Regulations Development Division
Maryland Department of the Environment
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RE: Stakeholder Comments on Draft COMAR 26.11.38

Dear Mr. DuRant:

The Environmental Integrity Project (“EIP”) thanks you for the opportunity to comment on the Maryland Department of the Environment’s (MDE’s) December 11, 2013 draft Reasonably Available Control Technology (“RACT”) regulation for emissions of nitrogen oxides (“NO_x”), to be codified at COMAR 26.11.38 (“Draft NO_x Rule”). EIP reserves the right to submit additional comments on future drafts of this rule, including when it is proposed in a formal rulemaking process.

We appreciate MDE’s willingness to take steps to limit NO_x emissions from coal-fired power plants in Maryland. Limiting emissions of NO_x is critical to the protection of public health, particularly in the Baltimore area. NO_x is a precursor for ozone, which is a serious problem in Baltimore. In 2013, the American Lung Association ranked the Baltimore, D.C. and Northern Virginia area ninth on its list of the twenty-five cities in America with the highest levels of ozone, making it the only area outside of Texas and California to make the list.¹ Ozone can damage airways, aggravate existing respiratory diseases such as asthma, and increase the frequency of asthma attacks, especially in vulnerable populations such as children. According to the Baltimore City Health Department, asthma is one of the health conditions that accounts for the greatest loss of productivity in Baltimore either through missed work days or school absenteeism.²

¹ American Lung Association, 2013 State of the Air Report, Most Polluted Cities, Ozone, *available at* <http://www.stateoftheair.org/2013/city-rankings/most-polluted-cities.html>

² Baltimore City Health Dept., Healthy Baltimore 2015, 6, *available at* http://www.baltimorehealth.org/info/Healthy_Baltimore_2015/HealthyBaltimore2015_Final_Web.pdf

NO_x is also a precursor for fine particulate matter (PM_{2.5}), which can aggravate heart and respiratory disease and even cause premature death. While the data recorded by MDE's Baltimore-area monitors show generally decreasing annual levels of PM_{2.5}, during 2013 these monitors recorded one violation and another near-violation of EPA's health-based National Ambient Air Quality Standards (NAAQS) for 24-hour PM_{2.5}.³

Finally, it is critical to the protection of public health that MDE ensure that short-term NO_x emissions from these power plants are adequately controlled. EPA recently recognized the adverse impacts that can be caused by short-term spikes in NO_x when it set a 1-hour air quality standard in 2010 for nitrogen dioxide (NO₂), a form of NO_x. EPA's website states:

Current scientific evidence links short-term NO₂ exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between breathing elevated short-term NO₂ concentrations, and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma.

EPA Nitrogen Dioxide Information, Health.⁴

For all of these reasons, the Draft NO_x Rule is an important step toward improving air quality in Baltimore and Maryland, and we appreciate this effort by MDE. However, it is important that MDE provide clarity regarding the periods during which the affected plants will not have to meet the proposed emissions limits. This is especially important if these exemptions will be allowed in system-wide averaging calculations.

1. MDE Must Provide Additional Information Regarding Exemptions from the Emissions Limits

For each affected emissions unit, MDE has set two NO_x limits, one with a 24-hour rolling averaging period and another with a 30-day rolling averaging period. It appears that compliance with the 30-day limit will be calculated using "the arithmetic average of all valid hourly emission rates of the previous 720 valid hours on a rolling basis." Draft COMAR 26.11.38.01(B)(4). Compliance with the 24-hour limit will be calculated using "the arithmetic average of all valid hourly rates for emission rates recorded from a continuous monitoring system on a rolling 24-hour basis." Draft COMAR 26.11.38.01(B)(5).

³ The 24-hour PM_{2.5} NAAQS is 35 µg/m³. In 2013, MDE's Essex monitor in Baltimore County recorded a 24-hour value of 35.2 µg/m³ and its Oldtown monitor in Baltimore City recorded a 24-hour value of 34.6 µg/m³. See EPA Airdata Monitor Values Report at http://www.epa.gov/airdata/ad_rep_mon.html (2013 Ozone, Baltimore-Towson Area).

⁴ Available at <http://www.epa.gov/airquality/nitrogenoxides/index.html>.

However, the plants need not meet the emissions limits when the affected unit is operating at or below Low Capacity Operation Limits. Draft COMAR 26.11.38.03(B). Low Capacity Operation Limits are expressed in megawatts (MW), and are set at different levels for each emissions unit. For example, the Low Capacity Operation Limit for Unit 1 at Brandon Shores is 299 MW, and the Low Capacity Operation Limit for Unit 1 at C.P. Crane is 99 MW.

MDE has not explained how it will calculate whether an emissions unit is operating at or below its Low Capacity Operation Limit. We assume that MDE likely intends to assess whether a unit exceeds its Low Capacity Operations Limit based on 24-hour rolling capacity averages and 30-day rolling capacity averages that will track the averaging periods for the proposed emission limits. However, if this is the case, then MDE should expressly state this in the regulation. Additionally, if a given unit were to operate below its Low Capacity Operation Limit for an hour, it seems possible that that hour would not count as a “valid hourly rate” and, therefore, be excluded from compliance calculations. MDE should, therefore, define “valid hourly rate.”

MDE should also provide an explanation for how the Low Capacity Operations Limit was selected for each emissions unit, how frequently each unit is currently running below its proposed capacity limit, and why an exemption is necessary at that capacity. MDE intends to use these limits to comply with Reasonably Available Control Technology (“RACT”) requirements, which must represent “the lowest emission limitations[s] that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.” *See, e.g.,* 57 Fed. Reg. 55,620, 55,624 (Nov. 25, 1992). If emissions units cannot meet the NO_x limits while operating at or below the Low Capacity Operation Limits, then MDE should explain why compliance is infeasible during these times.

Additionally, Low Capacity Operations are defined to include periods of startup and shutdown, but these terms are not defined. Draft COMAR 26.11.38.01(B)(2)(b). MDE must provide definitions for “startup” and “shutdown” that provide a clear method for determining when these periods begin and end.

Finally, while it appears that the plants cannot rely on the startup, shutdown, and low capacity exemptions if they opt to utilize the System-Wide Emission Averaging option set forth in Draft COMAR 26.11.38.03(C), this is not entirely clear. Under the System-Wide Emission Averaging option, the owner or operator of multiple plants can average emissions among all of its units in order to demonstrate compliance with system-wide emissions limits. If MDE does intend to allow the startup, shutdown, and low capacity exemptions when calculating compliance with the system-wide limits, then it is even more important that MDE provide clarity with regard

to the averaging period(s) for the Low Capacity Operation Limits and the definitions of “startup” and “shutdown.”

Thank you for your consideration of our comments.

Sincerely,



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