



AES Warrior Run

the power of being global

January 15, 2014

George S. Aburn, Jr.
Director
Air and Radiation Management Administration
Department of the Environment
1800 Washington Boulevard, Suite 730
Baltimore, Maryland 21230

SENT VIA US MAIL and EMAIL (gaburn@mde.state.md.us)

Re: Maryland Department of Environment
NOx RACT Draft Proposed Regulations
COMAR 26.11

Dear Mr. Aburn:

AES Warrior Run Inc. ("AES") welcomes the opportunity to provide the following comments to the Maryland Department of the Environment ("MDE") on the proposed revisions to COMAR 26.11 of MDE's regulations – Reasonably Available Control Technology ("RACT"). As we discussed at previous meetings, AES has a number of concerns about MDE's draft proposed RACT emission limits for further reducing NOx emissions from Maryland's coal-based electric generating units. For the reasons explained herein, we respectfully urge MDE to either: (1) remove AES Warrior Run from the list of generators subject to COMAR 26.11 NOx RACT revisions; or (2) in the alternative, modify its proposal as described herein.

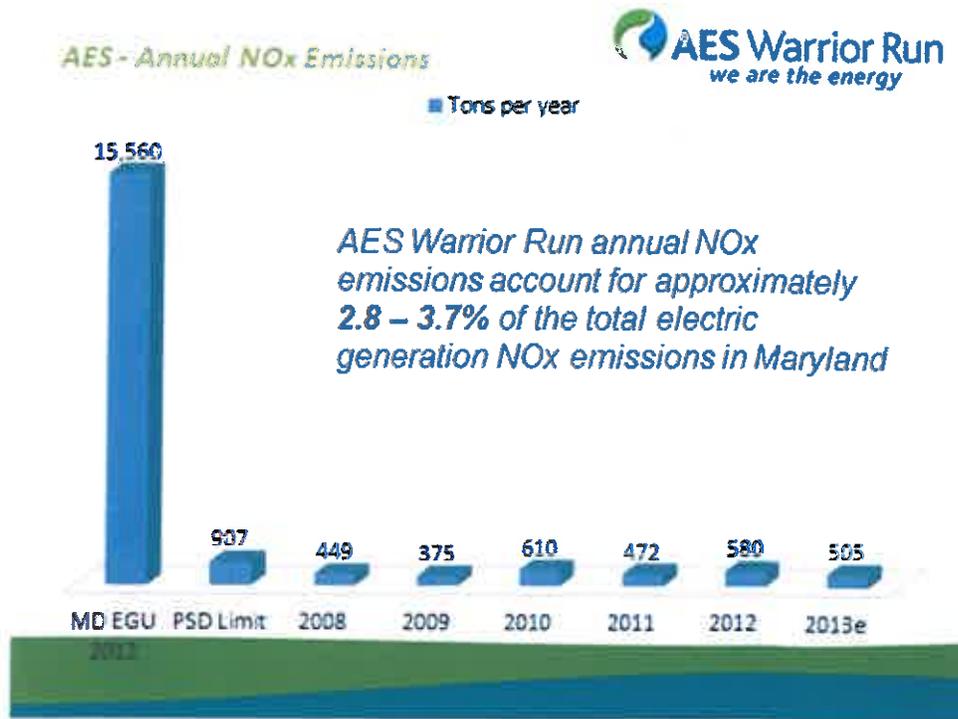
AES Warrior Run is a state-of-the-art 180-megawatt ("MW") circulating fluidized bed electric generation station located in Cumberland, Allegany County that began commercial operation in 2000. The CFB technology is an inherent low-NOx combustion source and coupled with Selective Non-Catalytic Reduction ("SNCR") make it one of the lowest emission sources in the United States. The co-generation facility with CO2 capture uses pulverized dry limestone for SO2 and Hg control, fabric filter bag house for PM capture and operates under a 30-year Power Purchase Agreement. Fuel is sourced from the State of Maryland.

We believe that the regulations, as proposed, would require Warrior Run to replace the installed SNCR control technology with Selective Catalytic Reduction ("SCR") for compliance. This SCR retrofit

requirement with expected capital costs in the tens of millions of dollars is economically infeasible and would not result in a tangible benefit to air quality in the state of Maryland.

1. **MDE sponsored amendment to exclude low emission sources from the Halthy Air Act (“HAA”) – MDE should treat AES the same way here:**

AES Warrior Run is equipped with an inherent low-NOx combustion source and coupled with Selective Non-Catalytic Reduction (SNCR) make it one of the lowest NOx emission sources in the United States. At full output, the facility emits approximately one (1) ton of NOx per calendar day. In an appreciation of this technology and impact on ambient air quality, the Maryland General Assembly expressly excluded AES Warrior Run when it enacted the Healthy Air Act in 2006. Moreover, pursuant to an amendment sponsored by MDE, the General Assembly excluded very low emitting sources (i.e. sources responsible for “less than 2% of emissions from all Maryland coal-fired plants”) from the HAA because MDE recognized that such plants were not contributors to Maryland’s ozone and fine particulate problems and therefore, not critical to meeting Maryland’s attainment goals. Emissions from AES Warrior Run are equivalent to the levels the MDE deemed appropriate for exemption from the HAA in its 2006 amendment. As illustrated in the chart below, based upon the last five (5) years of actual operating data, AES WR annual NOx emissions account for approximately 2.8-3.7% of the total NOx emissions from the coal-fired electric power sector in the state of Maryland. Recognizing the consistent low emission levels of AES Warrior Run, the facility should likewise be excluded from the proposed COMAR 26.11 revisions as the proposed changes for AES Warrior Run are not expected to have any tangible impact on ambient air quality.



2. **The proposed regulations would force AES Warrior Run to reduce its emissions by 83% -an unreasonable and unrealistic amount:**

The draft proposed NOx emission limitations on a 24-hour and 30-day rolling average for AES Warrior Run are 0.09 and 0.05 lb/mmbtu, respectively. The current NOx RACT emission limit for AES Warrior Run is 0.38 lb/mmbtu and the PSD NOx limit from a 1994 BACT Determination is 0.10 lb/mmbtu (24-hour average) with a resultant 907 tons per year potential to emit. AES WR also has an ammonia limit of 0.005 lb/mmbtu averaged on a 3-hour basis which is an important consideration for SNCR technology and balance of plant impacts. The draft proposed limits are the lowest emission rates proposed for all of the power plants in Maryland. Remarkably, these proposed limits represent a reduction of 83% from the current NOx RACT limit. The proposed 30-day rolling average limit represents a reduction of 44% from the proposed 24-hour limit. MDE should explain the rationale for the emission rates selected for AES Warrior Run and the resultant impact on ambient air quality. There has been no discussion on the feasibility of the reductions and expected balance of plant impacts as a result of these emission reductions. As explained above, annual NOx emissions from AES WR account for only 2.8 – 3.7% of total Maryland emissions statewide.

3. **The proposed emission limits for AES Warrior Run do not meet the definition of “Reasonably Available Control Technology”:**

MDE must demonstrate that the presumptive limits in the proposed NOX RACT rule for AES are “reasonable” and “available.” The reasonableness standard is predicated on a cost per ton reduced, unless MDE finds through modeling that more expensive and effective controls are necessary to achieve attainment. See EPA memorandum, “Cost-Effective Nitrogen Oxide (NOX) Reasonably Available Control Technology (RACT)” (March 16, 1994). MDE has not provided adequate data on which the cost and emissions limits are based. MDE must provide the technical basis for the new proposed emissions limits and the basis for the determination of cost effectiveness of the selected technology and resultant emission rate limit.

At the time of commercial operation in 2000, the combination of low-NOx CFB combustion and SNCR was deemed Best Available Control Technology (BACT) by the PSD permitting authority for AES. The emissions levels identified in the draft proposed NOX RACT rule are approaching the equivalent of new-source BACT and lowest achievable emission rate (“LAER”) for existing units.

MDE has not provided a standard presumptive NOx RACT rate for coal-fired boilers in the draft proposed rule. Moreover, MDE must correctly identify the level of emissions reductions that will occur as a result of the proposed NOX RACT rule using an accurate current baseline that includes emissions reductions realized, announced power plant retirements and expected reductions from all the aforementioned programs. MDE should

conduct emissions and economic modeling and/or update the historical modeling to estimate the level of emissions reductions and benefits expected from the CAIR/CSAPR replacement rule, the Utility MACT rule, and expected mobile source reductions to determine cumulative impact on the ozone levels in MDE as an alternative to ratcheting down the NOX RACT levels.

4. **The proposed regulations should include certain reasonable exemptions:**

The emissions levels identified in the proposed NOX RACT rule should be modified to incorporate startup, shutdown and malfunction periods. MDE is aware of the limitations of NOx reduction technology, especially on start-up and low-load operation. As an alternative, MDE should exempt emissions associated with low-load operation, startup, shutdown and malfunction events from the NOX RACT averaging period for compliance demonstration. Without compliance flexibility for low-load, startup, shutdown and malfunction events, it is probable that most units will be unable to comply with the proposed presumptive emissions limits during the ozone season 24-hour averaging period.

5. **The proposed regulations are unnecessary at this time – MDE should postpone action until USEPA acts:**

Emissions reductions beyond the Clean Air Interstate Rule (CAIR) Phase II as implemented in Maryland are not needed. CAIR is designed to provide a means for nonattainment areas in the region to reach attainment with the 8-hour ozone NAAQS. EPA has publicly stated the CAIR/CSAPR replacement rule, which is likely to be proposed in June 2014, will feature much more restrictive emissions limitations on NOX and SO2. Accordingly, MDE should not proceed further with the proposed NOX RACT rule until a full evaluation of the CAIR/CSAPR replacement rule, RGGI programmatic changes and the co-benefits from the Utility Maximum Achievable Control Technology (Utility MACT) rule are completed. At the very least, the compliance dates for the NOX RACT rule should be coordinated with the Utility MACT rule. Numerous programs have led to a major reduction in power sector NOX emissions, including Title IV of the Clean Air Act in 1996 and 2000; the "NOX SIP Call" in 2004; Ozone Transport Region actions in 1997 through present. The CAIR replacement rule and the Utility MACT rule are likely to render the proposed NOX RACT rules superfluous. Given the current economic climate, utility customers in Maryland cannot afford to pay for significant emissions source modifications that will not bring tangible improvements in air quality. MDE must evaluate how overall investment decisions are made for NOX emissions reductions in relation to other regulatory initiatives.

6. **Revised NOx RACT rates do not reflect seasonal difference:**

MDE has not provided any basis or rationale for requiring sources to meet presumptive RACT limits outside of the ozone season – i.e., September 30 – April 30. Oxides of nitrogen behave much differently in the ozone season than the non-ozone season. The regulations

should be modified to include less stringent limits that will not require add-on pollution control equipment during the non-ozone season.

Finally, MDE should provide for adequate review, comment and implementation in the rulemaking schedule. The final effective date of July 2014 does not allow sources to make the evaluation, permitting, engineering and operational modifications to bring a source into compliance.

Thank you for your consideration of our comments and we look forward to working with you to address the concerns we have highlighted.

Sincerely,



Peter Bajc

Plant Manager

AES Warrior Run

Attachment