

Secretary's Order No. 2006-A-0056

Re: Approving Electric Generating Unit Multi-Pollutant Proposed Regulation as Final Regulation No. 1146 to Delaware Regulations Governing Control of Air Pollution, and Approving Delaware's Proposed Section 111(d) State Plan for the Control of Mercury Emissions from Coal-Fired Electric Steam Generating Units as a Final Planning Document

Date of Issuance: November 15, 2006

Effective Date: December 11, 2006

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") under 29 *Del. C.* §§8001 et seq., 29 *Del. C.* §§10111 *et seq.* and 7 *Del. C.* §6010 (a), the following findings, reasons and conclusions are entered as an Order of the Secretary in this proceeding. This Order approves an important Department regulation and a required planning document, which together will improve Delaware's air quality. In turn, these regulatory actions will benefit the public health and welfare of thousands of Delaware's residents and visitors.

The regulation approved today will impose lower emissions limits of three of the most harmful pollutants to Delaware's air quality, namely, nitrogen oxides ("NOx"), sulfur dioxide ("SO₂") and mercury. These harmful pollutants will be reduced by the regulation's establishment of limits on Delaware's largest sources of such pollution, namely, the 8 coal and residual oil-fired electric generating units ("EGU") of 25 megawatts or more of generating capacity. EGUs subject to this regulation are Conectiv

Delmarva Generating, Inc.'s Edge Moor Generating Station Units 3, 4 and 5, the City of Dover's McKee Run Generating Station Unit 3, and NRG Energy, Inc./ Indian River Power LLC's the Indian River Generating Station Units 1, 2, 3 and 4. Together, in 2005 these units emitted 10,419 tons of NO_x and 30,482 tons of SO₂. This regulation reduces these levels to allowable 2009 emissions of 7,942 tons of NO_x and 14,295 tons of SO₂, or reductions of 24% and 53%, respectively. The regulation also imposes limits on mercury, which is a pollutant that prior to this Order was not subject to any regulatory limits or even monitoring.

This Order is based on a vast administrative record, including the public hearing record reviewed in the November 14, 2006, Hearing Officer's Report ("Report"), attached as Appendix C. I find that the proposed regulation and plan s well supported by technical expertise and sound judgment, is consistent with the law, and has a reasonable purpose that is consistent with the Department's statutory purposes. The Report reviews and summarizes the massive administrative record, including the public hearings, which were held in Dover, Kent County, in Georgetown, Sussex County, and in New Castle, New Castle County. Over a hundred persons participated in the public comment process by attending the public hearing or by submitting written comments. The Report recommends approval of the proposed regulation as a final regulation, except for non-substantive modifications recommended by the Department's experts based upon the public comments. In addition, the Report recommends approval of Delaware's Proposed Section 111(d) State Plan for the Control of Mercury Emissions from Coal-Fired Electric Steam Generating Units as a Final Planning Document. I agree with the Report and adopt it as part of this Order along with its reasons.

The regulation approved by this Order will result in significant improvements to Delaware's air quality, which, in turn, will benefit Delaware's public health and welfare. The improved air quality will particularly benefit Delaware's children, the elderly, and those who suffer with an impaired ability to breathe. The improvements will occur in two phases, with Phase I limits beginning May 1, 2009, and Phase II limits beginning January 1, 2012.

The regulation requires that the air emissions of the three most harmful air pollutants be reduced from Delaware's oldest and highest emitting EGUs. These older units operate with minimal air pollution controls, particularly compared to newer units. There is no question that this regulation will result in cleaner air in Delaware. There is no question that one major benefit of cleaner air is its public health benefit, both the short-term benefit in lessening the suffering of those inflicted by impaired respiratory health and the long-term benefit in prevented adverse health damage, particularly in children. The regulation also will improve the environment with the aesthetic benefit of less haze, and provide an economic benefit of reduced morbidity and mortality costs, health care and health insurance costs, lost work time, etc., as well as less harm to Delaware's agriculture products. Should the EGUs install pollution control equipment, then that investment will provide a sizable economic benefit, particularly in the workers needed to install and operate the equipment.

This regulation will become part of Delaware's ozone and fine particulate matter State Implementation Plan ("SIP"), which is used to establish Delaware's compliance with the federal Clean Air Act ("CAA"), as amended. The SIP identifies the regulatory steps and information that the Department has undertaken and relied upon in order that

Delaware's air will attain and maintain compliance with the CAA's air quality standards. Delaware must comply with the CAA and the Environmental Protection Agency's ("EPA") regulations that implement the CAA. The Department's experts have determined that this regulation is necessary to improve Delaware's air quality by the CAA's deadlines. The two phases of the regulation were designed to allow Delaware to meet the CAA's deadlines. This regulation, along with other regulatory actions the Department has taken and will continue to take, is part of the Department's overall effort to bring Delaware's air quality into compliance with the CAA's standards.

The Department determined that it was reasonable to address the three pollutants from coal or residual oil-fired EGUs with 25 megawatts or more of generating capacity. The Department's experts also indicate that these 8 units can install known and proven air pollution control equipment and/or make operational changes to comply with the regulation. The EGUs could also switch to cleaner fuels or even shutdown if the owners believe that the installation of the pollution control equipment is not cost justified on these old units. The Department cannot require the installation of pollution control equipment, but the CAA and the need to protect the environment and public health require that this regulation be approved even if the EGUs shutdown. The Department undertook the exercise of its power to regulate only after the EGUs were afforded an opportunity to provide their voluntary reductions to the emissions of these three harmful pollutants. The Department's efforts at voluntary compliance were unsuccessful, as the EGUs have not invested in the necessary pollution control equipment. The reason for the lack of investment to date is the equipment's considerable expense, and the lack of any regulatory mandate due to the EGUs' "grandfathered status" as older units built before

the current air permit requirements. Nonetheless, this cost is one that the EGUs must accept as a cost of doing business in Delaware, which no longer will be a safe haven for the continued operation of largely uncontrolled pollution from the EGUs.

This regulation is approved because the Department, acting on behalf of all Delawareans, is not willing to wait any longer for a business decision to install needed pollution control equipment. The EGUs emit more of the three harmful pollutants than any other sources in Delaware, and consequently harm Delaware's air quality more than any other sources. This harm to Delaware's air quality, in turn, causes numerous adverse health consequences to its residents and visitors.

There is a huge public health benefit from the cleaner air, although the economic valuation (lost work time, health care and insurance costs, and impaired quality of life diminished or cut short by exposure to polluted air, etc) is less readily quantified than a construction estimate for pollution control equipment. Nevertheless, EPA, in its Regulatory Impact Analysis for its federal regulation, determined that for each \$1.00 spent on pollution control equipment would produce a social value benefit of at least \$10 in ongoing annual health savings. Thus, the Department's regulation's cost to the EGUs is appropriate when measured by this far greater social benefit.

The 8 EGUs are older, but the age does not justify the continued release of harmful air emissions, often in or near densely populated residential areas and schools. Indeed, the public at the public hearings presented powerful comments on the adverse health consequences from adults and children's exposure to the EGU's harmful release of the three pollutants. Few of the Department's proposed regulations have received the amount of public support as this regulation received during the public hearing process,

although some of the public sought even more stringent limits than the Department proposed.

Also, the CAA Section 111(d) plan, which includes the mercury portion of Regulation No. 1146, is finalized under this Order and will be submitted to the EPA. On May 18, 2005, the EPA finalized the Clean Air Mercury Rule (CAMR) to establish standards of performance for mercury emissions from new and existing coal-fired electric steam generating units, as defined in Section 111 of the federal Clean Air Act (CAA). Under CAMR, each state receives an annual budget for mercury emissions from coal-fired EGUs with a nameplate capacity larger than 25 megawatts. A State can meet its CAMR budget either by joining the EPA managed cap-and-trade program or by demonstrating that the State annual EGU mercury budgets codified in 40 CFR §60.24(h)(3) will not be exceeded in any year. Delaware's plan does not provide for participation in the EPA-managed cap-and-trade program, but instead establishes a program that is designed to achieve emission reductions and cap overall mercury emissions from EGUs within Delaware. Delaware's Regulation No. 1146 establishes both mercury emission rate limitations and mercury emission mass limitations. The mercury mass emissions limitations, expressed in tons per year, are those that will satisfy CAMR requirements. Both the emission rate and emission mass requirements require compliance on a unit-by-unit basis, and do not allow trading or facility-wide emissions averaging. Delaware is not adopting the federal mercury budget trading program under 40 CFR Part 60 Subpart HHHH. This means that both existing and new (i.e., construction after January 30, 2004) coal fired EGUs are subject to this regulation. A new unit set aside has been established to provide for new unit construction – a 5% set

aside for Phase I is 0.0036 ton/yr (7.2 lb/yr) and the 3% set aside for Phase II is 0.0008 ton/yr (1.7 lb/yr). Any need beyond this will be addressed by revision to both Regulation No. 1146 and this plan to ensure annual mass emission from coal fired EGUs greater than 25 MW in size in Delaware will not exceed the annual mercury budget established under 40 CFR §60.24(h)(3).

This regulation shows that the Department's experts have struck a fair balance in determining the emission limits. They have relied upon accepted industry information that the pollution control equipment can be installed economically and in time. The EGUs should have planned for the installation of pollution control equipment long ago, but even with the December 11, 2006, effective date of this regulation, the Department has provided the EGUs with sufficient time for the pollution control equipment to be installed. Moreover, the law provides the EGUs with ample recourse. For example, the Administrative Procedure Act allows any person to petition for relief from a regulation, and the Department's statute also provides a relief mechanism in a variance. The Department also will be closely monitoring the EGUs progress, and reserves the right to review the limits and deadlines as may be warranted. The Department may undertake its own interim review of the time deadlines and limits as it deems appropriate, and the regulation's minor modification to Section 8.3 of Regulation 1146 offers another method of possible relief. This Order will formally set up an interim review of this Regulation by directing the Department undertake by January 11, 2010, a complete a review of the state of, and expected changes in, technology, cost effectiveness of available control technologies and control strategies, and emissions rates; as well as a review of the EGUs, and their emissions. This review shall be used to consider whether the standards in

Section 4, 5, and 6 of Regulation 1146 should be amended, including new standards adopted, to ensure the continued improvement of the ambient air quality in Delaware.

The Department adopts this regulation to exercise the state's authority to protect the public health and environment. This state action is taken because the federal regulatory scheme under the federal Clean Air Act relies on a market based theory to encourage the investment in pollution control equipment. The Department's experts have shown that Delaware's experience with the federal cap and trade programs has not resulted in significant reductions from Delaware's EGUs. Moreover, the emissions of these three harmful pollutants are predicted by the Department experts to increase in the future under the federal CAIR and CAMR cap and trade programs. This situation is unacceptable for Delaware.

For Delaware, allowing market conditions to dictate if and when Delaware has cleaner air is contrary to this Department's statutory purposes. Without this regulation, the current situation of minimal investment in pollution control equipment will continue, and the failure to install the needed equipment will mean continued adverse health consequences to Delawareans. The owners of similar units have invested in pollution control equipment in other locations outside of Delaware, and the regulation seeks to require that Delaware receive the same pollution control equipment that has been installed at these locations. This regulation is Delaware's reasonable and prudent action to exercise state authority to regulate these 8 units to reduce their emission of harmful pollutants, which is an action consistent with protecting the public health and environment in Delaware.

The Report discusses the proposed regulation and recommends the changes proposed by the Division of Air and Waste Management's Air Quality Management Section in response to public comments. One change extends the compliance period to coincide with the Department's regulation on ozone attainment, and this clearly is a procedural and non-substantive change. The other change is to allow a procedure for a unit's owner to seek relief relative to timing. Again, I find the ability to seek relief from a regulation is an inherent right in the Administrative Procedure Act and that this change is procedural and not substantive in nature. Any appeal, if successful, will mean that Delaware will not have cleaner air sooner, and will not be able to comply with the CAA's deadlines.

In conclusion, the following findings and conclusions are entered:

1. The Department, acting through this Order of the Secretary, adopts Regulation No. 1146 as set forth in the Appendix A hereto as a final regulation under 29 *Del. C. §6010 (a)*;
2. The Department, acting through this Order of the Secretary, adopts the Section 111(d) plan, as proposed and updated as set forth in Appendix B, as Delaware's final planning document for submission to the EPA;
3. The approval of the final regulation and the plan as a final planning document, will protect and improve the air quality in Delaware from the harmful consequences of the emissions of mercury, SO₂ and NO_x from the EGUs, which emissions are responsible for a large amount of the release of these pollutants in Delaware;

3 The proposed regulation and plan approved by this Order were developed consistent with the applicable law and regulatory standards, and are adequately supported by expert technical analysis, after considering all timely and relevant public comments;

4. The Department provided adequate public notice of the proceeding and the public hearings in a manner required by the law and regulations, held public hearings in a manner required by the law and regulations, and considered all timely and relevant public comments in making its determination;

5. The Department's approved final regulation reflects recommended non-substantive minor modifications that do not change the limits or any substantive part of the regulation. These minor modifications and the regulation as a whole are adequately supported, not arbitrary or capricious, and are consistent with the applicable laws and regulations. Approval of the final regulation and final plan are consistent with the Department's statutory duty to protect the public health and environment in Delaware. The final regulation and the final plan are approved and shall go into effect ten days after publication in the next available issue of the *Delaware Register of Regulations*; and that

6. The Department shall provide written notice to the persons affected by the Order, as determined by those who participated in these Department proceedings at either the public workshops, at the public hearings, or through participation by the submission of timely and relevant written comments.

John A. Hughes
Secretary