

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL (DNREC)

Proposed

Section 111(d) State Plan for the Control of
Mercury Emissions from Coal-Fired Electric
Steam Generating Units

AUGUST 10, 2006

**STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL**

**CAA SECTION 111(d) STATE PLAN FOR THE CONTROL OF MERCURY EMISSIONS
FROM COAL-FIRED ELECTRIC STEAM GENERATING UNITS (EGUs)**

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CAA SECTION 111(d) STATE PLAN FOR THE CONTROL OF MERCURY EMISSIONS FROM COAL-FIRED ELECTRIC STEAM GENERATING UNITS (EGUs)

I. BACKGROUND/INTRODUCTION

On May 18, 2005, the U.S. Environmental Protection Agency (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 (EGUs), as defined in Section 111 of the federal Clean Air Act (CAA). See 70 FR 28606, which is attached hereto as Appendix A.

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. The State of Delaware's mercury budget for the period January 1, 2010 through 2017 is 0.072 tons, and its budget for 2018 and thereafter is 0.028 tons.

By November 17, 2006, states must submit a plan to the EPA that meets the requirements of the CAMR. If a state fails to submit a state plan, then the EPA will prescribe a Federal plan for that state under Section 111(d)(2)(A) of the CAA. See 70 Fed. Reg. 28649 (May 18, 2005) and 40 CFR 60.24 (h)(2). The EPA would propose the model rule (i.e., 40 CFR Part 60 Subpart HHHH) under the CAMR as that Federal plan.

In Delaware two (2) facilities with six (6) existing EGUs are subject to the requirements of 60.24(h). Consequently, the Department must develop this State Plan to implement and enforce the Section 111(d) requirements to control mercury emissions from these EGUs.

The main component of this plan is the mercury portion of Delaware's Air Regulation No. 1146, Electric Generating Unit (EGU) Multi-Pollutant Regulation. Regulation No. 1146 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 proposed 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 plan. 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).

DNREC intends to finalize and submit to the EPA for approval both Regulation No. 1146 and this plan no later than November 17, 2006.

II. PUBLIC PARTICIPATION [40 CFR §60.23(f)]

Prior to submitting this Section 111(d) State Plan to EPA for approval, the DNREC will hold three public hearings for the purpose of accepting testimony on this proposed State Plan for controlling mercury emissions from all Coal-fired Electric Steam Generating Units in the State. Because of the integral relationship, these public hearings will coincide with the public hearings on the adoption of Regulation No. 1146, Electric Generating Unit (EGU) Multi-Pollutant Regulation. The public hearings will be held on the following dates, times and locations:

September 25, 2006 6:00 p.m.	DNREC Auditorium 89 Kings Highway Dover, DE 19901
September 27, 2006 6:00 p.m.	DNREC Lukens Drive Office 391 Lukens Drive New Castle, DE 19720
September 28, 2006 6:00 p.m.	Del Tech – Owens Campus Rt. 18 & Seashore Hwy Georgetown, DE 19947

As required under 40 CFR §60.23, DNREC will publish notice of the date, time and location of the hearings at least 30 days prior to the scheduled date of the hearing. The Notice of Public Hearings and opportunity to provide written comments will be published in both the Delaware Register of Regulations and in newspapers of general circulation in the state. In addition, EPA, and states in the interstate region whose air quality may be affected by emissions from Delaware's EGUs will receive notice of the date, time and location of each hearing. The notice will also specify that copies of the proposed Section 111(d) State Plan are available for review in the Departments Dover and New Castle offices.

Persons interested in providing testimony on the proposed Section 111(d) State Plan are encouraged to contact Bob Clausen at (302) 739-9402 prior to the hearing.

Persons interested in submitting written comments on the proposed State plan should send the comments to Bob Clausen, State of Delaware, DNREC, Division of Air and Waste Management, 156 S. State Street, Dover, DE 19901. Written comments will be accepted until October 1, 2006, or any longer time as specified by the Hearing Officer at the public

hearings. Copies of the proposed adopted State Plan for EGUs may be obtained from Bob Clausen at the above address or by telephone at (302) 739-9402 ([e-mail robert.clausen@state.de.us](mailto:robert.clausen@state.de.us)). This proposed State Plan is also available on the DNREC Web site at www.awm.delaware.gov/Info/Regs/AQMMultiPReg.htm.

In accordance with 40 CFR §60.23(f), DNREC will certify that the public hearings were held in accordance with the criteria specified in 40 CFR §60.23(d), and will provide a list of witnesses and their organizational affiliations, if any, appearing at the hearing and a brief written summary of each presentation or written submission. The public hearing certification is attached hereto as Appendix B (Documentation of public participation process).

III. IMPLEMENTATION OF THE SECTION 111(d) STATE PLAN

The Department is proposing State-specific regulations as the primary mechanism to control mercury emissions from existing coal-fired electric steam generating units (i.e., Regulation No. 1146). Proposed Regulation No. 1146 implements mercury requirements for all subject existing coal fired EGUs in Delaware, and is attached hereto as Appendix C.

Annual mercury emissions from new coal-fired EGUs will be limited through federally enforceable permit conditions, and allowable mass mercury emissions from new units shall not exceed the amount of the new source set-aside provided for in this plan. Any need beyond the new-source set aside provided for in this plan shall be addressed through revision to Reg. 1146 and this plan. Any revision to Reg. 1146 and this plan shall be pursuant to the requirements of 7. Del. C., Chapter 60 and federal requirements of 40 CFR Part 60. In addition, new coal fired EGUs will be subject to federal New Source Performance Standard (NSPS) requirements.

Public hearings will be simultaneously held on this plan and proposed Regulation No. 1146, as indicated in Section II above.

IV. Annual Mercury Mass Emissions Limitations for Delaware's Existing Coal-Fired Electric Generating Units

Annual EGU mercury mass emissions caps for individual states are specified in 40 CFR Part 60.24. For Delaware, §60.24 specifies a statewide mercury mass emissions cap of 0.072 tons/yr (2304 oz/yr) for the years 2010 through 2017, and a state mercury mass emissions cap of 0.028 tons/yr (896 oz/yr) for 2018 and thereafter.

The proposed state Regulation No. 1146 applies to Delaware's existing coal-fired electric generating units (EGUs) with nameplate ratings of 25 MW or greater. For each of these individual EGUs, the proposed regulation specifies annual mercury mass emissions caps. For the years 2009 through 2012, the total of the mercury mass emissions caps for all of the identified EGUs in the proposed regulation is 2189 oz/yr (0.068 ton/yr). For the year 2013

and thereafter, the total of the mercury mass emissions caps for all of the identified EGUs in the proposed regulation is 869 oz/yr (0.027 tons/yr).

Delaware will not participate in the Clean Air Mercury Rule (CAMR) cap-and-trade program. No interstate or intrastate trading or averaging is permitted in Delaware’s proposed regulation for compliance with the mercury mass emissions limits of the proposed regulation. There are no banking provisions in the proposed regulation. The proposed regulation states that compliance with a unit’s mercury annual emissions cap may not be achieved through use of acquiring mercury allowances under any state or federal program.

Individual EGU annual mercury mass emissions limits are identified in Table 1.

Table 1 Annual Mercury Mass Emissions Limits

Facility/Unit	Mercury Mass Emissions Limit 2009 – 2012 (ounces)	Mercury Mass Emissions Limit 2013 and thereafter (ounces)
Edge Moor Unit 3	266	106
Edge Moor Unit 4	462	183
Indian River Unit 1	207	82
Indian River Unit 2	216	86
Indian River Unit 3	337	134
Indian River Unit 4	700	278
Total	2189	869

V. INVENTORY OF EXISTING COAL-FIRED ELECTRIC STEAM GENERATING UNITS [40 CFR §60.25(a)]

In accordance with 40 CFR Part 60, Subpart B, §60.25(a), the State Plan must include “an inventory of all existing designated coal-fired EGUs including emissions data for the designated pollutant.” Delaware’s mercury budget covers six (6) existing designated coal-fired EGUs operated by 2 (two) facilities. The inventory of the existing designated coal-fired EGUs are presented in Table 2 below. Mercury emission from these units will be limited as provided for in Regulation No. 1146 (see Appendix C), and as explained in Section IV above.

Table 2. Inventory of Existing Designated Coal-fired Electric Steam Generating Units in Delaware

FACILITY NAME	UNIT ID	Capacity MW	FACILITY ADDRESS
	1	82	

NRG Indian River	2	82	Millsboro, DE
	3	177	
	4	442	
Conectiv Edgemoor	3	84	Wilmington, DE
	4	154	

VI. COMPLIANCE SCHEDULE FOR COAL-FIRED EGUs [40 CFR §60.24(a)]

An owner or operator of each designated existing coal-fired EGU must achieve compliance with the quarterly and annual emission limitations specified in Regulation No. 1146 on a unit-by-unit basis. The owners or operators of EGUs subject to Reg. 1146 shall comply with all applicable Reg. 1146 requirements and this Section 111(d) State Plan on or before January 1, 2009. Mercury allowances are not created under Regulation No. 1146 of this 111(d) plan, and no allowances under any program may be used or traded.

VII. Monitoring, Recordkeeping, and Reporting Requirements

Under 40 CFR §60.24, EGUs are required to comply with the monitoring, recordkeeping, and reporting provisions of 40 CFR Part 75 with regard to mercury mass emissions. The proposed regulation requires demonstration of compliance with the proposed regulation’s mercury mass emissions limitations through the use of continuous emissions monitoring systems that are installed, calibrated, operated, and certified in accordance with the requirements of 40 CFR Part 75.

Further, the proposed regulation requires compliance with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 60, which would include: §60.4170, General Requirements; §60.4171, Initial Certification and Recertification Procedures; §60.4172, Out of Control Periods; §60.4173, Notifications; §60.4174, Recordkeeping and Reporting; §60.4175, Petitions; §60.4176, Additional Requirements to Provide Heat Input Data; and Performance Specification 12A.

In addition to the requirements of 40CFR Part 60 and 40 CFR Part 75, the proposed regulation requires the maintenance of all relevant reports, test results, and records for a period of at least 5-years.

The proposed regulation also requires submittal of semi-annual reports, including, as a minimum, the following information:

- Tabulation of emissions monitoring results reduced to 1-hr averages.
- Calendar year-to-date summation of mass emissions.
- Identification and cause of any invalid data averages.

- Records of repairs, adjustment, or maintenance of the monitoring system.
- Results of all tests, audits, and recalibrations performed during the period.
- Certification statement, and signature of the designated representative.

**VIII. LEGAL AUTHORITY TO IMPLEMENT THE STATE PLAN
[40 CFR §60.26(a)]**

Pursuant to 40 CFR §60.26, the Section 111(d) State Plan for existing EGUs must demonstrate that States have legal authority to implement the plan. The demonstration of legal authority must show that the Department is authorized to (a) adopt emission standards and compliance schedules necessary for attainment and maintenance of the State's relevant annual EGU mercury budget under paragraph (h)(3) of this section; (b) to enforce applicable laws, regulations, standards, compliance schedules and seek injunctive relief; (c) to obtain information necessary to determine whether designated facilities are in compliance with applicable laws and regulations, standards and compliance schedules. The State Plan must also demonstrate that the Department has sufficient legal authority to require the installation, maintenance and use of emission monitoring devices by the owners and operators of designated EGU facilities and to require recordkeeping and reporting provisions of Part 75 of this Chapter with regards to mercury mass emissions including the submission of periodic emission reports. The legal demonstration must also show that sufficient legal authority exists to carry out inspections and to conduct testing of designated EGU facilities.

7 Del. C., Chapter 60, and Delaware's air permitting regulations No. 2 and 30 (See Appendix D-1) demonstrate that DNREC has the necessary legal authority to adopt and carry out this plan. These documents are included at Appendix D to this plan.

APPENDIX A:

70 FR 28606, Clean Air Mercury Rule (CAMR)

- See 70 FR 28606, May 18, 2005.

APPENDIX B:

DOCUMENTATION OF THE PUBLIC PARTICIPATION PROCESS

- To be inserted after the public process is complete.

APPENDIX C:

Regulation No. 1146, Electric Generating *Unit* (EGU) Multi-Pollutant Regulation

- To be inserted after Regulation No. 1146 is finalized. Regulation No. 1146 is being proposed in conjunction with this plan.

APPENDIX D:

**7 Del. C., Chapter 60, and Regulation No. 2 and Regulation No. 30 of the
State of Delaware “Regulations Governing the Control of Air Pollution”**

APPENDIX D:

Appendix D-1: 7 Del. C., Chapter 60
Appendix D-2: Regulation No. 2
Appendix D-3: Regulation No. 30

- 7 Del. C., Chapter 60. See <http://www.delcode.state.de.us>
- Regulation No. 2 and Regulation No. 30. See http://www.dnrec.state.de.us/air/aqm_page/regs.htm