

COMAR 26.11.27 Emission Limitations for Power Plants

.01 Definitions.

A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.

(1) “Affected facility” means any one of the following electric generating stations:

- (a) Brandon Shores;
- (b) C. P. Crane;
- (c) Chalk Point;
- (d) Dickerson;
- (e) H. A. Wagner;
- (f) Morgantown; and
- (g) R. P. Smith

(2) “Ozone season” means the period beginning May 1 of any given year and ending September 30 of the same year.

(3) “System” means two or more electric generating units subject to this chapter that are owned, operated, or controlled by the same person.

(4) “12-month rolling average emission rate” means an average emission rate determined at the conclusion of each month by calculating:

(a) For each hour that the unit is operating, the arithmetic average of all hourly emission rates for each operating day of a given calendar month to obtain a monthly average; and

(b) The arithmetic monthly average, as determined in §B(4)(a) of this regulation, of the previous 12 calendar months.

.02 Applicability and Exemptions.

A. This chapter applies to the following fossil-fuel fired electric generating units:

- (1) Brandon Shores Units 1 and 2;
- (2) C.P. Crane Units 1 and 2;
- (3) Chalk Point Units 1 and 2;
- (4) Dickerson Units 1, 2, and 3;
- (5) H.A. Wagner Units 2 and 3;
- (6) Morgantown Units 1 and 2; and
- (7) R. Paul Smith Units 3 and 4.

B. Except as provided in Regulation .03B(7) of this chapter, compliance with this chapter may not be achieved by applying sulfur dioxide (SO₂), oxides of nitrogen (NO_x), or mercury allowances acquired under any state or federal emissions trading program.

.03 General Requirements.

A. An electric generating unit subject to this chapter shall comply with the emission limitations for NO_x, SO₂ and mercury as provided in this regulation.

B. NO_x Emission Limitations.

(1) Except as provided in §E of this regulation, annual NO_x emissions from each affected electric generating unit may not exceed the number of tons in §B(2) of this regulation.

(2) Annual Tonnage Limitations.

Affected Unit	Annual NO _x Tonnage Limitations Beginning	
	January 1, 2009	January 1, 2012
Brandon Shores Unit 1	2,927	2,414
Brandon Shores Unit 2	3,055	2,519
C.P. Crane Unit 1	832	686
C.P. Crane Unit 2	894	737
Chalk Point Unit 1	1,415	1,166
Chalk Point Unit 2	1,484	1,223
Dickerson Unit 1	672	554
Dickerson Unit 2	736	607
Dickerson Unit 3	698	575

H.A. Wagner Unit 2	673	555
H.A. Wagner Unit 3	1,352	1,115
Morgantown Unit 1	2,540	2,094
Morgantown Unit 2	2,522	2,079
R. Paul Smith Unit 3	67	55
R. Paul Smith Unit 4	349	288
Total	20,216 tons	16,667 tons

(3) Except as provided in §E of this regulation, ozone season NOx emissions from each affected electric generating unit may not exceed the number of tons in §B(4) of this regulation.

(4) Ozone Season Tonnage Limitations.

Affected Unit	Ozone Season NOx Tonnage Limitations Beginning May 1, 2009
Brandon Shores Unit 1	1,363
Brandon Shores Unit 2	1,449
C.P. Crane Unit 1	345
C.P. Crane Unit 2	385
Chalk Point Unit 1	611
Chalk Point Unit 2	657
Dickerson Unit 1	311
Dickerson Unit 2	333
Dickerson Unit 3	314
H.A. Wagner Unit 2	278
H.A. Wagner Unit 3	583
Morgantown Unit 1	1,053
Morgantown Unit 2	1,048
R. Paul Smith Unit 3	27
R. Paul Smith Unit 4	143
Total	8,900 tons

(5) Except as provided in §B(7) and §E of this regulation, if after reviewing 2009 ozone season measured ozone levels at air monitoring stations located in Maryland, the Department determines that ozone levels in Maryland exceed the levels required to meet the National Ambient Air Quality Standard for ozone, commencing on May 1, 2012, ozone season NOx emissions from each affected electric generating unit shall not exceed the number of tons in

§B(6) of this regulation.

(6) Ozone Season Tonnage Limitations.

Affected Unit	Ozone Season NOx Tonnage Limitations Beginning May 1, 2012
Brandon Shores Unit 1	1,124
Brandon Shores Unit 2	1,195
C.P. Crane Unit 1	284
C.P. Crane Unit 2	317
Chalk Point Unit 1	503
Chalk Point Unit 2	542
Dickerson Unit 1	257
Dickerson Unit 2	274
Dickerson Unit 3	259
H.A. Wagner Unit 2	229
H.A. Wagner Unit 3	481
Morgantown Unit 1	868
Morgantown Unit 2	864
R. Paul Smith Unit 3	22
R. Paul Smith Unit 4	118
Total	7,337 tons

(7) Electric System Reliability During Ozone Seasons.

(a) An exceedance of the NOx limitations in §§B(4) or B(6) of this regulation which occurs because PJM Interconnection, LLC or a successor independent system operator, acts to invoke “Maximum Emergency Generation,” “Load Reduction,” “Voltage Reduction,” “Curtailed of Non-essential Building Load” or “Manual Load Dump” procedures in accordance with the current PJM Manual, or a PJM alert preceding such action as to a generating unit that has temporarily shut down in order to avoid potential interruption in electric service and maintain electric system reliability shall not be a violation of this chapter provided that:

(i) Within 36 hours following the action, the owner or operator of the affected electric generating unit(s) notifies the Manager of the Air Quality Compliance Program of the action taken by PJM Interconnection and provides the Department with documentation of the action which is satisfactory to the Department;

(ii) Within 48 hours after completion of the action, the owner or

operator of the affected unit(s) provides the Department with the estimated NOx emissions in excess of the emission limitation; and

(iii) No later than December 31 of the year in which the emission limitation is exceeded, the owner or operator of the affected generating unit(s) transfers to the Maryland Environmental Surrender Account, ozone season NOx allowances equivalent in number to the tons of NOx emitted in excess of the emission limitation in §§ B(4) or (6), as applicable.

(b) The owner or operator of an electric generating unit or system, as applicable, shall send written notice to the Manager of the Air Quality Compliance Program no later than 5 business days following the day when the cumulative ozone season NOx emissions of an electric generating unit or system, as applicable, are:

(i) Equal to approximately 80% of the applicable ozone season emission limitation; and

(ii) Equal to the applicable ozone season emission limitation.

C. SO₂ Emission Limitations.

(1) Except as provided in §E of this regulation, annual SO₂ emissions from each affected electric generating unit may not exceed the number of tons in §C(2) of this regulation.

(2) **Annual Tonnage Limitations.**

Affected Unit	Annual SO₂ Tonnage Limitations Beginning	
	January 1, 2010	January 1, 2013
Brandon Shores Unit 1	7,041	5,392
Brandon Shores Unit 2	7,347	5,627
C.P. Crane Unit 1	2,000	1,532
C.P. Crane Unit 2	2,149	1,646
Chalk Point Unit 1	3,403	2,606
Chalk Point Unit 2	3,568	2,733
Dickerson Unit 1	1,616	1,238
Dickerson Unit 2	1,770	1,355
Dickerson Unit 3	1,678	1,285
H.A. Wagner Unit 2	1,618	1,239
H.A. Wagner Unit 3	3,252	2,490
Morgantown Unit 1	6,108	4,678
Morgantown Unit 2	6066	4,646

R. Paul Smith Unit 3	161	124
R. Paul Smith Unit 4	841	644
Total	48,618	37,235 tons

D. Mercury Emission Limitations.

(1) For the 12 months beginning January 1, 2010 and ending with the 12 months beginning December 1, 2012 to December 1 2013, each affected facility shall meet a 12-month rolling average removal efficiency for mercury of at least 80 percent; and

(2) For the 12 months beginning January 1, 2013 and thereafter, each affected facility shall meet a 12-month rolling average removal efficiency for mercury of at least 90 percent.

(3) The mercury removal efficiency required in §D(1) and (2) of this regulation shall be determined in accordance with Regulation .04 of this chapter.

E. System-Wide Compliance Determinations.

(1) Compliance with the emission limitations in §§ B and C of this regulation may be achieved by demonstrating that the total number of tons emitted from all electric generating units in a system does not exceed the sum of the tonnage limitations for all electric generating units in that system.

(2) A system-wide compliance determination shall be based only upon emissions from units in Maryland that are subject to the emission limitations in §§ B and C of this regulation.

(3) If a unit that is part of a system is transferred to a different person that does not own, operate, lease or control an affected unit subject to this chapter, the transferred unit shall meet the limitations in §§B and C of this regulation applicable to that electric generating unit.

.04 Determining the Mercury Removal Efficiency for affected facilities.

A. The procedures of §§B—F of this regulation shall be used to demonstrate compliance with the 12-month rolling average removal efficiency required for mercury by regulation .03D of this chapter. The owner or operator of an affected facility shall notify the Department of the compliance demonstration method it has elected from §§D through F of this regulation on or before January 1, 2010 for the compliance period which commences on that date and on or before January 1, 2013 for the compliance period which commences on that date. The owner or operator of an electric generating unit that elects to demonstrate compliance with the required mercury removal efficiency by meeting the mass emissions limitation in §F of this regulation shall utilize that same method for all other electric generating units in the system. Once elected for each affected facility or system, as applicable, the option cannot be changed during the designated compliance period, but may be changed for the next compliance period.

B. Determining Mercury Content in Coal and Mercury Flue Gas Emission Rates for Each Affected Electric Generating Unit.

(1) The owner or operator of an electric generating unit subject to this regulation shall, at least once each quarter during a consecutive 18-month period beginning no later than July 1, 2007:

(a) Determine the mercury content of the coal utilized by each affected unit using a test method approved by the Department; and

(b) Conduct a combustion gas test to determine the mercury emission rate in the flue gas upstream of any pollution control measure, including fuel mercury beneficiation.

(2) Combustion gas testing and collection of coal samples to determine the mercury content in coal shall be performed on the same day(s).

(3) The mercury emission rate in the flue gas shall be reported as ounces of mercury per trillion Btu heat input.

(4) Combustion gas testing shall be performed using a test protocol approved by the Department. The test protocol shall be submitted to the Department at least 45 days prior to commencement of testing.

(5) The owner or operator of an affected electric generating unit shall submit to the Department:

(a) The results of tests to determine the mercury content of coal and mercury emission rate in the flue gas upon receipt; and

(b) A demonstration that the combustion gas tests were performed utilizing a coal with a mercury content within the same or lower range as the mercury content of the coal utilized by the electric generating unit during the previous ten years.

C. Determining the Uncontrolled Mercury Flue Gas Baseline for an affected facility.

(1) The uncontrolled mercury emission rate in the flue gas of each electric generating unit subject to this chapter shall be determined as the arithmetic average of the quarterly combustion gas tests required by §B of this regulation expressed as ounces per trillion Btu heat input.

(2) The uncontrolled mercury baseline emission rate for an affected facility shall be determined as the heat input weighted average of the emission rates for the coal-fired electric generating units at the affected facility determined in accordance with §C(1) of this regulation.

(3) The uncontrolled mercury baseline emission rate in §§C(1) and (2) of this regulation shall be measured upstream of all pollution control measures, including fuel mercury beneficiation.

D. Demonstrating Compliance By Measuring Mercury Removal Efficiency.

Compliance with the required mercury removal efficiency is demonstrated at an affected facility when the heat input weighted average of the mercury emission rate of all coal-fired electric generating units at the affected facility, calculated as a 12-month rolling average, is:

(1) For the 12-month period commencing on January 1, 2010, no more than 20 percent of the uncontrolled mercury emission rate established pursuant to §C of this regulation; and

(2) For the 12-month period commencing January 1, 2013 and thereafter, no more than 10 percent of the uncontrolled mercury emission rate established pursuant to §C of this regulation

E. Demonstrating Compliance By Meeting A Mercury Emission Rate.

(1) Compliance with the required mercury removal efficiency is achieved for an affected facility when the heat input weighted average of the mercury emission rates of all coal-fired electric generating units at the affected facility, measured as a 12-month rolling average, does not exceed the applicable emission rate in §E(2) of this regulation.

(2) Emission Rates.

Affected Facility	Emission Limits Ounces per trillion Btu Heat Input Beginning	
	January 1, 2010	January 1, 2013
Brandon Shores	21	10
C.P. Crane	37	18
Chalk Point	40	20
Dickerson	38	19
H.A. Wagner	25	12
Morgantown	27	14
R. Paul Smith	35	18

F. Demonstrating Compliance By Meeting A Mercury Mass Emission Cap.

(1) Compliance with the required mercury removal efficiency is demonstrated at an affected facility when the mass emissions from all affected facilities in a System, measured in pounds as a 12-month rolling average, do not exceed the applicable emission limits in §F(2) of this regulation.

(2) Mercury Emission Limits.

Affected Facility	Emission Limits (lbs per year) Beginning	
	January 1, 2010	January 1, 2013
Brandon Shores	94	46
C.P. Crane	26	13
Chalk Point	108	54
Dickerson	74	37
H.A. Wagner	68	33
Morgantown	127	66
R. Paul Smith	14	7

(3) In the event that an electric generating unit at an affected facility subject to this chapter permanently ceases operation, the mass emission limitation in §F(2) of this regulation which is applicable to that affected facility shall be reduced proportionally based on the relative capacity, in megawatts, of all the electric generating units at the affected facility which are subject to this regulation.

(4) In the event that an entire affected facility within a system permanently ceases operation, the total mass emission limitation in §F(2) which is applicable to the system shall be reduced by the mass emission limitation applicable to the affected facility.

(5) Except during periods of startup, shutdown, malfunction or maintenance, the owner or operator of an electric generating unit shall ensure that mercury control measures are continuously employed on each unit and properly adjusted for optimal control taking into consideration the operating conditions.

.05 Monitoring and Reporting Requirements.

A. Compliance with the emission limitations in this chapter shall be demonstrated with a continuous emission monitoring system that is installed, operated, and certified in accordance with 40 CFR Part 75.

B. Beginning with calendar year 2007 and each year thereafter, the owner or operator of each electric generating unit subject to this chapter shall submit an annual report to the Department, the Department of Natural Resources, and the Public Service Commission. The report for each calendar year shall be submitted no later than March 1 of the following year.

C. Each report shall include:

(1) Emissions performance results related to compliance with the emission requirements under this chapter;

(2) Emissions of NO_x and SO₂, and beginning with calendar year 2010, mercury, emitted during the previous calendar year from each affected unit;

(3) A current compliance plan; and

(4) Any other information requested by the Department.

.06 Judicial Review of Penalty Waivers.

A. Applicability.

The provisions of this regulation govern judicial review of determinations by the Department to reduce or waive penalties for failure to achieve timely compliance with this chapter in accordance with § 2-1002(i)(3) of the Environment Article.

B. Public Notice Requirements.

(1) The Department shall provide public notice of a tentative determination to grant a request for reduction or waiver of penalties made in accordance with § 2-1002(i)(2) of the Environment Article.

(2) The public notice shall:

(a) Be posted on the Department's website;

(b) Published in a newspaper of general circulation in the area in which the affected unit is located at least once a week for two consecutive weeks; and

(c) Be sent by first class mail, postage prepaid, or electronic mail to all persons who have requested to be notified about any request for reduction or waiver of penalties submitted to the Department.

(3) The public notice required by this regulation shall include the following information:

(a) The Department's address and the name and telephone number of a contact person for more information;

(b) The name and address of the person requesting a waiver or reduction of penalties;

(c) Identification and address of the affected unit for which the reduction or waiver is requested;

(d) The name, address and phone number of a person representing the applicant from whom an interested person may obtain additional information;

(e) The location where the following information is available for public inspection:

(i) The complete application for the reduction or waiver of penalties, except for information qualifying as confidential;

(ii) The tentative determination; and

(iii) Other supporting information deemed relevant by the Department;

(f) Notice of an opportunity for public comment on the Department's tentative determination for a period of at least 30 calendar days; and

(g) Notice of the public participation procedures and right to judicial review provided by this regulation.

C. Public Comment Period.

(1) The Department shall provide at least 30 days for public comment on a tentative determination to grant a reduction or waiver of penalties during which time any person may submit written comments on the tentative determination.

(2) The Department shall consider all comments that raise issues of law or material fact that are germane to the tentative determination.

D. Final Determination.

(1) The Department shall prepare a final determination if:

(a) The Department has received timely and germane written comments that are adverse to the tentative determination; or

(b) The final determination is substantively different from the tentative determination.

(2) If the Department is not required to prepare a final determination under Section D(1) of this Regulation, the tentative determination becomes the final determination when the request for reduction or waiver of penalties is granted.

(3) Notice of the final determination shall be mailed to each person that submitted comments on the tentative determination.

E. Petition for Judicial Review.

(1) Final determinations to reduce or waive penalties are subject to judicial review by any person who:

(a) Meets standing requirements under federal law; and

(b) Participated in the public comment process through the timely submission of written comments.

(2) Judicial review shall be on the administrative record before the Department and limited to objections raised in written comments received during the public comment period, unless the petitioner demonstrates:

(a) That the objections were not reasonably ascertainable during the comment period; or

(b) That grounds for the objections arose after the comment period.

F. Record for Judicial Review.

The record for judicial review of a final determination to grant a request to reduce or waive penalties shall consist of all written comments submitted to the Department during the public comment period, all information considered by the Department in making its final determination, and, in the case of a petition based upon new grounds under § E(2) of this regulation, any information that is relevant and material to the new grounds.