State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.ohio.gov

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

4/12/2010

Certified Mail
Facility ID: 0641050002
Permit Number: P0106261
County: Jefferson

Patrick Dal Porto
Cardinal Power Plant (Cardinal Operating Company)
1 Riverside Plaza
Columbus, OH 43215-2373

RE: FINAL AIR POLLUTION CONTROL TITLE IV ACID RAIN PERMIT
Permit Type: Administrative Permit Amendment

Dear Permit Holder:

Enclosed is a Title IV acid rain permit we urge you to read it carefully.

The issuance of this Title V permit is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of $70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions regarding this permit, please contact Dana Thompson (614) 644-3701. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page http://www.epa.ohio.gov/dapc.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Ohio EPA DAPC, Southeast District Office

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

FINAL

Title IV Acid Rain Permit
OAC Chapter 3745-103

Cardinal Power Plant (Cardinal Operating Company)

Facility ID: 0641050002
Permit Number: P0106261
Permit Type: Administrative Permit Amendment
Issued: 4/12/2010
Effective: 4/12/2010
Expiration: 3/26/2015

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Title IV Acid Rain Permit
OAC Chapter 3745-103
Cardinal Power Plant (Cardinal Operating Company)

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Authorization

Facility ID: 0641050002
Facility Description: Electric Power.
Application Number(s): A0039416
Permit Number: P0106261
Permit Description: This amendment is being issued to correct an error that occurred when the final permit was issued. The incorrect permit application was attached to the permit. That is being corrected with this issuance.
Permit Type: Administrative Permit Amendment
Issue Date: 4/12/2010
Effective Date: 4/12/2010
Expiration Date: 3/26/2015

This document constitutes issuance of an OAC Chapter 3745-103 Title V permit to:

Cardinal Power Plant (Cardinal Operating Company)
306 County Road 7 East
Jefferson County
Brilliant, OH 43913-1088

The above named entity is hereby granted a Title IV acid rain permit pursuant to Chapter 3745-103 of the Ohio Administrative Code. This permit shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 6 months prior to the expiration date regarding the renewal of this permit. It is the permittee's responsibility to renew this permit even if no notice of its expiration is received. If a renewal permit is not issued prior to the expiration date, the permittee may continue to follow the terms and conditions of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted by the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

A. Standard Terms and Conditions

1. Statement of Basis

a) In accordance with Ohio Revised Code Section 3704 and Titles IV and V of the Clean Air Act, the Ohio Environmental Protection Agency issues this permit pursuant to Ohio Administrative Code (OAC) Chapters 3745-103 and 3745-77.

2. Permit Application

a) Attached as part of this permit is the permittee's Title IV Acid Rain Permit Application (See Appendix A). The application contains additional conditions, terms and limitations that must be met and that are a part of this permit. The application identifies the affected source, affected units, and specifies standard requirements (Permit Requirements, Monitoring Requirements, Sulfur Dioxide Requirements, Nitrogen Oxides Requirements, Excess Emissions Requirements, Record keeping and Reporting Requirements, Liability, and Effect on Other Authorities).

B. Emissions Unit Terms and Conditions

1. B001

ORIS Code: 2828

Acid Rain Program Description:

Unit #1

a) Sulfur Dioxide (SO2) Allowance Allocations

The owners and operators of each source and each affected unit at the sources shall:

(1) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and

(2) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

b) Nitrogen Oxides (NOx) Requirements

(1) Pursuant to rules 3745-103-55 through 3745-103-66 of the Administrative Code, the Ohio EPA approves a NOx emissions averaging plan for this unit, effective for calendar years 2010 through 2011, and a NOx standard emissions limitation plan for this unit, effective for calendar years 2012 through 2014. Under the averaging plan, this unit's NOx emissions shall not exceed the annual average alternative contemporaneous emission limitation of 0.68 lb/mmBtu. Under the standard plan, this unit's annual average NOx emissions rate, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under Paragraph (A)(1) of rule 3745-103-58 of the Administrative Code, of 0.68 lb/mmBtu for cell burner boilers.

(2) Under the averaging plan, the actual Btu-weighted annual average NOx emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under OAC rules 3745-103-57, 3745-103-58, or 3745-103-59, except that for any early election units, the applicable emission limitations shall be under OAC rule 3745-103-59. If the designated representative demonstrates that the requirement of the prior sentence as set forth in

(3) OAC rule 3745-103-63(D)(1)(b)(i) is met for a year under the averaging plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit. In accordance with paragraph (A)(2) of rule 3745-103-09 of the Administrative Code, approval of the averaging plan shall be final only when Arkansas, Indiana, Kentucky, Oklahoma, Texas, Virginia, and West Virginia have also approved this averaging plan.

(4) In addition to the described NOx compliance plans, this unit shall comply with all other applicable requirements of OAC rules 3745-103-55 through 3745-103-66, including the duty to reapply for a NOx compliance plan and requirements covering excess emissions.

(5) The requirements in this permit are designed to meet Title IV of the Clean Air Act and the corresponding regulations of U.S. EPA and Ohio EPA. This source is also required to meet any applicable requirements of OAC rules 3745-14-01 through 3745-14-12.

c) Comments, Notes, and Justifications

(1) None.

2. B002

ORIS Code: 2828

Acid Rain Program Description:

Unit #2

a) Sulfur Dioxide (SO2) Allowance Allocations

The owners and operators of each source and each affected unit at the sources shall:

(1) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and

(2) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

b) Nitrogen Oxides (NOx) Requirements

(1) Pursuant to rules 3745-103-55 through 3745-103-66 of the Administrative Code, the Ohio EPA approves a NOx emissions averaging plan for this unit, effective for calendar years 2010 through 2011, and a NOx standard emissions limitation plan for this unit, effective for calendar years 2012 through 2014. Under the averaging plan, this unit's NOx emissions shall not exceed the annual average alternative contemporaneous emission limitation of 0.68 lb/mmBtu. Under the standard plan, this unit's annual average NOx emissions rate, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under Paragraph (A)(1) of rule 3745-103-58 of the Administrative Code, of 0.68 lb/mmBtu for cell burner boilers.

(2) Under the averaging plan, the actual Btu-weighted annual average NOx emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under OAC rules 3745-103-57, 3745-103-58, or 3745-103-59, except that for any early election units, the applicable emission limitations shall be under OAC rule 3745-103-59. If the designated representative demonstrates that the requirement of the prior sentence as set forth in OAC rule 3745-103-63(D)(1)(b)(i) is met for a year under the averaging plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit. In accordance with paragraph (A)(2) of rule 3745-103-09 of the Administrative Code, approval of the averaging plan shall be final only when Arkansas, Indiana, Kentucky, Oklahoma, Texas, Virginia, and West Virginia have also approved this averaging plan.

(3) In addition to the described NOx compliance plans, this unit shall comply with all other applicable requirements of OAC rules 3745-103-55 through 3745-103-66, including the duty to reapply for a NOx compliance plan and requirements covering excess emissions.

(4) The requirements in this permit are designed to meet Title IV of the Clean Air Act and the corresponding regulations of U.S. EPA and Ohio EPA. This source is also required to meet any applicable requirements of OAC rules 3745-14-01 through 3745-14-12.

c) Comments, Notes, and Justifications

(1) None.

3. B009

ORIS Code: 2828

Acid Rain Program Description:

Unit #3

a) Sulfur Dioxide (SO2) Allowance Allocations

The owners and operators of each source and each affected unit at the sources shall:

(1) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and

(2) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

b) Nitrogen Oxides (NOx) Requirements

(1) Pursuant to rules 3745-103-55 through 3745-103-66 of the Administrative Code, the Ohio EPA approves a NOx emissions averaging plan for this unit, effective for calendar years 2010 through 2011, and a NOx standard emissions limitation plan for this unit, effective for calendar years 2012 through 2014. Under the averaging plan, this unit's NOx emissions shall not exceed the annual average alternative contemporaneous emission limitation of 0.46 lb/mmBtu. Under the standard plan, this unit's annual average NOx emissions rate, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under Paragraph (A)(2) of rule 3745-103-59 of the Administrative Code, of 0.46 lb/mmBtu for dry bottom wall fired boilers.

(2) Under the averaging plan, the actual Btu-weighted annual average NOx emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under OAC rules 3745-103-57, 3745-103-58, or 3745-103-59, except that for any early election units, the applicable emission limitations shall be under OAC rule 3745-103-59. If the designated representative demonstrates that the requirement of the prior sentence as set forth in OAC rule 3745-103-63(D)(1)(b)(i) is met for a year under the averaging plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit. In accordance with paragraph (A)(2) of rule 3745-103-09 of the Administrative Code, approval of the averaging plan shall be final only when Arkansas, Indiana, Kentucky, Oklahoma, Texas, Virginia, and West Virginia have also approved this averaging plan.

(3) In addition to the described NOx compliance plans, this unit shall comply with all other applicable requirements of OAC rules 3745-103-55 through 3745-103-66, including the duty to reapply for a NOx compliance plan and requirements covering excess emissions.

(4) The requirements in this permit are designed to meet Title IV of the Clean Air Act and the corresponding regulations of U.S. EPA and Ohio EPA. This source is also required to meet any applicable requirements of OAC rules 3745-14-01 through 3745-14-12.

c) Comments, Notes, and Justifications

(1) None.

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Acid Rain Permit Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31

This submission is: ☐ New ☒ Revised

STEP 1

Identify the source by plant name, State, and ORIS code.

Plant Name	State	ORIS Code
Cardinal Plant	Ohio	2828

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a." For new units, enter the requested information in columns "c" and "d."

a	b	c	d
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	New Units Commence Operation Date	New Units Monitor Certification Deadline
1	Yes		
2	Yes		
3	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		
	Yes		

Cardinal Plant

Plant Name (from Step 1)

STEP 3

Read the standard requirements

Permit Requirements

(1) The designated representative of each affected source and each affected unit at the source shall:

(i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:

(i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and

(ii) Have an Acid Rain Permit.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each affected unit at the source shall:

(i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another affected unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and

(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:

(i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or

(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

STEP 3, Cont'd.

Nitrogen Oxides Requirements The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an affected unit that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting
authority:
(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
(iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

Cardinal Plant
Plant Name (from Step 1)

Step 3, Cont'd.

Liability, Cont'd.

(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:
(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a unit can hold; *provided,* that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4

Read the certification statement, sign, and date

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	John M. McManus	
Signature	John M. McManus	Date 6/20/02

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Phase II NO_X Compliance Plan

For more information, see instructions and refer to 40 CFR 76.9

This submission is: ☐ New ☒ Revised

STEP 1
Indicate plant name, State, and ORIS code from NADB, if applicable

Plant Name	State	ORIS Code
Cardinal	OH	2828

STEP 2

Identify each affected Group 1 and Group 2 boiler using the boiler ID# from NADB, if applicable. Indicate boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom. Indicate the compliance option selected for each unit.

	1	2	3			
ID#						
Type	CB	CB	DBW			
(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for Phase I dry bottom wall-fired boilers)	☐	☐	☐	☐	☐	☐
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)	☐	☐	☐	☐	☐	☐
(c) EPA-approved early election plan under 40 CFR 76.8 through 12/31/07 (also indicate above emission limit specified in plan)	☐	☐	☐	☐	☐	☐
(d) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)	☐	☐	☐	☐	☐	☐
(e) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase II tangentially fired boilers)	☐	☐	☐	☐	☐	☐
(f) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)	☐	☐	☐	☐	☐	☐
(g) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)	☐	☐	☐	☐	☐	☐
(h) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)	☐	☐	☐	☐	☐	☐
(i) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)	☐	☐	☐	☐	☐	☐
(j) NO_x Averaging Plan (include NO_x Averaging form)	☒	☒	☒	☐	☐	☐
(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)	☐	☐	☐	☐	☐	☐
(l) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO_x Averaging (check the NO_x Averaging Plan box and include NO_x Averaging form)	☐	☐	☐	☐	☐	☐

Cardinal

Plant Name (from Step 1)

STEP 2, cont'd.

	ID# 1 / Type CB	ID# 2 / Type CB	ID# 3 / Type DBW	ID# / Type	ID# / Type	ID# / Type
(m) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17 (a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)	☐	☐	☐	☐	☐	☐
(n) AEL (include Phase II AEL Demonstration Period, Final AEL Petition, or AEL Renewal form as appropriate)	☐	☐	☐	☐	☐	☐
(o) Petition for AEL demonstration period or final AEL under review by U.S. EPA or demonstration period ongoing	☐	☐	☒	☐	☐	☐
(p) Repowering extension plan approved or under review	☐	☐	☐	☐	☐	☐

STEP 3
Read the standard requirements and certification, enter the name of the designated representative, sign &

Standard Requirements

General. This source is subject to the standard requirements in 40 CFR 72.9 (consistent with 40 CFR 76.8(e)(1)(i)). These requirements are listed in this source's Acid Rain Permit.

Special Provisions for Early Election Units

Nitrogen Oxides. A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO_x as provided under 40 CFR 76.8(a)(2) except as provided under 40 CFR 76.8(e)(3)(iii).
Liability. The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or 40 CFR 76.8 at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR Part 77.
Termination. An approved early election plan shall be in effect only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under 40 CFR 76.5 for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the permitting authority will terminate the plan. The termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7. If an early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

John M. McManus Name	
Signature John M. McManus	16-Jan-02 Date

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Phase II NO_x Averaging Plan

For more information, see instructions and refer to 40 CFR 76.11

This submission is: ☐ New ☒ Revised

STEP 1

Identify the units participating in this averaging plan by plant name, State, and boiler ID# from NADB. In column (a), fill in each unit's applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7. In column (b), assign an alternative contemporaneous annual emissions limitation (ACEL) in lb/mmBtu to each unit. In column (c), assign an annual heat input limitation in mmBtu to each unit. Continue to page 3 if necessary.

Plant Name	State	ID#	(a) Emission Limitation	(b) ACEL	(c) Annual Heat Input Limit
Rockport	IN	MB1	0.46	0.46	94,595,000
Rockport	IN	MB2	0.46	0.46	82,260,000
Tanners Creek	IN	U1	0.80	0.80	5,429,000
Tanners Creek	IN	U2	0.80	0.80	5,394,000
Tanners Creek	IN	U3	0.80	0.80	9,557,000
Tanners Creek	IN	U4	0.86	1.58	33,431,000
Big Sandy	KY	BSU1	0.46	0.58	16,719,000
Big Sandy	KY	BSU2	0.46	0.58	44,857,000
Conesville	OH	3	0.50	0.51	4,746,000

STEP 2

Use the formula to enter the Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan and the Btu-weighted annual average emission rate for the same units if they are operated in compliance with 40 CFR 76.5, 76.6, or 76.7. The former must be less than or equal to the latter.

Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan		Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7
.59	≤	.59

$$\frac{\sum_{i=1}^{n} (R_{Li} \times HI_i)}{\sum_{i=1}^{n} HI_i} \leq \frac{\sum_{i=1}^{n} [R_{1i} \times HI_i]}{\sum_{i=1}^{n} HI_i}$$

Where,

R_{Li} = Alternative contemporaneous annual emission limitation for unit i, in lb/mmBtu, as specified in column (b) of Step 1:

R_{1i} = Applicable emission limitation for unit i, in lb/mmBtu, as specified in column (a) of Step 1;

HI_i = Annual heat input for unit i, in mmBtu, as specified in column (c) of Step 1;

n = Number of units in the averaging plan

Cardinal
Plant Name (from Step 1)

STEP 3

Mark one of the two options and enter dates.

[X] This plan is effective for calendar year 2002 through calendar year 2006 unless notification to terminate the plan is given.

[ ] Treat this plan as [ ] identical plans, each effective for one calendar year for the following calendar years: _____, _____, _____, _____ and _____ unless notification to terminate one or more of these plans is given.

STEP 4

Read the special provisions and certification, enter the name of the designated representative, and sign and date.

Special Provisions

Emission Limitations

Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO_x under the plan only if the following requirements are met:

(i) For each unit, the unit's actual annual average emission rate for the calendar year, in lb/mmBtu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan, and
(a) For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan,
(b) For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year is not less than the annual heat input limit in the averaging plan, or
(ii) If one or more of the units does not meet the requirements of (i), the designated representative shall demonstrate, in accordance with 40 CFR 76.11(d)(1)(ii)(A) and (B), that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.5, 76.6, or 76.7.
(iii) If there is a successful group showing of compliance under 40 CFR 76.11(d)(1)(ii)(A) and (B) for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under (i).

Liability

The owners and operators of a unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in part 77 of this chapter and sections 113 and 411 of the Act.

Termination

The designated representative may submit a notification to terminate an approved averaging plan, in accordance with 40 CFR 72.40(d), no later than October 1 of the calendar year for which the plan is to be terminated.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

John M. McManus Name	
Signature	16-Jan-02 Date

Cardinal
Plant Name (from Step 1)

STEP 1

Continue the identification of units from Step 1, page 1, here.

Plant Name	State	ID#	(a) Emission Limitation	(b) Alt. Contemp. Emission Limitation	(c) Annual Heat Input Limit
Conesville	OH	4	0.45	0.45	14,733,000
Conesville	OH	5	0.40	0.43	11,227,000
Conesville	OH	6	0.40	0.43	16,144,000
Muskingum	OH	1	0.84	0.74	6,250,000
Muskingum	OH	2	0.84	0.74	6,042,000
Muskingum	OH	3	0.86	0.74	7,575,000
Muskingum	OH	4	0.86	0.74	7,967,000
Muskingum	OH	5	0.68	0.68	32,619,000
Picway	OH	9	0.50	0.51	1,928,000
Clinch River	VA	1	0.80	0.71	11,366,000
Clinch River	VA	2	0.80	0.71	14,350,000
Clinch River	VA	3	0.80	0.71	14,544,000
Glen Lyn	VA	51	0.40	0.47	1,581,500
Glen Lyn	VA	52	0.40	0.47	1,581,500
Glen Lyn	VA	6	0.46	0.70	5,930,000
John E Amos	WV	1	0.46	0.47	45,691,000
John E Amos	WV	2	0.46	0.47	50,978,000
John E Amos	WV	3	0.68	0.70	81,651,000
Kammer	WV	1	0.86	0.80	13,318,000
Kammer	WV	2	0.86	0.80	11,456,000
Kammer	WV	3	0.86	0.80	12,838,000
Kanawha	WV	1	0.80	0.62	8,543,000
Kanawha	WV	2	0.80	0.62	9,132,000
Mitchell	WV	1	0.50	0.51	34,079,000
Mitchell	WV	2	0.50	0.51	34,224,000
Mountaineer	WV	1	0.46	0.49	84,213,000
Sporn	WV	11	0.80	0.69	4,744,000

Cardinal Plant Name (from Step 1)	

STEP 1

Continue the identification of units from Step 1, page 1, here.

Plant Name	State	ID#	(a) Emission Limitation	(b) Alt. Contemp. Emission Limitation	(c) Annual Heat Input Limit
Sporn	WV	21	0.80	0.69	4,579,000
Sporn	WV	31	0.80	0.69	7,503,000
Sporn	WV	41	0.80	0.69	5,590,000
Sporn	WV	51	0.46	0.46	22,201,000
Cardinal	OH	1	0.68	0.65	28,716,000
Cardinal	OH	2	0.68	0.52	26,079,000
Cardinal	OH	3	0.46	0.57	30,233,000
Gavin	OH	1	0.68	0.51	81,050,000
Gavin	OH	2	0.68	0.56	90,776,000

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Phase II NO_x Averaging Plan

For more information, see instructions and refer to 40 CFR 76.11

This submission is: [ ] New [X] Revised

STEP 1

Identify the units participating in this averaging plan by plant name, State, and boiler ID# from NADB. In column (a), fill in each unit's applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7. In column (b), assign an alternative contemporaneous annual emissions limitation (ACEL) in lb/mmBtu to each unit. In column (c), assign an annual heat input limitation in mmBtu to each unit. Continue to page 3 if necessary.

Plant Name	State	ID#	(a) Emission Limitation	(b) ACEL	(c) Annual Heat Input Limit
Rockport	IN	MB1	0.46	0.46	88,636,400
Rockport	IN	MB2	0.46	0.46	93,566,400
Tanners Creek	IN	U1	0.80	0.80	8,960,400
Tanners Creek	IN	U2	0.80	0.80	9,839,600
Tanners Creek	IN	U3	0.80	0.80	10,605,200
Tanners Creek	IN	U4	0.86	0.86	28,043,800
Big Sandy	KY	BSU1	0.46	0.46	16,002,200
Big Sandy	KY	BSU2	0.46	0.46	51,126,800
Conesville	OH	3	0.50	0.50	3,518,200

STEP 2

Use the formula to enter the Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan and the Btu-weighted annual average emission rate for the same units if they are operated in compliance with 40 CFR 76.5, 76.6, or 76.7. The former must be less than or equal to the latter.

Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan		Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7
.56	≤	.56

$$\frac{\sum_{i=1}^{n} (R_{Li} \times HI_i)}{\sum_{i=1}^{n} HI_i} \leq \frac{\sum_{i=1}^{n} [R_{1i} \times HI_i]}{\sum_{i=1}^{n} HI_i}$$

Where,

R_{Li} = Alternative contemporaneous annual emission limitation for unit i, in lb/mmBtu, as specified in column (b) of Step 1;

R_{1i} = Applicable emission limitation for unit i, in lb/mmBtu, as specified in column (a) of Step 1;

HI_i = Annual heat input for unit i, in mmBtu, as specified in column (c) of Step 1;

n = Number of units in the averaging plan

Conesville
Plant Name (from Step 1)

STEP 3

Mark one of the two options and enter dates.

[X] This plan is effective for calendar year 2007 through calendar year 2011 unless notification to terminate the plan is given.

[ ] Treat this plan as [ ] identical plans, each effective for one calendar year for the following calendar years: _____, _____, _____, _____ and _____ unless notification to terminate one or more of these plans is given.

STEP 4

Read the special provisions and certification, enter the name of the designated representative, and sign and date.

Special Provisions

Emission Limitations

Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO_x under the plan only if the following requirements are met:

(i) For each unit, the unit's actual annual average emission rate for the calendar year, in lb/mmBtu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan, and
(a) For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan,
(b) For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year is not less than the annual heat input limit in the averaging plan, or
(ii) If one or more of the units does not meet the requirements of (i), the designated representative shall demonstrate, in accordance with 40 CFR 76.11(d)(1)(ii)(A) and (B), that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.5, 76.6, or 76.7.
(iii) If there is a successful group showing of compliance under 40 CFR 76.11(d)(1)(ii)(A) and (B) for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under (i).

Liability

The owners and operators of a unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in part 77 of this chapter and sections 113 and 411 of the Act.

Termination

The designated representative may submit a notification to terminate an approved averaging plan, in accordance with 40 CFR 72.40(d), no later than October 1 of the calendar year for which the plan is to be terminated.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

John M. McManus Name	
Signature John M. McManus	December 19, 2006 Date

Conesville
Plant Name (from Step 1)

STEP 1

Continue the identification of units from Step 1, page 1, here.

Plant Name	State	ID#	(a) Emission Limitation	(b) Alt. Contemp. Emission Limitation	(c) Annual Heat Input Limit
Conesville	OH	4	0.45	0.45	44,976,190
Conesville	OH	5	0.40	0.40	25,434,200
Conesville	OH	6	0.40	0.40	24,905,400
Muskingum	OH	1	0.84	0.84	8,796,800
Muskingum	OH	2	0.84	0.84	8,181,600
Muskingum	OH	3	0.86	0.86	8,251,800
Muskingum	OH	4	0.86	0.86	8,143,200
Muskingum	OH	5	0.68	0.68	35,606,400
Picway	OH	9	0.50	0.50	3,432,400
Clinch River	VA	1	0.80	0.80	11,366,000
Clinch River	VA	2	0.80	0.80	14,350,000
Clinch River	VA	3	0.80	0.80	14,544,000
Glen Lyn	VA	51	0.40	0.40	1,581,500
Glen Lyn	VA	52	0.40	0.40	1,581,500
Glen Lyn	VA	6	0.46	0.46	5,930,000
John E Amos	WV	1	0.46	0.46	52,512,000
John E Amos	WV	2	0.46	0.46	52,031,200
John E Amos	WV	3	0.68	0.68	88,228,800
Kammer	WV	1	0.86	0.86	11,214,400
Kammer	WV	2	0.86	0.86	11,570,600
Kammer	WV	3	0.86	0.86	11,498,000
Kanawha	WV	1	0.80	0.80	10,392,600
Kanawha	WV	2	0.80	0.80	9,018,200
Mitchell	WV	1	0.50	0.50	50,415,600
Mitchell	WV	2	0.50	0.50	53,611,600
Mountaineer	WV	1	0.46	0.46	97,048,400
Sporn	WV	11	0.80	0.80	7,467,000

Conesville

Plant Name (from Step 1)

STEP 1

Continue the identification of units from Step 1, page 1, here.

Plant Name	State	ID#	(a) Emission Limitation	(b) Alt. Contemp. Emission Limitation	(c) Annual Heat Input Limit
Sporn	WV	21	0.80	0.80	7,203,600
Sporn	WV	31	0.80	0.80	7,733,800
Sporn	WV	41	0.80	0.80	8,083,200
Sporn	WV	51	0.46	0.46	13,054,800
Cardinal	OH	1	0.68	0.68	37,568,400
Cardinal	OH	2	0.68	0.68	39,809,200
Cardinal	OH	3	0.46	0.46	39,209,000
Gavin	OH	1	0.68	0.68	86,301,600
Gavin	OH	2	0.68	0.68	93,845,000
Flint Creek	AR	1	0.46	0.46	37,879,000
Northeastern	OK	3313	0.40	0.40	33,560,000
Northeastern	OK	3314	0.40	0.40	35,524,000
Oklaunion	TX	1	0.46	0.46	44,826,000
Pirkey	TX	1	0.46	0.46	51,699,000
Welsh	TX	1	0.46	0.46	37,588,000
Welsh	TX	2	0.46	0.46	37,923,000
Welsh	TX	3	0.46	0.46	39,080,000