



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: January 4, 2011

RE: Duke Energy / 165-29750-00001

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot12/03/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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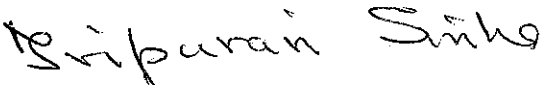
100 North Senate Avenue
Indianapolis, Indiana 46204
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TITLE IV (ACID RAIN) PERMIT RENEWAL OFFICE OF AIR QUALITY

Duke Energy Indiana, Inc. – Cayuga Generating Station
State Road 63
Cayuga, Indiana, 47928

ORIS: 1001

The owners and operators (hereinafter collectively known as the Permittee) of the above source are issued this permit under the provisions of 326 Indiana Administrative Code (IAC) 21 [326 IAC 21] with conditions listed on the attached pages.

Operation Permit No.: AR 165-29750-00001	
Issued by:  Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: January 4, 2011 Expiration Date: January 4, 2016

Title IV Operating Conditions

Title IV Source Description:

- 1) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, installed in 1967, with a nominal heat input capacity of 4,802 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, a flue gas desulfurization (FGD) system for control of SO₂, and exhausting to stack 1. Stack 1 has continuous emissions monitors (CEMs) for nitrogen oxides (NOX) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Boiler No. 1 was configured with a low NOX burner in 1993.
- 2) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, installed in 1968, with a nominal heat input capacity of 4,802 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, a flue gas desulfurization (FGD) system for control of SO₂, and exhausting to stack 2. Stack 2 has continuous emissions monitors (CEMs) for nitrogen oxides (NOX) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Boiler No. 2 was configured with a low NOX burner in 1993.

(The information contained in this box is descriptive information and does not constitute enforceable conditions.)

1. Statutory and Regulatory Authorities

In accordance with IC 13-17-3-4 and IC 13-17-3-11, as well as Titles IV and V of the Clean Air Act, the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) issues this permit pursuant to 326 IAC 2 and 326 IAC 21 (incorporates by reference 40 Code of Federal Regulations (CFR) 72 through 78).

2. Standard Permit Requirements [326 IAC 21]

- (a) The designated representative has submitted a complete acid rain permit application in accordance with 40 CFR 72.30.
- (b) The Permittee shall operate Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) in compliance with this permit.

3. Monitoring Requirements [326 IAC 21]

- (a) The Permittee and, to the extent applicable, the designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall comply with the monitoring requirements as provided in 40 CFR 75 and 76.
- (b) The emissions measurements recorded and reported in accordance with 40 CFR 75 and 76 shall be used to determine compliance by Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) with the acid rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (c) The requirements of 40 CFR 75 and 76 shall not affect the responsibility of the Permittee to monitor emissions of other pollutants or other emissions characteristics at Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) under other applicable requirements of the Clean Air Act and other provisions of the operating permit for the source.

4. Sulfur Dioxide Requirements [326 IAC 21]

- (a) The Permittee shall:
 - (1) Hold allowances, as of the allowance transfer deadline (as defined in 40 CFR 72.2), in the compliance subaccount of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2), after deductions under 40 CFR 73.34(c), not less than the total annual emissions of sulfur dioxide for the previous calendar year from Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2); and,

- (2) Comply with the applicable acid rain emissions limitations for sulfur dioxide.
- (b) Each ton of sulfur dioxide emitted in excess of the acid rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Clean Air Act.
- (c) Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall be subject to the requirements under paragraph 4(a) of the sulfur dioxide requirements as follows:
 - (1) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or,
 - (2) Starting on the latter of January 1, 2000, or the deadline for monitor certification under 40 CFR 75, an affected unit under 40 CFR 72.6(a)(3).
- (d) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (e) An allowance shall not be deducted in order to comply with the requirements under paragraph 4(a) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (f) An allowance allocated by the U.S. EPA 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, the acid rain portion of an operating permit, or the written exemption under 40 CFR 72.7 and 72.8 and 326 IAC 21, and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (g) An allowance allocated by U.S. EPA under the Acid Rain Program does not constitute a property right.
- (h) No permit revision may be required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program, provided that the increases do not require a permit revision under any other applicable requirement.
[326 IAC 2-7-5(4)(A)]
- (i) No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not, however, use allowances as a defense to noncompliance with any applicable requirement other than the requirements of the Acid Rain Program.
[326 IAC 2-7-5(4)(B)]

5. Nitrogen Oxides Requirements [326 IAC 21]

- (a) The Permittee shall comply with the applicable acid rain emissions limitation of nitrogen oxides (NO_x) for Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2).
- (b) NO_x Emission Averaging Plan for Unit #1 (Boiler No. 1):
 - (1) Pursuant to 40 CFR 76.11, the Indiana Department of Environmental Management, Office of Air Quality approves a NO_x emission averaging plan for Unit #1 (Boiler No. 1), effective from calendar year 2007 through 2011. Under the plan, the NO_x emissions from Unit #1 (Boiler No. 1) shall not exceed the annual Alternative Contemporaneous Emission Limitation (ACEI) of 0.38 lb/MMBtu. In addition, Unit shall not have an annual heat input less than 30,733,860 MMBtu.
 - (2) Under the plan, the actual Btu-weighted annual average NO_x emission rate for all the units in the plan shall be less than or equal to the Btu-weighted annual average NO_x 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 40 CFR 76.5. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11) is met for a year under the plan, then Unit #1 (Boiler No. 1) shall be deemed to be in compliance for that year with its annual ACEL and annual heat input limit.

(c) NO_x Emission Averaging Plan for Unit #2 (Boiler No. 2):

- (1) Pursuant to 40 CFR 76.11, the Indiana Department of Environmental Management, Office of Air Quality approves a NO_x emission averaging plan for Unit #2 (Boiler No. 2), effective from calendar year 2007 through 2011. Under the plan, the NO_x emissions from Unit #2 (Boiler No. 2) shall not exceed the annual Alternative Contemporaneous Emission Limitation (ACEL) of 0.36 lb/MMBtu. In addition, Unit shall not have an annual heat input less than 34,149,011 MMBtu.
- (2) Under the plan, the actual Btu-weighted annual average NO_x emission rate for all the units in the plan shall be less than or equal to the Btu-weighted annual average NO_x 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 40 CFR 76.5. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11) is met for a year under the plan, then Unit #2 (Boiler No. 2) shall be deemed to be in compliance for that year with its annual ACEL and annual heat input limit.

(d) In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when the Kentucky Department of Environmental Protection, Division of Air Quality; the North Carolina Department of Environmental and Natural Resources; and the South Carolina Department of Health and Environmental Control, Bureau of Air Quality have also approved this averaging plan.

(e) In addition to the described NO_x compliance plan, Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall comply with all other applicable requirements of 40 CFR 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.

6. Excess Emissions Requirements [40 CFR 77] [326 IAC 21]

(a) If Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) have excess emissions of sulfur dioxide in any calendar year, the designated representative shall submit a proposed offset plan to U.S. EPA and IDEM, OAQ as required under 40 CFR 77 and 326 IAC 21.

(b) The designated representative shall submit required information to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

and

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue, NW
Mail Code (6204N)
Washington, DC 20460

- (c) If Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) have excess emissions, as defined in 40 CFR 72.2, in any calendar year, the Permittee shall:
 - (1) Pay to U.S. EPA without demand the penalty required, and pay to U.S. EPA upon demand the interest on that penalty, as required by 40 CFR 77 and 326 IAC 21; and,
 - (2) Comply with the terms of an approved sulfur dioxide offset plan, as required by 40 CFR 77 and 326 IAC 21.

7. Record Keeping and Reporting Requirements [326 IAC 21]

- (a) Unless otherwise provided, the Permittee shall keep on site each of the following documents for a period of 5 years, as required by 40 CFR 72.9(f), from the date the document is created. This period may be extended for cause, at any time prior to the end of the 5 years, in writing by U.S. EPA or IDEM, OAQ:
 - (1) The certificate of representation for the designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) 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;
 - (2) All emissions monitoring information collected in accordance with 40 CFR 75 shall be retained on site for 3 years;
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (4) 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.
- (b) The designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 72.90 subpart I, 40 CFR 75, and 326 IAC 21. The required information is to be submitted to the appropriate authority(ies) as specified in 40 CFR 72.90 subpart I and 40 CFR 75.

8. Submissions [326 IAC 21]

- (a) The designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall submit a certificate of representation, and any superseding certificate of representation, to U.S. EPA and IDEM, OAQ in accordance with 40 CFR 72 and 326 IAC 21.
- (b) The designated representative shall submit required information to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

and

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue, NW
Mail Code (6204N)
Washington, DC 20460

- (c) Each such submission under the Acid Rain Program shall be submitted, signed and certified by the designated representative for all sources on behalf of which the submission is made.
- (d) In each submission under the Acid Rain Program, the designated representative shall certify, by his or her signature, the following statements which shall be included verbatim in the submission:
 - (1) "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."; and,
 - (2) "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."
- (e) The designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall notify the Permittee:
 - (1) By the date of submission, of any Acid Rain Program submissions by the designated representative;
 - (2) Within 10 business days of receipt of any written determination by U.S. EPA or IDEM, OAQ; and,
 - (3) Provided that the submission or determination covers Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2).
- (f) The designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall provide the Permittee a copy of any submission or determination under paragraph (e) of this section, unless the Permittee expressly waives the right to receive a copy.

9. Severability [326 IAC 21]

Invalidation of the acid rain portion of an operating permit does not affect the continuing validity of the rest of the operating permit, nor shall invalidation of any other portion of the operating permit affect the continuing validity of the acid rain portion of the permit. [40 CFR 72.72(b), 326 IAC 21, and 326 IAC 2-7-5(5)]

10. Liability [326 IAC 21]

- (a) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, an acid rain permit, an acid rain portion of an operation permit, or a written 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 by U.S. EPA pursuant to Section 113(c) of the Clean Air Act and shall be subject to enforcement by IDEM pursuant to 326 IAC 21 and IC 13-30-3.

- (b) 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 Clean Air Act, 18 U.S.C. 1001 and IDEM pursuant to 326 IAC 21 and IC 13-30-6-2.
- (c) 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.
- (d) Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall meet the requirements of the Acid Rain Program.
- (e) Any provision of the Acid Rain Program that applies to Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2), including a provision applicable to the designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) shall also apply to the Permittee.
- (f) Any provision of the Acid Rain Program that applies to Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2), including a provision applicable to the designated representative, shall also apply to the Permittee. 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 75, including 40 CFR 75.16, 75.17, and 75.18, the Permittee 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.
- (g) Each violation of a provision of 40 CFR parts 72, 73, 75, 76, 77, and 78 by Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2), or by the Permittee or designated representative, shall be a separate violation of the Clean Air Act.

11. Effect on Other Authorities [326 IAC 21]

No provision of the Acid Rain Program, an acid rain permit application, an acid rain permit, an acid rain portion of an operation permit, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (a) Except as expressly provided in Title IV of the Clean Air Act (42 USC 7651 to 7651(o)), exempting or excluding the Permittee and, to the extent applicable, the designated representative of Unit #1 (Boiler No. 1) and Unit #2 (Boiler No. 2) from compliance with any other provision of the Clean Air Act, including the provisions of Title I of the Clean Air Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (b) 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 Clean Air Act;
- (c) 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;
- (d) Modifying the Federal Power Act (16 USC 791(a) et seq.) or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (e) Interfering with or impairing any program for competitive bidding for power supply in a state in which such a program is established.

**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document
For a Title IV (Acid Rain) Permit Renewal**

Source Background and Description
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Source Name:	Cayuga Generating Station
Source Location:	State Road 63, Cayuga, Indiana 47928
County:	Vermillion County
Operated By:	Duke Energy Indiana, Inc.
Designated Representative:	Barry E. Pulskamp
ORIS Code:	1001
Previous Title IV (Acid Rain) Permit No.:	AR 165-19347-00001
Title IV (Acid Rain) Renewal Permit No.:	AR 165-29750-00001
Permit Reviewer:	David J. Matousek

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has reviewed a Title IV (Acid Rain) permit renewal application submitted by Duke Energy Indiana, Inc. – Cayuga Generating Station on September 30, 2010. The application is for the operation of the following affected units at a station located at State Road 63, Cayuga, Indiana 47928:

- 1) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, installed in 1967, with a nominal heat input capacity of 4,802 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, a flue gas desulfurization (FGD) system for control of SO₂, and exhausting to stack 1. Stack 1 has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Boiler No. 1 was configured with a low NO_x burner in 1993.
- 2) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, installed in 1968, with a nominal heat input capacity of 4,802 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, a flue gas desulfurization (FGD) system for control of SO₂, and exhausting to stack 2. Stack 2 has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Boiler No. 2 was configured with a low NO_x burner in 1993.

Existing Title IV (Acid Rain) Approvals
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The source has been operating under the following previous Title IV (Acid Rain) approvals:

- 1) First Acid Rain Renewal No. AR 165-19347-00001, issued on June 29, 2006; and
- 2) NO_x Phase II Compliance Plan No. 165-24144-00001, issued on January 31, 2008.

PSI Energy, Inc./Cinergy Services was issued a Title IV permit, AR165-5204-00001, for the Cayuga Generating Station, effective from January 1, 2000 to December 31, 2004. On November 6, 1998, PSI Energy, Inc./Cinergy Services submitted a Phase II NO_x Compliance Plan and incorporated a Phase II NO_x Averaging Plan for the Cayuga Generating Station. PSI Energy, Inc./Cinergy Services, Cayuga Generating Station submitted a Phase II Acid Rain renewal application on July 1, 2004. On December 12, 2006 an application was received stating October 1, 2006 PSI Energy Inc., Cayuga Generating Station operating name was changed to Duke Energy Indiana, Inc., Cayuga Generating Station.

Program Description

The following information is provided to explain the Acid Rain Program.

(a) Goal of the Program

The goal of the 1990 Clean Air Act (CAA) Amendments, Acid Rain Program is to reduce the impact of man-made emissions of sulfur dioxide (SO₂) and nitrogen oxide (NO_x) on lakes, streams, forests, crops and, most important, the health of the public, by a nationwide SO₂ allocation of emissions from power plants. While it may not seem to be a local problem, the information collected shows a need for this reduction. This is because these emissions can be transported great distances. Results of the SO₂ and NO_x program, along with past, present and future plans, can be found on the Internet at <http://www.epa.gov/airmarkets/>. Additional information in the form of maps showing the results of the SO₂ and NO_x limitations can be found on the Internet at <http://nadp.sws.uiuc.edu/>.

(b) Federal Rules

The emission allowances and conditions in this draft Title IV (Acid Rain) permit were taken from the limits developed by the U.S. EPA for the Acid Rain Program pursuant to Title IV of the Clean Air Act, 42 United States Code 7401, as amended by Public Law 101-5049 (November 15, 1990). Parts 72 through 78 of Title 40 of the Code of Federal Regulations (CFR), 61 Federal Register (FR) 59142, 61 FR 67111, 61 FR 68821, and 62 FR 3463, apply to regulated power plants.

(c) Indiana's Rules

Title 326 of the Indiana Administrative Code (IAC) Article 21, Acid Deposition Control, has adopted the federal rule by referencing 40 CFR 72 through 78, 61 FR 59142, 61 FR 67111, 61 FR 68821, and 62 FR 3463. The rule incorporates the requirements of Title IV, Clean Air Act Acid Rain Program, of the 1990 Clean Air Act (CAA).

(d) Sulfur Dioxide (SO₂) Emission Allocations

Beginning in 2010, the Clean Air Act has placed a cap at 8.95 million on the number of allowances issued to units each year. No allocations were made for new sources. New regulated power plants have to obtain sulfur dioxide emission allocations by purchasing them from pre-existing power plants that have received U.S. EPA allocations. A regulated power plant may have emission allocations to sell because the plant purchased newer, less polluting, equipment. The U.S. EPA keeps track of the transfer of all sulfur dioxide emission allocations in an official accounting system.

(e) Nitrogen Oxide Emission (NO_x) Limitations

The emission limitations for NO_x under this part apply to each affected coal-fired utility unit subject to section 404(d) or 409(b) of the Act on the date the unit is required to meet the Acid Rain emissions reduction requirements for SO₂.

Specific Sulfur Dioxide (SO₂) Emission Allocations

There are two (2) affected unit(s), identified as Unit 1 (Boiler No. 1) and Unit 2 (Boiler No. 2), in this generating station. Table 1 below summarizes the SO₂ Allowance Allocations for these unit(s).

Table 1	
SO ₂ Allowance Allocations (tons/year) for 2010 and Beyond	
Unit 1 – Boiler No. 1	14,415
Unit 2 – Boiler No. 2	14,740

Specific NO_x Compliance and Averaging Plan

There are two (2) affected unit(s), identified as Unit 1 (Boiler No. 1) and Unit 2 (Boiler No. 2), in this generating station. Table 2 and Table 3 summarize the NO_x compliance and averaging plan for these unit(s).

Table 2			
Calendar Years 2010 and Beyond	Emission Limitation per 40 CFR 76.5, 76.6 or 76.7 (lb/MMBTU)	Alternative Limit (lb/MMBTU)	Heat Input Limit (MMBTU)
Unit 1 – Boiler No. 1	0.45	0.38	30,733,860
Unit 2 – Boiler No. 2	0.45	0.36	34,149,011
<p>The BTU weighted annual emission rate average over the units if they are operated in accordance with the proposed averaging plans = 0.27 lb/MMBtu</p> <p>BTU weighted annual average emission rate for same units operated in compliance with 40 CFR 76 = 0.48 lb/MMBtu</p>			

Table 3			
List of Sources Participating in the NO _x Averaging Plan as submitted on January 11, 2007 for Calendar Years 2007 to 2011 (See Note Below)			
Source Names	No. of Units	Source Names	No. of Units
Cayuga (IN)	2	Buck (NC)	5
Edwardsport (IN)	3	Cliffside (NC)	5
Gallagher (IN)	4	Dan River (NC)	3
Gibson (IN)	5	G. G. Allen (NC)	5
Wabash River (IN)	6	Marshall (NC)	4
East Bend (KY)	1	Riverbend (NC)	4
Belews Creek (NC)	2	W. S. Lee (SC)	3
		Total No. of Units	52
		Total No. of Sources	14

Pursuant to CFR Part 76.11(b), Duke may submit a revised NO_x averaging plan to the permitting authority(ies) at any time up to and including January 1, 2012, for which the averaging plan is to become effective. Duke Energy plans to submit a NO_x averaging plan for the 2012-2016 compliance period before the current NO_x averaging plan expires. Once the 2012-2016 NO_x averaging plan is submitted, Duke will submit permit applications to incorporate the new averaging plan.

Emissions Monitoring Requirements

The Permittee and, to the extent applicable, the designated representative of Unit 1 (Boiler No. 1) and Unit 2 (Boiler No. 2) must comply with the monitoring requirements set out in 40 CFR 75 and 72.9(b)(1) and (2). The source must measure and record its emissions of sulfur dioxide. The source must report these measurements to IDEM and U.S. EPA. These records and reports are used to determine if the source is in compliance with the sulfur dioxide allocation program. The requirements of the Title IV (Acid Rain) permit do not affect the source's responsibility to monitor emissions of other pollutants or other emissions characteristics required by the Clean Air Act and other operating permit provisions. Monitoring requirements outlined in the source's Title IV (Acid Rain) permit renewal application are considered as part of the Title IV (Acid Rain) renewal permit.

Other Record Keeping and Reporting Requirements

The source must keep copies of all reports and compliance certifications that it submits to demonstrate compliance with the requirements of the Title IV (Acid Rain) permit for five years. The source must submit the reports and compliance certifications required by the Title IV (Acid Rain) permit to the U.S. EPA and IDEM, OAQ. Record keeping and reporting requirements outlined in the Title IV (Acid Rain) renewal application are considered part of the Title IV (Acid Rain) renewal permit.

Submissions

The designated representative for each emissions unit must sign and certify every report or other submission required by the Title IV (Acid Rain) renewal permit. The designated representative must include the following certification statement in every submission:

"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."

The designated representative must send the Permittee a notification regarding every submission. The designated representative must also notify the Permittee within ten (10) business days of the receipt of any written determination made by U.S. EPA or IDEM.

Draft Title IV (Acid Rain) Permit Renewal

IDEM has preliminarily determined that the source meets the requirements of Indiana Code (IC) 13-17-3-4 and IC 13-17-3-11, as well as Title IV of the Clean Air Act. IDEM proposes this draft Title IV (Acid Rain) permit renewal pursuant to 326 IAC 21.

Recommendation

The staff recommends that the Title IV Acid Rain permit renewal be approved. This recommendation is based on the following facts and conditions.

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

IDEM Contacts

(a) Permit

Questions regarding the proposed Title IV (Acid Rain) renewal permit can be directed to David J. Matousek at the Indiana Department Environmental Management (IDEM), Office of Air Quality (OAQ), 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8253 or toll free at 1-800-451-6027 extension 2-8253.

(b) Compliance Inspection

The source will be inspected by IDEM's compliance inspection staff. Persons seeking to obtain information regarding the source's compliance status or to report any potential violation of any permit condition should contact Dan Hancock at the Office of Air Quality (OAQ) address or by telephone at (317) 232-8429 or toll free at 1-800-451-6027 extension 2-8429.

(c) Copies

Copies of the Code of Federal Regulations (CFR) referenced in the permit may be obtained from:

Indiana Department of Environmental Management
Office of Air Quality
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

or

The Government Printing Office
Washington, D.C. 20402

or

on the Government Printing Office website at
<http://www.access.gpo.gov/nara/cfr/index.html>

Technical Support Document - Appendix A - Phase II NOx Averaging Plan

Company Name: Duke Energy Indiana, Inc. - Cayuga Generating Station

Address: State Road 63, Cayuga, Indiana 47928

Permit Number: AR 165-29750-00001

Plt ID: 165-00001

Reviewer: David J. Matousek

Date: October 6, 2010

NOx Averaging Units - Submitted on January 3, 2007							
Valid January 1, 2007 - December 31, 2011 (See Note 2)							
Plant Name	State	ID#	R _{II} - 40 CFR 76 Emission Limitation (lb/MMBtu)	R _{LI} - ACEL (lb/MMBtu)	H _I - Annual Heat Input Limit (MMBtu)	R _{II} x H _I (lb NO _x)	R _{LI} x H _I (lb NO _x)
Cayuga	IN	1	0.45	0.38	30,733,860	13,830,237	11,678,867
Cayuga	IN	2	0.45	0.36	34,149,011	15,367,055	12,293,644
Edwardsport	IN	7-1	0.46	0.78	857,864	394,617	669,134
Edwardsport	IN	7-2	0.46	0.70	611,040	281,078	427,728
Edwardsport	IN	8-1	0.46	0.87	623,263	286,701	542,239
Gallagher	IN	1	0.50	0.41	5,389,866	2,694,933	2,209,845
Gallagher	IN	2	0.50	0.41	5,119,935	2,559,968	2,099,173
Gallagher	IN	3	0.50	0.36	6,624,030	3,312,015	2,384,651
Gallagher	IN	4	0.50	0.36	6,170,982	3,085,491	2,221,554
Gibson	IN	1	0.50	0.29	40,679,344	20,339,672	11,797,010
Gibson	IN	2	0.50	0.29	35,784,543	17,892,272	10,377,517
Gibson	IN	3	0.50	0.30	45,485,728	22,742,864	13,645,718
Gibson	IN	4	0.50	0.29	53,603,321	26,801,661	15,544,963
Gibson	IN	5	0.46	0.30	47,798,920	21,987,503	14,339,676
Wabash River	IN	1	0.50	0.10	11,961,748	5,980,874	1,196,175
Wabash River	IN	2	0.50	0.45	6,026,584	3,013,292	2,711,963
Wabash River	IN	3	0.50	0.45	5,562,925	2,781,463	2,503,316
Wabash River	IN	4	0.46	0.45	6,170,782	2,838,560	2,776,852
Wabash River	IN	5	0.50	0.45	5,507,505	2,753,753	2,478,377
Wabash River	IN	6	0.45	0.45	21,205,567	9,542,505	9,542,505
East Bend	KY	2	0.50	0.24	41,472,175	20,736,088	9,953,322
Belews Creek	NC	1	0.68	0.11	61,879,230	42,077,876	6,806,715
Belews Creek	NC	2	0.68	0.10	78,743,845	53,545,815	7,874,385
Buck	NC	5	0.40	0.42	1,757,795	703,118	738,274
Buck	NC	6	0.40	0.42	1,757,795	703,118	738,274
Buck	NC	7	0.40	0.39	2,107,277	842,911	821,838
Buck	NC	8	0.40	0.24	8,531,789	3,412,716	2,047,629
Buck	NC	9	0.40	0.24	8,567,507	3,427,003	2,056,202
Cliffside	NC	1	0.40	0.60	1,748,054	699,222	1,048,832
Cliffside	NC	2	0.40	0.57	1,766,424	706,570	1,006,862
Cliffside	NC	3	0.40	0.59	3,200,829	1,280,332	1,888,489
Cliffside	NC	4	0.40	0.59	3,331,625	1,332,650	1,965,659
Cliffside	NC	5	0.40	0.09	41,176,110	16,470,444	3,705,850
Dan River	NC	1	0.40	0.56	3,242,839	1,297,136	1,815,990
Dan River	NC	2	0.40	0.35	3,886,171	1,554,468	1,360,160
Dan River	NC	3	0.40	0.35	8,059,518	3,223,807	2,820,831
G. G. Allen	NC	1	0.40	0.26	11,331,694	4,532,678	2,946,240
G. G. Allen	NC	2	0.40	0.27	9,413,342	3,765,337	2,541,602
G. G. Allen	NC	3	0.40	0.26	17,474,154	6,989,662	4,543,280
G. G. Allen	NC	4	0.40	0.26	18,980,416	7,592,166	4,934,908
G. G. Allen	NC	5	0.40	0.35	18,714,463	7,485,785	6,550,062

NOx Averaging Units - Submitted on January 3, 2007 Valid January 1, 2007 - December 31, 2011 (See Note 2)							
Plant Name	State	ID#	R _{li} - 40 CFR 76 Emission Limitation (lb/MMBtu)	R _{Li} - ACEL (lb/MMBtu)	H _{li} - Annual Heat Input Limit (MMBtu)	R _{li} x H _{li} (lb NO _x)	R _{Li} x H _{li} (lb NO _x)
Marshall	NC	1	0.40	0.26	28,002,460	11,200,984	7,280,640
Marshall	NC	2	0.40	0.31	23,044,573	9,217,829	7,143,818
Marshall	NC	3	0.40	0.29	48,294,356	19,317,742	14,005,363
Marshall	NC	4	0.40	0.29	47,312,073	18,924,829	13,720,501
Riverbend	NC	7	0.40	0.29	5,267,986	2,107,194	1,527,716
Riverbend	NC	8	0.40	0.35	4,919,495	1,967,798	1,721,823
Riverbend	NC	9	0.40	0.26	8,280,409	3,312,164	2,152,906
Riverbend	NC	10	0.40	0.26	8,281,677	3,312,671	2,153,236
W. S. Lee	SC	1	0.40	0.33	5,680,028	2,272,011	1,874,409
W. S. Lee	SC	2	0.40	0.33	6,064,103	2,425,641	2,001,154
W. S. Lee	SC	3	0.40	0.32	10,497,688	4,199,075	3,359,260
$\sum_{i=1}^n H_{li}$					912,854,718		
$\sum_{i=1}^n (R_{li} \times H_{li})$						439,123,351	
$\sum_{i=1}^n (R_{Li} \times H_{li})$							246,547,138

$$BTUPLAN = \frac{\sum_{i=1}^n (R_{Li} \times H_{li})}{\sum_{i=1}^n H_{li}} \leq BTUCFR = \frac{\sum_{i=1}^n (R_{li} \times H_{li})}{\sum_{i=1}^n H_{li}}$$

BTUWPLAN		BTUWCFR
0.27	≤	0.48
lb/MMBtu		lb/MMBtu

Where:

- BTUWPLAN = Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan
- BTUWCFR = Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7
- RLi = Alternative contemporaneous annual emission limitation (ACEL) for unit i, in lb/MMBtu
- Rli = Applicable emission limitation for unit i, in lb/MMBtu
- Hli = Annual Heat Input for unit i in MMBtu
- n = Number of units in the averaging plan
- ACEL = Alternative Contemporaneous Annual Emissions Limitation in lb/MMBtu

Notes:

- 1) BTUWPLAN must be less than or equal to BTUWCFR to show compliance
- 2) The information shown in the table above was submitted by Duke Energy on January 3, 2007 in the application for permit modification number 165-24144-00001. Pursuant to CFR Part 76.11(b), Duke may submit a revised NOx averaging plan to the permitting authority(ies) at any time up to and including January 1, 2012 for which the averaging plan is to become effective. Duke Energy plans to submit a NOx averaging plan for the 2012-2016 compliance period before the current NOx averaging plan expires. Once the 2012-2016 NOx averaging plan is submitted, Duke will submit permit applications to incorporate the new averaging plan.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Patrick Coughlin
Duke Energy, Indiana Inc.
1000 E Main St
Plainfield, IN 46168

DATE: January 4, 2011

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Acid Rain
165-29750-00001

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Barry E. Pulskamp, Responsible Official
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Commissioner

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January 4, 2011

TO: Newport Vermillion County Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information for Display Regarding a Final Determination

Applicant Name: Duke Energy Indiana, Inc.
Permit Number: 165-29750-00001 January 4, 2011

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	DPABST 1/4/2011 Duke Energy Indiana, Inc. - Cayuga Generating Station 165-29750-00001 (Final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	 Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

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1		Patrick Coughlin Duke Energy Indiana, Inc. - Cayuga Generating Stat 1000 E Main St Plainfield IN 46168 (Source CAATS) (CONFIRM DELIVERY)										
2		Barry E Pulskamp Sr VP - Regulated Fleet Operations Duke Energy Indiana, Inc. - Cayuga Generating Stat c/o P Coughlin, 1000 E Main St Plainfield IN 46168 (RO CAATS)										
3		Cayuga Town Council PO Box 33 Cayuga IN 47928 (Local Official)										
4		Vermillion County Health Department 257 Walnut Street Clinton IN 47842-2342 (Health Department)										
5		Newport Vermillion County Library P.O.Box 100, 385 E. Market St Newport IN 47966-0100 (Library)										
6		Vermillion County Commissioners P.O. Box 190 Newport IN 47966 (Local Official)										
7		J.P. Roehm PO Box 303 Clinton IN 47842 (Affected Party)										
8		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
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