



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: February 13, 2012

RE: Duke Energy Indiana – Gallagher Generation Station / 043-34130-00004

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

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires 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 from 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-AM.dot12/3/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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February 13, 2012

Mr. Patrick Coughlin
Duke Energy Indiana - Gallagher Generating Station
1000 East Main Street
Plainfield, IN 46168

Re: 043-31430-00004
Administrative Amendment to
Part 70 Renewal No.: T 043-27078-00004

Dear Mr. Coughlin:

Duke Energy Indiana - Gallagher Generating Station was issued a Part 70 Operating Permit Renewal on September 28, 2010 for an electric utility generating station. On February 1, 2012, the Office of Air Quality (OAQ) received an application from Duke Energy Indiana - Gallagher Generating Station to administratively amend their existing Title V operating permit T043-27078-00004, issued on September 28, 2010.

The Office of Air Quality (OAQ) issued a significant permit modification application on December 13, 2010, to Duke Energy Indiana - Gallagher Generating Station relating to a federal court Consent Decree in *United States v. Cinergy Corp.*, Case No. 1:99-cv-01693-LJM-JMS, (Document No.1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree"). In accordance with paragraph 49 of the Decree, Duke Energy Indiana, Inc, must permanently retire units 1 and 3 at Gallagher Generating Station. The official retirement date for these units was February 1, 2012.

Pursuant to the provisions of 326 IAC 2-7-11(a)(1), an Administrative Amendment is hereby approved as described in the attached Administrative Amendment letter. Please find enclosed the entire amended permit document for final issuance.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No.T043-27078-00004. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1: IDEM, OAQ has deleted all references to units 1 and 3 from Section A.2, D.1, D.3, E.2 and G of the permit. Units 1 and 3 is retired from the permit in accordance with paragraph 49 of the Decree, that Duke Energy Indiana, Inc, must permanently retire these units.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) **Reserved One (1) dry bottom, pulverized coal fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of**

~~1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 1 in 1994. The ESP on Boiler No.1 was replaced with a new baghouse in December 2007.~~

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 2 in 1992. The ESP on Boiler No.2 was replaced with a new baghouse in December 2007.
- (c) ~~Reserved One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 3 in 1994. The ESP on Boiler No.3 was replaced with a new baghouse in May 2008.~~
- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 4 in 1994. The ESP on Boiler No.4 was replaced with a new baghouse in April 2008.

All coal burned in Boilers No. **2 and 4** 4-4, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

- (e) One (1) coal transfer system for Boilers 1, 2, 3, and 4, with a nominal throughput of 800 tons of coal per hour, construction commenced prior to 1974, with equipment including barge unloading, truck unloading, a coal storage pile, conveying, coal bunkers and scale equipped with dust collector for all units.
- (f) One (1) dry fly ash handling and disposal system, including the following:
 - (1) One (1) pneumatic fly ash transfer system from boiler baghouses to a fly ash storage silo, with a maximum throughput of 17 tons of fly ash per hour, equipped with two (2) separators/mechanical exhausters and one (1) back-up to separate the fly ash, with PM emissions from the storage silo controlled by the separators and a bin vent baghouse.
 - (2) ~~Two (2) activated carbon silos, each with a maximum storage capacity of 60 tons.~~

- (32) Loading of fly ash into trucks for transport to the landfill and unloading of fly ash from trucks at the landfill.
- (43) Wind Erosion of fly ash from the landfill.
- (54) Fugitive dust from equipment traffic at the landfill.
- (65) Fugitive dust from trucks traveling between the storage silo and the landfill.

SECTION D.1

Reserved EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

- (a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 1 in 1994. The ESP on Boiler No. 1 was replaced with a new baghouse in December 2007.

All coal burned, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Consent Decree Definitions [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in *United States v. Cinergy Corp.*, Case No. 1:99-cv-01693-LJM-JMS, (Document No. 1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree"), the definitions in Attachment B shall apply to conditions D.1.2, D.1.10 and D.1.11.

D.1.2 Consent Decree SO₂ Emissions Limitations [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in *United States v. Cinergy Corp.*, Case No. 1:99-cv-01693-LJM-JMS, (Document No. 1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree"), the Permittee shall comply with the following requirements:

- (a) Until Unit 1 is Retired or Repowered with Natural Gas, the annual SO₂ tonnage for Unit 1 shall be limited to 11,062 tons.
- (b) Starting on January 30, 2011 and continuing thereafter until Unit 1 is Repowered with Natural Gas or Retired the SO₂ emission rate for Unit 1 shall be limited to no greater than 1.70 lbs/MMBtu on a 30 day rolling average. Compliance with a 30-Day Rolling Average Emission Rate shall commence on January 30 and shall be determined based on hourly data from that Operating Day and the 29 prior Operating Days.
- (c) By no later than January 1, 2012 the Permittee shall elect to Retire or Repower Unit 1 to Natural Gas.
 - (1) If the Permittee elects to Retire Unit 1, then by no later than February 1, 2012, the Permittee shall Retire Unit 1

- (2) If the Permittee elects to Repower Unit 1 to Natural Gas, then by no later than December 31, 2012 Unit 1 shall be Repowered to Natural Gas.

D.1.3 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the PM emissions from the Boiler No. 1 stack shall not exceed 0.36 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{(C)(a)(h)}{76.5(Q^{0.75})(N^{0.25})}$$

Where:

- C = 50 μ/m^3
Q = 5,840 MMBtu/hr (max capacity of boilers 1-4)
N = 2 (number of stacks)
a = 0.8
h = 550 Feet (average stack height)

D.1.4 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

(a) Pursuant to 326 IAC 5-1-3(a) (Temporary Alternative Opacity Limitations), the following applies:

- (1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the forty percent (40%) opacity limitation established by section 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6) minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6) minute averaging periods in any twenty-four (24) hour period. [326 IAC 5-1-3(a)]
- (2) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the forty percent (40%) opacity limitation established in section 326 IAC 5-1-2. However, opacity shall not exceed sixty percent (60%) for any six (6) minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6) minute averaging period in any sixty (60) minute period. The averaging periods shall not be permitted for more than three (3) six (6) minute averaging periods in a twelve (12) hour period. [326 IAC 5-1-3(b)]

(b) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(a) or (b), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-4-9]

Pursuant to 326 IAC 7-4-9 (Floyd County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 1 shall not exceed 4.70 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.

D.1.6 Nitrogen Oxides (NO_x) [326 IAC 10-1-4]

Pursuant to 326 IAC 10-1-4(b)(2) (Nitrogen Oxides Control in Clark and Floyd Counties), NO_x emissions from the Boiler No. 1 shall not exceed five-tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis.

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.8 Testing Requirements [326 IAC 2-7-6(1)(6)] [326 IAC 2-1-1-11]

In order to determine compliance with Condition D.1.3, the Permittee shall perform PM and opacity testing by May 2012 on dry bottom pulverized coal-fired Boiler, identified as Boiler No. 1 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.9 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with the particulate matter emission limitations in Condition D.1.3, the baghouse for particulate control of Boiler No. 1 shall be in operation and control emissions from Boiler No. 1 at all times that the boiler is in operation.

D.1.10 Continuous Emissions Monitoring and Operation (CEMs and COMs) [326 IAC 3-5][326 IAC 7-2][326 IAC 10-1] [326 IAC 2-7-5(3)(A)(iii)]

- (a) Pursuant to 326 IAC 3-5 (Continuous Emission Monitoring System (CEMS)), the Permittee shall install, calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.
- (b) Pursuant to the Consent Decree, the Permittee shall install a continuous emissions monitoring system to monitor the SO₂ emission rate in the outlet ductwork of the Baghouse for Unit 1. The CEMS shall be installed, calibrated, certified and maintained in accordance with 40 CFR Part 60, Appendix B. The Permittee shall conduct a performance evaluation to certify such CEMS by no later than December 1, 2010.
- (c) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (d) In the event that a breakdown of a COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and 40 CFR 63.
- (f) Pursuant to 326 IAC 3-5-1(d) (Continuous Monitoring of Emissions), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring SO₂ and NO_x emissions rates in lbs/MMBtu from the common stack for Boilers No. 1 and 2, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- (g) The continuous emissions monitoring system(s) (CEMS) for SO₂ and NO_x emission rates shall be operated at all times the emissions unit or process is operating except for reasonable periods of monitor system downtime due to necessary calibration, maintenance activities or malfunctions. Calibration and maintenance activities shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a).
[326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]
- (h) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 or any other applicable performance specifications, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (i) In the event that a breakdown of a continuous emission monitoring system required by this permit occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

- (j) ~~Nothing in this permit shall excuse the Permittee from complying with the requirements to operate continuous emissions monitoring systems (CEMs and COMs) pursuant to 326 IAC 3-5, 326 IAC 10-1, 40 CFR 60, or 40 CFR 75.~~

D.1.11 Sulfur Dioxide Emissions [326 IAC 7-2] [326 IAC 7-4-9]

- (a) ~~Pursuant to 326 IAC 7-2-1(g), the Permittee shall demonstrate compliance with the SO₂ limit in Condition D.1.5 using SO₂ CEMS on the common stack for units 1 and 2.~~
- (b) Pursuant to the Consent Decree, the Permittee shall demonstrate compliance with the SO₂ limit in condition D.1.2(b) by using SO₂ CEMS on the outlet of the Unit 1 Baghouse as follows:
- (1) ~~The hourly SO₂ emission rates shall be calculated using the methodology specified in 40 C.F.R. Part 60 Appendix A, Method 19.~~
 - (2) ~~Diluent Capping (i.e., 5% CO₂) will be applied to the SO₂ rate for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR part 75 Appendix F Section 3.3.4.1.~~
 - (3) ~~The 30 day rolling average shall be calculated by averaging all the hourly SO₂ rates during the 30 consecutive operating days.~~
- (c) Pursuant to Consent Decree, the Permittee shall demonstrate compliance with the Annual SO₂ Tonnage Limitations in condition D.1.2(a) as follows:
- (1) ~~For calendar year 2010, compliance with the Annual Tonnage Limitations shall be determined using the continuous emission monitoring systems on the common Stack for Units 1 and 2. The SO₂ emissions apportioned to Unit 1 shall be determined using the equations in 40 C.F.R Part 75.~~
 - (2) ~~For calendar year 2011 and each year thereafter until the Units have been Repowered or Retired, compliance with the Annual Tonnage Limitation shall be determined using CEMS installed on the Baghouse Duct outlet for Unit 1. The SO₂ emissions for Unit 1 shall be calculated using the equations as follows:~~
 - (a) ~~From 40 CFR Part 75, Appendix F, equation F-15:
Stack Total HI MMBTU/hr = Flow scfh x (1/Fc) * % CO₂ / 100~~
 - (b) ~~From 40 CFR Part 75, Appendix F, Equation F-21a:
Unit level HI = Stack Total HI x (TOLcs / TOLunit) x ((MWunit x TOLunit) / (sum of all (MWunit x TOLunit)))~~
 - (c) ~~From 40 CFR Part 75, Appendix F, Equation F-24a (adapt the equation by substituting SO₂ lb/mmBTU from the duct SO₂ CEMS for NO_x lb/MMBTU in the equation. Use unit level heat input in the equation):
SO₂ lb/hr = duct SO₂ lb/MMBTU x unit level heat input MMBTU/hr~~
 - (d) ~~From 40 CFR Part 75, Appendix F, Equation F-24 (adapt the equation by substituting SO₂ lb/hr, from Equation F-24a, for NO_x lb/hr):
SO₂ lb = SO₂ lb/hr x TOLunit~~
 - (e) ~~To calculate tons of SO₂:
Total SO₂ tons = sum of hourly SO₂ lb values / 2000~~

D.1.12 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-5, the Permittee shall demonstrate that Boiler No. 1 is in compliance with the NO_x emission limit of five tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis initially either by using a U.S. EPA or department certified continuous emissions monitor (CEM) or by using the test methods and procedures that follow either 326 IAC 3 or 40 CFR 60.

~~After the date that the initial compliance with the emission limits in section 326 IAC 10-1-4 is demonstrated, an owner or operator who installed CEMs shall demonstrate continuous compliance using either U.S. EPA or department certified CEMs.~~

~~**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**~~

~~D.1.13 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~

- ~~(a) The Permittee shall record the pressure drop across the baghouse at least once per day when the Boiler No. 1 is in operation. When for any hourly reading, the pressure drop across the baghouse is outside the normal range of 1.25 to 15 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~
- ~~(a) The instruments used for determining the pressure shall comply with the Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on-site with the Preventive Maintenance Plan.~~

~~D.1.14 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~

- ~~(a) The Permittee shall take reasonable response whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and adjustment of flue gas conditioning rate. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~
- ~~(b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~
- ~~(c) The Permittee may request that the IDEM, OAQ approve an opacity trigger level different than the one specified in (a) and (b) of this condition, provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.~~

~~D.1.15 SO₂ Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]~~

- ~~(a) For the purposes of demonstrating compliance with Condition D.1.5 whenever the common stack SO₂ continuous emission monitoring system (CEMs) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall calculate the daily heat input weighted SO₂ rate using the duct SO₂ CEMs. The daily heat input weighted SO₂ lbs/MMBtu shall be used to demonstrate compliance with the 30 day rolling weighted average SO₂ lbs/MMBtu rate limit specified in condition D.1.5.~~
- ~~(b) For the purposes of demonstrating compliance with the Conditions D.1.2 the Permittee shall use the data substitution procedures of 40 CFR Subpart 75.33(b) (for SO₂) and 40 CFR Subpart 75.35 (for CO₂) for any missing data period for the duct CEMs.~~

~~D.1.16 Nitrogen Oxide Emissions [326 IAC 10-1]~~

~~Pursuant to 326 IAC 10-1-6, the Permittee shall comply with the following emissions monitoring requirements pertaining to NO_x:~~

- ~~(a) NO_x continuous emissions monitors (CEMs) shall be installed (or maintained) on the common stack for Boilers No. 1 and 2 according to the requirements of 326 IAC 3.~~
- ~~(b) The NO_x CEMs on the common stack for Boilers No. 1 and 2 shall be certified according to procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.~~

- (c) ~~Operating and maintenance procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.~~
- (d) ~~Data recording and reporting procedures contained in 326 IAC 3 and 40 CFR 75 as applicable, except that for the purpose of the excess emissions reporting requirement in 326 IAC 3, the excess emissions reported shall be those emissions that exceed the applicable emissions limits in section 326 IAC 10-1-4.~~
- (e) ~~Whenever the CEMs System is down for a period of 24 hours or more, the Permittee shall employ Best Combustion Practices to minimize NO_x emissions from Boiler 1 until the CEMs is brought back online.~~

~~D.1.17 Continuous Opacity Monitoring System Downtime [326 IAC 2-7-5(3)(A)(iii)]~~

~~Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more, and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self monitor the emissions from the emission unit stack.~~

- (a) ~~Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.~~
- (b) ~~Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.~~
- (c) ~~Method 9 readings may be discontinued once a COMS is online.~~
- (d) ~~Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.1.18 Record Keeping Requirements~~

- (a) ~~To document the compliance status with the particulate matter and opacity Conditions D.1.3, D.1.4, D.1.10, D.1.13, D.1.14 and D.1.17, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.1.3 and D.1.4.~~
 - (1) ~~Data and results from the most recent stack test.~~
 - (2) ~~All continuous opacity monitoring data, pursuant to 326 IAC 3-5-6.~~
 - (3) ~~The results of all Method 9 visible emission readings taken during any periods of COM downtime.~~
 - (4) ~~All baghouse parametric monitoring readings.~~
- (b) ~~To document the compliance status with the SO₂ requirements in Conditions D.1.2 D.1.5, D.1.11 and D.1.15, the Permittee shall maintain all SO₂ continuous emissions monitoring data, pursuant to 326 IAC 3-5-6, with calendar dates and beginning and ending times of any CEM downtime.~~
- (c) ~~To document the compliance status with the NO_x Conditions D.1.6, D.1.10, D.1.12 and D.1.16, the Permittee shall maintain records in accordance with the following: Whenever using CEMS data to demonstrate compliance with Condition D.1.6, the Permittee shall maintain all NO_x continuous emissions monitoring data, pursuant to 326 IAC 10-1-5, with calendar dates and beginning and ending times of any CEM downtime. Records shall be complete and sufficient to establish compliance with the NO_x limits as required in Conditions D.1.12 and D.1.16.~~
- (d) ~~Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.~~

~~D.1.19 Reporting Requirements~~

- (a) ~~A quarterly report containing the information in (1) through (3) below shall be submitted~~

~~not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.~~

~~(1) To document compliance with the annual SO₂ limit in Condition D.1.2(a), the Permittee shall report the quarterly total SO₂ and year to date total SO₂ emissions in tons.~~

~~(2) To document compliance with Condition D.1.2(b), the Permittee shall report the thirty day average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each day in the reporting period.~~

~~(3) To document compliance with Condition D.1.5, the Permittee shall report the daily average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) and the thirty day weighted average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each calendar day during the reporting period from the common stack.~~

~~The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(b) A quarterly report of the thirty (30) day rolling weighted average nitrogen oxide(s) emission rate in pounds per million British Thermal Units (lb/MMBtu), shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. [326 IAC 10-1-4(b)(2)]~~

~~The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(c) Pursuant to 326 IAC 3-5-7(5), a quarterly report of the continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted shall include the following:~~

~~(1) Date of downtime.~~

~~(2) Time of commencement.~~

~~(3) Duration of each downtime.~~

~~(4) Reasons for each downtime.~~

~~(5) Nature of system repairs and adjustments.~~

~~The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(d) Pursuant to 326 IAC 10-1-7, the Permittee shall submit the following documents:~~

~~(1) A statement, signed by the owner or operator, certifying that the source has achieved compliance with the requirements of this rule.~~

~~(2) Emissions compliance test reports.~~

~~(3) Continuous emissions monitoring system performance evaluation reports.~~

~~(A) Records required by this rule shall be submitted to the department or the U.S. EPA within thirty (30) days of receipt of a written request.~~

~~(B) A source subject to this rule shall notify the department at least thirty (30) days prior to the addition or modification of a facility that may result in a potential increase in NO_x emissions.~~

- ~~(C) — The owner or operator of an affected source may comply with the reporting requirement of this rule by submitting to the department a substitute report. A substitute report is a report that satisfies an applicable state or federal reporting requirement and contains the information required to be submitted by 326 IAC 10-1-7.~~
- ~~(e) — Pursuant to 326 IAC 3-5-7, a separate quarterly report of opacity exceedances, SO₂ exceedances, and NO_x exceedances shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C – General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~
- ~~(f) — Pursuant to 326 IAC 3-5-5(e), a quarterly report of the continuous emissions monitoring system performance audits shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C – General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~
-

D.2.10 Consent Decree Sulfur Dioxide Controls [326 IAC 2-7-6(3)]

- (a) By no later than January 1, 2011 and continuing thereafter, the Permittee shall install and commence continuous operation of a DSI system on **Boiler No. Unit 2**.
- (b) Until the thirtieth (30th) Operating Day following January 1, 2011, Duke will be working to optimize performance of the DSI and to identify technological limitations and good engineering and maintenance practices for the DSI system.
- (c) Commencing on the 60th Operating Day following January 1, 2011, and continuously thereafter, The Permittee shall continuously operate the DSI system on **Boiler No. Unit 2** so as to achieve and maintain a 30-day rolling average emissions rate for SO₂ of no greater than 0.800 lbs/MMBtu.
- (d) The Permittee shall not be required to continuously operate the DSI system at **Boiler No. Unit 2**, if the Permittee;
- (1) permanently ceases to emit any SO₂ from **Boiler No. 2 Unit**, or
- (2) makes physical or operational changes to **Boiler No. 2 Unit** that;
-

D.2.11 Continuous Emissions Monitoring and Operation (CEMs and COMs) [326 IAC 3-5][326 IAC 7-2][326 IAC 10-1][326 IAC 2-7-5(3)(A)(iii)]

- (a) Pursuant to 326 IAC 3-5 (Continuous Emission Monitoring System (CEMS)), the Permittee shall install calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.
- (b) Pursuant to the Consent Decree, the Permittee shall install a continuous emissions monitoring system to monitor the SO₂ emission rate in the outlet ductwork of the Baghouses for **Boiler No. Unit 2**. The CEMS shall be installed, calibrated, certified and

maintained in accordance with 40 CFR Part 60, Appendix B. The Permittee shall conduct a performance evaluation to certify such CEMS by no later than December 1, 2010.

.....

- (f) Pursuant to 326 IAC 3-5-1(d) (Continuous Monitoring of Emissions), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring SO₂ and NO_x emissions rates in lbs/MMBtu from the common stack for Boilers No. 4 and 2, **stack** in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
-

D.2.12 Sulfur Dioxide Emissions [326 IAC 7-2] [326 IAC 7-4-9]

- (a) Pursuant to 326 IAC 7-2-1(g), the Permittee shall demonstrate compliance with the SO₂ limit in condition D.2.5 using SO₂ CEMS on the common stack for units 1 and **Boiler No. 2**:
 - (b) Pursuant to the Consent Decree, the Permittee shall demonstrate compliance with the SO₂ limit in condition D.2.2 by using SO₂ CEMS on the outlet of the **Boiler No. Unit 2** Baghouse as follows:
-

D.2.17 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-6, the Permittee shall comply with the following emissions monitoring requirements pertaining to NO_x:

- (a) NO_x continuous emissions monitors (CEMs) shall be installed (or maintained) on the common stack for Boilers No. 4 and 2 according to the requirements of 326 IAC 3.
 - (b) The NO_x CEMs on the common stack for Boilers No. 4 and 2 shall be certified according to procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
 - (c) Operating and maintenance procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
 - (d) Data recording and reporting procedures contained in 326 IAC 3 and 40 CFR 75 as applicable, except that for the purpose of the excess emissions reporting requirement in 326 IAC 3, the excess emissions reported shall be those emissions that exceed the applicable emissions limits in section 326 IAC 10-1-4.
 - (e) Whenever the CEMs System is down for a period of 24 hours or more, the Permittee shall employ Best Combustion Practices to minimize NO_x emissions from Boiler **No. 2** until the CEMs is brought back online.
-

D.2.20 Reporting Requirements

- (a) A quarterly report containing the information in (1) through (2) below shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.
 - (1) To document compliance with Condition D.2.2, the Permittee shall report the thirty day average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each day in the reporting period.

- (2) To document compliance with Condition D.2.5, the Permittee shall report the daily average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) and the thirty day weighted average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each calendar day during the reporting period from the common stack.
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SECTION D.3

Reserved EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

- (c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 3 in 1994. The ESP on Boiler No.3 was replaced with a new baghouse in May 2008.

All coal burned, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Consent Decree Definitions [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in *United States v. Cinergy Corp.*, Case No. 1:99-cv-01693-LJM-JMS, (Document No.1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree") the definitions in Attachment B shall apply to conditions D.3.2, D.3.10 and D.3.11.

D.3.2 Consent Decree SO₂ Emissions Limitations [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in *United States v. Cinergy Corp.*, Case No. 1:99-cv-01693-LJM-JMS, (Document No.1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree"), the Permittee shall comply with the following requirements:

- (a) Until Unit 3 is Retired or Repowered with Natural Gas, the annual SO₂ tonnage for Unit 3 shall be limited to 9,383 tons.
- (b) Starting on January 30, 2011 and continuing thereafter until Unit 3 is Repowered with Natural Gas or Retired the SO₂ emission rate for Unit 3 shall be limited to no greater than 1.70 lbs/MMBtu on a 30 day rolling average. Compliance with a 30-Day Rolling Average Emission Rate shall commence on January 30 and shall be determined based on hourly data from that Operating Day and the 29 prior Operating Days.
- (c) By no later than January 1, 2012 the Permittee shall elect to Retire or Repower Unit 3 to Natural Gas.
- (1) If the Permittee elects to Retire Unit 3, then by no later the February 1, 2012, the Permittee shall Retire Unit 3.
- (2) If the Permittee elects to Repower Unit 3 to Natural Gas, then by no later than December 31, 2012 Unit 3 shall be Repowered to Natural Gas.

D.3.3 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating:

Emission limitations for facilities specified in 326 IAC 6-2-1(c), the PM emissions from the Boiler No. 3 stack shall not exceed 0.36 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{(C)(a)(h)}{76.5(Q^{0.75})(N^{0.25})}$$

Where:

- C = 50 μ/m^3
- Q = 5,840 MMBtu/hr (max capacity of boilers 1-4)
- N = 2 (number of stacks)
- a = 0.8
- h = 550 Feet (average stack height)

D.3.4 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

(a) Pursuant to 326 IAC 5-1-3(a) (Temporary Alternative Opacity Limitations), the following applies:

(1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the forty percent (40%) opacity limitation established by section 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6) minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6) minute averaging periods in any twenty four (24) hour period. [326 IAC 5-1-3(a)]

(2) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the forty percent (40%) opacity limitation established in section 326 IAC 5-1-2. However, opacity shall not exceed sixty percent (60%) for any six (6) minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6) minute averaging period in any sixty (60) minute period. The averaging periods shall not be permitted for more than three (3) six (6) minute averaging periods in a twelve (12) hour period. [326 IAC 5-1-3(b)]

(b) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(a) or (b), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

D.3.5 Sulfur Dioxide (SO₂) [326 IAC 7-4-9]

Pursuant to 326 IAC 7-4-9 (Floyd County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 3 shall not exceed 4.70 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.

D.3.6 Nitrogen Oxides (NO_x) [326 IAC 10-1-4]

Pursuant to 326 IAC 10-1-4(b)(2) (Nitrogen Oxides Control in Clark and Floyd Counties), NO_x emissions from the Boiler No. 3 shall not exceed five-tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis.

D.3.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.3.3, the Permittee shall perform PM and opacity testing by May 2012 on dry bottom pulverized coal-fired Boiler, identified as Boiler No. 3 utilizing methods as approved by the Commissioner. This test shall be repeated at least once

every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

~~D.3.9 Particulate Control [326 IAC 2-7-6(6)]~~

~~In order to comply with the particulate matter emission limitations in Condition D.3.3, the baghouse for particulate control of Boiler No. 3 shall be in operation and control emissions from Boiler No. 3 at all times that the boiler is in operation.~~

~~D.3.10 Continuous Emissions Monitoring and Operation (CEMs and COMs) [326 IAC 3-5][326 IAC 7-2][326 IAC 10-1]
[326 IAC 2-7-5(3)(A)(iii)]~~

- ~~(a) Pursuant to 326 IAC 3-5 (Continuous Emission Monitoring System (CEMS)), the Permittee shall install, calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.~~
- ~~(b) Pursuant to the Consent Decree, the Permittee shall install a continuous emissions monitoring system to monitor the SO₂ emission rate in the outlet ductwork of the Baghouse for Unit 3. The CEMS shall be installed, calibrated, certified and maintained in accordance with 40 CFR Part 60, Appendix B. The Permittee shall conduct a performance evaluation to certify such CEMS by no later than December 1, 2010.~~
- ~~(c) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.~~
- ~~(d) In the event that a breakdown of a COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.~~
- ~~(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and 40 CFR 63.~~
- ~~(f) Pursuant to 326 IAC 3-5-1(d) (Continuous Monitoring of Emissions), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring SO₂ and NO_x emissions rates in lbs/MMBtu from the common stack for Boilers No. 1 and 2, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.~~
- ~~(g) The continuous emissions monitoring system(s) (CEMS) for SO₂ and NO_x emission rates shall be operated at all times the emissions unit or process is operating except for reasonable periods of monitor system downtime due to necessary calibration, maintenance activities or malfunctions. Calibration and maintenance activities shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a).
[326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]~~
- ~~(h) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 or any other applicable performance specifications, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.~~
- ~~(i) In the event that a breakdown of a continuous emission monitoring system required by this permit occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.~~
- ~~(j) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emissions monitoring systems (CEMs and COMs) pursuant to 326 IAC 3-5, 326 IAC 10-1, 40 CFR 60, or 40 CFR 75.~~

~~D.3.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 7-2] [326 IAC 7-4-9]~~

- ~~(a) Pursuant to 326 IAC 7-2-1(g), the Permittee shall demonstrate compliance with the SO₂ limit in condition D.3.5 using the SO₂ Continuous Emissions Monitoring System on the common stack for Units 3 and 4.~~

- (b) Pursuant to the Consent Decree, the Permittee shall demonstrate compliance with the SO₂ limit in condition D.3.2(b) by using SO₂ CEMS on the outlet of the Unit 1 Baghouse as follows:
- (1) The hourly SO₂ emission rates shall be calculated using the methodology specified in 40 C.F.R. Part 60 Appendix A, Method 19.
 - (2) Diluent Capping (i.e., 5% CO₂) will be applied to the SO₂ rate for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR part 75 Appendix F Section 3.3.4.1.
 - (3) The 30 day rolling average shall be calculated by averaging all the hourly SO₂ rates during the 30 consecutive operating days.
- (c) Pursuant to Consent Decree, the Permittee shall demonstrate compliance with the Annual SO₂ Tonnage Limitations in condition D.3.2(a) as follows:
- (1) For calendar year 2010, compliance with the Annual Tonnage Limitations shall be determined using the continuous emission monitoring systems on the common Stack for Units 3 and 4. The SO₂ emissions apportioned to units 3 shall be determined using the equations in 40 C.F.R Part 75.
 - (2) For calendar year 2011 and each year thereafter until the Units have been Repowered or Retired compliance with the Annual Tonnage Limitation shall be determined using CEMS installed on the Baghouse Duct outlet for unit 3. The SO₂ emissions for unit 3 shall be calculated using the equations as follows:
 - i. From 40 CFR Part 75, Appendix F, equation F-15:
$$\text{Stack Total HI MMBTU/hr} = \text{Flow scfh} \times (1/\text{Fc}) \times \% \text{ CO}_2 / 100$$
 - ii. From 40 CFR Part 75, Appendix F, Equation F-21a:
$$\text{Unit level HI} = \text{Stack Total HI} \times (\text{TOLcs} / \text{TOLunit}) \times ((\text{MWunit} \times \text{TOLunit}) / (\text{sum of all } (\text{MWunit} \times \text{TOLunit})))$$
 - iii. From 40 CFR Part 75, Appendix F, Equation F-24a (adapt the equation by substituting SO₂ lb/MMBTU from the duct SO₂ CEMS for NO_x lb/MMBTU in the equation. Use unit level heat input in the equation):
$$\text{SO}_2 \text{ lb/hr} = \text{duct SO}_2 \text{ lb/MMBTU} \times \text{unit level heat input MMBTU/hr}$$
 - vi. From 40 CFR Part 75, Appendix F, Equation F-24 (adapt the equation by substituting SO₂ lb/hr, from Equation F-24a, for NO_x lb/hr):
$$\text{SO}_2 \text{ lb} = \text{SO}_2 \text{ lb/hr} \times \text{TOLunit}$$
 - v. To calculate tons of SO₂:
$$\text{Total SO}_2 \text{ tons} = \text{sum of hourly SO}_2 \text{ lb values} / 2000$$

D.3.12 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-5, the permittee shall demonstrate that Boiler No. 3 is in compliance with the NO_x emission limit of five tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis initially either by using a U.S. EPA or department certified continuous emissions monitor (CEM) or by using the test methods and procedures that follow either 326 IAC 3 or 40 CFR 60. After the date that the initial compliance with the emission limits in section 326 IAC 10-1-4 is demonstrated, an owner or operator who installed CEMs shall demonstrate continuous compliance using either U.S. EPA or department certified CEMs.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.13 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse at least once per day when the Boiler No. 3 is in operation. When for any hourly reading, the pressure drop across the baghouse is outside the normal range of 1.25 to 15 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

- (a) ~~The instruments used for determining the pressure shall comply with the Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated in accordance with the manufacturer’s specifications. The specifications shall be available on site with the Preventive Maintenance Plan.~~

~~D.3.14 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~

- (a) ~~The Permittee shall take reasonable response whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and adjustment of flue gas conditioning rate. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition.~~
- (b) ~~Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~
- (c) ~~The Permittee may request that the IDEM, OAQ approve an opacity trigger level different than the one specified in (a) and (b) of this condition, provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.~~

~~D.3.15 SO₂ Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]~~

- (a) ~~For the purposes of demonstrating compliance with Condition D.3.5 whenever the continuous emission monitoring system (CEMs) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall calculate the daily heat input weighted SO₂ rate using the duct SO₂ CEMS. The daily heat input weighted SO₂ lbs/MMBtu shall be used to demonstrate compliance with the 30 day rolling weighted average SO₂ lbs/MMBtu rate limit specified in condition D.3.5.~~
- (b) ~~For the purposes of demonstrating compliance with the Condition D.3.2 the Permittee shall use the data substitution procedures of 40 CFR Subpart 75.33(b) (for SO₂) and 40 CFR Subpart 75.35 (for CO₂) for any missing data period for the duct CEMS.~~

~~D.3.16 Nitrogen Oxide Emissions [326 IAC 10-1]~~

~~Pursuant to 326 IAC 10-1-6, the Permittee shall comply with the following emissions monitoring requirements pertaining to NO_x:~~

- (a) ~~NO_x continuous emissions monitors (CEMs) shall be installed (or maintained) on the common stack for Boilers No. 3 and 4 according to the requirements of 326 IAC 3.~~
- (b) ~~The NO_x CEMs on the common stack for Boilers No. 3 and 4 shall be certified according to procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.~~
- (c) ~~Operating and maintenance procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.~~
- (d) ~~Data recording and reporting procedures contained in 326 IAC 3 and 40 CFR 75 as applicable, except that for the purpose of the excess emissions reporting requirement in 326 IAC 3, the excess emissions reported shall be those emissions that exceed the applicable emissions limits in section 326 IAC 10-1-4.~~
- (e) ~~Whenever the CEMs System is down for a period of 24 hours or more, the Permittee shall employ Best Combustion Practices to minimize NO_x emissions from Boiler 3 until the CEMs is brought back online.~~

~~D.3.17 Continuous Opacity Monitoring System Downtime [326 IAC 2-7-5(3)(A)(iii)]~~

~~Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more, and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.~~

- (a) ~~Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.~~
- (b) ~~Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.~~
- (c) ~~Method 9 readings may be discontinued once a COMS is online.~~
- (d) ~~Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.18 Record Keeping Requirements

- (a) ~~To document the compliance status with the particulate matter and opacity Conditions D.3.3, D.3.4, D.3.10, D.3.13, D.3.14 and D.3.17, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.3.3 and D.3.4.~~
 - (1) ~~Data and results from the most recent stack test.~~
 - (2) ~~All continuous opacity monitoring data, pursuant to 326 IAC 3-5.~~
 - (3) ~~The results of all Method 9 visible emission readings taken during any periods of COM downtime.~~
 - (4) ~~All baghouse parametric monitoring readings.~~
- (b) ~~To document the compliance status with the SO₂ Conditions D.3.2, D.3.6, D.3.10 and D.3.16, the Permittee shall maintain all SO₂ Continuous Emissions Monitoring System (CEMS) data, pursuant to 326 IAC 3-6-5, with calendar dates and the beginning and ending times of any CEMS down time.~~
- (c) ~~To document the compliance status with the NO_x Conditions D.3.6, D.3.11, D.3.13 and D.3.17, the Permittee shall maintain records in accordance with the following: Whenever using CEMS data to demonstrate compliance with Condition D.3.6, the Permittee shall maintain all NO_x continuous emissions monitoring data, pursuant to 326 IAC 10-1-5, with calendar dates and beginning and ending times of any CEM downtime. Records shall be complete and sufficient to establish compliance with the NO_x limits as required in Conditions D.3.6 and D.3.13.~~
- (d) ~~Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.~~

D.3.19 Reporting Requirements

- (a) ~~A quarterly report containing the information in (1) through (3) below shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.~~
 - (1) ~~To document compliance with the annual SO₂ limit in Condition D.3.2(b), the Permittee shall report the quarterly total SO₂ and year to date total SO₂ emissions in tons.~~
 - (2) ~~To document compliance with Condition D.3.2(b), the Permittee shall report the thirty day average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each day in the reporting period.~~
 - (3) ~~To document compliance with Condition D.3.5, the Permittee shall report the daily average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) and the thirty day weighted average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each calendar day during the reporting period from the common stack.~~
~~The report submitted by the Permittee does require a certification that meets the~~

~~requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(b) A quarterly report of the thirty (30) day rolling weighted average nitrogen oxide(s) emission rate in pounds per million British Thermal Units (lb/MMBtu), shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. [326 IAC 10-1-4(b)(2)]~~

~~The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(c) Pursuant to 326 IAC 3-5-7(5), a quarterly report of the continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted shall include the following:~~

- ~~(1) Date of downtime.~~
- ~~(2) Time of commencement.~~
- ~~(3) Duration of each downtime.~~
- ~~(4) Reasons for each downtime.~~
- ~~(5) Nature of system repairs and adjustments.~~

~~The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(d) Pursuant to 326 IAC 10-1-7, the Permittee shall submit the following documents:~~

- ~~(1) A statement, signed by the owner or operator, certifying that the source has achieved compliance with the requirements of this rule.~~
- ~~(2) Emissions compliance test reports.~~
- ~~(3) Continuous emissions monitoring system performance evaluation reports.
 - ~~(A) Records required by this rule shall be submitted to the department or the U.S. EPA within thirty (30) days of receipt of a written request.~~
 - ~~(B) A source subject to this rule shall notify the department at least thirty (30) days prior to the addition or modification of a facility that may result in a potential increase in NO_x emissions.~~
 - ~~(C) The owner or operator of an affected source may comply with the reporting requirement of this rule by submitting to the department a substitute report. A substitute report is a report that satisfies an applicable state or federal reporting requirement and contains the information required to be submitted by 326 IAC 10-1-7.~~~~

- ~~(e) Pursuant to 326 IAC 3-5-7, a separate quarterly report of opacity exceedances, SO₂ exceedances, and NO_x exceedances shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(f) Pursuant to 326 IAC 3-5-5(e), a quarterly report of the continuous emissions monitoring system performance audits shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

D.4.10 Consent Decree Sulfur Dioxide Controls [326 IAC 2-7-6(3)]

- (a) By no later than January 1, 2011 and continuing thereafter, the Permittee shall install and commence continuous operation of a DSI system on **Boiler No. Unit 4**.
 - (b) Until the thirtieth (30th) Operating Day following January 1, 2011, Duke will be working to optimize performance of the DSI and to identify technological limitations and good engineering and maintenance practices for the DSI system.
 - (c) Commencing on the 60th Operating Day following January 1, 2011, and continuously thereafter, The Permittee shall continuously operate the DSI system on **Boiler No. Unit 4** so as to achieve and maintain a 30-day rolling average emissions rate for SO₂ of no greater than 0.800 lbs/MMBtu.
 - (d) The Permittee shall not be required to continuously operate the DSI system at **Boiler No. Unit 4**, if the Permittee;
 - (1) permanently ceases to emit any SO₂ from **Boiler No. Unit 4**, or
 - (2) makes physical or operational changes to **Boiler No. Unit 4** that;
-

D.4.11 Continuous Emissions Monitoring and Operation (CEMs and COMs) [326 IAC 3-5][326 IAC 7-2][326 IAC 10-1][326 IAC 2-7-5(3)(A)(iii)]

- (a) Pursuant to 326 IAC 3-5 (Continuous Emission Monitoring System (CEMS)), the Permittee shall install calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.
 - (b) Pursuant to the Consent Decree, the Permittee shall install a continuous emissions monitoring system for SO₂ emission rate in the outlet ductwork of the Baghouse for **Boiler No. Unit 4**. The CEMS shall be installed, calibrated, certified and maintained in accordance with 40 CFR Part 60, Appendix B. The Permittee shall conduct a performance evaluation to certify such CEMS by no later than December 1, 2010.
 - (f) Pursuant to 326 IAC 3-5-1(d) (Continuous Monitoring of Emissions), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring SO₂ and NO_x emissions rates in lbs/MMBtu from the ~~common stack~~ for Boilers No. ~~4 1-and-2~~, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
-

D.4.12 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 7-2] [326 IAC 7-4-9]

- (a) Pursuant to 326 IAC 7-2-1(g), the Permittee shall demonstrate compliance with the SO₂ limit in condition D.4.5 using SO₂ CEMS on the ~~common stack for units 3 and~~ **Boiler No. 4 stack**.
- (b) Pursuant to the Consent Decree, the Permittee shall demonstrate compliance with the SO₂ limit in condition D.4.2 as using SO₂ CEMS on the outlet of the **Boiler No. Unit 4** Baghouse as follows:

.....
D.4.17 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-6, the Permittee shall comply with the following emissions monitoring requirements pertaining to NO_x:

- (a) NO_x continuous emissions monitors (CEMs) shall be installed (or maintained) on the common stack for Boilers No. 3 and 4 according to the requirements of 326 IAC 3.
 - (b) The NO_x CEMs on the common stack for Boilers No. 3 and 4 shall be certified according to procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
 - (c) Operating and maintenance procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
 - (d) Data recording and reporting procedures contained in 326 IAC 3 and 40 CFR 75 as applicable, except that for the purpose of the excess emissions reporting requirement in 326 IAC 3, the excess emissions reported shall be those emissions that exceed the applicable emissions limits in section 326 IAC 10-1-4.
 - (e) Whenever the CEMs System is down for a period of 24 hours or more, the Permittee shall employ Best Combustion Practices to minimize NO_x emissions from Boiler No. 4 until the CEMs is brought back online.
-

D.4.20 Reporting Requirements

- (a) A quarterly report containing the information in (1) through (2) below shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.
 - (1) To document compliance with Condition D.4.2, the Permittee shall report the thirty day average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each day in the reporting period.
 - (2) To document compliance with Condition D.4.5, the Permittee shall report the daily average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) and the thirty day weighted average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each calendar day during the reporting period from the common stack.
-

Emission Unit Description [326 IAC 2-7-5(15)]

A coal transfer system for Boilers No. 1, No. 2, No. 3, and No. 4, with a nominal throughput of 800 tons of coal per hour, construction commenced prior to 1974, with equipment including barge unloading, truck unloading, a coal storage pile, conveying, coal bunkers and scale equipped with dust collectors (enclosures) for all units.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

.....

SECTION D.6

EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

Dry fly ash handling and disposal system, including the following:

- (1) One (1) pneumatic fly ash transfer system from boiler baghouses to a fly ash storage silo, with a maximum throughput of 17 tons of fly ash per hour, equipped with two (2) separators/mechanical exhausters and one (1) back-up to separate the fly ash, with PM emissions from the storage silo controlled by the separators and a bin vent baghouse.
- (2) ~~Two (2) activated carbon silos, each with a maximum storage capacity of 60 tons.~~
- (23) Loading of fly ash into trucks for transport the landfill and unloading of fly ash from trucks at the landfill.
- (34) Wind Erosion of fly ash from the landfill.
- (45) Fugitive dust from equipment traffic at the landfill.
- (56) Fugitive dust from trucks traveling between the storage silo and the landfill.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

SECTION E.2

TITLE IV ACID RAIN PROGRAM CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

- (a) ~~Reserved One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 1 in 1994. The ESP on Boiler No.1 was replaced with a new baghouse in December 2007.~~
- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. SO₂ emissions will be controlled by dry sorbent injection system scheduled to be in service by January 1, 2011. Sorbent will be injected upstream of the baghouse. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 2 in 1992. The ESP on Boiler No.2 was replaced with a new baghouse in December 2007.
- (c) ~~Reserved One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack B. Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 3 in 1994. The ESP on Boiler No.3 was replaced with a new baghouse in May 2008.~~
- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. SO₂ emissions will be controlled by dry sorbent injection system scheduled to be in service by January 1, 2011. Sorbent will be injected upstream of the baghouse. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 4 in 1994. The ESP on Boiler No.4 was replaced with a new baghouse in April 2008.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Acid Rain Program

SECTION G

Clean Air

Interstate Rule (CAIR) Nitrogen Oxides Annual, Sulfur Dioxide, and Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a), and 326 IAC 24-3-1(a)

ORIS Code:

1008

CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a) and 326 IAC 24-3-1(a)

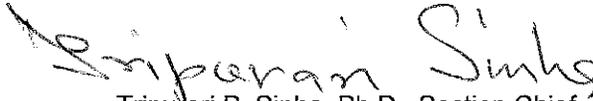
- (a) ~~Reserved One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 1 in 1994. The ESP on Boiler No.1 was replaced with a new baghouse in December 2007.~~
- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 2 in 1992. The ESP on Boiler No.2 was replaced with a new baghouse in December 2007.
- (c) ~~Reserved One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 3 in 1994. The ESP on Boiler No.3 was replaced with a new baghouse in May 2008.~~
- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 4 in 1994. The ESP on Boiler No.4 was replaced with a new baghouse in April 2008.

All coal burned in Boilers No. 2 and 4 1-4, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Josiah Balogun at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5257 or toll free at 1-800-451-6027 extension 4-5257.

Sincerely,



Tripurari P. Sinha, Ph.D., Section Chief
Permits Branch
Office of Air Quality

cc: File – Floyd County
Floyd County Health Department
U.S. EPA, Region V
SWRO and SERO
Compliance and Enforcement Branch



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

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Duke Energy Indiana, Inc. - Gallagher Generating Station
30 Jackson Street
New Albany, Indiana 47150

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T043-27078-00004

Issued by:

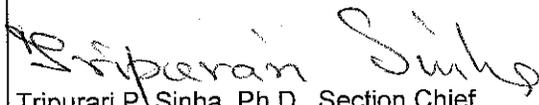
Chrystal A. Wagner, Section Chief
Permits Branch
Office of Air Quality

Issuance Date: September 28, 2010

Expiration Date: September 28, 2015

Administrative Amendment No.: 043-31430-00004

Issued by:


Tripurari P. Sinha, Ph.D., Section Chief
Permits Branch
Office of Air Quality

Issuance Date: February 13, 2012

Expiration Date: September 28, 2015

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- D.2.20 Reporting Requirements

D.3 RESERVED

D.4 EMISSIONS UNIT OPERATION CONDITIONS - One (1) Coal-Fired Boiler (Boiler No.4)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.4.1 Consent Degree Definitions [326 IAC 2-7-6(3)]
- D.4.2 Consent Degree SO₂ Emissions Limitations [326 IAC 2-7-6(3)]
- D.4.3 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]
- D.4.4 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]
- D.4.5 Sulfur Dioxide (SO₂) [326 IAC 7-4-9]
- D.4.6 Nitrogen Oxides (NO_x) Emissions Limitation [326 IAC 10-1-4]
- D.4.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.4.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]
- D.4.9 Particulate Control [326 IAC 2-7-6(6)]
- D.4.10 Consent Degree Sulfur Dioxide Controls [326 IAC 2-7-6(3)]
- D.4.11 Continuous Emissions Monitoring (CEMs and COMs) [326 IAC 3-5] [326 IAC 7-2] [326 IAC 10-1]
- D.4.12 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 7-2] [326 IAC 7-4-9]
- D.4.13 Nitrogen Oxide (NO_x) Emissions [326 IAC 10-1]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.4.14 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.4.15 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.4.16 SO₂ Monitor Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(1)]
- D.4.17 Nitrogen Oxide (NO_x) Emissions [326 IAC 10-1]
- D.4.18 Continuous Opacity Monitoring System Downtime [326 IAC 2-7-5(3)(A)(iii)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.4.19 Record Keeping Requirements
- D.4.20 Reporting Requirements

D.5 EMISSIONS UNIT OPERATION CONDITIONS - Coal Storage and Handling

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.5.1 Particulate [326 IAC 6-3-2]
- D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.5.3 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.5.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.5.5 Record Keeping Requirements

D.6 EMISSIONS UNIT OPERATION CONDITIONS – Dry Fly Ash Handling and Disposal System

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.6.1 PSD Minor Limits [326 IAC 2-2] and Nonattainment NSR Limits [326 IAC 2-1.1-5]
- D.6.2 Particulate [326 IAC 6-3-2]
- D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.6.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]
- D.6.5 Particulate Control

Compliance Monitoring Requirements

- D.6.6 Visible Emission Notations
- D.6.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.6.8 Record Keeping Requirements

D.7 EMISSIONS UNIT OPERATION CONDITIONS - Insignificant Activities

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.7.1 Organic Solvent Degreasing Operations: Cold Cleaner Operation [326 IAC 8-3-2]
- D.7.2 Organic Solvent Degreasing Operations: Cold Cleaner Degreaser Operation and Control [326 IAC 8-3-5]
- D.7.3 Fugitive Dust Emission Limitations [326 IAC 6-4-2]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.7.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.7.5 Record Keeping Requirements

D.8 EMISSIONS UNIT OPERATION CONDITIONS - Sorbent Storage Silos

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.8.1 PSD Minor Limits and Nonattainment NSR Limits [326 IAC 2-2] [326 IAC 2-1.1-5]
- D.8.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
- D.8.3 Preventative Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.8.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]
- D.8.5 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements

- D.8.6 Visible Emission Notations
- D.8.7 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.8.8 Record Keeping Requirements

E.1 NEW SOURCE PERFORMANCE STANDARDS [326 IAC 12-1][40 CFR 60]

- E.1.1 General Provisions Relating to new Source Performance Standards [326 IAC 12-1][40 CFR 60, Subpart A]
- E.1.2 Standard of Performance for Nonmetallic Mineral Processing Plants Requirements [326 IAC 12-1] [40 CFR 60, Subpart OOO]

E.2 ACID RAIN PROGRAM CONDITIONS

Acid Rain Program

- E.2.1 Acid Rain Permit [326 IAC 2-7-5(1)(C)] [326 IAC 21] [40 CFR 72 through 40 CFR 78]
- E.2.2 Title IV Emissions Allowances [326 IAC 2-7-5(4)] [326 IAC 21]

F RESERVED

G Clean Air Interstate (CAIR) Nitrogen Oxides Annual, Sulfur Dioxide, and Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a), and 326 IAC 24-3-1(a)

- G.1 Automatic Incorporation of Definitions [326 IAC 24-1-7(e)] [326 IAC 24-2-7(e)] [326 IAC 24-3-7(e)] [40 CFR 97.123(b)] [40 CFR 97.223(b)] [40 CFR 97.323(b)]
- G.2 Standard Permit Requirements [326 IAC 24-1-4(a)] [326 IAC 24-2-4(a)] [326 IAC 24-3-4(a)] [40 CFR 97.106(a)] [40 CFR 97.206(a)] [40 CFR 97.306(a)]
- G.3 Monitoring, Reporting, and Record Keeping Requirements [326 IAC 24-1-4(b)] [326 IAC 24-2-4(b)] [326 IAC 24-3-4(b)] [40 CFR 97.106(b)] [40 CFR 97.206(b)] [40 CFR 97.306(b)]
- G.4.1 Nitrogen Oxides Emission Requirements [326 IAC 24-1-4(c)] [40 CFR 97.106(c)]
- G.4.2 Sulfur Dioxide Emission Requirements [326 IAC 24-2-4(c)] [40 CFR 97.206(c)]
- G.4.3 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]
- G.5 Excess Emissions Requirements [326 IAC 24-1-4(d)] [326 IAC 24-2-4(d)] [326 IAC 24-3-4(d)] [40 CFR 97.106(d)] [40 CFR 97.206(d)] [40 CFR 97.306(d)]
- G.6 Record Keeping Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)] [326 IAC 2-7-5(3)] [40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]
- G.7 Reporting Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)] [40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]
- G.8 Liability [326 IAC 24-1-4(f)] [326 IAC 24-2-4(f)] [326 IAC 24-3-4(f)] [40 CFR 97.106(f)] [40 CFR 97.206(f)] [40 CFR 97.306(f)]
- G.9 Effect on Other Authorities [326 IAC 24-1-4(g)] [326 IAC 24-2-4(g)] [326 IAC 24-3-4(g)] [40 CFR 97.106(g)] [40 CFR 97.206(g)] [40 CFR 97.306(g)]
- G.10 CAIR Designated Representative and Alternate CAIR Designated Representative [326 IAC 24-1-6] [326 IAC 24-2-6] [326 IAC 24-3-6] [40 CFR 97, Subpart BB] [40 CFR 97, Subpart BBB] [40 CFR 97, Subpart BBBB]

Certification

Emergency Occurrence Report

Quarterly Deviation and Compliance Monitoring Report

Attachment A: Subpart OOO, New Source Performance Standard for Nonmetallic Mineral Processing Plants

Attachment B: Consent Decree Requirements

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(21)]

The Permittee owns and operates a stationary electric utility generating station.

Source Address:	30 Jackson Street, New Albany, Indiana 47150
General Source Phone Number:	317-838-2108
SIC Code:	4911
County Location:	Floyd
Source Location Status:	Nonattainment for PM _{2.5} Standard Attainment or unclassifiable for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules; Major Source, under Nonattainment NSR Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) **Reserved**
- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 2 in 1992. The ESP on Boiler No.2 was replaced with a new baghouse in December 2007.
- (c) **Reserved**
- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 4 in 1994. The ESP on Boiler No.4 was replaced with a new baghouse in April 2008.

All coal burned in Boilers No. 2 and 4, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

- (e) One (1) coal transfer system for Boilers 2 and 4, with a nominal throughput of 800 tons of coal per hour, construction commenced prior to 1974, with equipment including barge unloading, truck unloading, a coal storage pile, conveying, coal bunkers and scale equipped with dust collector for all

units.

- (f) One (1) dry fly ash handling and disposal system, including the following:
 - (1) One (1) pneumatic fly ash transfer system from boiler baghouses to a fly ash storage silo, with a maximum throughput of 17 tons of fly ash per hour, equipped with two (2) separators/mechanical exhausters and one (1) back-up to separate the fly ash, with PM emissions from the storage silo controlled by the separators and a bin vent baghouse.
 - (2) Loading of fly ash into trucks for transport the landfill and unloading of fly ash from trucks at the landfill.
 - (3) Wind Erosion of fly ash from the landfill.
 - (4) Fugitive dust from equipment traffic at the landfill.
 - (5) Fugitive dust from trucks traveling between the storage silo and the landfill.
- (g) Two (2) sorbent storage silos, identified as SS-01 and SS-02, approved for construction in 2010, each equipped with a baghouse to control particulate matter emissions during loading. Sorbent shall be delivered by enclosed tanker trucks. The sorbent is pneumatically transferred from the truck to the silo through a totally enclosed system. The maximum throughput capacity is 24 tons per hour based on unloading one tanker truck per hour. The sorbent will be pulled from the silo through an enclosed system and injected into the boiler upstream of the baghouse. The injection system equipped with mills to reduce the size of sorbent material prior to injection into the flue gas. The totally enclosed mills are to be operated on an as needed basis.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Cleaners and solvents characterized as follows: [326 IAC 8-3]
 - (1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38°C (100°F) or;
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3]
- (c) Multiple ash ponds, with a combined surface area of 57 acres [326 IAC 6-4].

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability); and
- (c) It is an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

- (a) This permit, T043-27078-00004, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:
 - (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and

- (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year 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

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

**B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]**

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of

the emergency;

- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Southeast Regional Office and Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile 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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has

issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

- (a) All terms and conditions of permits established prior to T043-27078-00004 and issued pursuant to permitting programs approved into the state implementation plan have been either
- (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted 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

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by a reasonable deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12] [40 CFR 72]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Pursuant to 326 IAC 2-7-11(b) and 326 IAC 2-7-12(a), administrative Part 70 operating permit amendments and permit modifications for purposes of the acid rain portion of a Part 70 permit shall be governed by regulations promulgated under Title IV of the Clean Air Act. [40 CFR 72]
- (c) Any application requesting an amendment or modification of this permit shall be submitted 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
- Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]
[326 IAC 2-7-12 (b)(2)]**

- (a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
 - (5) The Permittee maintains records accessible on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b), (c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).
- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
 - (2) The date on which the change will occur;
 - (3) Any change in emissions; and
 - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable

SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c). The notification requirement per (a)(4) of this condition does not apply to emission trades of SO₂ or NO_x under 326 IAC 21 or 326 IAC 10-4.

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the **notification** requirements of part (a) of this condition do not apply.
- (f) This condition does not apply to emission trades of SO₂ or NO_x under 326 IAC 21 or 326 IAC 10-4.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1][IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records are physically present or electronically accessible under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted 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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

- (a) The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations for Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4 and 326 IAC 1-7-5(a), (b) and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted 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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet

the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

-
- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such recordkeeping.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
 - (1) Before beginning actual construction of the "project" (as defined in

326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain the following records:

- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
 - (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

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

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (f) The report for project at an existing emissions unit shall be submitted not later than sixty (60) days after the end of the year and contain the following:
 - (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted 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

- (g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

Ambient Monitoring Requirements [326 IAC 7-3]

C.20 Ambient Monitoring [326 IAC 7-3]

- (a) The Permittee shall operate continuous ambient sulfur dioxide air quality monitors and a meteorological data acquisition system according to a monitoring plan submitted to the commissioner for approval. The monitoring plan shall include requirements listed in 326 IAC 7-3-2(a)(1), 326 IAC 7-3-2(a)(2) and 326 IAC 7-3-2(a)(3).
- (b) The Permittee and other operators subject to the requirements of this rule, located in the same county, may submit a joint monitoring plan to satisfy the requirements of this rule. [326 IAC 7-3-2(c)]
- (c) The Permittee may petition the commissioner for an administrative waiver of all or some of the requirements of 326 IAC 7-3 if such owner or operator can demonstrate that ambient monitoring is unnecessary to determine continued maintenance of the sulfur dioxide ambient air quality standards in the vicinity of the source. [326 IAC 7-3-2(d)]

C.21 Consent Decree SO₂ Allowance Surrender Requirement [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in *United States v. Cinergy Corp.*, Case No. 1:99-cv-01693-LJM-JMS, (Document No.1852) entered by the court on March 18, 2010 (“Consent Decree” or “Decree”), the Permittee shall surrender SO₂ Allowances as follows:

- (a) For the purposes of this condition the definitions in Attachment B shall apply.
- (b) The Permittee shall surrender the Tonnage Equivalent in SO₂ Allowances, in addition to the surrender required under existing law, for the total tons of SO₂ emitted from Gallagher Unit 1 and Unit 3 from May 19, 2009, through the date that Gallagher Unit 1 and Unit 3 are Repowered to Natural Gas or Retired.
- (c) Beginning in calendar year 2010, and continuing each calendar year thereafter, the Permittee shall surrender the amount of SO₂ Allowances equal to the amount allocated to the Gallagher Plant for that calendar year that the Permittee does not need in order meet its federal and/or state Clean Air Act regulatory requirements for the Gallagher Plant. Allowance Surrenders pursuant to paragraph (b) of this condition shall be in addition to any Surrender required by this paragraph (c).
- (d) The Permittee shall Surrender, or transfer to a non-profit third party selected by the Permittee for Surrender, all SO₂ Allowances required to be Surrendered pursuant to paragraphs (b) and (c) of this condition by March 1 of the immediately following year. If transferred to a non-profit third party, that party must in turn surrender the allowances to EPA and may not sell, trade, or otherwise exchange any of the allowances and may not use any of the SO₂ Allowances to meet any obligation imposed by any environmental law.
- (e) For all SO₂ Allowances required to be surrendered under this condition, Duke or the third party recipient(s) (as the case may be) shall first submit an SO₂ Allowance transfer request (in paper or electronic format) to EPA’s Office of Air and Radiation’s Clean Air Markets Division directing the transfer of such SO₂ Allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. As part of submitting these transfer requests, Duke or the third party recipient(s) shall irrevocably authorize the transfer of these SO₂ Allowances and identify – by name of account and any applicable serial or other identification numbers or station names – the source and location of the SO₂ Allowances being surrendered. Duke shall not have complied with the SO₂ Allowance surrender requirements of this condition until all third party recipient(s) have actually surrendered the transferred SO₂ Allowances to EPA.
- (f) Nothing in this condition shall prevent the Permittee from purchasing or otherwise obtaining SO₂ Allowances from another source for purposes of complying with paragraphs (b) and (c) or federal and/or state Clean Air Act regulatory requirements to the extent otherwise allowed by law.

SECTION D.1

RESERVED

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 2 in 1992. The ESP on Boiler No.2 was replaced with a new baghouse in December 2007.

All coal burned, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Consent Decree [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in United State v. Cinergy Corp., Case No. 1:99-cv-01693-LJM-JMS, (Document No. 1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree"), the definitions in Attachment B shall apply to conditions D.2.2, D.2.10, D.2.11 and D.2.12.

D.2.2 Consent Decree SO₂ Emissions Limit [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in United State v. Cinergy Corp., Case No. 1:99-cv-01693-LJM-JMS, (Document No. 1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree") commencing on the 60th Operating Day following January 1, 2011, the 30 day rolling average SO₂ emissions shall not exceed 0.800 lbs/MMBtu.

D.2.3 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the PM emissions from the Boiler No. 2 stack shall not exceed 0.36 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{(C)(a)(h)}{76.5(Q^{0.75})(N^{0.25})}$$

Where:

- C = 50 μ/m³
- Q = 5,840 MMBtu/hr (max capacity of boilers 1-4)
- N = 2 (number of stacks)
- a = 0.8
- h = 550 Feet (average stack height)

D.2.4 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

(a) Pursuant to 326 IAC 5-1-3(a) (Temporary Alternative Opacity Limitations), the following applies:

- (1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the forty percent (40%) opacity limitation established by section 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6) minute averaging period. Opacity in

excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6) minute averaging periods in any twenty-four (24) hour period. [326 IAC 5-1-3(a)]

- (2) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the forty percent (40%) opacity limitation established in section 326 IAC 5-1-2. However, opacity shall not exceed sixty percent (60%) for any six (6) minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6) minute averaging period in any sixty (60) minute period. The averaging periods shall not be permitted for more than three (3) six (6) minute averaging periods in a twelve (12) hour period. [326 IAC 5-1-3(b)]

- (b) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(a) or (b), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

D.2.5 Sulfur Dioxide (SO₂) [326 IAC 7-4-9]

Pursuant to 326 IAC 7-4-9 (Floyd County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 2 shall not exceed 4.70 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.

D.2.6 Nitrogen Oxides (NO_x) [326 IAC 10-1-4]

Pursuant to 326 IAC 10-1-4(b)(2) (Nitrogen Oxides Control in Clark and Floyd Counties), NO_x emissions from the Boiler No. 2 shall not exceed five-tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis.

D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.2.3, the Permittee shall perform PM and opacity testing by May 2012 on dry bottom pulverized coal - fired Boiler, identified as Boiler No. 2 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.2.9 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with the particulate matter emission limitations in Condition D.2.3, the baghouse for particulate control of Boiler No. 2 shall be in operation and control emissions from Boiler No. 2 at all times that the boiler is in operation.

D.2.10 Consent Decree Sulfur Dioxide Controls [326 IAC 2-7-6(3)]

- (a) By no later than January 1, 2011 and continuing thereafter, the Permittee shall install and commence continuous operation of a DSI system on Boiler No. 2.
- (b) Until the thirtieth (30th) Operating Day following January 1, 2011, Duke will be working to optimize performance of the DSI and to identify technological limitations and good engineering and maintenance practices for the DSI system.
- (c) Commencing on the 60th Operating Day following January 1, 2011, and continuously thereafter, The Permittee shall continuously operate the DSI system on Boiler No. 2 so as to achieve and maintain a 30-day rolling average emissions rate for SO₂ of no greater than 0.800 lbs/MMBtu.
- (d) The Permittee shall not be required to continuously operate the DSI system at Boiler No. 2, if the Permittee;
- (1) permanently ceases to emit any SO₂ from Boiler No. 2, or

- (2) makes physical or operational changes to Boiler No. 2 that;
 - i. alone and without the continuous operation of the DSI, achieves and maintains a 30-day rolling average emission rate for SO₂ of no greater than 0.60 lb/MMBTU, and
 - ii. the Permittee makes these physical or operational changes, including, if applicable, the continuous operation of the alternative SO₂ pollution control technology, and the 30-day rolling average emission rate of no greater than 0.60 lbs/MMBTU, federally enforceable in accordance with applicable regulatory requirements, including obtaining all necessary construction and operating permits.

D.2.11 Continuous Emissions Monitoring and Operation (CEMs and COMs) [326 IAC 3-5][326 IAC 7-2][326 IAC 10-1]
[326 IAC 2-7-5(3)(A)(iii)]

- (a) Pursuant to 326 IAC 3-5 (Continuous Emission Monitoring System (CEMS)), the Permittee shall install, calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.
- (b) Pursuant to the Consent Decree, the Permittee shall install a continuous emissions monitoring system to monitor the SO₂ emission rate in the outlet ductwork of the Baghouses for Boiler No. 2. The CEMS shall be installed, calibrated, certified and maintained in accordance with 40 CFR Part 60, Appendix B. The Permittee shall conduct a performance evaluation to certify such CEMS by no later than December 1, 2010.
- (c) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (d) In the event that a breakdown of a COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and 40 CFR 63.
- (f) Pursuant to 326 IAC 3-5-1(d) (Continuous Monitoring of Emissions), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring SO₂ and NO_x emissions rates in lbs/MMBtu from the Boiler No. 2 stack, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- (g) The continuous emissions monitoring system(s) (CEMS) for SO₂ and NO_x emission rates shall be operated at all times the emissions unit or process is operating except for reasonable periods of monitor system downtime due to necessary calibration, maintenance activities or malfunctions. Calibration and maintenance activities shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a). [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]
- (h) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 or any other applicable performance specifications, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (i) In the event that a breakdown of a continuous emission monitoring system required by this permit occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (j) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emissions monitoring systems (CEMs and COMs) pursuant to 326 IAC 3-5, 326 IAC 10-1,

40 CFR 60, or 40 CFR 75.

D.2.12 Sulfur Dioxide Emissions [326 IAC 7-2] [326 IAC 7-4-9]

- (a) Pursuant to 326 IAC 7-2-1(g), the Permittee shall demonstrate compliance with the SO₂ limit in condition D.2.5 using SO₂ CEMS on the stack for Boiler No. 2:
- (b) Pursuant to the Consent Decree, the Permittee shall demonstrate compliance with the SO₂ limit in condition D.2.2 by using SO₂ CEMS on the outlet of the Boiler No. 2 Baghouse as follows:
 - (1) The hourly SO₂ emission rates shall be calculated using the methodology specified in 40 C.F.R. Part 60 Appendix A, Method 19.
 - (2) Diluent Capping (i.e., 5% CO₂) will be applied to the SO₂ rate for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR part 75 Appendix F Section 3.3.4.1.
 - (3) The 30 day rolling average shall be calculated by averaging all the hourly SO₂ rates during the 30 consecutive operating days.

D.2.13 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-5, the permittee shall demonstrate that Boiler No. 2 is in compliance with the NO_x emission limit of five-tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis initially either by using a U.S. EPA or department certified continuous emissions monitor (CEM) or by using the test methods and procedures that follow either 326 IAC 3 or 40 CFR 60. After the date that the initial compliance with the emission limits in section 326 IAC 10-1-4 is demonstrated, an owner or operator who installed CEMs shall demonstrate continuous compliance using either U.S. EPA or department certified CEMs.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.14 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouses at least once per day when the Boiler No. 2 is in operation. When for any hourly reading, the pressure drop across the baghouse is outside the normal range of 1.25 to 15 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The instruments used for determining the pressure shall comply with the Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated in accordance with the manufacturer’s specifications. The specifications shall be available on site with the Preventive Maintenance Plan.

D.2.15 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall take reasonable response whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and adjustment of flue gas conditioning rate. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition.
- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

- (c) The Permittee may request that the IDEM, OAQ approve an opacity trigger level different than the one specified in (a) and (b) of this condition, provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.

D.2.16 SO₂ Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]

- (a) For the purposes of demonstrating compliance with Condition D.2.5 whenever the common stack continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall calculate the daily weighted SO₂ rate using the duct SO₂ CEMS. The daily heat input weighted SO₂ lbs/MMBtu shall be used to demonstrate compliance with the 30 day rolling weighted average SO₂ lbs/MMBtu rate limit specified in condition D.2.5.
- (b) For the purposes of demonstrating compliance with the Condition D.2.2 the Permittee shall use the data substitution procedures of 40 CFR Subpart 75.33(b) (for SO₂) and 40 CFR Subpart 75.35 (for CO₂) for any missing data period for the duct CEMS.

D.2.17 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-6, the Permittee shall comply with the following emissions monitoring requirements pertaining to NO_x:

- (a) NO_x continuous emissions monitors (CEMs) shall be installed (or maintained) on the stack for Boiler No. 2 according to the requirements of 326 IAC 3.
- (b) The NO_x CEMs on the stack for Boiler No. 2 shall be certified according to procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
- (c) Operating and maintenance procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
- (d) Data recording and reporting procedures contained in 326 IAC 3 and 40 CFR 75 as applicable, except that for the purpose of the excess emissions reporting requirement in 326 IAC 3, the excess emissions reported shall be those emissions that exceed the applicable emissions limits in section 326 IAC 10-1-4.
- (e) Whenever the CEMs System is down for a period of 24 hours or more, the Permittee shall employ Best Combustion Practices to minimize NO_x emissions from Boiler No. 2 until the CEMs is brought back online.

D.2.18 Continuous Opacity Monitoring System Downtime [326 IAC 2-7-5(3)(A)(iii)]

Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more, and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.

- (a) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
- (b) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.
- (c) Method 9 readings may be discontinued once a COMS is online.
- (d) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.19 Record Keeping Requirements

- (a) To document the compliance status with the particulate matter and opacity Conditions D.2.3, D.2.4, D.2.11, D.2.14, D.2.15, and D.2.18, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.2.3 and D.2.4.
- (1) Data and results from the most recent stack test.
 - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.
 - (3) The results of all Method 9 visible emission readings taken during any periods of COM downtime.
 - (4) All baghouse parametric monitoring readings.
- (b) To document the compliance status with the SO₂ Conditions D.2.2, D.2.5, D.2.12 and D.2.16, the Permittee shall maintain all SO₂ continuous emission monitoring system data pursuant to 326 IAC 3-5-6, with calendar dates and beginning and ending times of any CEMS downtime.
- (c) To document the compliance status with the NO_x Conditions D.2.6, D.2.11, D.2.13 and D.2.17, the Permittee shall maintain records in accordance with the following: Whenever using CEMS data to demonstrate compliance with Condition D.2.6, the Permittee shall maintain all NO_x continuous emissions monitoring data, pursuant to 326 IAC 10-1-5, with calendar dates and beginning and ending times of any CEM downtime. Records shall be complete and sufficient to establish compliance with the NO_x limits as required in Conditions D.2.6 and D.2.13.
- (d) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

D.2.20 Reporting Requirements

- (a) A quarterly report containing the information in (1) through (2) below shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.
- (1) To document compliance with Condition D.2.2, the Permittee shall report the thirty day average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each day in the reporting period.
 - (2) To document compliance with Condition D.2.5, the Permittee shall report the daily average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) and the thirty day weighted average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each calendar day during the reporting period from the stack.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A quarterly report of the thirty (30) day rolling weighted average nitrogen oxide(s) emission rate in pounds per million British Thermal Units (lb/MMBtu), shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. [326 IAC10-1-4(b)(2)]

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Pursuant to 326 IAC 3-5-7(5), a quarterly report of the continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall be submitted

not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted shall include the following:

- (1) Date of downtime.
- (2) Time of commencement.
- (3) Duration of each downtime.
- (4) Reasons for each downtime.
- (5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (d) Pursuant to 326 IAC 10-1-7, the Permittee shall submit the following documents:
- (1) A statement, signed by the owner or operator, certifying that the source has achieved compliance with the requirements of this rule.
 - (2) Emissions compliance test reports.
 - (3) Continuous emissions monitoring system performance evaluation reports.
 - (A) Records required by this rule shall be submitted to the department or the U.S. EPA within thirty (30) days of receipt of a written request.
 - (B) A source subject to this rule shall notify the department at least thirty (30) days prior to the addition or modification of a facility that may result in a potential increase in NO_x emissions.
 - (C) The owner or operator of an affected source may comply with the reporting requirement of this rule by submitting to the department a substitute report. A substitute report is a report that satisfies an applicable state or federal reporting requirement and contains the information required to be submitted by 326 IAC 10-1-7.
- (e) Pursuant to 326 IAC 3-5-7, a separate quarterly report of opacity exceedances, SO₂ exceedances, and NO_x exceedances shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (f) Pursuant to 326 IAC 3-5-5(e), a quarterly report of the continuous emissions monitoring system performance audits shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.3

RESERVED

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 4 in 1994. The ESP on Boiler No.4 was replaced with a new baghouse in April 2008.

All coal burned, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Consent Decree [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in United State v. Cinergy Corp., Case No. 1:99-cv-01693-LJM-JMS, (Document No. 1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree"), the definitions in Attachment B shall apply to conditions D.4.2, D.4.10, D.4.11 and D.4.12.

D.4.2 Consent Decree SO₂ Emissions Limit [326 IAC 2-7-6(3)]

Pursuant to the Consent Decree in United State v. Cinergy Corp., Case No. 1:99-cv-01693-LJM-JMS, (Document No. 1852) entered by the court on March 18, 2010 ("Consent Decree" or "Decree") commencing on the 60th Operating Day following January 1, 2011, the 30 day rolling average SO₂ emissions shall not exceed 0.800 lbs/MMBtu.

D.4.3 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the PM emissions from the Boiler No. 4 stack shall not exceed 0.36 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{(C)(a)(h)}{76.5(Q^{0.75})(N^{0.25})}$$

Where C = 50 μm³
Q = 5,840 MMBtu/hr (max capacity of boilers 1-4)
N = 2 (number of stacks)
a = 0.8
h = 550 Feet (average stack height)

D.4.4 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

(a) Pursuant to 326 IAC 5-1-3(a) (Temporary Alternative Opacity Limitations), the following applies:

- (1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the forty percent (40%) opacity limitation established by section 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6) minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6) minute averaging periods in any twenty-four (24) hour period. [326 IAC 5-1-3(a)]

- (2) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the forty percent (40%) opacity limitation established in section 326 IAC 5-1-2. However, opacity shall not exceed sixty percent (60%) for any six (6) minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6) minute averaging period in any sixty (60) minute period. The averaging periods shall not be permitted for more than three (3) six (6) minute averaging periods in a twelve (12) hour period. [326 IAC 5-1-3(b)]

- (b) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(a) or (b), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

D.4.5 Sulfur Dioxide (SO₂) [326 IAC 7-4-9]

Pursuant to 326 IAC 7-4-9 (Floyd County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 4 shall not exceed 4.70 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.

D.4.6 Nitrogen Oxides (NO_x) [326 IAC 10-1-4]

Pursuant to 326 IAC 10-1-4(b)(2) (Nitrogen Oxides Control in Clark and Floyd Counties), NO_x emissions from the Boiler No. 4 shall not exceed five-tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis.

D.4.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.4.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.4.3, the Permittee shall perform PM and opacity testing by May 2012 on dry bottom pulverized coal - fired Boiler No. 4 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.4.9 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with the particulate matter emission limitations in Condition D.4.3, the baghouse for particulate control of Boiler No. 4 shall be in operation and control emissions from Boiler No. 4 at all times that the boiler is in operation.

D.4.10 Consent Decree Sulfur Dioxide Controls [326 IAC 2-7-6(3)]

- (a) By no later than January 1, 2011 and continuing thereafter, the Permittee shall install and commence continuous operation of a DSI system on Boiler No. 4.
- (b) Until the thirtieth (30th) Operating Day following January 1, 2011, Duke will be working to optimize performance of the DSI and to identify technological limitations and good engineering and maintenance practices for the DSI system.
- (c) Commencing on the 60th Operating Day following January 1, 2011, and continuously thereafter, The Permittee shall continuously operate the DSI system on Boiler No. 4 so as to achieve and maintain a 30-day rolling average emissions rate for SO₂ of no greater than 0.800 lbs/MMBtu.
- (d) The Permittee shall not be required to continuously operate the DSI system at Boiler No. 4, if the Permittee;
- (1) permanently ceases to emit any SO₂ from Boiler No. 4, or
- (2) makes physical or operational changes to Boiler No. 4 that;

- i. alone and without the continuous operation of the DSI, achieves and maintains a 30-day rolling average emission rate for SO₂ of no greater than 0.60 lbs/MMBTU, and
- ii. the Permittee makes these physical or operational changes, including, if applicable, the continuous operation of the alternative SO₂ pollution control technology, and the 30-day rolling average emission rate of no greater than 0.60 lbs/MMBTU, federally enforceable in accordance with applicable regulatory requirements, including obtaining all necessary construction and operating permits.

**D.4.11 Continuous Emissions Monitoring and Operation (CEMs and COMs) [326 IAC 3-5][326 IAC 7-2][326 IAC 10-1]
[326 IAC 2-7-5(3)(A)(iii)]**

- (a) Pursuant to 326 IAC 3-5 (Continuous Emission Monitoring System (CEMS)), the Permittee shall install, calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.
- (b) Pursuant to the Consent Decree, the Permittee shall install a continuous emissions monitoring system for SO₂ emission rate in the outlet ductwork of the Baghouse for Boiler No. 4. The CEMS shall be installed, calibrated, certified and maintained in accordance with 40 CFR Part 60, Appendix B. The Permittee shall conduct a performance evaluation to certify such CEMS by no later than December 1, 2010.
- (c) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (d) In the event that a breakdown of a COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and 40 CFR 63.
- (f) Pursuant to 326 IAC 3-5-1(d) (Continuous Monitoring of Emissions), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring SO₂ and NO_x emissions rates in lbs/MMBtu from the Boiler No. 4, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- (g) The continuous emissions monitoring system(s) (CEMS) for SO₂ and NO_x emission rates shall be operated at all times the emissions unit or process is operating except for reasonable periods of monitor system downtime due to necessary calibration, maintenance activities or malfunctions. Calibration and maintenance activities shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a). [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]
- (h) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 or any other applicable performance specifications, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (i) In the event that a breakdown of a continuous emission monitoring system required by this permit occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (j) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emissions monitoring systems (CEMs and COMs) pursuant to 326 IAC 3-5, 326 IAC 10-1, 40 CFR 60, or 40 CFR 75.

D.4.12 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 7-2] [326 IAC 7-4-9]

- (a) Pursuant to 326 IAC 7-2-1(g), the Permittee shall demonstrate compliance with the SO₂ limit in

condition D.4.5 using SO₂ CEMS on the Boiler No. 4 stack.

- (b) Pursuant to the Consent Decree, the Permittee shall demonstrate compliance with the SO₂ limit in condition D.4.2 as using SO₂ CEMS on the outlet of the Boiler No. 4 Baghouse as follows:
- (1) The hourly SO₂ emission rates shall be calculated using the methodology specified in 40 CFR Part 60 Appendix A, Method 19.
 - (2) Diluent Capping (i.e., 5% CO₂) will be applied to the SO₂ rate for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR part 75 Appendix F Section 3.3.4.1.
 - (3) The 30 day rolling average shall be calculated by averaging all the hourly SO₂ rates during the 30 consecutive operating days.

D.4.13 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-5, the Permittee shall demonstrate that Boiler No. 4 is in compliance with the NO_x emission limit of five-tenths (0.5) lb/MMBtu input on a thirty (30) day rolling average basis initially either by using a U.S. EPA or department certified continuous emissions monitor (CEM) or by using the test methods and procedures that follow either 326 IAC 3 or 40 CFR 60. After the date that the initial compliance with the emission limits in section 326 IAC 10-1-4 is demonstrated, an owner or operator who installed CEMs shall demonstrate continuous compliance using either U.S. EPA or department certified CEMs.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.14 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse at least once per day when the Boiler No. 4 is in operation. When for any hourly reading, the pressure drop across the baghouse is outside the normal range of 1.25 to 15 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The instruments used for determining the pressure shall comply with the Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated in accordance with the manufacturer’s specifications. The specifications shall be available on site with the Preventive Maintenance Plan.

D.4.15 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall take reasonable response whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and adjustment of flue gas conditioning rate. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition.
- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee may request that the IDEM, OAQ approve an opacity trigger level different than the one specified in (a) and (b) of this condition, provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.

D.4.16 SO₂ Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]

- (a) For the purposes of demonstrating compliance with Condition D.4.5 whenever the continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall calculate the daily heat input weighted SO₂ rate using the duct CEMS. The daily heat input weighted SO₂ lbs/MMBtu shall be used to demonstrate compliance with the 30 day rolling weighted average SO₂ lbs/MMBtu rate limit specified in condition D.4.5.
- (b) For the purposes of demonstrating compliance with the Condition D.4.2 the Permittee shall use the data substitution procedures of 40 CFR Subpart 75.33(b) (for SO₂) and 40 CFR Subpart 75.35 (for CO₂) for any missing data period for the duct CEMS.

D.4.17 Nitrogen Oxide Emissions [326 IAC 10-1]

Pursuant to 326 IAC 10-1-6, the Permittee shall comply with the following emissions monitoring requirements pertaining to NO_x:

- (a) NO_x continuous emissions monitors (CEMs) shall be installed (or maintained) on the stack for Boiler No. 4 according to the requirements of 326 IAC 3.
- (b) The NO_x CEMs on the stack for Boiler No. 4 shall be certified according to procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
- (c) Operating and maintenance procedures contained in 326 IAC 3 and 40 CFR 75 as applicable.
- (d) Data recording and reporting procedures contained in 326 IAC 3 and 40 CFR 75 as applicable, except that for the purpose of the excess emissions reporting requirement in 326 IAC 3, the excess emissions reported shall be those emissions that exceed the applicable emissions limits in section 326 IAC 10-1-4.
- (e) Whenever the CEMs System is down for a period of 24 hours or more, the Permittee shall employ Best Combustion Practices to minimize NO_x emissions from Boiler No. 4 until the CEMs is brought back online.

D.4.18 Continuous Opacity Monitoring System Downtime [326 IAC 2-7-5(3)(A)(iii)]

Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more, and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.

- (a) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
- (b) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.
- (c) Method 9 readings may be discontinued once a COMS is online.
- (d) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.19 Record Keeping Requirements

- (a) To document the compliance status with the particulate matter and opacity Conditions D.4.3, D.4.4, D.4.11, D.4.14, D.4.15 and D.4.18, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.4.3 and D.4.4..

- (1) Data and results from the most recent stack test.
 - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.
 - (3) The results of all Method 9 visible emission readings taken during any periods of COM downtime.
 - (4) All baghouse parametric monitoring readings.
- (b) To document the compliance status with the SO₂ Conditions D.4.2, D.4.5, D.4.12 and D.4.16, the Permittee shall maintain all SO₂ continuous emissions monitoring data pursuant to 326 IAC 3-5-6, with calendar dates and beginning and ending times of any CEMS down time.
- (c) To document the compliance status with the NO_x Conditions D.4.6, D.4.13 and D.4.17, the Permittee shall maintain records in accordance with the following: Whenever using CEMS data to demonstrate compliance with Condition D.4.6, the Permittee shall maintain all NO_x continuous emissions monitoring data, pursuant to 326 IAC 10-1-5, with calendar dates and beginning and ending times of any CEM downtime. Records shall be complete and sufficient to establish compliance with the NO_x limits as required in Conditions D.4.6 and D.4.17.
- (d) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

D.4.20 Reporting Requirements

- (a) A quarterly report containing the information in (1) through (2) below shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.
- (1) To document compliance with Condition D.4.2, the Permittee shall report the thirty day average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each day in the reporting period.
 - (2) To document compliance with Condition D.4.5, the Permittee shall report the daily average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) and the thirty day weighted average SO₂ in pounds per million British Thermal Units (lbs/MMBtu) for each calendar day during the reporting period from the stack.
- The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) A quarterly report of the thirty (30) day rolling weighted average nitrogen oxide(s) emission rate in pounds per million British Thermal Units (lb/MMBtu), shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. [326 IAC10-1-4(b)(2)]
- The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-5-7(5), a quarterly report of the continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted shall include the following:
- (1) Date of downtime.
 - (2) Time of commencement.

- (3) Duration of each downtime.
- (4) Reasons for each downtime.
- (5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (d) Pursuant to 326 IAC 10-1-7, the Permittee shall submit the following documents:
 - (1) A statement, signed by the owner or operator, certifying that the source has achieved compliance with the requirements of this rule.
 - (2) Emissions compliance test reports.
 - (3) Continuous emissions monitoring system performance evaluation reports.
 - (A) Records required by this rule shall be submitted to the department or the U.S. EPA within thirty (30) days of receipt of a written request.
 - (B) A source subject to this rule shall notify the department at least thirty (30) days prior to the addition or modification of a facility that may result in a potential increase in NO_x emissions.
 - (C) The owner or operator of an affected source may comply with the reporting requirement of this rule by submitting to the department a substitute report. A substitute report is a report that satisfies an applicable state or federal reporting requirement and contains the information required to be submitted by 326 IAC 10-1-7.
- (e) Pursuant to 326 IAC 3-5-7, a separate quarterly report of opacity exceedances, SO₂ exceedances, and NO_x exceedances shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (f) Pursuant to 326 IAC 3-5-5(e), a quarterly report of the continuous emissions monitoring system performance audits shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5

EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

A coal transfer system for Boilers No. 2 and No. 4, with a nominal throughput of 800 tons of coal per hour, construction commenced prior to 1974, with equipment including barge unloading, truck unloading, a coal storage pile, conveying, coal bunkers and scale equipped with dust collectors (enclosures) for all units.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the coal storage and handling drop points, coal bunkers and scale exhausts, and associated dust collector vents shall not exceed 75 pounds per hour when operating at a process weight of 800 tons per hour. This is determined by the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour.}$$

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed 75 pounds per hour, provided the concentration of particulate matter in the discharge gases to the atmosphere is less than 0.10 pounds per one thousand (1,000) pounds of gases.

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the emission control devices associated with the facilities in this section. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.5.3 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the watering system for the coal storage pile shall be in operation and control emissions as needed when coal is being unloaded, conveyed, or stored except when the ambient temperature is at or below the freezing point.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.5.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the coal storage and handling drop points, coal bunkers and scale exhausts, and associated dust collector vents shall be performed once per week during normal daylight operations. A trained employee shall record whether any emissions are observed.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) If abnormal emissions are observed at any baghouse exhaust, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust emissions) or an applicable opacity limit is not a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.5 Record Keeping Requirements

- (a) To document the compliance status with Condition D.5.4, the Permittee shall maintain records of the visible emission notations of the coal storage and handling drop points, coal bunkers and scale exhausts, and associated dust collector vents and all response steps taken and the outcome for each. The Permittee shall include in its weekly record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e., the process did not operate that week).
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.6

EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

Dry fly ash handling and disposal system, including the following:

- (1) One (1) pneumatic fly ash transfer system from boiler baghouses to a fly ash storage silo, with a maximum throughput of 17 tons of fly ash per hour, equipped with two (2) separators/mechanical exhausters and one (1) back-up to separate the fly ash, with PM emissions from the storage silo controlled by the separators and a bin vent baghouse.
- (2) Loading of fly ash into trucks for transport the landfill and unloading of fly ash from trucks at the landfill.
- (3) Wind Erosion of fly ash from the landfill.
- (4) Fugitive dust from equipment traffic at the landfill.
- (5) Fugitive dust from trucks traveling between the storage silo and the landfill.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 PSD Minor Limits and Nonattainment NSR [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to Significant Permit Modification No. 043-22712-00004, issued on April 9, 2007, the following limits are required in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable. The Permittee shall comply with the following for the fly ash handling and disposal operation:

- (a) PM/PM₁₀ emissions from each separator shall not exceed 0.91 pounds per hour.
- (b) The Permittee shall operate only two (2) separators at one time.
- (c) PM/PM₁₀ emissions from the silo bin vent filter shall not exceed 0.41 pounds per hour.

Compliance with these limits in conjunction with the potential fugitive emissions from truck loading and unloading, vehicular traffic, the activated carbon silos, wind erosion of fly ash from the landfill, and dust from equipment traffic at the landfill will ensure that the PM emissions are less than twenty-five (25) tons/yr and PM₁₀ emissions are less than 15 tons/yr, and renders the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable.

D.6.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the pneumatic fly ash transfer system shall not exceed 27.5 pounds per hour when operating at a process weight rate of 17.0 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.6.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) In order to determine compliance with Condition D.6.1, the Permittee shall perform PM and PM₁₀ testing by January 2015 on one (1) of the three (3) separators on the ash silo and on the silo bin vent filter utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.
- (b) In order to determine compliance with Condition D.6.2, the Permittee shall perform PM testing by January 2015 on pneumatic fly ash transfer system utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.6.5 Particulate Control

In order to comply with the particulate matter limitations in Conditions D.6.1 and D.6.2, the baghouse filter separators and bin vent baghouse for particulate control shall be in operation and control emissions from the pneumatic fly ash transfer system at all times that the associated process is in operation and transferring flyash.

Compliance Monitoring Requirements

D.6.6 Visible Emissions Notations

- (a) Visible emission notations of the truck loading and unloading stations shall be performed at least once per day during normal daylight operations when ash is being loaded and unloaded. A trained employee shall record whether any emissions are normal or abnormal.
- (b) Visible emission notations of the pneumatic fly ash conveyance shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (c) Visible emission notations of the separators exhaust and the ash silo bin vent baghouse exhaust shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (d) Visible emission notations of the dry spout shall be performed at least once per day during normal daylight operations when unloading ash through the dry spout. A trained employee shall record whether emissions are normal or abnormal.
- (e) Visible emissions of the landfill area shall be performed at least once per day during normal daylight hours. A trained employee shall record whether emissions are normal or abnormal.
- (f) If visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.
- (g) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

- (h) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (i) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (j) If abnormal emissions are observed at any baghouse exhaust or the truck loading and unloading points, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Observations of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.6.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse filter separators at least once per day when the pneumatic fly ash system is in operation and transferring ash. The hourly average pressure drop, as recorded by the plant's data management system, shall be considered a valid hour if there are at least sixteen (16) consecutive minutes in the hour when the unit is in operation and transferring ash. When for any valid hourly average reading, the pressure drop across the baghouse filter separators is outside the normal range of 1.25 to 6 inches of water column for the separators or a range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedance contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with the Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated in accordance with the manufacturer's specifications or replaced at least once every six (6) months. The specifications shall be available on site with the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.8 Record Keeping Requirements

- (a) To document the compliance status with D.6.6, the Permittee shall maintain records of all the daily visible emissions notations of the truck loading and unloading stations, pneumatic fly ash conveyance, separators exhaust and the ash silo bin vent baghouse exhaust, dry spout, and landfill area. The Permittee shall include in the daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e., the process did not operate that day).
- (b) To document the compliance status with D.6.7, the Permittee shall maintain a daily record of the pressure drop across the baghouse filter separators during normal operation. The Permittee shall include in its daily record when a valid hourly average pressure drop reading is not taken for the day and the reason for not collecting a valid hourly average pressure drop reading for the day (e.g., the process did not operate that day). If for any reason a valid hourly average pressure drop is not collected for the day the Permittee shall keep a record of the manual pressure drop reading for the day.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emission Units Description [326 IAC 2-7-5(15)]

Insignificant Activities [326 IAC 2-7-1(21)]:

- (1) Multiple ash ponds, with a combined surface area of 57 acres [326 IAC 6-4].
- (2) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Organic Solvent Degreasing Operations: Cold Cleaner Operation [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.7.2 Organic Solvent Degreasing Operations: Cold Cleaner Degreaser Operation and Control [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for a cold cleaner degreaser facility, the Permittee shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control) for a cold cleaning facility, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.7.3 Fugitive Dust Emission Limitations [326 IAC 6-4-2]

Pursuant to 326 IAC 6-4-2:

- (a) Any ash storage pond area generating fugitive dust shall be in violation of this rule (326 IAC 6-4) if any of the following criteria are violated:
 - (1) A source or combination of sources which cause to exist fugitive dust concentrations greater than sixty-seven percent (67%) in excess of ambient upwind concentrations as determined by the following formula:
$$P = \frac{100(R) - U}{U}$$
Where
P = Percentage increase
R = Number of particles of fugitive dust measured at downward receptor site
U = Number of particles of fugitive dust measured at upwind or background site
 - (2) The fugitive dust is comprised of fifty percent (50%) or more respirable dust, then the percent increase of dust concentration in subdivision (1) of this section shall be modified as follows:
$$P_R = (1.5 \pm N) P$$
Where
N = Fraction of fugitive dust that is respirable dust;
P_R = allowable percentage increase in dust concentration above background; and
P = no value greater than sixty-seven percent (67%).
 - (3) The ground level ambient air concentrations exceed fifty (50) micrograms per cubic meter

above background concentrations for a sixty (60) minute period.

- (4) If fugitive dust is visible crossing the boundary or property line of a source. This subdivision may be refuted by factual data expressed in subdivisions (1), (2) or (3) of this section. 326 IAC 6-4-2(4) is not federally enforceable.
- (b) Pursuant to 326 IAC 6-4-6(6) (Exceptions), fugitive dust from a source caused by adverse meteorological conditions will be considered an exception to this rule (326 IAC 6-4) and therefore not in violation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.7.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the ash storage pond area(s) shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) If visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Adverse weather conditions shall not relieve the Permittee of responsibility to take reasonable response steps to mitigate fugitive dust formation and transport. Failure to take response steps in shall be considered a deviation from this permit.
- (c) If abnormal emissions are observed from the ash storage pond area(s), the Permittee shall take reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions), 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps in shall be considered a deviation from this permit.
- (d) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.
- (e) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (f) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.7.5 Record Keeping Requirements

- (a) To document the compliance status with Section C - Opacity, Section C -Fugitive Dust Emissions and Conditions D.7.3 and D.7.4, the Permittee shall maintain records of the visible emission notations of the fly ash storage pond area(s). The Permittee shall include in the daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e., the plant was closed that day).
- (b) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]

- (g) Two (2) sorbent storage silos, identified as SS-01 and SS-02, approved in 2010 for construction, each equipped with a baghouse to control particulate matter emissions during loading. Once the dry sorbent injection system is constructed and operational sorbent shall be delivered by enclosed tanker trucks. The sorbent is pneumatically transferred from the truck to the silo through a totally enclosed system. The maximum throughput capacity is 24 tons per hour based on unloading one tanker truck per hour. The sorbent will be pulled from the silo through an enclosed system and injected into the boiler upstream of the baghouse. The injection system equipped with mills to reduce the size of sorbent material prior to injection into the flue gas. The totally enclosed mills are to be operated on an as needed basis.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 PSD Minor Limit and Nonattainment NSR [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to Significant Source Modification No. 043-29143-00004, the Permittee shall comply with the following:

- (a) PM emissions from the sorbent storage silos shall not exceed 3.4 pounds per hour.
- (b) PM_{2.5} emissions from the sorbent storage silos shall not exceed 1.8 pounds per hour.

Compliance with these limits in conjunction with the potential fugitive emissions from vehicular traffic, will ensure that the PM emissions from the sorbent storage silos system are less than 25 tons/yr and PM_{2.5} emissions are less than 10 tons/yr, and render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the 2010 modification.

D.8.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from the dry sorbent silo shall not exceed 29.4 pounds per hour when operating at a process weight rate of 24 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

Where:

E = rate of emission in pounds per hour and

P = process weight rate in tons per hour

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.8.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after the initial startup of the sorbent silo baghouse, in order to determine compliance with Condition D.8.1, the Permittee shall perform PM testing on one (1) of the two (2) sorbent silo baghouses utilizing methods as approved by the Commissioner at least once every five (5) years from

the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C- Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

- (b) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after the initial startup of the sorbent silo baghouses, the Permittee shall perform PM₁₀ testing on one (1) of the two (2) sorbent silo baghouses utilizing methods as approved by the Commissioner once to demonstrate compliance with the PM₁₀ limit. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C- Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (c) In order to determine compliance with Condition D.8.1, the Permittee shall perform PM_{2.5} testing of one (1) of the two (2) sorbent silo baghouses within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, whichever is later utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.8.5 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute, rule, or in this permit, the baghouse for particulate control shall be in operation and control emissions at all times that trucks are unloading into the dry sorbent injection silo.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.8.6 Visible Emissions Notations

- (a) Visible emission notations of a sorbent silo baghouse stack exhaust shall be performed once per week during normal daylight operations when loading. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the performance testing required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.8.7 Parametric Monitoring

The Permittee shall record the pressure drop across each baghouse used in conjunction with the sorbent silo, at least once per day when a sorbent silo is being loaded by truck and exhausting to the atmosphere. When for any one reading, the pressure drop across a baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. Section C- Response to Excursions and Exceedances contains the Permittee's obligation with regard to the performance testing required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered deviation from the permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated as specified by the manufacturer or replaced at least once every six (6) months.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.8 Record Keeping Requirements

- (a) To document the compliance status with Condition D.8.6 - Visible Emission Notation, the Permittee shall maintain weekly records of the visible emission notations of the sorbent silo exhaust stacks when loading. The Permittee shall include in its weekly record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (e.g. the process did not operate that day).
- (b) To document the compliance status with Condition D.8.7 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the sorbent silo. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (g) Two (2) sorbent storage silos, identified as SS-01 and SS-02, approved in 2010 for construction, each equipped with a baghouse to control particulate matter emissions during loading. Once the dry sorbent injection system is constructed and operational sorbent shall be delivered by enclosed tanker trucks. The sorbent is pneumatically transferred from the truck to the silo through a totally enclosed system. The maximum throughput capacity is 24 tons per hour based on unloading one tanker truck per hour. The sorbent will be pulled from the silo through an enclosed system and injected into the boiler upstream of the baghouse. The injection system equipped with mills to reduce the size of sorbent material prior to injection into the flue gas. The totally enclosed mills are to be operated on an as needed basis.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards [326 IAC 12-1] [40 CFR 60]

E.1.1 General Provision Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the sorbent storage silo, except as otherwise specified in 40 CFR Part 60, Subpart OOO.
- (b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports 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

E.1.2 Standard of Performance for Nonmetallic Mineral Processing Plants Requirments [326 IAC 12-1] [40 CFR 60, Subpart OOO]

Pursuant to 40 CFR 60 Subpart OOO, the Permittee shall comply with the applicable provisions of Standard of Performance for Nonmetallic Mineral Processing Plants which are incorporated by reference as 326 IAC 12 as specified as follows:

- (1) 40 CFR 60.670
- (2) 40 CFR 60.671
- (3) 40 CFR 60.672
- (4) 40 CFR 60.673
- (5) 40 CFR 60.674
- (6) 40 CFR 60.675
- (7) 40 CFR 60.676
- (8) Table 1 to Subpart OOO
- (9) Table 2 to Subpart OOO
- (10) Table 3 to Subpart OOO

SECTION E.2 TITLE IV ACID RAIN PROGRAM CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]

- (a) **Reserved**
- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. SO₂ emissions will be controlled by dry sorbent injection system scheduled to be in service by January 1, 2011. Sorbent will be injected upstream of the baghouse. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 2 in 1992. The ESP on Boiler No.2 was replaced with a new baghouse in December 2007.–
- (c) **Reserved**
- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. SO₂ emissions will be controlled by dry sorbent injection system scheduled to be in service by January 1, 2011. Sorbent will be injected upstream of the baghouse. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 4 in 1994. The ESP on Boiler No.4 was replaced with a new baghouse in April 2008.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Acid Rain Program

E.2.1 Acid Rain Permit [326 IAC 2-7-5(1)(C)] [326 IAC 21] [40 CFR 72 through 40 CFR 78]

Pursuant to 326 IAC 21 (Acid Deposition Control), the Permittee shall comply with all provisions of the Acid Rain permit issued for this source, and any other applicable requirements contained in 40 CFR 72 through 40 CFR 78. The Acid Rain permit for this source is attached to this permit as Appendix A, and is incorporated by reference.

E.2.2 Title IV Emissions Allowances [326 IAC 2-7-5(4)] [326 IAC 21]

Emissions exceeding any allowances that the Permittee lawfully holds under the Title IV Acid Rain Program of the Clean Air Act are prohibited, subject to the following limitations:

- (a) No revision of this permit shall be required for increases in emissions that are authorized by allowances acquired under the Title IV Acid Rain Program, provided that such increases do not require a permit revision under any other applicable requirement.
- (b) No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not use allowances as a defense to noncompliance with any other applicable requirement.
- (c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act.

SECTION F

RESERVED

SECTION G Clean Air Interstate Rule (CAIR) Nitrogen Oxides Annual, Sulfur Dioxide, and Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a), and 326 IAC 24-3-1(a)

ORIS Code: 1008

CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a) and 326 IAC 24-3-1(a)

(a) **Reserved**

(b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack A. Stack A has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 2 in 1992. The ESP on Boiler No.2 was replaced with a new baghouse in December 2007.

(c) **Reserved**

(d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 1390 million Btu per hour (MMBtu/hr). Particulate matter emissions are controlled by a baghouse. On or after January 1, 2011, SO₂ emissions will be controlled by a dry sorbent injection system, approved in 2010 for construction, where sorbent is injected upstream of the baghouse. Emissions are exhausted through Stack B. Stack B has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM). Low-NO_x burners were installed on Boiler No. 4 in 1994. The ESP on Boiler No.4 was replaced with a new baghouse in April 2008.

All coal burned in Boilers No. 2 and 4, including coal treated with any additive, shall meet the ASTM definition of coal. Any boiler or condenser tube chemical cleaning waste liquids fired in the boiler shall only contain the cleaning solution and two full volume boiler rinses.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

G.1 Automatic Incorporation of Definitions [326 IAC 24-1-7(e)] [326 IAC 24-2-7(e)] [326 IAC 24-3-7(e)] [40 CFR 97.123(b)] [40 CFR 97.223(b)] [40 CFR 97.323(b)]

This CAIR permit is deemed to incorporate automatically the definitions of terms under 326 IAC 24-1-2, 326 IAC 24-2-2, and 326 IAC 24-3-2.

G.2 Standard Permit Requirements [326 IAC 24-1-4(a)] [326 IAC 24-2-4(a)] [326 IAC 24-3-4(a)] [40 CFR 97.106(a)] [40 CFR 97.206(a)] [40 CFR 97.306(a)]

(a) The owners and operators of each CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source and CAIR NO_x units, CAIR SO₂ units, and CAIR NO_x ozone season units shall operate each source and unit in compliance with this CAIR permit.

(b) The CAIR NO_x units, CAIR SO₂ units, and CAIR NO_x ozone season units subject to this CAIR permit are, Boiler No. 2, and Boiler No. 4.

G.3 Monitoring, Reporting, and Record Keeping Requirements [326 IAC 24-1-4(b)][326 IAC 24-2-4(b)][326 IAC 24-3-4(b)] [40 CFR 97.106(b)] [40 CFR 97.206(b)][40 CFR 97.306(b)]

(a) The owners and operators, and the CAIR designated representative, of each CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source and CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit at the source shall comply with the applicable monitoring, reporting, and record

keeping requirements of 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11.

- (b) The emissions measurements recorded and reported in accordance with 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11 shall be used to determine compliance by each CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source with the CAIR NO_x emissions limitation under 326 IAC 24-1-4(c), CAIR SO₂ emissions limitation under 326 IAC 24-2-4(c), and CAIR NO_x ozone season emissions limitation under 326 IAC 24-3-4(c) and Condition G.4.1, Nitrogen Oxides Emission Requirements, Condition G.4.2, Sulfur Dioxide Emission Requirements, and Condition G.4.3, Nitrogen Oxides Ozone Season Emission Requirements.

G.4.1 Nitrogen Oxides Emission Requirements [326 IAC 24-1-4(c)] [40 CFR 97.106(c)]

- (a) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_x source and each CAIR NO_x unit at the source shall hold, in the source's compliance account, CAIR NO_x allowances available for compliance deductions for the control period under 326 IAC 24-1-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x units at the source, as determined in accordance with 326 IAC 24-1-11.
- (b) A CAIR NO_x unit shall be subject to the requirements under 326 IAC 24-1-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-1-4(c)(2), and for each control period thereafter.
- (c) A CAIR NO_x allowance shall not be deducted for compliance with the requirements under 326 IAC 24-1-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO_x allowance was allocated.
- (d) CAIR NO_x allowances shall be held in, deducted from, or transferred into or among CAIR NO_x allowance tracking system accounts in accordance with 326 IAC 24-1-9, 326 IAC 24-1-10, and 326 IAC 24-1-12.
- (e) A CAIR NO_x allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO_x annual trading program. No provision of the CAIR NO_x annual trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-1-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.
- (f) A CAIR NO_x allowance does not constitute a property right.
- (g) Upon recordation by the U.S. EPA under 326 IAC 24-1-8, 326 IAC 24-1-9, 326 IAC 24-1-10, or 326 IAC 24-1-12, every allocation, transfer, or deduction of a CAIR NO_x allowance to or from a CAIR NO_x source's compliance account is incorporated automatically in this CAIR permit.

G.4.2 Sulfur Dioxide Emission Requirements [326 IAC 24-2-4(c)] [40 CFR 97.206(c)]

- (a) As of the allowance transfer deadline for a control period, the owners and operators of the CAIR SO₂ source and each CAIR SO₂ unit at the source shall hold, in the source's compliance account, a tonnage equivalent of CAIR SO₂ allowances available for compliance deductions for the control period under 326 IAC 24-2-8(j) and 326 IAC 24-2-8(k) not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO₂ units at the source, as determined in accordance with 326 IAC 24-2-10.
- (b) A CAIR SO₂ unit shall be subject to the requirements under 326 IAC 24-1-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-1-4(c)(2), and for each control period thereafter.
- (c) A CAIR SO₂ allowance shall not be deducted for compliance with the requirements under 326 IAC 24-2-4(c)(1), for a control period in a calendar year before the year for which the CAIR SO₂ allowance was allocated.
- (d) CAIR SO₂ allowances shall be held in, deducted from, or transferred into or among CAIR SO₂

allowance tracking system accounts in accordance with 326 IAC 24-2-8, 326 IAC 24-2-9, and 326 IAC 24-2-11.

- (e) A CAIR SO₂ allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO₂ trading program. No provision of the CAIR SO₂ trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-2-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.
- (f) A CAIR SO₂ allowance does not constitute a property right.
- (g) Upon recordation by the U.S. EPA under 326 IAC 24-2-8, 326 IAC 24-2-9, or 326 IAC 24-2-11, every allocation, transfer or deduction of a CAIR SO₂ allowance to or from a CAIR SO₂ source's compliance account is incorporated automatically in this CAIR permit.

G.4.3 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]

- (a) As of the allowance transfer deadline for a control period, the owners and operators of the each CAIR NO_x ozone season source and each CAIR NO_x ozone season unit at the source shall hold, in the source's compliance account, CAIR NO_x ozone season allowances available for compliance deductions for the control period under 326 IAC 24-3-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x ozone season units at the source, as determined in accordance with 326 IAC 24-3-11.
- (b) A CAIR NO_x ozone season unit shall be subject to the requirements under 326 IAC 24-1-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-1-4(c)(2), and for each control period thereafter.
- (c) A CAIR NO_x ozone season allowance shall not be deducted for compliance with the requirements under 326 IAC 24-3-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO_x ozone season allowance was allocated.
- (d) CAIR NO_x ozone season allowances shall be held in, deducted from, or transferred into or among CAIR NO_x ozone season allowance tracking system accounts in accordance with 326 IAC 24-3-9, 326 IAC 24-3-10, and 326 IAC 24-3-12.
- (e) A CAIR NO_x for a control period allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO_x ozone season trading program. No provision of the CAIR NO_x ozone season trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-3-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.
- (f) A CAIR NO_x for a control period allowance does not constitute a property right.
- (g) Upon recordation by the U.S. EPA under 326 IAC 24-3-8, 326 IAC 24-3-9, 326 IAC 24-3-10, or 326 IAC 24-3-12, every allocation, transfer, or deduction of a CAIR NO_x ozone season allowance to or from a CAIR NO_x ozone season source's compliance account is incorporated automatically in this CAIR permit.

G.5 Excess Emissions Requirements [326 IAC 24-1-4(d)] [326 IAC 24-2-4(d)] [326 IAC 24-3-4(d)] [40 CFR 97.106(d)] [40 CFR 97.206(d)] [40 CFR 97.306(d)]

- (a) The owners and operators of a CAIR NO_x source and each CAIR NO_x unit that emits nitrogen oxides during any control period in excess of the CAIR NO_x emissions limitation shall do the following:
 - (1) Surrender the CAIR NO_x allowances required for deduction under 326 IAC 24-1-9(j)(4).
 - (2) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a

separate violation of 326 IAC 24-1-4, the Clean Air Act (CAA), and applicable state law.

- (b) The owners and operators of a CAIR SO₂ source and each CAIR SO₂ unit that emits sulfur dioxide during any control period in excess of the CAIR SO₂ emissions limitation shall do the following:
- (1) Surrender the CAIR SO₂ allowances required for deduction under 326 IAC 24-2-8(k)(4).
 - (2) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-2-4, the Clean Air Act (CAA), and applicable state law.

- (c) The owners and operators of a CAIR NO_x ozone season source and each CAIR NO_x ozone season unit that emits nitrogen oxides during any control period in excess of the CAIR NO_x ozone season emissions limitation shall do the following:
- (1) Surrender the CAIR NO_x ozone season allowances required for deduction under 326 IAC 24-3-9(j)(4).
 - (2) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-3-4, the Clean Air Act (CAA), and applicable state law.

G.6 Record Keeping Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)]
[326 IAC 2-7-5(3)] [40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]

Unless otherwise provided, the owners and operators of the CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit at the source shall keep on site at the source or at a central location within Indiana for those owners or operators with unattended sources, each of the following documents for a period of five (5) years from the date the document was created:

- (a) The certificate of representation under 326 IAC 24-1-6(h), 326 IAC 24-2-6(h), and 326 IAC 24-3-6(h) for the CAIR designated representative for the source and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation. The certificate and documents shall be retained on site at the source or at a central location within Indiana for those owners or operators with unattended sources beyond such five (5) year period until such documents are superseded because of the submission of a new account certificate of representation under 326 IAC 24-1-6(h), 326 IAC 24-2-6(h), and 326 IAC 24-3-6(h) changing the CAIR designated representative.
- (b) All emissions monitoring information, in accordance with 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11, provided that to the extent that 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11 provides for a three (3) year period for record keeping, the three (3) year period shall apply.
- (c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program.
- (d) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program or to demonstrate compliance with the requirements of the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program.

This period may be extended for cause, at any time before the end of five (5) years, in writing by IDEM, OAQ

or the U.S. EPA. Unless otherwise provided, all records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

G.7 Reporting Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)]
[40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]

- (a) The CAIR designated representative of the CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit at the source shall submit the reports required under the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program, including those under 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11.
- (b) Pursuant to 326 IAC 24-1-4(e), 326 IAC 24-2-4(e), and 326 IAC 24-3-4(e) and 326 IAC 24-1-6(e)(1), 326 IAC 24-2-6(e)(1), and 326 IAC 24-3-6(e)(1), each submission under the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program shall include the following certification statement by the CAIR designated representative: "I am authorized to make this submission on behalf of the owners and operators of the source or 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."

- (c) Where 326 IAC 24-1, 326 IAC 24-2, and 326 IAC 24-3 requires a submission to IDEM, OAQ, the information shall be submitted 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

- (d) Where 326 IAC 24-1, 326 IAC 24-2, and 326 IAC 24-3 requires a submission to U.S. EPA, the information shall be submitted to:

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

G.8 Liability [326 IAC 24-1-4(f)] [326 IAC 24-2-4(f)] [326 IAC 24-3-4(f)] [40 CFR 97.106(f)]
[40 CFR 97.206(f)] [40 CFR 97.306(f)]

The owners and operators of each CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit shall be liable as follows:

- (a) Each CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit shall meet the requirements of the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program, respectively.
- (b) Any provision of the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program that applies to a CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source or the CAIR designated representative of a CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source shall also apply to the owners and operators of such source and of the CAIR NO_x units, CAIR SO₂ units, and CAIR NO_x ozone season units at the source.
- (c) Any provision of the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x

ozone season trading program that applies to a CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit or the CAIR designated representative of a CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit shall also apply to the owners and operators of such units.

G.9 Effect on Other Authorities [326 IAC 24-1-4(g)] [326 IAC 24-2-4(g)] [326 IAC 24-3-4(g)]
[40 CFR 97.106(g)] [40 CFR 97.206(g)] [40 CFR 97.306(g)]

No provision of the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program, a CAIR permit application, a CAIR permit, or an exemption under 326 IAC 24-1-3, 326 IAC 24-2-3, and 326 IAC 24-3-3 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source or CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act (CAA).

G.10 CAIR Designated Representative and Alternate CAIR Designated Representative [326 IAC 24-1-6]
[326 IAC 24-2-6] [326 IAC 24-3-6] [40 CFR 97, Subpart BB] [40 CFR 97, Subpart BBB] [40 CFR 97, Subpart BBBB]

Pursuant to 326 IAC 24-1-6, 326 IAC 24-2-6, and 326 IAC 24-3-6:

- (a) Except as specified in 326 IAC 24-1-6(f)(3), 326 IAC 24-2-6(f)(3), and 326 IAC 24-3-6(f)(3), each CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source, including all CAIR NO_x units, CAIR SO₂ units, and CAIR NO_x ozone season units at the source, shall have one (1) and only one (1) CAIR designated representative, with regard to all matters under the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program concerning the source or any CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit at the source.
- (b) The provisions of 326 IAC 24-1-6(f), 326 IAC 24-2-6(f), and 326 IAC 24-3-6(f) shall apply where the owners or operators of a CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source choose to designate an alternate CAIR designated representative.

Except as specified in 326 IAC 24-1-6(f)(3), 326 IAC 24-2-6(f)(3), and 326 IAC 24-3-6(f)(3), whenever the term "CAIR designated representative" is used, the term shall be construed to include the CAIR designated representative or any alternate CAIR designated representative.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Duke Energy Indiana, Inc. - Gallagher Generating Station
Source Address: 30 Jackson Street, New Albany, Indiana 47150
Part 70 Permit No.: T043-27078-00004

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Telephone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Duke Energy Indiana, Inc. - Gallagher Generating Station
Source Address: 30 Jackson Street, New Albany, Indiana 47150
Part 70 Permit No.: T043-27078-00004

This form consists of 2 pages

Page 1 of 2

<input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)
<input type="checkbox"/> The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
<input type="checkbox"/> The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:

Title / Position:

Date:

Phone:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH**

**PART 70 OPERATING PERMIT
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Duke Energy Indiana, Inc. - Gallagher Generating Station
 Source Address: 30 Jackson Street, New Albany, Indiana 47150
 Part 70 Permit No.: T043-27078-00004

Months: _____ to _____ Year: _____

This report shall be submitted on a quarterly basis. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By:

Title/Position:

Date:

Phone:

**Attachment A
to a Part 70 Operating Permit**

New Source Performance Standards (NSPS)

**40 CFR 60, Subpart OOO—Standards of Performance for Nonmetallic
Mineral Processing Plants**

Source Name:	Duke Energy Indiana - Gallagher Generating Station
Source Location:	30 Jackson Street, New Albany, IN 47150
County:	Floyd
SIC Code:	4911
Operation Permit No.:	T043-27078-00004
Operation Permit Issuance Date:	September 28, 2010
Permit Reviewer:	Josiah Balogun

***Subpart OOO—Standards of Performance for Nonmetallic Mineral
Processing Plants***

Source: 74 FR 19309, Apr. 28, 2009, unless otherwise noted.

§ 60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in §60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility

is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

§ 60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crush or Crushing means to reduce the size of nonmetallic mineral material by means of physical impaction of the crusher or grinding mill upon the material.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

(10) Boron, including Borax, Kernite, and Colemanite.

(11) Barite.

(12) Fluorospars.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

(18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in §60.670 (b) and (c).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Saturated material means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for purposes of this definition.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

Seasonal shut down means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

Wet material processing operation(s) means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

Wet mining operation means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

Wet screening operation means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

§ 60.672 Standard for particulate matter (PM).

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 pascals ± 1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (e.g. , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

- (ii) Sealing off defective bags or filter media;
- (iii) Replacing defective bags or filter media or otherwise repairing the control device;
- (iv) Sealing off a defective fabric filter compartment;
- (v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or
- (vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

§ 60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in §60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A-3 of this part or Method 17 of Appendix A-6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A-4 of this part and the procedures in §60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in §60.672(b) or §60.672(e)(1), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A-4), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A-4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) or §60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in §60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and §60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A-7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in §60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and §60.11 to show compliance with the opacity limit in §60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A-1 of this part [*i.e.*, velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of Appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (*e.g.*, from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \quad (\text{Eq. 1})$$

Where:

V_e = average building vent velocity (feet per minute);

Q_f = average fan flow rate (cubic feet per minute); and

A_e = area of building vent and measurement location (square feet).

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A–4) testing, the owner or operator may reduce the 30-day advance notification of performance test in §60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in §60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to §60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in §60.672(b) and the emission test requirements of §60.11.

(h) The subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to §60.4(b).

Table 1 to Subpart 000—Exceptions to Applicability of Subpart A to Subpart 000

Table 1 to Subpart 000—Exceptions to Applicability of Subpart A to Subpart 000

Subpart A reference	Applies to subpart 000	Explanation
60.4, Address	Yes	Except in §60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§60.675(c)), Method 9 (40 CFR part 60, Appendix A–4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

Table 2 to Subpart 000—Stack Emission Limits for Affected Facilities With Capture Systems

Table 2 to Subpart 000—Stack Emission Limits for Affected Facilities With Capture Systems

For * * *	The owner or operator must	And the owner or operator must	The owner or operator must demonstrate
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	meet a PM limit of * * *	meet an opacity limit of * * *	compliance with these limits by conducting * * *
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) ^a	7 percent for dry control devices ^b	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e).
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf) ^a	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e); and
			Monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b).

^aExceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

^bThe stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

Table 3 to Subpart 000—Fugitive Emission Limits

Table 3 to Subpart 000—Fugitive Emission Limits

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors,	The owner or operator must meet the following fugitive emissions limit for crushers at	The owner or operator must demonstrate compliance with these limits by conducting * * *

	bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671) * * *	which a capture system is not used * * *	
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart; and Periodic inspections of water sprays according to §60.674(b) and §60.676(b); and
			A repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

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

Attachment B

Source Name:	Duke Energy Indiana - Gallagher Generating Station
Source Location:	30 Jackson Street, New Albany, IN 47150
County:	Floyd
SIC Code:	4911
Operation Permit No.:	T 043-27078-00004
Operation Permit Issuance Date:	September 28, 2010
Permit Reviewer:	Josiah Balogun

The following definitions shall apply to the Consent Decree requirements in sections D.1, D.2, D.3, D.4, Attachment C (Acid Rain) and Attachment D (CAIR).

1. "30-Day Rolling Average Emission Rate" for SO₂ shall be expressed in lb/MMBtu calculated using the following procedure: first, develop hourly average lb/MMBtu values for each hour of the Operating Day and the previous twenty nine (29) Operating Days in accordance with Attachment C of this Permit, and second, average the hourly averages for the Operating Day and the previous twenty nine (29) Operating Days. A new 30-Day Rolling Average Emission Rate shall be calculated for each new Operating Day. Each 30-Day Rolling Average Emission Rate shall include all emissions of SO₂ that occur during all periods within each Operating Day including startup, shutdown, and Malfunction, provided, however, that reported emissions associated with a Malfunction shall be excluded for purposes of determining compliance with this Permit if the Malfunction is determined to be a Force Majeure Event pursuant to Section XIII (Force Majeure) of the Decree. The Parties expressly recognize that compliance with a 30-Day Rolling Average Emission Rate shall commence immediately upon the date specified, and that compliance as of such specified date (e.g., January 30) shall be determined based on data from that Operating Day and the 29 prior Operating Days (e.g., January 1-29).
2. "Annual SO₂ Tonnage Limitation" for Gallagher Unit 1 and Unit 3 means the limitations as specified in this Consent Decree on the total number of tons of SO₂ emitted from Gallagher Unit 1 and Unit 3, individually, during all periods of operation including, without limitation, all SO₂ emitted during periods of startup, shutdown, and Malfunction, during the relevant calendar year (i.e., January 1 through December 31). Compliance with the Annual SO₂ Tonnage Limitation for Gallagher Unit 1 and for Gallagher Unit 3 shall be determined for each new calendar year.
3. "Continuously Operate" or "Continuous Operation" means that when DSI is used at Gallagher Unit 2 or Unit 4, it shall be used at all times such Unit is in operation, consistent with the technological limitations, manufacturers' specifications, and good engineering and maintenance practices for such equipment and the Unit. Until the thirtieth (30th) Operating Day following January 1, 2011, Duke will be working to optimize performance of the DSI and to identify technological limitations and good engineering and maintenance practices for the DSI at these Units.
4. "Day" means calendar day, unless otherwise specified.
5. "Dry Sorbent Injection" or "DSI" means an SO₂ control system consisting of the injection of trona or sodium bicarbonate (or a similar material of at least equal effectiveness in removing SO₂) in the gas stream upstream of the particulate control device to react with the acid gases and reduce the outlet SO₂ Emission Rate.
6. "Operating Day" means any Day on which a Unit fires coal.

7. "Repower" or "Repowered" means, solely for purposes of this Consent Decree, the permanent decommissioning of devices, systems, equipment, and ancillary or supporting systems (collectively, "Equipment") for Gallagher Unit 1 and Unit 3 that are not shared with Gallagher Unit 2 and Unit 4, respectively, such that Gallagher Unit 1 and Unit 3 cannot be fired with coal, and the installation of all Equipment needed to fire Gallagher Unit 1 and Unit 3 with Natural Gas, including installation of the following combustion controls to reduce emissions of nitrogen oxides (NOx): low-NOx natural gas burners, an over-fire air system, and flue gas recirculation. Nothing herein requires the decommissioning of any Equipment that Gallagher Unit 1 and Unit 2 share and/or that Gallagher Unit 3 and Unit 4 share that are necessary to operate Gallagher Unit 2 and/or Unit 4. Nothing herein shall prevent Duke from (a) reusing any Equipment from Gallagher Unit 1 and/or Unit 3 at any other existing Unit or new emissions unit at the Gallagher Plant or another facility, provided that Duke applies for, and obtains, all required permits, if any, including, if applicable, an NSR Permit, or (b) selling any Equipment from Gallagher Unit 1 and/or Unit 3.
8. "Retire" means that Duke shall (a) permanently shutdown and cease firing Gallagher Unit 1 and Unit 3 with any fuel and permanently decommission Equipment for Gallagher Unit 1 and Unit 3 that is not shared with Gallagher Unit 2 and Unit 4, respectively, such that Gallagher Unit 1 and Unit 3 cannot be fired with any fuel of any kind, and (b) initiate all necessary steps to remove Gallagher Unit 1 and Unit 3 from Indiana's air emissions inventory and amend all applicable permits to reflect the permanent shutdown status of Gallagher Unit 1 and Unit 3. Nothing herein shall prevent Duke from (i) reusing any Equipment from Gallagher Unit 1 and/or Unit 3 at any other existing Unit or new emissions unit at the Gallagher Plant or at another facility, provided that Duke applies for, and obtains, all required permits, if any, including, if applicable, an NSR Permit, or (ii) selling any Equipment from Gallagher Unit 1 and/or Unit 3. For purposes of this Paragraph, if Duke seeks to commence operation of Retired Gallagher Unit 1 and/or Unit 3, such Retired Unit would be considered a "new emissions unit" at the Gallagher Plant.
9. "SO2 Allowance" means an authorization or credit to emit a specified amount of SO2 that is allocated or issued under an emissions trading or marketable permit program of any kind that has been established under the Clean Air Act or the Indiana SIP.
10. "Surrender" or "Surrender of Allowances" means, for purposes of SO2 Allowances, permanently surrendering allowances from the accounts administered by EPA and the State of Indiana, so that such allowances can never be used thereafter to meet any compliance requirement under the Clean Air Act, a State Implementation Plan, or the Consent Decree in *United States v. Cinergy Corp.*, Case No. 1:99-cv-01693-LJM-JMS, (Document No.1852) entered by the court on March 18, 2010.
11. "Tonnage Equivalent" means, for purposes of determining the requisite number of SO2 Allowances that must be surrendered pursuant to the Consent Decree issued on March 18, 2010, the number of SO2 Allowances required to be surrendered based on the year the emissions occur and the relationship between SO2 Allowances and tons emitted as specified in the definition of "CAIR SO2 allowance" in 40 C.F.R. § 96.202.



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 – Gallagher Generation Station
1000 E Main Street
Plainfield, IN 46168

DATE: February 13, 2012

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

SUBJECT: Final Decision
Administrative Amendment
043-31430-00004

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:
Bryan Walsh – Plant Manager
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

Mail Code 61-53

IDEM Staff	GHOTOPP 2/13/2012 Duke Energy Indiana, Inc. - Gallagher Generating Station 043-31430-00004 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. - Gallagher Generating S 1000 E Main St Plainfield IN 46168 (Source CAATS) via confirmed delivery										
2		Bryan Walsh Plant Mgr - Gallagher Gen Station Duke Energy Indiana, Inc. - Gallagher Generating S 30 Jackson St New Albany IN 47150 (RO CAATS)										
3		Mr. Robert Bottom Paddlewheel Alliance P.O. Box 35531 Louisville KY 40232-5531 (Affected Party)										
4		Floyd County Commissioners 311-319 West 1st St, Rm 214 New Albany IN 47150 (Local Official)										
5		New Albany City Council and Mayors Office City County Building #316 New Albany IN 47150 (Local Official)										
6		Floyd County Health Department 1917 Bono Rd New Albany IN 47150-4607 (Health Department)										
7		Mr. Arthur L. Williams Louisville Kentucky Air Pollution Control District 850 Barrett Avenue Louisville KY 40204-1745 (Affected State)										
8		Ms. Sue Green 1985 Kopley Road Georgetown IN 47122 (Affected Party)										
9		Ms. Michelle Stites 850 Barret Ave. Louisville KY 40204 (Affected Party)										
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