



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To: Interested Parties

Date: July 10, 2015

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

Source Name: Duke Energy Indiana – Edward sport Generating Station

Permit Level: Title V PSD SSM

Permit Number: 083-35647-00003

Source Location: Location street address, location city, IN

Type of Action Taken: Modification at an existing source

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>
To view the document, select Search option 3, then enter permit 35647.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

(continues on next page)

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

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

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

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

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



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Mr. Mack Sims
Duke Energy Indiana - Edwardsport Generating Station
1000 E Main Street
Plainfield, IN 46168

July 10, 2015

Re: 083-35647-00003
PSD/Significant Source Modification

Dear Mr. Sims:

Duke Energy Indiana - Edwardsport Generating Station was issued Part 70 Operating Permit Renewal No. T083-27138-00003 on April 3, 2013 for a stationary electric utility generating station located at 15424 East State Rd 358, Edwardsport, Indiana. An application to modify the source was received on March 27, 2015. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

- (a) Two (2) wet rod mills, identified as WRM, constructed in 2008 but permitted in 2015, rated at 2847 dscfm, exhausting through two vents, identified as WRMV1 and WRMV2.

The following construction conditions are applicable to the proposed modification:

1. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
2. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

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 Balgun of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Josiah Balgun or extension 4-*5257 or dial (317) 234-5257.

Sincerely,

Matthew Stuckey, Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

cc: File - Knox County
Knox County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
IDEM Southwest Regional Office



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PSD/Significant Source Modification to a Part 70 Source OFFICE OF AIR QUALITY

Duke Energy Indiana - Edwardsport Generating Station
15424 East State Road 358
Edwardsport, Indiana 47528

(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.

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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.


PSD/Significant Source Modification No.: 083-35647-00003	
Issued by:  Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality	Issuance Date: July 10, 2015

TABLE OF CONTENTS

A. SOURCE SUMMARY

- A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]
- A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]
- A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

B. GENERAL CONDITIONS

- B.1 Definitions [326 IAC 2-7-1]
- 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)]
- B.3 Term of Conditions [326 IAC 2-1.1-9.5]
- B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]
- B.5 Severability [326 IAC 2-7-5(5)]
- B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
- B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
- B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
- B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
- 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]
- B.11 Emergency Provisions [326 IAC 2-7-16]
- B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]
- B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]
- B.14 Termination of Right to Operate [326 IAC 2-7-10][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]
- B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]
- B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12] [40 CFR 72]
- B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]
[326 IAC 2-7-12(b)(2)]
- B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]
- B.20 Source Modification Requirement [326 IAC 2-7-10.5]
- 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]
- B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
- B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]
- B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

C. SOURCE OPERATION CONDITIONS

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]
- C.2 Opacity [326 IAC 5-1]
- C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
- C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

- C.5 Fugitive Dust Emissions [326 IAC 6-4]
- C.6 Stack Height [326 IAC 1-7]
- C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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)]
- C.11 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
- C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
- C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

- C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
- C.16 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
- C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

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

- C.18 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]
- C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]
- C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

Stratospheric Ozone Protection

- C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Ambient Monitoring Requirements [326 IAC 7-3]

- C.22 Ambient Monitoring [326 IAC 7-3]

Retirement of Existing Operations

- C.23 Retirement of Existing Operations [326 IAC 2-2]

D.1. RESERVED

D.2. RESERVED

D.3. RESERVED

D.4. RESERVED

D.5. RESERVED

D.6. RESERVED

D.7. EMISSIONS UNIT OPERATION CONDITIONS

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

- D.7.1 Facility wide Operation - PSD Minor Limit [326 IAC 2-2]
- D.7.2 Gasification Block SO₂ Emission Limitation [326 IAC 2-2]

Compliance Determination Requirements

- D.7.3 Plant-wide SO₂ Operation (excluding startup/shutdowns)
- D.7.4 Plant-wide NO_x Operation (excluding startup/shutdowns)
- D.7.5 Plant-wide NO_x and SO₂ Operations - Startups and Shutdowns
- D.7.6 Testing Requirements [326 IAC 2-1.1-11]

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

- D.7.7 Record Keeping Requirement
- D.7.8 Reporting Requirements

D.8. EMISSIONS UNIT OPERATION CONDITIONS

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

- D.8.1 Thermal Oxidizer PSD BACT [326 IAC 2-2-3]
- D.8.2 Flare Pilot PSD BACT Limit [326 IAC 2-2-3]
- D.8.3 Gasification Pre-heaters PSD BACT Limit [326 IAC 2-2-3]
- D.8.4 Opacity Limitation [326 IAC 2-2][3260 AC 5-1-2]
- D.8.5 Gasification Block Startups and Shutdowns [326 IAC 2-2-3]

Compliance Determination Requirements

- D.8.6 Thermal Oxidizer Operation
- D.8.7 Flare Pilot Flame
- D.8.8 Gasification Block Startups and Shutdowns

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

- D.8.9 Thermal Oxidizer Visible Emission Notation
- D.8.10 Thermal Oxidizer Parametric Monitoring
- D.8.11 Flare Parametric Monitoring

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

- D.8.12 Record Keeping Requirements

D.8.13 Reporting Requirements

D.9. EMISSIONS UNIT OPERATION CONDITIONS

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

- D.9.1 Combustion Turbine PSD Limit [326 IAC 2-2-3]
- D.9.2 Cooling Tower PSD BACT Limit [326 IAC 2-2-3]
- D.9.3 Auxiliary Boiler PSD BACT Limit [326 IAC 2-2-3]
- D.9.4 Turbine Gas Conditioning Preheater PSD BACT Limit [326 IAC 2-2-3]
- D.9.5 Diesel Fire Emergency Generator PSD BACT Limit [326 IAC 2-2-3]
- D.9.6 Diesel Fire Emergency Fire Pump PSD BACT Limit [326 IAC 2-2-3]
- D.9.7 Power Block Startups and Shutdowns [326 IAC 2-2-3]
- D.9.8 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Compliance Determination Requirements

- D.9.9 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-7-6(1)]
- D.9.10 Power Block Startups and Shutdowns]

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

- D.9.11 Continuous Emissions Monitoring [326 IAC 3-5][40 CFR 64]
- D.9.13 Continuous Emissions Monitoring System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(3)][326 IAC 3-7-2][326 IAC 3-7-3]
- D.9.12 Combustion Turbine Fuel Monitoring

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

- D.9.14 Record Keeping Requirements
- D.9.15 Reporting Requirements

D.10. EMISSIONS UNIT OPERATION CONDITIONS

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

- D.10.1 Coal Handling and Lime and Soda Ash Handling Particulate Matter BACT Requirements [326 IAC 2-2-3]
- D.10.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
- D.10.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.10.4 Particulate Control [326 IAC 2-7-6(6)][326 IAC 6-3-2][326 IAC 2-2]
- D.10.5 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-7-6(1)]

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

- D.10.6 Visible Emission Notation [326 IAC 2-7-6(1)][362 IAC 2-7-5(1)] [40 CFR 64]
- D.10.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][362 IAC 2-7-5(1)]
- D.10.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][362 IAC 2-7-5(1)]

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

- D.10.9 Record Keeping Requirements

D.11. EMISSIONS UNIT OPERATION CONDITIONS

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

- D.11.1 Coal Storage Pile PSD BACT Requirements [326 IAC 2-2-3]
- D.11.2 Slag Storage Pile and Slag Handling PSD BACT Requirements [326 IAC 2-2-3]
- D.11.3 Paved Roads/Parking Areas PSD BACT Requirements [326 IAC 2-2-3]

Compliance Determination Requirements

- D.11.4 Fugitive Dust Control [326 IAC 2-2]

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

- D.11.5 Pave Roads/Parking Area [326 IAC 2-2]

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

- D.11.6 Record Keeping Requirements

E.1. EMISSIONS UNIT OPERATION CONDITIONS

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

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

F.1. 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)

- F.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)]
- F.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)]
- F.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)]
- F.4.1 Nitrogen Oxides Emission Requirements [326 IAC 24-1-4(c)] [40 CFR 97.106(c)]
- F.4.2 Sulfur Dioxide Emission Requirements [326 IAC 24-2-4(c)] [40 CFR 97.206(c)]
- F.4.3 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]
- F.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)]
- F.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)]
- F.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)]
- F.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)]
- F.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.1. New Source Performance Standards (NSPS) Requirements [40 CFR 60]

New Source performance Standards [40 CFR 60]]

- G.1.1 General Provisions Relating to NSPS Subpart Da [326 IAC 12-1] [40 CFR 60, Subpart A]
- G.1.2 NSPS for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 [40 CFR Part 60, Subpart Da]

G.2. New Source Performance Standards (NSPS) Requirements [40 CFR 60]

New Source performance Standards [40 CFR 60]]

- G.2.1 General Provisions Relating to NSPS Subpart Db [326 IAC 12-1] [40 CFR 60, Subpart A]
- G.2.2 NSPS for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Db]

G.3. New Source Performance Standards (NSPS) Requirements [40 CFR 60]

New Source performance Standards [40 CFR 60]]

- G.3.1 General Provisions Relating to NSPS Subpart Y [326 IAC 12-1] [40 CFR 60, Subpart A]
- G.3.2 NSPS for Coal Preparation Plants [40 CFR 60, Subpart Y]

G.4. RESERVED

G.5. New Source Performance Standards (NSPS) Requirements [40 CFR 60]

New Source performance Standards [40 CFR 60]]

- G.5.1 General Provisions Relating to NSPS Subpart IIII [326 IAC 12-1] [40 CFR 60, Subpart A]
- G.5.2 NSPS for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII]

Certification

Emergency Occurrence Report

Quarterly Report

Quarterly Deviation and Compliance Monitoring Report

Appendix A: Fugitive Dust Control Plan

Appendix C: Air Quality Analysis

Attachment A: New Source Performance Standards - Subpart Da

Attachment B: New Source Performance Standards - Subpart Db

Attachment C: New Source Performance Standards - Subpart Y

Attachment D: New Source Performance Standards - Subpart IIII

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(22)]

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

Source Address:	15424 East State Road 358, Edwardsport, Indiana 47528
General Source Phone Number:	(317)-838-2108
SIC Code:	4911
County Location:	Knox
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source (Existing Plant), Section 112 of the Clean Air Act Minor Source (IGCC Plant), 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) Integrated Gasification Combined Cycle (IGCC) Electric Generating Plant:

- (a) One gasification block with acid gas removal/sulfur recovery, particulate removal and mercury removal consisting of the following:
 - (1) Two (2) refractory-lined, oxygen-blown, entrained flow gasifiers designated as GASIF1 and GASIF2, permitted in 2008, exhausting through Vents S-5a1 and S-5a2 during startup only.
 - (2) Two (2) natural gas fired gasification preheaters designated as GPREHEAT1 and GPREHEAT2, permitted in 2008, with a maximum heat input capacity of 19.1 MMBtu/hr each (high heating value basis), exhausting to Vents S-5a1 and S-5a2 during startup only.

- (3) One (1) natural gas fired thermal oxidizer designated as THRMOX, permitted in 2008, with a maximum heat input for the pilot of 3.85 MMBtu/hr, exhausting to Stack S-4. The thermal oxidizer will combust waste gas streams from the Sulfur Recovery Unit (SRU) sulfur pit vents and intermittent gas streams for the SRU during startup, shutdown and trip events.
 - (4) One natural gas fired elevated open flare designated as FLR, permitted in 2008, with a maximum heat input for the pilot of 1.23 MMBtu/hr, exhausting to Stack S-3. An additional heat input of 1.44 MMBtu/hr (natural gas) will be provided to the flare as sweep enrichment gas/flare purge gas. The flare will combust syngas streams from various operations associated with the gasification process during startup, shutdown and trip events.
- (b) One power block consisting of the following:
- (1) Two (2) combined cycle combustion turbine trains each consisting of a combustion turbine and a heat recovery steam generator, designated as CTHRSG1 and CTHRSG2, permitted in 2008, using diffusion combustors firing either syngas, natural gas, or combined syngas and natural gas, and exhausting to Stacks S-2a and S-2b. The turbine trains use nitrogen diluent injection (to control NO_x) when firing syngas, steam injection when firing natural gas, and nitrogen diluent injection and steam injection when co-firing syngas and natural gas.

Nominal Heat Input Capacity (HHV) for each Combustion Turbine Train	
Fuel	MMBtu/hr
Syngas Only	2106
Natural Gas Only	2109
Combined Syngas and Natural Gas	2129

Stacks S-2a and S-2b have continuous emissions monitors (CEMs) for carbon monoxide (CO), nitrogen oxides (NO_x) and sulfur dioxide (SO₂). Mercury (Hg) will be monitored per requirements of 40 CFR Part 60, Subpart Da.

- (2) One (1) reheat, condensing steam turbine, permitted in 2008.
- (3) One (1) twenty (20) cell induced draft cooling tower designated as CT1 – CT20, permitted in 2008, exhausting to Stack S-9. The cooling tower will use a high-efficiency drift eliminator to control particulate emissions.
- (4) One (1) natural gas fired auxiliary boiler designated as AUXBLR, permitted in 2008, with a maximum heat input capacity of 300 MMBtu/hr (high heating value basis) and exhausting to Stack S-6.

- (5) Two (2) natural gas fired turbine gas conditioning preheaters designated as TPREHEAT1 and TPREHEAT2, permitted in 2008, with a maximum heat input capacity of 5 MMBtu/hr (per unit on a high heating value basis) and exhausting to Stacks S-5b1 and S-5b2 respectively.
 - (6) One (1) diesel-fired emergency generator designated as EMDSL, permitted in 2008, with a maximum rating of 2200 brake-horsepower (Bhp), exhausting to Stack S-7.
 - (7) One (1) diesel-fired emergency fire pump designated as FIRPMP, permitted in 2008, with a maximum rating of 420 brake-horsepower (Bhp), exhausting to Stack S-8.
- (c) Material handling operations consisting of:
- (1) Coal receiving and handling system, permitted in 2010, except the truck or railcar receiving and unloading station permitted in 2008, using enclosed conveyors consisting of the following equipment:
 - (A) 1200 ton per hour enclosed coal conveyor with particulate emissions from drop point to active coal pile stacking tube controlled by an insertable dust filter, exhausting to Stack S-1D.
 - (B) One (1) 1200 ton per hour truck or railcar receiving and unloading station with enclosed drop points and particulate emissions controlled by a baghouse and exhausting to Stack S-1B.
 - (C) One (1) 1,800 ton per hour reclaim tunnel, using two (2) 900 ton per hour conveyors with enclosed drop points and particulate matter controlled by a baghouse and exhausting to Stack S-2A.
 - (D) Two (2) 900 ton per hour enclosed coal conveyors with particulate matter from enclosed drop points controlled by insertable dust filters and exhausting to Stacks S-2B and S-2C.
 - (E) Two (2) enclosed coal bunkers with a total loading capacity of 1800 tons per hour and with particulate matter controlled by bin vent dust collectors exhausting to Stacks S- 3A and S-3B.
 - (2) Lime and soda ash handling system, permitted in 2010:
 - (A) Transfer of lime from truck or railcar by a closed pneumatic conveyor to two (2) lime storage silos, each capable of handling a maximum loading rate of 46 tons per hour and with particulate matter controlled by bin vent dust collectors exhausting to Stacks S-4A and S-4B.
 - (B) Transfer of soda ash from truck or railcar by a closed pneumatic conveyor to two (2) soda ash storage silos, each capable of

handling a maximum loading rate of 46 tons per hour and with particulate matter controlled by bin vent dust collectors exhausting to Stacks S-4C and S- 4D.

- (3) Two (2) wet rod mills, identified as WRM, constructed in 2008 but permitted in 2015, rated at 2847 dscfm, exhausting through two vents, identified as WRMV1 and WRMV2.
- (d) Fugitive dust emissions consisting of:
 - (1) Coal storage piles including one (1) inactive coal pile identified as CP_IN, permitted in 2008, and one (1) active coal pile identified as CP_AC, permitted in 2008.
 - (2) Slag storage pile and slag handling, permitted in 2008.
 - (3) Paved roads, permitted in 2008.

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):

- (b) **RESERVED**

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).
- (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, T083-27138-00003, 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) 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 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
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, rules from 326 IAC, federal statutes from the Clean Air Act, and regulations of the U.S.EPA from 40 CFR, 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 T083-27138-00003 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 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).

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 the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), 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 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).
- (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 must be kept 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 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 the 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 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)][40 CFR 60]

- (a) The Permittee shall install, calibrate, maintain, and operate all continuous emission monitoring systems (CEMS) and related equipment required by this permit.
- (b) 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.
- (c) 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.
- (d) Whenever a continuous emission monitor required by this permit other than an opacity monitor is malfunctioning or is down for maintenance or repairs, the following shall be used as an alternative to continuous data collection:
 - (1) Whenever the NO_x, SO₂, and CO emission rate continuous emission monitoring systems are malfunctioning or down for repairs or adjustments, the Permittee shall use a data substitution procedure for the CEMs that is consistent with the requirements of 40 CFR 75, Subpart D - Missing Data Substitution Procedures.
- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-7, 326 IAC 3-5, and 40 CFR 60.

C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)] [40 CFR 60]

- (a) The Permittee shall calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment. For a boiler, the COM shall be in operation at all times that the induced draft fan is in operation.
- (b) 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.

- (c) In the event that a breakdown of a COMS occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (d) 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.
 - (1) 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.
 - (2) 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.
 - (3) Method 9 readings may be discontinued once a COMS is online.
 - (4) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (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 and 40 CFR 60.

C.13 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.14 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.15 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.16 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit. 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.17 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.18 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.19 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 record keeping.

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

- (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 no 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.21 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.22 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)]

Retirement of Existing Operations

C.23 Retirement of Existing Operations [326 IAC 2-2]

Pursuant to 326 IAC 2-2, the Permittee shall permanently discontinue or terminate operation of all emission units at the existing coal-fired plant, including the following units, prior to initial startup of the new emission units of the IGCC plant:

- (a) One (1) No. 2 fuel oil-fired boiler, identified as Boiler No. 6-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr) and exhausting to stack 6-1.
- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-1. Stack 7-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).
- (c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-2. Stack 7-2 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).
- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 8-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 8-1. Stack 8-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).
- (e) A coal transfer system, with a nominal throughput of 300 tons of coal per hour, construction commenced prior to 1974, consisting of the following equipment:
 - (1) One (1) unloading station for trucks, with a drop point to a coal storage pile identified as F-1, with the drop point, identified as DP-1, controlled by a partial enclosure, and exhausting to the ambient air.
 - (2) One (1) storage pile area, having an estimated storage capacity of 70,000 tons, with fugitive emissions controlled by watering as needed.
 - (3) One (1) enclosed hopper, with a drop point identified as DP-3 to a conveyor identified as Conveyor C, with each drop point enclosed and exhausting to the ambient air.
 - (4) An enclosed conveyor system, with 6 drop points identified as DP-3, DP-4, DP-5, DP-6, DP-7, and DP-8, with each drop point enclosed.

- (5) Three (3) enclosed coal bunkers, each with a normal nominal capacity of 15,000 tons of coal. Bunkers are loaded via a conveyor tripper system with a total capacity of 300 tons per hour to the Boilers 7-1, 7-2 and 8-1 bunkers. Particulate matter generated from loading bunkers is controlled by enclosure and exhausts to the ambient air.

- (f) All insignificant activities, as defined in 326 IAC 2-7-1(21), associated with the units to be retired, will also be permanently discontinued when the emission units described above are retired.

- (g) Upon the retirement (permanent discontinuance or termination of operation) of the emission units listed in paragraphs (a) through (e) of this Condition C.23 and the provision of notice to IDEM, OAQ of such action, the conditions listed in Sections D.1, D.2, D.3, D.4, D.5 and D.6 of this permit shall have no further force or effect and shall no longer be obligatory upon the Permittee.

SECTION D.1

RESERVED

Emissions Unit Description: RESERVED

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

SECTION D.2

RESERVED

Emissions Unit Description: RESERVED

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

SECTION D.3

RESERVED

Emissions Unit Description: RESERVED

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

SECTION D.4

RESERVED

Emissions Unit Description: RESERVED

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

SECTION D.5

RESERVED

Emissions Unit Description: RESERVED

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

SECTION D.6

RESERVED

Emissions Unit Description: RESERVED

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

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Facility wide Operations, which include the following:

- (1) One gasification block with acid gas removal/sulfur recovery, particulate removal and mercury removal;
- (2) One power block consisting of two (2) combined cycle combustion turbine trains each consisting of a combustion turbine and a heat recovery steam generator, one (1) reheat, condensing steam turbine; one (1) twenty (20) cell cooling tower; one (1) natural gas fired auxiliary boiler; two (2) natural gas fired turbine gas conditioning preheaters; one (1) diesel fired emergency generator; one (1) diesel fired emergency fire pump;
- (3) Material handling operations consisting of coal receiving and handling system and lime and soda ash handling system; and
- (4) Fugitive dust emissions from coal storage piles, slag storage pile and slag handling, and paved roads.

(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.7.1 Facility wide Operations - PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, not applicable to emissions of NO_x and SO₂ from Significant Source Modification No. 083-23529-00003, IGCC plant wide operations shall be limited as follows:

- (a) Sulfur Dioxide (SO₂) emissions shall not exceed 358.5 tons per year (tpy) based on a 12-month rolling total (excluding startup and shutdowns);
- (b) Nitrogen Oxide (NO_x) emissions shall not exceed 2121.5 tons per year (tpy) based on a 12-month rolling total (excluding startup and shutdowns); and
- (c) Emissions from startup and shutdowns of the gasification and power blocks shall not exceed the following annual limits:

Annual Startup and Shutdown Emission Limits		
Equipment	NO_x (tpy)	SO₂ (tpy)
Thermal Oxidizer	7.9	40.4
Flare	22.1	79.7
Gasification Preheaters	6.5	0.04
Aux Boiler	76.7	0.4
Combustion Turbines	153.2	1.9
Total	266.4	122.44

D.7.2 Gasification Block SO₂ Emission Limitation [326 IAC 2-2]

In order to render the requirements of Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, not applicable to emissions of SO₂ from this source modification, the thermal oxidizer shall be limited as follows:

- (a) Emissions of sulfur dioxide (SO₂) shall not exceed 19.86 lbs/hr during normal operation of the thermal oxidizer, THRMOX.
- (b) Emissions of sulfur dioxide (SO₂) shall not exceed 150.9 lbs/hr during startup/shutdown operation of the thermal oxidizer, THRMOX.

Compliance Determination Requirements

D.7.3 Plant-wide SO₂ Operations (excluding startups/shutdowns)

In order to ensure compliance with Condition D.7.1(a), SO₂ emissions shall be based on a 12-month rolling total, determined on a monthly basis, using appropriate emission factors and, where available, monitoring data for each operation associated with the IGCC plant that has the potential to emit SO₂ under normal equipment operations.

D.7.4 Plant-wide NO_x Operations (excluding startup/shutdowns)

In order to ensure compliance with Condition D.7.1 (b), NO_x emissions shall be based on a 12-month rolling total, determined on a monthly basis, using appropriate emission factors and, where available, monitoring data for each operation associated with the IGCC plant that has the potential to emit NO_x.

D.7.5 Plant-wide NO_x and SO₂ Operations – Startups and Shutdowns

In order to ensure compliance with Condition D.7.1(c), SO₂ and NO_x emissions shall be based on a 12-month rolling average, determined on a monthly basis, using appropriate emission factors and number of specific startup and shutdown events per month.

- (a) SO₂ and NO_x emissions from startup and shutdown events shall be based on the following calculation method:
 - (1) Appropriate startup and shutdown emission factor for each piece of emitting equipment in the tables below shall be multiplied by the number of startup and shutdown events of each type per month X 1/2000.
 - (A) Each startup and shutdown emission factor is the maximum pounds of that pollutant that shall be emitted for the specified event.
 - (i) The operational phases noted as phases 1 through 3 are typical of a cold startup at an IGCC plant. These emission factors represent cumulative emissions as the plant progresses through a cold startup.
 - (ii) The operational phase noted as phase 4 represents hot startup of an individual IGCC train.

(B) Each trip emission factor is the maximum pounds of that pollutant that shall be emitted for the startup trip event.

Startup and Shutdown Emission Factors Gasification Thermal Oxidizer – Syngas			
Equipment	Operating Phase	NO_x (lbs)	SO₂ (lbs)
Startup Events			
Thermal Oxidizer – Syngas	Phase 1	6.27	0.032
Thermal Oxidizer – Syngas	Phase 2	184.13	293.8
Thermal Oxidizer – Syngas	Phase 3	191.9	789.8
Thermal Oxidizer – Syngas	Phase 4	4.29	327.2
Equipment Trip B to Thermal Oxidizer	N/A	3.5	815.2
Tail Gas Unit Trip to Thermal Oxidizer	N/A	2.1	897.4
Shutdown Events			
Thermal Oxidizer – Syngas	Partial Plant (≤ 5 hrs)	6.9	51.6
Thermal Oxidizer – Syngas	Entire Plant (> 5 hrs)	15.8	51.7

Startup and Shutdown Emission Factors Gasification Flare – Syngas			
Equipment	Operating Phase	NO_x (lbs)	SO₂ (lbs)
Startup Event			
Flare – Syngas	Phase 1	3.9	0.03
Flare – Syngas	Phase 2	99.1	708.1
Flare – Syngas	Phase 3	182.4	1396.7
Flare – Syngas	Phase 4	81.25	688.5
SRU Trip to Flare	N/A	11.2	642.9
Equipment Trip A to Flare	N/A	11.3	394.6
CT Trip to Flare	N/A	769.9	72.1
Shutdown Event			
Flare – Syngas	Partial Plant (≤ 5 hrs)	158.6	499.0
Flare – Syngas	Entire Plant (> 5 hrs)	163.8	499.0

Startup and Shutdown Emission Factors Gasification Preheaters / Gasifiers – Syngas			
Equipment	Operating Phase¹	NO_x (lbs)	SO₂ (lbs)
Startup Event			
Preheaters / Gasifiers – Syngas	Phase 1	39.3	0.29
Preheaters / Gasifiers – Syngas	Phase 2	140.4	1.05
Preheaters / Gasifiers – Syngas	Phase 3	172.0	1.27
Shutdown Event			
Preheaters / Gasifiers – Syngas	Partial Plant (≤ 5 hrs)	N/A	N/A
Preheaters / Gasifiers – Syngas	Entire Plant (> 5 hrs)	N/A	N/A

¹ Gasification Preheaters are only required to be operational while the Gasifiers are being brought up to the required temperature. Gasification Preheaters are not required for a hot start-up of an individual gasification train.

Startup and Shutdown Emission Factors Gasification Auxiliary Boiler – Natural Gas			
Equipment	Operating Phase¹	NO_x (lbs)	SO₂ (lbs)
Startup Event			
Aux. Boiler – Natural Gas	Phase 1	1317.6	7.1
Aux. Boiler – Natural Gas	Phase 2	2017.5	10.9
Aux. Boiler – Natural Gas	Phase 3	2017.5	10.9
Shutdown Event			
Aux. Boiler – Natural Gas	Partial Plant (≤ 5 hrs)	N/A	N/A
Aux. Boiler – Natural Gas	Entire Plant (> 5 hrs)	N/A	N/A

¹ The Auxiliary Boiler is only required to be in operation during the first 50 hours of a cold startup. The Gasification Auxiliary Boiler is not required for a hot start-up of an individual gasification train.

Startup and Shutdown Emission Factors Gasification Combustion Turbines – Syngas			
Equipment	Operating Phase	NO_x (lbs)	SO₂ (lbs)
Startup Event			
Combustion Turbines – Syngas	Phase 1	0.0	0.0
Combustion Turbines – Syngas	Phase 2	3006.1	20.2
Combustion Turbines – Syngas	Phase 3	3783.0	42.8
Combustion Turbines – Syngas	Phase 4	21.41	601.99
Shutdown Event			
Combustion Turbines – Syngas	Partial Plant (≤ 5 hrs)	247.4	8.2

Startup and Shutdown Emission Factors Gasification Combustion Turbines – Syngas			
Equipment	Operating Phase	NO_x (lbs)	SO₂ (lbs)
Combustion Turbines – Syngas	Entire Plant (> 5 hrs)	247.4	8.2

- (2) Total the emissions of SO₂ and NO_x from all pieces of emitting equipment for a calendar month from all startup and shutdown events occurring in that month and add to previous 12-month total; then deduct the total SO₂ and NO_x emissions from the earliest month of the previous 12-month total to determine the current 12-month total.
- (3) A description of the startup phases for the combustion turbines during a cold startup of the IGCC plant and a hot startup of an individual gasification train is provided in the following table:

Summary of Startup Phases Gasification Combustion Turbines – Syngas				
Phase	Thermal Oxidizer	Gasification Flare	Combustion Turbines	Cold Start Timeline
1	Initial warm-up	Initial warm-up	Both CT's dormant as Gasification Process goes through initial warm-up	Duration typically 32 hours
2	Startup of first SRU, the TGU, and first gas recycle	Venting syngas before first CT comes online and venting acid gas before first SRU comes online	Startup of first CT on natural gas as Gasification Process startup proceeds	Duration typically runs from hour 33 through hour 62 of a cold start
3	Startup of second SRU and second gas recycle unit	Venting syngas before second CT comes online and venting acid gas before second SRU comes online	Transition of first CT to syngas combustion and startup of second CT on natural gas, then transitioning to syngas	Duration typically runs from hour 63 through remainder of a cold start

Summary of Startup Phases Gasification Combustion Turbines – Syngas				
Phase	Thermal Oxidizer	Gasification Flare	Combustion Turbines	Cold Start Timeline
4	Restart of affected SRU and gas recycle unit	Venting syngas before syngas combustion achieved in CT being restarted and venting acid gas before affected SRU comes online	Restart of a single CT on natural gas, then transitioning to syngas	Durations is typically 5 hours or less

D.7.6 Testing Requirements [326 IAC 2-1.1-11]

- (a) Within sixty (60) days after achieving the maximum production rate at which the gasification block will be operated, but no later than 180 days after initial startup of the gasification block, in order to demonstrate compliance with Conditions 7.2, the Permittee shall conduct initial performance tests to measure emissions of SO₂ from the thermal oxidizer during the peak period of SRU startup and during normal mode operation, utilizing methods as approved by the Commissioner.

Permittee shall submit a proposed test protocol to IDEM, OAQ Compliance Section for review at least 35 days prior to the scheduled testing date. 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 obligations with regard to the performance testing required by this condition. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

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

D.7.7 Record Keeping Requirements

- (a) To document the compliance status with Condition D.7.1 (a) and D.7.3, the Permittee shall maintain records of the following:
- (1) Monthly emissions of SO₂ and supporting calculation; and
 - (2) 12-month rolling total of SO₂ emissions;
- From all emission units of the IGCC plant with the potential to emit SO₂.
- (b) To document the compliance status with Condition D.7.1(b) and D.7.4, the Permittee shall maintain records of the following:
- (1) Monthly emissions of NO_x and supporting calculation; and
 - (2) 12-month rolling total of NO_x emissions;

From all emission units of the IGCC plant with the potential to emit NO_x.

- (c) To document the compliance status with Condition D.7.1(c) and D.7.5, the Permittee shall maintain records of the following:
 - (1) Monthly emissions of SO₂ and NO_x and supporting calculation; and
 - (2) 12-month rolling total of SO₂ and NO_x emissions;

From all emission units of the IGCC plant with the potential to emit SO₂ and NO_x emissions during startups and shutdowns

- (c) To document the compliance status with Condition D.7.2, the Permittee shall maintain records of the of the stack testing performed as required in D.7.6 showing compliance with the emission limits in D.7.2.
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.7.8 Reporting Requirements

A monthly summary of the information to document compliance with Condition D.7.1, D.7.3, D.7.4, and D.7.5 shall be submitted quarterly using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

One gasification block with acid gas removal/sulfur recovery, particulate removal and mercury removal consisting of the following:

- (1) Two (2) refractory-lined, oxygen-blown, entrained flow gasifiers designated as GASIF1 and GASIF2, permitted in 2008, exhausting through Vents S-5a1 and S-5a2 during startup only.
- (2) Two (2) natural gas fired gasification preheaters designated as GPREHEAT1 and GPREHEAT2, permitted in 2008, with a maximum heat input capacity of 19.1 MMBtu/hr each (high heating value basis), exhausting to Vents S-5a1 and S-5a2 during startup only.
- (3) One (1) natural gas fired thermal oxidizer designated as THRMOX, permitted in 2008, with a maximum heat input for the pilot of 3.85 MMBtu/hr, exhausting to Stack S-4. The thermal oxidizer will combust waste gas streams from the Sulfur Recovery Unit (SRU) sulfur pit vents and intermittent gas streams for the SRU during startup, shutdown and trip events.
- (4) One natural gas fired elevated open flare designated as FLR, permitted in 2008, with a maximum heat input for the pilot of 1.23 MMBtu/hr, exhausting to Stack S-3. An additional heat input of 1.44 MMBtu/hr (natural gas) will be provided to the flare as sweep enrichment gas/flare purge gas. The flare will combust syngas streams from various operations associated with the gasification process during startup, shutdown and trip events.

(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 Thermal Oxidizer PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for the natural gas fired thermal oxidizer designated as THRMOX, shall be as follows:

- (a) Carbon monoxide (CO) emissions shall not exceed 0.08 lbs/MMBtu.
- (b) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 0.0075 lbs/MMBtu (PM filterable, PM₁₀ filterable and condensable). (PM₁₀ serves as a surrogate for PM_{2.5} throughout this permit.)
- (c) Volatile Organic Compound (VOC) emissions shall not exceed 0.005 lbs/MMBtu.
- (d) Combustion of natural gas.
- (e) Maintenance of equipment in good working order and operation per manufacturer's specifications.

D.8.2 Flare Pilot PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for the natural gas fired flare pilot, designated as FLR, shall be as follows:

- (a) Carbon monoxide (CO) emissions shall not exceed 0.08 lbs/MMBtu.
- (b) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 0.0075 lbs/MMBtu (PM filterable, PM₁₀ filterable and condensable).
- (c) Volatile Organic Compound (VOC) emissions shall not exceed 0.005 lbs/MMBtu.
- (d) Combustion of natural gas.
- (e) Maintenance of equipment in good working order and operation per manufacturer's specifications.

D.8.3 Gasification Pre-heaters PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for each natural gas fired gasifier pre-heater designated as GPREHEAT1 and GPREHEAT2 shall be as follows:

- (a) Carbon monoxide (CO) emissions shall not exceed 0.08 lbs/MMBtu.
- (b) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 0.0075 lbs/MMBtu (PM filterable, PM₁₀ filterable and condensable).
- (c) Volatile Organic Compound (VOC) emissions shall not exceed 0.005 lbs/MMBtu.
- (d) Combustion of natural gas.
- (e) Maximum heat input of each gasifier pre-heater is 19.1 MMBtu/hr.
- (f) Maintenance of equipment in good working order and operation per manufacturer's specifications.

D.8.4 Opacity Limitation [326 IAC 2-2] [326 IAC 5-1-2]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity from each natural gas fired gasifier preheater shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of 40 percent (%) 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 non-overlapping integrated averages for a continuous opacity) monitor in a six (6) hour period.

D.8.5 Gasification Block Startups and Shutdowns [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for startup and shutdown of the gasification block of the IGCC plant, comprising the gasifiers, gasifier preheaters (GPREHEAT1 and GPREHEAT2), gas cooling units, acid gas removal (AGR) units, and sulfur recovery units (SRU), shall consist of the following:

- (a) Waste gas streams from the sulfur recovery unit shall be vented to the thermal oxidizer, THRMOX, during periods of startups and shutdowns.
- (b) Excess syngas and other waste gas streams from the gasification block not routed to the thermal oxidizer shall be routed to the open flare, FLR, during periods of startups and shutdowns.
- (c) Emissions from startups, shutdowns, and trips of the gasification block shall not exceed the following annual limits:

Annual Startup and Shutdown Emission Limits			
Equipment	CO (tpy)	PM¹ (tpy)	VOC (tpy)
Thermal Oxidizer	6.8	0.65	0.43
Flare	72.9	4.3	0.58
Gasification Preheaters	5.5	0.5	0.3
Total	85.2	5.45	1.31

PM = PM, PM₁₀/PM_{2.5} (filterable PM, filterable and condensable PM₁₀). PM₁₀ serves as a surrogate for PM_{2.5} throughout this permit.

- (d) Emissions from startups, shutdowns, and trips of the gasification block shall not exceed the following hourly limits:

Hourly Startup and Shutdown Emission Limits (24-hr average)			
Equipment	CO (lbs/hr)	PM¹ (lbs/hr)	VOC (lbs/hr)
Thermal Oxidizer	5.1	0.45	0.33
Flare	37.2	0.042	0.03

PM = PM, PM₁₀/PM_{2.5} (filterable PM, filterable and condensable PM₁₀). PM₁₀ serves as a surrogate for PM_{2.5} throughout this permit.

Compliance Determination Requirements

D.8.6 Thermal Oxidizer Operation

In order to ensure compliance with Condition D.8.5, the thermal oxidizer shall be in operation at all times when the sulfur recovery unit / tail gas unit is in operation.

D.8.7 Flare Pilot Flame

The flare must be operated with a flame present at all times when the gasification block is in startup mode and any of the following equipment is in operation: Low Temperature Gas Cooling System, Acid Gas Removal System and Sulfur Recovery Unit.

D.8.8 Gasification Block – Startups and Shutdowns

In order to ensure compliance with Condition D.8.5(c), CO, PM and VOC emissions shall be based on a 12 month rolling average determined on a monthly basis using appropriate emission factors and number of specific startup and shutdown events per month.

- (a) CO, PM and VOC emissions from startup and shutdown events shall be based on the following calculation method:
 - (1) Appropriate startup and shutdown emission factor for each piece of emitting equipment in the tables below shall be multiplied by the number of startup and shutdown events of each type per month X 1/2000
 - (A) Each startup and shutdown emission factor is the maximum pounds of that pollutant that shall be emitted for the specified event.
 - (i) The operational phases noted as phases 1 through 3 are typical of a cold startup at an IGCC plant. These emission factors represent cumulative emissions as the plant progresses through a cold startup.
 - (ii) The operational phase noted as phase 4 represents hot startup of an individual IGCC train.
 - (B) Each trip emission factor is the maximum pounds of that pollutant that shall be emitted for the startup trip event.

Startup and Shutdown Emission Factors Gasification Thermal Oxidizer – Syngas				
Equipment	Operating Phase	CO (lbs)	PM² (lbs)	VOC (lbs)
Startup Event				
Thermal Oxidizer – Syngas	Phase 1	5.28	0.48	0.352
Thermal Oxidizer – Syngas	Phase 2	155.0	13.99	10.13
Thermal Oxidizer – Syngas	Phase 3	161.9	14.58	10.5
Thermal Oxidizer – Syngas	Phase 4	3.92	0.322	0.231
Equipment Trip B to Thermal Oxidizer	N/A	5.3	0.2	0.2
Tail Gas Unit Trip to Thermal Oxidizer	N/A	4.4	0.1	0.1
Shutdown Event				
Thermal Oxidizer – Syngas	Partial Plant (≤ 5 hrs)	5.9	0.53	0.37
Thermal Oxidizer – Syngas	Entire Plant (> 5 hrs)	13.4	1.2	0.8

Startup and Shutdown Emission Factors Gasification Flare – Syngas				
Equipment	Operating Phase	CO (lbs)	PM² (lbs)	VOC (lbs)
Startup Event				
Flare – Syngas	Phase 1	3.2	0.29	0.22
Flare – Syngas	Phase 2	477.7	0.95	0.71
Flare – Syngas	Phase 3	898	1.5	1.1
Flare – Syngas	Phase 4	415.6	0.437	0.317
SRU Trip to Flare	N/A	10.3	0.8	0.6
Equipment Trip A to Flare	N/A	14.3	0.8	0.6
CT Trip to Flare	N/A	1120.9	358.2	36.9
Shutdown Event				
Flare – Syngas	Partial Plant (≤ 5 hrs)	670.5	3.2	2.3
Flare – Syngas	Entire Plant (> 5 hrs)	674.8	3.6	2.6

Startup and Shutdown Emission Factors Gasification Preheaters / Gasifiers – Syngas				
Equipment	Operating Phase¹	CO (lbs)	PM² (lbs)	VOC (lbs)
Startup Event				
Preheaters / Gasifiers – Syngas	Phase 1	33.0	2.98	2.16
Preheaters / Gasifiers – Syngas	Phase 2	119.9	10.7	7.7
Preheaters / Gasifiers – Syngas	Phase 3	145.0	13.0	9.3
Shutdown Event				
Preheaters / Gasifiers – Syngas	Partial Plant (≤ 5 hrs)	NA	NA	NA
Preheaters / Gasifiers – Syngas	Entire Plant (> 5 hrs)	NA	NA	NA

¹ Gasification pre-heaters are only required to be operational while the gasifiers are being brought up to the required temperature. Gasifier preheaters are not required for a hot start-up of an individual gasification train.

² PM = PM, PM₁₀/PM_{2.5} (filterable PM, filterable and condensable PM₁₀). PM₁₀ serves as a surrogate for PM_{2.5} throughout this permit.

- (2) Total the emissions of CO, PM and VOC, respectively, from all pieces of emitting equipment for a calendar month from all startup and shutdown events occurring in that month and add to previous 12-month total; then deduct the total CO, PM and VOC emissions, respectively, from the earliest month of the previous 12-month total to determine the current 12-month total.
- (3) A description of the startup phases for the thermal oxidizer and flare devices during a cold startup of the IGCC plant and a hot startup of an individual gasification train is provided in the following table:

Summary of Startup Phases Thermal Oxidizer and Gasification Flare – Syngas			
Phase	Thermal Oxidizer	Gasification Flare	Cold Start Timeline
1	Initial warm-up	Initial warm-up	Duration typically 32 hours
2	Startup of first SRU, the TGU, and first gas recycle	Venting syngas before first CT comes online and venting acid gas before first SRU comes online	Duration typically runs from hour 33 through hour 62 of a cold start
3	Startup of second SRU and second gas recycle unit	Venting syngas before second CT comes online and venting acid gas before second SRU comes online	Duration typically runs from hour 63 through remainder of a cold start
4	Restart of affected SRU and gas recycle unit	Venting syngas before syngas combustion achieved in CT being restarted and venting acid gas before affected SRU comes online	Duration is typically 5 hours or less

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

D.8.9 Thermal Oxidizer Visible Emissions Notations

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- (a) Visible emission notations of the thermal oxidizer stack exhaust shall be performed once per day during normal daylight operations. 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.
 - (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. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

D.8.10 Thermal Oxidizer Parametric Monitoring

To demonstrate compliance with Condition D.8.1:

Vendor documentation that certifies the burner is natural gas fired and has a maximum rate heat input of 3.85 MMBtu/hr. No parametric monitoring is required if this information is maintained on file and available for inspection by IDEM.

D.8.11 Flare Parametric Monitoring

- (a) To demonstrate compliance with Conditions D.8.2 and D.8.7:
- (1) The Permittee shall continuously monitor the presence of the flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame. For the purpose of this condition, continuous means no less than once per minute; and
 - (2) The Permittee shall determine flare visible emissions by Reference Method 22
- (b) To demonstrate compliance with Condition D.8.5:

The Permittee shall continuously monitor the flow rate, in CFM, of the total gas flow to the flare, including syngas, other waste gases and natural gas. The Permittee shall determine through engineering estimates the heating value of the total flow of gas to the flare within 180 days of initial startup of the gasification block.

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

D.8.12 Record Keeping Requirements

- (a) To document the compliance status with Condition D.8.1, D.8.2, and D.8.3, the Permittee shall maintain records of the following:
- (1) Vendor guarantee on maximum heat input capacity of burners associated with the thermal oxidizer, flare and gasifier
 - (2) Vendor guarantee on lb/MMBtu emission rates for CO, PM and VOC for the thermal oxidizer, flare and gasifier.
 - (3) Documentation that pipeline natural gas is the only fuel used in the thermal oxidizer, flare and gasifier.
- (b) To document the compliance status with Condition D.8.5, the Permittee shall maintain records of the following:
- (1) Monthly emissions of CO, PM and VOC and supporting calculation; and
 - (2) 12-month rolling total of CO, PM and VOC emissions;

From all emission units of the IGCC plant's Gasification block with the potential to emit CO, PM and VOC emissions during startups and shutdowns

- (c) To document the compliance status with Condition D.8.6 and D.8.9, the Permittee shall maintain records of the following:
- (1) Date and time when the SRU, Tail Gas units were operational and confirmation that the thermal oxidizer was in operation.

- (2) The Permittee shall maintain a daily record of visible emission notations of the stack exhaust from the thermal oxidizer. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g., the process did not operate that day, etc.).
- (d) To document the compliance status with Condition D.8.7, the Permittee shall maintain records of the following:
 - (1) Data and time when the gasification blocks gas cooling, acid gas removal and SRU system were operational and documentation that a flare pilot flame was present.
 - (2) Presence of any visible emissions based on Method 22.
 - (e) To document the compliance status with Condition D.8.11(b), the Permittee shall maintain records of the following:
 - (1) Monthly records of flow rate, in cubic feet per minute (CFM), of the total gas flow to the flare, including syngas, other waste gases and natural gas.
 - (2) Documentation of engineering estimates that provide the heating value of the total flow of gas to the flare.
 - (f) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.8.13 Reporting Requirements

A monthly summary of the information to document compliance with Condition D.8.12 shall be submitted quarterly using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

One power block consisting of the following:

- (1) Two (2) combined cycle combustion turbine trains each consisting of a combustion turbine and a heat recovery steam generator, designated as CTHRSG1 and CTHRSG2, permitted in 2008, using diffusion combustors firing syngas, natural gas, or combined syngas and natural gas, and exhausting to Stacks S-2a and S-2b. The turbine trains use nitrogen diluent injection (to control NO_x) when firing syngas, steam injection when firing natural gas, and nitrogen diluent injection and steam injection when co-firing syngas and natural gas.

Nominal Heat Input Capacity (HHV) for each Combustion Turbine Train	
Fuel	MMBtu/hr
Syngas Only	2106
Natural Gas Only	2109
Combined Syngas and Natural Gas	2129

Stacks S-2a and S-2b have continuous emissions monitors (CEMs) for carbon monoxide (CO), nitrogen oxides (NO_x) and sulfur dioxide (SO₂). Mercury (Hg) will be monitored per requirements of 40 CFR Part 60, Subpart Da.

- (2) One (1) reheat, condensing steam turbine, permitted in 2008.
- (3) One (1) twenty (20) cell induced draft cooling tower designated as CT1 – CT20, permitted in 2008, exhausting to Stack S-9. The cooling tower will use a high-efficiency drift eliminator to control particulate emissions.
- (4) One (1) natural gas fired auxiliary boiler designated as AUXBLR, permitted in 2008, with a maximum heat input capacity of 300 MMBtu/hr (high heating value basis) and exhausting to Stack S-6.
- (5) Two (2) natural gas fired turbine gas conditioning preheaters designated as TPREHEAT1 and TPREHEAT2, permitted in 2008, with a maximum heat input capacity of 5 MMBtu/hr (per unit on a high heating value basis) and exhausting to Stacks S-5b1 and S-5b2 respectively.
- (6) One (1) diesel-fired emergency generator designated as EMDSL, permitted in 2008, with a maximum rating of 2200 brake-horsepower (Bhp), exhausting to Stack S-7.
- (7) One (1) diesel-fired emergency fire pump designated as FIRPMP, permitted in 2008, with a maximum rating of 420 brake-horsepower (Bhp), exhausting to Stack S-8.

(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.9.1 Combustion Turbine PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for each combustion turbine train consisting of a combustion turbine and a heat recovery steam generator, designated as CTHRSG1 and CTHRSG2 when firing syngas, natural gas or co-firing syngas with natural gas shall be as follows:

- (a) Carbon monoxide (CO) emissions shall not exceed 0.046 lbs/MMBtu (heat input to combustion turbine) based on a twenty-four (24) hour average when combusting syngas or co-firing syngas and natural gas.
- (b) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 0.019 lbs/MMBtu (heat input to combustion turbine, PM filterable, PM₁₀ filterable and condensable) based on a three (3) hour average when combusting syngas or co-firing syngas and natural gas.
- (c) Volatile Organic Compound (VOC) emissions shall not exceed 0.002 lbs/MMBtu (heat input to combustion turbine) based on a three (3) hour average when combusting syngas or co-firing syngas and natural gas or combusting natural gas only.
- (d) Carbon monoxide (CO) emissions shall not exceed 0.042 lbs/MMBtu (heat input to combustion turbine) based on a twenty-four (24) hour average when combusting natural gas only.
- (e) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 0.009 lbs/MMBtu (heat input to combustion turbine, PM filterable, PM₁₀ filterable and condensable) based on a three (3) hour average when combusting natural gas only.
- (f) Each combined cycle combustion turbine shall be maintained in good working order and shall be operated using good combustion practices using diffusion combustion technology to minimize CO, PM and VOC emissions

D.9.2 Cooling Tower PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for the twenty (20) cell cooling tower designated as CT1 – CT20 shall be as follows:

- (a) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 3.2 lbs/hr.
- (b) Total dissolved solids less than 5000 mg/l in the recirculating cooling water.
- (c) High efficiency drift eliminator with a drift flow rate of less than 0.0005 percent shall be utilized at all times the cooling tower is in operation.

D.9.3 Auxiliary Boiler PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for the natural gas fired auxiliary boiler designated as AUXBLR shall be as follows:

- (a) Carbon monoxide (CO) emissions shall not exceed 0.036 lbs/MMBtu.

- (b) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 0.0075 lbs/MMBtu. Includes filterable and condensable particulates.
- (c) Volatile Organic Compound (VOC) emissions shall not exceed 0.005 lbs/MMBtu.
- (d) Maximum heat input of 300 MMBtu/hr and combustion of natural gas only.
- (e) Boiler shall be maintained in good working order and shall be operated using good combustion practices.

D.9.4 Turbine Gas Conditioning Preheater PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for each natural gas fired turbine gas conditioning preheater designated as TPREHEAT1 and TPREHEAT2 shall be as follows:

- (a) Carbon monoxide (CO) emissions shall not exceed 0.10 lbs/MMBtu.
- (b) Particulate matter (PM/PM₁₀/PM_{2.5}) emissions shall not exceed 0.0075 lbs/MMBtu.
- (c) Volatile Organic Compound (VOC) emissions shall not exceed 0.038 lbs/MMBtu.
- (d) Combust natural gas only
- (e) Maintenance of the equipment in good working order and operation per manufacturer's specifications.
- (f) Maximum heat input of 5.0 MMBtu/hr for each gas conditioning preheater.

D.9.5 Diesel Fired Emergency Generator PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for the diesel fired emergency generator designated as EMDSL shall be as follows:

- (a) Emission limitations as defined by NSPS Subpart IIII.
- (b) Maintenance of the equipment in good working order and operation per manufacturer's specifications.

D.9.6 Diesel Fired Emergency Fire Pump PSD BACT Limit [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for the diesel fired emergency fire pump designated as FIRPMP shall be as follows:

- (a) Emission limitations as defined by NSPS Subpart IIII.
- (b) Maintenance of the equipment in good working order and operation per manufacturer's specifications.

D.9.7 Power Block Startups and Shutdowns [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for startups and shutdowns of the power block of the IGCC plant shall be as follows:

- (a) Emissions from startups and shutdowns of the power block of the IGCC plant shall not exceed the following annual limits:

Annual Startup and Shutdown Emission Limits			
Equipment	CO (tpy)	PM¹ (tpy)	VOC (tpy)
Aux Boiler	46.0	4.2	3.0
Combustion Turbines	250.8	14.3	48.5
Total	296.8	18.5	51.5

PM = PM, PM₁₀/PM_{2.5} (filterable PM, filterable and condensable PM₁₀). PM₁₀ serves as a surrogate for PM_{2.5} throughout this permit.

- (b) Emissions from startups and shutdowns of the power block of the IGCC plant shall not exceed the following hourly limits:

Hourly Startup and Shutdown Emission Limits (24-hr average)			
Equipment	CO (lbs/hr)	PM¹ (lbs/hr)	VOC (lbs/hr)
Combustion Turbines	255.0	14.13	49.5

PM = PM, PM₁₀/PM_{2.5} (filterable PM, filterable and condensable PM₁₀). PM₁₀ serves as a surrogate for PM_{2.5} throughout this permit.

D.9.8 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from auxiliary boiler (AUXBLR) shall be limited to 0.25 pounds per million British thermal units (lbs/MMBtu).

Compliance Determination Requirements

D.9.9 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-7-6(1)]

- (a) **Combustion Turbine Trains:**

- (1) **Natural Gas Only:**

Within sixty (60) days after achieving the maximum production rate at which one of the combustion turbine trains will be operated on natural gas, but no later than 180 days after initial startup of the first combustion turbine train on natural gas, in order to demonstrate compliance with Conditions D.9.1 the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and PM_{2.5} and filterable and condensable particulates) and VOC of exhaust air from Stacks S-2a and S-2b, utilizing methods as approved by the Commissioner. (Note that PM₁₀ is being used throughout this permit as a surrogate for PM_{2.5}).

- (2) **Syngas Only:**
Within sixty (60) days after achieving the maximum production rate at which one of the combustion turbine trains will be operated on syngas, but no later than 180 days after initial startup of the first combustion turbine train to come online on syngas, in order to demonstrate compliance with Conditions D.9.1 the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and PM_{2.5}, and filterable and condensable particulates) and VOC of exhaust air from Stacks S-2a and S-2b, utilizing methods as approved by the Commissioner.
- (3) **Co-firing Syngas and Natural Gas:**
Within sixty (60) days after achieving the maximum production rate at which one of the combustion turbine trains will be operated co-firing syngas and natural gas, but no later than 180 days after initial startup of the first combustion turbine train co-firing syngas and natural gas, in order to demonstrate compliance with Conditions D.9.1 the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and PM_{2.5} and filterable and condensable particulates), VOC of exhaust air from Stacks S-2a and S-2b, utilizing methods as approved by the Commissioner.

Testing of only one of the combustion turbines shall be required during the initial performance test and during any subsequent performance test. Subsequent performance tests shall alternate the combustion turbines that are tested for each operating scenario (e.g., if CTHRSG1 is tested for each operating scenario for the initial performance tests, then CTHRSG2 will be tested for each operating scenario for the next set of subsequent performance tests.)

- (b) Within sixty (60) days after achieving the maximum production rate at which the auxiliary boiler will be operated, but no later than 180 days after initial startup of the auxiliary boiler, in order to demonstrate compliance with Conditions D.9.3, the Permittee shall conduct initial performance test to measure the CO, PM (which includes PM₁₀ and PM_{2.5} and filterable and condensable particulates), and VOC of exhaust air from Stack S-6, utilizing methods as approved by the Commissioner.
- (c) 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 obligations with regard to the performance testing required by this condition. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. The testing period for the combustion turbine trains may be extended by IDEM upon written request by the Permittee as needed to complete shakedown related to the extensive testing required to verify the new and innovative design of the IGCC process and associated equipment and perform emission testing.

D.9.10 Power Block – Startups and Shutdowns

In order to ensure compliance with Condition D.9.7(a), CO, PM and VOC emissions shall be based on a 12-month rolling average, determined on a monthly basis, using appropriate emission factors and number of specific startup and shutdown events per month.

- (a) CO, PM and VOC emissions from startup and shutdown events shall be based on the following calculation method:

- (1) Appropriate startup and shutdown emission factor for each piece of emitting equipment in the tables below shall be multiplied by the number of startup and shutdown events of each type per month X 1/2000
- (A) Each startup and shutdown emission factor is the maximum pounds of that pollutant that shall be emitted for the specified event.
- (i) The operational phases noted as phases 1 through 3 are typical of a cold startup at an IGCC plant. These emission factors represent cumulative emissions as the plant progresses through a cold startup.
- (ii) The operational phase noted as phase 4 represents hot startup of an individual IGCC train.
- (B) Each trip emission factor is the maximum pounds of that pollutant that shall be emitted for the startup trip event.

Startup and Shutdown Emission Factors Gasification Auxiliary Boiler – Natural Gas				
Equipment	Operating Phase¹	CO (lbs)	PM² (lbs)	VOC (lbs)
Startup Event				
Aux. Boiler – Natural Gas	Phase 1	790.6	71.5	51.8
Aux. Boiler – Natural Gas	Phase 2	1210.6	109.5	79.3
Aux. Boiler – Natural Gas	Phase 3	1210.6	109.5	79.3
Shutdown Event				
Aux. Boiler – Natural Gas	Partial Plant (≤ 5 hrs)	NA	NA	NA
Aux. Boiler – Natural Gas	Entire Plant (> 5 hrs)	NA	NA	NA

¹The Auxiliary Boiler is only required to be in operation during the first 50 hours of a cold startup. The Gasification Auxiliary Boiler is not required for a hot start-up of an individual gasification train.

Startup and Shutdown Emission Factors Combustion Turbines – Syngas				
Equipment	Operating Phase	CO (lbs)	PM² (lbs)	VOC (lbs)
Startup Event				
Combustion Turbines – Syngas	Phase 1	0.0	0.0	0.0
Combustion Turbines – Syngas	Phase 2	5976.2	310.7	1178.0
Combustion Turbines – Syngas	Phase 3	6433.5	367.3	1247.5
Combustion Turbines – Syngas	Phase 4	375.78	40.37	63.77

Startup and Shutdown Emission Factors Combustion Turbines – Syngas				
Equipment	Operating Phase	CO (lbs)	PM² (lbs)	VOC (lbs)
Shutdown Event				
Combustion Turbines – Syngas	Partial Plant (≤ 5 hrs)	164.6	10.8	29.0
Combustion Turbines – Syngas	Entire Plant (> 5 hrs)	0.0	0.0	0.0

² PM = PM, PM₁₀/PM_{2.5} (filterable PM, filterable and condensable PM₁₀). PM₁₀ serves as a surrogate for PM_{2.5} throughout this permit.

- (2) Total the emissions of CO, PM and VOC, respectively, from all pieces of emitting equipment for a calendar month from all startup and shutdown events occurring in that month and add to previous 12-month total; then deduct the total CO, PM and VOC emissions, respectively, from the earliest month of the previous 12-month total to determine the current 12-month total.
- (3) A description of the startup phases for the combustion turbines during a cold startup of the IGCC plant and a hot startup of an individual gasification train is provided in the following table:

Summary of Startup Phases Gasification Combustion Turbines – Syngas		
Phase	Combustion Turbines	Cold Start Timeline
1	Both CT's dormant as Gasification Process goes through initial warm-up	Duration typically 32 hours
2	Startup of first CT on natural gas as Gasification Process startup proceeds	Duration typically runs from hour 33 through hour 62 of a cold start
3	Transition of first CT to syngas combustion and startup of second CT on natural gas, then transitioning to syngas	Duration typically runs from hour 63 through remainder of a cold start
4	Restart of a single CT on natural gas, then transitioning to syngas	Durations is typically 5 hours or less

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

D.9.11 Continuous Emissions Monitoring [326 IAC 3-5]

- (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), commencing with operation of each combustion turbine train, a continuous monitoring system for the measurement of oxides of nitrogen (NO_x) emissions, and carbon monoxide (CO)

emissions which meets the performance specifications of 326 IAC 3-5-2, shall be installed, calibrated, operated, and maintained for each combustion turbine Stack S-2a and S-2b.

- (b) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), commencing with operation of each combustion turbine train, a continuous monitoring system for the measurement of sulfur dioxide (SO₂) emissions, which meets the performance specifications of 326 IAC 3-5-2, shall be installed, calibrated, operated, and maintained for each combustion turbine Stack S-2a and S-2b.
- (c) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), commencing with operation of the auxiliary boiler a continuous monitoring system for the measurement of oxides of nitrogen (NO_x) emissions that meets the performance specifications of 326 IAC 3-5-2, shall be installed, calibrated, operated, and maintained for Stack S-6.

D.9.12 Continuous Emissions Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]
[326 IAC 3-7-2] [326 IAC 3-7-3]

Whenever the SO₂ continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments, the following shall be used to provide information related to SO₂ emissions:

- (a) If the SO₂ CEM system is down for less than twenty-four (24) hours, the Permittee shall substitute an average of the quality assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data.

D.9.13 Combustion Turbine Fuel Monitoring

- (a) The Permittee shall install, operate and maintain meters to measure and record consumption of syngas and natural gas by each combustion turbine.

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

D.9.14 Record Keeping Requirements

- (a) To document the compliance status with Condition D.9.1, the Permittee shall maintain records of the following:
 - (1) Performance Testing performed for emissions of PM and VOC.
 - (2) Continuous Emissions Monitoring Data for emissions of CO.
- (b) To document the compliance status with Condition D.9.2, the Permittee shall maintain records on the following:
 - (1) Total dissolved solids (TSD) of the coolant water and gallons of coolant water pumped through the cooling tower on a monthly basis.
 - (2) Documentation that the cooling tower has been equipped with high efficiency mist eliminators.

- (c) To document the compliance status with Condition D.9.3 and D.9.4, the Permittee shall maintain records of the following:
 - (1) Vendor guarantee of maximum heat input of the auxiliary boiler and gas conditioning heater
 - (2) Vendor guarantee on lb/MMBtu emission rates for PM and VOC for the auxiliary boiler and gas conditioning heater.
 - (3) Documentation that pipeline natural gas is the only fuel used in the auxiliary boiler and gas conditioning heater.
 - (4) Initial compliance test for CO emissions from the Auxiliary Boiler.
- (d) To document the compliance status with Condition D.9.5 and D.9.6, the Permittee shall maintain records of the following:
 - (1) Documentation that the requirements of NSPS Subpart IIII have been satisfied.
 - (2) Records on periodic maintenance performed.
- (e) To document the compliance status with Condition D.9.7, the Permittee shall maintain records of the following on the combustion turbines (CTHRSG1 and CTHRSG2) and the auxiliary boiler (AUXBLR):
 - (1) Monthly emissions of CO, PM and VOC and supporting calculation; and
 - (2) 12-month rolling total of CO, PM and VOC emissions;
- (f) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.9.15 Reporting Requirements

A monthly summary of the information to document compliance with Condition D.9.13 shall be submitted quarterly using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.10 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Material handling operations consisting of:

- (1) Coal receiving and handling system, permitted in 2010, except the truck or railcar receiving and unloading station permitted in 2008, using enclosed conveyors consisting of the following equipment:
 - (A) 1200 ton per hour enclosed coal conveyor with particulate emissions from drop point to active coal pile stacking tube controlled by an insertable dust filter, exhausting to Stack S-1D.
 - (B) One (1) 1200 ton per hour truck or railcar receiving and unloading station with enclosed drop points and particulate emissions controlled by a baghouse and exhausting to Stack S-1B.
 - (C) One (1) 1,800 ton per hour reclaim tunnel, using two (2) 900 ton per hour conveyors with enclosed drop points and particulate matter controlled by a baghouse and exhausting to Stack S-2A.
 - (D) Two (2) 900 ton per hour enclosed coal conveyors with particulate matter from enclosed drop points controlled by insertable dust filters and exhausting to Stacks S-2B and S-2C.
 - (E) Two (2) enclosed coal bunkers with a total loading capacity of 1800 tons per hour and with particulate matter controlled by bin vent dust collectors exhausting to Stacks S-3A and S-3B.
- (2) Lime and soda ash handling system, permitted in 2010:
 - (A) Transfer of lime from truck or railcar by a closed pneumatic conveyor to two (2) lime storage silos, each capable of handling a maximum loading rate of 46 tons per hour and with particulate matter controlled by bin vent dust collectors exhausting to Stacks S-4A and S-4B.
 - (B) Transfer of soda ash from truck or railcar by a closed pneumatic conveyor to two (2) soda ash storage silos, each capable of handling a maximum loading rate of 46 tons per hour and with particulate matter controlled by bin vent dust collectors exhausting to Stacks S-4C and S- 4D.
- (3) Two (2) wet rod mills, identified as WRM, constructed in 2008 but permitted in 2015, rated at 2847 dscfm, exhausting through two vents, identified as WRMV1 and WRMV2.

(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.10.1 Coal Handling and Lime and Soda Ash Handling Particulate Matter BACT Requirements [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for coal receiving and unloading station emissions exhausting to Stack S-1B, coal reclaim tunnel conveyor emissions exhausting to stack S-2A, coal conveyor emissions exhausting to Stacks S-1D, S-2B and S-2C, coal bunker emissions exhausting to Stacks S-3A and S-3B and lime handling emissions exhausting to Stacks S-4A and S-4B, and Soda Ash handling emissions exhausting to Stacks S-4C and S-4D shall be as follows:

- (a) Best management practices.
- (b) PM emissions from the high efficiency baghouse, insertable dust filters and bin vent dust collectors shall not exceed a grain loading of 0.003 grains per dry standard cubic foot (gr/dscf).
- (c) PM/PM₁₀/PM_{2.5} emissions shall not exceed;
 - (A) 0.66 lbs/hr for the reclaim tunnel baghouse (Stack S-2A);
 - (B) 0.34 lbs/hr for the coal receiving and unloading station baghouse (Stack S-1B);
 - (C) 0.064 lb/hr for the bin vent dust collector associated with the coal bunker, identified as coal bunker #1 (Stack S-3A);
 - (D) 0.064 lb/hr for the bin vent dust collector associated with the coal bunker, identified as coal bunker #2 (Stack S-3B);
 - (E) 0.051 lb/hr for the insertable dust filter on the conveyor drop point, identified as Conveyor MH-002 Head Chute (Stack S-1D);
 - (F) 0.051 lb/hr for the insertable dust filter on the conveyor drop point, identified as Conveyor MH-003A Head Chute (Stack S-2B);
 - (G) 0.051 lb/hr for the insertable dust filter on the conveyor drop point, identified as Conveyor MH-003B Head Chute (Stack S-2C);
 - (H) 0.019 lb/hr for the bin vent dust collector associated with the lime silo, identified as Lime Silo #1 (Stack S-4A);
 - (I) 0.019 lb/hr for the bin vent dust collector associated with the lime silo, identified as Lime Silo #2 (Stack S-4B);
 - (J) 0.019 lb/hr for the bin vent dust collector associated with the soda ash silo #1 (Stack S-4C); and

- (K) 0.019 lb/hr for the bin vent dust collector associated with the soda ash silo #2 (Stack S-4D).
- (d) Pursuant to PSD/Significant Source Modification No. 083-35647-00003 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the Best Available Control Technologies (BACT) for the Wet Rod Mill Operation, identified as WRM shall be as follows:
 - (1) The use of Good Design and Proper operation of the Wet Rod Mill.
 - (2) The PM, PM₁₀ and PM_{2.5} emission from the two (2) wet rod mills shall not exceed 0.117 pounds of hour, each.

D.10.2 Particulate Emissions Limitation for manufacturing Processes [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the coal receiving and handling and lime and soda ash handling shall not exceed the pounds per hour rate (E) when operating at a process weight of (P) tons per hour as determined by the following equation:

Interpolation 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 61 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.

Particulate Emission Limitations for Manufacturing Processes			
Emission Point	Unit Description	Process Weight Rate (TPH)	E (lb/hr)
Stack S-2A	Reclaim Tunnel	1800	85.4
Stack S-1B	Coal receiving and unloading station	1200	80
Stack S1-D	Conveyor MH-002 Head Chute	1200	80
Stack S-2B	Conveyor MH-003A Head Chute	900	76.2
Stack S-2C	Conveyor MH-003B Head Chute	900	76.2
Stack S3-A	Coal Bunker #1	1800	85.4
Stack S-3B	Coal Bunker #2	1800	85.4
Stack S-4A	Lime Silo #1	46	43.8
Stack S-4B	Lime Silo #2	46	43.8
Stack S-4C	Soda Ash Silo #1	46	43.8

Particulate Emission Limitations for Manufacturing Processes			
Emission Point	Unit Description	Process Weight Rate (TPH)	E (lb/hr)
Stack S-4D	Soda Ash Silo #2	46	43.8

D.10.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for the baghouses. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.10.4 Particulate Control [326 IAC 2-7-6(6)][326 IAC 6-3-2][326 IAC 2-2]

- (a) Except as otherwise provided by statute or rule or in this permit, the baghouses, dust collectors and dust filters for PM control shall be in operation and control emissions at all times the associated coal, reclaim tunnel, receiving and unloading station, coal conveyors, bunkers, and lime and soda ash facilities are in operation.
- (b) The Permittee shall possess a guarantee from the Vendor of each baghouse, dust collector and dust filter that the control device meets a grain outlet loading of 0.003 grains/dscf.

D.10.5 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-7-6(1)]

- (a) Within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of the coal reclaim operations, in order to demonstrate compliance with Condition D.10.1, the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and PM_{2.5} and filterable and condensable particulates), of exhaust air from Stack S-2A, utilizing methods as approved by the Commissioner.
- (b) Within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of coal receiving and unloading station, in order to demonstrate compliance with Condition D.10.1, the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and PM_{2.5} and filterable and condensable particulates), of exhaust air from Stack S-1B, utilizing methods as approved by the Commissioner.
- (c) Within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of coal conveying operations, in order to demonstrate compliance with Condition D.10.1, the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and PM_{2.5} and filterable and condensable particulates), of exhaust air from, Stacks S-1D, S-2B and S-2C, utilizing methods as approved by the Commissioner.
- (d) Within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of the coal bunker operations, in order to demonstrate compliance with Condition D.10.1, the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and

PM_{2.5} and filterable and condensable particulates), of exhaust air from Stacks S-3A and S-3B, utilizing methods as approved by the Commissioner.

- (e) Within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of the lime and soda ash handling operations, in order to demonstrate compliance with Condition D.10.1, the Permittee shall conduct initial performance test to measure the PM (which includes PM₁₀ and PM_{2.5} and filterable and condensable particulates), of exhaust air from Stack S4-A, S-4B, S-4C and S-4D, utilizing methods as approved by the Commissioner.

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 obligations with regard to the performance testing required by this condition. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

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

D.10.6 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)] [40 CFR 64]

- (a) Visible emission notations of each baghouse, dust collector, and dust filter exhausts shall be performed once per week during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) Visible emission notations of the coal unloading station(s) doorways and drop points shall be performed once per day during normal daylight operations. A trained employee shall record whether any emissions are observed.
- (c) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.
- (d) 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.
- (e) 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.
- (f) If any emissions are observed from the coal unloading station doorways and drop points, the Permittee shall take reasonable response steps. Visible 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. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

- (g) If abnormal emissions are observed at any baghouse exhaust, the Permittee shall take reasonable response steps. 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. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

D.10.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across each of the baghouses, dust collectors and dust filters used in conjunction with the coal reclaim operations, receiving and unloading station, coal conveyors, coal bunkers and lime and soda ash facilities at least once per week when the facilities are in operation. When for any one reading the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. 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. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.
- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, and shall be calibrated in every 6 months. The specifications shall be available on site with the Preventive Maintenance Plan.

D.10.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouses controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the coal transfer system. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.10.9 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.10.6 - Visible Emissions Notations, the Permittee shall maintain records of the visible emission notations of the transfer points, baghouse dust collector and dust filter exhausts and railcar unloading stations. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) In order to document the compliance status with Condition D.10.7 - Baghouse Parametric Monitoring, the Permittee shall maintain records of the pressure drop across each baghouse dust collector and dust filter. 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 record keeping required by this condition.

SECTION D.11 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Fugitive dust emissions consisting of:

- (1) Coal storage piles including one (1) inactive coal pile identified as CP_IN and one (1) active coal pile identified as CP_AC.
- (2) Slag storage pile and slag handling
- (3) Paved roads/Parking Areas

(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.11.1 Coal Storage Pile PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for fugitive emissions of PM/PM₁₀/PM_{2.5} from coal storage piles designated as CP_IN and CP_AC shall be:

- (a) Best management practices
- (b) Wet suppression techniques shall be used on an as-needed basis to minimize fugitive dust.
- (c) Coal compaction techniques shall be used to further control PM.

D.11.2 Slag Storage Pile and Slag Handling PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for fugitive emissions of PM/PM₁₀/PM_{2.5} emissions from the slag storage pile and handling operations shall be:

- (a) Best management practices
- (b) Wet suppression techniques shall be used on an as-needed basis to minimize fugitive dust.
- (c) Water added to slag for processing shall be used for added PM control.

D.11.3 Paved Roads/Parking Areas PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for fugitive emissions of PM/PM₁₀/PM_{2.5} emissions from paved roads shall be:

- (a) Best management practices
- (b) The visible emissions from paved roads/parking areas shall not exceed 15% opacity.
- (c) Vehicle speeds on paved roads shall be limited to 20 mph.

- (d) Wet suppression techniques shall be used on an as-needed basis, but at a minimum of once per week except when ambient air temperature is below 32°F.
- (e) Removal of significant deposits of soil on paved roads and investigation and proper clean-up of incidents of material spillage on paved roads that may create fugitive dust.

Compliance Determination Requirements [326 IAC 2-1.1-11]

D.11.4 Fugitive Dust Control Plan [326 IAC 2-2]

In order to ensure compliance Conditions D.11.1, D.11.2 and D.11.3, the Permittee shall maintain, update, comply, and implement its Fugitive Dust Control Plan.

- (a) At a minimum, the fugitive dust plan shall address any fugitive emissions from paved roads, parking areas, and wind erosion of coal/slag piles.
- (b) The job title and telephone number on site of the person responsible for implementing the fugitive dust plan shall be provided to IDEM, OAQ.
- (c) Paved roads/parking areas shall be controlled by the use of water flushing and shall be performed on an as needed basis.
- (d) Coal and slag storage piles shall be watered on an as-needed basis to eliminate wind erosion.

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

D.11.5 Paved Roads/Parking Areas [326 IAC 2-2]

The Permittee shall perform the following opacity evaluations once per month:

- (a) The opacity from paved roads/parking areas shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass.
- (b) The three (3) opacity readings for each vehicle pass shall be taken as follows:
 - (i) The first will be taken at the time of emission generation.
 - (ii) The second will be taken five (5) seconds later.
 - (iii) The third will be taken five (5) seconds later or ten (10) seconds after the first.
- (c) The three (3) readings shall be taken at a point of maximum opacity.
- (d) The readings shall be taken at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.
- (e) Each reading shall be taken approximately four (4) feet above the surface of the paved road/parking area.

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

D.11.6 Record Keeping Requirements

- (a) The Permittee shall maintain records of the activities required by Conditions D.11.1, D.11.2 and D.11.3 and make these records available upon request to IDEM, OAQ and the USEPA.
- (b) Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

SECTION E.1 TITLE IV ACID RAIN PROGRAM CONDITIONS

ORIS Code: 1004

Emissions Unit Description:

New Emission Units at the IGCC Plant:

- (a) Two (2) combined cycle combustion turbine trains each consisting of a combustion turbine and a heat recovery steam generator, designated as CTHRSG1 and CTHRSG2, permitted in 2008, using diffusion combustors firing either syngas, natural gas, or combined syngas and natural gas, and exhausting to Stacks S-2a and S-2b. The turbine trains use nitrogen diluent injection (to control NOX) when firing syngas, steam injection when firing natural gas, and nitrogen diluent injection and steam injection when co-firing syngas and natural gas.

Nominal Heat Input Capacity (HHV) for each Combustion Turbine Train	
Fuel	MMBtu/hr
Syngas Only	2106
Natural Gas Only	2109
Combined Syngas and Natural Gas	2129

Stacks S-2a and S-2b have continuous emissions monitors (CEMs) for carbon monoxide (CO), nitrogen oxides (NOX) and sulfur dioxide (SO2). Mercury (Hg) will be monitored per requirements of 40 CFR Part 60, Subpart Da.

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

Acid Rain Program

E.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 incorporated by reference.

E.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 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: 1004

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)

New Emission Units at the IGCC Plant:

- (a) Two (2) combined cycle combustion turbine trains each consisting of a combustion turbine and a heat recovery steam generator, designated as CTHRSG1 and CTHRSG2, permitted in 2008, using diffusion combustors firing either syngas, natural gas, or combined syngas and natural gas, and exhausting to Stacks S-2a and S-2b. The turbine trains use nitrogen diluent injection (to control NO_x) when firing syngas, steam injection when firing natural gas, and nitrogen diluent injection and steam injection when co-firing syngas and natural gas.

Nominal Heat Input Capacity (HHV) for each Combustion Turbine Train	
Fuel	MMBtu/hr
Syngas Only	2106
Natural Gas Only	2109
Combined Syngas and Natural Gas	2129

Stacks S-2a and S-2b have continuous emissions monitors (CEMs) for carbon monoxide (CO), nitrogen oxides (NO_x) and sulfur dioxide (SO₂). Mercury (Hg) will be monitored per requirements of 40 CFR Part 60, Subpart Da.

- (b) One (1) natural gas fired auxiliary boiler designated as AUXBLR, permitted in 2008, with a maximum heat input capacity of 300 MMBtu/hr (high heating value basis) and exhausting to Stack S-6.

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

F.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.

F.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 unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit shall operate each source and unit in compliance with this CAIR permit.
- (b) The CAIR NO_x unit(s), CAIR SO₂ unit(s), and CAIR NO_x ozone season unit(s) subject to this CAIR permit are AUXBLR, CTHRSG1 and CTHRSG2.

F.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 F.4.1, Nitrogen Oxides Emission Requirements, Condition F.4.2, Sulfur Dioxide Emission Requirements, and Condition F.4.3, Nitrogen Oxides Ozone Season Emission Requirements.

F.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.

F.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 each 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 24-2-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-2-4(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.

F.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 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 24-3-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-3-4(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 ozone season 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 ozone season 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.

F.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.

F.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.

F.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
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

F.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 unit.

F.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).

F.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.

SECTION G.1 New Source Performance Standards (NSPS) Requirements [40 CFR 60]

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

The power block includes the following, among other emission units:

- (1) Two (2) combined cycle combustion turbine trains each consisting of a combustion turbine and a heat recovery steam generator, designated as CTHRSG1 and CTHRSG2, permitted in 2008, using diffusion combustors firing either syngas, natural gas, or combined syngas and natural gas, and exhausting to Stacks S-2a and S-2b. The turbine trains use nitrogen diluent injection (to control NO_x) when firing syngas, steam injection when firing natural gas, and nitrogen diluent injection and steam injection when co-firing syngas and natural gas.

Nominal Heat Input Capacity (HHV) for each Combustion Turbine Train	
Fuel	MMBtu/Hr
Syngas Only	2106
Natural Gas Only	2109
Combined Syngas and Natural Gas	2129

Stacks S-2a and S-2b have continuous emissions monitors (CEMs) for carbon monoxide (CO), nitrogen oxides (NO_x) and sulfur dioxide (SO₂). Mercury (Hg) will be monitored per requirements of 40 CFR Part 60, Subpart Da.

Under the NSPS for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, (40 CFR 60, Subpart Da), these emission units are considered to be new integrated gasification combined cycle electric utility steam generating units.

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

New Source Performance Standards Requirements [40 CFR 60]

G.1.1 General Provisions Relating to NSPS Subpart Da [326 IAC 12-1] [40 CFR 60, Subpart A]

- (a) The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart Da.
- (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

G.1.2 NSPS for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 [40 CFR Part 60, Subpart Da]

Pursuant to 40 CFR Part 60, Subpart Da, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Da, upon startup of the affected units, as follows:

- (1) 40 CFR 60.40Da
- (2) 40 CFR 60.41Da
- (3) 40 CFR 60.42Da
- (4) 40 CFR 60.43Da
- (5) 40 CFR 60.44Da
- (6) 40 CFR 60.45Da
- (7) 40 CFR 60.46Da [Reserved]
- (8) 40 CFR 60.47Da
- (9) 40 CFR 60.48Da
- (10) 40 CFR 60.49Da
- (11) 40 CFR 60.50Da
- (12) 40 CFR 60.51Da
- (13) 40 CFR 60.52Da

SECTION G.2 New Source Performance Standards (NSPS) Requirements [40 CFR 60]

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

- (4) One (1) natural gas fired auxiliary boiler designated as AUXBLR, permitted in 2008, with a maximum heat input capacity of 300 MMBtu/hr (high heating value basis) and exhausting to Stack S-6.

Under the NSPS for Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Db), the auxiliary boiler is considered to be a natural gas fired steam generating unit commencing construction after February 28, 2005.

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

New Source Performance Standards Requirements [40 CFR 60]

G.2.1 General Provisions Relating to NSPS Subpart Db [326 IAC 12-1] [40 CFR 60, Subpart A]

- (a) The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart Db.
- (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

G.2.2 NSPS for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Db]

Pursuant to 40 CFR Part 60, Subpart Db, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Db, upon startup of the affected unit, as follows:

- (1) 40 CFR 60.40b
- (2) 40 CFR 60.41b
- (3) 40 CFR 60.42b
- (4) 40 CFR 60.43b
- (5) 40 CFR 60.44b
- (6) 40 CFR 60.45b
- (7) 40 CFR 60.46b
- (8) 40 CFR 60.48b
- (9) 40 CFR 60.49b

SECTION G.3 New Source Performance Standards (NSPS) Requirements [40 CFR 60]

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

Coal receiving and handling system, to be permitted in 2010, except the truck or railcar receiving and unloading permitted in 2008, using enclosed conveyors consisting of the following equipment:

- (A) 1200 ton per hour enclosed coal conveyor with particulate emissions from drop point to active coal pile stacking tube controlled by an insertable dust filter, exhausting to Stack S-1D.
- (B) One (1) 1200 ton per hour truck or railcar receiving and unloading station with enclosed drop points and particulate emissions controlled by a baghouse and exhausting to Stack S-1B.
- (C) One (1) 1,800 ton per hour reclaim tunnel, using two (2) 900 ton per hour conveyors with enclosed drop points and particulate matter controlled by a baghouse and exhausting to Stack S-2A.
- (D) Two (2) 900 ton per hour enclosed coal conveyors with particulate matter from enclosed drop points controlled by insertable dust filters and exhausting to Stacks S-2B and S-2C.
- (E) Two (2) enclosed coal bunkers with a total loading capacity of 1800 tons per hour and with particulate matter controlled by bin vent dust collectors exhausting to Stacks S-3A and S-3B.

Under the NSPS for Coal Preparation Plants (40 CFR 60, Subpart Y), these emission units are considered to be affected facilities in a coal preparation plant that will commence construction after October 24, 1974.

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

New Source Performance Standards (NSPS) Requirements]

G.3.1 General Provisions Relating to NSPS Subpart Y [326 IAC 12-1] [40 CFR 60, Subpart A]

- (a) The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart Y.
- (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

G.3.2 NSPS for Coal Preparation Plants [40 CFR 60, Subpart Y]

Pursuant to 40 CFR 60, Subpart Y, the Permittee shall comply with the provisions of 40 CFR 60, Subpart Y, upon startup of the affected units, as follows:

- (1) 40 CFR 60.250
- (2) 40 CFR 60.251
- (3) 40 CFR 60.252
- (4) 40 CFR 60.253
- (5) 40 CFR 60.254

SECTION G.4 RESERVED

SECTION G.5 New Source Performance Standards (NSPS) Requirements [40 CFR 60]

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

- (i) One (1) diesel-fired emergency generator designated as EMDSL, permitted in 2008, with a maximum rating of 2200 brake-horsepower (Bhp), exhausting to Stack S-7.

Under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII), this emission unit is considered a model year 2007 or later emergency stationary internal combustion engine.

- (j) One (1) diesel-fired emergency fire pump (FIRPMP), permitted in 2008, with a maximum rating of 420 brake-horsepower (Bhp) exhausting to stack S-8.

Under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII), this emission unit is considered to be a stationary CI ICE commencing construction after July 11, 2005, where the stationary CI ICE is manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

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

New Source Performance Standards Requirements [40 CFR 60]

G.5.1 General Provisions Relating to NSPS Subpart IIII [326 IAC 12-1] [40 CFR 60, Subpart A]

- (a) The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart IIII.
- (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

G.5.2 NSPS for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII]

Pursuant to 40 CFR Part 60, Subpart IIII, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart IIII, upon startup of the affected units, as follows:

- (1) 40 CFR 60.4200
- (2) 40 CFR 60.4201
- (3) 40 CFR 60.4202
- (4) 40 CFR 60.4203
- (5) 40 CFR 60.4204
- (6) 40 CFR 60.4205

- (7) 40 CFR 60.4206
- (8) 40 CFR 60.4207
- (9) 40 CFR 60.4208
- (10) 40 CFR 60.4209
- (11) 40 CFR 60.4210
- (12) 40 CFR 60.4211
- (13) 40 CFR 60.4212
- (14) 40 CFR 60.4213
- (15) 40 CFR 60.4214
- (16) 40 CFR 60.4215
- (17) 40 CFR 60.4216
- (18) 40 CFR 60.4217
- (19) 40 CFR 60.4218
- (20) 40 CFR 60.4219
- (21) Tables to Subpart IIII of Part 60

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Duke Energy Indiana - Edwardsport Generating Station
Source Address: 15424 East State Road 358, Edwardsport, Indiana 47528
Part 70 Permit No.: T083-27138-00003

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:

Phone:

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 - Edwardsport Generating Station
Source Address: 15424 East State Road 358, Edwardsport, Indiana 47528
Part 70 Permit No.: T083-27138-00003

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - 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
Type of Pollutants Emitted: TSP, PM-10, 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 DATA SECTION**

**PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Duke Energy Indiana, Inc. - Edwardsport Generating Station
Source Address: 15424 East State Road 358, Edwardsport, Indiana 47258
Part 70 Permit No.: T 083-27138-00003

Emission Unit: _____

<input type="checkbox"/> Natural Gas Only
<input type="checkbox"/> Alternate Fuel burned
From: _____ To: _____

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: _____
Phone: _____
Date: _____

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

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

Part 70 Quarterly Report

Source Name: Duke Energy Indiana - Edwardsport Generating Station
Source Address: 15424 East State Road 358, Edwardsport, Indiana 47528
Part 70 Permit No.: T083-27138-00003
Emission Unit: _____
Parameter: _____
Limit: _____

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

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

Part 70 Quarterly Report

Source Name: Duke Energy Indiana - Edwardsport Generating Station
 Source Address: 15424 East State Road 358, Edwardsport, Indiana 47528
 Part 70 Permit No.: T083-27138-00003
 Emission Unit: _____
 Parameter: _____
 Limit: _____

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
 Deviation has been reported on:

Submitted by: _____
 Title / Position: _____
 Signature: _____
 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 - Edwardsport Generating Station
 Source Address: 15424 East State Road 358, Edwardsport, Indiana 47528
 Part 70 Permit No.: T083-27138-00003

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. 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. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does 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".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> 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: _____

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

**Technical Support Document (TSD) for a PSD/Part 70 Significant
Source Permit Modification**

Source Description and Location

Source Name:	Duke Energy Indiana - Edwardsport Generating Station
Source Location:	15424 East State Rd 358, Edwardsport, IN 47258
County:	Knox
SIC Code:	4911
Operation Permit No.:	T 083-27138-00003
Operation Permit Issuance Date:	April 3, 2013
PSD/Significant Source Modification No.:	SSM 083-35647-00003
Significant Permit Modification No.:	SPM 083-35669-00003
Permit Reviewer:	Josiah Balogun

Existing Approvals

The source was issued Part 70 Operating Permit No. 083-27138-00003 on April 3, 2013. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Knox County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Knox County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
 Knox County has been classified as attainment for PM_{2.5}. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**
 Knox County has been classified as attainment or unclassifiable in Indiana for list the pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a power plant it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (ton/yr)
PM	> 100
PM ₁₀	> 100
PM _{2.5}	> 100
SO ₂	> 100
NO _x	> 100
VOC	< 100
CO	> 100
HAPs	
Single HAP	> 10
Total HAPs	> 25

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

- (b) These emissions are based upon Part 70 operating permit renewal No. 083-27138-00003, issued on April 3, 2015.
- (c) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Duke Energy Indiana - Edwardsport Generating Station on March 27, 2015, relating to the modification of the coal grinding operation, which includes two (2) wet rod mills that produce coal slurry which is the input to the gasification process. The two (2) wet rod mills were not properly permitted in the initial PSD permit No. 083-23529-00003, issued on January 25, 2008.

The following is a list of the emission units;

- (a) Two (2) wet rod mills, identified as WRM, constructed in 2008 but permitted in 2015, rated at 2847 dscfm, exhausting through two vents, identified as WRMV1 and WRMV2.

History

On August 18, 2006, the Office of Air Quality (OAQ) received an application from Duke Energy Indiana to construct and operate an Integrated Gasification and Combined Cycle (IGCC) electric generating plant at the Edwardsport generating station site, located at 15424 East State Rd 358, Edwardsport, Indiana, in Knox County. The Edwardsport Generating Station is classified as a major stationary source since the station is defined as a Fossil-Fuel Fired Steam Electric Plant of More Than Two Hundred Fifty Million (250,000,000) British Thermal Units Per Hour Heat Input, and has the potential to emit, more than one hundred (100) tons per year of at least one regulated NSR pollutant (326 IAC 2-2-1(gg)(1)).

The IGCC project was considered a modification to an existing major stationary source and was evaluated under 326 IAC 2-2-2(d)(1) and (2) to determine whether or not the project triggers the Prevention of Significant Deterioration (PSD) requirements (326 IAC 2-2). This requires the project to be evaluated as to whether it causes both a significant emissions increase and a significant net emissions increase.

Based on that evaluation done, the Edwardsport IGCC project is subject to 326 IAC 2-2 because, pursuant to 326 IAC 2-2-1(xx), the net emissions increase will equal or exceed the significant increase thresholds of one hundred (100) tons per year of carbon monoxide (CO), forty (40) tons per year of volatile organic compounds (VOC), twenty-five (25) tons per year of particulate matter (PM), and fifteen (15) tons per year of PM₁₀.

The permit, PSD/Significant Source Modification No. 083-23529-00003, was issued on January 25, 2008. A corresponding Significant Permit Modification No. T083-23531-00003 authorizing operation of the IGCC plant was issued by the IDEM, OAQ on March 11, 2008.

Duke Energy Indiana, identified the coal grinding operation, which includes two (2) wet rod mills that produce coal slurry, as an insignificant source of emissions and an insignificant activity in the original permit application with permit No. 083-23529-00003, issued on January 25, 2008. During the IGCC design phase, it was determined by Duke that there would be no significant amount of PM emissions from the two atmospheric vents associated with this operation since the operation involved a wet process. During the final permitting of the IGCC plant, a detailed listing of insignificant activities was not included in the permits issued by IDEM to Duke which allowed for the construction and operation of the IGCC plant.

During the initial commissioning of the IGCC plant following construction, Duke concluded that a continuous water spray of the screening apparatus for the slurry output of the Wet Rod Mills in

place of the originally planned intermittent spraying, would improve the slurry production process. Even with this change in method of operation, Duke still believed the Wet Rod Mill operation to be an insignificant source of emissions due to the wet nature of the process.

Following commencement of commercial operation of the IGCC plant, an IDEM site inspection was performed in August 2013. During the inspection, the IDEM representative observed the vents from the wet rod mill operations and made a determination that the rod mill operations have the potential to emit particulate matter. IDEM subsequently requested that Duke perform stack testing of the Wet Rod Mill operation to determine whether or not particulate matter (PM) may be present in the exhaust gas associated with this operation. Testing performed by Duke detected emissions of PM from the vents from the Wet Rod Mill operation; however the measured mass emission rate was less than 0.25 pounds per hour for the two vents associated with the two wet rod mills comprising the Wet Rod Mill operation. At continuous operation, 24 hours per day and 365 days per year, this would translate to approximately 1.0 ton per year of potential emissions of PM. For purposes of this application, if not specifically referenced, any reference to PM also includes PM₁₀ and PM_{2.5}.

Though the particulate emissions from the two (2) Wet Rod Mills are at exemption level, this modification will be considered part of the original PSD/SSM permit that was permitted in 2008.

Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Increase in PTE Before Controls of the Modification	
Pollutant	Potential To Emit (ton/yr)
PM	1.03
PM ₁₀	1.03
PM _{2.5}	1.03
SO ₂	0
VOC	0
CO	0
NO _x	0

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

This source modification is subject to 326 IAC 2-7-10.5, though the particulate emissions are below the exemption levels this modification is evaluated as part of the original PSD permit application. The initial IGCC project with permit No. 083-23529-00003, issued on January 25, 2008 resulted in a significant net emission increase for carbon monoxide (CO), particulate matter (PM), and volatile organic compounds (VOC), as well as the potential to emit nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions being greater than twenty-five (25) tons per year before control. Therefore, pursuant to 326 IAC 2-7-10.5(g)(1) and (4) this modification is Subject to PSD/Significant Source Modification. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12, because the modifications requires a case-by-case determination of an emission limitation in a Part 70 Operating Permit.

The only change to the existing Part 70 Operating Permit for Duke Energy Indiana’s Edwardsport Generating Station, that would occur as a result of this proposed PSD/Significant Source Modification No. SSM 083-35647-00003, and the proposed Significant Permit Modification No. SPM 083-35669-00003, if approved and issued, are limited in scope to the provisions of Section D.10 and corresponding provisions of Section A.2 of these proposed permits that address a coal handling equipment; the Wet Rod Mills.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process / Emission Unit	Project Emissions (ton/yr)							
	PM	PM ₁₀	PM _{2.5} *	SO ₂	NO _x	VOC	CO	Pb
Two (2) Wet Rod Mills	1.03	1.03	1.03	--	--	--	--	--
Total for Modification	1.03	1.03	1.03	--	---	--	--	--
Significant levels	25	15	10	40	40	40	100	0.6

*PM_{2.5} listed is direct PM_{2.5}.

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court’s decision. U.S. EPA’s guidance states that U.S. EPA will no longer require PSD or Title V permits for sources “previously classified as ‘Major’ based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

The original modification to an existing major PSD stationary source (the construction of the IGCC plant) was major because the emissions increases of PM/PM10/PM2.5 were equal to or greater than the PSD significant level. This modification is part of the initial IGCC project with permit No. 083-23529-00003, issued on January 25, 2008 and an addition to the project, with permit No. 083-28683-00003, issued on March 1, 2010. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do apply to these emission units.

Federal Rule Applicability Determination

There are no federal rules applicable to this source for this modification:

NSPS:

- (a) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.
- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
 - (2) is subject to an emission limitation or standard for that pollutant; and
 - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The two (2) wet rod mills have the potential to emit of criteria pollutants (uncontrolled) less than the CAM major source thresholds of 100 tons per year. Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the wet rod mills as part of this modification.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)

PSD applicability is discussed under the Permit Level Determination – PSD section.

326 IAC 2-2-3 (PSD BACT: Control Technology Review Requirements)

Pursuant to 326 IAC 2-2-3, the Best Available Control Technology (PSD BACT) for the wet rod mill operation shall be as follows:

- (1) The use of Good Design and Proper operation of the Wet Rod Mill.
- (2) The PM, PM₁₀ and PM_{2.5} emission from the two (2) wet rod mills shall not exceed 0.117 pounds of hour, each.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the two (2) wet rod mills will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-7-6(5) (Annual Compliance Certification)

The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The potential particulate emissions from two (2) wet rod mills are less than 0.551 pounds per hour, each. Pursuant to 326 IAC 6-3-1(b)(14), these emission units are exempt from the requirements of 326 IAC 6-3 rule.

326 IAC 2-2-4 (Air Quality Analysis Requirements)

Section (4)(a) of this rule, requires that the PSD application shall contain an analysis of ambient air quality in the area that the major stationary source would affect for pollutants that are emitted at major levels or significant amounts. Duke Energy Edwardsport has submitted an air quality analysis, which has been evaluated by IDEM's Technical Support and Modeling Section. See details in Appendix C.

Since this was done before, NAAQs modeling for the appropriate time-averaging period for PM_{2.5} was conducted to include the Wet Rod Mills and compared to the respective NAAQs limit. All maximum-modeled PM_{2.5} concentrations were compared to the respective NAAQS limit. All maximum-modeled concentrations during the five years were below the 24-hour and annual NAAQS limits and no further modeling was required.

326 IAC 2-2-5 (Air Quality Impact Requirements)

326 IAC 2-2-5(e)(1) of this rule, requires that the air quality impact analysis required by this section shall be conducted in accordance with the following provisions:

- (1) Any estimates of ambient air concentrations used in the demonstration processes required by this section shall be based upon the applicable air quality models, data bases, and other requirements specified in 40 CFR Part 51, Appendix W (Requirements for Preparation, Adoption, and Submittal of Implementation Plans, Guideline on Air Quality Models).
- (2) Where an air quality impact model specified in the guidelines cited in subdivision (1) is inappropriate, a model may be modified or another model substituted provided that all applicable guidelines are satisfied.
- (3) Modifications or substitution of any model may only be done in accordance with guideline documents and with written approval from U.S. EPA and shall be subject to public comment procedures set forth in 326 IAC 2-1.1-6.

326 IAC 2-2-6 (Increment Consumption Requirements)

326 IAC 2-2-6(a) requires that any demonstration under section 5 of this rule shall demonstrate that increased emissions caused by the proposed major stationary source will not exceed eighty percent (80%) of the available maximum allowable increases (MAI) over the baseline concentration of particulate matter indicated in subsection (b)(1) of this rule.

326 IAC 2-2-7 (Additional Analysis, Requirements)

326 IAC 2-2-7(a) requires an analysis of the impairment to visibility, soils and vegetation that would result from emissions from the proposed source. This analysis is to include the air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the source. See detailed analysis in Appendix C.

326 IAC 2-2-10 (Source Information)

The Permittee has submitted all information necessary to perform the analysis or make the determination required under this rule.

326 IAC 2-2-12 (Permit Rescission)

The permit issued under this rule shall remain in effect unless and until it is rescinded, modified, revoked, or it expires in accordance with 326 IAC 2-1.1-9.5 or section 8 of this rule.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no Compliance Determination and Monitoring Requirements applicable to this modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 083-27138-00003. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1: The two (2) wet rod mills were not properly permitted in the initial PSD permit No. 083-23529-00003, issued on January 25, 2008. The two (2) wet rod mills have been added to the permit with its conditions in Section A.2 and Section D.10.

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:

(c) Material handling operations consisting of:

(1) Coal receiving and handling system, permitted in 2010, except the truck or railcar receiving and unloading station permitted in 2008, using enclosed conveyors consisting of the following equipment:

(3) Two (2) wet rod mills, identified as WRM, constructed in 2008 but permitted in 2015, rated at 2847 dscfm, exhausting through two vents, identified as WRMV1 and WRMV2.

SECTION D.10 EMISSIONS UNIT OPERATION CONDITIONS

<p>Emissions Unit Description: Material handling operations consisting of:</p> <p>(1) Coal receiving and handling system, permitted in 2010, except the truck or railcar receiving and unloading station permitted in 2008, using enclosed conveyors consisting of the following equipment:</p> <p>*****</p> <p>(3) Two (2) wet rod mills, identified as WRM, constructed in 2008 but permitted in 2015, rated at 2847 dscfm, exhausting through two vents, identified as WRMV1 and WRMV2.</p> <p>(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)</p>

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

D.10.1 Coal Handling and Lime and Soda Ash Handling Particulate Matter BACT Requirements
[326 IAC 2-2-3]

(d) Pursuant to PSD/Significant Source Modification No. 083-35647-00003 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the Best Available Control Technologies (BACT) for the Wet Rod Mill Operation, identified as WRM shall be as follows:

- (1) The use of Good Design and Proper operation of the Wet Rod Mill.**
- (2) The PM, PM₁₀ and PM_{2.5} emission from the two (2) wet rod mills shall not exceed 0.117 pounds of hour, each.**

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

Change 1: After the installation and operations of the IGCC Plant at Duke Energy Indiana Edwardsport plant, the following emissions units at the Coal-Fired Power Plant have been removed and no longer exist at the Plant. Therefore, these emission unit and all conditions associated with these emission units have been deleted from the permit in Section A.2, D.1, D.2, D.3, D.4, D.5 and D.6. All these sections have been marked as "Reserved" in the permit. The coal fired boilers and the No. 2 fuel oil-fired boiler have been deleted from Section E.1 - Acid Rain and Section F - CAIR of the permit accordingly.

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 Emission Units at the Existing Coal-Fired Power Plant to be retired prior to operation of the IGCC Plant:

- ~~(a) One (1) No. 2 fuel oil-fired boiler, identified as Boiler No. 6-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr) and exhausting to stack 6-1.~~

- (b) ~~One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-1. Stack 7-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).~~
- (c) ~~One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-2. Stack 7-2 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).~~
- (d) ~~One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 8-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 8-1. Stack 8-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).~~
- (e) ~~A coal transfer system, with a nominal throughput of 300 tons of coal per hour, construction commenced prior to 1974, consisting of the following equipment:
 - (1) ~~One (1) unloading station for trucks, with a drop point to a coal storage pile identified as F-1, with the drop point, identified as DP-1, controlled by a partial enclosure, and exhausting to the ambient air.~~
 - (2) ~~One (1) storage pile area, having an estimated storage capacity of 70,000 tons, with fugitive emissions controlled by watering as needed.~~
 - (3) ~~One (1) enclosed hopper, with a drop point identified as DP-3 to a conveyor identified as Conveyor C, with each drop point enclosed and exhausting to the ambient air.~~
 - (4) ~~An enclosed conveyor system, with six (6) drop points identified as DP-3, DP-4, DP-5, DP-6, DP-7, and DP-8, with each drop point enclosed.~~
 - (5) ~~Three (3) enclosed coal bunkers, each with a normal nominal capacity of 15,000 tons of coal. Bunkers are loaded via a conveyor tripper system with a total capacity of 300 tons per hour to the Boilers 7-1, 7-2 and 8-1 bunkers. Particulate matter generated from loading bunkers is controlled by enclosure and exhausts to the ambient air.~~~~

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):

- (b) **RESERVED** Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3]

SECTION D.1 RESERVED EMISSIONS UNIT OPERATION CONDITIONS

<p>Emissions Unit Description: RESERVED</p> <p><u>Emission Units at the Existing Coal-Fired Power Plant to be Retired prior to operation of the IGCC Plant:</u></p> <p>One (1) No. 2 Fuel oil-fired boiler, identified as Boiler No. 6-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr) and exhausting to stack 6-1.</p> <p>(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)</p>
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Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 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, the PM emissions from the Boiler No. 6-1 stack shall not exceed 0.223 pound per million Btu heat input (lb/MMBtu).~~

D.1.2 Sulfur Dioxide (SO₂) [326 IAC 7-1.1]

~~Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 6-1 shall not exceed 0.5 pound per million Btu (lbs/MMBtu).~~

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

~~A Preventive Maintenance Plan (PMP) is required for this unit and its control device. Section B—Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.~~

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

~~In order to determine compliance with Condition D.1.1, the Permittee shall perform PM testing on stack or the boiler, 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 the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C—Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.~~

D.1.5 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1]

~~Compliance with Condition D.1.2 shall be determined using one of the following options:~~

- ~~(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five tenths (0.5) pound per million Btu heat input by:
 - ~~(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;~~
 - ~~(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - ~~(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and~~
 - ~~(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.~~~~~~
- ~~(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.~~
- ~~(c) Upon written notification to IDEM by the Permittee, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]~~

~~A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.~~

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

D.1.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- ~~(a) Visible emission (VE) notations of the boiler stack exhaust shall be performed once per day during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.~~
- ~~(c) "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.~~
- ~~(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 the boiler.~~
- ~~(b) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C—Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.~~

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

D.1.7 Record Keeping Requirements

- ~~(a) To document the compliance status with Conditions D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ limits as required in Conditions D.1.2.~~
- ~~(1) All fuel sampling and analysis data, pursuant to 326 IAC 7-2.~~
- ~~(2) Actual fuel usage since last compliance determination period.~~

~~If the fuel supplier certification is used to demonstrate compliance, when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:~~

- ~~(3) Fuel supplier certifications;~~
- ~~(4) The name of the fuel supplier; and~~
- ~~(5) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.~~
- ~~The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report.~~
- ~~(b) To document the compliance status with Condition D.1.6 - Visible Emission Notations, the Permittee shall maintain records of visible emission notations of the boiler stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (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 record keeping required by this condition.~~

SECTION D.2 RESERVED EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: RESERVED

Emission Units at the Existing Coal-Fired Power Plant to be Retired prior to operation of the IGCC Plant:

One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-1. Stack 7-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).

(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.2.1 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, the PM emissions from the Boiler No. 7-1 stack shall not exceed 0.223 pound per million Btu heat input (lb/MMBtu).

D.2.2 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

- ~~(a) Pursuant to 326 IAC 5-1-3(e) (Temporary Alternative Opacity Limitations), the following applies to Boilers No. 7-1:~~
- ~~(1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed two (2) hours (twenty (20) six (6) minute averaging periods) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first. When shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed 30 minutes (five (5) six (6) minute averaging periods). [326 IAC 5-1-3(e)]~~

- (2) — Operation of the electrostatic precipitator is not required during these times unless necessary to comply with these limits.
- (3) — The allowable opacity exceedances identified in subparagraphs (a)(1) and (a)(2) are to be measured over the course of the startup or shutdown, and may be either continuous or non-continuous, or both.
- (b) — Firing a boiler as part of the chemical cleaning operations of the boiler and its associated tubes is considered a “startup condition” pursuant to 326 IAC 1-2-76 and subject to the exemptions as set forth in D.2.2(a).
- (c) — When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2. However, opacity levels 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)]
- (d) — 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.2.3 — Sulfur Dioxide (SO₂) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 7-1 shall not exceed 6.0 pounds per million Btu (lbs/MMBtu).

D.2.4 — Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for this unit and its control device. Section B — Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.5 — Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.2.1, the Permittee shall perform PM testing on ESP controlling boiler No. 7-1, 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 the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C — Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

D.2.6 — Particulate Control [326 IAC 2-7-6(6)]

In order to ensure compliance with Condition D.2.1, the electrostatic precipitator shall be operated at all times that the Boiler No. 7-1 is in operation and combusting fuel.

D.2.7 — Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 64]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), continuous emission monitoring systems shall be calibrated, maintained, and operated for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2.

D.2.8 — Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu. Compliance shall be determined utilizing the following options:

- (a) — Providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier as described under 40 CFR 60.48c(f)(3). The certification shall include:
- (1) — The name of the coal supplier; and
- (2) — The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the coal was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected); and
- (3) — The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

- (4) ~~The methods used to determine the properties of the coal; and~~
- (b) ~~Sampling and analyzing the coal using one of the following procedures:~~
- (1) ~~Minimum Coal Sampling Requirements and Analysis Methods:~~
- (A) ~~The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;~~
- (B) ~~Coal shall be sampled at least one (1) time per day;~~
- (C) ~~Minimum sample size shall be five hundred (500) grams;~~
- (D) ~~Samples shall be composited and analyzed at the end of each calendar quarter;~~
- (E) ~~Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or~~
- (2) ~~Sample and analyze the coal pursuant to 326 IAC 3-7-3; or~~
- (c) ~~Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]~~
- (d) ~~Upon written notification to IDEM by the Permittee, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]~~
- A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

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

D.2.9 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

- (a) ~~The ability of the ESP to control particulate emissions shall be monitored once per day, when the unit is in operation, by measuring and recording the number of T-R sets in service and the primary and secondary voltages and the currents of the T-R sets.~~
- (b) ~~Reasonable response steps shall be taken whenever the percentage of T-R sets in service falls below ninety percent (90%). T-R set failure resulting in less than ninety percent (90%) availability is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~

D.2.10 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

- (a) ~~Appropriate response steps shall be taken whenever the opacity exceeds twenty percent (20%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty percent (20%), 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 percent (20%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets being returned to service.~~
- (b) ~~Opacity readings in excess of twenty percent (20%) 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~
- (c) ~~The Permittee may request that the IDEM, OAQ approve a different opacity trigger level 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.2.11 SO₂ Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]

~~Whenever the automatic coal sampling system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following shall be used to provide information related to SO₂ emissions:~~

- (a) ~~Fuel sampling shall be conducted as specified in 326 IAC 3-7-2(a) or (b). Fuel sample preparation and analysis shall be conducted as specified in 326 IAC 3-7-2(c), 326 IAC 3-7-2(d), and 326 IAC 3-7-2(e). Pursuant to 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring.~~
- (b) ~~If during the life of this permit the Permittee notifies the IDEM that, pursuant to 326 IAC 7-2-1(g), continuous emission monitoring data will be used instead of fuel sampling and analysis, then whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments, the following shall be used to provide information related to SO₂ emissions:~~
- (1) ~~If the CEM system is down for less than twenty four (24) hours, the Permittee shall substitute an average of the quality-assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data.~~
- (2) ~~If the CEM system is down for twenty-four (24) hours or more, fuel sampling shall be conducted as specified in part (a) of this condition, above.~~

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

D.2.12 Record Keeping Requirements

- (a) ~~To document the compliance status with Section C – Opacity and Conditions D.2.1, D.2.2, D.2.7, D.2.9, and D.2.10, 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.2.1 and D.2.2.~~
- (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 visible emission (VE) notations and Method 9 visible emission readings taken during any periods of COM downtime.~~
- (4) ~~All ESP parametric monitoring readings.~~
- (b) ~~To document the compliance status with Conditions D.2.3, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ limits as required in Conditions D.2.3. The Permittee shall maintain records in accordance with (2) below during SO₂ CEM system downtime if a backup CEM is not used.~~
- (1) ~~Whenever using CEMS data to demonstrate compliance with Condition D.2.3, the Permittee shall maintain all SO₂ continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g), with calendar dates and beginning and ending times of any CEMS downtime.~~
- (2) ~~Whenever the Permittee is not using CEMS data to demonstrate compliance with Condition D.2.3, the Permittee shall maintain records in accordance with (A) through (E) below. Records maintained for (A) through (E) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Condition D.2.3.~~
- (A) ~~Calendar dates covered in the compliance determination period; and;~~
- (B) ~~Actual coal usage since last compliance determination period; and;~~
- (C) ~~Sulfur content, heat content, and ash content; and;~~
- (D) ~~Sulfur dioxide emission rates; and;~~
- (E) ~~Vendor analysis of coal and coal supplier certification.~~
- (c) ~~Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, QAQ.~~
- (d) ~~Section C – General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.~~

D.2.13 Reporting Requirements

- (a) ~~A quarterly report of opacity exceedances shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, not later than thirty (30) days after the end of the quarter being reported. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~
- (b) ~~A quarterly report of the thirty (30) day rolling weighted average sulfur dioxide emission rate in pounds per million Btus, and records of the daily average coal sulfur content, coal heat content, weighing factor, and daily average sulfur dioxide emission rate in pounds per million Btus shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, not later than thirty (30) days after the end of the quarter being reported. [326 IAC 7-2-1(c)(1)]~~
~~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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~
- (c) ~~Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, 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). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~

SECTION D.3 RESERVED EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: RESERVED

Emission Units at the Existing Coal-Fired Power Plant to be retired prior to operation of the IGCC Plant:

One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-2. Stack 7-2 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).

(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.3.1 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, the PM emissions from the Boiler No. 7-2 stack shall not exceed 0.223 pound per million Btu heat input (lb/MMBtu).~~

D.3.2 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

(a) ~~Pursuant to 326 IAC 5-1-3(e) (Temporary Alternative Opacity Limitations), the following applies to Boilers No. 7-2:~~

- ~~(1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed two (2) hours (twenty (20) six (6) minute averaging periods) or until the~~

- flue-gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first. When shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed 30 minutes (five (5) six (6) minute averaging periods). [326 IAC 5-1-3(e)]
- (2) Operation of the electrostatic precipitator is not required during these times unless necessary to comply with these limits.
- (3) The allowable opacity exceedances identified in subparagraphs (a)(1) and (a)(2) are to be measured over the course of the startup or shutdown, and may be either continuous or non-continuous, or both.
- (b) Firing a boiler as part of the chemical cleaning operations of the boiler and its associated tubes is considered a "startup condition" pursuant to 326 IAC 1-2-76 and subject to the exemptions as set forth in D.3.2(a).
- (c) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2. However, opacity levels 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)]
- (d) 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.3.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 7-2 shall not exceed 6.0 pounds per million Btu (lbs/MMBtu).

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for this unit and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.2.1, the Permittee shall perform PM testing on ESP controlling boiler No. 7-2, 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 the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

D.3.6 Particulate Control [326 IAC 2-7-6(6)]

In order to ensure compliance with Condition D.3.1, the electrostatic precipitator shall be operated at all times that the Boiler No. 7-2 is in operation and combusting fuel.

D.3.7 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 64]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), continuous emission monitoring systems shall be calibrated, maintained, and operated for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2.

D.3.8 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu. Compliance shall be determined utilizing the following options:

- (a) Providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier as described under 40 CFR 60.48c(f)(3). The certification shall include:
- (1) The name of the coal supplier; and

- ~~(2) — The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the coal was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected); and~~
 - ~~(3) — The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and~~
 - ~~(4) — The methods used to determine the properties of the coal; and~~
 - ~~(b) — Sampling and analyzing the coal using one of the following procedures:
 - ~~(1) — Minimum Coal Sampling Requirements and Analysis Methods:
 - ~~(A) — The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;~~
 - ~~(B) — Coal shall be sampled at least one (1) time per day;~~
 - ~~(C) — Minimum sample size shall be five hundred (500) grams;~~
 - ~~(D) — Samples shall be composited and analyzed at the end of each calendar quarter;~~
 - ~~(E) — Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or~~~~
 - ~~(2) — Sample and analyze the coal pursuant to 326 IAC 3-7-3; or~~~~
 - ~~(c) — Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]~~
 - ~~(d) — Upon written notification to IDEM by the Permittee, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]~~
- ~~A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.~~

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

~~D.3.9 Transformer Rectifier (T-R) Sets [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]~~

- ~~(a) — The ability of the ESP to control particulate emissions shall be monitored once per day, when the unit is in operation, by measuring and recording the number of T-R sets in service and the primary and secondary voltages and the currents of the T-R sets.~~
- ~~(b) — Reasonable response steps shall be taken whenever the percentage of T-R sets in service falls below ninety percent (90%). T-R set failure resulting in less than ninety percent (90%) availability is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C — Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.~~

~~D.3.10 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]~~

- ~~(a) — Appropriate response steps shall be taken whenever the opacity exceeds twenty percent (20%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty percent (20%), 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 percent (20%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets being returned to service.~~
- ~~(b) — Opacity readings in excess of twenty percent (20%) 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. Section C — Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.~~

- (c) ~~— The Permittee may request that the IDEM, OAQ approve a different opacity trigger level 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.3.11 SO₂ Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]~~

~~Whenever the automatic coal sampling system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following shall be used to provide information related to SO₂ emissions:~~

- (a) ~~— Fuel sampling shall be conducted as specified in 326 IAC 3-7-2(a) or (b). Fuel sample preparation and analysis shall be conducted as specified in 326 IAC 3-7-2(c), 326 IAC 3-7-2(d), and 326 IAC 3-7-2(e). Pursuant to 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring.~~
- (b) ~~— If during the life of this permit the Permittee notifies the IDEM that, pursuant to 326 IAC 7-2-1(g), continuous emission monitoring data will be used instead of fuel sampling and analysis, then whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments, the following shall be used to provide information related to SO₂ emissions:~~
- (1) ~~— If the CEM system is down for less than twenty-four (24) hours, the Permittee shall substitute an average of the quality assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data.~~
- (2) ~~— If the CEM system is down for twenty-four (24) hours or more, fuel sampling shall be conducted as specified in part (a) of this condition, above.~~

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

~~D.3.12 Record Keeping Requirements~~

- (a) ~~— To document the compliance status with Section C - Opacity and Conditions D.3.1, D.3.2, D.3.7, D.3.9, and D.3.10, 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.3.1 and D.3.2.~~
- (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 visible emission (VE) notations and Method 9 visible emission readings taken during any periods of COM downtime.~~
- (4) ~~— All ESP parametric monitoring readings.~~
- (b) ~~— To document the compliance status with Conditions D.3.3, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ limits as required in Conditions D.3.3. The Permittee shall maintain records in accordance with (2) below during SO₂ CEM system downtime if a backup CEM is not used.~~
- (a) ~~— (1) — Whenever using CEMS data to demonstrate compliance with Condition D.3.3, the Permittee shall maintain all SO₂ continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g), with calendar dates and beginning and ending times of any CEMS downtime.~~
- (2) ~~— Whenever the Permittee is not using CEMS data to demonstrate compliance with Condition D.3.3, the Permittee shall maintain records in accordance with (A) through (E) below. Records maintained for (A) through (E) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Condition D.3.3.~~
- (A) ~~— Calendar dates covered in the compliance determination period; and;~~
- (B) ~~— Actual coal usage since last compliance determination period; and;~~
- (C) ~~— Sulfur content, heat content, and ash content; and;~~

- (D) ~~_____ Sulfur dioxide emission rates; and;~~
- (E) ~~_____ Vendor analysis of coal and coal supplier certification.~~
- (c) ~~_____ Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.~~
- (d) ~~_____ Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.~~

D.3.13 Reporting Requirements

- (a) ~~_____ A quarterly report of opacity exceedances shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, not later than thirty (30) days after the end of the quarter being reported. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~
- (b) ~~_____ A quarterly report of the thirty (30) day rolling weighted average sulfur dioxide emission rate in pounds per million Btus, and records of the daily average coal sulfur content, coal heat content, weighing factor, and daily average sulfur dioxide emission rate in pounds per million Btus shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, not later than thirty (30) days after the end of the quarter being reported. [326 IAC 7-2-1(c)(1)]
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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~
- (c) ~~_____ Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, 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). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~

SECTION D.4 RESERVED EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: RESERVED

Emission Units at the Existing Coal-Fired Power Plant to be retired prior to operation of the IGCC Plant:

One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 8-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 8-1. Stack 8-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).

(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.4.1 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, the~~

PM emissions from the Boiler No. 8-1 stack shall not exceed 0.223 pound per million Btu heat input (lb/MMBtu).

~~D.4.2 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]~~

~~(a) Pursuant to 326 IAC 5-1-3(e) (Temporary Alternative Opacity Limitations), the following applies to Boilers No. 8-1:~~

- ~~(1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed two (2) hours (twenty (20) six (6) minute averaging periods) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first. When shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed 30 minutes (five (5) six (6) minute averaging periods). [326 IAC 5-1-3(e)]~~
- ~~(2) Operation of the electrostatic precipitator is not required during these times unless necessary to comply with these limits.~~
- ~~(3) The allowable opacity exceedances identified in subparagraphs (a)(1) and (a)(2) are to be measured over the course of the startup or shutdown, and may be either continuous or non-continuous, or both.~~

~~(b) Firing a boiler as part of the chemical cleaning operations of the boiler and its associated tubes is considered a "startup condition" pursuant to 326 IAC 1-2-76 and subject to the exemptions as set forth in D.4.2(a).~~

~~(c) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2. However, opacity levels 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)]~~

~~(d) 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.4.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1]~~

~~Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 8-1 shall not exceed 6.0 pounds per million Btu (lbs/MMBtu).~~

~~D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan (PMP) is required for this unit and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.~~

Compliance Determination Requirements

~~D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]~~

~~In order to determine compliance with Condition D.2.1, the Permittee shall perform PM testing on ESP controlling boiler No. 8-1, 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 the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.~~

~~D.4.6 Particulate Control [326 IAC 2-7-6(6)]~~

~~In order to ensure compliance with Condition D.4.1, the electrostatic precipitator shall be operated at all times that the Boiler No. 8-1 is in operation and combusting fuel.~~

~~D.4.7 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 64]~~

~~Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), continuous emission monitoring systems shall be calibrated, maintained, and operated for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2.~~

~~D.4.8 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]~~

~~Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu. Compliance shall be determined utilizing the following options:~~

- (a) ~~Providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier as described under 40 CFR 60.48c(f)(3). The certification shall include:~~
- ~~(1) The name of the coal supplier; and~~
 - ~~(2) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the coal was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected); and~~
 - ~~(3) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and~~
 - ~~(4) The methods used to determine the properties of the coal; and~~
- (b) ~~Sampling and analyzing the coal using one of the following procedures:~~
- ~~(1) Minimum Coal Sampling Requirements and Analysis Methods:~~
 - ~~(A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;~~
 - ~~(B) Coal shall be sampled at least one (1) time per day;~~
 - ~~(C) Minimum sample size shall be five hundred (500) grams;~~
 - ~~(D) Samples shall be composited and analyzed at the end of each calendar quarter;~~
 - ~~(E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or~~
 - ~~(2) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or~~
- (c) ~~Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]~~
- (d) ~~Upon written notification to IDEM by the Permittee, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]~~
- ~~A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.~~

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

D.4.9 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

- (a) ~~The ability of the ESP to control particulate emissions shall be monitored once per day, when the unit is in operation, by measuring and recording the number of T-R sets in service and the primary and secondary voltages and the currents of the T-R sets.~~
- (b) ~~Reasonable response steps shall be taken whenever the percentage of T-R sets in service falls below ninety percent (90%). T-R set failure resulting in less than ninety percent (90%) availability is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.~~

~~D.4.10 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]~~

- ~~(a) — Appropriate response steps shall be taken whenever the opacity exceeds twenty percent (20%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty percent (20%), 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 percent (20%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets being returned to service.~~
- ~~(b) — Opacity readings in excess of twenty percent (20%) 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. Section C — Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.~~
- ~~(c) — The Permittee may request that the IDEM, OAQ approve a different opacity trigger level 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.4.11 SO₂ Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]~~

~~Whenever the automatic coal sampling system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following shall be used to provide information related to SO₂ emissions:~~

- ~~(a) — Fuel sampling shall be conducted as specified in 326 IAC 3-7-2(a) or (b). Fuel sample preparation and analysis shall be conducted as specified in 326 IAC 3-7-2(c), 326 IAC 3-7-2(d), and 326 IAC 3-7-2(e). Pursuant to 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval, that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring.~~
- ~~(b) — If during the life of this permit the Permittee notifies the IDEM that, pursuant to 326 IAC 7-2-1(g), continuous emission monitoring data will be used instead of fuel sampling and analysis, then whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments, the following shall be used to provide information related to SO₂ emissions:
 - ~~(1) — If the CEM system is down for less than twenty-four (24) hours, the Permittee shall substitute an average of the quality assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data.~~
 - ~~(2) — If the CEM system is down for twenty-four (24) hours or more, fuel sampling shall be conducted as specified in part (a) of this condition, above.~~~~

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

~~D.4.12 Record Keeping Requirements~~

- ~~(a) — To document the compliance status with Section C — Opacity and Conditions D.4.1, D.4.2, D.4.7, D.4.9, and D.4.10, 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.4.1 and D.4.2.
 - ~~(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 visible emission (VE) notations and Method 9 visible emission readings taken during any periods of COM downtime.~~
 - ~~(4) — All ESP parametric monitoring readings.~~~~
- ~~(b) — To document the compliance status with Condition D.4.3, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ limits as required in Condition D.4.3. The Permittee shall maintain records in accordance with (2) below during SO₂ CEM system downtime if a backup CEM is not used.~~

- (a) ~~(1) Whenever using CEMS data to demonstrate compliance with Condition D.4.3, the Permittee shall maintain all SO₂ continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g), with calendar dates and beginning and ending times of any CEMS downtime.~~
- ~~(2) Whenever the Permittee is not using CEMS data to demonstrate compliance with Condition D.4.3, the Permittee shall maintain records in accordance with (A) through (E) below. Records maintained for (A) through (E) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Condition D.4.3.~~
- ~~(A) Calendar dates covered in the compliance determination period; and;~~
- ~~(B) Actual coal usage since last compliance determination period; and;~~
- ~~(C) Sulfur content, heat content, and ash content; and;~~
- ~~(D) Sulfur dioxide emission rates; and;~~
- ~~(E) Vendor analysis of coal and coal supplier certification.~~
- (c) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.4.13 Reporting Requirements

- (a) ~~A quarterly report of opacity exceedances shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, not later than thirty (30) days after the end of the quarter being reported. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~
- (b) ~~A quarterly report of the thirty (30) day rolling weighted average sulfur dioxide emission rate in pounds per million Btus, and records of the daily average coal sulfur content, coal heat content, weighing factor, and daily average sulfur dioxide emission rate in pounds per million Btus shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, not later than thirty (30) days after the end of the quarter being reported. [326 IAC 7-2-1(c)(1)]~~

~~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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~

- (c) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, 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). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~

SECTION D.5 RESERVED EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: RESERVED

Emission Units at the Existing Coal-Fired Power Plant to be Retired prior to operation of the

IGCC Plant:

A coal transfer system, with a nominal throughput of 300 tons of coal per hour, construction commenced prior to 1974, consisting of the following equipment:

- (1) One (1) unloading station for trucks, with a drop point to a coal storage pile identified as F-1, with the drop point, identified as DP-1, controlled by a partial enclosure, and exhausting to the ambient air.
- (2) One (1) storage pile area, having an estimated storage capacity of 70,000 tons, with fugitive emissions controlled by watering as needed.
- (3) One (1) enclosed hopper, with a drop point identified as DP-3 to a conveyor identified as Conveyor C, with each drop point enclosed and exhausting to the ambient air.
- (4) An enclosed conveyor system, with 6 drop points identified as DP-3, DP-4, DP-5, DP-6, DP-7, and DP-8, with each drop point enclosed.
- (5) Three (3) enclosed coal bunkers, each with a normal nominal capacity of 15,000 tons of coal. Bunkers are loaded via a conveyor tripper system with a total capacity of 300 tons per hour to the Boilers 7-1, 7-2 and 8-1 bunkers. Particulate matter generated from loading bunkers is controlled by enclosure and exhausts to the ambient air.

(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.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 63 pounds per hour when operating at a process weight of 300 tons per hour (600,000 pounds 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:

$$E = 55.0 P^{0.44} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour.}$$

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed 63 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 (PMP) is required for the watering system and the enclosures. Section B Preventive Maintenance Plan contains the Permittee's obligations 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)]

In order to ensure compliance with Condition D.5.1, the Permittee shall maintain enclosures for particulate control at all times the associated coal processing or conveyors are in operation and the watering system for the coal storage pile shall be in operation and control emissions as needed when coal is being unloaded.

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)] [40 CFR 64]

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.

If any abnormal emissions are observed from the coal storage and handling drop points, coal bunkers and scale exhausts, or associated dust collector vents, the Permittee shall take reasonable response steps. Visible 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 shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

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 Section C – Opacity, Section C – Fugitive Dust Emissions, and Condition D.5.4 – Visible Emissions Notations, the Permittee shall maintain weekly records of the visible emission notations of the coal storage and handling drop points, coal bunkers and scale exhausts, and associated dust collector vents. 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, (e.g. the process did not operate that day).
- (b) Section C – General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

SECTION D.6 RESERVED EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: RESERVED

Emission Units at the Existing Coal-Fired Power Plant to be Retired prior to operation of the IGCC Plant:

The following insignificant activities:

- (a) 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 emissions unit description box is descriptive information and does not constitute enforceable conditions.)

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

D.6.1 Volatile Organic Compounds (VOC) [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; and
- (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.6.2 Volatile Organic Compounds (VOC) [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 or 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.

SECTION E.1 TITLE IV ACID RAIN PROGRAM CONDITIONS
ORIS Code: 1004

Emissions Unit Description:

Emission Units at the Existing Coal-Fired Power Plant to be retired prior to operation of the IGCC Plant:

- (a) — One (1) No. 2 Fuel oil-fired boiler, identified as Boiler No. 6-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr) and exhausting to stack 6-1.
- (b) — One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-1. Stack 7-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NOX) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).
- (c) — One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-2. Stack 7-2 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).
- (d) — One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 8-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and

~~exhausting to stack 8-1. Stack 8-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).~~

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

Acid Rain Program

SECTION F 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: 1004

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)

Emission Units at the Existing Coal-Fired Power Plant to be retired prior to operation of the IGCC Plant:

(a) ~~One (1) No. 2 Fuel oil-fired boiler, identified as Boiler No. 6-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr) and exhausting to stack 6-1.~~

(b) ~~One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-1. Stack 7-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).~~

(c) ~~One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 7-2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 7-2. Stack 7-2 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).~~

(d) ~~One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 8-1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 510 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, and exhausting to stack 8-1. Stack 8-1 has Continuous Emissions Monitors (CEMs) for Oxides of Nitrogen (NO_x) and Sulfur Dioxide (SO₂) and a continuous opacity monitor (COM).~~

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

F.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 unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit shall operate each source and unit in compliance with this CAIR permit.
- (b) The CAIR NO_x unit(s), CAIR SO₂ unit(s), and CAIR NO_x ozone season unit(s) subject to this CAIR permit are **AUXBLR, CTHRS1 and CTHRS2** Boiler No. 6-1, Boiler No. 7-1, Boiler No. 7-2 and Boiler No. 8-1.

Conclusion and Recommendation

The operation of this proposed modification shall be subject to the conditions of the attached proposed PSD/Part 70 Significant Source Modification No. 083-35647-00003 and Significant Permit Modification No. 083-35669-00003. The staff recommends to the Commissioner that this PSD/Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Josiah Balogun at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5257 or toll free at 1-800-451-6027 extension 4-5257.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

Appendix A: Emissions Calculations

Emission Summary

Source Name: Duke Energy Indiana - Edwardsport Generating Station

Source Location: 15424 East State Rd 358, Edwardsport, IN 47258

Permit Number: SSM 083-35647-00003

Permit Reviewer: Josiah Balogun

Date: 18-May-2015

Uncontrolled Potential to Emit

	PM (tons/yr)	PM₁₀ (tons/yr)	PM_{2.5} (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)
Emission Unit								
Wet Rod Mill	1.03	1.03	1.03	0.00	0.00	0.00	0.00	0.00
Total Emissions	1.03	1.03	1.03	0.00	0.00	0.00	0.00	0.00

Limited Potential to Emit

	PM (tons/yr)	PM₁₀ (tons/yr)	PM_{2.5} (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)
Emission Unit								
Wet Rod Mill	1.03	1.03	1.03	0.00	0.00	0.00	0.00	0.00
Total Emissions	1.03	1.03	1.03	0.00	0.00	0.00	0.00	0.00

Appendix A: Emissions Calculations
Emission Summary

Source Name: Duke Energy Indiana - Edwardsport Generating Station
Source Location: 15424 East State Rd 358, Edwardsport, IN 47258
Permit Number: SSM 083-35647-00003
Permit Reviewer: Josiah Balogun
Date: 18-May-2015

PM/PM ₁₀ /PM _{2.5} Emission Rate (gr/dscf)*	Wet Rod Mill Stack Flow Rate (dscfm)*	PM/PM ₁₀ /PM _{2.5} Emissions (gr/hour)	PM/PM ₁₀ /PM _{2.5} Emissions (lbs/hour)	PM/PM ₁₀ /PM _{2.5} Emissions (One Vent) (tpy)	PM/PM ₁₀ /PM _{2.5} Emissions (Two Vents) (tpy)
0.0048	2847	819.9	0.117	0.513	1.026

Notes:

*Based on stack testing conducted at Edwardsport Generating Station on August 13, 2014.

Example Calculations

PM₁₀/PM_{2.5} Emissions (gr/hour) = PM₁₀/PM_{2.5} Emission Rate (gr/dscf) * Wet Rod Mill Stack Flow Rate (dscfm) * 60

PM₁₀/PM_{2.5} Emissions (lb/hour) = PM₁₀/PM_{2.5} Emissions (gr/hour) / 7000

PM₁₀/PM_{2.5} Emissions (One Vent) (tpy) = PM₁₀/PM_{2.5} Emissions (lb/hour) * 8760 / 2000

PM₁₀/PM_{2.5} Emissions (Two Vents) (tpy) = PM₁₀/PM_{2.5} Emissions (One Vent) (tpy) * 2

ESTIMATED CAPITAL AND OPERATING COSTS	
VENTURI SCRUBBER SYSTEM	
<u>FOR 70% CONTROL OF PM</u>	
Duke	
<u>CAPITAL COSTS</u>	
DIRECT CAPITAL COSTS (DC)	
Purchased Equipment Costs (PE)	\$750,000
<u>Venturi Scrubber System:</u>	\$400,000
Flange-to-flange scrubber system, tank, head tank, housing and frame, injection	
Inlet and outlet ductwork and supports (Eng. Estimate)	\$100,000
Instrumentation (10% of Equipment, OAQPS Manual)	\$115,000
Sales Tax (5%)	\$68,000
Freight (5% of Equipment, OAQPS Manual)	<u>\$68,000</u>
	PE Total = \$1,501,000
Direct Installation Costs (DI)	
Foundations and supports (6% of PE, OAQPS Manual)	\$90,000
Handling and erection (10% of PE, Eng Estimate)	\$150,000
Electrical (1% of PE, OAQPS Manual)	\$15,000
Piping (5% of PE, Engg Estimate)	\$75,000
Insulation + Painting (4% of PE, OAQPS Manual)	\$60,000
Site preparation etc. (Eng. Estimate)	<u>\$25,000</u>
	DI Total = \$415,000
	DC Total = \$1,916,000
INDIRECT CAPITAL COSTS (IC)	
Engineering and Supervision (10% of PE, OAQPS Manual)	\$150,000
Construction and Field Expenses (10% of PE, OAQPS Manual)	\$150,000
Contractor Fees (10% of PE, OAQPS Manual)	\$150,000
Start-up + Performance (2% of PE, OAQPS Manual)	\$30,000
Over-all Contingencies (3% of PE, OAQPS Manual)	<u>\$45,000</u>
	IC Total = \$525,000
TOTAL CAPITAL INVESTMENT (TCI) = Sum (DC + IC) = \$2,441,000	
Capital Recovery at 7% interest over 10 years (0.1424*TCI) \$348,000	
<u>OPERATION AND MAINTENANCE (O & M)</u>	
DIRECT ANNUAL COSTS (DA)	
<u>Operating Labor:</u>	
Operator (1 hr/shift, 8760 hrs/yr, \$20/hr) + Supervisor (15% of Operator)	\$25,000
<u>Maintenance:</u>	
Labor (1 hr/shift, 8760 hrs/yr, \$20/hr) + Materials (100% of Labor)	\$44,000
Makeup Water Requirement Cost (12 gpm @\$0.01/gal)	\$63,000
Wastewater Disposal Cost (30 gals/day @\$0.05/gal)	\$1,000
Electricity (100 Kw for 8760 hrs/yr @ \$0.05/kW-hr)	<u>\$44,000</u>
	DA Total = \$177,000
INDIRECT ANNUAL COSTS (IA)	
Overhead (60% of maintenance parts & labor costs, OAQPS Manual)	\$41,000
Admin., Property Tax, Insurance (4% of TCI, OAQPS Manual)	<u>\$98,000</u>
	IA Total = \$139,000
	O & M Total = \$316,000
TOTAL ANNUAL CAPITAL AND O & M COSTS (inclgd. Capital Recovery) \$664,000	
Baseline PM Emissions Wet Rod Mill (tons/yr)	1.02
Annual PM removal assuming 70% Removal Efficiency (tons)	0.71
Annual cost effectiveness, \$/ton of PM removed	\$930,000
Note: Cost Factors based on OAQPS Control Cost Manual (Ch. 9, 6th Ed., 06/17/03)(EPA 452/B-02-001)	

Indiana Department of Environmental Management Office of Air Quality

Appendix B – BACT Analyses Significant Source Modification (SSM) of a Part 70 Source Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Background and Description

Source Name:	Duke Energy Indiana - Edwardsport Generating Station
Source Location:	15424 East State Rd 358, Edwardsport, IN 47258
County:	Knox
SIC Code:	4911
Operation Permit No.:	T 083-27138-00003
Operation Permit Issuance Date:	April 3, 2013
PSD/Significant Source Modification No.:	SSM 083-35647-00003
Significant Permit Modification No.:	SPM 083-35669-00003
Permit Reviewer:	Josiah Balogun

Proposed Modification

On August 18, 2006, the Office of Air Quality (OAQ) received an application from Duke Energy Indiana to construct and operate an Integrated Gasification and Combined Cycle (IGCC) electric generating plant at the Edwardsport Generating Station site, located at 15424 East State Rd 358, Edwardsport, Indiana, in Knox County. The Edwardsport Generating Station is classified as a major stationary source since the station is defined as a Fossil-Fuel Fired Steam Electric Plant of More Than Two Hundred Fifty Million (250,000,000) British Thermal Units Per Hour Heat Input, and has the potential to emit, more than one hundred (100) tons per year of at least one regulated NSR pollutant (326 IAC 2-2-1(gg)(1).

The IGCC project was considered a modification to an existing major stationary source and was evaluated under 326 IAC 2-2-2(d)(1) and (2) to determine whether or not the project triggers the Prevention of Significant Deterioration (PSD) requirements (326 IAC 2-2). This requires the project to be evaluated as to whether it causes both a significant emissions increase and a significant net emissions increase.

Based on that evaluation, the Edwardsport IGCC project is subject to 326 IAC 2-2 because, pursuant to 326 IAC 2-2-1(xx), the net emissions increase will equal or exceed the significant increase thresholds of one hundred (100) tons per year of carbon monoxide (CO), forty (40) tons per year of volatile organic compounds (VOC), twenty-five (25) tons per year of particulate matter (PM), and fifteen (15) tons per year of PM₁₀.

The permit, PSD/Significant Source Modification No. 083-23529-00003, was issued on January 25, 2008. A corresponding Significant Permit Modification No. T083-23531-00003 authorizing operation of the IGCC plant was issued by the IDEM, OAQ on March 11, 2008.

Following commencement of commercial operation of the IGCC plant, an IDEM site inspection was performed in August 2013. During the inspection, the IDEM representative observed the vents from the wet rod mill operations and made a determination that the rod mill operations have the potential to emit particulate matter. IDEM subsequently requested that Duke perform stack testing of the Wet Rod Mill

operation to determine whether or not particulate matter (PM) may be present in the exhaust gas associated with this operation. Testing performed by Duke detected emissions of PM from the vents from the Wet Rod Mill operation; however the measured mass emission rate was less than 0.25 pounds per hour for the two vents associated with the two wet rod mills comprising the Wet Rod Mill operation. At continuous operation, 24 hours per day and 365 days per year, this would translate to approximately 1.0 ton per year of potential PM emissions.

Though the particulate emissions from the two (2) Wet Rod Mills are below the exemption levels, therefore, this modification will be considered part of the original PSD/SSM permit that was permitted in 2008.

Duke Energy Indiana - Edwardsport Generating Station, located at 15424 East State Rd 358, Edwardsport, IN, Indiana, in Knox County submitted a PSD/Significant Source Modification application to IDEM, OAQ on March 27, 2015.

Requirement for Best Available Control Technology (BACT)

326 IAC 2-2 requires a best available control technology (BACT) review to be performed on the proposed modification because the modification is a part of the original PSD/SSM 083-23529-00003, issued in January 25, 2008.

Emission Units

- (a) Two (2) wet rod mills, identified as WRM, constructed in 2008 but permitted in 2015, rated at 2847 dscfm, exhausting through two vents, identified as WRMV1 and WRMV2.

Summary of the Best Available Control Technology (BACT) Process

BACT is an emissions limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute significantly to air pollution, thereby protecting public health and the environment.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis used by the Office of Air Quality (OAQ) to make BACT determinations are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and

source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative controls are normally given a waiver from the BACT requirements due to the uncertainty of actual control efficiency. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

Step 5: Select BACT

The Office of Air Quality (OAQ) makes final BACT determinations by following the five steps identified above.

Particulate Matter (PM, PM₁₀ and PM_{2.5}) BACT – Wet Rod Mills

The Wet Rod Mill Operation associated with the coal grinding operation whose vent streams have the potential to emit PM, PM₁₀ and PM_{2.5} emissions is currently equipped with a wet scrubber, which is not an enforceable control device.

- The two wet rod mills, identified as Wet Rod Mill Operation with maximum potential PM, PM₁₀ and PM_{2.5} emissions of 1.03 tons per year.

The total PM, PM₁₀ and PM_{2.5} emissions from the wet rod mill operation is less than 5 tons per year which makes the wet rod mill operation an insignificant emission unit.

Step 1: Identify Potential Control Technologies

The emissions of PM, PM₁₀ and PM_{2.5} are generally controlled by the following add-on control equipment designed to capture the emissions prior to the time they are exhausted to the atmosphere:

- (1) Mechanical Collectors (such as Cyclones or Multiclones);

- (2) Wet Scrubbers;
- (3) Electrostatic Precipitators (ESP); and
- (4) Fabric Filter Dust Collectors (Baghouses).

The choice of which technology is most appropriate for a specific application depends upon several factors, including particle size to be collected, particle loading, stack gas flow rate, stack gas physical characteristics (e.g., temperature, moisture content, presence of reactive materials), and desired collection efficiency.

Step 2: Eliminate Technically Infeasible Options

(a) **Cyclones:**

Cyclones are simple mechanical devices commonly used to remove relatively large particles from gas streams. In industrial applications, cyclones are often used as pre-cleaners for the more sophisticated air pollution control equipment such as ESPs or baghouses. Cyclones are less efficient than wet scrubbers, baghouses, or ESPs. Cyclones used as pre-cleaners are often designed to remove more than 80% of the particles that are greater than 20 microns in diameter. Smaller particles that escape the cyclone can then be collected by more efficient control equipment. This control technology may be more commonly used in industrial sites that generate a considerable amount of particulate matter, such as lumber companies, feed mills, cement plants, and smelters.

Since the particulate loading for a single vent associated with the Wet Rod Mill Operation is 0.0048 grains per cubic foot, the use of this type of control device on the Wet Rod Mill Vents emission source will not be technical feasibility. The extremely low grain loading of the wet rod mill which is well below the loading rate of between 1 to 100 grains per cubic foot for mechanical collector

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a Mechanical Collector is not a technically feasible option for the Wet Rod Mill at this source.

(b) **Electrostatic Precipitators:**

An electrostatic precipitator (ESP) is a particle control device that uses electrical forces to move the particles out of the flowing gas stream and onto collector plates. The particles are given an electrical charge by forcing them to pass through a corona, a region in which gaseous ions flow. The electrical field that forces the charged particles to the walls comes from electrodes maintained at high voltage in the center of the flow lane.

Once the particles are collected on the plates, they must be removed from the plates without re-entraining them into the gas stream. This is usually accomplished by knocking them loose from the plates, allowing the collected layer of particles to slide down into a hopper from which they are evacuated. Some precipitators remove the particles by intermittent or continuous washing with water. ESP control efficiencies can range from 95% to 99.9%.

The ESP is designed for particulate loadings of 0.5 to 10 grains per cubic foot and thus would not be feasible for this application. Also the high moisture content of the Wet Rod Mill vent exhaust will also cause technical difficulties with the plates used in this control device. Since the particulate loading for a single vent associated with the Wet Rod Mill Operation is 0.0048 grains per cubic foot and the high moisture content of the exhaust gas air stream, since the grain loading of the wet rod mill is extremely low, which is well below the loading rate of between 0.5 to 10 grains per cubic foot for ESP, therefore the ESP is not a technically feasible option.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of an electrostatic precipitator is not a technically feasible option for the Wet Rod Mill at this source.

(c) **Fabric Filtration:**

A fabric filter unit consists of one or more isolated compartments containing rows of fabric bags in the form of round, flat, or shaped tubes, or pleated cartridges. Particle laden gas passes up (usually) along the surface of the bags then radially through the fabric. Particles are retained on the upstream face of the bags, and the cleaned gas stream is vented to the atmosphere. The filter is operated cyclically, alternating between relatively long periods of filtering and short periods of cleaning. During cleaning, dust that has accumulated on the bags is removed from the fabric surface and deposited in a hopper for subsequent disposal.

The efficiency of the baghouse is generally in excess of 99 or 99.9%. The layer of dust, or dust cake, collected on the fabric is primarily responsible for such high efficiency. The cake is a barrier with tortuous pores that trap particles as they travel through the cake. Gas temperatures up to about 500°F, with surges to about 550°F, can be accommodated routinely in some configurations. Most of the energy used to operate the system appears as pressure drop across the bags and associated hardware and ducting. Typical values of system pressure drop range from about 5 to 20 inches of water.

The Baghouse is designed for particulate loadings of 0.5 to 10 grains per cubic foot and thus would not be feasible for this application. Also the high moisture content of the Wet Rod Mill vent exhaust will also cause technical difficulties with the bags used in this control device. Since the particulate loading for a single vent associated with the Wet Rod Mill Operation is 0.0048 grains per cubic foot and the high moisture content of the exhaust gas air stream, since the grain loading of the wet rod mill is extremely low, which is well below the loading rate of between 0.5 to 10 grains per cubic foot for Baghouse, therefore the Baghouse is not a technically feasible option.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a Baghouse is not a technically feasible option for the Wet Rod Mill at this source.

(d) **Wet scrubbers:**

A wet scrubber is an air pollution control device that removes PM from waste gas streams primarily through the impaction, diffusion, interception and/or absorption of the pollutant onto droplets of liquid. The liquid containing the pollutant is then collected for disposal. There are numerous types of wet scrubbers that remove PM. Collection efficiencies for wet scrubbers vary with the particle size distribution of the waste gas stream. In general, collection efficiency decreases as the PM size decreases. Collection efficiencies also vary with scrubber type. Collection efficiencies range from greater than 99% for venturi scrubbers to 40-60% (or lower) for simple spray towers. Wet scrubbers are smaller and more compact than baghouses or ESPs. They have lower capital costs and comparable operation and maintenance (O&M) costs.

Wet scrubbers are typically intended to control fine particulate matter with an aerodynamic diameter of between approximately 0.25 and 1.0 µm and are generally intended to be used downstream of another scrubber which has already removed PM >1.0 µm. A wet scrubber can be utilized technically for the Wet Rod Mills to control PM and PM₁₀ emissions. However because of the low grain loadings associated with the Wet Rod Mill emission source, the overall efficiency would be sufficiently lower than that associated with a high grain loading exhaust gas stream.

Wet scrubbers are particularly useful in the removal of particulates with the following characteristics:

- (1) Sticky and/or hygroscopic materials (materials that readily absorb water);
- (2) Combustible, corrosive and explosive materials;
- (3) Particles which are difficult to remove in their dry form;
- (4) PM in the presence of soluble gases; and
- (5) PM in waste gas streams with high moisture content.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a wet scrubber is a technically feasible option for the Wet Rod Mill at this source.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the information reviewed for this BACT Analysis the only control technology identified for control of PM, PM₁₀ and PM_{2.5} resulting from the Wet Rod Mill Operation is the Wet Scrubber.

- (1) Wet scrubber 99% PM/PM₁₀/PM_{2.5} Reduction

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed PM, PM₁₀ and PM_{2.5} BACT determination along with the existing PM, PM₁₀ and PM_{2.5} BACT determinations for Wet Rod Mills. All data in the table is based on the information obtained from the permit application submitted by Duke Energy Indiana – Edwardsport Generating Station, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies.

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating	Limitation	Control Method
083-35647-00003	Duke Energy Indiana – Edwardsport Generating Station	Proposed	Two (2) Wet Rod Mills	2847 dscfm	PM/PM ₁₀ /PM _{2.5} : 0.234 pounds per hour	Good design and proper operation
147-30464-00060	Indiana Gasification LLC	June 27, 2012	Four (4) rod mill eductor vent stacks	180 cfm	PM/PM ₁₀ emissions from each vent shall not exceed 0.025 lb/hr based on a 3-hour average. (total of 0.1 lb/hr) PM _{2.5} emissions from each vent shall not exceed 0.0074 lb/hr	None

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating	Limitation	Control Method
					based on a 3-hour average	
PSD-LA-742	Lake Charles Cogeneration, LLC	June 22, 2009	Rod mill air eductors (4)	None	PM ₁₀ total <0.02 lb/hr (total of 0.08 lb/hr)	Good design and proper operation

The wet rod mill has a small amount of particulate (PM/PM10/PM2.5) emissions which are estimated to be 1.03 tons per year total for two (2) wet rod mills. This low emissions rate is due to the fact that the wet rod mill is a wet operation. The high moisture content effectively minimizes the particulate emissions and results in an exhaust particulate concentration of about 0.0048 grains/dscf of PM/PM10/PM2.5, which is equivalent to 0.234 pounds per hour at maximum capacity. In addition, the high moisture content of this exhaust would create technical difficulties using the more effective of these add-on control devices, the ESP and the baghouses.

The initial design of the Wet Rod Mill emission source did not include air pollution control devices. After initial testing and a determination that particulate emissions were detected, Duke Energy Indiana, voluntarily installed a wet scrubbing system to significantly reduce the potential particulate emissions from the Wet Rod Mill by 70%.

The estimated capital cost, including installation for a typical wet scrubber is in the vicinity of \$750,000, annualizing this over a 10 year equipment life cycle at 7% interest would result in an annualized cost of approximately \$930,000. Using this annualized cost and the PM/PM10/PM2.5 emission rate of 1 ton/year for both vents results in a cost effectiveness rate of \$930,000 per ton of pollutant removed which is considered cost excessive (see cost analysis calculations). Because of the high cost per ton of particulate removal, the continued use of a wet scrubber to control PM/PM₁₀/PM_{2.5} from the Wet Rod Mill operation, is considered to be economically infeasible for this type of operation.

The proposed BACT for PM, PM₁₀ and PM_{2.5} emissions from the Wet Rod Mill Operations did not include controls. The PM, PM₁₀ and PM_{2.5} emissions from these emission units are insignificant in nature.

Proposal: Duke Energy Indiana - Edwardsport Generating Station

The following has been proposed as BACT for PM, PM₁₀ and PM_{2.5} from the proposed Wet Rod Mill:

- (1) No Control
- (2) The Use of Good Design and Proper operation of the Wet Rod Mill.
- (3) The PM, PM₁₀ and PM_{2.5} emission from the wet rod mill operation shall not exceed 0.234 pounds of hour.

Step 5: Select BACT

Pursuant to 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following requirements for particulate matter (PM, PM₁₀ and PM_{2.5}) for the proposed Wet Rod Mill Operation:

- (1) The use of Good Design and Proper operation of the Wet Rod Mill.
- (2) The PM, PM₁₀ and PM_{2.5} emission from the two (2) wet rod mills shall not exceed 0.117 pounds of hour, each.

Air Quality Analysis

Duke Energy Indiana, Inc.

Edwardsport, Indiana (Knox County)

Tracking and Plant ID: 083-23529-00003

Proposed Project

Duke Energy Indiana, Inc. (Duke) submitted PSD modeling in April 2015 since they inadvertently omitted PM emission units from their coal handling operations. The Wet Rod Mill emission sources were part of the initial PSD project and are subject to the PSD requirements that were applicable to that project. Since the Wet Rod Mills were believed to be insignificant activities in the first application, this prompted another PSD review of the Wet Rod Mills.

The Wet Rod Mills at continuous operation would produce 1 ton/year of potential PM.

Kennedy/Jenks was the consultant that prepared the modeling portion of the permit application for Duke. This technical support document provides the air quality analysis review of the submitted modeling by Kennedy/Jenks for this PSD permit correction.

Project Requirements

Based on the Office of Air Quality (OAQ) modeling policies, when a PSD permit is being modified due to possible emission corrections from the applicant's original or latest PSD permit, modeling is required to determine if the air quality standards are being protected. Any concentration increase from changes due to missing units or emissions are added to the previous PSD modeling performed (original PSD concentration + concentration from increase = new value). If this new value is close to the NAAQS after the background is added or is close to the increment, then the source would have to remodel the whole facility. If there is plenty of head room for this increase, then remodeling the whole facility is not necessary.

Analysis Summary

Since the Wet Rod Mills were omitted from the first application, a PSD air quality analysis is required for PM₁₀, and PM_{2.5}. Since Duke was very close to the PM₁₀ increment in their last round of modeling, a full increment analysis is required. The PM₁₀ NAAQs was adequately protected in the previous modeling so a significant impact level (SIL) PM₁₀ test was performed. A PM_{2.5} NAAQs analysis was performed again since a voluntary NAAQs analysis was performed in August 2011.

Previous modeling was not used in this analysis. The source was remodeled for each modeling event listed above and was found not to violate the NAAQs or the increment.

Knox County is designated as attainment for all criteria pollutants.

Air Quality Impact Objectives

The purpose of the air quality impact analysis in the permit application is to accomplish the following objectives. Each objective is individually addressed in this document in each section outlined

below.

- A. Pollutants analyzed for an air quality analysis.
- B. Provide analyses of actual stack heights with respect to Good Engineering Practice (GEP), the meteorological data used, a description of the model used in the analysis, and the receptor grid utilized for the analyses.
- C. Determine background air quality levels.
- D. Demonstrate that the source will not cause or contribute to a violation of the National Ambient Air Quality Standard (NAAQS) or PSD increment.
- E. Summarize the Air Quality Analysis.

Section A - Pollutants Analyzed for Air Quality Impact

Proposed Project Emissions

PM₁₀ and PM_{2.5} are pollutants that will be emitted from Wet Rod Mills and are summarized below in Table 1. PM₁₀ and PM_{2.5} do not exceed the PSD significant emission rates but required an air quality analysis since they were omitted from the original PSD application.

TABLE 1
Significant Emission Rates for PSD

Pollutant	Source Emission Rate (Facility totals in tons/year)	Significant Emission Rate (tons/year)
PM ₁₀	1.0	15
PM _{2.5}	1.0	10

Duke's emission rates were taken from Section 2 of their permit submittal.

Section B – Good Engineering Practice (GEP), Met Data, Model Used, Receptor Grid and Terrain

Stack Height Compliance with Good Engineering Practice (GEP)

Applicability

Stacks should comply with GEP requirements established in 326 IAC 1-7-4. If stacks are lower than GEP, excessive ambient concentrations due to aerodynamic downwash may occur. Dispersion modeling credit for stacks taller than 65 meters (213 feet) is limited to GEP for the purpose of establishing emission limitations. The GEP stack height takes into account the distance and dimensions of nearby structures, which affects the downwind wake of the stack. The downwind wake is considered to extend five times the lesser of the structure's height or width. A GEP stack height is determined for each nearby structure by the following formula:

$$H_g = H + 1.5L$$

Where: Hg is the GEP stack height
H is the structure height
L is the structure's lesser dimension (height or width)

Stacks

Since some of the stack heights for Duke are below GEP stack height, the effect of aerodynamic downwash is accounted for in the air quality analysis for the project.

Meteorological Data

The National Weather Service (NWS) 1-minute Automated Surface Observation Station (ASOS) meteorological data used in AERMOD consisted of 2008 through 2012 surface data from Evansville, Indiana and upper air measurements taken at Lincoln, Illinois. The meteorological data was preprocessed using the latest versions of AERMINUTE, AERSURFACE, and AERMET at the time the permit was prepared.

Model Description

Kennedy/Jenks used AERMOD Version 14134. The Office of Air Quality (OAQ) used the same model version in their air quality analysis review to determine maximum off-property concentrations or impacts for each pollutant. All regulatory default options were utilized in the U.S. EPA approved model, as listed in the 40 Code of Federal Register Part 51, Appendix W "Guideline on Air Quality Models".

Receptor Grid

OAQ modeling used the same receptor grids generated by Kennedy/Jenks. Based on the previous analysis, the maximum point of impact from PM₁₀ and PM_{2.5} emission sources from Duke have been shown to occur along the plant property boundary or shortly downwind of that boundary. For the PM₁₀ increment analysis and the SIL test, receptors were spaced along the plant boundary and out to a distance of 3 kilometers. Receptor spacing for all the receptors was a 100 meters. The receptor spacing for the PM_{2.5} NAAQs analysis was 100 meters around the plant boundary and out to distance of approximately 1 kilometer.

Treatment of Terrain

Receptor terrain elevation inputs were interpolated from NED (National Elevation Dataset) data obtained from the USGS. NED terrain data was preprocessed using AERMAP.

Section C - Background Air Quality Levels

Background Concentrations

Applicability

EPA's "Ambient Monitoring Guidelines for Prevention of Significant Deterioration" (EPA-450/4-87-007) Section 2.4.1 is cited for approval of the monitoring sites chosen for this area.

Background Monitors

Background data was taken from representative monitoring station for Duke as shown in Table 2. A representative background concentration is intended to account for emission sources in the area of the plant under evaluation that are not specifically included in the air quality analysis. It was agreed between Duke and OAQ that this approach could be taken in place of the pre-construction monitoring requirement.

TABLE 2
Existing Monitoring Data Used For Background Concentrations (ug/m³)

Pollutant	Averaging Period	Location	Monitoring Site	Monitored Design Values
PM _{2.5}	Annual	Greene County – Plummer	18-055-0001	9.9 ¹
PM _{2.5}	24-hour	Greene County - Plummer	18-055-0001	23 ¹

¹The latest 3 years 2012- 2014 were used.

Section D – SIL Test, NAAQS, and PSD Increment

SIL Test Results

The PM₁₀ NAAQS was adequately protected in the previous PSD modeling submittal so a PM₁₀ SIL test was performed to account for the increased emissions from the Wet Rod Mill process.

This analysis was conducted to determine if the Wet Rod Mills would exceed the PSD PM₁₀ SILs. If the source's concentrations exceed these SILs, a NAAQS analysis is required. The modeling results showed a NAAQS analysis for PM₁₀ was not required because concentrations were below the SILs. SILs are defined by the following time periods in Table 3.

TABLE 3
SIL Test

Pollutant	Time Averaging Period	Maximum Modeled Impacts (µg/m ³)	Significant Impact Level (µg/m ³)	Refined AQ Aanalysis Required
PM ₁₀	24-hour	0.72 ¹	5	No

¹The first highest values per the EPA NSR manual dated October 1990.

NAAQS Compliance Analysis and Results

During Duke's Title V Part 70 renewal proceeding, challenges by third parties were raised. In order to support the Title V renewal process, Duke volunteered to perform a PM_{2.5} NAAQS analysis.

Since this was done before, NAAQS modeling for the appropriate time-averaging period for PM_{2.5} was conducted to include the Wet Rod Mills and compared to the respective NAAQS limit. OAQ modeling

results are shown in Table 4. All maximum-modeled PM_{2.5} concentrations were compared to the respective NAAQS limit. All maximum-modeled concentrations during the five years were below the 24-hour and annual NAAQS limits and no further modeling was required.

TABLE 4
NAAQS Analysis

Pollutant	Year	Time-Averaging Period	Maximum Concentration ug/m3	Background Concentration ug/m3	Total ug/m3	NAAQS Limit ug/m3	NAAQS Violation
PM _{2.5}	2008-2012	Annual	2.07	9.9	11.97	12	No
PM _{2.5}	2008-2012	24-hour	9.39 ¹	23	32.39	35	No

¹The maximum concentration is using the first high which is more conservative.

Analysis and Results of Source Impact on the PSD Increment

Applicability

Maximum allowable increases (PSD increments) are established by 326 IAC 2-2-6. This rule also limits a source to no more than 80 percent of the available PSD increment to allow for future growth.

Source Impact

Since Duke was very close to the PM₁₀ increment in their previous PSD modeling, a full increment analysis is required.

Results of the increment modeling are summarized in Table 5 below.

TABLE 5
Increment Analysis

Pollutant	Year	Time-Averaging Period	Maximum Concentration µg/m3	PSD Increment µg/m3	Percent Impact on the PSD Increment	Increment Violation
PM ₁₀	2009	24-hour ¹	20.94	30	69.8%	No
PM ₁₀	2012	Annual	4.33	17	25.5%	No

¹High 2nd High

The results of the PM₁₀ increment analysis show all averaging periods were below 80% of the available increment. No further analysis is required.

Part I - Summary of Air Quality Analysis

Kennedy/Jenks prepared the PSD modeling for the Wet Rod Mills which were inadvertently left out of the original PSD permit. This modeling analysis put those missing units into the PSD modeling to demonstrate the air quality standards would be protected. Duke's predicted PM₁₀ and PM_{2.5} impacts for the SIL test, NAAQS and the increment were all below air quality standards.



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Mack Sims
Duke Energy Indiana, Inc. - Edwardsport Generating
1000 E Main St
Plainfield, IN 46168

DATE: July 10, 2015

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

SUBJECT: Final Decision
Title V PSD SSM
083-35647-00003

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:
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 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

July 10, 2015

TO: Knox Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**


Applicant Name: Duke Energy Indiana – Edwardsport Station
Permit Number: 083-35647-00003

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

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

Enclosures
Final Library.dot 6/13/2013


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											Remarks
1		Mack Sims Duke Energy Indiana, Inc. - Edwardsport Generating 1000 E Main St Plainfield IN 46168 (Source CAATS)									
2		Jack Stultz GM Edwardsport Duke Energy Indiana, Inc. - Edwardsport Generating 15424 E SR 358 Edwardsport IN 47528 (RO CAATS)									
3		Mr. Ron Clark 4476 N. American Rd Bicknell IN 47512 (Affected Party)									
4		Mr. Larry Kane Bringham, Summers, Welsh & Spilman 10 West Market Street, Suite 2700 Indianapolis IN 46204 (Affected Party)									
5		Mr. Kerwin Olson Citizens Action Coalition 603 E Washington St Ste 502 Indianapolis IN 46204 (Affected Party)									
6		Knox County Health Department 520 S. 7th Street Vincennes IN 47591-1038 (Health Department)									
7		Knox Co Public Library 502 N 7th St Vincennes IN 47591-2101 (Library)									
8		Edwardsport Town Council P.O. Box 142 Edwardsport IN 47528 (Local Official)									
9		Mr. David C. Bender McGillivray Westerberg & Bender LLC 305 S Paterson St Madison WI 53703 (Affected Party)									
10		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 (Affected Party)									
11		Joanne Alexandrovich Vanderburgh County Health Dept. 420 Mulberry ST. Evansville IN 47713 (Affected Party)									
12		Ms. Isabel Piedmont Bloomington City Council 819 S. Washington Street Bloomington IN 47401 (Affected Party)									
13		Mr. Richard Hill SAVE THE VALLEY INC 3800 W H&H RUSTIC LANE PO BOX 813 MADISON IN 47250 (Affected Party)									
14		Ms. Jennifer Nulph 1023 Franklin Street Columbus IN 47201 (Affected Party)									
15		Ms. Martha Jane Neufelder 1402 Chestnut Street Columbus IN 47201 (Affected Party)									

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1		Mark President Pro Tempore City of Vincennes - Common Council 203 Vigo Street Vincennes IN 47591 (Affected Party)										
2		Ms. Deborah Quinto 6337 Macatuck Drive Indianapolis IN 46220 (Affected Party)										
3		Mr. Arthur Ross, Sr. 5928 South 75 West Ferdinand IN 47532 (Affected Party)										
4		Mr. Tom Duncan 6146 Ralston Avenue Indianapolis IN 46220 (Affected Party)										
5		Kevin & Elizabeth Curtis 816 West Fourth Street Bicknell IN 47512 (Affected Party)										
6		Ms. Linda Joyner 12781 Hearthstone Dr. Fishers IN 46037 (Affected Party)										
7		Mr. John Waterman State of Indiana 200 West Washington Street Indianapolis IN 46204 (Legislator)										
8		Mr. Greg Deaves Sherwin Williams #1211 2704 Hart Street Vincennes IN 47591-9234 (Affected Party)										
9		Daniel McCrary 116 Main St Bicknell IN 47512 (Affected Party)										
10		Ann Patton 608 Indiana St Bicknell IN 47512 (Affected Party)										
11		Mr. Georg Karl First Church of God in Vincennes 342 N Hyde Park Drive Vincennes IN 47591 (Affected Party)										
12		Bonnie Sydow 9491 N Freelandville Rd Edwardsport IN 47528 (Affected Party)										
13		Frank Gugliotta 515 W 8th St Bicknell IN 47512 (Affected Party)										
14		Mr. Vincent Griffin Environmental and Energy Policy 115 West Washington Street Suite # 850 S. Indianapolis IN 46204 (Affected Party)										
15		Mark Blackwell PO Box 36 Edwardsport IN 47528 (Affected Party)										

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1		Jen 207 E Shipping St Edwardsport In 47528 (Affected Party)										
2		Casey Robbins 9344 E Pepmeier Rd Oaktown IN 47561 (Affected Party)										
3		Steven Fields PO Box 237 Edwardsport IN 47528 (Affected Party)										
4		Tim Ellerman 1660 Lost Rd Monroe City In 47557 (Affected Party)										
5		H. J. Halterman The Vincennes Daily Capital PO Box 2 Oaktown In 47561 (Affected Party)										
6		Carl Koraleski 1811 Woodlawn Dr Washington In 47501 (Affected Party)										
7		Don Hart 4 Robert Dr Bicknell In 47512 (Affected Party)										
8		Jeanna Cummings PO Box 61 Edwardsport IN 47528 (Affected Party)										
9		George Hassell 302 S 4th St PO Box 102 Edwardsport In 47528 (Affected Party)										
10		Clint Jochim 604 S Main St Bicknell In 47512 (Affected Party)										
11		Gerald Hill 911 Popcorn Rd Springville In 47462 (Affected Party)										
12		Clark Anderson PO Box 101 Westphalia IN 47596 (Affected Party)										
13		Andrew Moreland 406 S Main Bicknell IN 47512 (Affected Party)										
14		Emily Heineke 609 N 5th St Vincennes IN 47591 (Affected Party)										
15		Scott Brown PO Box 447 Vincennes In 47591 (Affected Party)										

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1		Dee PO BOX 1602 Nashville In 47448 (Affected Party)									
2		Robert Lechner 310 Plumtree Vincennes In 47591 (Affected Party)									
3		Marc McNeece 608 N 6th Vincennes In 47591 (Affected Party)									
4		James Newkirk PO Box 61 Edwardsport In 47528 (Affected Party)									
5		Gary Gentry PO Box 246 Newburgh IN 47629 (Affected Party)									
6		P. R. Sweeney 2899 S Hickory Cr Rd Vincennes In 47591 (Affected Party)									
7		Patrick Fazio PO Box 299 Terre Haute In 47808 (Affected Party)									
8		Mr. Kent Hert RR1 BOX 192 Springville IN 47462 (Affected Party)									
9		Ms. Linda Montag-Olson 6495 Glenwood Drive Zionsville IN 46071 (Affected Party)									
10		Mr. Brad Severance 6443 Bayside North Indianapolis IN 46250 (Affected Party)									
11		Jane Goodman 715 W 13th St Bloomington IN 47408 (Affected Party)									
12		Lynn Jenkins 1730 S 950 E Zionsville In 46077 (Affected Party)									
13		Thomas & Beth Hollingsworth 2321 E Rechter Rd Bloomington In 47401 (Affected Party)									
14		Anne & Christopher Haynes 626 N Grandview Dr Bloomington IN 47408 (Affected Party)									
15		Armin Moczek 1800 Windsor Dr Bloomington In 47401 (Affected Party)									

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1		Edwin & Monica 3432 N Valleyview Dr Bloomington In 47404 (Affected Party)									
2		Dorothy & Steven Sowell 409 E Clover Lane Bloomington In 47408 (Affected Party)									
3		Velda Kanne PO Box 2174 Bloomington In 47402-2174 (Affected Party)									
4		Cynthia Schultz 1643 E Maplecrest Dr Bloomington In 47408 (Affected Party)									
5		Marcia Veldman 6181 Kent Rd Bloomington In 47401 (Affected Party)									
6		Peter & Carolyn Mitchell 6412 Wellston Drive Bloomington IN 47408 (Affected Party)									
7		Mary Blizzard 1510 E Maxwell Lane Bloomington In 47401 (Affected Party)									
8		Kim Sakmann 8700 E St Road 45 Unionville IN 47468 (Affected Party)									
9		Chris Judge 3611 Bainbridge Road Bloomington IN 47401 (Affected Party)									
10		John Thompson Clean Air Task Force 231 W Main Suite 1E Carbondale IL 62901 (Affected Party)									
11		David Pilbrow 3308 Ivory Way Indianapolis In 46227 (Affected Party)									
12		Martha Sattinger 4333 E Stephens Dr Bloomington In 47408 (Affected Party)									
13		Laura Mojonnier 1800 E Windsor Drive Bloomington IN 47401 (Affected Party)									
14		Jeanette Rowe 4980 W 59th Street Indainapolis IN 46254 (Affected Party)									
15		H. Jane Sandberg 2201 N Fritz Drive Bloomington IN 46204-2251 (Affected Party)									

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Mail Code 61-53

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Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Marilyn 9222 Garrison Drive Apt 303-B Indianapolis IN 46240 (Affected Party)										
2		Mr. Jim Sweeney 1773 Selo Drive Schererville IN 46372 (Affected Party)										
3		Joan Keeler 412 E Cardinal Drive Bloomington IN 47401 (Affected Party)										
4		ARLIS BATES 936 VANDALIA ST HILLSBORO IL 62049 (Affected Party)										
5		Mr. TERRANCE BLACK GREEN WAY SUPPLY 620 N DELAWARE ST INDIANPOLIS IN 46204 (Affected Party)										
6		Mr. Greg Buck Campaign for Sustainable Economics 537 Fletcher Ave #2 Indianapolis IN 46203 (Affected Party)										
7		Mr. Greg Cardinal First American Bank PO BOX 1317 Vincennes IN 47591 (Affected Party)										
8		Mr. Douglas Halton 15290 Nashua Cir Westfield IN 46074 (Affected Party)										
9		Mr. Richard Helton Vincennes University 1002 N First St Vincennes IN 47591 (Affected Party)										
10		Mrs. Judith Hostetler 6315 E Pleasant Run Pkwy South Dr Indianapolis IN 46219 (Affected Party)										
11		Anne Jacoby Generations 1019 N 4th St PO BOX 314 Vincennes IN 47591 (Affected Party)										
12		Elizabeth Joshi 2377 Lakeridge Dr Newburgh IN 47630 (Affected Party)										
13		Tim Kiger Schoot North America 2000 Chestnut St Vincennes IN 47591 (Affected Party)										
14		Mr. Terry Mooney City of Vincennes 201 Vigo St Vincennes IN 47591 (Affected Party)										
15		Kevin Rowland Stradtner, Rowland & Associates 518 Main St Vincennes IN 47591 (Affected Party)										

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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1		Helen Regional President Old National Bank PO BOX 1200 Vincennes IN 47591 (Affected Party)										
2		Terry Singleton 4249 Sunrise Dr Sellersburg IN 47172 (Affected Party)										
3		Timothy Smith Vincennes Twp Fire Dept 1265 S Hart St Rd Vincennes IN 47591 (Affected Party)										
4		J. Wayne Thomann Kemper CPA Group. LLC 505 N 6th Street P O Box 297 Vincennes IN 47591 (Affected Party)										
5		Fred E. Thompson Knox County Commissioner 4315 N Camp Arthur Road Bruceville IN 47516 (Affected Party)										
6		Kent E. Utt Community Bank President, Region Bank 2202 N 6th Street Vincennes IN 47591 (Affected Party)										
7		Tim Wilson 1260 Thornton Court Apt. D Columbus IN 47201 (Affected Party)										
8		Greg Wolters Schott North America 2000 Chestnut Street Vincennes IN 47591 (Affected Party)										
9		Nicole Robinson MPR Associates 320 King Street, Suite 400 Alexandria VA 22314 (Affected Party)										
10		Mr. Patrick Coughlin Duke Energy Indiana, Inc. 1000 East Main Street Plainfield IN 46168 (Source ? addl contact)										
11		Rex Alton 2341 S Old Decker Rd Vincennes IN 47591 (Affected Party)										
12		Zac Elliot Citizens Action Coalition of Indiana 603 E Washington St # 502 Indianapolis IN 46204 (Affected Party)										
13		Steve Thais 203 Nicholas St Vincennes IN 47591 (Affected Party)										
14		John Blair 800 Adams Ave Evansville IN 47713 (Affected Party)										
15		Mr. Steven Frey Kennedy/Jenks Consultants 1515 Woodfield Rd, Ste 360 Schaumburg IL 60173 (Consultant)										

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											Remarks
1		Knox County Commissioners 111 Washington Ave Vincennes in 47591 (Local Official)									
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

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