



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: January 16, 2014

RE: Duke Energy Indiana, Inc. - Gibson Generating Station/051-33624-00013

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

Notice of Decision: Approval – Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) 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.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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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Part 70 Operating Permit Renewal OFFICE OF AIR QUALITY

Duke Energy Indiana., Inc - Gibson Generating Station 1097 N 950 W Owensville, Indiana 47665

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

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

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

Operation Permit No.: T051-33624-00013	
Issued by:  Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: January 16, 2014 Expiration Date: January 16, 2019

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- E.5.1 General Provisions Relating to National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-1][40 CFR Part 63, Subpart A]
- E.5.2 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82-1]

F.1 SO₃ MITIGATION PLAN

- F.1 SO₃ Mitigation System [326 IAC 2-2.3]
- F.2 Reserved
- F.3 Minimum Injection Rate
- F.4 Plume Touchdown

H.1 Clean Air Interstate (CAIR)

- H.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)]
- H.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)]
- H.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)]
- H.4.1 Nitrogen Oxides Emission Requirements [326 IAC 24-1-4(c)] [40 CFR 97.106(c)]
- H.4.2 Sulfur Dioxide Emission Requirements [326 IAC 24-2-4(c)] [40 CFR 97.206(c)]
- H.4.3 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]
- H.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)]
- H.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)]
- H.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)]
- H.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)]
- H.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)]
- H.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]

Quarterly Report
Quarterly Deviation and Compliance Monitoring Report

- Attachment A - NSPS 40 CFR 60, Subpart D**
- Attachment B - NSPS 40 CFR 60, Subpart OOO**
- Attachment C - CAM Plan**
- Attachment D - NSPS 40 CFR 60, Subpart IIII**
- Attachment E - NESHAP 40 CFR 63, Subpart ZZZZ**

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.4 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(14)][326 IAC 2-7-1(22)]

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

Source Address:	1097 N 950 W, Owensville, Indiana 47665
General Source Phone Number:	317-838-2108
SIC Code:	4911
County Location:	Gibson
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

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

- (a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 1 has its own continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 2 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with a flue gas conditioning system and an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 3.

Boiler No. 3 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack D.

Stack D has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (e) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

Stack C has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a Boiler 5 has a continuous opacity monitor (COM).

- (f) A coal transfer system, with a nominal throughput of 6,000 tons of coal per hour, consisting of the following equipment:

- (1) Two (2) railcar unloading stations, each with a drop point to a hopper identified as DP-5 and DP-25, with the drop point controlled by a partial enclosure, and exhausting to the ambient air.
- (2) Two (2) active piles, each with a drop point to a hopper identified as DP-1 and DP-16, with each drop point enclosed and exhausting to the ambient air.
- (3) Three (3) storage piles, having an estimated combined storage capacity including the active piles of 4,000,000 tons, with fugitive emissions controlled by watering trucks.
- (4) Four (4) enclosed hoppers, each with a drop point to conveyors identified as DP-2, DP-6, DP-17 and DP-26, with each drop point enclosed and exhausting to the ambient air.
- (5) An enclosed conveyor system, with 18 drop points identified as DP-3, DP-4, DP-7 through DP-15, and DP-14 through DP-22, with each drop point enclosed, excluding the two (2) active pile conveyors which have the drop points (DP-18 and DP-22) controlled by telescopic chutes, and exhausting to the ambient air.
- (6) Five (5) enclosed coal bunkers, each with a nominal capacity of 15,000 tons of coal. Bunkers are loaded via a conveyor tripper system with a total capacity of 3,000 tons per hour to the units 1 and 2 bunkers, and 3,000 tons per hour to the units 3, 4 and 5 bunkers.

- (g) A limestone processing system, consisting of the following equipment:

- (1) One (1) unloading station for trucks or railcar, with a drop point to a hopper identified as LSDP-1 with a nominal throughput of 2,500 tons of limestone per hour, with the drop point controlled by a partial enclosure, and exhausting to the

ambient air.

- (2) Two (2) enclosed hoppers, each with a drop point to conveyors identified as LSDP-2 and LSDP-5 with a nominal throughput of 200 tons of limestone per hour, with each drop point enclosed.
 - (3) One (1) storage pile, with a nominal storage capacity of 50,000 tons, with a drop point to a hopper identified as LSDP-4, with the drop point enclosed and exhausting to the ambient air.
 - (4) An enclosed conveyor system, with four (4) drop points identified as LSDP-3 and LSDP-8 through LSDP-10, with each drop point enclosed.
 - (5) One (1) enclosed ball mill, with a drop point to a conveyor identified as LSDP-6, with the drop point enclosed.
 - (6) Two (2) day bins for temporary storage of limestone, with a nominal loading capacity of 150 tons per hour, with dust from loading the bins controlled by bin vent filters, and exhausting to the ambient air.
- (h) Limestone Handling (TP-1 to TP-5, TP-10 to TP-17, F-6 and F-9), with maximum capacity of 2,500 tons per hour:
- (1) Transfer of limestone from railcar or truck to the limestone hopper, with fogging type dust suppression as particulate control.
 - (2) Enclosed transfer of limestone from unloading hoppers to belt feeders.
 - (3) Enclosed transfer of limestone from belt feeders to conveyors.
 - (4) Telescoping chute transfer of limestone from conveyor to lime storage stockout pile.
 - (5) Enclosed transfer of limestone from the reclaim hoppers to belt feeders, with fogging type dust suppression as particulate control.
 - (6) Enclosed transfer of limestone from conveyor to conveyor, with fogging type dust suppression as particulate control.
 - (7) Transfer of limestone from conveyor to day bin, with surge-bin filter as particulate control.
 - (8) Enclosed transfer of limestone from conveyor fixed hopper to conveyor with fogging type dust suppression as particulate control.
 - (9) Transfer of limestone from conveyor fixed tripper to day bin, with surge-bin filter as particulate control.
 - (10) Limestone storage piles, with watering type dust suppression as fugitive dust control.
- (i) Gypsum Handling (TP-26 to TP-35, TP-38, and TP-39), with maximum capacity of 300 tons per hour:
- (1) Enclosed transfer of gypsum from belt feeders to conveyors.

- (2) Transfer of gypsum from conveyors to stockout piles.
 - (3) Partially enclosed transfer of gypsum from conveyor to radial stacker conveyor.
 - (4) Transfer of gypsum from radial stacker conveyor to stockout pile.
 - (5) Stockout piles.
- (j) Dry fly ash handling system, including the following, permitted in 2011:
- (1) one (1) pneumatic fly ash transfer system from existing precipitator hoppers for Units 1, 2, and 3 equipped with separators/exhausters designated as 1A, 1B, 2A, 2B, 2C, 3A, 3B and 3C to two (2) new transfer stations designated as B1 & B2 each with a maximum capacity of 200 tons per hour. The particulate emissions from each transfer station silo will be controlled by bin-vent filters to 0.01 gr/dscf.
 - (2) one (1) pneumatic fly ash transfer system conveying ash from the two (2) transfer station silos to two (2) new fixation silos designated as B3 & B4 each with a maximum capacity of 200 tons per hour. The particulate emissions from each fixation silo will be controlled by bin-vent filters to 0.01 gr/dscf.
 - (3) one (1) pneumatic fly ash transfer system equipped enclosed screw conveyers from the two (2) fixation silos to a new Fixation Building with particulate emissions controlled by a dust collector C1 (with a spare dust collector C2).
 - (4) Loading of fly ash into trucks for transport to the landfill from fixation silos B3 & B4 using wet unloaders.
 - (5) Truck loading of two (2) new lime silos designated B5 & B6 for use in the Fixation Building, each with bin-vent filters controlling particulate matter emissions to 0.01 gr/dscf.
 - (6) One (1) fly ash day bin designated B7 with a maximum capacity of 200 tons per hour with particulate matter emissions controlled by a bin-vent filter to 0.01 gr/dscf.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(14)]

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

- (a) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.[326 IAC 6-3-2]
- (b) Conveyors as follows: [326 IAC 6-3]
 - (1) Covered conveyor for coal or coke conveying of less than or equal to 360 tons per day;
 - (2) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983;

- (3) Underground conveyors.
- (c) Coal bunker and coal scale exhausts and associated dust collector vents. [326 IAC 6-3]
- (d) One (1) emergency firewater pump engine, rated at 500 horsepower (HP) and identified as Pump #1, installed in 1995 and permitted in 2013.[Under 40 CFR 63, Subpart ZZZZ, the firewater pump engine is considered an existing affected source.]
- (e) One (1) emergency firewater pump engine, rated at 575 horsepower (HP) and identified as Pump #2, installed in 2007 and permitted in 2013. [Under 40 CFR 60, Subpart IIII, the firewater pump engine is considered an existing affected source.]

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, T051-33624-00013, 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(35), 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(35).

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(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][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(35).

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(35).

- (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(35).

(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)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

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

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

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

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a

compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

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

- (a) All terms and conditions of permits established prior to T051-33624-00013 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(35).
- (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(35).

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(35).
- (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) or (c) 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)(1) and (c)(1). 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) and (c)(1).

- (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(37)) 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(35).

- (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(35).

- (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(35).

- (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(35).
- (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)][40 CFR 64][326 IAC 3-8]

- (a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.
- (b) For existing units:
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 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, 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(35).

- (c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
- (d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

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

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

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

C.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5]
[326 IAC 2-7-6]

- (I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:
 - (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
 - (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
 - (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
 - (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
 - (e) The Permittee shall record the reasonable response steps taken.
- (II)
 - (a) *CAM Response to excursions or exceedances.*
 - (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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 emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
- (b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.
- (d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
 - (1) Failed to address the cause of the control device performance problems;
or
 - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
- (h) *CAM recordkeeping requirements.*
 - (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the

adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

- (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) ("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(35).

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

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

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 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(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 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:
- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 64][326 IAC 3-8]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. 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(35). 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 (oo) and/or 326 IAC 2-3-1 (jj)) 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 (ww) and/or 326 IAC 2-3-1 (pp), 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.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

Ambient Monitoring Requirements [326 IAC 7-3]

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 1 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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.1.1 PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to PSD Permit PSD (26) 1215, issued March 17, 1978, particulate matter emissions (PM) from the Boiler No. 1 stack shall not exceed 0.12 pound per million Btu heat input (lb/MMBtu).

D.1.2 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

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

- (a) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of four (4) hours (forty (40) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- Operation of the electrostatic precipitator is not required during these times.
- (b) 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 a total of four (4) hours (forty (40) six (6)-minute averaging periods, consecutive or non-consecutive).
- (c) Permittee is also allowed one start up and one shut down per calendar year as follows:
- (i) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of seven (7) hours (seventy (70) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- (ii) 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 a total of five (5) hours (fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive).
- (d) 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.1.3 Sulfur Dioxide (SO₂) and Pollution Control Project [326 IAC 7-4-12.1][326 IAC 2-2.3]
[326 IAC 2-3.3]

- (a) Pursuant to 326 IAC 7-4-12.1 (Gibson County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 1 shall not exceed 3.19 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 2-2.3 and 326 IAC 2-3.3, the installation and operation of the flue gas desulfurization (FGD) system for Boiler No. 1 and the associated limestone and gypsum handling equipment is considered a pollution control project.
- (c) Pursuant to 326 IAC 2-2.3 and 326 IAC 2-3.3, upon initial start up of the flue gas desulfurization (FGD) system, the sulfur dioxide (SO₂) emissions from Boiler No. 1 shall not exceed 1.0 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.

D.1.4 Operation Standard [326 IAC 2-1.1-5(a)(4)]

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

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

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.1.6 Testing Requirements [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.1.1 - PSD BACT Requirements, the Permittee shall perform PM testing for the dry-bottom pulverized coal-fire boiler, identified as Boiler 1, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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.1.7 Operation of Electrostatic Precipitator and Flue gas Desulfurization [326 IAC 2-7-6(6)]

- (a) Except as otherwise provided by statute or rule or in this permit, the electrostatic precipitator shall be operated at all times that the Boiler No. 1 is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.
- (b) Except as otherwise provided by statute or rule or in this permit, the flue gas desulfurization (FGD) system shall be operated as needed to maintain compliance with applicable SO₂ emission limits.

D.1.8 Maintenance of Continuous Opacity Monitoring System [326 IAC 2-7-5(3)(A)(iii)]

The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment required by this permit. For a boiler, the COMS shall be in operation at all times that the forced draft fan is in operation.

- (a) 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.
- (b) 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.
- (c) 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 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 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 and/or 40 CFR 63.

D.1.9 Maintenance of Continuous Emission Monitoring System [326 IAC 3-5] [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for NO_x and SO₂ emissions.
- (b) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 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 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 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) If the CEM is required for monitoring NO_x emissions pursuant to 40 CFR 75 (Title IV Acid Rain program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.
- (2) If the CEM is not used to monitor NO_x emissions from a unit subject to requirements of the Title IV Acid Rain program and is down for a period of four (4) hours or more, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 26 IAC 3-5, 40 CFR 60 and Construction Permit PSD (26) 1215.

D.1.10 Sulfur Dioxide Emissions [326 IAC 7-2][326 IAC 7-4-12.1][326 IAC 2-7-5(3)(A)][326 IAC 2-7-6]

- (a) Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide (SO₂) emissions do not exceed the equivalent of 3.19 pounds per MMBtu using a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data shall be collected as follows:
 - (1) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or
 - (2) 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.
- (c) Upon written notification to IDEM by a facility owner or operator, 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)]
- (d) Pursuant to 326 IAC 3-5-1(c)(2)(B), compliance shall be demonstrated using SO₂ continuous emission monitoring system (CEMS) data.

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

D.1.11 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (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.1.12 Opacity Reading [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) Appropriate response steps shall be taken whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets being returned to service.

- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit.

Failure to take response steps shall be considered a deviation from this permit. 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 requirements of (a) and (b), do not apply to Boiler No. 1 during startup and shutdown of Boiler No. 1 and do not apply when Boiler No. 1 is being controlled by the flue gas desulfurization (FGD) system.

D.1.13 SO₂ Monitoring System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(3)][326 IAC 2-7-5(1)]

At any time the flue gas desulfurization (FGD) system is operating, if the SO₂ continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service, to demonstrate that the operation of the flue gas desulfurization (FGD) continues in a manner typical for the boiler load and sulfur content of the coal fired.

Flue gas desulfurization (FGD) parametric monitoring readings shall be recorded at least twice per day until the primary CEMS or a backup CEMS is brought online.

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

D.1.14 Record Keeping Requirement

- (a) To document the compliance status with Condition D.1.9 - Maintenance of Continuous Emission Monitoring Equipment,
- (1) The Permittee shall record the output of the continuous monitoring systems and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.
- (2) The Permittee shall maintain the monthly records of the SO₂ and NO_x emissions from the coal-fired boiler, identified as Boiler No. 1 based the CEM data.
- (b) To document the compliance status with Section C - Opacity and Conditions D.1.1 - PSD BACT Requirements, D.1.2 - Temporary Alternative Opacity Limitations, D.1.9 - Continuous Emissions Monitoring, D.1.11 - Transformer-Rectifier (T-R) Sets, and D.1.12 - Opacity Readings, the Permittee shall maintain records in accordance with (1) through (4) below.

Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.1.1 - PSD BACT Requirements, D.1.2 - Temporary Alternative Opacity Limitations.

- (1) Data and results from the most recent stack test.
 - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.
 - (3) The results of all Method 9 visible emission readings taken during any periods of COM downtime.
 - (4) All ESP parametric monitoring readings.
- (c) To document the compliance status with Conditions D.1.3 - Sulfur Dioxide (SO₂) and Pollution Control Project, D.1.10 - Sulfur Dioxide Emissions, and D.1.7(b) - Operation of Electrostatic Precipitator and Flue Gas Desulfurization (FGD), 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 CEM downtime.
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.1.15 Reporting Requirement

- (a) A quarterly report of opacity exceedances shall be submitted 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.
- (b) 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 2 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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 PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to PSD Permit PSD (26) 1215, issued March 17, 1978, particulate matter emissions (PM) from the Boiler No. 2 stack shall not exceed 0.12 pound per million Btu heat input (lb/MMBtu).

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

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

- (a) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of four (4) hours (forty (40) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- Operation of the electrostatic precipitator is not required during these times.
- (b) 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 a total of four (4) hours (forty (40) six (6)-minute averaging periods, consecutive or non-consecutive).
- (c) Permittee is also allowed one start up and one shut down per calendar year as follows:
- (i) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of seven (7) hours (seventy (70) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- (ii) 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 a total of five (5) hours (fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive).
- (d) 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.2.3 Sulfur Dioxide (SO₂) and Pollution Control Project [326 IAC 7-4-12.1][326 IAC 2-2.3]
[326 IAC 2-3.3]**

- (a) Pursuant to 326 IAC 7-4-12.1 (Gibson County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 2 shall not exceed 3.19 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 2-2.3 and 326 IAC 2-3.3, the installation and operation of the flue gas desulfurization (FGD) system for Boiler No. 2 and the associated limestone and gypsum handling equipment is considered a pollution control project.
- (c) Pursuant to 326 IAC 2-2.3 and 326 IAC 2-3.3, upon initial start up of the flue gas desulfurization (FGD) system, the sulfur dioxide (SO₂) emissions from Boiler No. 2 shall not exceed 1.0 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.

D.2.4 Operation Standards [326 IAC 2-1.1-5(a)(4)]

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

D.2.5 Preventive Maintenance Plan [326 IAC 1-6-3]

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.2.6 Testing Requirements [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.2.1 - PSD BACT Requirements, the Permittee shall perform PM testing for the dry-bottom pulverized coal-fire boiler, identified as Boiler 2, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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.2.7 Operation of Electrostatic Precipitator and Flue Desulfurization (FGD) [326 IAC 2-7-6(6)]

- (a) Except as otherwise provided by statute or rule or in this permit, the electrostatic precipitator shall be operated at all times that the Boiler No. 2 is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.
- (b) Except as otherwise provided by statute or rule or in this permit, the flue gas desulfurization (FGD) system shall be operated as needed to maintain compliance with applicable SO₂ emission limits.

D.2.8 Maintenance of Continuous Opacity Monitoring System [326 IAC 2-7-5(3)(A)(iii)]

The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment required by this permit. For a boiler, the COMS shall be in operation at all times that the forced draft fan is in operation.

- (a) 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.
- (b) 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.
- (c) 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 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 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.
- (d) 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 and/or 40 CFR 63.

D.2.9 Maintenance of Continuous Emission Monitoring System [326 IAC 3-5] [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for NO_x and SO₂ emissions.
- (b) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 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 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 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) If the CEM is required for monitoring NOX emissions pursuant to 40 CFR 75 (Title IV Acid Rain program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.
- (2) If the CEM is not used to monitor NOx emissions from a unit subject to requirements of the Title IV Acid Rain program and is down for a period of four (4) hours or more, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 26 IAC 3-5, 40 CFR 60 and Construction Permit PSD (26) 1215.

D.2.10 Sulfur Dioxide Emissions [326 IAC 7-2][326 IAC 7-4-12.1][326 IAC 2-7-5(3)(A)][326 IAC 2-7-6]

- (a) Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide (SO₂) emissions do not exceed the equivalent of 3.19 pounds per MMBtu using a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data shall be collected as follows:
 - (1) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or
 - (2) 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.
- (c) Upon written notification to IDEM by a facility owner or operator, 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)]
- (d) Pursuant to 326 IAC 3-5-1(c)(2)(B), compliance shall be demonstrated using SO₂ continuous emission monitoring system (CEMS) data.

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

D.2.11 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (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.2.12 Opacity Reading [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) Appropriate response steps shall be taken whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets being returned to service.

- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit.

Failure to take response steps shall be considered a deviation from this permit. 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 requirements of (a) and (b), do not apply to Boiler No. 2 during startup and shutdown of Boiler No. 2 and do not apply when Boiler No. 2 is being controlled by the flue gas desulfurization (FGD) system.

D.2.13 SO₂ Monitoring System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(3)][326 IAC 2-7-5(1)]

At any time the flue gas desulfurization (FGD) system is operating, if the SO₂ continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service, to demonstrate that the operation of the flue gas desulfurization (FGD) continues in a manner typical for the boiler load and sulfur content of the coal fired. Flue gas desulfurization (FGD) parametric monitoring readings shall be recorded at least twice per day until the primary CEMS or a backup CEMS is brought online.

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

D.2.14 Record Keeping Requirement

- (a) To document the compliance status with Condition D.2.9 - Maintenance of Continuous Emission Monitoring Equipment,
- (1) The Permittee shall record the output of the continuous monitoring systems and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.
 - (2) The Permittee shall maintain the monthly records of the SO₂ and NO_x emissions from the coal-fired boiler, identified as Boiler No. 1 based the CEM data.
- (b) To document the compliance status with Section C - Opacity and Conditions D.2.1 - PSD BACT Requirements, D.2.2 - Temporary Alternative Opacity Limitations, D.2.9 - Continuous Emissions Monitoring, D.2.11 - Transformer-Rectifier (T-R) Sets, and D.2.12 - Opacity Readings, 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 - PSD BACT Requirements, and D.2.2 - Temporary Alternative Opacity Limitations.

- (1) Data and results from the most recent stack test.
 - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.
 - (3) The results of all Method 9 visible emission readings taken during any periods of COM downtime.
 - (4) All ESP parametric monitoring readings.
- (c) To document the compliance status with Conditions D.2.3 - Sulfur Dioxide (SO₂) and Pollution Control Project, D.2.10 - Sulfur Dioxide Emissions, and D.2.7(b) - Operation of Electrostatic Precipitator and Flue Gas Desulfurization (FGD), 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 CEM downtime.
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.2.15 Reporting Requirement

- (a) A quarterly report of opacity exceedances shall be submitted 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.
- (b) 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with a flue gas conditioning system and an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 3.

Boiler No. 3 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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 PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to PSD Permit PSD (26) 1215, issued March 17, 1978, particulate matter emissions (PM) from the Boiler No. 3 stack shall not exceed 0.12 pound per million Btu heat input (lb/MMBtu).

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

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

- (a) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of five (5) hours (fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- Operation of the electrostatic precipitator is not required during these times.
- (b) 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 a total of four (4) hours (forty (40) six (6)-minute averaging periods, consecutive or non-consecutive).
- (c) Permittee is also allowed one start up and one shut down per calendar year as follows:
- (i) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of seven (7) hours (seventy (70) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- (ii) 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 a total of five (5) hours (fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive).
- (d) 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.3.3 Sulfur Dioxide (SO₂) and Pollution Control Project [326 IAC 7-4-12.1][326 IAC 2-2.3]
[326 IAC 2-3.3]**

- (a) Pursuant to 326 IAC 7-4-12.1 (Gibson County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 3 shall not exceed 3.19 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 2-2.3 and 326 IAC 2-3.3, the installation and operation of the flue gas desulfurization (FGD) system for Boiler No. 3 and the associated limestone and gypsum handling equipment is considered a pollution control project.
- (c) Pursuant to 326 IAC 2-2.3 and 326 IAC 2-3.3, upon initial start up of the flue gas desulfurization (FGD) system, the sulfur dioxide (SO₂) emissions from Boiler No. 3 shall not exceed 1.5 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average.

D.3.4 Operation Standards [326 IAC 2-1.1-5(a)(4)]

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

D.3.5 Preventive Maintenance Plan [326 IAC 1-6-3]

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

In order to determine compliance with Condition D.3.1 - PSD BACT Requirements, the Permittee shall perform PM testing for the dry-bottom pulverized coal-fire boiler, identified as Boiler 3, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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.3.7 Operation of Electrostatic Precipitator and Flue Gas Desulfurization (FGD) [326 IAC 2-7-6(6)]

- (a) Except as otherwise provided by statute or rule or in this permit, the electrostatic precipitator shall be operated at all times that the Boiler No. 3 is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.
- (b) Except as otherwise provided by statute or rule or in this permit, the flue gas desulfurization (FGD) system shall be operated as needed to maintain compliance with applicable SO₂ emission limits.

D.3.8 Maintenance of Continuous Opacity Monitoring System [326 IAC 2-7-5(3)(A)(iii)]

The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment required by this permit. For a boiler, the COMS shall be in operation at all times that the forced draft fan is in operation.

- (a) 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.
- (b) 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.
- (c) 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 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 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.
- (d) 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 and/or 40 CFR 63.

D.3.9 Maintenance of Continuous Emission Monitoring System [326 IAC 3-5] [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for NO_x and SO₂ emissions.
- (b) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 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 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 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) If the CEM is required for monitoring NOX emissions pursuant to 40 CFR 75 (Title IV Acid Rain program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.
- (2) If the CEM is not used to monitor NOx emissions from a unit subject to requirements of the Title IV Acid Rain program and is down for a period of four (4) hours or more, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 26 IAC 3-5, 40 CFR 60 and Construction Permit PSD (26) 1215.

D.3.10 Sulfur Dioxide Emissions [326 IAC 7-2][326 IAC 7-4-12.1][326 IAC 2-7-5(3)(A)][326 IAC 2-7-6]

- (a) Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide (SO₂) emissions do not exceed the equivalent of 3.19 pounds per MMBtu using a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data shall be collected as follows:
 - (1) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or
 - (2) 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.
- (c) Upon written notification to IDEM by a facility owner or operator, 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)]
- (d) Pursuant to 326 IAC 3-5-1(c)(2)(B), compliance shall be demonstrated using SO₂ continuous emission monitoring system (CEMS) data.

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

D.3.11 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

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

- (a) Appropriate response steps shall be taken whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets being returned to service.

- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit.

Failure to take response steps shall be considered a deviation from this permit. 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 requirements of (a) and (b), do not apply to Boiler No. 3 during startup and shutdown of Boiler No. 3 and do not apply when Boiler No. 3 is being controlled by the flue gas desulfurization (FGD) system.

D.3.13 SO₂ Monitoring System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(3)][326 IAC 2-7-5(1)]

At any time the flue gas desulfurization (FGD) system is operating, if the SO₂ continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service, to demonstrate that the operation of the flue gas desulfurization (FGD) continues in a manner typical for the boiler load and sulfur content of the coal fired.

Flue gas desulfurization (FGD) parametric monitoring readings shall be recorded at least twice per day until the primary CEMS or a backup CEMS is brought online.

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

D.3.14 Record Keeping Requirements

- (a) To document the compliance status with Section C - Opacity and Conditions D.3.1 - PSD BACT Requirements, D.3.2 - Temporary Alternative Opacity Limitations, D.3.7 - Continuous Emissions Monitoring, D.3.9 - Transformer-Rectifier (T-R) Sets, and D.3.11 - Opacity Readings, 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- Particulate Emissions Limitation, and D.3.2 - Temporary Alternative Opacity Limitations.

- (1) Data and results from the most recent stack test.
- (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.
- (3) The results of all Method 9 visible emission readings taken during any periods of COM downtime.
- (4) All ESP parametric monitoring readings.

- (b) To document the compliance status with Conditions D.3.3 - Sulfur Dioxide (SO₂) and Pollution Control Project, D.3.10 - Sulfur Dioxide Emissions, and D.3.7(b) - Operation of Electrostatic Precipitator and Flue Gas Desulfurization (FGD), 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 CEM downtime.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.3.15 Reporting Requirement

- (a) A quarterly report of opacity exceedances shall be submitted 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.
- (b) 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack D.

Stack D has continuous emissions monitors (CEMs) for nitrogen oxides (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 PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to PSD Permit PSD (26) 1215, issued March 17, 1978, particulate matter emissions (PM) from the Boiler No. 4 stack shall not exceed 0.12 pound per million Btu heat input (lb/MMBtu).

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

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

- (a) During boiler startups an exemption from the 40% opacity limit is allowed for up to fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive or until the flue gas temperature entering the electrostatic precipitator reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- Operation of the electrostatic precipitator is not required during these times.
- (b) During boiler shutdowns, an exemption from the 40% opacity limitation established in 326 IAC 5-1-2 is allowed for a period not to exceed forty (40) six (6)-minute averaging periods, consecutive or non-consecutive.
- (c) Permittee is also allowed one start up and one shut down per calendar year as follows:
- (i) During boiler startups an exemption from the 40% opacity limit is allowed for up to seven (7) hours (seventy (70) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature entering the electrostatic precipitator reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- (ii) During boiler shutdowns, an exemption from the 40% opacity limitation established in 326 IAC 5-1-2 is allowed for a period not to exceed five (5) hours (fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive).
- (d) 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.4.3 Sulfur Dioxide (SO₂) Limitations [326 IAC 7-4-12.1]

Pursuant to 326 IAC 7-4-12.1 (Gibson County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 4 stack shall not exceed 0.60 pounds per million Btu (lbs/MMBtu) based on a thirty (30) day rolling weighted average and operate an FGD system.

D.4.4 Operation Standards [326 IAC 2-1.1-5(a)(4)]

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

D.4.5 Preventive Maintenance Plan [326 IAC 1-6-3]

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

In order to determine compliance with Condition D.4.1 - PSD BACT Requirements, the Permittee shall perform PM testing for the dry-bottom pulverized coal-fire boiler, identified as Boiler 4, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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.4.7 Operation of Electrostatic Precipitator [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the electrostatic precipitator shall be operated at all times that the Boiler No. 4 is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.

D.4.8 Flue Gas Desulfurization (FGD) System [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

Except as otherwise provided by statute or rule or in this permit, the flue gas desulfurization (FGD) system shall be operated as needed to maintain compliance with applicable SO₂ emission limits.

D.4.9 Maintenance of Continuous Opacity Monitoring System [326 IAC 2-7-5(3)(A)(iii)]

The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment required by this permit. For a boiler, the COMS shall be in operation at all times that the forced draft fan is in operation.

- (a) 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.
- (b) 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.

- (c) 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 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 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.
- (d) 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 and/or 40 CFR 63.

D.4.10 Maintenance of Continuous Emission Monitoring System [326 IAC 3-5] [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for NO_x and SO₂ emissions.
- (b) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 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 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 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) If the CEM is required for monitoring NO_x emissions pursuant to 40 CFR 75 (Title IV Acid Rain program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.
 - (2) If the CEM is not used to monitor NO_x emissions from a unit subject to requirements of the Title IV Acid Rain program and is down for a period of four (4) hours or more, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.

- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 26 IAC 3-5, 40 CFR 60 and Construction Permit PSD (26) 1215.

D.4.11 Sulfur Dioxide Emissions [326 IAC 2-7-5(3)(A)][326 IAC 2-7-6][326 IAC 3-5]

Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions from Unit 4 does not exceed the equivalents of the limits specified in Condition D.4.3 - Sulfur Dioxide (SO₂), using a thirty (30) day rolling weighted average.

Pursuant to 326 IAC 3-5-1(c)(2)(B), compliance shall be demonstrated using CEMS data.

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

D.4.12 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

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

- (a) Appropriate response steps shall be taken whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

Examples of expected response steps include, but are not limited to, boiler loads being reduced, adjustment of flue gas conditioning rate, and ESP T-R sets being returned to service.

- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit.

Failure to take response steps shall be considered a deviation from this permit. 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 requirements of (a) and (b), do not apply to Boiler No. 4 during startup and shutdown of Boiler No. 4 and do not apply when Boiler No. 4 is being controlled by the flue gas desulfurization (FGD) system.

D.4.14 SO₂ Monitor System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(1)]

Whenever the SO₂ continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service, to demonstrate that the operation of the flue gas desulfurization (FGD) system continues in a manner typical for the boiler load and sulfur content of the coal fired.

Flue gas desulfurization (FGD) system parametric monitoring readings shall be recorded at least

twice per day until the primary CEMS or a backup CEMS is brought online.

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

D.4.15 Record Keeping Requirements

- (a) To document the compliance status with Section C - Opacity and Conditions D.4.1 - PSD BACT Requirements, D.4.2 - Temporary Alternative Opacity Limitations, D.4.10 - Continuous Emissions Monitoring, D.4.12 - Transformer-Rectifier (T-R) Sets, and D.4.13 - Opacity Readings, 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 - Particulate Emissions Limitation, and D.4.2 - Temporary Alternative Opacity Limitations.

- (1) Data and results from the most recent stack test.
 - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.
 - (3) The results of all Method 9 visible emission readings taken during any periods of COM downtime.
 - (4) All ESP parametric monitoring readings.
- (b) To document the compliance status with SO₂ Conditions D.4.3 - Sulfur Dioxide (SO₂), D.4.10 - Continuous Emissions Monitoring, D.4.11 - Sulfur Dioxide Emissions, D.4.8 - Flue Gas Desulfurization (FGD) System, and D.4.14 - SO₂ Monitor Downtime, the Permittee shall maintain records in accordance with (1) through (3) below.

Records shall be complete and sufficient to establish compliance with the SO₂ limits as required in Conditions D.4.3 - Sulfur Dioxide (SO₂), and D.4.11 - Sulfur Dioxide Emissions. The Permittee shall maintain records in accordance with (2) and (3) below during SO₂ CEM system downtime if a backup CEM is not used.

- (1) All SO₂ continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g),
 - (2) All flue gas desulfurization (FGD) system parametric monitoring readings taken during any periods of CEM downtime, in accordance with Condition D.4.12- SO₂ Monitor Downtime.
 - (3) Actual fuel usage during each SO₂ CEM downtime.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.4.16 Reporting Requirements

- (a) A quarterly report of opacity exceedances and a quarterly summary of the information to document the compliance status with Condition D.4.2 - Temporary Alternative Opacity Limitations shall be submitted 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.

- (b) 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (e) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

Stack C has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a Boiler 5 has 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.5.1 PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to Construction Permit PSD (26) 1215 issued on March 17, 1978, 326 IAC 2-2 the and 40 CFR 52.21 (Prevention of Significant Deterioration), PM emissions from the Boiler No. 5 stack C shall not exceed one-tenth (0.10) pound PM per million Btu (MMBtu) heat input.

D.5.2 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

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

- (a) When building a new fire in a boiler, opacity may exceed the 20% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of five (5) hours (fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- Operation of the electrostatic precipitator is not required during these times.
- (b) When shutting down a boiler, opacity may exceed the 20% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of four (4) hours (forty (40) six (6)-minute averaging periods, consecutive or non-consecutive).
- (c) Permittee is also allowed one start up and one shut down per calendar year as follows:
- (i) When building a new fire in a boiler, opacity may exceed the 20% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of seven (7) hours (seventy (70) six (6)-minute averaging periods, consecutive or non-consecutive) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
- (ii) When shutting down a boiler, opacity may exceed the 20% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of five (5) hours (fifty (50) six (6)-minute averaging periods, consecutive or non-consecutive).
- (d) 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.5.3 Sulfur Dioxide (SO₂) Limitations [326 IAC 7-4-12.1]

Pursuant to 326 IAC 7-4-12.1 (Gibson County Sulfur Dioxide Emission Limitations), the SO₂ emissions from Boiler No. 5 stack shall not exceed 1.10 pounds per million Btu (lbs/MMBtu) based on a twenty-four (24) hour average and operation of an FGD system.

D.5.4 Operation Standards [326 IAC 2-1.1-5(a)(4)]

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

D.5.5 Preventive Maintenance Plan [326 IAC 1-6-3]

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

In order to determine compliance with the Condition D.5.1 - PSD BACT Requirements, the Permittee shall perform PM testing for the dry-bottom pulverized coal-fire boiler, identified as Boiler 5, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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.5.7 Operation of Electrostatic Precipitator [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the electrostatic precipitator shall be operated at all times that the Boiler No. 5 is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.

D.5.8 Flue Gas Desulfurization (FGD) System [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

Except as otherwise provided by statute or rule or in this permit the flue gas desulfurization (FGD) system shall be operated as needed to maintain compliance with applicable SO₂ emission limits.

D.5.9 Maintenance of Continuous Opacity Monitoring System [326 IAC 2-7-5(3)(A)(iii)]

The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment required by this permit. For a boiler, the COMS shall be in operation at all times that the forced draft fan is in operation.

- (a) 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.
- (b) 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.
- (c) 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 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 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.
- (d) 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 and/or 40 CFR 63.

D.5.10 Maintenance of Continuous Emission Monitoring System [326 IAC 3-5] [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for NO_x and SO₂ emissions.
- (b) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 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 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 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) If the CEM is required for monitoring NO_x emissions pursuant to 40 CFR 75 (Title IV Acid Rain program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.
 - (2) If the CEM is not used to monitor NO_x emissions from a unit subject to requirements of the Title IV Acid Rain program and is down for a period of four (4) hours or more, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 26 IAC 3-5, 40 CFR 60 and Construction Permit PSD (26) 1215.

D.5.11 Sulfur Dioxide Emissions [326 IAC 2-7-5(3)(A)][326 IAC 2-7-6][326 IAC 3-5]

Pursuant to 326 IAC 2-7-5(3)(A), the Permittee shall demonstrate that the sulfur dioxide emissions from Unit 5 does not exceed the limits specified in Conditions D.5.3 - Sulfur Dioxide (SO₂), using a thirty (30) day rolling weighted average.

Pursuant to 326 IAC 3-5-1(c)(2)(B), compliance shall be demonstrated using CEMS data.

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

D.5.12 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (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 and Reports, 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.5.13 Opacity Readings [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) Appropriate response steps shall be taken whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%). Examples of expected response steps include, but are not limited to, boiler loads being reduced, adjustment of flue gas conditioning rate, and ESP T-R sets being returned to service.
- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, 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 requirements of (a) and (b), do not apply to Boiler No. 5 during startup and shutdown of Boiler No. 5 and do not apply when Boiler No. 5 is being controlled by the flue gas desulfurization (FGD) system.

D.5.14 SO₂ Monitor System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(1)]

Whenever the SO₂ continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service, to demonstrate that the operation of the flue gas desulfurization (FGD) system continues in a manner typical for the boiler load and sulfur content of the coal fired.

Flue gas desulfurization (FGD) system parametric monitoring readings shall be recorded at least twice per day until the primary CEMS or a backup CEMS is brought online.

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

D.5.15 Record Keeping Requirements

- (a) To document the compliance status with Section C - Opacity and Conditions D.5.1 - PSD

BACT Requirements, D.5.2 - Temporary Alternative Opacity Limitations, D.5.10 - Continuous Emissions Monitoring, and D.5.12 - Transformer-Rectifier (T-R) Sets, 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.5.1 - PSD BACT Requirements, and D.5.2 - Temporary Alternative Opacity Limitations.

- (1) Data and results from the most recent stack test.
 - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5 and 40 CFR 60.40 (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971).
 - (3) The results of all 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.5.3 - Sulfur Dioxide (SO₂), D.5.8 - Flue Gas Desulfurization (FGD) System, D.5.10 - Continuous Emissions Monitoring, D.5.11 - Sulfur Dioxide Emissions, and D.5.13 - Opacity Readings, the Permittee shall maintain records in accordance with (1) through (3) below. Records shall be complete and sufficient to establish compliance with the SO₂ limits as required in Conditions D.5.3 - Sulfur Dioxide (SO₂), and D.5.8 - Flue Gas Desulfurization (FGD) System. The Permittee shall maintain records in accordance with (2) and (3) below during SO₂ CEM system downtime if a backup CEM is not used.
- (1) All SO₂ continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g) and 40 CFR 60.40 (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), with calendar dates and beginning and ending times of any CEM downtime.
 - (2) All flue gas desulfurization (FGD) system parametric monitoring readings taken during any periods of CEM downtime, in accordance with Condition D.5.14 - SO₂ Monitor Downtime.
 - (3) Actual fuel usage during each SO₂ CEM downtime.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.5.16 Reporting Requirements

- (a) A quarterly report of opacity exceedances and a quarterly summary of the information to document the compliance status with Condition D.5.3 - Sulfur Dioxide (SO₂), shall be submitted 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.
- (b) 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (f) A coal transfer system, with a nominal throughput of 6,000 tons of coal per hour, consisting of the following equipment:
- (1) Two (2) railcar unloading stations, each with a drop point to a hopper identified as DP-5 and DP-25, with the drop point controlled by a partial enclosure, and exhausting to the ambient air.
 - (2) Two (2) active piles, each with a drop point to a hopper identified as DP-1 and DP-16, with each drop point enclosed and exhausting to the ambient air.
 - (3) Three (3) storage piles, having an estimated combined storage capacity including the active piles of 4,000,000 tons, with fugitive emissions controlled by watering trucks.
 - (4) Four (4) enclosed hoppers, each with a drop point to conveyors identified as DP-2, DP-6, DP-17 and DP-26, with each drop point enclosed and exhausting to the ambient air.
 - (5) An enclosed conveyor system, with 18 drop points identified as DP-3, DP-4, DP-7 through DP-15, and DP-14 through DP-22, with each drop point enclosed, excluding the two (2) active pile conveyors which have the drop points (DP-18 and DP-22) controlled by telescopic chutes, and exhausting to the ambient air.
 - (6) Five (5) enclosed coal bunkers, each with a nominal capacity of 15,000 tons of coal. Bunkers are loaded via a conveyor tripper system with a total capacity of 3,000 tons per hour to the units 1 and 2 bunkers, and 3,000 tons per hour to the units 3, 4 and 5 bunkers.

(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 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 emissions from the coal storage and handling drop points and coal bunkers shall not exceed 103.2 pounds per hour when operating at a process weight of 6000 tons per hour. This is determined by the following equation:

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

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

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed 103.2 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.6.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for for the watering system and the telescopic. 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.6.3 Particulate Control [326 IAC 2-7-6(6)]

Telescoping chutes shall be kept within a few feet of the top of the coal piles at all times drop points DP-14 and DP-22 are in operation.

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

D.6.4 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) Visible emission notations of the transfer points shall be performed once per week during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

If abnormal emissions are observed at the transfer points, 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.

- (b) Visible emission notations of the coal unloading station(s) doorways and drop points shall be performed once per week during normal daylight operations. A trained employee shall record whether any emissions are observed.

If abnormal emissions are observed from the coal unloading station doorways and drop points, 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 in, 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) 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.

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

D.6.5 Record Keeping Requirements

- (a) To document the compliance status with Condition D.6.4 - Visible Emissions Notations, the Permittee shall maintain records of the weekly visible emission notations of the transfer points, railcar unloading stations and all response steps taken and the outcome for each. The Permittee shall include in its records 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.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (g) A limestone processing system, consisting of the following equipment:
- (1) One (1) unloading station for trucks or railcar, with a drop point to a hopper identified as LSDP-1 with a nominal throughput of 2,500 tons of limestone per hour, with the drop point controlled by a partial enclosure, and exhausting to the ambient air.
 - (2) Two (2) enclosed hoppers, each with a drop point to conveyors identified as LSDP-2 and LSDP-5 with a nominal throughput of 200 tons of limestone per hour, with each drop point enclosed.
 - (3) One (1) storage pile, with a nominal storage capacity of 50,000 tons, with a drop point to a hopper identified as LSDP-4, with the drop point enclosed and exhausting to the ambient air.
 - (4) An enclosed conveyor system, with four (4) drop points identified as LSDP-3 and LSDP-8 through LSDP-10, with each drop point enclosed.
 - (5) One (1) enclosed ball mill, with a drop point to a conveyor identified as LSDP-6, with the drop point enclosed.
 - (6) Two (2) day bins for temporary storage of limestone, with a nominal loading capacity of 150 tons per hour, with dust from loading the bins controlled by bin vent filters, and exhausting 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.7.1 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 emissions from the storage and handling drop points and bunkers shall not exceed 61 pounds per hour when operating at a process weight of 250 tons per hour. This is determined by the following equation:

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

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

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed 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.

Compliance Determination Requirements

D.7.2 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, to demonstrate compliance with 326 IAC 6-3-2:

The telescopic chute for all conveyors shall be kept within a few feet of the top of the limestone piles at all times the limestone handling system is in operation.

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

D.7.3 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) Visible emission notations of the transfer points and ball mill baghouse exhausts shall be performed once per week during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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 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) Visible emission notations of the partially enclosed railcar limestone unloading station exhausts shall be performed once per week during normal daylight operations. A trained employee shall record whether any emissions are observed.

If any abnormal visible emissions of dust are observed exiting the limestone unloading station doors, the Permittee shall take reasonable response steps. Observation of 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.

- (c) Visible emission notations of the ash storage pond area(s) shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

If visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, the Permittee shall take reasonable response 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) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.
- (e) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (f) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.7.4 Record Keeping Requirement

- (a) To document the compliance status with Section C - Opacity and Condition D.7.3 - Visible Emissions Notations, the Permittee shall maintain records of the weekly visible emission notations of the transfer points, limestone unloading station doors, fly ash storage pond area(s) and all response steps taken and the outcome for each. The Permittee shall include in its records 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.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (h) Limestone Handling (TP-1 to TP-5, TP-10 to TP-17, F-6 and F-9), with maximum capacity of 2,500 tons per hour:
- (1) Transfer of limestone from railcar or truck to the limestone hopper, with fogging type dust suppression as particulate control.
 - (2) Enclosed transfer of limestone from unloading hoppers to belt feeders.
 - (3) Enclosed transfer of limestone from belt feeders to conveyors.
 - (4) Telescoping chute transfer of limestone from conveyor to lime storage stockout pile.
 - (5) Enclosed transfer of limestone from the reclaim hoppers to belt feeders, with fogging type dust suppression as particulate control.
 - (6) Enclosed transfer of limestone from conveyor to conveyor, with fogging type dust suppression as particulate control.
 - (7) Transfer of limestone from conveyor to day bin, with surge-bin filter as particulate control.
 - (8) Enclosed transfer of limestone from conveyor fixed hopper to conveyor with fogging type dust suppression as particulate control.
 - (9) Transfer of limestone from conveyor fixed tripper to day bin, with surge-bin filter as particulate control.
 - (10) Limestone storage piles, with watering type dust suppression as fugitive dust control.

(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 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 emissions from the gypsum handling operation shall not exceed 90 pounds per hour when operating at a process weight of 2500 tons per hour. This is determined by the following equation:

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

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

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed the emission rate derived by the equation above, 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.8.2 Preventive Maintenance Plan (PMP) [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.8.3 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit:

- (a) The Permittee shall apply fogging type dust suppression when the following are in operation:
 - transfers of limestone from railcar or truck to the limestone hopper,
 - transfers of limestone from conveyor to conveyor, and
 - transfers of limestone from conveyor fixed hopper to conveyor.
- (b) The Permittee shall conduct the transfers of limestone in enclosures when the following are in operation:
 - from unloading hoppers to belt feeders,
 - from belt feeders to conveyors,
 - from the reclaim hoppers to belt feeders,
 - from conveyor to conveyor, and
 - from conveyor fixed hopper to conveyor.
- (c) The Permittee shall use surge-bin filters when the following are in operation:
 - transfers of limestone from conveyor to day bin.
 - transfers of limestone from conveyor fixed tripper to day bin.
- (d) The Permittee shall use telescoping chute transfer of limestone from conveyor to lime storage stockout pile.

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

D.8.4 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) Visible emission notations of the limestone transfer points shall be performed once per week 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 visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, the Permittee shall take reasonable response 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.

- (f) If abnormal emissions are observed from the limestone transfer points, 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.

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

D.8.5 Record Keeping Requirement

- (a) To document the compliance status with Condition D.8.4, the Permittee shall maintain records of the weekly visible emission notations of the limestone transfer points, and all response steps taken and the outcome for each and make such records available upon request to IDEM, OAQ, and the US EPA. The Permittee shall include in its records 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.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (i) Gypsum Handling (TP-26 to TP-35, TP-38, and TP-39), with maximum capacity of 300 tons per hour:
 - (1) Enclosed transfer of gypsum from belt feeders to conveyors.
 - (2) Transfer of gypsum from conveyors to stockout piles.
 - (3) Partially enclosed transfer of gypsum from conveyor to radial stacker conveyor.
 - (4) Transfer of gypsum from radial stacker conveyor to stockout pile.
 - (5) Stockout piles.

(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 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 emissions from the gypsum handling operation shall not exceed 63 pounds per hour when operating at a process weight of 300 tons per hour. This is determined by the following equation:

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

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

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed the emission rate derived by the equation above, 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.9.2 Preventive Maintenance Plan (PMP) [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 Requirement

D.9.3 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit:

- (a) The Permittee shall conduct the transfers of gypsum from belt feeders to conveyors in enclosures.
- (b) The Permittee shall conduct transfers of gypsum from conveyor to radial stacker conveyor in a partial enclosure.

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

D.9.4 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) Visible emission notations of the gypsum transfer points shall be performed once per week 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 visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, the Permittee shall take reasonable response. 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.
- (f) If abnormal emissions are observed from the gypsum transfer points, 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.

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

D.9.5 Record Keeping Requirements

- (a) To document the compliance status with Condition D.9.4, the Permittee shall maintain records of the once per week visible emission notations of the gypsum transfer points, and all response steps taken and the outcome for each and make such records available upon request to IDEM, OAQ, and the US EPA. The Permittee shall include in its records 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.10 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (j) Dry fly ash handling system, including the following, permitted in 2011:
- (1) one (1) pneumatic fly ash transfer system from existing precipitator hoppers for Units 1, 2, and 3 equipped with separators/exhausters designated as 1A, 1B, 2A, 2B, 2C, 3A, 3B and 3C to two (2) new transfer stations designated as B1 & B2 each with a maximum capacity of 200 tons per hour. The particulate emissions from each transfer station silo will be controlled by bin-vent filters to 0.01 gr/dscf.
 - (2) one (1) pneumatic fly ash transfer system conveying ash from the two (2) transfer station silos to two (2) new fixation silos designated as B3 & B4 each with a maximum capacity of 200 tons per hour. The particulate emissions from each fixation silo will be controlled by bin-vent filters to 0.01 gr/dscf.
 - (3) one (1) pneumatic fly ash transfer system equipped enclosed screw conveyers from the two (2) fixation silos to a new Fixation Building with particulate emissions controlled by a dust collector C1 (with a spare dust collector C2).
 - (4) Loading of fly ash into trucks for transport to the landfill from fixation silos B3 & B4 using wet unloaders.
 - (5) Truck loading of two (2) new lime silos designated B5 & B6 for use in the Fixation Building, each with bin-vent filters controlling particulate matter emissions to 0.01 gr/dscf.
 - (6) One (1) fly ash day bin designated B7 with a maximum capacity of 200 tons per hour with particulate matter emissions controlled by a bin-vent filter to 0.01 gr/dscf.

(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 PSD Minor Limits and Particulate Emission Limitation for Manufacturing Processes [326 IAC 2-2] [326 IAC 6-3-2]

In order to make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable, the Permittee shall comply with the following for the Dry fly ash handling system:

- (A) The total hours of operation for the Exhauster 3A, Exhauster 3B, Exhauster 3C (spare) Exhauster 1A, Exhauster 1B, Exhauster 2A, Exhauster 2B, Spare Exhauster, (B3) Remote Fly Ash Silo A Bin Vent Filter and (B4) Remote Fly Ash Silo B Bin Vent Filter shall be less than 4745 hours each per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (a) PM and PM10 emissions from the Exhauster 3A, Exhauster 3B and Exhauster 3C (spare) shall not exceed 0.188 pounds per hour, each.
 - (b) PM and PM10 emissions from the Exhauster 1A, Exhauster 1B, Exhauster 2A, Exhauster 2B and Spare Exhauster shall not exceed 0.28 pounds per hour, each.

- (c) PM and PM10 emissions from (B3) Remote Fly Ash Silo A Bin Vent Filter and (B4) Remote Fly Ash Silo B Bin Vent Filter shall not exceed 0.65 pounds per hour, each.
 - (d) Only two out of the three exhausters, identified as Exhauster 3A, Exhauster 3B and Exhauster 3C (spare) shall operate at any time.
 - (e) Only four out of the five exhausters, identified as Exhauster 1A, Exhauster 1B, Exhauster 2A, Exhauster 2B and Spare Exhauster shall operate at any time.
- (B) The total hours of operation for the U1 Bin Vent Filter and U2 Bin Vent Filter shall be less than 5840 hours each per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) PM and PM10 emissions from the U1 Bin Vent Filter and U2 Bin Vent Filter shall not exceed 0.13 pounds per hour, each.
- (C) The total hours of operation for the Lime Silo A Bin Vent Filter and Lime Silo B Bin Vent Filter shall be less than 2920 hours each per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) PM and PM10 emissions from the Lime Silo A Bin Vent Filter and Lime Silo B Bin Vent Filter shall not exceed 0.085 pounds per hour, each.
- (D) The total hours of operation for the Fly Ash Day Bin vent Filter shall be less than 8760 hours per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) PM and PM10 emissions from the Fly Ash Day Bin vent Filter shall not exceed 0.12 pounds per hour, each.
- (E) PM and PM10 emissions from the Dust Collector A shall not exceed 0.386 pounds per hour, each.
- (a) Only one out of the two dust collectors, identified as Dust Collector A and Dust Collector B (Spare) shall operate at any time.

Compliance with these limits will limit the potential to emit of PM and PM₁₀ emissions from the dry fly ash handling system to less than 25 and 15 per year, respectively and render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2011 modification.

This condition will also satisfy for 326 IAC 6-3-2 for the emission units being constructed in 2011.

D.10.2 Nonattainment New Source Review [326 IAC 2-1.1-5]

In order to make the requirements of 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable, the Permittee shall comply with the following for the Dry fly ash handling system:

- (A) The total hours of operation for the Exhauster 3A, Exhauster 3B, Exhauster 3C (spare) Exhauster 1A, Exhauster 1B, Exhauster 2A, Exhauster 2B, Spare Exhauster, (B3) Remote Fly Ash Silo A Bin Vent Filter and (B4) Remote Fly Ash Silo B Bin Vent Filter shall be less than 4745 hours each per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (a) PM and PM10 emissions from the Exhauster 3A, Exhauster 3B and Exhauster 3C (spare) shall not exceed 0.188 pounds per hour, each.

- (b) PM and PM10 emissions from the Exhauster 1A, Exhauster 1B, Exhauster 2A, Exhauster 2B and Spare Exhauster shall not exceed 0.28 pounds per hour, each.
 - (c) PM and PM10 emissions from (B3) Remote Fly Ash Silo A Bin Vent Filter and (B4) Remote Fly Ash Silo B Bin Vent Filter shall not exceed 0.65 pounds per hour, each.
 - (d) Only two out of the three exhausters, identified as Exhauster 3A, Exhauster 3B and Exhauster 3C (spare) shall operate at any time.
 - (e) Only four out of the five exhausters, identified as Exhauster 1A, Exhauster 1B, Exhauster 2A, Exhauster 2B and Spare Exhauster shall operate at any time.
- (B) The total hours of operation for the U1 Bin Vent Filter and U2 Bin Vent Filter shall be less than 5840 hours each per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) PM and PM10 emissions from the U1 Bin Vent Filter and U2 Bin Vent Filter shall not exceed 0.13 pounds per hour, each.
- (C) The total hours of operation for the Lime Silo A Bin Vent Filter and Lime Silo B Bin Vent Filter shall be less than 2920 hours each hours per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) PM2.5 emissions from the Lime Silo A Bin Vent Filter and Lime Silo B Bin Vent Filter shall not exceed 0.085 pounds per hour, each.
- (D) The total hours of operation for the Fly Ash Day Bin vent Filter shall be less than 8760 hours per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) PM2.5 emissions from the Fly Ash Day Bin vent Filter shall not exceed 0.12 pounds per hour.
- (E) PM2.5 emissions from the Dust Collector A shall not exceed 0.386 pounds per hour.
- (a) Only one out of the two dust collectors, identified as Dust Collector A and Dust Collector B (Spare) shall operate at any time.

Compliance with these limits will limit the potential to emit of PM_{2.5} emissions from the dry fly ash handling system to less than 10 tons per year and render the requirements of 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the 2011 modification.

D.10.3 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.10.4 Particulate Control [326 IAC 2-7-6(6)]

- (a) In order to comply with Conditions D.10.1 and D.10.2, the filters separators, bin vent filter and the dust collectors for particulate control shall be in operation and control emissions from these emission units at all times that these emission units are in operation.

- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

- (a) Within 180 days after the initial startup of the pneumatic fly ash transfer system, compliance with the PM, PM10 and PM2.5 limitations in Conditions D.10.1(A)(a), (b) and D.10.2 A (a) and (b) shall be determined by a performance stack test on two (2) of the eight (8) separator/exhausters using methods as approved by the Commissioner. This testing shall be at least once every 5 years from the date of the last valid compliance demonstration. The separator/exhauster tested shall be the unit in which the longest amount of time has elapsed since its previous test. 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.
- (b) Within 180 days after the initial startup of the pneumatic fly ash transfer system, compliance with the PM, PM10 and PM2.5 limitations in Conditions D.10.1A (c), B(a) (C) (a), D(a) and D.10.2 A (c), B(a, C(a) and D(a) shall be determined by a performance stack test on two (2) of the seven (7) silo bin vent filters using methods as approved by the Commissioner. This testing shall be at least once every 5 years from the date of the last valid compliance demonstration. The bin vent filters tested shall be the unit in which the longest amount of time has elapsed since its previous test. 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.
- (c) Within 180 days after the initial startup of the pneumatic fly ash transfer system, compliance with the PM, PM10 and PM2.5 limitations in Conditions D.10.1(E) and D.11.2 (E) shall be determined by a performance stack test on one (1) of the two (2) fixation building dust collectors using methods as approved by the Commissioner. This testing shall be at least once every 5 years from the date of the last 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.

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

D.10.6 Visible Emissions Notations [40 CFR 64]

- (a) Visible emission notations of the truck loading stations shall be performed at least once per day during normal daylight operations when ash is being loaded and unloaded. A trained employee shall record whether any emissions are normal or abnormal.
- (b) Visible emission notations of the separator/exhausters shall be performed at least once per week during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (c) Visible emission notations of the silo bin vent filters shall be performed at least once per week during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (d) Visible emission notations of the fixation building dust collector exhaust shall be

performed at least once per week during normal daylight operations when the pin-paddle mixers are operating. A trained employee shall record whether emissions are normal or abnormal.

- (e) Visible emissions of the landfill area shall be performed at least once per day during normal daylight hours. A trained employee shall record whether emissions are normal or abnormal.
- (f) If visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, the Permittee shall take reasonable response 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.
- (g) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (h) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (i) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (j) If abnormal emissions are observed, 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.

D.10.7 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

- (a) The Permittee shall monitor the flow rate of the scrubbing liquid daily. When for any one reading, the flow rate is below the normal minimum value established during the latest stack test, 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.
- (b) The instruments used for determining the pressure, flow rate, and pH level shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

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

D.10.8 Record Keeping Requirements [40 CFR 64]

- (a) To document the compliance status with Conditions D.10.1 (A), (B), (C), (D) and D.10.2 (A), (B), (C), and (D), the Permittee shall maintain monthly records of hours of operation of the Dry fly ash handling system.

- (b) To document the compliance status with Condition D.10.6 (a) and (e) - Visible Emission Notation, the Permittee shall maintain records of visible emission notations of truck loading stations and the landfill area once per day. 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) To document the compliance status with Condition D.10.6 (b), (c) and (d) - Visible Emission Notation, the Permittee shall maintain records of visible emission notations of separator/exhausters, silo bin vent filters and fixation building dust collector exhaust once per week. 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 week).
- (d) To document compliance with Condition D.10.7(a), the Permittee shall maintain records of the flow rate of the scrubber. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of reading (e.g. the process did not operate that day).
- (e) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.10.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.10.1 (A), (B), (C), (D) and D.10.2 (A), (B), (C) and (D) shall be submitted, 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.11 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.[326 IAC 6-3-2]
- (b) Conveyors as follows: [326 IAC 6-3]
 - (1) Covered conveyor for coal or coke conveying of less than or equal to 360 tons per day;
 - (2) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983;
 - (3) Underground conveyors.
- (c) Coal bunker and coal scale exhausts and associated dust collector vents. [326 IAC 6-3]

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

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the grinding and machining facilities shall not exceed 0.551 pounds per hour (lbs/hr) based on the following equation:

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

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

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

SECTION E.1 ACID RAIN PROGRAM CONDITIONS

ORIS Code: 6113

Emissions Unit Description:

- (a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 1 has its own continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 2 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with a flue gas conditioning system and an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 3.

Boiler No. 3 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack D.

Stack D has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (e) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

Stack C has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a Boiler 5 has 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)]

E.1.1. Statutory and Regulatory Authorities

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

E.1.2. Standard Permit Requirements [326 IAC 21]

- (a) The designated representative has submitted a complete acid rain permit application in accordance with 40 CFR 72.30.
- (b) The Permittee shall operate Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 in compliance with this permit.

E.1.3. Monitoring Requirements [326 IAC 21]

- (a) The Permittee and, to the extent applicable, the designated representative of Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 shall comply with the monitoring requirements as provided in 40 CFR 75 and 76.
- (b) The emissions measurements recorded and reported in accordance with 40 CFR 75 and 76 shall be used to determine compliance by Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 with the acid rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (c) The requirements of 40 CFR 75 and 76 shall not affect the responsibility of the Permittee to monitor emissions of other pollutants or other emissions characteristics at Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 under other applicable requirements of the Clean Air Act and other provisions of the operating permit for the source.

E.1.4. Sulfur Dioxide Requirements [326 IAC 21]

- (a) The Permittee shall:
 - (1) Hold allowances, as of the allowance transfer deadline (as defined in 40 CFR 72.2), in the compliance subaccount of Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5, after deductions under 40 CFR 73.34(c), not less than the total annual emissions of sulfur dioxide for the previous calendar year from Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5; and,
 - (2) Comply with the applicable acid rain emissions limitations for sulfur dioxide.
- (b) Each ton of sulfur dioxide emitted in excess of the acid rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Clean Air Act.
- (c) Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 shall be subject to the requirements under paragraph 4(a) of the sulfur dioxide requirements as follows:
 - (1) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or,
 - (2) Starting on the latter of January 1, 2000, or the deadline for monitor certification under 40 CFR 75, an affected unit under 40 CFR 72.6(a)(3).

- (d) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (e) An allowance shall not be deducted in order to comply with the requirements under paragraph 4(a) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (f) An allowance allocated by the U.S. EPA under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the acid rain permit application, the acid rain permit, the acid rain portion of an operating permit, or the written exemption under 40 CFR 72.7 and 72.8 and 326 IAC 21, and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (g) An allowance allocated by U.S. EPA under the Acid Rain Program does not constitute a property right.
- (h) No permit revision may be required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program, provided that the increases do not require a permit revision under any other applicable requirement. [326 IAC 2-7-5(4)(A)]
- (i) No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not, however, use allowances as a defense to noncompliance with any applicable requirement other than the requirements of the Acid Rain Program. [326 IAC 2-7-5(4)(B)]

E.1.5. Nitrogen Oxides Requirements [326 IAC 21]

- (a) The Permittee shall comply with the applicable acid rain emissions limitation for nitrogen oxides (NOx) for Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5.
- (b) NOx Emission Averaging Plan for Unit 1:
 - (1) Pursuant to 40 CFR 76.11, IDEM, OAQ approves a NOx emission averaging plan for Unit 1, effective from calendar year 2007 through 2011. Under the plan the NOx emissions from Unit 1 shall not exceed the alternative contemporaneous annual emission limitation (ACEL) of 0.29 lb/MMBtu. In addition, Unit 1 shall not have an annual heat input less than 40,679,344 MMBtu.
 - (2) Under the plan, the actual Btu-weighted annual average NOx emission rate for all the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under the plan, then Unit 1 shall be deemed to be in compliance for that year with its annual ACEL and annual heat input limit.
- (c) NOx Emission Averaging Plan for Unit 2:
 - (1) Pursuant to 40 CFR 76.11, IDEM, OAQ approves a NOx emission averaging plan for Unit 2, effective from calendar year 2007 through 2011. Under the plan the NOx emissions from Unit 2 shall not exceed the ACEL of 0.29 lb/MMBtu. In addition, Unit 2 shall not have an annual heat input less than 35,784,543 MMBtu.

- (2) Under the plan, the actual Btu-weighted annual average NOx emission rate for all the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under the plan, then Unit 2 shall be deemed to be in compliance for that year with its annual ACEL and annual heat input limit.
- (d) NOx Emission Averaging Plan for Unit 3:
 - (1) Pursuant to 40 CFR 76.11, IDEM, OAQ approves a NOx emission averaging plan for Unit 3, effective from calendar year 2007 through 2011. Under the plan the NOx emissions from Unit 3 shall not exceed the ACEL of 0.30 lb/MMBtu. In addition, Unit 3 shall not have an annual heat input less than 45,485,728 MMBtu.
 - (2) Under the plan, the actual Btu-weighted annual average NOx emission rate for all the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under the plan, then Unit 3 shall be deemed to be in compliance for that year with its annual ACEL and annual heat input limit.
- (e) NOx Emission Averaging Plan for Unit 4:
 - (1) Pursuant to 40 CFR 76.11, IDEM, OAQ approves a NOx emission averaging plan for Unit 4, effective from calendar year 2007 through 2011. Under the plan the NOx emissions from Unit 4 shall not exceed the ACEL of 0.29 lb/MMBtu. In addition, Unit 4 shall not have an annual heat input less than 53,603,321 MMBtu.
 - (2) Under the plan, the actual Btu-weighted annual average NOx emission rate for all the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under the plan, then Unit 4 shall be deemed to be in compliance for that year with its annual ACEL and annual heat input limit.
- (f) NOx Emission Averaging Plan for Unit 5:
 - (1) Pursuant to 40 CFR 76.11, IDEM, OAQ approves a NOx emission averaging plan for Unit 5, effective from calendar year 2007 through 2011. Under the plan the NOx emissions from Unit 5 shall not exceed the ACEL of 0.30 lb/MMBtu. In addition, Unit 5 shall not have an annual heat input less than 47,798,920 MMBtu.
 - (2) Under the plan, the actual Btu-weighted annual average NOx emission rate for all the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they each been operated,

during the same period of time, in compliance with the applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under the plan, then Unit 5 shall be deemed to be in compliance for that year with its annual ACEL and annual heat input limit.

- (g) In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when the Kentucky Department of Environmental Protection, Division of Air Quality; North Carolina Department of Environmental and Natural Resources, Division of Air Quality; and South Carolina Department of Health and Environmental Control, Bureau of Air Quality have also approved this averaging plan.
- (h) In addition to the described NOx compliance plan, the units shall comply with all other applicable requirements of 40 CFR 76, including the duty to reapply for a NOx compliance plan and requirements covering excess emissions.

E.1.6. Excess Emissions Requirements [40 CFR 77] [326 IAC 21]

- (a) If Unit 1, 2, 3, 4, or 5 has excess emissions of sulfur dioxide in any calendar year, the designated representative shall submit a proposed offset plan to U.S. EPA and IDEM, OAQ as required under 40 CFR 77 and 326 IAC 21.

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

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

and

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

- (c) If Unit 1, 2, 3, 4, or 5 has excess emissions, as defined in 40 CFR 72.2, in any calendar year the Permittee shall:
 - (1) Pay to U.S. EPA without demand the penalty required, and pay to U.S. EPA upon demand the interest on that penalty, as required by 40 CFR 77 and 326 IAC 21; and,
 - (2) Comply with the terms of an approved sulfur dioxide offset plan, as required by 40 CFR 77 and 326 IAC 21.

E.1.7. Record Keeping and Reporting Requirements [326 IAC 21]

- (a) Unless otherwise provided, the Permittee shall keep on site each of the following documents for a period of 5 years, as required by 40 CFR 72.9(f), from the date the document is created. This period may be extended for cause, at any time prior to the end of the 5 years, in writing by U.S. EPA or IDEM, OAQ:

- (1) The certificate of representation for the designated representative of Boiler 1,

- Boiler 2, Boiler 3, Boiler 4 and Boiler 5 and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5 year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
- (2) All emissions monitoring information collected in accordance with 40 CFR 75 shall be retained on site for 3 years;
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (4) Copies of all documents used to complete an acid rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (b) The designated representative of Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 72.90, Subpart I, 40 CFR 75, and 326 IAC 21. The required information is to be submitted to the appropriate authority(ies) as specified in 40 CFR 72.90, Subpart I, and 40 CFR 75.

E.1.8. Submissions [326 IAC 21]

- (a) The designated representative of Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 shall submit a certificate of representation, and any superseding certificate of representation, to U.S. EPA and IDEM, OAQ in accordance with 40 CFR 72 and 326 IAC 21.
- (b) The designated representative shall submit required information to:
 - Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251
 - and
 - U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue, NW
Mail Code (6204N)
Washington, DC 20460
- (c) Each such submission under the Acid Rain Program shall be submitted, signed and certified by the designated representative for all sources on behalf of which the submission is made.
- (d) In each submission under the Acid Rain Program, the designated representative shall certify, by his or her signature, the following statements which shall be included verbatim in the submission:
 - (1) "I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made."; and

- (2) "I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."
- (e) The designated representative of Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 shall notify the Permittee:
 - (1) By the date of submission, of any Acid Rain Program submissions by the designated representative;
 - (2) Within 10 business days of receipt of any written determination by U.S. EPA or IDEM, OAQ; and,
 - (3) Provided that the submission or determination covers Unit 1, 2, 3, 4, or 5.
- (f) The designated representative of Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 shall provide the Permittee a copy of any submission or determination under paragraph 8(e), unless the Permittee expressly waives the right to receive a copy.

E.1.9. Severability [326 IAC 21]

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

E.1.10. Liability [326 IAC 21]

- (a) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, an acid rain permit, an acid rain portion of an operation permit, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement by U.S. EPA pursuant to Section 113(c) of the Clean Air Act and shall be subject to enforcement by IDEM pursuant to 326 IAC 21 and IC 13-30-3.
- (b) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to Section 113(c) of the Clean Air Act, 18 U.S.C. 1001 and IDEM pursuant to 326 IAC 21 and IC 13-30-6-2.
- (c) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (d) Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5 shall meet the requirements of the Acid Rain Program.
- (e) Any provision of the Acid Rain Program that applies to Unit 1, 2, 3, 4, or 5, including a provision applicable to the designated representative of Unit 1, 2, 3, 4, or 5 shall also apply to the Permittee.
- (f) Any provision of the Acid Rain Program that applies to Unit 1, 2, 3, 4, or 5, including a provision applicable to the designated representative, shall also apply to the Permittee. Except as provided under 40 CFR 72.44 (Phase II repowering

extension plans) and 40 CFR 76.11 (NOx averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR 75, including 40 CFR 75.16, 75.17, and 75.18, the Permittee and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

- (g) Each violation of a provision of 40 CFR 72, 73, 75, 76, 77, and 78 by Unit 1, 2, 3, 4, or 5, or by the Permittee or designated representative shall be a separate violation of the Clean Air Act.

E.1.11. Effect on Other Authorities [326 IAC 21]

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

- (a) Except as expressly provided in Title IV of the Clean Air Act (42 USC 7651 to 7651(o)), exempting or excluding the Permittee and, to the extent applicable, the designated representative of Unit 1, 2, 3, 4, or 5 from compliance with any other provision of the Clean Air Act, including the provisions of Title I of the Clean Air Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (b) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Clean Air Act;
- (c) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law;
- (d) Modifying the Federal Power Act (16 USC 791(a) et seq.) or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; and
- (e) Interfering with or impairing any program for competitive bidding for power supply in a state in which such a program is established.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (e) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

Stack C has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a Boiler 5 has 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.)

New Source Performance Standards [326 IAC 12] [40 CFR Part 60, Subpart D]

E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the emission units identified as Boiler No. 5, except as otherwise specified in 40 CFR Part 60, Subpart D.

E.2.2 New Source Performance Standards of Performance for Fossil-Fuel-Fired Steam Generators [40 CFR Part 60, Subpart D] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart D, the Permittee shall comply with the provisions of New Source Performance Standards of Performance for Fossil-Fuel-Fired Steam Generators, which are incorporated by reference as 326 IAC 12, (included as Attachment A of this permit), for the above emission unit as specified as follows:

- (1) 40 CFR 60.40
- (2) 40 CFR 60.41
- (3) 40 CFR 60.42
- (4) 40 CFR 60.43
- (5) 40 CFR 60.44
- (6) 40 CFR 60.45
- (7) 40 CFR 60.46

SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (1) A limestone processing system, consisting of the following equipment:
 - (A) One (1) unloading station for trucks or railcar, with a drop point to a hopper identified as LSDP-1 with a nominal throughput of 2,500 tons of limestone per hour, with the drop point controlled by a partial enclosure, and exhausting to the ambient air.
 - (B) Two (2) enclosed hoppers, each with a drop point to conveyors identified as LSDP-2 and LSDP-5 with a nominal throughput of 200 tons of limestone per hour, with each drop point enclosed.
 - (C) One (1) storage pile, with a nominal storage capacity of 50,000 tons, with a drop point to a hopper identified as LSDP-4, with the drop point enclosed and exhausting to the ambient air.
 - (D) An enclosed conveyor system, with four (4) drop points identified as LSDP-3 and LSDP-8 through LSDP-10, with each drop point enclosed.
 - (E) One (1) enclosed hammermill, with a drop point to a conveyor identified as LSDP-6, with the drop point enclosed.
 - (F) Two (2) day bins for temporary storage of limestone, with a nominal loading capacity of 150 tons per hour, with dust from loading the bins controlled by bin vent filters, and exhausting to the ambient air.
- (2) Limestone Handling (TP-1 to TP-5, TP-10 to TP-17, F-6 and F-9), with maximum capacity of 2,500 tons per hour:
 - (A) Transfer of limestone from railcar or truck to the limestone hopper, with fogging type dust suppression as particulate control.
 - (B) Enclosed transfer of limestone from unloading hoppers to belt feeders.
 - (C) Enclosed transfer of limestone from belt feeders to conveyors.
 - (D) Telescoping chute transfer of limestone from conveyor to lime storage stockout pile.
 - (E) Enclosed transfer of limestone from the reclaim hoppers to belt feeders, with fogging type dust suppression as particulate control.
 - (F) Enclosed transfer of limestone from conveyor to conveyor, with fogging type dust suppression as particulate control.
 - (G) Transfer of limestone from conveyor to day bin, with surge-bin filter as particulate control.
 - (H) Enclosed transfer of limestone from conveyor fixed hopper to conveyor with fogging type dust suppression as particulate control.
 - (I) Transfer of limestone from conveyor fixed tripper to day bin, with surge-bin filter as particulate control.

(J) Limestone storage piles, with watering type dust suppression as fugitive dust control.

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

New Source Performance Standards [326 IAC 12] [40 CFR Part 60, Subpart Y]

E.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the emission units identified above, except as otherwise specified in 40 CFR Part 60, Subpart OOO.

E.3.2 New Source Performance Standards for Standard of Performance for Non-metalic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart OOO, the Permittee shall comply with the provisions of New Source Performance Standards for Standard of Performance for Non-metalic Mineral Processing Plants, which are incorporated by reference as 326 IAC 12, (included as Attachment B of this permit), for the above emission units as specified as follows:

- (1) 40 CFR 60.670
- (2) 40 CFR 60.671
- (3) 40 CFR 60.672
- (4) 40 CFR 60.673
- (5) 40 CFR 60.674
- (6) 40 CFR 60.675
- (7) 40 CFR 60.676

SECTION E.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (e) One (1) emergency firewater pump engine, rated at 575 horsepower (HP) and identified as Pump #2, installed in 2007 and permitted in 2013. [Under 40 CFR 60, Subpart IIII, the firewater pump engine is considered an existing affected source.]

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

New Source Performance Standards [326 IAC 12] [40 CFR 60, Subpart IIII]

E.4.1 General Provisions Relating to NSPS IIII [326 IAC 12][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emergency diesel generators and the firewater pump diesel engines described in this section except when otherwise specified in 40 CFR Part 60, Subpart IIII.

E.4.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12][40 CFR Part 60, Subpart IIII]

The Permittee who owns and operates stationary compression ignition (CI) internal combustion engines (ICE) shall comply with the following provisions of 40 CFR Part 60, Subpart IIII, included as Attachment D of this permit. The source is subject to the following portions of Subpart IIII:

- (1) 40 CFR 60.4200(a);
- (2) 40 CFR 60.4205(b);
- (3) 40 CFR 60.4205(c);
- (4) 40 CFR 60.4206;
- (5) 40 CFR 60.4207(a);
- (6) 40 CFR 60.4207(b);
- (7) 40 CFR 60.4208(a);
- (8) 40 CFR 60.4208(b);
- (9) 40 CFR 60.4208(g);
- (10) 40 CFR 60.4209(a);
- (11) 40 CFR 60.4211(a);
- (12) 40 CFR 60.4211(c);
- (13) 40 CFR 60.4211(e);
- (14) 40 CFR 60.4212(a);
- (15) 40 CFR 60.4212(b);
- (16) 40 CFR 60.4212(c);
- (17) 40 CFR 60.4214(b);
- (18) 40 CFR 60.4218;
- (19) 40 CFR 60.4219;
- (20) Table 4 to Subpart IIII of Part 60 - Emission Standard for Stationary Fire Pump Engines;
- (21) Table 5 to Subpart IIII of Part 60 - Labeling and Recordkeeping Requirements for New Stationary Emergency Engines;
- (22) Table 8 to Subpart IIII of Part 60 - Applicability of General Provisions to Subpart IIII.

SECTION E.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (d) One (1) emergency firewater pump engine, rated at 500 horsepower (HP) and identified as Pump #1, installed in 1995 and permitted in 2013.[Under 40 CFR 63, Subpart ZZZZ, the firewater pump engine is considered an existing affected source.]

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

National Emissions Standard for Hazardous Air Pollutants [326 IAC 20] [40 CFR 63, Subpart ZZZZ]

- E.5.1 General Provisions Relating to National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.6590, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the affected source, as specified in Appendix A of 40 CFR Part 63, Subpart ZZZZ, in accordance with the schedule in 40 CFR 63 Subpart ZZZZ.

- E.5.2 National Emissions Standard for Hazardous Air Pollutants for stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82-1]

Pursuant to CFR Part 63, Subpart ZZZZ, the Permittee shall comply with the provisions of 40 CFR Part 63.6590, for the affected source, as specified as follows:

- (1) 40 CFR 63.6600(d)
- (2) 40 CFR 63.6605
- (3) 40 CFR 63.6610
- (4) 40 CFR 63.6625(h),(i)
- (5) 40 CFR 63.6630
- (6) 40 CFR 63.6635
- (7) 40 CFR 63.6640
- (8) 40 CFR 63.6645(a)(3)
- (9) 40 CFR 63.6645(g)
- (10) 40 CFR 63.6650
- (11) 40 CFR 63.6655
- (12) 40 CFR 63.6660
- (13) 40 CFR 63.6665

SECTION F.1

SO₃ MITIGATION PLAN

Emissions Unit Description:

- (a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 1 has its own continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 2 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with a flue gas conditioning system and an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 3.

Boiler No. 3 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack D.

Stack D has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (e) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

Stack C has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a Boiler 5 has 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.1 SO₃ Mitigation System [326 IAC 2-2.3]

- (a) Pursuant to 326 IAC 2-2.3, the Permittee shall operate the SO₃ Mitigation System utilizing Sodium Bisulfite (SBS) or other mitigation reagents whenever a Selective Catalytic Reduction System (SCR) is in operation in conjunction with a Flue Gas Desulfurization System (FGD), except:
- (1) During SCR startups; or
 - (2) If the SO₃ mitigation system shuts down due to events beyond the reasonable control of the Permittee or there is need for emergency maintenance repairs.
- (b) If events described in Condition F.1(a)(1) and F.1(a)(2) occur, the Permittee cannot start or restart the SO₃ mitigation system within one (1) hour.

The station personnel shall notify IDEM in accordance with the emergency notification provisions of 326 IAC 2-7-16(b) and if there is potential for plume touchdown in the opinion of station personnel and/or IDEM, the respective SCR shall be taken out of service.

F.2 Reserved

F.3 Minimum Injection Rate

- (a) The Permittee shall operate the SO₃ mitigation system when both the SCR and FGD are in service at a minimum injection rate of 0.9 molar ratio, including during any periods when mitigating a single duct or gas stream if demonstrated to be SCR neutral.
- (b) At all times when both the SCR and FGD are in service, except as described in Condition F.1(a)(1) and F.1(a)(2), a minimum of at least one (1) duct shall be treated for SO₃ mitigation.
- (c) Any change in the established minimum injection rate, the Permittee shall report such change with supporting information.

F.4 Plume Touchdown

In the event that a plume touchdown is observed, IDEM and the appropriate local authorities shall be immediately notified of this event and the respective SCR(s) causing such plume touchdown shall be removed from service.

The SCR shall remain out of service until the conditions or cause resulting in the plume touchdown subside or are resolved.

SECTION H 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)

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

- (a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 1 has its own continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 2 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with a flue gas conditioning system and an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 3.

Boiler No. 3 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack D.

Stack D has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (e) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

Stack C has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur

dioxide (SO₂) and a Boiler 5 has 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)]

H.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.

H.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 Boiler 1, Boiler 2, Boiler 3, Boiler 4 and Boiler 5.

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

H.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.

H.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.

H.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.

H.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.

H.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.

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

(a) The CAIR designated representative of the CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x ozone season source and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x ozone season unit at the source shall submit the reports required under the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program, including those under 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11.

(b) Pursuant to 326 IAC 24-1-4(e), 326 IAC 24-2-4(e), and 326 IAC 24-3-4(e) and 326 IAC 24-1-6(e)(1), 326 IAC 24-2-6(e)(1), and 326 IAC 24-3-6(e)(1), each submission under the CAIR NO_x annual trading program, CAIR SO₂ trading program, and CAIR NO_x ozone season trading program shall include the following certification statement by the CAIR designated representative: "I am authorized to make this submission on behalf of the owners and operators of the source or units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

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

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

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

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

H.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.

H.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).

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

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

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

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

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

Source Name: Duke Energy Indiana., Inc - Gibson Generating Station
Source Address: 1097 N 950 W, Owensville, Indiana 47665
Part 70 Permit No.: T051-33624-00013

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., Inc - Gibson Generating Station
Source Address: 1097 N 950 W, Owensville, Indiana 47665
Part 70 Permit No.: T051-33624-00013

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 AND ENFORCEMENT BRANCH**

Part 70 Quarterly Report

Source Name: Duke Energy Indiana., Inc - Gibson Generating Station
 Source Address: 1097 N 950 W, Owensville, Indiana 47665
 Part 70 Permit No.: T051-33624-00013
 Facility: Exhauster 3A, Exhauster 3B, Exhauster 3C (spare) Exhauster 1A, Exhauster 1B,
 Exhauster 2A, Exhauster 2B, Spare Exhauster, (B3) Remote Fly Ash Silo A Bin
 Vent Filter and (B4) Remote Fly Ash Silo B Bin Vent Filter
 Pollutants: PM, PM₁₀ and PM_{2.5}
 Parameter: Number of hours of operation
 Limit: Less than 4745 hours each per twelve (12) consecutive month period with
 compliance determined at the end of each month.

QUARTER :

YEAR:

Month	Number of Hours of Operation	Number of Hours of Operation	Number of Hours of Operation
	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., Inc - Gibson Generating Station
 Source Address: 1097 N 950 W, Owensville, Indiana 47665
 Part 70 Permit No.: T051-33624-00013
 Facility: U1 Bin Vent Filter and U2 Bin Vent Filter
 Pollutants: PM, PM₁₀ and PM_{2.5}
 Parameter: Number of hours of operation
 Limit: Less than 5840 hours each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER :

YEAR:

Month	Number of Hours of Operation	Number of Hours of Operation	Number of Hours of Operation
	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., Inc - Gibson Generating Station
 Source Address: 1097 N 950 W, Owensville, Indiana 47665
 Part 70 Permit No.: T051-33624-00013
 Facility: Lime Silo A Bin Vent Filter and Lime Silo B Bin Vent Filter
 Pollutants: PM, PM₁₀ and PM_{2.5}
 Parameter: Number of hours of operation
 Limit: Less than 2920 hours each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER :

YEAR:

Month	Number of Hours of Operation	Number of Hours of Operation	Number of Hours of Operation
	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., Inc - Gibson Generating Station
 Source Address: 1097 N 950 W, Owensville, Indiana 47665
 Part 70 Permit No.: T051-33624-00013
 Facility: Fly Ash Day Bin vent Filter
 Pollutants: PM, PM₁₀ and PM_{2.5}
 Parameter: Number of hours of operation
 Limit: Less than 8760 hours each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER :

YEAR:

Month	Number of Hours of Operation	Number of Hours of Operation	Number of Hours of Operation
	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, Inc - Gibson Generating Station
 Source Address: 1097 N 950 W, Owensville, Indiana 47665
 Part 70 Permit No.: T051-33624-00013

Months: _____ **to** _____ **Year:** _____

<p>This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. 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".</p>	
<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: _____

Attachment A to a Part 70 Operating Permit Renewal

Standards of Performance for Fossil-Fuel-Fired Steam Generators **[40 CFR Part 60, Subpart D] [326 IAC 12]**

Source Name:	Duke Energy Indiana, Inc. - Gibson Generating Station
Source Location:	1097 North 950 West, Owensville, IN 47665
County:	Gibson
SIC Code:	4911
Permit Renewal No.:	T051-33624-00013
Permit Reviewer:	Josiah Balogun

Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators

SOURCE: 72 FR 32717, June 13, 2007, unless otherwise noted.

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§ 60.40 Applicability and designation of affected facility.

(a) The affected facilities to which the provisions of this subpart apply are:

(1) Each fossil-fuel-fired steam generating unit of more than 73 megawatts (MW) heat input rate (250 million British thermal units per hour (MMBtu/hr)).

(2) Each fossil-fuel and wood-residue-fired steam generating unit capable of firing fossil fuel at a heat input rate of more than 73 MW (250 MMBtu/hr).

(b) Any change to an existing fossil-fuel-fired steam generating unit to accommodate the use of combustible materials, other than fossil fuels as defined in this subpart, shall not bring that unit under the applicability of this subpart.

(c) Except as provided in paragraph (d) of this section, any facility under paragraph (a) of this section that commenced construction or modification after August 17, 1971, is subject to the requirements of this subpart.

(d) The requirements of §§ 60.44 (a)(4), (a)(5), (b) and (d), and 60.45(f)(4)(vi) are applicable to lignite-fired steam generating units that commenced construction or modification after December 22, 1976.

(e) Any facility subject to either subpart Da or KKKK of this part is not subject to this subpart.

[72 FR 32717, June 13, 2007, as amended at 77 FR 9447, Feb. 16, 2012]

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§ 60.41 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, and in subpart A of this part.

Boiler operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the steam-generating unit. It is not necessary for fuel to be combusted the entire 24-hour period.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by ASTM D388 (incorporated by reference, see § 60.17).

Coal refuse means waste-products of coal mining, cleaning, and coal preparation operations (e.g. culm, gob, etc.) containing coal, matrix material, clay, and other organic and inorganic material.

Fossil fuel means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat.

Fossil fuel and wood residue-fired steam generating unit means a furnace or boiler used in the process of burning fossil fuel and wood residue for the purpose of producing steam by heat transfer.

Fossil-fuel-fired steam generating unit means a furnace or boiler used in the process of burning fossil fuel for the purpose of producing steam by heat transfer.

Natural gas means a fluid mixture of hydrocarbons (e.g., methane, ethane, or propane), composed of at least 70 percent methane by volume or that has a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot), that maintains a gaseous state under ISO conditions. In addition, *natural gas* contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Finally, *natural gas* does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

Wood residue means bark, sawdust, slabs, chips, shavings, mill trim, and other wood products derived from wood processing and forest management operations.

[72 FR 32717, June 13, 2007, as amended at 77 FR 9447, Feb. 16, 2012]

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§ 60.42 Standard for particulate matter (PM).

(a) Except as provided under paragraphs (b), (c), (d), and (e) of this section, on and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that:

(1) Contain PM in excess of 43 nanograms per joule (ng/J) heat input (0.10 lb/MMBtu) derived from fossil fuel or fossil fuel and wood residue.

(2) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

(b)(1) On or after December 28, 1979, no owner or operator shall cause to be discharged into the atmosphere from the Southwestern Public Service Company's Harrington Station #1, in Amarillo, TX, any gases which exhibit greater than 35 percent opacity, except that a maximum of 42 percent opacity shall be permitted for not more than 6 minutes in any hour.

(2) Interstate Power Company shall not cause to be discharged into the atmosphere from its Lansing Station Unit No. 4 in Lansing, IA, any gases which exhibit greater than 32 percent opacity, except that a maximum of 39 percent opacity shall be permitted for not more than six minutes in any hour.

(c) As an alternate to meeting the requirements of paragraph (a) of this section, an owner or operator that elects to install, calibrate, maintain, and operate a continuous emissions monitoring systems (CEMS) for measuring PM emissions can petition the Administrator (in writing) to comply with § 60.42Da(a) of subpart Da of this part. If the Administrator grants the petition, the source will from then on (unless the unit is modified or reconstructed in the future) have to comply with the requirements in § 60.42Da(a) of subpart Da of this part.

(d) An owner or operator of an affected facility that combusts only natural gas is exempt from the PM and opacity standards specified in paragraph (a) of this section.

(e) An owner or operator of an affected facility that combusts only gaseous or liquid fossil fuel (excluding residual oil) with potential SO₂ emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and that does not use post-combustion technology to reduce emissions of SO₂ or PM is exempt from the PM standards specified in paragraph (a) of this section.

[60 FR 65415, Dec. 19, 1995, as amended at 76 FR 3522, Jan. 20, 2011; 74 FR 5077, Jan. 28, 2009; 77 FR 9447, Feb. 16, 2012]

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§ 60.43 Standard for sulfur dioxide (SO₂).

(a) Except as provided under paragraph (d) of this section, on and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain SO₂ in excess of:

(1) 340 ng/J heat input (0.80 lb/MMBtu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.

(2) 520 ng/J heat input (1.2 lb/MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in paragraph (e) of this section.

(b) Except as provided under paragraph (d) of this section, when different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) shall be determined by proration using the following formula:

$$PS_{SO_2} = \frac{y(340) + z(520)}{(y + z)}$$

Where:

PS_{SO_2} = Prorated standard for SO_2 when burning different fuels simultaneously, in ng/J heat input derived from all fossil fuels or from all fossil fuels and wood residue fired;

y = Percentage of total heat input derived from liquid fossil fuel; and

z = Percentage of total heat input derived from solid fossil fuel.

(c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

(d) As an alternate to meeting the requirements of paragraphs (a) and (b) of this section, an owner or operator can petition the Administrator (in writing) to comply with § 60.43Da(i)(3) of subpart Da of this part or comply with § 60.42b(k)(4) of subpart Db of this part, as applicable to the affected source. If the Administrator grants the petition, the source will from then on (unless the unit is modified or reconstructed in the future) have to comply with the requirements in § 60.43Da(i)(3) of subpart Da of this part or § 60.42b(k)(4) of subpart Db of this part, as applicable to the affected source.

(e) Units 1 and 2 (as defined in appendix G of this part) at the Newton Power Station owned or operated by the Central Illinois Public Service Company will be in compliance with paragraph (a)(2) of this section if Unit 1 and Unit 2 individually comply with paragraph (a)(2) of this section or if the combined emission rate from Units 1 and 2 does not exceed 470 ng/J (1.1 lb/MMBtu) combined heat input to Units 1 and 2.

[60 FR 65415, Dec. 19, 1995, as amended at 74 FR 5077, Jan. 28, 2009]

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§ 60.44 Standard for nitrogen oxides (NO_x).

(a) Except as provided under paragraph (e) of this section, on and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that contain NO_x , expressed as NO_2 in excess of:

(1) 86 ng/J heat input (0.20 lb/MMBtu) derived from gaseous fossil fuel.

(2) 129 ng/J heat input (0.30 lb/MMBtu) derived from liquid fossil fuel, liquid fossil fuel and wood residue, or gaseous fossil fuel and wood residue.

(3) 300 ng/J heat input (0.70 lb/MMBtu) derived from solid fossil fuel or solid fossil fuel and wood residue (except lignite or a solid fossil fuel containing 25 percent, by weight, or more of coal refuse).

(4) 260 ng/J heat input (0.60 lb MMBtu) derived from lignite or lignite and wood residue (except as provided under paragraph (a)(5) of this section).

(5) 340 ng/J heat input (0.80 lb MMBtu) derived from lignite which is mined in North Dakota, South Dakota, or Montana and which is burned in a cyclone-fired unit.

(b) Except as provided under paragraphs (c), (d), and (e) of this section, when different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PS_{NO_x} = \frac{w (260) + x (86) + y (130) + z (300)}{(w + x + y + z)}$$

Where:

PS_{NO_x} = Prorated standard for NO_x when burning different fuels simultaneously, in ng/J heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w = Percentage of total heat input derived from lignite;

x = Percentage of total heat input derived from gaseous fossil fuel;

y = Percentage of total heat input derived from liquid fossil fuel; and

z = Percentage of total heat input derived from solid fossil fuel (except lignite).

(c) When a fossil fuel containing at least 25 percent, by weight, of coal refuse is burned in combination with gaseous, liquid, or other solid fossil fuel or wood residue, the standard for NO_x does not apply.

(d) Except as provided under paragraph (e) of this section, cyclone-fired units which burn fuels containing at least 25 percent of lignite that is mined in North Dakota, South Dakota, or Montana remain subject to paragraph (a)(5) of this section regardless of the types of fuel combusted in combination with that lignite.

(e) As an alternate to meeting the requirements of paragraphs (a), (b), and (d) of this section, an owner or operator can petition the Administrator (in writing) to comply with § 60.44Da(e)(3) of subpart Da of this part. If the Administrator grants the petition, the source will from then on (unless the unit is modified or reconstructed in the future) have to comply with the requirements in § 60.44Da(e)(3) of subpart Da of this part.

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§ 60.45 Emissions and fuel monitoring.

(a) Each owner or operator of an affected facility subject to the applicable emissions standard shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) for measuring opacity and a continuous emissions monitoring system (CEMS) for measuring SO_2 emissions, NO_x emissions, and either oxygen (O_2) or carbon dioxide (CO_2) except as provided in paragraph (b) of this section.

(b) Certain of the CEMS and COMS requirements under paragraph (a) of this section do not apply to owners or operators under the following conditions:

(1) For a fossil-fuel-fired steam generator that combusts only gaseous or liquid fossil fuel (excluding residual oil) with potential SO_2 emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and that does not use post-combustion technology to reduce emissions of SO_2 or PM, COMS for measuring the opacity of emissions and CEMS for measuring SO_2 emissions are not required if the owner or operator monitors SO_2 emissions by fuel sampling and analysis or fuel receipts.

(2) For a fossil-fuel-fired steam generator that does not use a flue gas desulfurization device, a CEMS for measuring SO_2 emissions is not required if the owner or operator monitors SO_2 emissions by fuel sampling and analysis.

(3) Notwithstanding § 60.13(b), installation of a CEMS for NO_x may be delayed until after the initial performance tests under § 60.8 have been conducted. If the owner or operator demonstrates during the

performance test that emissions of NO_x are less than 70 percent of the applicable standards in § 60.44, a CEMS for measuring NO_x emissions is not required. If the initial performance test results show that NO_x emissions are greater than 70 percent of the applicable standard, the owner or operator shall install a CEMS for NO_x within one year after the date of the initial performance tests under § 60.8 and comply with all other applicable monitoring requirements under this part.

(4) If an owner or operator is not required to and elects not to install any CEMS for either SO₂ or NO_x, a CEMS for measuring either O₂ or CO₂ is not required.

(5) For affected facilities using a PM CEMS, a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most current requirements in § 60.48Da of this part, or an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the most current requirements in section § 60.48Da of this part a COMS is not required.

(6) A COMS for measuring the opacity of emissions is not required for an affected facility that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO₂, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected source are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis. Owners and operators of affected sources electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (b)(6)(i) through (iv) of this section.

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (b)(6)(i)(A) through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in § 60.58b(i)(3) of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(C) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in § 60.13(h)(2).

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each boiler operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each boiler operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each boiler operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (b)(6) of this section and any corrective actions taken. The record of corrective action taken must include the date

and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(7) An owner or operator of an affected facility subject to an opacity standard under § 60.42 that elects to not use a COMS because the affected facility burns only fuels as specified under paragraph (b)(1) of this section, monitors PM emissions as specified under paragraph (b)(5) of this section, or monitors CO emissions as specified under paragraph (b)(6) of this section, shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in § 60.11 to demonstrate compliance with the applicable limit in § 60.42 by April 29, 2011 or within 45 days after stopping use of an existing COMS, whichever is later, and shall comply with either paragraph (b)(7)(i), (b)(7)(ii), or (b)(7)(iii) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation. The permitting authority may exempt owners or operators of affected facilities burning only natural gas from the opacity monitoring requirements.

(i) Except as provided in paragraph (b)(7)(ii) or (b)(7)(iii) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (b)(7) of this section according to the applicable schedule in paragraphs (b)(7)(i)(A) through (b)(7)(i)(D) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(A) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(B) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(C) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(D) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(ii) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance test, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (b)(7)(ii)(A) and (B) of this section.

(A) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.*, 90 seconds per 30 minute period), the owner or operator

shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (i.e., 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (b)(7) of this section within 45 calendar days according to the requirements in § 60.46(b)(3).

(B) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(iii) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (b)(7)(ii) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(8) A COMS for measuring the opacity of emissions is not required for an affected facility at which the owner or operator installs, calibrates, operates, and maintains a particulate matter continuous parametric monitoring system (PM CPMS) according to the requirements specified in subpart UUUUU of part 63.

(c) For performance evaluations under § 60.13(c) and calibration checks under § 60.13(d), the following procedures shall be used:

(1) Methods 6, 7, and 3B of appendix A of this part, as applicable, shall be used for the performance evaluations of SO₂ and NO_x continuous monitoring systems. Acceptable alternative methods for Methods 6, 7, and 3B of appendix A of this part are given in § 60.46(d).

(2) Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of appendix B to this part.

(3) For affected facilities burning fossil fuel(s), the span value for a continuous monitoring system measuring the opacity of emissions shall be 80, 90, or 100 percent. For a continuous monitoring system measuring sulfur oxides or NO_x the span value shall be determined using one of the following procedures:

(i) Except as provided under paragraph (c)(3)(ii) of this section, SO₂ and NO_x span values shall be determined as follows:

Fossil fuel	In parts per million	
	Span value for SO ₂	Span value for NO _x
Gas	(¹)	500.
Liquid	1,000	500.
Solid	1,500	1,000.
Combinations	1,000y + 1,500z	500 (x + y) + 1,000z.

¹ Not applicable.

Where:

x = Fraction of total heat input derived from gaseous fossil fuel;

y = Fraction of total heat input derived from liquid fossil fuel; and

z = Fraction of total heat input derived from solid fossil fuel.

(ii) As an alternative to meeting the requirements of paragraph (c)(3)(i) of this section, the owner or operator of an affected facility may elect to use the SO₂ and NO_x span values determined according to sections 2.1.1 and 2.1.2 in appendix A to part 75 of this chapter.

(4) All span values computed under paragraph (c)(3)(i) of this section for burning combinations of fossil fuels shall be rounded to the nearest 500 ppm. Span values that are computed under paragraph (c)(3)(ii) of this section shall be rounded off according to the applicable procedures in section 2 of appendix A to part 75 of this chapter.

(5) For a fossil-fuel-fired steam generator that simultaneously burns fossil fuel and nonfossil fuel, the span value of all CEMS shall be subject to the Administrator's approval.

(d) [Reserved]

(e) For any CEMS installed under paragraph (a) of this section, the following conversion procedures shall be used to convert the continuous monitoring data into units of the applicable standards (ng/J, lb/MMBtu):

(1) When a CEMS for measuring O₂ is selected, the measurement of the pollutant concentration and O₂ concentration shall each be on a consistent basis (wet or dry). Alternative procedures approved by the Administrator shall be used when measurements are on a wet basis. When measurements are on a dry basis, the following conversion procedure shall be used:

$$E = CF \left(\frac{20.9}{(20.9 - \%O_2)} \right)$$

Where E, C, F, and %O₂ are determined under paragraph (f) of this section.

(2) When a CEMS for measuring CO₂ is selected, the measurement of the pollutant concentration and CO₂ concentration shall each be on a consistent basis (wet or dry) and the following conversion procedure shall be used:

$$E = CF_c \left(\frac{100}{\%CO_2} \right)$$

Where E, C, F_c and %CO₂ are determined under paragraph (f) of this section.

(f) The values used in the equations under paragraphs (e)(1) and (2) of this section are derived as follows:

(1) E = pollutant emissions, ng/J (lb/MMBtu).

(2) C = pollutant concentration, ng/dscm (lb/dscf), determined by multiplying the average concentration (ppm) for each one-hour period by 4.15×10^4 M ng/dscm per ppm (2.59×10^{-9} M lb/dscf per ppm) where M = pollutant molecular weight, g/g-mole (lb/lb-mole). $M = 64.07$ for SO_2 and 46.01 for NO_x .

(3) $\%O_2$, $\%CO_2 = O_2$ or CO_2 volume (expressed as percent), determined with equipment specified under paragraph (a) of this section.

(4) F , F_c = a factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted (F), and a factor representing a ratio of the volume of CO_2 generated to the calorific value of the fuel combusted (F_c), respectively. Values of F and F_c are given as follows:

(i) For anthracite coal as classified according to ASTM D388 (incorporated by reference, see § 60.17), $F = 2.723 \times 10^{-17}$ dscm/J (10,140 dscf/MMBtu) and $F_c = 0.532 \times 10^{-17}$ scm CO_2 /J (1,980 scf CO_2 /MMBtu).

(ii) For subbituminous and bituminous coal as classified according to ASTM D388 (incorporated by reference, see § 60.17), $F = 2.637 \times 10^{-7}$ dscm/J (9,820 dscf/MMBtu) and $F_c = 0.486 \times 10^{-7}$ scm CO_2 /J (1,810 scf CO_2 /MMBtu).

(iii) For liquid fossil fuels including crude, residual, and distillate oils, $F = 2.476 \times 10^{-7}$ dscm/J (9,220 dscf/MMBtu) and $F_c = 0.384 \times 10^{-7}$ scm CO_2 /J (1,430 scf CO_2 /MMBtu).

(iv) For gaseous fossil fuels, $F = 2.347 \times 10^{-7}$ dscm/J (8,740 dscf/MMBtu). For natural gas, propane, and butane fuels, $F_c = 0.279 \times 10^{-7}$ scm CO_2 /J (1,040 scf CO_2 /MMBtu) for natural gas, 0.322×10^{-7} scm CO_2 /J (1,200 scf CO_2 /MMBtu) for propane, and 0.338×10^{-7} scm CO_2 /J (1,260 scf CO_2 /MMBtu) for butane.

(v) For bark $F = 2.589 \times 10^{-7}$ dscm/J (9,640 dscf/MMBtu) and $F_c = 0.500 \times 10^{-7}$ scm CO_2 /J (1,840 scf CO_2 /MMBtu). For wood residue other than bark $F = 2.492 \times 10^{-7}$ dscm/J (9,280 dscf/MMBtu) and $F_c = 0.494 \times 10^{-7}$ scm CO_2 /J (1,860 scf CO_2 /MMBtu).

(vi) For lignite coal as classified according to ASTM D388 (incorporated by reference, see § 60.17), $F = 2.659 \times 10^{-7}$ dscm/J (9,900 dscf/MMBtu) and $F_c = 0.516 \times 10^{-7}$ scm CO_2 /J (1,920 scf CO_2 /MMBtu).

(5) The owner or operator may use the following equation to determine an F factor (dscm/J or dscf/MMBtu) on a dry basis (if it is desired to calculate F on a wet basis, consult the Administrator) or F_c factor (scm CO_2 /J, or scf CO_2 /MMBtu) on either basis in lieu of the F or F_c factors specified in paragraph (f)(4) of this section:

$$F = 10^{-4} \frac{[227.2 (\%H) + 95.5 (\%C) + 35.6 (\%S) + 8.7 (\%N) - 28.7 (\%O)]}{GCV}$$

$$F_c = \frac{2.0 \times 10^{-5} (\%C)}{GCV \text{ (SI units)}}$$

$$F = 10^{-4} \frac{[3.64 (\%H) + 1.53 (\%C) + 0.57 (\%S) + 0.14 (\%N) - 0.46 (\%O)]}{GCV \text{ (English units)}}$$

$$F_c = \frac{20.0 (\%C)}{GCV \text{ (SI units)}}$$

$$F_c = \frac{321 \times 10^3 (\%C)}{GCV \text{ (English units)}}$$

(i) %H, %C, %S, %N, and %O are content by weight of hydrogen, carbon, sulfur, nitrogen, and O₂ (expressed as percent), respectively, as determined on the same basis as GCV by ultimate analysis of the fuel fired, using ASTM D3178 or D3176 (solid fuels), or computed from results using ASTM D1137, D1945, or D1946 (gaseous fuels) as applicable. (These five methods are incorporated by reference, see § 60.17.)

(ii) GCV is the gross calorific value (kJ/kg, Btu/lb) of the fuel combusted determined by the ASTM test methods D2015 or D5865 for solid fuels and D1826 for gaseous fuels as applicable. (These three methods are incorporated by reference, see § 60.17.)

(iii) For affected facilities which fire both fossil fuels and nonfossil fuels, the F or F_c value shall be subject to the Administrator's approval.

(6) For affected facilities firing combinations of fossil fuels or fossil fuels and wood residue, the F or F_c factors determined by paragraphs (f)(4) or (f)(5) of this section shall be prorated in accordance with the applicable formula as follows:

$$F = \sum_{i=1}^n X_i F_i \quad \text{or} \quad F_c = \sum_{i=1}^n X_i (F_c)_i$$

Where:

X_i = Fraction of total heat input derived from each type of fuel (e.g. natural gas, bituminous coal, wood residue, etc.);

F_i or (F_c)_i = Applicable F or F_c factor for each fuel type determined in accordance with paragraphs (f)(4) and (f)(5) of this section; and

n = Number of fuels being burned in combination.

(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in § 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(1) *Opacity*. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

(i) For sources subject to the opacity standard of § 60.42(b)(1), excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 35 percent opacity, except that one six-minute average per hour of up to 42 percent opacity need not be reported.

(ii) For sources subject to the opacity standard of § 60.42(b)(2), excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 32 percent opacity, except that one six-minute average per hour of up to 39 percent opacity need not be reported.

(2) *Sulfur dioxide*. Excess emissions for affected facilities are defined as:

(i) For affected facilities electing not to comply with § 60.43(d), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of SO₂ as measured by a CEMS exceed the applicable standard in § 60.43; or

(ii) For affected facilities electing to comply with § 60.43(d), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of SO₂ as measured by a CEMS exceed the applicable standard in § 60.43. Facilities complying with the 30-day SO₂ standard shall use the most current associated SO₂ compliance and monitoring requirements in §§ 60.48Da and 60.49Da of subpart Da of this part or §§ 60.45b and 60.47b of subpart Db of this part, as applicable.

(3) *Nitrogen oxides*. Excess emissions for affected facilities using a CEMS for measuring NO_x are defined as:

(i) For affected facilities electing not to comply with § 60.44(e), any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in § 60.44; or

(ii) For affected facilities electing to comply with § 60.44(e), any 30 operating day period during which the average emissions (arithmetic average of all one-hour periods during the 30 operating days) of NO_x as measured by a CEMS exceed the applicable standard in § 60.44. Facilities complying with the 30-day NO_x standard shall use the most current associated NO_x compliance and monitoring requirements in §§ 60.48Da and 60.49Da of subpart Da of this part.

(4) *Particulate matter*. Excess emissions for affected facilities using a CEMS for measuring PM are defined as any boiler operating day period during which the average emissions (arithmetic average of all operating one-hour periods) exceed the applicable standards in § 60.42. Affected facilities using PM CEMS must follow the most current applicable compliance and monitoring provisions in §§ 60.48Da and 60.49Da of subpart Da of this part.

(h) The owner or operator of an affected facility subject to the opacity limits in § 60.42 that elects to monitor emissions according to the requirements in § 60.45(b)(7) shall maintain records according to the requirements specified in paragraphs (h)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (h)(1)(i) through (iii) of this section.

- (i) Dates and time intervals of all opacity observation periods;
 - (ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and
 - (iii) Copies of all visible emission observer opacity field data sheets;
- (2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (h)(2)(i) through (iv) of this section.
- (i) Dates and time intervals of all visible emissions observation periods;
 - (ii) Name and affiliation for each visible emission observer participating in the performance test;
 - (iii) Copies of all visible emission observer opacity field data sheets; and
 - (iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.
- (3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

[60 FR 65415, Dec. 19, 1995, as amended at 74 FR 5077, Jan. 28, 2009; 76 FR 3522, Jan. 20, 2011; 77 FR 9447, Feb. 16, 2012]

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§ 60.46 Test methods and procedures.

- (a) In conducting the performance tests required in § 60.8, and subsequent performance tests as requested by the EPA Administrator, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (d) of this section.
- (b) The owner or operator shall determine compliance with the PM, SO₂, and NO_x standards in §§ 60.42, 60.43, and 60.44 as follows:
 - (1) The emission rate (E) of PM, SO₂, or NO_x shall be computed for each run using the following equation:

$$E = CF_d \left(\frac{20.9}{(20.9 - \%O_2)} \right)$$

Where:

E = Emission rate of pollutant, ng/J (1b/million Btu);

C = Concentration of pollutant, ng/dscm (1b/dscf);

%O₂ = O₂ concentration, percent dry basis; and

F_d = Factor as determined from Method 19 of appendix A of this part.

(2) Method 5 of appendix A of this part shall be used to determine the PM concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems and Method 5B of appendix A of this part shall be used to determine the PM concentration (C) after FGD systems.

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train shall be set to provide an average gas temperature of 160±14 °C (320±25 °F).

(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B of appendix A of this part shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O₂ concentration for the run shall be the arithmetic mean of the sample O₂ concentrations at all traverse points.

(iii) If the particulate run has more than 12 traverse points, the O₂ traverse points may be reduced to 12 provided that Method 1 of appendix A of this part is used to locate the 12 O₂ traverse points.

(3) Method 9 of appendix A of this part and the procedures in § 60.11 shall be used to determine opacity.

(4) Method 6 of appendix A of this part shall be used to determine the SO₂ concentration.

(i) The sampling site shall be the same as that selected for the particulate sample. The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval.

(ii) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B of appendix A of this part shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be taken simultaneously with, and at the same point as, the SO₂ sample. The SO₂ emission rate shall be computed for each pair of SO₂ and O₂ samples. The SO₂ emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples.

(5) Method 7 of appendix A of this part shall be used to determine the NO_x concentration.

(i) The sampling site and location shall be the same as for the SO₂ sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.

(ii) For each NO_x sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B of appendix A of this part shall be used to determine the O₂ concentration (%O₂). The sample shall be taken simultaneously with, and at the same point as, the NO_x sample.

(iii) The NO_x emission rate shall be computed for each pair of NO_x and O₂ samples. The NO_x emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

(c) When combinations of fossil fuels or fossil fuel and wood residue are fired, the owner or operator (in order to compute the prorated standard as shown in §§ 60.43(b) and 60.44(b)) shall determine the percentage (w, x, y, or z) of the total heat input derived from each type of fuel as follows:

(1) The heat input rate of each fuel shall be determined by multiplying the gross calorific value of each fuel fired by the rate of each fuel burned.

(2) ASTM Methods D2015, or D5865 (solid fuels), D240 (liquid fuels), or D1826 (gaseous fuels) (all of these methods are incorporated by reference, see § 60.17) shall be used to determine the gross calorific values of the fuels. The method used to determine the calorific value of wood residue must be approved by the Administrator.

(3) Suitable methods shall be used to determine the rate of each fuel burned during each test period, and a material balance over the steam generating system shall be used to confirm the rate.

(d) The owner or operator may use the following as alternatives to the reference methods and procedures in this section or in other sections as specified:

(1) The emission rate (E) of PM, SO₂ and NO_x may be determined by using the F_c factor, provided that the following procedure is used:

(i) The emission rate (E) shall be computed using the following equation:

$$E = CF_c \left(\frac{100}{\%CO_2} \right)$$

Where:

E = Emission rate of pollutant, ng/J (lb/MMBtu);

C = Concentration of pollutant, ng/dscm (lb/dscf);

%CO₂ = CO₂ concentration, percent dry basis; and

F_c = Factor as determined in appropriate sections of Method 19 of appendix A of this part.

(ii) If and only if the average F_c factor in Method 19 of appendix A of this part is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a continuous emission monitoring system is from 17 to 20 percent, then three runs of Method 3B of appendix A of this part shall be used to determine the O₂ and CO₂ concentration according to the procedures in paragraph (b)(2)(ii), (4)(ii), or (5)(ii) of this section. Then if F_o (average of three runs), as calculated from the equation in Method 3B of appendix A of this part, is more than ±3 percent than the average F_o value, as determined from the average values of F_d and F_c in Method 19 of appendix A of this part, *i.e.*, F_{oa} = 0.209 (F_{da} / F_{ca}), then the following procedure shall be followed:

(A) When F_o is less than 0.97 F_{oa}, then E shall be increased by that proportion under 0.97 F_{oa}, *e.g.*, if F_o is 0.95 F_{oa}, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the emission standard.

(B) When F_o is less than 0.97 F_{oa} and when the average difference (d) between the continuous monitor minus the reference methods is negative, then E shall be increased by that proportion under 0.97 F_{oa}, *e.g.*, if F_o is 0.95 F_{oa}, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(C) When F_o is greater than 1.03 F_{oa} and when the average difference d is positive, then E shall be decreased by that proportion over 1.03 F_{oa}, *e.g.*, if F_o is 1.05 F_{oa}, E shall be decreased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(2) For Method 5 or 5B of appendix A-3 of this part, Method 17 of appendix A-6 of this part may be used at facilities with or without wet FGD systems if the stack gas temperature at the sampling location does not exceed an average temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A-3 of this part may be used with Method 17 of appendix A-6 of this part only if it is used after wet FGD systems. Method 17 of appendix A-6 of this part shall not be used after wet FGD systems if the effluent gas is saturated or laden with water droplets.

(3) Particulate matter and SO₂ may be determined simultaneously with the Method 5 of appendix A of this part train provided that the following changes are made:

(i) The filter and impinger apparatus in sections 2.1.5 and 2.1.6 of Method 8 of appendix A of this part is used in place of the condenser (section 2.1.7) of Method 5 of appendix A of this part.

(ii) All applicable procedures in Method 8 of appendix A of this part for the determination of SO₂ (including moisture) are used:

(4) For Method 6 of appendix A of this part, Method 6C of appendix A of this part may be used. Method 6A of appendix A of this part may also be used whenever Methods 6 and 3B of appendix A of this part data are specified to determine the SO₂ emission rate, under the conditions in paragraph (d)(1) of this section.

(5) For Method 7 of appendix A of this part, Method 7A, 7C, 7D, or 7E of appendix A of this part may be used. If Method 7C, 7D, or 7E of appendix A of this part is used, the sampling time for each run shall be at least 1 hour and the integrated sampling approach shall be used to determine the O₂ concentration (%O₂) for the emission rate correction factor.

(6) For Method 3 of appendix A of this part, Method 3A or 3B of appendix A of this part may be used.

(7) For Method 3B of appendix A of this part, Method 3A of appendix A of this part may be used.

[60 FR 65415, Dec. 19, 1995, as amended at 74 FR 5078, Jan. 28, 2009]

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Attachment B to a Part 70 Operating Permit Renewal

Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12]

Source Name:	Duke Energy Indiana, Inc. - Gibson Generating Station
Source Location:	1097 North 950 West, Owensville, IN 47665
County:	Gibson
SIC Code:	4911
Permit Renewal No.:	T051-33624-00013
Permit Reviewer:	Josiah Balogun

Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

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

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§ 60.670 *Applicability and designation of affected facility.*

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

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

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

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

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

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

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

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in § 60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§ 60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

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

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

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

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

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§ 60.671 Definitions.

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

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

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

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

Building means any frame structure with a roof.

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) Sand and Gravel.

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

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

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

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

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

(11) Barite.

(12) Fluorospar.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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§ 60.672 Standard for particulate matter (PM).

- (a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.
- (b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.
- (c) [Reserved]
- (d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.
- (e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

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

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

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

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§ 60.673 *Reconstruction.*

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

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

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§ 60.674 *Monitoring of operations.*

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

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

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

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

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

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

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

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

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

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

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

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

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

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according

to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

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

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

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

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

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

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

(i) Installation of the bag leak detection system;

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

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

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

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

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

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

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

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

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

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§ 60.675 Test methods and procedures.

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

(b) The owner or operator shall determine compliance with the PM standards in § 60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A-3 of this part or Method 17 of Appendix A-6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A-4 of this part and the procedures in § 60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in § 60.672(b) or § 60.672(e)(1), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in § 60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under § 60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A-4), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A-4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under § 60.672(b) or § 60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in § 60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A-7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in § 60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11 to show compliance with the opacity limit in § 60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A-1 of this part [*i.e.*, velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of Appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (*e.g.*, from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \quad (\text{Eq. 1})$$

Where:

V_e = average building vent velocity (feet per minute);

Q_f = average fan flow rate (cubic feet per minute); and

A_e = area of building vent and measurement location (square feet).

(f) To comply with § 60.676(d), the owner or operator shall record the measurements as required in § 60.676(c) using the monitoring devices in § 60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A-4) testing, the owner or operator may reduce the 30-day advance notification of performance test in § 60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in § 60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

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§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with § 60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§ 60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under § 60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to § 60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to § 60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by § 63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

- (d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.
- (e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.
- (f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in § 60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with § 60.672(b), (e) and (f).
- (g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in § 60.672(b) and the emission test requirements of § 60.11.
- (h) The subpart A requirement under § 60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.
- (i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.
- (1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.
- (2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.
- (j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.
- (k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to § 60.4(b).

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Table 1 to Subpart 000 of Part 60—Exceptions to Applicability of Subpart A to Subpart 000

Subpart A reference	Applies to subpart 000	Explanation
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60.4, Address	Yes	Except in § 60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§ 60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§ 60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§ 60.675(c)), Method 9 (40 CFR part 60, Appendix A-4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

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Table 2 to Subpart OOO of Part 60—Stack Emission Limits for Affected Facilities With Capture Systems

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) ^a	7 percent for dry control devices ^b	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e).
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf) ^a	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e); and
			Monitoring of baghouses according to § 60.674(c), (d), or (e) and § 60.676(b).

^a Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See § 60.672(d) through (f).

^b The stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

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Table 3 to Subpart 000 of Part 60—Fugitive Emission Limits

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§ 60.670 and 60.671) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart.
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart; and Periodic inspections of water sprays according to § 60.674(b) and § 60.676(b); and
			A repeat performance test according to § 60.11 of this part and § 60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in § 60.674(b) and § 60.676(b) are exempt from this 5-year repeat testing requirement.

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Attachment D to a Part 70 Operating Permit Renewal

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart III] [326 IAC 12]

Source Name:	Duke Energy Indiana, Inc. - Gibson Generating Station
Source Location:	1097 North 950 West, Owensville, IN 47665
County:	Gibson
SIC Code:	4911
Permit Renewal No.:	T051-33624-00013
Permit Reviewer:	Josiah Balogun

Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than

10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

§ 60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Reduce nitrogen oxides (NO_x) emissions by 90 percent or more, or limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)).

(2) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart.

Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce NO_x emissions by 90 percent or more, or limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

- (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
- (b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.
- (c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.
- (d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.
- (e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.
- (f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.
- (g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.
- (h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

- (a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.
- (b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI

internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and §60.4202(c) using the certification procedures required in 40 CFR part 94 subpart C, and must test their engines as specified in 40 CFR part 94.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 40 CFR 1039.125, 40 CFR 1039.130, 40 CFR 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89 or 40 CFR part 94 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate, but the words "stationary" must be included instead of "nonroad" or "marine" on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under parts 89, 94, or 1039 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words "and stationary" after the word "nonroad" or "marine," as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as "Fire Pump Applications Only".

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_x and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_x and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to

100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad (\text{Eq. 1})$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a

displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (d) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 2})$$

Where:

C_i = concentration of NO_x or PM at the control device inlet,

C_o = concentration of NO_x or PM at the control device outlet, and

R = percent reduction of NO_x or PM emissions.

(2) You must normalize the NO_x or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \% \text{O}_2} \quad (\text{Eq. 3})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O_2 .

C_d = Measured concentration of NO_x or PM, uncorrected.

5.9 = 20.9 percent O_2 - 15 percent O_2 , the defined O_2 correction value, percent.

$\% \text{O}_2$ = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209}{F_c} \quad (\text{Eq. 4})$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2 , percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, $ds\text{m}^3 / J$ ($dscf/10^6 \text{ Btu}$).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, $ds\text{m}^3 / J$ ($dscf/10^6 \text{ Btu}$).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

X_{CO_2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 - 15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the NO_x and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 6})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O_2 .

C_d = Measured concentration of NO_x or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \quad (\text{Eq. 7})$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_x concentration in ppm.

1.912×10^{-3} = Conversion constant for ppm NO_x to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 8})$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §60.4205. Non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder, must meet the applicable emission standards in §60.4204(c).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI engines located in areas of Alaska not accessible by the Federal Aid Highway System should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) The Governor of Alaska may submit for EPA approval, by no later than January 11, 2008, an alternative plan for implementing the requirements of 40 CFR part 60, subpart IIII, for public-sector electrical utilities located in rural areas of Alaska not accessible by the Federal Aid Highway System. This alternative plan must be based on the requirements of section 111 of the Clean Air Act including any increased risks to human health and the environment and must also be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of 40 CFR part 60, subpart IIII. If EPA approves by rulemaking process an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel engines used in new stationary internal combustion engines subject to this paragraph.

§ 60.4217 What emission standards must I meet if I am an owner or

operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means either:

- (1) The calendar year in which the engine was originally produced, or
- (2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)
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	NMHC + NO _x	HC	NO _x	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart III of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO _x + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart III of Part 60—Certification Requirements for Stationary

Fire Pump Engines

[As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

Table 4 to Subpart III of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO _x	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ ¹	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ ¹	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+ ²	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ ³	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)

	2009+ ³	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

¹For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

²For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

³In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart III of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart III of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed ¹	Torque (percent) ²	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

¹Engine speed: ±2 percent of point.

²Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart III of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder	a. Reduce NO _x emissions by 90 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO _x concentration.
		iv. Measure NO _x at the inlet and outlet of the control device	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

			reference, see §60.17)	
	b. Limit the concentration of NO _x in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurement for NO _x concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO _x concentration.
		iv. Measure NO _x at the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of	(2) Method 3, 3A, or 3B of 40 CFR	(b) Measurements to determine

		the control device;	part 60, appendix A	O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the	(4) Method 5 of 40 CFR part 60,	(d) PM concentration must be at 15 percent

		stationary internal combustion engine	appendix A	O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
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Table 8 to Subpart III of Part 60—Applicability of General Provisions to Subpart III

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart III.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	

§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

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Attachment E to a Part 70 Operating Permit Renewal

40 CFR 63, Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

Source Name:	Duke Energy Indiana, Inc. - Gibson Generating Station
Source Location:	1097 North 950 West, Owensville, IN 47665
County:	Gibson
SIC Code:	4911
Permit Renewal No.:	T051-33624-00013
Permit Reviewer:	Josiah Balogun

<i>Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</i>

SOURCE: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40

CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in § 63.6675, which includes operating according to the provisions specified in § 63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of § 63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of § 63.6645(f) and the requirements of §§ 63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in § 63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6602 What emission limitations and other requirements must I meet

if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§ 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical

CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in § 63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in § 63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in § 63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in § 63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in § 63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in § 63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§ 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2), or are on offshore vessels that meet § 63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or

other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or

equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

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Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

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Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($\text{dscf}/10^6 \text{ Btu}$).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($\text{dscf}/10^6 \text{ Btu}$).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{\text{CO}_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

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Where:

X_{CO_2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 — 15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{\text{adj}} = C_d \frac{X_{\text{CO}_2}}{\% \text{CO}_2} \quad (\text{Eq. 4})$$

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Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2 .

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO_2} = CO_2 correction factor, percent.

$\% \text{CO}_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE

exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a

specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in § 63.8(d). As specified in § 63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

- (iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;
 - (iv) Ongoing operation and maintenance procedures in accordance with provisions in § 63.8(c)(1)(ii) and (c)(3); and
 - (v) Ongoing reporting and recordkeeping procedures in accordance with provisions in § 63.10(c), (e)(1), and (e)(2)(i).
- (2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.
 - (3) The CPMS must collect data at least once every 15 minutes (see also § 63.6635).
 - (4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
 - (5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.
 - (6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.
- (c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.
- (d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.
- (e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:
- (1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
 - (2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
 - (3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;
 - (4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;
 - (5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet § 63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the

engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These

deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

- (1) The compliance demonstration must consist of at least one test run.
 - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
 - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
 - (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
 - (5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.
 - (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.
 - (7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.
- (d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).
- (e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary

RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-

emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with § 63.6590(b), your notification should include the information in § 63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to § 63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in § 63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in § 63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in § 63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

- (iii) Engine site rating and model year.
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (v) Hours operated for the purposes specified in § 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(2)(ii) and (iii).
 - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 63.6640(f)(2)(ii) and (iii).
 - (vii) Hours spent for operation for the purpose specified in § 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
 - (viii) If there were no deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.
 - (ix) If there were deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.
- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§ 63.6655 *What records must I keep?*

- (a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.
- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in § 63.10(b)(2)(xiv).
 - (2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.
 - (3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).
 - (4) Records of all required maintenance performed on the air pollution control and monitoring equipment.
 - (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in § 63.6640(f)(2)(ii) or (iii) or § 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in § 63.6600 under § 63.6(g).

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in § 63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see § 63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO₂ .

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in § 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in § 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 63.6640(f)(2)(ii) or (iii) and § 63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x , CO, and volatile organic compounds (VOC) into CO_2 , nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.*, remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in § 63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to § 63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to § 63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C₃H₈.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart P P P P P of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart Z Z Z Z.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1 a to Subpart Z Z Z Z of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE > 500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB	a. Reduce formaldehyde emissions by 76 percent or	Minimize the engine's time spent at idle and

stationary RICE	more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂	

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1 b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

TABLE 1B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SI 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. ¹
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR.	

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Table 2 a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O ₂ . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O ₂ until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂	

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2 b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§ 63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

TABLE 2B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND CI STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, NEW AND RECONSTRUCTED 4SLB STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, EXISTING CI STATIONARY RICE >500 HP

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. ¹
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. ¹
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE

≤500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

TABLE 2C TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING COMPRESSION IGNITION STATIONARY RICE LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS AND EXISTING SPARK IGNITION STATIONARY RICE ≤500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first. ² b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ³
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first. ² b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O ₂ .	
4. Non-Emergency, non-black start CI stationary RICE 300>HP≤500.” is corrected to read “4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	

<p>5. Non-Emergency, non-black start stationary CI RICE >500 HP</p>	<p>a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</p>	
<p>6. Emergency stationary SI RICE and black start stationary SI RICE.¹</p>	<p>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.³</p>	
<p>7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE</p>	<p>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;</p>	
	<p>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.³</p>	
<p>8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP</p>	<p>a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;</p>	
	<p>c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.³</p>	
<p>9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500</p>	<p>Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15</p>	

	percent O ₂ .	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O ₂ .	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O ₂ .	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O ₂ .	

¹ If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

² Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

³ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§ 63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

TABLE 2D TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING STATIONARY RICE LOCATED AT AREA SOURCES OF HAP EMISSIONS

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI	a. Change oil and filter	Minimize the engine's time spent at idle

stationary RICE ≤ 300 HP	<p>every 1,000 hours of operation or annually, whichever comes first;¹</p> <p>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;</p> <p>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.</p>	and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE $300 < \text{HP} \leq 500$	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE > 500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE > 500 HP that operate 24 hours or less per calendar year. ²	<p>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;¹;</p> <p>b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and</p> <p>c. Inspect all hoses and belts every 500 hours of</p>	

	operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	

10. Non-emergency, non-black start 4SRB stationary RICE \leq 500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹ b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

¹ Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

² If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

Subsequent Performance Tests

As stated in §§ 63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

TABLE 3 TO SUBPART ZZZZ OF PART 63—SUBSEQUENT PERFORMANCE TESTS

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. ¹
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

¹ After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

TABLE 4 TO SUBPART ZZZZ OF PART 63. REQUIREMENTS FOR PERFORMANCE TESTS

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). ^{a,c}	(a) Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) ^{a,b,c} or Method 10 of 40 CFR part 60, appendix A	(a) The CO concentration must be at 15 percent O ₂ , dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). ^a	(a) measurements to determine O ₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. ^a	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, ^a provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A	(a) THC concentration must be at 15 percent O ₂ , dry basis. Results of this

		requirement, measure THC at the inlet and the outlet of the control device		test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) if using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). ^a	(a) measurements to determine O ₂ concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. ^a	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, ^a provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), ^a Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03. ^a	(a) CO concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

^a Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

^b You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

^c ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§ 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS, OPERATING LIMITATIONS, AND OTHER REQUIREMENTS

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and

		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at the outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using § 63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to

		continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP,	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable

and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP		determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in § 63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS, AND OTHER REQUIREMENTS

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ^a ; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ^a ; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and

	emissions and using NSCR	
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP $\geq 5,000$ located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent. ^a
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ^a ; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency	a. Limit the	i. Conducting semiannual performance

stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ^a ; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as

	an oxidation catalyst	appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	<p>i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂; and either</p> <p>ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or</p> <p>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.</p>
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	<p>i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O₂ or the average reduction of emissions of THC is 30 percent or more; and either</p> <p>ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or</p> <p>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.</p>

^a After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in § 63.6650, you must comply with the following requirements for reports:

TABLE 7 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR REPORTS

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in § 63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or	i. Semiannually according to the requirements in § 63.6650(b).
		c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4).	i. Semiannually according to the requirements in § 63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of	i. Annually, according to the requirements in § 63.6650.

gross heat input on an annual basis		heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5).
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in § 63.6640(f)(4)(ii)	Report	a. The information in § 63.6650(h)(1)	i. annually according to the requirements in § 63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in § 63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.1	General applicability of the General Provisions	Yes.	
§ 63.2	Definitions	Yes	Additional terms defined in § 63.6675.
§ 63.3	Units and abbreviations	Yes.	
§ 63.4	Prohibited activities and	Yes.	

	circumvention		
§ 63.5	Construction and reconstruction	Yes.	
§ 63.6(a)	Applicability	Yes.	
§ 63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§ 63.6(b)(5)	Notification	Yes.	
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§ 63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No.	
§ 63.6(f)(1)	Applicability of standards	No.	
§ 63.6(f)(2)	Methods for determining compliance	Yes.	
§ 63.6(f)(3)	Finding of compliance	Yes.	
§ 63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes.	
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting	No.	Subpart ZZZZ specifies conditions for

	performance tests		conducting performance tests at § 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at § 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	
§ 63.8(b)(1)	Monitoring	Yes.	
§ 63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§ 63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§ 63.8(c)(1)(i)	Routine and predictable SSM	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes.	
§ 63.8(e)	CMS performance evaluation	Yes	Except for § 63.8(e)(5)(ii), which applies to COMS.
		Except that § 63.8(e) only	

		applies as specified in § 63.6645.	
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that § 63.8(f)(4) only applies as specified in § 63.6645.
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that § 63.8(f)(6) only applies as specified in § 63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640.
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that § 63.9(b)(3) is reserved.
		Except that § 63.9(b) only applies as specified in § 63.6645.	
§ 63.9(c)	Request for compliance extension	Yes	Except that § 63.9(c) only applies as specified in § 63.6645.
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that § 63.9(d) only applies as specified in § 63.6645.
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that § 63.9(g) only applies as specified in § 63.6645.	
§ 63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved.
			Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	

§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that § 63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that § 63.10(e)(3)(i) (C) is reserved.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§ 63.11	Flares	No.	
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by reference	Yes.	
§ 63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine

Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 SCOPE AND APPLICATION. WHAT IS THIS PROTOCOL?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O₂) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O₂).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O ₂)	7782-44-7	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O₂, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 SUMMARY OF PROTOCOL

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O₂ gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or

unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 DEFINITIONS

3.1 Measurement System. The total equipment required for the measurement of CO and O₂ concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a

length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O₂ and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre-sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 INTERFERENCES.

When present in sufficient concentrations, NO and NO₂ are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 SAFETY. [RESERVED]

6.0 EQUIPMENT AND SUPPLIES.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O₂ concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O₂; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 REAGENTS AND STANDARDS. WHAT CALIBRATION GASES ARE NEEDED?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O₂. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ± 5 percent of the label value. Dry ambient air (20.9 percent O₂) is acceptable for calibration of the O₂ cell. If needed, any lower percentage O₂ calibration gas must be a mixture of O₂ in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O₂ Calibration Gas Concentration.

Select an O₂ gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O₂. When the average exhaust gas O₂ readings are above 6 percent, you may use dry ambient air (20.9 percent O₂) for the up-scale O₂ calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO₂).

8.0 SAMPLE COLLECTION AND ANALYSIS

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the "sample conditioning phase" once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and O₂ concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ± 10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ± 3 percent, as instructed by the EC cell manufacturer.

9.0 QUALITY CONTROL (RESERVED)

10.0 CALIBRATION AND STANDARDIZATION

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O₂ and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ± 3 percent of the up-scale gas value or ± 1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ± 0.3 percent O₂ for the O₂ channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two

minutes. Then begin the “measurement data phase” and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to ± 5 percent or ± 1 ppm for CO or ± 0.5 percent O₂, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to ± 2 percent or ± 1 ppm for CO or ± 0.5 percent O₂, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 ANALYTICAL PROCEDURE

The analytical procedure is fully discussed in Section 8.

12.0 CALCULATIONS AND DATA ANALYSIS

Determine the CO and O₂ concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

13.0 PROTOCOL PERFORMANCE

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is ± 2 percent, or ± 1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ± 2 percent or ± 1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO₂ gas standards that are generally recognized as representative of diesel-fueled engine NO and NO₂ emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO₂ interference response should be less than or equal to ± 5 percent of the up-scale CO calibration gas concentration.

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[78 FR 6721, Jan. 30, 2013]

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

**Addendum to the Technical Support Document (ATSD) for a Part 70
Operating Permit Renewal (TITLE V)**

Source Background and Description

Source Name:	Duke Energy Indiana, Inc. - Gibson Generating Station
Source Location:	1097 North 950 West, Owensville, IN 47665
County:	Gibson
SIC Code:	4911
Permit Renewal No.:	T051-33624-00013
Permit Reviewer:	Josiah Balogun

On November 11, 2013, the Office of Air Quality (OAQ) had a notice published in the Princeton Daily Clarion in Princeton, Indiana, stating that Duke Energy Indiana, Inc. - Gibson Generating Station had applied for a Part 70 Operating Permit (TITLE V) to continue to operate stationary electric power plant. The notice also stated that OAQ proposed to issue a Title V permit for this operation and provided information on how the public could review the proposed Title V and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Title V permit should be issued as proposed.

Comments from the Source

On December 11, 2013, Mack Sims of Duke Energy Indiana submitted comments on the proposed Title V Operating Permit. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflects the permit that was on public notice. Changes that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result, ensuring that these types of concerns are documented and part of the record regarding this permit decision.

The summary of the comments and IDEM, OAQ responses, including changes to the permit No. T051-33624-00013 (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Comment 1: There appears to be quite a few changes to permit boilerplate language (Section B & Section C) and other permit conditions that among other things involve revisions to rule citations listed with the various conditions that are not documented in the TSD as changes.

Response 1: All the new changes in the permit is in line with the new format being used by IDEM for clarity in the permit without changing the context of the rule.

Comment 2: Comments about NSPS in the permit:

- (a) While Duke prefers to have NSPS requirements listed in the corresponding Section D with the other conditions for that specific piece of equipment, IDEM chooses to list the NSPS requirements separately in Section E of the permit.

This requires going to more than one permit location when looking for requirements and hinders compliance. See Comments 10, 13 and 14.

- (b) Instead of having the NSPS requirements listed in Section D.5 (as was Permit 27086) where they were clearly listed and there was no question of applicability and what the requirements are, they have now been removed from Section D.5 and are hidden in Section E.2 and Attachment D where they are not clearly listed or easily referenced. Anyone reading Section D.5 would not know that this unit was subject to a NSPS. Similar comment applies to Sections D.7 and D.8.
- (c) Similar to Section D.5, all reference to NSPS has been removed from Section D.7.
- (d) Similar to Sections D.5 and D.7, all reference to NSPS has been removed from Section D.8.

Response 2: All the New Source Performing Standards (NSPS) in this permit have been moved to a new section called Section E in the permit. As stated above this is in line with the new IDEM format for clarity in the permit. All applicable citations are in the permit while the attachments contains the entire part of NSPS. This is to avoid misinterpretation of the rules by changing the language of the rule.

Comment 3: Please confirm that Gibson County is now unclassifiable or attainment for PM2.5.

Response 3: Yes. Gibson County is now attainment for PM2.5 emissions.

Comments 4: The TSD, page 19 says "No NESHAPS are included in this permit renewal" but emergency firewater pump engine, Pump #1, is subject to 40 CFR 63, Subpart ZZZZ.

Response 4: This is a typo. No changes shall be made to the Technical Support Document (TSD) because the OAQ prefers that the TSD reflects the permit that was public noticed.

Comments 5: Condition B.11 – Emergency Provisions previously required Gibson Station to notify IDEM. This new condition requires Gibson Station to notify IDEM or Southwest Regional Office. Please confirm that it is IDEM or Southwest Regional Office not and.

Response 5: As clearly stated in the Rule "*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*" The Permittee will have to notify either **IDEM, OAQ or Southwest Regional Office** for any occurrence.

Comment 6: Condition C.8(c) – Performance Testing, previously had language stating that the extension request did not require certification by the responsible official. This language has been removed from Condition C.8(c) in this permit. Is IDEM now requiring extension request to be certified by the responsible official?

Response 6: Yes. The extension request has to be certified by a "responsible official" as defined by 326 IAC 2-7-1(35) before submission to IDEM.

Comment 7: Condition C.17(a) – General Record Keeping Requirements, IDEM has added extra language regarding support information. Duke suggest that these items listed in (AA) thru (FF) are not needed and request that it be deleted.

Response 7: In order to clarify the Permittee's responsibility with regards to record keeping, IDEM decided to add specific language from the TV rules regarding monitoring recordkeeping.

Comment 8: Condition D.1.15, D.2.15, & D.3.15 – Reporting Requirement previously contained a paragraph (c) to report SO₂ emission exceedances in lbs/MMBtu. This reporting requirement has been removed from these conditions. Is a quarterly report of SO₂ exceedances no longer required?

Response 8: The quarterly report of SO₂ exceedances is no longer required since the limit is not required by the rule.

Comments 9: Should Condition D.3.15 be labeled Reporting Requirement instead of Record Keeping Requirement?

Response 9: The typo has been corrected in the permit accordingly.

D.3.15 Record Keeping Reporting Requirement

(a) A quarterly report of opacity exceedances shall be submitted 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.

Comment 10: In the description box for Section D.6, remove "(f)" and in paragraph (5), (DP-18 and DP-22) should be (DP-14 and DP-22) and in paragraph (6) you added particulate matter being controlled with a baghouse and this wording had never been there before. We ask that this added wording be removed.

Response 10: The typos in Section D.6 has been corrected in the permit accordingly. The sub-number "f" can not be removed from this section because it is a means of identification to the emission unit in Section A.3

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) A coal transfer system, with a nominal throughput of 6,000 tons of coal per hour, consisting of the following equipment:

(5) An enclosed conveyor system, with 18 drop points identified as DP-3, DP-4, DP-7 through DP-15, and DP-14 through DP-22, with each drop point enclosed, excluding the two (2) active pile conveyors which have the drop points (DP-18 and DP-22) controlled by telescopic chutes, and exhausting to the ambient air.

(6) Five (5) enclosed coal bunkers, each with a nominal capacity of 15,000 tons of coal. Bunkers are loaded via a conveyor tripper system with a total capacity of 3,000 tons per hour to the units 1 and 2 bunkers, and 3,000 tons per hour to the units 3, 4 and 5 bunkers. Particulate matter generated from loading bunkers is controlled with a baghouse, 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.)

Comment 11: In the description box for Section D.7, remove "(g)", in paragraph (5) "enclosed hammer mill" should be "enclosed ball mill" and in paragraph (6) remove "nominal loading capacity of 150 tons per hour" and replace with "combined storage capacity of 13,000 tons".

Response 11: IDEM may not be able to increase the capacity of the day bins for temporary storage of limestone during this renewal process. To increase the capacity, the Permittee will need to submit a separate application for this purpose. The typos in Section D.7 has been corrected in the permit accordingly. The sub-number "g" can not be removed from this section because it is a means of identification to the emission unit in Section A.3.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(g) A limestone processing system, consisting of the following equipment:

(5) One (1) enclosed **ball mill** ~~hammer mill~~, with a drop point to a conveyor identified as LSDP-6, with the drop point enclosed.

(6) Two (2) day bins for temporary storage of limestone, with a nominal loading capacity of 150 tons per hour, with dust from loading the bins controlled by bin vent filters, and exhausting 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.)

Comments 12: In the description box for Section D.10, remove "(j)", in paragraph (1) the separators/exhausters are designated A1, A2, A3, A4, A5, A6, A7 and A8. These should be changed to 1A, 1B, 2A, 2B, 2C, 3A, 3B, and 3C to match the designations in Condition D.10.1.

Response 12: The typos in Section D.10 has been corrected in the permit accordingly. The sub-number "j" can not be removed from this section because it is a means of identification to the emission unit in Section A.3

SECTION D.10 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(j) Dry fly ash handling system, including the following, permitted in 2011:

(1) one (1) pneumatic fly ash transfer system from existing precipitator hoppers for Units 1, 2, and 3 equipped with separators/exhausters designated as **1A, 1B, 2A, 2B, 2C, 3A, 3B and 3C** ~~A1, A2, A3 (spare) A4, A5, A6 (spare), A7 & A8~~ to two (2) new transfer stations designated as B1 & B2 each with a maximum capacity of 200 tons per hour. The particulate emissions from each transfer station silo will be controlled by bin-vent filters to 0.01 gr/dscf.

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

Comments 13: Now that there is some operating experience with the Lime Silo, the operating hours need to be increased. This can be accomplished in Condition D.10.1 (A) and (B) by decreasing the hours for U1 and U2 Bin Vent Filter from 5840 hours to 5110 hours each which will allow an increase in the hours for Lime Silo A Bin Vent Filter and Lime Silo B Bin Vent Filter from 2920 hours to 4380 hours each while keeping the overall emissions for the dry fly ash handling the same.

Response 13: IDEM may not be able to increase the operating hours during this renewal process. To increase the operating hours, the Permittee will need to submit a separate application for this purpose.

Comments 14: There is no truck unloading station. The trucks are unloaded at the landfill. Request deleting unloading station from Condition D.10.6(a).

Response 14: The typo in Condition D.10.6(a) has been corrected in the permit accordingly.

D.10.6 Visible Emissions Notations [40 CFR 64]

- (a) Visible emission notations of the truck loading ~~and unloading~~ stations shall be performed at least once per day during normal daylight operations when ash is being loaded and unloaded. A trained employee shall record whether any emissions are normal or abnormal.

D.10.9 Record Keeping Requirements [40 CFR 64]

- (b) To document the compliance status with Condition D.10.6 (a) and (e) - Visible Emission Notation, the Permittee shall maintain records of visible emission notations of truck loading ~~and unloading~~ stations and the landfill area once per day. 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).

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Duke Energy Indiana, Inc. - Gibson Generating Station
Source Location:	1097 North 950 West, Owensville, IN 47665
County:	Gibson
SIC Code:	4911
Permit Renewal No.:	T051-33624-00013
Permit Reviewer:	Josiah Balogun

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Duke Energy Indiana, Inc. - Gibson Generating Station relating to the operation of a stationary electric utility generating station. On September 9, 2013, Duke Energy Indiana, Inc. - Gibson Generating Station submitted an application to the OAQ requesting to renew its operating permit. Duke Energy Indiana, Inc. - Gibson Generating Station was issued its first Part 70 Operating Permit Renewal T051-27086-00013 on June 8, 2009.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 1 has its own continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5875 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 1-2.

Boiler No. 2 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 3, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with a flue gas conditioning system and an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system to control sulfur dioxide (SO₂) emissions, and exhausting to a new stack, identified as Stack 3.

Boiler No. 3 has its own continuous emissions monitors (CEMs) for nitrogen oxides (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. 4, construction commenced prior to August 17, 1971, with a nominal heat input capacity of 5897 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack D.

Stack D has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a continuous opacity monitor (COM).

- (e) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NO_x during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

Stack C has continuous emissions monitors (CEMs) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a Boiler 5 has a continuous opacity monitor (COM).

- (f) A coal transfer system, with a nominal throughput of 6,000 tons of coal per hour, consisting of the following equipment:

- (1) Two (2) railcar unloading stations, each with a drop point to a hopper identified as DP-5 and DP-25, with the drop point controlled by a partial enclosure, and exhausting to the ambient air.
- (2) Two (2) active piles, each with a drop point to a hopper identified as DP-1 and DP-16, with each drop point enclosed and exhausting to the ambient air.
- (3) Three (3) storage piles, having an estimated combined storage capacity including the active piles of 4,000,000 tons, with fugitive emissions controlled by watering trucks.
- (4) Four (4) enclosed hoppers, each with a drop point to conveyors identified as DP-2, DP-6, DP-17 and DP-26, with each drop point enclosed and exhausting to the ambient air.
- (5) An enclosed conveyor system, with 18 drop points identified as DP-3, DP-4, DP-7 through DP-15, and DP-18 through DP-24, with each drop point enclosed, excluding the two (2) active pile conveyors which have the drop points (DP-18 and DP-22) controlled by telescopic chutes, and exhausting to the ambient air.
- (6) Five (5) enclosed coal bunkers, each with a nominal capacity of 15,000 tons of coal. Bunkers are loaded via a conveyor tripper system with a total capacity of 3,000 tons per hour to the units 1 and 2 bunkers, and 3,000 tons per hour to the units 3, 4 and 5 bunkers. Particulate matter generated from loading bunkers is controlled with a baghouse, and exhausts to the ambient air.

- (g) A limestone processing system, consisting of the following equipment:

- (1) One (1) unloading station for trucks or railcar, with a drop point to a hopper identified as LSDP-1 with a nominal throughput of 2,500 tons of limestone per

- hour, with the drop point controlled by a partial enclosure, and exhausting to the ambient air.
- (2) Two (2) enclosed hoppers, each with a drop point to conveyors identified as LSDP-2 and LSDP-5 with a nominal throughput of 200 tons of limestone per hour, with each drop point enclosed.
 - (3) One (1) storage pile, with a nominal storage capacity of 50,000 tons, with a drop point to a hopper identified as LSDP-4, with the drop point enclosed and exhausting to the ambient air.
 - (4) An enclosed conveyor system, with four (4) drop points identified as LSDP-3 and LSDP-8 through LSDP-10, with each drop point enclosed.
 - (5) One (1) enclosed hammermill, with a drop point to a conveyor identified as LSDP-6, with the drop point enclosed.
 - (6) Two (2) day bins for temporary storage of limestone, with a nominal loading capacity of 150 tons per hour, with dust from loading the bins controlled by bin vent filters, and exhausting to the ambient air.
- (h) Limestone Handling (TP-1 to TP-5, TP-10 to TP-17, F-6 and F-9), with maximum capacity of 2,500 tons per hour:
- (1) Transfer of limestone from railcar or truck to the limestone hopper, with fogging type dust suppression as particulate control.
 - (2) Enclosed transfer of limestone from unloading hoppers to belt feeders.
 - (3) Enclosed transfer of limestone from belt feeders to conveyors.
 - (4) Telescoping chute transfer of limestone from conveyor to lime storage stockout pile.
 - (5) Enclosed transfer of limestone from the reclaim hoppers to belt feeders, with fogging type dust suppression as particulate control.
 - (6) Enclosed transfer of limestone from conveyor to conveyor, with fogging type dust suppression as particulate control.
 - (7) Transfer of limestone from conveyor to day bin, with surge-bin filter as particulate control.
 - (8) Enclosed transfer of limestone from conveyor fixed hopper to conveyor with fogging type dust suppression as particulate control.
 - (9) Transfer of limestone from conveyor fixed tripper to day bin, with surge-bin filter as particulate control.
 - (10) Limestone storage piles, with watering type dust suppression as fugitive dust control.
- (i) Gypsum Handling (TP-26 to TP-35, TP-38, and TP-39), with maximum capacity of 300 tons per hour:

- (1) Enclosed transfer of gypsum from belt feeders to conveyors.
 - (2) Transfer of gypsum from conveyors to stockout piles.
 - (3) Partially enclosed transfer of gypsum from conveyor to radial stacker conveyor.
 - (4) Transfer of gypsum from radial stacker conveyor to stockout pile.
 - (5) Stockout piles.
- (j) Dry fly ash handling system, including the following:
- (1) one (1) pneumatic fly ash transfer system from existing precipitator hoppers for Units 1, 2, and 3 equipped with separators/exhausters designated as A1, A2, A3 (spare) A4, A5, A6 (spare), A7 & A8 to two (2) new transfer stations designated as B1 & B2 each with a maximum capacity of 200 tons per hour. The particulate emissions from each transfer station silo will be controlled by bin-vent filters to 0.01 gr/dscf.
 - (2) one (1) pneumatic fly ash transfer system conveying ash from the two (2) transfer station silos to two (2) new fixation silos designated as B3 & B4 each with a maximum capacity of 200 tons per hour. The particulate emissions from each fixation silo will be controlled by bin-vent filters to 0.01 gr/dscf.
 - (3) one (1) pneumatic fly ash transfer system equipped enclosed screw conveyers from the two (2) fixation silos to a new Fixation Building with particulate emissions controlled by a dust collector C1 (with a spare dust collector C2).
 - (4) Loading of fly ash into trucks for transport to the landfill from fixation silos B3 & B4 using wet unloaders.
 - (5) Truck loading of two (2) new lime silos designated B5 & B6 for use in the Fixation Building, each with bin-vent filters controlling particulate matter emissions to 0.01 gr/dscf.
 - (6) One (1) fly ash day bin designated B7 with a maximum capacity of 200 tons per hour with particulate matter emissions controlled by a bin-vent filter to 0.01 gr/dscf.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit
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There are no unpermitted emission units at the source being added through this permitting action.

Emission Units and Pollution Control Equipment Removed From the Source

No emission units have been removed from this facility through this permitting action.

Specifically Insignificant Activities

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

- (a) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.[326 IAC 6-3-2]
- (b) Conveyors as follows: [326 IAC 6-3]
 - (1) Covered conveyor for coal or coke conveying of less than or equal to 360 tons per day;
 - (2) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983;
 - (3) Underground conveyors.
- (c) Coal bunker and coal scale exhausts and associated dust collector vents. [326 IAC 6-3]
- (d) One (1) emergency firewater pump engine, rated at 500 horsepower (HP) and identified as Pump #1, installed in 1995 and permitted in 2013.[Under 40 CFR 63, Subpart ZZZZ, the firewater pump engine is considered an existing affected source.]
- (e) One (1) emergency firewater pump engine, rated at 575 horsepower (HP) and identified as Pump #2, installed in 2007 and permitted in 2013. [Under 40 CFR 60, Subpart IIII, the firewater pump engine is considered an existing affected source.]

Insignificant Activities

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

- (1) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.
- (2) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (3) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (4) The following VOC and HAP storage containers:
 - (a) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.

- (b) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (5) Refractory storage not requiring air pollution control equipment.
- (6) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.
- (7) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (8) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (9) Cleaners and solvents characterized as follows:
 - (a) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;
 - (b) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (10) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (11) Closed loop heating and cooling systems.
- (12) Any of the following structural steel and bridge fabrication activities:
 - (a) Cutting 200,000 linear feet or less of one inch (10) plate or equivalent.
 - (b) Using 80 tons or less of welding consumables.
- (13) Rolling oil recovery systems.
- (14) Solvent recycling systems with batch capacity less than or equal to 100 gallons.
- (15) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
- (16) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.
- (17) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs.
- (18) Water based adhesives that are less than or equal to 5% by volume of VOCs, excluding HAPs.
- (19) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (20) Heat exchanger cleaning and repair.

- (21) Process vessel degreasing and cleaning to prepare for internal repairs.
- (22) Stockpiled soils from soil remediation activities that are covered and waiting transportation for disposal.
- (23) Paved and unpaved roads and parking lots with public access.
- (24) Conveyors as follows:
 - (a) Covered conveyor for coal or coke conveying of less than or equal to 360 tons per day;
 - (b) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983;
 - (c) Underground conveyors.
- (25) Coal bunker and coal scale exhausts and associated dust collector vents.
- (26) Asbestos abatement projects regulated by 326 IAC 14-10.
- (27) Purging of gas lines and vessels that is related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (28) Flue gas conditioning systems and associated chemicals such as the following: sodium sulfate, ammonia, and sulfur trioxide.
- (29) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (30) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (31) On-site fire and emergency response training approved by the department.
- (32) Emergency generators as follows:
 - (a) Gasoline generators not exceeding 110 horsepower.
 - (b) Diesel generators not exceeding 1600 horsepower.
- (33) Other emergency equipment as follows:
 - (a) Stationary fire pumps.
- (34) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

- (35) Purge double block and bleed valves.
- (36) Vents from ash transport systems not operated at positive pressure.
- (37) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (38) Farm Operations.

The following activities and categories have emissions equal to or less than the following insignificant thresholds:

Insignificant Emission Thresholds

Lead (Pb) = 0.6 ton/year or 3.29 lbs/day	Carbon Monoxide (CO) = 25 lbs/day
Sulfur Dioxide (SO ₂) = 5 lbs/hour or 25 lbs/day	Particulate Matter (PM) = 5 lbs/hour or 25 lbs/day
Nitrogen Oxides (NO _x) = 5 lbs/hour or 25 lbs/day	VOC's = 3 lbs/hour or 15 lbs/day

- (a) Two (2) fuel oil storage tanks, identified as A and B, constructed in 1975 and 1976, each with a storage capacity of 460,000 gallons.
- (b) Five (5) fuel oil storage tanks, identified as 1, 2, 3, 4 and 5, constructed in 1975, 1976, 1978, 1979, and 1982, each with a storage capacity of 20,000 gallons.
- (c) Flyash handling system, including pneumatic conveying and wet transport. [326 IAC 6-1]
- (d) Six (6) battery rooms.
- (e) Two (2) diesel dredge pumps, with a maximum capacity of 40 gallons of fuel per hour.
- (f) Five (5) ash ponds, with a combined surface area of 435 acres.
- (g) One (1) FGD landfill, with a surface area of 85 acres.
- (h) One (1) FGD emergency pond, with a surface area of 1 acre.
- (i) Two (2) FGD limestone slurry processing systems including one (1) ball mill, two (2) slurry preparation tanks, two (2) dewatering/fixation stations with a vacuum drum and pug mill, and enclosed conveying system. [326 IAC 6-1]
- (j) Six (6) storage tanks for Betz Inhibitor, BULAB 6040, DUSBLOC 165 and 335, and Apollo Antifreeze.
- (k) Eight (8) degreasing units, constructed before 1980, with capacities of 5 gallons (1 tank), 10 gallons (2 tanks), 20 gallons (1 tank), 30 gallons (3 tanks), and 300 gallons (1 tank).
- (l) Five (5) enclosed coal pulverizers, each with a normal maximum capacity of 285 tons of coal per hour, and exhausting to the boiler. [326 IAC 6]

Existing Approvals

Since the issuance of the Part 70 Operating Permit 051-27086-00013 on June 8, 2009, the source has constructed or has been operating under the following additional approvals:

- (a) Temporary Operation 051-29664-00013, issued on September 28, 2010;
- (b) Significant Permit Modification No. AR 051-29752-00013, issued on January 4, 2011;
- (c) Significant Source Modification No. 051-30403-00013, issued on June 15, 2011; and
- (d) Significant Permit Modification No. 051-30405-00013, issued on July 1, 2011.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Gibson County.

Pollutant	Designation
SO ₂	Cannot be classified.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective October 27, 2011, for the Montgomery Twp for PM _{2.5} . The remainder of Gibson County is unclassifiable or attainment effective April 5, 2005, for PM _{2.5} .	

- (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. Gibson 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}**
 Gibson County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011.. Therefore,

direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

- (c) Other Criteria Pollutants
 Gibson County has been classified as attainment or unclassifiable in Indiana for all criteria 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.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	3,380,541
PM ₁₀	786,129
PM _{2.5}	785,769
SO ₂	640,244
VOC	436
CO	3,747
NO _x	141,043
GHGs as CO ₂ e	29,278,571

HAPs	tons/year
Single HAP (pb)	> 10
Total HAPs	> 25

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

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM₁₀, PM_{2.5}, SO₂, VOC, CO and NO_x is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is equal to or greater than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2012 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	--
PM ₁₀	730
PM _{2.5}	197
SO ₂	22,446
VOC	256
CO	2,133
NO _x	12,642
Lead	1.79
Ammonia	3

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	VOC	CO	NO _x	GHGs	Total HAPs	Worst Single HAP
Boiler 1	3088	710	710	82087	87	749	13107	5841930	> 25	17
Boiler 2	3088	710	710	82087	87	749	13107	5841930	> 25	17
Boiler 3	3099	713	713	82394	87	749	13107	5863806	> 25	17
Boiler 4	3099	713	713	82394	87	749	13107	5863806	> 25	17
Boiler 5	3101	713	713	31010	87	749	18089	5866789	> 25	17
Coal Transfer System	2410	1032	1032	0	0	0	0	0	0	0
Limestone Processing System	16	16	16	0	0	0	0	0	0	0
Limestone Handling				0	0	0	0	0	0	0
Gypsum Handling	276	276	276	0	0	0	0	0	0	0
Dry Fly Ash Handling System										
Exhauster 3A	0.44	0.44	0.44	0	0	0	0	---	---	--
Exhauster 3B	0.44	0.44	0.44	0	0	0	0	---	---	--
Exhauster 3C (Spare)	0	0	0	0	0	0	0	---	---	--
Exhauster 1A	0.67	0.67	0.67	0	0	0	0	---	---	--
Exhauster 1B	0.67	0.67	0.67	0	0	0	0	---	---	--
Spare Exhauster	0	0	0	0	0	0	0	---	---	--
Exhauster 2A	0.67	0.67	0.67	0	0	0	0	---	---	--
Exhauster 2B	0.67	0.67	0.67	0	0	0	0	---	---	--
U1 Bin Vent Filter	0.38	0.38	0.38	0	0	0	0	---	---	--

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	VOC	CO	NO _x	GHGs	Total HAPs	Worst Single HAP
U2 Bin Vent Filter	0.38	0.38	0.38	0	0	0	0	---	---	--
Remotely Fly Ash Silo A Bin Vent Filter	1.55	1.55	1.55	0	0	0	0	---	---	--
Remotely Fly Ash Silo B Bin Vent Filter	1.55	1.55	1.55	0	0	0	0	---	---	--
Lime Silo A Bin Vent Filter	0.13	0.13	0.13	0	0	0	0	---	---	--
Lime Silo B Bin Vent Filter	0.13	0.13	0.13	0	0	0	0	---	---	--
Fly Ash Day Bin vent Filter	0.53	0.53	0.53	0	0	0	0	---	---	--
Dust Colector A	1.69	1.69	1.69	0	0	0	0	---	---	--
Dust Colector B (Spare)	0	0	0	0	0	0	0	---	---	--
Plant Roads	44.2	44.2	--	--	--	--	--	--	--	--
FGD Haul Road	136	136	--	--	--	--	--	--	--	--
Pump #1	0.28	0.28	0.28	0.26	0.31	0.84	3.88	144	0.0034	0.001
Pump #2	0.32	0.32	0.32	0.29	0.36	0.96	4.46	166	0.004	0.001
Total PTE of Entire Source	18368	5074	4894	293076	436	3747	70525	29,278571	> 25	85
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO ₂ e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO ₂ e	NA	NA
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". **PM _{2.5} listed is direct PM _{2.5} .										

Note: Limited emissions was derived from the application submitted by the source on September 9, 2013 and from the existing permit no. 051-30405-00013, issued on July 1, 2011.

- (a) This existing stationary source is major for PSD because the emissions of at least one regulated pollutant are greater than one hundred (>100) tons per year, and it is in one of the twenty-eight (28) listed source categories.
- (b) GHG emissions are equal to or greater than one hundred thousand (>100,000) tons of CO₂ equivalent (CO₂e) emissions per year.

Federal Rule Applicability

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:
- (1) has a potential to emit before controls equal to or greater than the 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 following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Part 70 Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
Boiler 1 (PM)	ESP	Y	1,029,300	3,088	100	Y	Y
Boiler 1 (PM10)	ESP	Y	236,739	710	100	Y	Y
Boiler 2 (PM)	ESP	Y	1,029,300	3,088	100	Y	Y
Boiler 2 (PM10)	ESP	Y	236,739	710	100	Y	Y
Boiler 3 (PM)	ESP	Y	344,385	3,099	100	Y	Y
Boiler 3 (PM10)	ESP	Y	79,209	713	100	Y	Y
Boiler 4 (PM)	ESP	Y	344,385	3,099	100	Y	Y
Boiler 4 (PM10)	ESP	Y	79,209	713	100	Y	Y
Boiler 5 (PM)	ESP	Y	620,208	3,101	100	Y	Y
Boiler 5 (PM10)	ESP	Y	142,648	713	100	Y	Y
Exhauster 3A (PM10)	Filter	Y	440	0.44	100	Y	N
Exhauster 3A (PM)	Filter	Y	440	0.44	100	Y	N
Exhauster 3A (PM2.5)	Filter	Y	440	0.44	100	Y	N
Exhauster 3B (PM10)	Filter	Y	440	0.44	100	Y	N
Exhauster 3B (PM)	Filter	Y	440	0.44	100	Y	N
Exhauster	Filter	Y	440	0.44	100	Y	N

CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Part 70 Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
3B (PM2.5)							
Exhauster 1A(PM10)	Filter	Y	670	0.67	100	Y	N
Exhauster 1A(PM)	Filter	Y	670	0.67	100	Y	N
Exhauster 1A(PM2.5)	Filter	Y	670	0.67	100	Y	N
Exhauster 1B(PM10)	Filter	Y	670	0.67	100	Y	N
Exhauster 1B(PM)	Filter	Y	670	0.67	100	Y	N
Exhauster 1B (PM2.5)	Filter	Y	670	0.67	100	Y	N
Exhauster 2A (PM10)	Filter	Y	670	0.67	100	Y	N
Exhauster 2A (PM)	Filter	Y	670	0.67	100	Y	N
Exhauster 2A (PM2.5)	Filter	Y	670	0.67	100	Y	N
Exhauster 2B (PM10)	Filter	Y	670	0.67	100	Y	N
Exhauster 2B (PM)	Filter	Y	670	0.67	100	Y	N
Exhauster 2B (PM2.5)	Filter	Y	670	0.67	100	Y	N
U1Bin Vent(PM10)	Bin Vent	Y	380	0.38	100	Y	N
U1Bin Vent(PM)	Bin Vent	Y	380	0.38	100	Y	N
U1Bin Vent (PM2.5)	Bin Vent	Y	380	0.38	100	Y	N
U2 Bin Vent(PM10)	Bin Vent	Y	380	0.38	100	Y	N
U2 Bin Vent(PM)	Bin Vent	Y	380	0.38	100	Y	N
U2 Bin Vent (PM2.5)	Bin Vent	Y	380	0.38	100	Y	N
Silo A (PM10)	Bin Vent	Y	1550	1.55	100	Y	N
Silo A (PM)	Bin Vent	Y	1550	1.55	100	Y	N
Silo A (PM2.5)	Bin Vent	Y	1550	1.55	100	Y	N
Silo B (PM10)	Bin Vent	Y	1550	1.55	100	Y	N
Silo B (PM)	Bin Vent	Y	1550	1.55	100	Y	N
Silo B (PM2.5)	Bin Vent	Y	1550	1.55	100	Y	N

CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Part 70 Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
Lime Silo A (PM10)	Bin Vent	Y	130	0.13	100	N	N
Lime Silo A (PM2.5)	Bin Vent	Y	130	0.13	100	N	N
Lime Silo B (PM10)	Bin Vent	Y	130	0.13	100	N	N
Lime Silo B (PM2.5)	Bin Vent	Y	130	0.13	100	N	N
Day Bin(PM10)	Bin Vent	Y	530	0.53	100	Y	N
Day Bin(PM)	Bin Vent	Y	530	0.53	100	Y	N
Day Bin(PM2.5)	Bin Vent	Y	530	0.53	100	Y	N
Dust A (PM10)	Baghouse	Y	1690	1.69	100	Y	N
Dust A (PM)	Baghouse	Y	1690	1.69	100	Y	N
Dust A (PM2.5)	Baghouse	Y	1690	1.69	100	Y	N

The boilers, identified as Boiler 1 - Boiler 5 have pre-controlled emissions greater than 100 tpy for NO_x and SO₂ and will utilize SCR to control NO_x emissions and flue gas desulfurization (FGD) system to control SO₂ emissions in order to meet federally enforceable emission limits. Compliance with these limits will be demonstrated through use of NO_x and SO₂ CEMS. Upon incorporation into a Title V permit, the use of CEMS is considered a continuous compliance determination method.

The pre-controlled emissions of CO for each of the boilers is greater than 100 tons per year but the boilers have not control device to control the CO emission therefore, the boilers are not subject to CAM requirements.

All other units at the have pre-controlled emissions less than the major source threshold and do not use a control device as defined by the CAM regulations.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to Boiler 1, Boiler 2, Boiler 3 boiler 5 and Boiler 5 for PM and PM10, also the requirements of 40 CFR Part 64, CAM are applicable to Exhauster 3A, Exhauster 3B, Exhauster 1A Exhauster 1B Exhauster 2A Exhauster 2B U1Bin Vent U2Bin Vent Silo A Silo B, Day Bin, Dust A, Dust B for PM, PM10 and PM2.5. A CAM plan has been submitted by the source.

- (b) Boilers 1 through 4 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40, Subpart D-Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), because construction on these boilers commenced prior to August 17, 1971, as determined by the United States District Court for the Southern District of Indiana in the case of United States of America v. Public Service Company of Indiana, Inc. on September 30, 1977.

- (c) The flue gas desulfurization (FGD) landfill is not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.750, Subpart WWW-Standards of Performance for Municipal Solid Waste Landfills), because construction on this landfill commenced prior to May 30, 1991.
- (d) The flue gas desulfurization (FGD) landfill is not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart Cc-Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills), because this landfill does not meet the definition of a municipal solid waste landfill as defined in 40 CFR 60.31(c).
- (e) The two (2) no. 2 fuel oil storage tank A and B are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction , Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 because no. 2 fuel oil is not considered a petroleum liquid.
- (f) The two (2) no. 2 fuel oil storage tank A and B are not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60.110a, Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction , Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984) because no. 2 fuel oil is not considered a petroleum liquid.
- (g) The five (5) no. 2 fuel oil day tanks are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb-Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984) because the tanks were all constructed prior to July 23, 1984.
- (h) The coal processing system is not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.250, Subpart Y-Standards of Performance for Coal Preparation Plants) because it is not a coal preparation plant as defined in 40 CFR 60.251, meaning that they do not use breaking, crushing, screening, wet or dry cleaning, or thermal drying in their process.
- (i) The boiler, identified as Boiler 5 is subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971)), because the heat input rate is 5900 MMBTU/hr, and construction commenced after the applicability date of this rule. The emission unit subject to the rule is as follows:
 - (1) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 5, installed in 1982, with a nominal heat input capacity of 5900 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter, equipped with Selective Catalytic Reduction (SCR) for control of NOx during the ozone season, with a flue gas desulfurization (FGD) system for control of sulfur dioxide, and exhausting to stack C.

This source is subject to the following portions of Subpart D:

- (1) 40 CFR 60.40
- (2) 40 CFR 60.41
- (3) 40 CFR 60.42
- (4) 40 CFR 60.43

- (5) 40 CFR 60.44
 - (6) 40 CFR 60.45
 - (7) 40 CFR 60.46
- (j) The limestone processing system is subject to the New Source Performance Standard, for Standard of Performance for Non-metallic Mineral Processing Plants 326 IAC 12, (40 CFR 60.670, Subpart OOO) because this is a nonmetallic mineral processing plants. The emission unit subject to the rule is as follows:
- (1) A limestone processing system, consisting of the following equipment:
 - (A) One (1) unloading station for trucks or railcar, with a drop point to a hopper identified as LSDP-1 with a nominal throughput of 2,500 tons of limestone per hour, with the drop point controlled by a partial enclosure, and exhausting to the ambient air.
 - (B) Two (2) enclosed hoppers, each with a drop point to conveyors identified as LSDP-2 and LSDP-5 with a nominal throughput of 200 tons of limestone per hour, with each drop point enclosed.
 - (C) One (1) storage pile, with a nominal storage capacity of 50,000 tons, with a drop point to a hopper identified as LSDP-4, with the drop point enclosed and exhausting to the ambient air.
 - (D) An enclosed conveyor system, with four (4) drop points identified as LSDP-3 and LSDP-8 through LSDP-10, with each drop point enclosed.
 - (E) One (1) enclosed hammermill, with a drop point to a conveyor identified as LSDP-6, with the drop point enclosed.
 - (F) Two (2) day bins for temporary storage of limestone, with a nominal loading capacity of 150 tons per hour, with dust from loading the bins controlled by bin vent filters, and exhausting to the ambient air.
 - (2) Limestone Handling (TP-1 to TP-5, TP-10 to TP-17, F-6 and F-9), with maximum capacity of 2,500 tons per hour:
 - (A) Transfer of limestone from railcar or truck to the limestone hopper, with fogging type dust suppression as particulate control.
 - (B) Enclosed transfer of limestone from unloading hoppers to belt feeders.
 - (C) Enclosed transfer of limestone from belt feeders to conveyors.
 - (D) Telescoping chute transfer of limestone from conveyor to lime storage stockout pile.
 - (E) Enclosed transfer of limestone from the reclaim hoppers to belt feeders, with fogging type dust suppression as particulate control.
 - (F) Enclosed transfer of limestone from conveyor to conveyor, with fogging type dust suppression as particulate control.
 - (G) Transfer of limestone from conveyor to day bin, with surge-bin filter as

particulate control.

- (H) Enclosed transfer of limestone from conveyor fixed hopper to conveyor with fogging type dust suppression as particulate control.
- (I) Transfer of limestone from conveyor fixed tripper to day bin, with surge-bin filter as particulate control.
- (J) Limestone storage piles, with watering type dust suppression as fugitive dust control.

This source is subject to the following portions of Subpart 000:

- (1) 40 CFR 60.670
 - (2) 40 CFR 60.671
 - (3) 40 CFR 60.672
 - (4) 40 CFR 60.673
 - (5) 40 CFR 60.674
 - (6) 40 CFR 60.675
 - (7) 40 CFR 60.676
- (o) The emergency firewater pump engine, identified as Pump #2 is subject to the requirements of 40 CFR, Subpart IIII - Standard of Performance for Stationary Compression Ignition Internal Combustion Engines because the emergency firewater pump was constructed after July 11, 2005 and manufactured after April 1, 2006. The specific facilities subject to this rule includes the following.
- (1) One (1) emergency firewater pump engine, rated at 575 horsepower (HP) and identified as Pump #2, installed in 2007 and permitted in 2013. [Under 40 CFR 60, Subpart IIII, the firewater pump engine is considered an existing affected source.]

The emergency firewater pump is subject to the following sections of 40 CFR Part 60, Subpart IIII.

- (1) 40 CFR 60.4200(a);
- (2) 40 CFR 60.4205(b);
- (3) 40 CFR 60.4205(c);
- (4) 40 CFR 60.4206;
- (5) 40 CFR 60.4207(a);
- (6) 40 CFR 60.4207(b);
- (7) 40 CFR 60.4208(a);
- (8) 40 CFR 60.4208(b);
- (9) 40 CFR 60.4208(g);
- (10) 40 CFR 60.4209(a);
- (11) 40 CFR 60.4211(a);
- (12) 40 CFR 60.4211(c);
- (13) 40 CFR 60.4211(e);
- (14) 40 CFR 60.4212(a);
- (15) 40 CFR 60.4212(b);
- (16) 40 CFR 60.4212(c);
- (17) 40 CFR 60.4214(b);
- (18) 40 CFR 60.4218;
- (19) 40 CFR 60.4219;

- (20) Table 4 to Subpart IIII of Part 60 - Emission Standard for Stationary Fire Pump Engines;
 - (21) Table 5 to Subpart IIII of Part 60 - Labeling and Recordkeeping Requirements for New Stationary Emergency Engines;
 - (22) Table 8 to Subpart IIII of Part 60 - Applicability of General Provisions to Subpart III.
- (p) The emergency firewater pump engine, identified as Pump #1 is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63 Subpart ZZZZ). The Standards apply to new stationary reciprocating internal combusting engines (RICE) and are located at facilities that are major source of HAPs. The specific facilities subject to this rule include the following.

This emission unit is subject to the following portions of Subpart ZZZZ:

- (1) One (1) emergency firewater pump engine, rated at 500 horsepower (HP) and identified as Pump #1, installed in 1995 and permitted in 2013.[Under 40 CFR 63, Subpart ZZZZ, the firewater pump engine is considered an existing affected source.]

The emergency generator and the firewater pumps are subject to the following sections of 40 CFR Part 63, Subpart ZZZZ.

- (1) 40 CFR 63.6600(d)
- (2) 40 CFR 63.6605
- (3) 40 CFR 63.6610
- (4) 40 CFR 63.6625(h),(i)
- (5) 40 CFR 63.6630
- (6) 40 CFR 63.6635
- (7) 40 CFR 63.6640
- (8) 40 CFR 63.6645(a)(3)
- (9) 40 CFR 63.6645(g)
- (10) 40 CFR 63.6650
- (11) 40 CFR 63.6655
- (12) 40 CFR 63.6660
- (13) 40 CFR 63.6665

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart ZZZZ.

- (l) Clean Air Interstate Rule (CAIR)
The five (5) boilers identified as Boiler 1 - Boiler 5 are subject to the Clean Air Interstate Rule (CAIR) Nitrogen Oxides Annual, Sulfur Dioxide, and Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 40 CFR 97.
- (m) Acid Deposition Control
326 IAC 21 incorporates by reference the provisions of 40 CFR 72 through 40 CFR 78 for the purposes of implementing an acid rain program that meets the requirements of Title IV of the Clean Air Act and to incorporate monitoring, record keeping, and reporting requirements for nitrogen oxide and sulfur dioxide emissions to demonstrate compliance with nitrogen oxides and sulfur dioxide emission reduction requirements. This source is subject to the requirements of 326 IAC 21 and shall be incorporated into the permit.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source, which was constructed prior to 1977, the applicability date of this rule, is subject to the requirements of 326 IAC 2-2 (PSD) because the potential to emit of at least one regulated pollutant is greater than 100 tons per year and it is one of the twenty-eight (28) listed sources. All limitations applicable to the source under Prevention of Significant Deterioration (PSD) have been included in the permit. This source is a major source under PSD.

The installation of Boiler No. 3 and Boiler No. 4 commenced after August 7, 1977, the United States District Court for the Southern District of Indiana in the case of United States of America v. Public Service Company of Indiana, Inc. on September 30, 1977, decided that the groundwork had been started for these boilers prior to August 7, 1977 and intentions were known that actual construction for these boilers would be commenced after the applicability date. Therefore, these boilers were considered as units constructed before the PSD applicability date and were not reviewed pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration).

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source is subject to 326 IAC 1-6-3.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of PM10 is greater than 250 tons per year, and the potential to emit of CO, NOx and SO2 is greater than 2,500 tons per year, each. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted by July 1, 2014, and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated pursuant to 326 IAC 6-4-5(c). Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The source is not subject to the requirements of 326 IAC 6-5, because the paved and unpaved roads, coal handling equipment, and slag handling have potential fugitive particulate emissions less than 25 tons per year.

326 IAC 7-3 (Ambient Monitoring)

- (a) The Permittee shall operate continuous ambient sulfur dioxide air quality monitors and a meteorological data acquisition 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)]

326 IAC 9 (Carbon Monoxide Emission Limits)

Pursuant to 326 IAC 9 (Carbon Monoxide Emission Limits), the source is subject to this rule because it is a stationary source which emits CO emissions and commenced operation after March 21, 1972. Under this rule, there is not a specific emission limit because the source is not an operation listed under 326 IAC 9-1-2.

State Rule Applicability – Individual Facilities

326 IAC 3-5 (Continuous Emissions Monitoring)

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), continuous monitoring systems shall be calibrated, maintained, and operated for measuring opacity from Boilers 1, 2, 3, 4 and 5, which meet the performance specifications of 326 IAC 3-5-2. This rule applies to Gibson Generating Station because they are coal-fired steam generators of greater than one hundred million (100,000,000) British thermal units (Btus) per hour heat input capacity. [326 IAC 3-5-1(b)(2)]

326 IAC 5-1-3 (Temporary Alternative Opacity Limitations)

- (a) Pursuant to 326 IAC 5-1-3(e) (Temporary Alternative Opacity Limitations), the following applies:
- (1) For Boiler No. 1 and Boiler No. 2, when building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity limitation. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than four (4) hours (forty (40) six (6)-minute averaging periods) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
 - (2) For Boiler No. 3, Boiler No. 4, and Boiler No. 5, when building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than five (5) hours (fifty (50) six (6)-minute averaging periods) or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first.
 - (3) 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 four (4) hours (forty (40) six (6)-minute averaging periods).
 - (4) Operation of the electrostatic precipitator is not required during these times unless necessary to comply with these limits.
- (b) 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)]

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

- (a) Pursuant to 326 IAC 6-2-3 (Particulate Matter Emissions for Sources of Indirect Heating), the PM emissions from the Boilers No. 1 through 4 shall each be limited to 0.096 pound per million Btu heat input (lb/MMBtu). This limitation will satisfy the requirement to maintain PM emissions below the amounts assumed in the PSD modeling analysis that was performed for Boiler No. 5. This limitation was calculated using the following equation:

$$Pt = \frac{(C) (a) (h)}{76.5 (Q^{0.75}) (N^{0.25})} = 0.096 \text{ lbs/MMBtu}$$

Where:

C = 50 μm^3
Q = 23,703 MMBtu/hr(capacity of boilers 1-4, Aux.2)
N = 4 (number of stacks)
a = 0.8
h = 497.5 Feet (average stack height)

- (b) Pursuant to 326 IAC 6-2-3 (Particulate Matter Emissions for Sources of Indirect Heating), the PM emissions from the Boiler No. 5 stack shall not exceed 0.073 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{(C) (a) (h)}{76.5 (Q^{0.75}) (N^{0.25})} = 0.073 \text{ lbs/MMBtu}$$

Where:

C = 50 μm^3
Q = 29,829 MMBtu/hr(capacity of boilers 1-5, Aux.2, Aux.5)
N = 6 (number of stacks)
a = 0.8
h = 496.4 Feet (average stack height)

The electrostatic precipitators (ESP) shall be in operation at all times when Boiler No. 5 is in operation, in order to comply with this limit.

However, 326 IAC 6-2-4 (h) states that if a limitation established by this rule is inconsistent with a limitation required by the permit regulations, then the permit regulation limit will prevail. Since the BACT emissions limit is significantly more stringent than the above calculated limit, compliance with the BACT particulate matter limits renders the above rule (326 IAC 6-2-4) not applicable to these boilers.

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) the allowable PM emission rate from the coal storage and handling drop points and coal bunkers shall not exceed 103.2 pounds per hour when operating at a process weight rate of 6000 tons per hour.

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

$$E = 55.0P^{0.11} - 40$$

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

Pursuant to 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes) When the process weight rate of the coal storage and handling drop points and coal bunkers exceeds 200 tons per hour, the maximum allowable emission may exceed 103.2 pounds per hour, provided the concentration of particulate in discharge gases to the atmosphere shall be less than 0.10 pounds per one thousand (1000) pounds of gases.

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) the allowable PM emission rate from the limestone storage and handling drop points and temporary storage bins shall not exceed 61 pounds per hour when operating at a process weight rate of 250 tons per hour.

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

$$E = 55.0P^{0.11} - 40$$

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

Pursuant to 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes) When the process weight rate of the limestone storage and handling drop points and temporary storage bins exceeds 200 tons per hour, the maximum allowable emission may exceed 61 pounds per hour, provided the concentration of particulate in discharge gases to the atmosphere shall be less than 0.10 pounds per one thousand (1000) pounds of gases.

- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) the allowable PM emission rate from the gypsum handling operation shall not exceed 63 pounds per hour when operating at a process weight rate of 300 tons per hour.

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

$$E = 55.0P^{0.11} - 40$$

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

Pursuant to 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes) When the process weight rate of the coal storage and handling drop points and coal bunkers exceeds 200 tons per hour, the maximum allowable emission may exceed 63 pounds per hour, provided the concentration of particulate in discharge gases to the atmosphere shall be less than 0.10 pounds per one thousand (1000) pounds of gases.

- (d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the gypsum handling operation shall not exceed 90 pounds per hour when operating at a process weight of 2500 tons per hour. This is determined by the following equation:

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

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and

P = 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 the emission rate derived by the equation above, 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.

- (e) Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from A1-Exhauster 3A, A2-Exhauster 3B, A4-Exhauster 1A, A5-Exhauster 1B, A7-Exhauster 2A, A8-Exhauster 2B, B1-U1 Bin Vent Filter, B2-U2 Bin Vent Filter and C1-Dust Collector A shall not exceed 58.51 pounds per hour when operating at a process weight rate of 200 tons per hour.
- (f) Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from B5-Lime Silo A Bin Vent Filter, B6-Lime Silo B Bin Vent Filter and B7-Fly Ash Day Bin Vent Filter shall not exceed 37.27 pounds per hour when operating at a process weight rate of 22 tons per hour.
- (g) The potential PM emissions from remote silo operations B3-Remote Fly Ash Silo A and B4-Remote Fly Ash Silo B are less than 0.551 pounds per hour. Therefore, these processes are not subject to 326 IAC 6-3.
- (h) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the grinding and machining operations (Insignificant Activity), shall not exceed the pound per hour emission rate established as E in the following formula:

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

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

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

Where:

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

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

$$E = 55.0 P^{0.11} - 40$$

Where:

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

The filters, bin vent filter and the dust collector shall be in operation at all times that these emission units are in operation, in order to comply with this limit.

326 IAC 7-4-12.1 (Gibson County Sulfur Dioxide Emission Limitations)

The five (5) boilers identified as Boiler 1 - Boiler 5 are subject to 326 IAC 326 IAC 7-4 because its SO₂ PTE is equal to or greater than 25 tons per year. Therefore, pursuant to 326 IAC 7-4-12.1 (Gibson County Sulfur Dioxide Emission Limitations), the SO₂ emissions from the coal-fired boilers shall not exceed the following amounts:

Facility Description	Emissions (lbs/MMBtu)
Boiler 1	3.19
Boiler 2	3.19
Boiler 3	3.19
Boiler 4	0.6
Boiler 5	1.10

326 IAC 8-3 (Organic Solvent Degreasing Operations)

Pursuant to 326 IAC 8-3 (Organic Solvent Degreasing Operations), this rule does not apply to the degreasing units listed in the insignificant activities section because these units were constructed prior to January 1, 1980.

326 IAC 8-4-3 (Petroleum Liquid Storage Tanks)

Pursuant to 326 IAC 8-4-1 (Applicability), 326 IAC 8-4-3 (Petroleum Liquid Storage Tanks) does not apply to storage tanks A and B and day tanks 1 through 5 because they were constructed prior to January 1, 1980 or have capacities less than 39,000 gallons.

326 IAC 8-4-6 (Gasoline Dispensing Facilities)

Pursuant to 326 IAC 8-4-1 (Applicability), 326 IAC 8-4-6 (Gasoline Dispensing Facilities) does not apply to the storage tank or dispensing facility because they were constructed prior to July 1, 1989 and have monthly throughputs of less than 10,000 gallons.

326 IAC 8-8.1 (Municipal Solid Waste Landfills Not Located in Clark, Floyd, Lake, and Porter Counties)

Pursuant to 326 IAC 8-8.1-3(a)(1) (Requirements; incorporation by reference of federal standards), 326 IAC 8-8.1 (Municipal Solid Waste Landfills Not Located in Clark, Floyd, Lake, and Porter Counties) does not apply to the flue gas desulfurization (FGD) landfill because the sludge waste is exclusively from an industrial waste stream, not a residential waste stream. Therefore, the FGD landfill does not meet the definition of a municipal solid waste landfill and 326 IAC 8-8.1 does not apply.

326 IAC 24 (Clean Air Interstate Rule (CAIR))

The five (5) boilers identified as Boiler 1 - Boiler 5 are subject to the 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), 326 IAC 24-3-1(a).

326 IAC 21 Acid Deposition Control

326 IAC 21 incorporates by reference the provisions of 40 CFR 72 through 40 CFR 78 for the purposes of implementing an acid rain program that meets the requirements of Title IV of the Clean Air Act and to incorporate monitoring, record keeping, and reporting requirements for nitrogen oxide and sulfur dioxide emissions to demonstrate compliance with nitrogen oxides and sulfur dioxide emission reduction requirements. This regulation applies to electric utility generating units that supply greater than 1/3 their potential electrical output and greater than 219,000 MWe-hrs (25MW) actual electrical output on an annual basis to any utility power distribution system for sale. This source is subject to the requirements of 326 IAC 21 because it

does sell greater than 1/3 its generated electric. Therefore, the five (5) boilers identified as Boiler 1 - Boiler 5 are subject to the requirements of 326 IAC 21.

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.

The compliance monitoring requirements applicable to this source are as follows:

Testing Requirements

The Compliance Determination Requirements applicable to this modification are as follows:

Emission Unit	Summary of Testing Requirements					
	Control Device	When to Test	No of Control Device required to be tested	Pollutant	Frequency of Testing	Limit or Requirement
Boiler 1, 2, 3 and 4	ESP	NA	1	PM	Every two (2) years	326 IAC 6-2-3
Boiler 5		NA	1	PM		326 IAC 6-2-3
Pneumatic fly ash transfer system	Bin Vent Filter	Within 180 days after the initial startup	2	PM, PM10 and PM2.5	Every five (5) years	326 IAC 2-2 and 326 IAC 6-3-2
Pneumatic fly ash transfer system, Loading of fly ash, Truck loading of two (2) new lime silos and fly ash day bin	Bin Vent Filter		2	PM, PM10 and PM2.5	Every five (5) years	326 IAC 2-2 and 326 IAC 6-3-2
Pneumatic fly ash transfer system	Dust Collector C1 (with a spare duct collector C2)		1	PM, PM10 and PM2.5	Every five (5) years	326 IAC 2-2 and 326 IAC 6-3-2

The compliance monitoring requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances	Limits and Requirements
Pneumatic fly ash transfer system (Dust Collector, C1)	Water Pressure Drop	Daily	2 to 5 inches	Response Steps	326 IAC 2-2, 326 IAC 6-3-2 and 40 CFR 64
	Visible Emissions		Normal-Abnormal		
Transfer points and Coal unloading station(s) doorways and drop points	Visible Emissions	once per Weekly	Normal-Abnormal	Response Steps	326 IAC 6-3-2
Transfer points and ball mill and partially enclosed railcar limestone unloading station					
Ash storage pond area(s)					
Limestone transfer points					
Gypsum transfer points					
Electrostatic Precipitator (ESP) to control Boilers 1, 2, 3, 4 and 5	T-R sets in service and T-R electrical values of Primary and secondary voltages and Current.	Daily	> 90% T-R sets in service	Response Steps	326 IAC 6-2-3

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on September 9, 2013.

Conclusion

The operation of this electric power plant shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 051-33624-00013.

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 IGCN 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's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations

Emission Summary

Source Name: Duke Energy Indiana, Inc - Gibson Generating Station
 Source Location: 1097 North 950 West, Owensville, IN 47665
 Permit Number: 051-33624-00013
 Permit Reviewer: Josiah Balogun
 Date: 16-Oct-2013

Uncontrolled Potential to Emit

Emission Unit	PM (tons/yr)	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	GHGs (tons/yr)	HAPs (tons/yr)
Boiler 1	1029300	236739	236739	82087	87	749	26214	5841930	17
Boiler 2	1029300	236739	236739	82087	87	749	26214	5841930	17
Boiler 3	344385	79209	79209	82394	87	749	26214	5863806	17
Boiler 4	344385	79209	79209	172172	87	749	26214	5863806	17
Boiler 5	620208	142648	142648	221503	87	749	36179	5866789	17
Coal Transfer System	2410	1032	1032	0	0	0	0	0	0
Limestone Processing System	16.22	16.22	16.22	0	0	0	0	0	0
Limestone Handling				0	0	0	0	0	0
Gypsum Handling	276	276	276	0	0	0	0	0	0
Dry Fly Ash Handling System									
Exhauster 3A	440	440	440	0	0	0	0	0	0
Exhauster 3B	440	440	440	0	0	0	0	0	0
Exhauster 3C (Spare)	0	0	0	0	0	0	0	0	0
Exhauster 1A	670	670	670	0	0	0	0	0	0
Exhauster 1B	670	670	670	0	0	0	0	0	0
Spare Exhauster	0	0	0	0	0	0	0	0	0
Exhauster 2A	670	670	670	0	0	0	0	0	0
Exhauster 2B	670	670	670	0	0	0	0	0	0
U1 Bin Vent Filter	380	380	380	0	0	0	0	0	0
U2 Bin Vent Filter	380	380	380	0	0	0	0	0	0
Remote Fly Ash Silo A Bin Vent Filter	1550	1550	1550	0	0	0	0	0	0
Remote Fly Ash Silo B Bin Vent Filter	1550	1550	1550	0	0	0	0	0	0
Lime Silo A Bin Vent Filter	130	130	130	0	0	0	0	0	0
Lime Silo B Bin Vent Filter	130	130	130	0	0	0	0	0	0
Fly Ash Day Bin Vent Filter	530	530	530	0	0	0	0	0	0
Dust Collector A (Note 2)	1690	1690	1690	0	0	0	0	0	0
Dust Collector B (Spare)	0	0	0	0	0	0	0	0	0
Plant Road	88.4	88.4	0	0	0	0	0	0	0
FGD Haul Road	272	272	0	0	0	0	0	0	0
Fire Pump #1	0.28	0.28	0.28	0.26	0.31	0.84	3.88	144	0.0034
Fire Pump #2	0.32	0.32	0.32	0.29	0.36	0.96	4.46	166	0.004
Total Emissions	3380541.22	786129.22	785768.82	640243.55	435.67	3746.80	141043.34	#####	Single HAP >10 Combined HAPs > 25

Note: Uncontrolled Emission was submitted by the source with the application

Appendix A: Emissions Calculations

Emission Summary

Source Name: Duke Energy Indiana, Inc - Gibson Generating Station
 Source Location: 1097 North 950 West, Owensville, IN 47665
 Permit Number: 051-33624-00013
 Permit Reviewer: Josiah Balogun
 Date: 16-Oct-2013

Limited Potential to Emit

Emission Unit	PM (tons/yr)	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	GHGs (tons/yr)	HAPs (tons/yr)
Boiler 1	3088	710	710	82087	87	749	13107	5841930	17
Boiler 2	3088	710	710	82087	87	749	13107	5841930	17
Boiler 3	3099	713	713	82394	87	749	13107	5863806	17
Boiler 4	3099	713	713	15497	87	749	13107	5863806	17
Boiler 5	3101	713	713	31010	87	749	18089	5866789	17
Coal Transfer System	2410	1032	1032	0	0	0	0	0	0
Limestone Processing System	16.22	16.22	16.22	0	0	0	0	0	0
Limestone Handling				0	0	0	0	0	0
Gypsum Handling	276	276	276	0	0	0	0	0	0
Dry Fly Ash Handling System									
Exhauster 3A	0.44	0.44	0.44	0	0	0	0	0	0
Exhauster 3B	0.44	0.44	0.44	0	0	0	0	0	0
Exhauster 3C (Spare)	0	0	0	0	0	0	0	0	0
Exhauster 1A	0.67	0.67	0.67	0	0	0	0	0	0
Exhauster 1B	0.67	0.67	0.67	0	0	0	0	0	0
Spare Exhauster	0	0	0	0	0	0	0	0	0
Exhauster 2A	0.67	0.67	0.67	0	0	0	0	0	0
Exhauster 2B	0.67	0.67	0.67	0	0	0	0	0	0
U1 Bin Vent Filter	0.38	0.38	0.38	0	0	0	0	0	0
U2 Bin Vent Filter	0.38	0.38	0.38	0	0	0	0	0	0
Remote Fly Ash Silo A Bin Vent Filter	1.55	1.55	1.55	0	0	0	0	0	0
Remote Fly Ash Silo B Bin Vent Filter	1.55	1.55	1.55	0	0	0	0	0	0
Lime Silo A Bin Vent Filter	0.13	0.13	0.13	0	0	0	0	0	0
Lime Silo B Bin Vent Filter	0.13	0.13	0.13	0	0	0	0	0	0
Fly Ash Day Bin Vent Filter	0.53	0.53	0.53	0	0	0	0	0	0
Dust Collector A (Note 2)	1.69	1.69	1.69	0	0	0	0	0	0
Dust Collector B (Spare)	0	0	0	0	0	0	0	0	0
Plant Road	44.2	44.2	0	0	0	0	0	0	0
FGD Haul Road	136	136	0	0	0	0	0	0	0
Fire Pump #1	0.28	0.28	0.28	0.26	0.31	0.84	3.88	144	0.0034
Fire Pump #2	0.32	0.32	0.32	0.29	0.36	0.96	4.46	166	0.004
Total Emissions	18367.92	5073.92	4893.72	293075.55	435.67	3746.80	70525.34	#####	Single HAP >10 Combined HAPs > 25

Note: Limited emissions was derived from the application submitted by the source and from the existing permit No. 051-30405-00013

Emission Summary

Source Name: Duke Energy Indiana, Inc - Gibson Generating Station

Source Location: 1097 North 950 West, Owensville, IN 47665

Permit Number: 051-33624-00013

Permit Reviewer: Josiah Balogun

Date: 16-Oct-2013

Coal Combustion							
Emission Unit	Coal Throughput (ton/yr)	CO ₂ Emission Factor (lb/ton)	CH ₄ Emission Factor (lb/ton)	N ₂ O Emission Factor (lb/ton)	CO ₂ Emissions (ton/yr)	CH ₄ Emissions (ton/yr)	N ₂ O Emissions (ton/yr)
Boiler Unit 1	2,416,197	4,810	0.04	0.08	5,810,954	48	97
Boiler Unit 2	2,416,197	4,810	0.04	0.08	5,810,954	48	97
Boiler Unit 3	2,425,245	4,810	0.04	0.08	5,832,714	49	97
Boiler Unit 4	2,425,245	4,810	0.04	0.08	5,832,714	49	97
Boiler Unit 4	2,426,479	4,810	0.04	0.08	5,835,682	49	97

Greenhouse Gas Emissions - CO ₂ e Calculation							
	Worst Case Emissions			Global Warming Potential			CO ₂ e (TPY)
	CO ₂ Emissions (ton/yr)	CH ₄ Emissions (ton/yr)	N ₂ O Emissions (ton/yr)	CO ₂ (Unitless)	CH ₄ (Unitless)	N ₂ O Emissions (Unitless)	
Boiler Unit 1	5,810,954	48	97	1	21	310	5,841,930
Boiler Unit 2	5,810,954	48	97	1	21	310	5,841,930
Boiler Unit 3	5,832,714	49	97	1	21	310	5,863,806
Boiler Unit 4	5,832,714	49	97	1	21	310	5,863,806
Boiler Unit 4	5,835,682	49	97	1	21	310	5,866,789

Emission Calculations										
Device	Device Name	Event	Media	Hrs/day Operation	Flow Rate (dscf)	Emission Rate	Units	Emission gr/day	Emission Ton/yr	
A1	Exhauster 3A	Pull	Fly Ash	13	2186	0.01	gr/dscf	17050.8	0.44	
A2	Exhauster 3B	Pull	Fly Ash	13	2186	0.01	gr/dscf	17050.8	0.44	
A3	Exhauster 3C (Spare)	Pull	Fly Ash	0	2186	0.01	gr/dscf	0	0.00	
A4	Exhauster 1A	Pull	Fly Ash	13	3307	0.01	gr/dscf	25794.6	0.67	
A5	Exhauster 1B	Pull	Fly Ash	13	3307	0.01	gr/dscf	25794.6	0.67	
A6	Spare Exhauster	Pull	Fly Ash	0	3307	0.01	gr/dscf	0	0.00	
A7	Exhauster 2A	Pull	Fly Ash	13	3307	0.01	gr/dscf	25794.6	0.67	
A8	Exhauster 2B	Pull	Fly Ash	13	3307	0.01	gr/dscf	25794.6	0.67	
B1	U1 Bin Vent Filter	Transfer	Fly Ash	16	1503	0.01	gr/dscf	14428.8	0.38	
B2	U2 Bin Vent Filter	Transfer	Fly Ash	16	1503	0.01	gr/dscf	14428.8	0.38	
B3	Remote Fly Ash Silo A Bin Vent Filter	Transfer	Fly Ash	13	7620	0.01	gr/dscf	59436	1.55	
B4	Remote Fly Ash Silo B Bin Vent Filter	Transfer	Fly Ash	13	7620	0.01	gr/dscf	59436	1.55	
B5	Lime Silo A Bin Vent Filter	Transfer	Lime	8	1000	0.01	gr/dscf	4800	0.13	
B6	Lime Silo B Bin Vent Filter	Transfer	Lime	8	1000	0.01	gr/dscf	4800	0.13	
B7	Fly Ash Day Bin Vent Filter	Transfer	Fly Ash	24	1400	0.01	gr/dscf	20160	0.53	
C1	Dust Collector A (Note 2)	Pull	Lime/Fly Ash	24	4500	0.01	gr/dscf	64800	1.69	
C2	Dust Collector B (Spare)	Pull	Lime/Fly Ash	0	4500	0.01	gr/dscf	0	0.00	
Annual Tons									9.90	
<p>Note: 1) Dust detectors are located down stream fo the Filter/Separators and before the inlet of the Mechanical Exhausters to detect the presence of ash in the conveying air stream. If ash is detected the Exhauster is shut off for Filter/Separator repairs or the system is set up to pull through the redundant Filter/Separator.</p> <p>Note: 2) The dust collectors pull a vacuum off the pug mill feed chute to minimize dusting in the Fixation Building.</p> <p>gr/day = hrs/day x flow rate x emission rate x 60</p> <p>tons/yr = gr/day x 365 / 7000 / 2000</p>										

Emission Calculations (Tons/Yr)							
Device	Device Name	Uncontrolled			Controlled		
		PM	PM ₁₀	PM _{2.5}	PM	PM ₁₀	PM _{2.5}
A1	Exhauster 3A	440	440	440	0.44	0.44	0.44
A2	Exhauster 3B	440	440	440	0.44	0.44	0.44
A3	Exhauster 3C (Spare)	0	0	0	0	0	0
A4	Exhauster 1A	670	670	670	0.67	0.67	0.67
A5	Exhauster 1B	670	670	670	0.67	0.67	0.67
A6	Spare Exhauster	0	0	0	0	0	0
A7	Exhauster 2A	670	670	670	0.67	0.67	0.67
A8	Exhauster 2B	670	670	670	0.67	0.67	0.67
B1	U1 Bin Vent Filter	380	380	380	0.38	0.38	0.38
B2	U2 Bin Vent Filter	380	380	380	0.38	0.38	0.38
B3	Remote Fly Ash Silo A Bin Vent Filter	1550	1550	1550	1.55	1.55	1.55
B4	Remote Fly Ash Silo B Bin Vent Filter	1550	1550	1550	1.55	1.55	1.55
B5	Lime Silo A Bin Vent Filter	130	130	130	0.13	0.13	0.13
B6	Lime Silo B Bin Vent Filter	130	130	130	0.13	0.13	0.13
B7	Fly Ash Day Bin Vent Filter	530	530	530	0.53	0.53	0.53
C1	Dust Collector A (Note 2)	1690	1690	1690	1.69	1.69	1.69
C2	Dust Collector B (Spare)	0	0	0	0	0	0
Total		9900	9900	9900	9.9	9.9	9.9

Note: 1) Dust detectors are located down stream fo the Filter/Separators and before the inlet of the Mechanical Exhausters to detect the presence of ash in the conveying air stream. If ash is detected the Exhauster is shut off for Filter/Separator repairs or the system is set up to pull through the redundant Filter/Separator.

Note: 2) The dust collectors pull a vacuum off the pug mill feed chute to minimize dusting in the Fixation Building.

Uncontrolled emissions based on control efficiency of 99.9%

Emission Calculations (Lbs/Hr)							
Device	Device Name	Uncontrolled			Controlled		
		PM	PM ₁₀	PM _{2.5}	PM	PM ₁₀	PM _{2.5}
A1	Exhauster 3A	187.37	187.37	187.37	0.187	0.187	0.187
A2	Exhauster 3B	187.37	187.37	187.37	0.187	0.187	0.187
A3	Exhauster 3C (Spare)	0	0	0	0	0	0
A4	Exhauster 1A	283.46	283.46	283.46	0.283	0.283	0.283
A5	Exhauster 1B	283.46	283.46	283.46	0.283	0.283	0.283
A6	Spare Exhauster	0	0	0	0	0	0
A7	Exhauster 2A	283.46	283.46	283.46	0.283	0.283	0.283
A8	Exhauster 2B	283.46	283.46	283.46	0.283	0.283	0.283
B1	U1 Bin Vent Filter	128.83	128.83	128.83	0.129	0.129	0.129
B2	U2 Bin Vent Filter	128.83	128.83	128.83	0.129	0.129	0.129
B3	Remote Fly Ash Silo A Bin Vent Filter	653.14	653.14	653.14	0.653	0.653	0.653
B4	Remote Fly Ash Silo B Bin Vent Filter	653.14	653.14	653.14	0.653	0.653	0.653
B5	Lime Silo A Bin Vent Filter	85.71	85.71	85.71	0.086	0.086	0.086
B6	Lime Silo B Bin Vent Filter	85.71	85.71	85.71	0.086	0.086	0.086
B7	Fly Ash Day Bin Vent Filter	120.00	120.00	120.00	0.120	0.120	0.120
C1	Dust Collector A (Note 2)	385.71	385.71	385.71	0.386	0.386	0.386
C2	Dust Collector B (Spare)	0	0	0	0	0	0

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel #1
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Duke Energy Indiana, Inc - Gibson Generating Station
Address City IN Zip: 1097 North 950 West, Owensville, IN 47665
Permit Number: 051-33624-00013
Reviewer: Josiah Balogun
Date: 16-Oct-2013

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	500.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	250,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.28	0.28	0.28	0.26	3.88	0.31	0.84

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	8.16E-04	3.58E-04	2.49E-04	3.42E-05	1.03E-03	6.71E-04	8.09E-05	1.47E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	3.39E-03
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Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.44E+02	5.79E-03	1.16E-03

Summed Potential Emissions in tons/yr	1.44E+02
CO2e Total in tons/yr	1.44E+02

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
 CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Option B Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
 Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) +
 N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel #2
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Duke Energy Indiana, Inc - Gibson Generating Station
Address City IN Zip: 1097 North 950 West, Owensville, IN 47665
Permit Number: 051-33624-00013
Reviewer: Josiah Balogun
Date: 16-Oct-2013

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	575.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	287,500

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.32	0.32	0.32	0.29	4.46	0.36	0.96

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	9.39E-04	4.12E-04	2.87E-04	3.93E-05	1.19E-03	7.72E-04	9.31E-05	1.69E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	3.90E-03
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Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.65E+02	6.66E-03	1.33E-03

Summed Potential Emissions in tons/yr	1.65E+02
CO2e Total in tons/yr	1.66E+02

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
 CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Option B Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
 Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) +
 N2O Potential Emission ton/yr x N2O GWP (310).

**GIBSON GENERATING STATION
ELECTROSTATIC PRECIPITATOR FOR PM CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station Unit 1
- B. Control Technology: Electrostatic Precipitator (ESP)
- C. Applicable Requirements: 326 IAC 6-2-3; 326 IAC 5-1-2

2. Monitoring Methods.

- A. Continuous opacity monitoring system (COMS), calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2. Monitoring via a certified opacity reader in accordance with 40 CFR 60, Appendix A, Method 9 or some other reliable method that is requested by Duke Energy and approved by IDEM shall be permitted.
- B. 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, a certified opacity reader shall be provided to perform visible emission readings in accordance with 40 CFR 60, Appendix A, Method 9, or some other reliable opacity measurement method that is requested by Duke Energy and approved by IDEM shall be utilized.
- C. Periodic Monitoring of Parameters.
 - (1) ESP electrical data: ESP electrical data will 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 currents of the T-R sets.
 - (2) Reasonable response steps shall be taken in accordance with Section C – Response to Excursions or exceedances whenever the percentage of T-R sets in service falls below ninety percent (90%).
- D. Periodic Inspections and Review.
 - (1) Inspection of plate and electrode alignment: Plate and electrode alignment will be visually inspected during each major unit outage when the ESP is opened.
- E. Periodic emissions testing for particulate matter performed once every two years.

3. Performance Criteria / Corrective Action

- A. Continuous opacity monitoring.
Appropriate response steps will be taken in accordance with Section C – Response to Excursions or Exceedances whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

These requirements do not apply during startup and shutdown and when the boiler is being controlled by the flue gas desulfurization (FGD) system.

Standard operating procedure is to operate the FGD system at all times the boiler is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.

- B. Visible emissions reading
Visible emission readings will be performed for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of a COMS malfunction or down time. Readings will be repeated at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.
- C. Periodic monitoring of parameters.
Corrective actions will be implemented whenever the monitored parameters are operating outside that normally expected for the unit, considering the current operating conditions. The corrective action will take into account the operating conditions, type of fuel, severity of the deviation from normal operation, and demand for the unit.
- D. Periodic inspections.
Corrective actions will be implemented whenever the inspections reveal operation or equipment conditions outside that normally expected considering the operating conditions. The corrective action will take into account the operating conditions, severity of the deviation from normal operation, and demand for the unit.
- E. Periodic emissions testing for particulate matter.
Corrective actions will be implemented whenever the particulate emissions exceed the limitation or exceed the particulate matter emission levels normally expected for the unit considering the operating conditions. The corrective action will take into account the current operating conditions, type of fuel, severity of the particulate levels, and demand for the unit.

4. Justifications for Unique Selections

The expected operating efficiency of an electrostatic precipitator will vary, depending on several factors, including, but not limited to, the particular fuel used, ambient conditions, unit load, boiler operation, base loaded or cycling operation, malfunctions, etc. A proactive/condition based routine assessment of the equipment allows for a corrective action strategy based on the current operating conditions and targeted for the specific problem. By developing a specific corrective action in this manner, operating personnel can target the known or suspected problems and avoid the unnecessary time, activities and busy work associated with a predetermined corrective action. The specific corrective action will correct operational problems at least as quick as a predetermined corrective action, and sooner in most cases by avoiding unnecessary steps and activities.

5. Record Keeping and Reporting

- A. Opacity data: Excess opacity reported quarterly to IDEM OAQ and records kept for 5 years.
- B. Particulate matter emission test results: Reported to IDEM OAQ following test and records kept for 5 years.
- C. Any visible emission observations: Records kept for 5 years.

6. Quality Control

- A. Each COM will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification No. 1 and is subject to 326 IAC 3-5 monitor system certification requirements.
- B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.
- C. Visible emissions taken in accordance with 40 CFR 60, Appendix A, Method 9 will be taken by a certified visible emissions reader.
- D. Particulate matter emissions tests will be conducted in accordance with 40 CFR 60, Appendix A, Method 5.

**GIBSON GENERATING STATION
ELECTROSTATIC PRECIPITATOR FOR PM CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station Unit 2
- B. Control Technology: Electrostatic Precipitator (ESP)
- C. Applicable Requirements: 326 IAC 6-2-3; 326 IAC 5-1-2

2. Monitoring Methods.

- A. Continuous opacity monitoring system (COMS), calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2. Monitoring via a certified opacity reader in accordance with 40 CFR 60, Appendix A, Method 9 or some other reliable method that is requested by Duke Energy and approved by IDEM shall be permitted.
- B. 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, a certified opacity reader shall be provided to perform visible emission readings in accordance with 40 CFR 60, Appendix A, Method 9, or some other reliable opacity measurement method that is requested by Duke Energy and approved by IDEM shall be utilized.
- C. Periodic Monitoring of Parameters.
 - (1) ESP electrical data: ESP electrical data will 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 currents of the T-R sets.
 - (2) Reasonable response steps shall be taken in accordance with Section C – Response to Excursions or exceedances whenever the percentage of T-R sets in service falls below ninety percent (90%).
- D. Periodic Inspections and Review.
 - (1) Inspection of plate and electrode alignment: Plate and electrode alignment will be visually inspected during each major unit outage when the ESP is opened.
- E. Periodic emissions testing for particulate matter performed once every two years.

3. Performance Criteria / Corrective Action

A. Continuous opacity monitoring.

Appropriate response steps will be taken in accordance with Section C – Response to Excursions or Exceedances whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

These requirements do not apply during startup and shutdown and when the boiler is being controlled by the flue gas desulfurization (FGD) system.

Standard operating procedure is to operate the FGD system at all times the boiler is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.

B. Visible emissions reading

Visible emission readings will be performed for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of a COMS malfunction or down time. Readings will be repeated at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.

C. Periodic monitoring of parameters.

Corrective actions will be implemented whenever the monitored parameters are operating outside that normally expected for the unit, considering the current operating conditions. The corrective action will take into account the operating conditions, type of fuel, severity of the deviation from normal operation, and demand for the unit.

D. Periodic inspections.

Corrective actions will be implemented whenever the inspections reveal operation or equipment conditions outside that normally expected considering the operating conditions. The corrective action will take into account the operating conditions, severity of the deviation from normal operation, and demand for the unit.

E. Periodic emissions testing for particulate matter.

Corrective actions will be implemented whenever the particulate emissions exceed the limitation or exceed the particulate matter emission levels normally expected for the unit considering the operating conditions. The corrective action will take into account the current operating conditions, type of fuel, severity of the particulate levels, and demand for the unit.

4. Justifications for Unique Selections

The expected operating efficiency of an electrostatic precipitator will vary, depending on several factors, including, but not limited to, the particular fuel used, ambient conditions, unit load, boiler operation, base loaded or cycling operation, malfunctions, etc. A proactive/condition based routine assessment of the equipment allows for a corrective action strategy based on the current operating conditions and targeted for the specific problem. By developing a specific corrective action in this manner, operating personnel can target the known or suspected problems and avoid the unnecessary time, activities and busy work associated with a predetermined corrective action. The specific corrective action will correct operational problems at least as quick as a predetermined corrective action, and sooner in most cases by avoiding unnecessary steps and activities.

5. Record Keeping and Reporting

- A. Opacity data: Excess opacity reported quarterly to IDEM OAQ and records kept for 5 years.
- B. Particulate matter emission test results: Reported to IDEM OAQ following test and records kept for 5 years.
- C. Any visible emission observations: Records kept for 5 years.

6. Quality Control

- A. Each COM will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification No. 1 and is subject to 326 IAC 3-5 monitor system certification requirements.
- B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.
- C. Visible emissions taken in accordance with 40 CFR 60, Appendix A, Method 9 will be taken by a certified visible emissions reader.
- D. Particulate matter emissions tests will be conducted in accordance with 40 CFR 60, Appendix A, Method 5.

**GIBSON GENERATING STATION
ELECTROSTATIC PRECIPITATOR FOR PM CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station Unit 3
- B. Control Technology: Electrostatic Precipitator (ESP)
- C. Applicable Requirements: 326 IAC 6-2-3; 326 IAC 5-1-2

2. Monitoring Methods.

- A. Continuous opacity monitoring system (COMS), calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2. Monitoring via a certified opacity reader in accordance with 40 CFR 60, Appendix A, Method 9 or some other reliable method that is requested by Duke Energy and approved by IDEM shall be permitted.
- B. 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, a certified opacity reader shall be provided to perform visible emission readings in accordance with 40 CFR 60, Appendix A, Method 9, or some other reliable opacity measurement method that is requested by Duke Energy and approved by IDEM shall be utilized.
- C. Periodic Monitoring of Parameters.
 - (1) ESP electrical data: ESP electrical data will 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 currents of the T-R sets.
 - (2) Reasonable response steps shall be taken in accordance with Section C – Response to Excursions or exceedances whenever the percentage of T-R sets in service falls below ninety percent (90%).
- D. Periodic Inspections and Review.
 - (1) Inspection of plate and electrode alignment: Plate and electrode alignment will be visually inspected during each major unit outage when the ESP is opened.
- E. Periodic emissions testing for particulate matter performed once every two years.

3. Performance Criteria / Corrective Action

- A. Continuous opacity monitoring.
Appropriate response steps will be taken in accordance with Section C – Response to Excursions or Exceedances whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

These requirements do not apply during startup and shutdown and when the boiler is being controlled by the flue gas desulfurization (FGD) system.

Standard operating procedure is to operate the FGD system at all times the boiler is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.

- B. Visible emissions reading
Visible emission readings will be performed for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of a COMS malfunction or down time. Readings will be repeated at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.
- C. Periodic monitoring of parameters.
Corrective actions will be implemented whenever the monitored parameters are operating outside that normally expected for the unit, considering the current operating conditions. The corrective action will take into account the operating conditions, type of fuel, severity of the deviation from normal operation, and demand for the unit.
- D. Periodic inspections.
Corrective actions will be implemented whenever the inspections reveal operation or equipment conditions outside that normally expected considering the operating conditions. The corrective action will take into account the operating conditions, severity of the deviation from normal operation, and demand for the unit.
- E. Periodic emissions testing for particulate matter.
Corrective actions will be implemented whenever the particulate emissions exceed the limitation or exceed the particulate matter emission levels normally expected for the unit considering the operating conditions. The corrective action will take into account the current operating conditions, type of fuel, severity of the particulate levels, and demand for the unit.

4. Justifications for Unique Selections

The expected operating efficiency of an electrostatic precipitator will vary, depending on several factors, including, but not limited to, the particular fuel used, ambient conditions, unit load, boiler operation, base loaded or cycling operation, malfunctions, etc. A proactive/condition based routine assessment of the equipment allows for a corrective action strategy based on the current operating conditions and targeted for the specific problem. By developing a specific corrective action in this manner, operating personnel can target the known or suspected problems and avoid the unnecessary time, activities and busy work associated with a predetermined corrective action. The specific corrective action will correct operational problems at least as quick as a predetermined corrective action, and sooner in most cases by avoiding unnecessary steps and activities.

5. Record Keeping and Reporting

- A. Opacity data: Excess opacity reported quarterly to IDEM OAQ and records kept for 5 years.
- B. Particulate matter emission test results: Reported to IDEM OAQ following test and records kept for 5 years.
- C. Any visible emission observations: Records kept for 5 years.

6. Quality Control

- A. Each COM will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification No. 1 and is subject to 326 IAC 3-5 monitor system certification requirements.
- B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.
- C. Visible emissions taken in accordance with 40 CFR 60, Appendix A, Method 9 will be taken by a certified visible emissions reader.
- D. Particulate matter emissions tests will be conducted in accordance with 40 CFR 60, Appendix A, Method 5.

**GIBSON GENERATING STATION
ELECTROSTATIC PRECIPITATOR FOR PM CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station Unit 4
- B. Control Technology: Electrostatic Precipitator (ESP)
- C. Applicable Requirements: 326 IAC 6-2-3; 326 IAC 5-1-2

2. Monitoring Methods.

- A. Continuous opacity monitoring system (COMS), calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2. Monitoring via a certified opacity reader in accordance with 40 CFR 60, Appendix A, Method 9 or some other reliable method that is requested by Duke Energy and approved by IDEM shall be permitted.
- B. 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, a certified opacity reader shall be provided to perform visible emission readings in accordance with 40 CFR 60, Appendix A, Method 9, or some other reliable opacity measurement method that is requested by Duke Energy and approved by IDEM shall be utilized.
- C. Periodic Monitoring of Parameters.
 - (1) ESP electrical data: ESP electrical data will 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 currents of the T-R sets.
 - (2) Reasonable response steps shall be taken in accordance with Section C – Response to Excursions or exceedances whenever the percentage of T-R sets in service falls below ninety percent (90%).
- D. Periodic Inspections and Review.
 - (1) Inspection of plate and electrode alignment: Plate and electrode alignment will be visually inspected during each major unit outage when the ESP is opened.
 - (2) Fly ash conveyance system: The fly ash conveyance system will be inspected at a frequency as deemed necessary based on unit operation and performance.
- E. Periodic emissions testing for particulate matter performed once every two years.

3. Performance Criteria / Corrective Action

- A. Continuous opacity monitoring.
Appropriate response steps will be taken in accordance with Section C – Response to Excursions or Exceedances whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

These requirements do not apply during startup and shutdown and when the boiler is being controlled by the flue gas desulfurization (FGD) system.

Standard operating procedure is to operate the FGD system at all times the boiler is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.

- B. Visible emissions reading
Visible emission readings will be performed for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of a COMS malfunction or down time. Readings will be repeated at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.
- C. Periodic monitoring of parameters.
Corrective actions will be implemented whenever the monitored parameters are operating outside that normally expected for the unit, considering the current operating conditions. The corrective action will take into account the operating conditions, type of fuel, severity of the deviation from normal operation, and demand for the unit.
- D. Periodic inspections.
Corrective actions will be implemented whenever the inspections reveal operation or equipment conditions outside that normally expected considering the operating conditions. The corrective action will take into account the operating conditions, severity of the deviation from normal operation, and demand for the unit.
- E. Periodic emissions testing for particulate matter.
Corrective actions will be implemented whenever the particulate emissions exceed the limitation or exceed the particulate matter emission levels normally expected for the unit considering the operating conditions. The corrective action will take into account the current operating conditions, type of fuel, severity of the particulate levels, and demand for the unit.

4. Justifications for Unique Selections

The expected operating efficiency of an electrostatic precipitator will vary, depending on several factors, including, but not limited to, the particular fuel used, ambient conditions, unit load, boiler operation, base loaded or cycling operation, malfunctions, etc. A proactive/condition based routine assessment of the equipment allows for a corrective action strategy based on the current operating conditions and targeted for the specific problem. By developing a specific corrective action in this manner, operating personnel can target the known or suspected problems and avoid the unnecessary time, activities and busy work associated with a predetermined corrective action. The specific corrective action will correct operational problems at least as quick as a predetermined corrective action, and sooner in most cases by avoiding unnecessary steps and activities.

5. Record Keeping and Reporting

- A. Opacity data: Excess opacity reported quarterly to IDEM OAQ and records kept for 5 years.
- B. Particulate matter emission test results: Reported to IDEM OAQ following test and records kept for 5 years.
- C. Any visible emission observations: Records kept for 5 years.

6. Quality Control

- A. Each COM will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification No. 1 and is subject to 326 IAC 3-5 monitor system certification requirements.
- B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.
- C. Visible emissions taken in accordance with 40 CFR 60, Appendix A, Method 9 will be taken by a certified visible emissions reader.
- D. Particulate matter emissions tests will be conducted in accordance with 40 CFR 60, Appendix A, Method 5.

**GIBSON GENERATING STATION
ELECTROSTATIC PRECIPITATOR FOR PM CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station Unit 5
- B. Control Technology: Electrostatic Precipitator (ESP)
- C. Applicable Requirements: 326 IAC 6-2-3; 326 IAC 5-1-2

2. Monitoring Methods.

- A. Continuous opacity monitoring system (COMS), calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2. Monitoring via a certified opacity reader in accordance with 40 CFR 60, Appendix A, Method 9 or some other reliable method that is requested by Duke Energy and approved by IDEM shall be permitted.
- B. 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, a certified opacity reader shall be provided to perform visible emission readings in accordance with 40 CFR 60, Appendix A, Method 9, or some other reliable opacity measurement method that is requested by Duke Energy and approved by IDEM shall be utilized.
- C. Periodic Monitoring of Parameters.
 - (1) ESP electrical data: ESP electrical data will 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 currents of the T-R sets.
 - (2) Reasonable response steps shall be taken in accordance with Section C – Response to Excursions or exceedances whenever the percentage of T-R sets in service falls below ninety percent (90%).
- D. Periodic Inspections and Review.
 - (1) Inspection of plate and electrode alignment: Plate and electrode alignment will be visually inspected during each major unit outage when the ESP is opened.
 - (2) Fly ash conveyance system: The fly ash conveyance system will be inspected at a frequency as deemed necessary based on unit operation and performance.
- E. Periodic emissions testing for particulate matter performed once every two years.

3. Performance Criteria / Corrective Action

- A. Continuous opacity monitoring.
Appropriate response steps will be taken in accordance with Section C – Response to Excursions or Exceedances whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods.

In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%).

These requirements do not apply during startup and shutdown and when the boiler is being controlled by the flue gas desulfurization (FGD) system.

Standard operating procedure is to operate the FGD system at all times the boiler is in operation and combusting any amount of solid fuel or any combination of solid fuel and other fuels.

- B. Visible emissions reading
Visible emission readings will be performed for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of a COMS malfunction or down time. Readings will be repeated at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.
- C. Periodic monitoring of parameters.
Corrective actions will be implemented whenever the monitored parameters are operating outside that normally expected for the unit, considering the current operating conditions. The corrective action will take into account the operating conditions, type of fuel, severity of the deviation from normal operation, and demand for the unit.
- D. Periodic inspections.
Corrective actions will be implemented whenever the inspections reveal operation or equipment conditions outside that normally expected considering the operating conditions. The corrective action will take into account the operating conditions, severity of the deviation from normal operation, and demand for the unit.
- E. Periodic emissions testing for particulate matter.
Corrective actions will be implemented whenever the particulate emissions exceed the limitation or exceed the particulate matter emission levels normally expected for the unit considering the operating conditions. The corrective action will take into account the current operating conditions, type of fuel, severity of the particulate levels, and demand for the unit.

4. Justifications for Unique Selections

The expected operating efficiency of an electrostatic precipitator will vary, depending on several factors, including, but not limited to, the particular fuel used, ambient conditions, unit load, boiler operation, base loaded or cycling operation, malfunctions, etc. A proactive/condition based routine assessment of the equipment allows for a corrective action strategy based on the current operating conditions and targeted for the specific problem. By developing a specific corrective action in this manner, operating personnel can target the known or suspected problems and avoid the unnecessary time, activities and busy work associated with a predetermined corrective action. The specific corrective action will correct operational problems at least as quick as a predetermined corrective action, and sooner in most cases by avoiding unnecessary steps and activities.

5. Record Keeping and Reporting

- A. Opacity data: Excess opacity reported quarterly to IDEM OAQ and records kept for 5 years.
- B. Particulate matter emission test results: Reported to IDEM OAQ following test and records kept for 5 years.
- C. Any visible emission observations: Records kept for 5 years.

6. Quality Control

- A. Each COM will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification No. 1 and is subject to 326 IAC 3-5 monitor system certification requirements.
- B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.
- C. Visible emissions taken in accordance with 40 CFR 60, Appendix A, Method 9 will be taken by a certified visible emissions reader.
- D. Particulate matter emissions tests will be conducted in accordance with 40 CFR 60, Appendix A, Method 5.

**GIBSON GENERATING STATION
FLUE GAS DESULFURIZATION FOR SO_x CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station, Unit 1
- B. Control Technology: Flue Gas Desulfurization (FGD)
- C. Applicable Requirements: 326 IAC 7-1

2. Monitoring Methods.

SO₂ Continuous Emissions Monitoring System, calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2.

3. Performance Criteria / Corrective Action

- A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.
- B. The SO₂ continuous emission monitoring system shall measure SO₂ emission rates in pounds per hour and parts per million (ppmvd) corrected to 15% O₂ and International Standards Organization (ISO) standard conditions.

Whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following method shall be used to demonstrate that the operation of the flue gas desulfurization continues in a manner typical for the boiler load and sulfur content of the coal fired:

- (a) The boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service shall be monitored and recorded at least twice per day until the primary CEMS or backup CEMS is brought online and functioning properly.
- (b) Instruments used in monitoring the above parameters shall comply with Section C –Instrument Specifications, of the permit, shall be subject to approval by IDEM, OAQ.

4. Justifications for Unique Selections

The use of CEMS to measure and record the SO₂ hourly limits is sufficient to demonstrate compliance with the limitations set forth in the permit. To demonstrate compliance with the SO₂ limit, a three (3) hour block average of pounds per hour will be taken. Records shall be maintained of the parts per million and pounds per hour.

5. Record Keeping and Reporting

A. SO₂ emissions exceedances in pounds per million Btus and monitoring system performance reports will be reported quarterly to IDEM, OAQ.

B. All records will be kept for five (5) years.

6. Quality Control

A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.

B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.

**GIBSON GENERATING STATION
FLUE GAS DESULFURIZATION FOR SO_x CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station, Unit 2
- B. Control Technology: Flue Gas Desulfurization (FGD)
- C. Applicable Requirements: 326 IAC 7-1

2. Monitoring Methods.

SO₂ Continuous Emissions Monitoring System, calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2.

3. Performance Criteria / Corrective Action

- A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.
- B. The SO₂ continuous emission monitoring system shall measure SO₂ emission rates in pounds per hour and parts per million (ppmvd) corrected to 15% O₂ and International Standards Organization (ISO) standard conditions.

Whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following method shall be used to demonstrate that the operation of the flue gas desulfurization continues in a manner typical for the boiler load and sulfur content of the coal fired:

- (a) The boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service shall be monitored and recorded at least twice per day until the primary CEMS or backup CEMS is brought online and functioning properly.
- (b) Instruments used in monitoring the above parameters shall comply with Section C –Instrument Specifications, of the permit, shall be subject to approval by IDEM, OAQ.

4. Justifications for Unique Selections

The use of CEMS to measure and record the SO₂ hourly limits is sufficient to demonstrate compliance with the limitations set forth in the permit. To demonstrate compliance with the SO₂ limit, a three (3) hour block average of pounds per hour will be taken. Records shall be maintained of the parts per million and pounds per hour.

5. Record Keeping and Reporting

- A. SO₂ emissions exceedances in pounds per million Btus and monitoring system performance reports will be reported quarterly to IDEM, OAQ.
- B. All records will be kept for five (5) years.

6. Quality Control

- A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.
- B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.

**GIBSON GENERATING STATION
FLUE GAS DESULFURIZATION FOR SO_x CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station, Unit 3
- B. Control Technology: Flue Gas Desulfurization (FGD)
- C. Applicable Requirements: 326 IAC 7-1

2. Monitoring Methods.

SO₂ Continuous Emissions Monitoring System, calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2.

3. Performance Criteria / Corrective Action

- A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.
- B. The SO₂ continuous emission monitoring system shall measure SO₂ emission rates in pounds per hour and parts per million (ppmvd) corrected to 15% O₂ and International Standards Organization (ISO) standard conditions.

Whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following method shall be used to demonstrate that the operation of the flue gas desulfurization continues in a manner typical for the boiler load and sulfur content of the coal fired:

- (a) The boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service shall be monitored and recorded at least twice per day until the primary CEMS or backup CEMS is brought online and functioning properly.
- (b) Instruments used in monitoring the above parameters shall comply with Section C –Instrument Specifications, of the permit, shall be subject to approval by IDEM, OAQ.

4. Justifications for Unique Selections

The use of CEMS to measure and record the SO₂ hourly limits is sufficient to demonstrate compliance with the limitations set forth in the permit. To demonstrate compliance with the SO₂ limit, a three (3) hour block average of pounds per hour will be taken. Records shall be maintained of the parts per million and pounds per hour.

5. Record Keeping and Reporting

A. SO₂ emissions exceedances in pounds per million Btus and monitoring system performance reports will be reported quarterly to IDEM, OAQ.

B. All records will be kept for five (5) years.

6. Quality Control

A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.

B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.

**GIBSON GENERATING STATION
FLUE GAS DESULFURIZATION FOR SO_x CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station, Unit 4
- B. Control Technology: Flue Gas Desulfurization (FGD)
- C. Applicable Requirements: 326 IAC 7-1

2. Monitoring Methods.

SO₂ Continuous Emissions Monitoring System, calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2.

3. Performance Criteria / Corrective Action

- A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.
- B. The SO₂ continuous emission monitoring system shall measure SO₂ emission rates in pounds per hour and parts per million (ppmvd) corrected to 15% O₂ and International Standards Organization (ISO) standard conditions.

Whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following method shall be used to demonstrate that the operation of the flue gas desulfurization continues in a manner typical for the boiler load and sulfur content of the coal fired:

- (a) The boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service shall be monitored and recorded at least twice per day until the primary CEMS or backup CEMS is brought online and functioning properly.
- (b) Instruments used in monitoring the above parameters shall comply with Section C –Instrument Specifications, of the permit, shall be subject to approval by IDEM, OAQ.

4. Justifications for Unique Selections

The use of CEMS to measure and record the SO₂ hourly limits is sufficient to demonstrate compliance with the limitations set forth in the permit. To demonstrate compliance with the SO₂ limit, a three (3) hour block average of pounds per hour will be taken. Records shall be maintained of the parts per million and pounds per hour.

5. Record Keeping and Reporting

- A. SO₂ emissions exceedances in pounds per million Btus and monitoring system performance reports will be reported quarterly to IDEM, OAQ.
- B. All records will be kept for five (5) years.

6. Quality Control

- A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.
- B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.

**GIBSON GENERATING STATION
FLUE GAS DESULFURIZATION FOR SO_x CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.

- A. Name of Unit: Gibson Generating Station, Unit 5
- B. Control Technology: Flue Gas Desulfurization (FGD)
- C. Applicable Requirements: 326 IAC 7-1

2. Monitoring Methods.

SO₂ Continuous Emissions Monitoring System, calibrated, certified, operated, and maintained in accordance with 326 IAC 3-5-2.

3. Performance Criteria / Corrective Action

- A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.
- B. The SO₂ continuous emission monitoring system shall measure SO₂ emission rates in pounds per hour and parts per million (ppmvd) corrected to 15% O₂ and International Standards Organization (ISO) standard conditions.

Whenever the SO₂ continuous emission monitoring system is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the following method shall be used to demonstrate that the operation of the flue gas desulfurization continues in a manner typical for the boiler load and sulfur content of the coal fired:

- (a) The boiler load, recirculation pH, slurry feed rate, and number of recirculation pumps in service shall be monitored and recorded at least twice per day until the primary CEMS or backup CEMS is brought online and functioning properly.
- (b) Instruments used in monitoring the above parameters shall comply with Section C –Instrument Specifications, of the permit, shall be subject to approval by IDEM, OAQ.

4. Justifications for Unique Selections

The use of CEMS to measure and record the SO₂ hourly limits is sufficient to demonstrate compliance with the limitations set forth in the permit. To demonstrate compliance with the SO₂ limit, a three (3) hour block average of pounds per hour will be taken. Records shall be maintained of the parts per million and pounds per hour.

5. Record Keeping and Reporting

A. SO₂ emissions exceedances in pounds per million Btus and monitoring system performance reports will be reported semi-annually to IDEM, OAQ and U.S. EPA.

B. All records will be kept for five (5) years.

6. Quality Control

A. Each SO₂ CEMS will meet the applicable requirements of 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F for certifying, maintaining, operating, and assuring quality of the system.

B. Instruments will be maintained by Duke Energy instrument personnel or a qualified contractor.

**GIBSON GENERATING STATION
DRY FLY ASH HANDLING SYSTEM PM CONTROL
COMPLIANCE MONITORING PLAN**

1. Identification.
 - A. Name of Unit: Dry Fly Ash Handling System
 - B. Control Technology: Filter Separators, Bin Vent Filters, Dust collectors
 - C. Applicable Requirements: 326 IAC 2-2

2. Monitoring Methods.
 - A. Visible emission notations of the truck loading and unloading stations shall be performed at least once per week during normal daylight operations when ash is being loaded and unloaded. A trained employee shall record whether any emissions are normal or abnormal.
 - B. Visible emission notations of the separator/exhausters shall be performed at least once per week during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
 - C. Visible emission notations of the silo bin vent filters shall be performed at least once per week during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
 - D. Visible emission notations of the fixation building dust collector exhaust shall be performed at least once per week during normal daylight operations when the pin-paddle mixers are operating. A trained employee shall record whether emissions are normal or abnormal.
 - E. Visible emissions of the landfill area shall be performed at least once per week during normal daylight hours. A trained employee shall record whether emissions are normal or abnormal.

3. Performance Criteria / Corrective Action
 - A. If visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, reasonable response steps shall be taken.
 - B. If abnormal emissions are observed, reasonable response steps shall be taken.
 - C. Upon detecting an excursion or exceedance, operation of the pollutant-specific emissions unit (including the control device) shall be restored to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

4. Record Keeping and Reporting

- A. Records shall be maintained of visible emission notations of truck loading and unloading stations, separator/exhausters, silo bin vent filters, fixation building dust collector exhaust and the landfill area.
- B. Reports will be reported quarterly.
- C. All records will be kept for five (5) years.



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

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

TO: Mack Sims
Duke Energy Indiana, Inc. - Gibson Generating Station
1000 E Main Street
Plainfield, IN 46168

DATE: January 16, 2014

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

SUBJECT: Final Decision
Part 70 Operating Permit Renewal
051-33624-00013

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:
John Hayes, Responsible Official
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

January 16, 2014

TO: Owensville Carnegie 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, Inc. - Gibson Generating Station
Permit Number: 051-33624-00013

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

Mail Code 61-53

IDEM Staff	PWAY 1/16/2014 Duke Energy Indiana, Inc. - Gibson Generating Sta 051-33624-00013 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

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2		John Hayes GM Duke Energy Indiana, Inc. - Gibson Generating Stat c/o Mack Sims 1000 E Main St Plainfield IN 46168 (RO CAATS)										
3		Owensville Carnegie Public 110 S Main St Owensville IN 47665-0218 (Library)										
4		Princeton City Council and Mayors Office 603 South Main Street Princeton IN 47670 (Local Official)										
5		Gibson County Health Department 203 S Prince Street, Suite A Princeton IN 47670 (Health Department)										
6		Eric Anderson 25 Atlantic Avenue Erlanger KY 41018 (Affected Party)										
7		Gibson County Commissioners 101 N. Main Street Princeton IN 47670 (Local Official)										
8		Oakland City Town Council and Mayors Office 210 E. Washington St. Oakland City IN 47660 (Local Official)										
9		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 (Affected Party)										
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11		Mr. Bil Musgrove PO Box 520 Chandler IN 47610 (Affected Party)										
12		David Boggs 216 Western Hills Dr Mt Vernon IN 47620 (Affected Party)										
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