



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: July 16, 2008

RE: Pendleton Correctional / 095-26417-00006

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Charles Rinehart
Pendleton Correctional Facility
P.O. Box 28
Pendleton, IN 46064

July 16, 2008

Re: 095-26417-00006
Second Significant Revision to
F095-16603-00006

Dear Charles Rinehart:

Pendleton Correctional Facility was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F095-16603-00006 on October 29, 2003 for a stationary correctional facility located at 4490 West Reformatory Road, Pendleton, Indiana 46064. On April 14, 2008, the Office of Air Quality (OAQ) received an application from the source requesting to modify an existing corn-fired boiler to also burn biomass, (including untreated corn, wood (including bark), wood pellets, switchgrass and clean, untreated construction debris). The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Anne-Marie C. Hart, of my staff, at 317-234-5401 or 1-800-451-6027, and ask for extension 4-5401.

Original signed by,

Alfred C. Dumauval, Ph. D., Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

ACD/ACH

cc: File - Madison County
Madison County Health Department
U.S. EPA, Region V
Air Compliance Section
City of Anderson, Air Management Division
Compliance Data Section
Technical Support and Modeling
Permits Administrative and Development
Billing, Licensing and Training Section



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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY AND ANDERSON AIR MANAGEMENT DIVISION

**Pendleton Correctional Facility
4490 West Reformatory Rd
Pendleton, Indiana 46064**

(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 provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

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 2-8 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.: F095-16603-00006	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: October 28, 2003 Expiration Date: October 28, 2008

First Significant Permit Revision No.: 095-24743-00006, issued November 30, 2007

Second Significant Permit Revision No.: 095-26417-00006	
Original signed by: Alfred C. Dumauval, Ph.D, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 16, 2008 Expiration Date: July 16, 2013

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary correctional facility.

Source Address:	4490 West Reformatory Road, Pendleton, Indiana 46064
Mailing Address:	P.O. Box 28, Pendleton, Indiana 46064
General Source Phone Number:	765- 778-2107
SIC Code:	9223
County Location:	Madison
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) One (1) biomass-fired boiler system including one (1) boiler identified as boiler B-1, constructed in 1967, approved for modification in 2007 and modified in 2008, capable of combusting untreated corn, wood (including bark), wood pellets, switchgrass, and clean, untreated construction debris, with a maximum heat input capacity of 27.5 million British thermal units per hour, and one (1) natural-gas ignition burner with a maximum heat input capacity of 1.075 MMBtu/hr for cold boiler starts with emissions controlled by a cyclone, and exhausting to a stack.
- (b) One (1) natural gas-fired boiler, constructed in 1968 as a coal-fired boiler, and modified in 1998 to burn natural gas, identified as boiler B-2, with a maximum heat input capacity of 79.13 million British thermal units per hour, with emissions exhausting to stack S-B-2.
- (c) One (1) natural gas-fired boiler, constructed in 1968 as a coal-fired boiler, and modified in 1998 to burn natural gas, identified as boiler B-3, with a maximum heat input capacity of 98.9 million British thermal units per hour, with emissions exhausting to stack S-B-3.
- (d) One (1) natural gas and No. 2 fuel oil-fired boiler, identified as boiler B-4, constructed in 1985, with a maximum heat input capacity of 37.5 million British thermal units per hour, with emissions exhausting to stack S-B-4.
- (e) One (1) natural gas and No. 2 fuel oil-fired boiler, constructed in 1995, identified as boiler B-5, with a maximum heat input capacity of 56.25 million British thermal units per hour, with emissions exhausting to stack S-B-5.
- (f) One (1) biomass handling and storage operation, approved for construction in 2007 and modified in 2008 consisting of the following:
 - (1) One (1) truck unloading operation with a maximum throughput of 224,000 pounds of biomass per hour.

- (2) One (1) biomass storage silo, with a maximum storage capacity of 762,552 pounds of biomass (volumetric capacity 15,987 cubic feet), with emissions controlled by a baghouse.
- (3) One (1) biomass handling system with a maximum throughput of 252,000 pounds per hour, with emissions controlled by a baghouse including: six (6) augers, one (1) conveyor, one (1) bucket elevator, and one (1) metering bin.
- (g) One (1) ash disposal system, approved for construction in 2007, with a maximum throughput of 500 pounds of ash per hour, with emissions controlled by a cyclone including: three (3) augers.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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

- (a) 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;
- (b) A petroleum fuel, other than gasoline, having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6; [326 IAC 8-3-2] [326 IAC 8-3-5]
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment; [26 IAC 6-3-2]
- (e) Paved and unpaved roads and parking lots with public access;
- (f) Covered conveyors for coal or coke conveying of less than or equal to 360 tons per day;
- (g) Blowdown for any of the following: sight glass, boiler, compressors, pumps and cooling tower;
- (h) On-site fire and emergency response training approved by the department;
- (i) Diesel generators not exceeding 1600 horsepower; and
- (j) Stationary fire pumps.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, F095-16603-00006, 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.
- (b) If IDEM, OAQ, and AAMD, 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, 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 2-8-6]

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

B.5 Severability [326 IAC 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ and AAMD, within a reasonable time, any information that IDEM, OAQ and AAMD 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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ and AAMD 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 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ and AAMD may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.9 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.10 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

- (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 and AAMD 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 2-8-4(3); and
- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ and AAMD may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ and AAMD upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and AAMD. IDEM, OAQ and AAMD 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 or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) 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.12 Emergency Provisions [326 IAC 2-8-12]

- (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 except as provided in 326 IAC 2-8-12.

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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 and AAMD, 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 Section), or

Telephone Number: 317-233-0178 (ask for Compliance Section)

Facsimile Number: 317-233-6865

Anderson Air Management Division phone: (765) 648-6158; fax: (765) 648-5924

- (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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

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 2-8-4(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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 and AAMD may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ and AAMD 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 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) 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.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.
- Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) All terms and conditions of permits established prior to F095-16603-00006 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ and AAMD 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 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ and AAMD 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 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, and AAMD at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and AAMD may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and AAMD and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

- (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 and AAMD, 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 2-8 until IDEM, OAQ and AAMD 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 in writing by IDEM, OAQ and AAMD any additional information identified as being needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) 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 approval required by 326 IAC 2-8-11.1 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
Permits Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

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 2-8-15(b) through (d). 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 and AAMD in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(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 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) 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.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC13-30-3-1]

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 FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ and AAMD, 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 and AAMD, the applicable fee is due April 1 of each year.
- (b) 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 2-8-4(3)][326 IAC 2-8-5][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

Emissions Limitations and Standards [326 IAC 2-8-4(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 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2] [326 IAC 2-3]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable;
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 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 thirty percent (30%) 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.4 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.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.6 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).

C.7 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.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and AAMD not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and AAMD 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.10 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 2-8-4] [326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.14 Risk Management Plan [326 IAC 2-8-4] [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.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.
- (b) 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). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (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;
 - (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 maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ and AAMD, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) 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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported.

This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

and

City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018

- (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 and AAMD, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) 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.

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 the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (a) One (1) biomass-fired boiler system including one (1) boiler identified as Boiler B-1, constructed in 1967, approved for modification in 2007 and modified in 2008 capable of combusting untreated corn, wood (including bark), wood pellets, switchgrass, and clean, untreated construction debris, with a maximum heat input capacity of 27.5 million British thermal units per hour, and one (1) natural-gas ignition burner with a maximum heat input capacity of 1.075 MMBtu/hr for cold boiler starts with emissions controlled by a cyclone, and exhausting to a stack.
- (b) One (1) natural gas-fired boiler, constructed in 1968 as a coal-fired boiler, and modified in 1998 to burn natural gas, identified as boiler B-2, with a maximum heat input capacity of 79.13 million British thermal units per hour, with emissions exhausting to stack S-B-2.
- (c) One (1) natural gas-fired boiler, constructed in 1968 as a coal-fired boiler, and modified in 1998 to burn natural gas, identified as boiler B-3, with a maximum heat input capacity of 98.9 million British thermal units per hour, with emissions exhausting to stack S-B-3.
- (d) One (1) natural gas and No. 2 fuel oil-fired boiler, identified as boiler B-4, constructed in 1985, with a maximum heat input capacity of 37.5 million British thermal units per hour, with emissions exhausting to stack S-B-4.
- (e) One (1) natural gas and No. 2 fuel oil-fired boiler, constructed in 1995, identified as boiler B-5, with a maximum heat input capacity of 56.25 million British thermal units per hour, with emissions exhausting to stack S-B-5.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Fuel Usage [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

- (a) The total amount of biomass and natural gas burned by Boilers B-1, B-2, B-3, B-4 and B-5 shall be limited such that NO_x emissions shall not exceed 91.0 tons per twelve (12) consecutive month period,
- (b) The total amount of biomass and natural gas fuel burned by Boilers B-1, B-2, B-3, B-4 and B-5 shall be limited such that CO emissions shall not exceed 90.0 tons per twelve (12) consecutive month period, and
- (c) The total No. 2 distillate fuel oil input to Boilers B-4 and B-5 shall be limited to less than 500,000 U.S. gallons per year. This fuel usage limit will limit the NO_x emissions to less than 5.0 tons per year, the CO emissions to 1.25 tons per year and the SO₂ emissions to 17.8 tons per year.
- (d) When burning corn in Boiler B-1, the Permittee shall only burn untreated corn. When burning construction debris in Boiler B-1, the Permittee shall only burn clean, untreated construction debris.

The above listed emission limitations for Boilers B-1, B-2, B-3, B-4 and B-5 will limit the source-wide potential to emit of SO₂, NO_x and CO to less than 100 tons per twelve (12) consecutive

month period each. Compliance with these limits makes 326 IAC 2-7 (Part 70) not applicable and classifies the Pendleton Correctional Facility as an existing minor source under 326 IAC 2-2 (PSD).

D.1.2 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983):

- (a) The allowable PM emissions from the one (1) biomass-fired boiler, identified as B-1, shall not exceed 0.247 pound per million British thermal units heat input.
- (b) The allowable PM emissions from the two (2) natural gas fired boilers, identified as B-2 and B-3, shall not exceed 0.254 pound per million British thermal units heat input.
- (c) The allowable PM emissions from the one (1) natural gas and No. 2 fuel oil fired boiler, identified as B-4, shall not exceed 0.425 pound per million British thermal units heat input.
- (d) The allowable PM emissions from the one (1) natural gas and No. 2 fuel oil fired boiler, identified as B-5, shall not exceed 0.335 pound per million British thermal units heat input.

These limitations are based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where

Pt = emission rate limit (lbs/MMBtu)

Q = total source heat input capacity (MMBtu/hr)

D.1.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations) the SO₂ emissions from the boilers, identified as B-4 and B-5 shall not exceed five tenths (0.5) pounds per MMBtu heat input while combusting fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the five (5) boilers identified as B-1 through B-5.

Compliance Determination Requirements

D.1.5 Particulate Control

The cyclone for particulate control shall be in operation and control emissions from the biomass-fired boiler (B-1) at all times that the biomass-fired boiler is in operation.

D.1.6 Nitrogen Oxides Emissions

Compliance with the NO_x emissions limit in Condition D.1.3(a) shall be demonstrated by the summation of twelve (12) consecutive monthly emission rates calculated by the following equation:

$$E_{NOx} = (CE_{Corn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (2.9 * Q_{Bark}) + (7.92 * Q_{Wood}) + (100 * Q_{NG})$$

2000 lbs/ton

Where:

E_{NOx}	=	Emissions of NOx in tons per month
CE_{Corn}	=	Compliance emission factor for NOx shall be 10.2 pounds NOx per ton corn until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
Q_{Corn}	=	Corn consumption in tons per month
CE_{SG}	=	Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
Q_{SG}	=	Switchgrass consumption in tons per month
Q_{Bark}	=	Wood (including bark and clean, untreated construction debris) consumption in tons per month
Q_{Wood}	=	Wood pellets consumption in tons per month
Q_{NG}	=	Natural Gas consumption in MMCF per month

D.1.7 Carbon Monoxide Emissions

Compliance with the CO emissions limit in Condition D.1.3(a) shall be demonstrated by the summation of twelve (12) consecutive monthly emission rates calculated by the following equation:

$$E_{CO} = \frac{(CE_{Corn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (7.74 * Q_{Bark}) + (9.48 * Q_{Wood}) + (84 * Q_{NG})}{2000 \text{ lbs/ton}}$$

Where

E_{CO}	=	Emissions of CO in tons per month
CE_{Corn}	=	Compliance Emission Factor for CO shall be 8.16 pounds CO per ton Corn until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
Q_{Corn}	=	Corn consumption in tons per month.
CE_{SG}	=	Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
Q_{SG}	=	Switchgrass consumption in tons per month
Q_{Bark}	=	Wood (including bark and clean, untreated construction debris) consumption in tons per month
Q_{Wood}	=	Wood pellets consumption in tons per month
Q_{NG}	=	Natural Gas consumption in MMCF per month

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) Unless the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is representative of emissions from Boiler B-1, within one hundred and eighty (180) days after initial usage of untreated corn as a fuel in Boiler B-1 the Permittee shall perform PM, PM10, SO₂, NOx, CO, VOC, and HCl testing for Boiler B-1 when burning untreated corn utilizing methods as approved by the Commissioner. PM-10 includes filterable and condensable PM-10. If the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is not representative of emissions from Boiler B-1, stack tests shall be repeated at least once every five (5) years from the date of this valid

compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

- (b) Unless the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is representative of emissions from Boiler B-1, within one hundred eighty (180) days after initial usage of switchgrass as a fuel in Boiler B-1, the Permittee shall perform PM, PM10, SO₂, NO_x, CO and VOC testing for Boiler B-1 when burning switchgrass utilizing methods as approved by the Commissioner. PM10 includes filterable and condensable PM10. If the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is not representative of emissions from Boiler B-1, stack tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.9 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.1.3 shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pound per million Btu heat input by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.10 Visible Emissions Notations

- (a) When combusting fuel oil, visible emission notations of the boilers, identified as B-4 and B-5 stack exhaust shall be performed daily during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) When combusting biomass, visible emission notations of Boiler B-1 stack exhaust shall be performed daily during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (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, not counting startup or shut down time.

- (d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (f) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.11 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.12 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2 and D.1.3, the Permittee shall maintain records of the amount of each type of fuel (untreated corn, wood (including bark), wood pellets, switchgrass, clean, untreated construction debris, No. 2 distillate fuel oil and natural gas) burned in the boilers, as well as the calculated twelve (12) consecutive month NO_x and CO emissions in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂, NO_x and CO emission limits established in Conditions D.1.1, D.1.2 and D.1.3.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
 - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period. The natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

 - (4) Fuel supplier certifications;
 - (5) The name of the fuel supplier; and
 - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) Pursuant to 326 IAC 12, the Permittee shall maintain daily records of the amount and type of fuel combusted by the boilers. This condition expires when the transitions made to 40 CFR 60, Subpart Dc as amended on February 27, 2006, becomes an Indiana law. This condition is not federally enforceable.

- (c) To document compliance with Condition D.1.10, the Permittee shall maintain records of visible emission notations of Boilers B-1, B-4, and B-5 stack exhausts while combusting fuel oil and biomass. 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, (i.e. the process did not operate that day).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.13 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1-1(1).
- (b) The Permittee shall certify, on the form provided, that natural gas was fired in the boiler at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

D.1.14 General Provisions Relating to New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12-1][40 CFR Part 60, Subpart A] [40 CFR Part 60, Subpart Dc]

Pursuant to 40 CFR 60, Subpart Dc, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1-1 for the for the boilers (B-1 and B-5) as specified in Appendix A of 40 CFR Part 60, in accordance with the schedule in 40 CFR 60, Subpart Dc.

D.1.15 New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Dc, which are incorporated by reference as 326 IAC 12-1 for the boilers (B-1 and B-5) as specified as follows:

§ 60.40c Applicability and delegation of authority.

- (a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).
- (b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, Sec. 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.
- (c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO₂) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (Sec. Sec. 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in Sec. 60.41c.
- (d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under Sec. 60.14.

§ 60.41c Definitions.

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

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see Sec. 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see Sec. 60.17).

Dry flue gas desulfurization technology means a SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO₂ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under Sec. 60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see Sec. 60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO₂ emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see Sec. 60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 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 continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO₂.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.42c Standard for sulfur dioxide.

(d) On and after the date on which the initial performance test is completed or required to be completed under Sec. 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under Sec. 60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and Sec. 60.8(b), performance tests required under Sec. 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in Sec. 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under Sec. 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO₂ emission limits under Sec. 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the

initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under Sec. 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under Sec. 60.46c(d)(2).

(h) For affected facilities subject to Sec. 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under Sec. 60.48c(f), as applicable.

§ 60.46c Emission monitoring for sulfur dioxide

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to Sec. 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under Sec. 60.48c(f), as applicable.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by Sec. 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under Sec. 60.42c, or Sec. 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of Sec. 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO₂ emission limits of Sec. 60.42c, or the PM or opacity limits of Sec. 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(d) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under Sec. 60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under Sec. 60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO₂ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO₂ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in Sec. 60.41c; and

(iii) The sulfur content of the oil.

g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in Sec. 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (f) One (1) biomass handling and storage operation, approved for construction in 2007 and modified in 2008, consisting of the following:
 - (1) One (1) truck unloading operation with a maximum throughput of 224,000 pounds of biomass per hour.
 - (2) One (1) biomass storage silo, with a maximum storage capacity of 762,552 pounds of biomass (volumetric capacity 15,987 cubic feet), with emissions controlled by a baghouse.
 - (3) One (1) biomass handling system with a maximum throughput of 252,000 pounds per hour, with emissions controlled by a baghouse including: five (5) augers, one (1) conveyor, one (1) bucket elevator, and one (1) metering bin.
- (g) One (1) ash disposal system, approved for construction in 2007, with a maximum throughput of 500 pounds of ash per hour, with emissions controlled by a cyclone including: three (3) augers.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacture Processes), the allowable particulate emission rate from each process shall be limited by using either of the following equations:

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:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and } P = \text{process weight rate in tons per hour}$$

or

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

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

The following table shows the maximum process weight rate and allowable particulate emission rate for each emission unit:

Emission Unit	Process Weight Rate (tons/hour)	Particulate Emission Limit (lbs/hr)
Truck Unloading Operation	112	52.4
Biomass Handling System	126	53.6
Ash handling System	0.25	1.62

D.2.2 PM₁₀ Limitations [326 IAC 2-8-4]

The PM₁₀ emissions from the baghouse controlling the emissions from biomass handling operations shall not exceed 10.81 pounds per hour. Compliance with this limit, combined with the PM₁₀ emissions from the other emission units at this source shall limit the source-wide potential to emit PM₁₀ to less than 100 tons per twelve (12) consecutive month period, and render 326 IAC 2-7 (Part 70 Program) not applicable.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit is required for these facilities and any control devices.

Compliance Determination Requirements

D.2.4 Particulate Control

- (a) In order to comply with Condition D.2.2, the biomass handling operation shall be controlled by a baghouse when these 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.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.5 Visible Emissions Notations

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

D.2.6 Parametric Monitoring

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the biomass handling operations at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is 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.

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

D.2.7 Broken or Failed Bag Detection

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

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

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.8 Record Keeping Requirements

- (a) To document compliance with D.2.5, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhausts. The Permittee shall include its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with D.2.6, the Permittee shall maintain daily records of pressure drop for baghouses during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6; (326 IAC 8-3-2) (326 IAC 8-3-5)
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment; (326 IAC 6-3-2)

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

Emission Limitations and Standards

D.3.1 Particulate (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the brazing, cutting, soldering, and welding, operations shall not exceed the allowable PM emission rate 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:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour.}$$

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

The insignificant degreasing operations are subject to the provisions of 326 IAC 8-3-2 (Organic solvent degreasing operations: cold cleaner operations). Pursuant to this rule, the owner or operator shall:

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

D.3.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

- (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch)

measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

- (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
And AAMD**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Pendleton Correctional Facility
Source Address: 4490 West Reformatory Rd, Pendleton, IN 46064
Mailing Address: P.O. Box 28, Pendleton, IN 46064
FESOP No.: F095-16603-00006

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:

Date:

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

and AAMD

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Pendleton Correctional Facility
Source Address: 4490 West Reformatory Rd, Pendleton, IN 46064
Mailing Address: P.O. Box 28, Pendleton, IN 46064
FESOP No.: F095-16603-00006

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• 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 Describe:
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: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and AAMD**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
SEMI- ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Pendleton Correctional Facility
Source Address: 4490 West Reformatory Rd, Pendleton, IN 46064
Mailing Address: P.O. Box 28, Pendleton, IN 46064
FESOP No.: F095-16603-00006

- Natural Gas Only
 Alternate Fuel burned

From: _____ To: _____

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

Signature:

Printed Name:

Title/Position:

Date:

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and AAMD**

FESOP Quarterly Report

Source Name: Pendleton Correctional Facility
Source Address: 4490 West Reformatory Rd, Pendleton, IN 46064
Mailing Address: P.O. Box 28, Pendleton, IN 46064
FESOP No.: F095-16603-00006
Facility: Two (2) natural gas and No. 2 fuel oil boilers, identified as boiler B-4 and B-5
Parameter: Kilo Gallons of No. 2 fuel oil burned
Limit: 500 kilo gallons of No. 2 distillate fuel oil or equivalent fuel per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

Month	Kilo Gallons of No. 2 fuel oil burned	Kilo Gallons of No. 2 fuel oil burned	Kilo Gallons of No. 2 fuel oil burned
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

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

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and AAMD
FESOP Quarterly Report

Source Name: Pendleton Correctional Facility
Source Address: 4490 West Reformatory Rd, Pendleton, IN 46064
Mailing Address: P.O. Box 28, Pendleton, IN 46064
FESOP No.: F095-16603-00006
Facility: Boilers B-1 through B-5
Parameter: Biomass or equivalent fuel usage
Limit: (a) The total amount of fuel (untreated corn, wood (including bark), wood pellets, switchgrass, clean, untreated construction debris and natural gas) burned by Boiler #1, Boiler # 2, Boiler # 3, Boiler # 4 shall be limited such that NOx emissions shall not exceed 90.3 tons per twelve (12) consecutive month period with compliance determined at the end of each month based on the following equation.
(b) The total amount of fuel (untreated corn, wood (including bark), wood pellets, switchgrass, clean, untreated construction debris and natural gas) burned by Boiler #1, Boiler # 2, Boiler # 3, Boiler # 4 shall be limited such that CO emissions shall not exceed 97.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month based on the following equation.

$$E_{NOx} = \frac{(CE_{Corn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (2.9 * Q_{Bark}) + (7.92 * Q_{Wood}) + (100 * Q_{NG})}{2000 \text{ lbs/ton}}$$

Where:

E_{NOx} = Emissions of NOx in tons per month
 CE_{Corn} = Compliance emission factor for NOx shall be 10.2 pounds NOx per ton corn until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
 Q_{Corn} = Corn consumption in tons per month
 CE_{SG} = Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
 Q_{SG} = Switchgrass consumption in tons per month
 Q_{Bark} = Wood (including bark and clean, untreated construction debris) consumption in tons per month
 Q_{Wood} = Wood pellets consumption in tons per month
 Q_{NG} = Natural Gas consumption in MMCF per month

$$E_{CO} = \frac{(CE_{Corn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (7.74 * Q_{Bark}) + (9.48 * Q_{Wood}) + (84 * Q_{NG})}{2000 \text{ lbs/ton}}$$

Where:

E_{CO} = Emissions of CO in tons per month
 CE_{Corn} = Compliance Emission Factor for CO shall be 8.16 pounds CO per ton Corn until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
 Q_{Corn} = Corn consumption in tons per month.
 CE_{SG} = Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
 Q_{SG} = Switchgrass consumption in tons per month
 Q_{Bark} = Wood (including bark and clean, untreated construction debris) consumption in tons per month
 Q_{Wood} = Wood pellets consumption in tons per month
 Q_{NG} = Natural Gas consumption in MMCF per month

This FESOP Quarterly Report consists of 2 pages.

YEAR: _____

Month	NOx Emissions	NOx Emissions	NOx Emissions
	This Month	Previous 11 Months	12 Month Total

Month	CO Emissions	CO Emissions	CO Emissions
	This Month	Previous 11 Months	12 Month Total

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and AAMD**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Pendleton Correctional Facility
Source Address: 4490 West Reformatory Rd, Pendleton, IN 46064
Mailing Address: P.O. Box 28, Pendleton, IN 46064
FESOP No.: F095-16603-00006

Months: _____ to _____ Year: _____

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, 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: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality
And City of Anderson, Air Management Division**

Technical Support Document (TSD) for a Significant Permit Revision to a
Federally Enforceable State Operating Permit (FESOP)

Source Description and Location
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Source Name:	Pendleton Correctional Facility
Source Location:	4490 West Reformatory Road, Pendleton, Indiana 46064
County:	Madison
SIC Code:	9223
Operation Permit No.:	F 095-16603-00006
Operation Permit Issuance Date:	October 29, 2003
Significant Permit Revision No.:	095-26417-00006
Permit Reviewer:	Anne-Marie C. Hart

On April 14, 2008, the Office of Air Quality (OAQ) has received an application from Pendleton Correctional Facility related to a modification to an existing corn-fired boiler system.

Existing Approvals

The source was issued FESOP Renewal No. F095-16603-00006 on October 29, 2003. The source has since received Significant Permit Revision No. 095-24743-00006, issued on November 30, 2007.

County Attainment Status

The source is located in Madison County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective October 19, 2007, 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 April 5, 2005, for PM2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock,

Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.

- (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to ozone. Madison County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Madison County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.
- (c) Other Criteria Pollutants
 Madison County has been classified as attainment or unclassifiable in Indiana for SO₂, CO, PM₁₀, NOx and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

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

Process/Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)							
	PM	PM10	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
Boiler 1 (B-1) (Corn-fired)	29.80	28.20	54.20		2.05		4.04	2.29 (Hydrogen Chloride)
Boiler 2 (B-2) (Natural Gas-fired)	<1.73	<6.92	<0.55	<91.0	<5.01	<90.0	<1.72	<1.64 (Hexane)
Boiler 3 (B-3) (Natural Gas-Fired)								
Boiler 4 (B-4) (Worst-Case Fuel)*	<0.5	<0.83	<17.8	<5.0	<0.05	<1.25	<0.06	<0.06 (Formaldehyde)
Boiler 5 (B-5) (Worst-Case Fuel)*								
Corn Handling **	163.70	58.20	0.00	0.00	0.00	0.00	0.00	0.00
Ash Handling **	2.40	2.4	0.00	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	2.00	2.00	0.50	0.50	5.00	0.50	Negl.	Negl.
Total PTE of Entire Source	<250	<100	<100	<100	<100	<100	<25	<10

Process/Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)							
	PM	PM10	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
Emission Offset Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA
negl. = negligible These emissions are based upon Minor Permit Revision No. 095-24743-00006 issued November 30, 2007. * Boiler 4 (B-4) and Boiler 5 (B-5) are both capable of running on natural gas and No. 2 fuel oil. The worst-case fuel, No. 2 fuel oil, was used to calculate source-wide PTE. ** Potential to emit before baghouse and cyclone controls.								

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Pendleton Correctional Facility on April 14, 2008, relating to modification of an existing boiler, identified as B-1, to burn wood (including bark), wood pellets, switchgrass, and clean, untreated construction debris. The boiler was approved for modification in 2007 (Minor Permit Revision No. 095-24743-00006, issued November 30, 2007) to burn untreated corn. Pursuant to FESOP Renewal No. F095-16603-00006, issued October 29, 2003, boiler B-1 had been modified in 1998 from a coal-fired boiler to a natural gas-fired boiler.

The following is a list of the modified emission unit and pollution control device:

- (a) One (1) biomass-fired boiler system including one (1) boiler, identified as B-1, constructed in 1967, approved for modification in 2007 and modified in 2008, capable of combusting untreated corn, wood (including bark), wood pellets, switchgrass, and clean, untreated construction debris, with a maximum heat input capacity of 27.5 million British thermal units (MMBtu) per hour, and one (1) natural gas ignition burner with a maximum heat input capacity of 1.075 MMBtu per hour for cold boiler starts, using a cyclone as control, and exhausting to a stack.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE of the proposed revision after the federally enforceable controls contained in Condition D.1.5 of the FESOP. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/Emission Unit	PTE of Proposed Revision (tons/year)							
	PM	PM10*	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Boiler 1 (B-1) (Biomass-fired)	29.75	40.48	3.01	59.02	1.57	72.27	4.25	2.29 (Hydrogen Chloride)
Total PTE of Proposed Revision	29.75	40.48	3.01	59.02	1.57	72.27	4.25	2.29 (Hydrogen Chloride)
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". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.								

This FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1(f)(1)(E) because the revision involves the modification of one boiler, identified as B-1, to run on corn, wood (including bark), wood pellets, switchgrass, or clean, untreated construction debris with potential to emit (PTE) greater than 25 tons per year.

The use of switchgrass as an alternative fuel source will also include a permit condition requiring the source to perform a stack test to determine appropriate emissions factors associated with the combustion of switchgrass.

In addition, a PM₁₀ limit for Biomass Handling is being added to Section D.2 of the permit in order to limit the source-wide potential to emit to within FESOP levels.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source reflecting adjustment of existing limits, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)							
	PM	PM10*	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Boiler 1 (B-1) (Corn-fired Biomass-Fired)	48.2 29.75	29.92 40.47	54.20		2.05		4.25	2.29 (Hydrogen Chloride)
Boiler 2 (B-2) (Natural Gas-Fired)	<1.73	<6.92	<0.55	<91.0	<5.01	<90.0	<1.72	<1.64 (Hexane)
Boiler 3 (B-3) (Natural Gas-Fired)								
Boiler 4 (B-4) (Worst-Case Fuel)**	<0.5	<0.83	<17.8	<5.0	<0.05	<1.25	<0.06	<0.06 (Formaldehyde)
Boiler 5 (B-5) (Worst-Case Fuel)**								
Corn Biomass Handling	163.70	58.20 <47.35	0.00	0.00	0.00	0.00	0.00	0.00
Ash Handling	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	2.00	2.00	0.50	0.50	5.00	0.50	Negl.	Negl.
Total PTE of Entire Source	<250	<100	<100	<100	11.86	<100	<25	<10
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
Emission Offset Major Source Thresholds	NA	NA	NA	NA	NA	NA	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". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** Boiler 4 (B-4) and Boiler 5 (B-5) are both capable of running on natural gas and No. 2 fuel oil. The worst-case fuel, No. 2 fuel oil, was used to calculate source-wide PTE.								

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)							
	PM	PM10*	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Boiler 1 (B-1) (Biomass-Fired)	29.75	40.47	3.01	<91.0	1.57	<90.0	4.25	2.29 (Hydrogen Chloride)
Boiler 2 (B-2) (Natural Gas-Fired)	<1.73	<6.92	<0.55		<5.01		<1.72	<1.64 (Hexane)
Boiler 3 (B-3) (Natural Gas-Fired)				<0.5	<0.83	<17.8	<5.0	<0.05
Boiler 4 (B-4) (Worst-Case Fuel)**								
Boiler 5 (B-5) (Worst-Case Fuel)**								
Biomass Handling	163.70	<47.35	0.00	0.00	0.00	0.00	0.00	0.00
Ash Handling	2.4	2.4	0.00	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	2.00	2.00	0.50	0.50	5.00	0.50	Negl.	Negl.
Total PTE of Entire Source	<250	<100	<100	<100	<100	<100	<25	<10
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
Emission Offset Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA
negl. = negligible * US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** Boiler 4 (B-4) and Boiler 5 (B-5) are both capable of running on natural gas and No. 2 fuel oil. The worst-case fuel, No. 2 fuel oil, was used to calculate source-wide PTE.								

(a) FESOP Status

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) The total amount of biomass and natural gas burned by Boilers B-1, B-2, B-3, B-4 and B-5 shall be limited such that NO_x emissions shall not exceed 91.0 tons per twelve (12) consecutive month period.

- (2) The total amount of biomass and natural gas fuel burned by Boilers B-1, B-2, B-3, B-4 and B-5 shall be limited such that CO emissions shall not exceed 90.0 tons per twelve (12) consecutive month period.
- (3) The total No. 2 distillate fuel oil input to Boilers B-4 and B-5 shall be limited to less than 500,000 U.S. gallons per year. This fuel usage limit will limit the NOx emissions to less than 5.0 tons per year, the CO emissions to 1.25 tons per year and the SO2 emissions to 17.8 tons per year.
- (4) The cyclone, used for control on boiler B-1, shall be in operation at all times boiler B-1 is in operation in order to control the PM₁₀ emissions from boiler B-1.
- (5) The PM₁₀ emissions from the baghouse controlling the emissions from biomass handling operations shall not exceed 10.81 pounds per hour.

Compliance with these limits, combined with the potential to emit SO₂, NOx, CO and PM₁₀ from all other emission units at this source, shall limit the source-wide total potential to emit of SO₂, NOx, CO and PM₁₀ to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

- (b) PSD Minor Source
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Grain Elevators, 40 CFR 60.300, Subpart DD (326 IAC 12) are not included in this permit because the source has a permanent storage capacity less than 2.5 million U.S. bushels. The maximum storage capacity of the source is 0.013 million U.S. bushels.
- (b) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc are included for the biomass-fired boiler (B-1), because the operation commenced after June 9, 1989 and the maximum design heat input capacity is greater than ten (10) MMBtu/hr but less than one hundred (100) MMBtu/hr.

326 IAC 12 and 326 IAC 1-1-3 incorporate by reference the previous version of 40 CFR 60, Subpart Dc (promulgated on Feb. 27, 2006) (see State Rule Applicability section below).

The biomass-fired boiler (B-1) is subject to the following portions of 40 CFR 60, Subpart Dc. Nonapplicable portions of the NSPS are not included in the permit:

- (1) 40 CFR 60.40c (a), (b), (c) and (d);
- (2) 40 CFR 60.41c;
- (3) 40 CFR 60.42c (d), (g), (h)(1), (i) and (j);
- (4) 40 CFR 60.44c (a), (b), (g) and (h);
- (5) 40 CFR 60.46c (e); and
- (6) 40 CFR 60.48c (a)(1) through (4), (b), (d), (e)(1) through (6) and (11), (f)(1)(i) through (iii), (g)(1)(2)(i), and (j);

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

- (c) There are no other New Source Performance Standards (NSPS)(40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (e) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the modified unit is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) 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.

- (2) 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.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

Biomass-Fired Boiler (B-1)

- (g) 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the biomass-fired boiler (B-1) shall be limited to 0.247 pound per million Btu of heat input. This limitation is based on the following equation:

$$Pt = 1.09 / Q^{0.26} = 1.09 / (299.98)^{0.26}$$

Where Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).

Q = Total source maximum operating capacity rating in million Btu per hour of heat input.

Based on page 2 of Appendix A, the controlled PM emission rate is:

$$16.86 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 3.85 \text{ lb/hr}$$
$$(3.85 \text{ lb/hr} / 27.5 \text{ MMBtu/hr}) = 0.14 \text{ lb PM per MMBtu}$$

Therefore, the one (1) boiler identified as B-1, modified in 2008, will be able to comply with this rule when the cyclone is in operation.

- (h) 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
This rule is applicable to emission units with a potential to emit twenty five (25) tons per year or ten (10) pounds per hour of sulfur dioxide. Pursuant to 326 IAC 7-1.1 (applicability), the one (1) biomass-fired boiler (Boiler B-1) is subject to the rule because the potential emissions are greater than twenty five (25) tons per year when burning corn. However, since the biomass fired-boiler does not burn any of the fuels listed in 326 IAC 7-1.1-2, the requirements of this rule do not apply.
- (i) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements
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- (a) The compliance determination and monitoring requirements applicable to this proposed revision are as follows:

Emission Unit/Control	Operating Parameters	Frequency
Boiler 1 (B-1)	Visible Emissions Notations	Once per day

(b) The testing requirements applicable to this proposed revision are as follows:

Testing Requirements				
Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Boiler 1 (B-1) (when burning switchgrass)	Cyclone	PM PM ₁₀ NOx VOC SO ₂ CO	No later than 180 after initial usage of switchgrass as a fuel	Once every five years

There are currently no EPA approved Emission Factors for switchgrass fired boilers. IDEM has assumed that factors from the stack testing conducted by the source for corn combustion in Boiler B-1 represent a reasonable estimate of emissions. To demonstrate compliance with these limits, the Permittee shall, no later than 180 days after initial usage of switchgrass as a fuel in Boiler B-1, perform testing for NOx, SO₂, PM, PM₁₀, CO and VOC when burning switchgrass. All testing shall be conducted in accordance with Section C – Performance Testing, using methods approved by the Commissioner.

Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) Descriptive language in Condition A.2 (Emission Units and Pollution Control Equipment Summary), Section D.1 (Facility Description), and Section D.2 (Facility Description) is revised to reflect the modification to use biomass in Boiler B-1, and the storage and handling of biomass at the source as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) One (1) ~~corn~~ **biomass**-fired boiler system including one (1) ~~untreated corn-fired~~ boiler identified as boiler B-1, constructed in 1967, approved for modification in 2007, **and modified in 2008, capable of combusting untreated corn, wood (including bark), wood pellets, switchgrass, and clean, untreated construction debris** with a maximum heat input capacity of 27.5 million British thermal units per hour, and one (1) natural-gas ignition burner with a maximum heat input capacity of 1.075 MMBtu/hr for cold boiler starts with emissions controlled by a cyclone, and exhausting to a stack.

* * *

(f) One (1) ~~corn~~ **biomass** handling and storage operation, approved for construction in 2007 **and modified in 2008**, consisting of the following:

- (1) One (1) truck unloading operation with a maximum throughput of 224,000 pounds of ~~corn~~ **biomass** per hour.
- (2) One (1) ~~corn~~ **biomass** storage silo, with a maximum storage capacity of 762,552 pounds of ~~corn~~ **biomass** (volumetric capacity 15,987 cubic feet), with emissions controlled by a baghouse.
- (3) One (1) ~~corn~~ **biomass** handling system with a maximum throughput of 252,000 pounds per hour, with emissions controlled by a baghouse including: ~~five (5)~~ **six**

(6) augers, one (1) conveyor, one (1) bucket elevator, and one (1) metering bin.

- (2) Conditions D.1.1 (Fuel Usage), D.1.2 (Particulate), D.1.5 (Particulate Control), D.1.6 (Nitrogen Oxide Emissions), D.1.7 (Carbon Monoxide Emissions), D.1.8 (Testing Requirements), D.1.10 (Visible Emissions Notations) and D.1.12 (Record Keeping Requirements), are revised to reflect the use of biomass in Boiler B-1 as follows:

D.1.1 Fuel Usage [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

- (a) The total amount of ~~corn~~ **biomass** and natural gas burned by Boilers B-1, B-2, B-3, B-4 and B-5 shall be limited such that NOx emissions shall not exceed 91.0 tons per twelve (12) consecutive month period,
- (b) The total amount of ~~corn~~ **biomass** and natural gas fuel burned by Boilers B-1, B-2, B-3, B-4 and B-5 shall be limited such that CO emissions shall not exceed 90.0 tons per twelve (12) consecutive month period, and
- (c) The total No. 2 distillate fuel oil input to Boilers B-4 and B-5 shall be limited to less than 500,000 U.S. gallons per year. This fuel usage limit will limit the NOx emissions to less than 5.0 tons per year, the CO emissions to 1.25 tons per year and the SO2 emissions to 17.8 tons per year.
- (d) **When burning corn in Boiler B-1, the Permittee shall only burn untreated corn. When burning construction debris in Boiler B-1, the Permittee shall only burn clean, untreated construction debris.**

The above listed emission limitations for Boilers B-1, B-2, B-3, B-4 and B-5 will limit the source-wide potential to emit of SO₂, NOx and CO to less than 100 tons per twelve (12) consecutive month period **each**. Compliance with these limits makes 326 IAC 2-7 (Part 70) not applicable and classifies the Pendleton Correctional Facility as an existing minor source under 326 IAC 2-2 (PSD).

D.1.2 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983):

- (a) The allowable PM emissions from the one (1) ~~corn~~ **biomass** fired boiler, identified as B-1, shall not exceed 0.247 pound per million British thermal units heat input.

* * *

D.1.5 Particulate Control

The cyclone for particulate control shall be in operation and control emissions from the ~~corn~~ **biomass**-fired boiler (B-1) at all times that the ~~corn~~ **biomass**-fired boiler is in operation.

D.1.6 Nitrogen Oxides Emissions

Compliance with the NOx emissions limit in Condition D.1.3(a) shall be demonstrated by the summation of twelve (12) consecutive monthly emission rates calculated by the following equation:

$$E_{NOx} = \frac{(CE_{NOxCorn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (2.9 * Q_{Bark}) + (7.92 * Q_{Wood}) + (100 * Q_{NG})}{2000 \text{ lbs/ton}}$$

Where:

E_{NOx}	=	Emissions of NOx in tons per month
$CE_{NOx-Corn}$	=	Compliance emission factor for NOx shall be 10.2 pounds NOx per ton corn until an IDEM approved stack test is conducted. After a stack test is conducted, the EF emission factor shall be the lb/ton value as established by the stack test
Q_{Corn}	=	Corn consumption in tons per month
CE_{SG}	=	Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
Q_{SG}	=	Switchgrass consumption in tons per month
Q_{Bark}	=	Wood (including bark and clean, untreated construction debris) consumption in tons per month
Q_{Wood}	=	Wood pellets consumption in tons per month
Q_{NG}	=	Natural Gas consumption in MMCF per month

D.1.7 Carbon Monoxide Emissions

Compliance with the CO emissions limit in Condition D.1.3(a) shall be demonstrated by the summation of twelve (12) consecutive monthly emission rates calculated by the following equation:

$$E_{CO} = \frac{(CE_{CO-Corn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (7.74 * Q_{Bark}) + (9.48 * Q_{Wood}) + (84 * Q_{NG})}{2000 \text{ lbs/ton}}$$

Where

E_{CO}	=	Emissions of CO in tons per month
$CE_{CO-Corn}$	=	Compliance Emission Factor for CO shall be 8.16 pounds CO per ton Corn until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
Q_{Corn}	=	Corn consumption in tons per month. After a stack test is conducted, the EF shall be the lb/ton value as established by the stack test
CE_{SG}	=	Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test
Q_{SG}	=	Switchgrass consumption in tons per month
Q_{Bark}	=	Wood (including bark and clean, untreated construction debris) consumption in tons per month
Q_{Wood}	=	Wood pellets consumption in tons per month
Q_{NG}	=	Natural Gas consumption in MMCF per month

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) Unless the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is representative of emissions from Boiler B-1, within one hundred and eighty (180) days after initial ~~startup usage of untreated corn as a fuel in the corn-fired boiler B-1~~ **Boiler B-1** the Permittee shall perform PM, PM10, SO₂, NOx, CO, VOC, and HCl testing for ~~the corn-fired boiler B-1~~ **Boiler B-1 when burning untreated corn** utilizing methods as approved by the Commissioner. PM-10 includes filterable and condensable PM-10. ~~All~~ **If the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is not representative of emissions from Boiler B-1, stack tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.**

- (b) **Unless the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is representative of emissions from Boiler B-1, within one hundred eighty (180) days after initial usage of switchgrass as a fuel in Boiler B-1, the Permittee shall perform PM, PM10, SO₂, NO_x, CO and VOC testing for Boiler B-1 when burning switchgrass utilizing methods as approved by the Commissioner. PM10 includes filterable and condensable PM10. If the Commissioner determines that valid stack test results from a similar boiler operated by the Indiana Department of Corrections is not representative of emissions from Boiler B-1, stack tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.**

* * *

D.1.10 Visible Emissions Notations

* * *

- (b) When combusting ~~corn~~ **biomass**, visible emission notations of ~~the boiler, identified as B-1~~ stack exhaust shall be performed daily during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

* * *

D.1.12 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2 and D.1.3, the Permittee shall maintain records of the amount of ~~corn~~ **each type of fuel (untreated corn, wood (including bark), wood pellets, switchgrass, clean, untreated construction debris, No. 2 distillate fuel oil and natural gas)** burned in the boilers, as well as the calculated twelve (12) consecutive month NO_x and CO emissions in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂, NO_x and CO emission limits established in Conditions D.1.1, D.1.2 and D.1.3.

* * *

- (c) To document compliance with Condition D.1.10, the Permittee shall maintain records of visible emission notations of ~~the boilers, identified as B-1, B-4, and B-5~~ stack exhausts while combusting fuel oil and ~~corn~~ **biomass**. 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, (i.e. the process did not operate that day).

- (3) Condition D.2.1 (Particulate) is revised to reflect the use of biomass in Boiler B-1, as follows:

* * *

Emission Unit	Process Weight Rate (tons/hour)	Particulate Emission Limit (lbs/hr)
Truck Unloading Operation	112	52.4
Corn Biomass Handling System	126	53.6

Ash handling System	0.25	1.62
---------------------	------	------

- (4) Emission limitations, compliance determination, compliance monitoring, and record keeping requirements (Conditions D.2.2 through D.2.8) are added as follows:

D.2.2 PM₁₀ Limitations [326 IAC 2-8-4]

The PM₁₀ emissions from the baghouse controlling the emissions from biomass handling operations shall not exceed 10.81 pounds per hour. Compliance with this limit, combined with the PM₁₀ emissions from the other emission units at this source shall limit the source-wide potential to emit PM₁₀ to less than 100 tons per twelve (12) consecutive month period, and render 326 IAC 2-7 (Part 70 Program) not applicable.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit is required for these facilities and any control devices.

Compliance Determination Requirements

D.2.4 Particulate Control

- (a) In order to comply with Condition D.2.2, the biomass handling operation shall be controlled by a baghouse when these 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.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.5 Visible Emissions Notations

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

D.2.6 Parametric Monitoring

- (a) **The Permittee shall record the pressure drop across the baghouse used in conjunction with the biomass handling operations at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is 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.**
- (b) **The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated at least once every six (6) months.**

D.2.7 Broken or Failed Bag Detection

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

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

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.8 Record Keeping Requirements

- (a) **To document compliance with D.2.5, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).**
 - (b) **To document compliance with D.2.6, the Permittee shall maintain daily records of pressure drop for baghouses during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).**
 - (c) **All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**
- (5) The FESOP Quarterly Report form is revised to reflect the use of biomass in Boiler B-1, identified

as B-1, as follows:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Pendleton Correctional Facility
 Source Address: 4490 West Reformatory Rd, Pendleton, IN 46064
 Mailing Address: P.O. Box 28, Pendleton, IN 46064
 FESOP No.: F095-16603-00006
 Facility: Boilers B-1 through B-5

Parameter: ~~Corn~~ **Biomass** or equivalent fuel usage

- Limit: (a) The total amount of fuel (**untreated corn, wood (including bark), wood pellets, switchgrass, clean, untreated construction debris** and natural gas) burned by Boiler #1, Boiler # 2, Boiler # 3, Boiler # 4 shall be limited such that NOx emissions shall not exceed 90.3 tons per twelve (12) consecutive month period with compliance determined at the end of each month based on the following equation.
- (b) The total amount of fuel (**untreated corn, wood (including bark), wood pellets, switchgrass, clean, untreated construction debris** and natural gas) burned by Boiler #1, Boiler # 2, Boiler # 3, Boiler # 4 shall be limited such that CO emissions shall not exceed 97.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month based on the following equation.

$$E_{NOx} = \frac{(CE_{NOxCorn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (2.9 * Q_{Bark}) + (7.92 * Q_{Wood}) + (100 * Q_{NG})}{2000 \text{ lbs/ton}}$$

Where:

- E_{NOx} = Emissions of NOx in tons per month
 $CE_{NOxCorn}$ = Compliance emission factor for NOx shall be 10.2 pounds NOx per ton corn until an IDEM approved stack test is conducted. After a stack test is conducted, the ~~EF~~ **emission factor** shall be the lb/ton value as established by the stack test
 Q_{Corn} = Corn consumption in tons per month
 CE_{SG} = **Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test**
 Q_{SG} = **Switchgrass consumption in tons per month**
 Q_{Bark} = **Wood (including bark and clean, untreated construction debris) consumption in tons per month**
 Q_{Wood} = **Wood pellets consumption in tons per month**
 Q_{NG} = Natural Gas consumption in MMCF per month

$$E_{CO} = \frac{(CE_{COCorn} * Q_{Corn}) + (CE_{SG} * Q_{SG}) + (7.74 * Q_{Bark}) + (9.48 * Q_{Wood}) + (84 * Q_{NG})}{2000 \text{ lbs/ton}}$$

Where

- E_{CO} = Emissions of CO in tons per month
 CE_{COCorn} = Compliance Emission Factor for CO shall be 8.16 pounds CO per ton Corn until an IDEM approved stack test is conducted. **After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test**
 Q_{Corn} = Corn consumption in tons per month. ~~After a stack test is conducted, the EF shall be the lb/ton value as established by the stack test~~

- CE_{SG}** = **Compliance emission factor for NOx shall be 10.2 pounds NOx per ton switchgrass until an IDEM approved stack test is conducted. After a stack test is conducted, the emission factor shall be the lb/ton value as established by the stack test**
- Q_{SG}** = **Switchgrass consumption in tons per month**
- Q_{Bark}** = **Wood (including bark and clean, untreated construction debris) consumption in tons per month**
- Q_{Wood}** = **Wood pellets consumption in tons per month**
- Q_{NG}** = **Natural Gas consumption in MMCF per month**

* * *

- (6) Since the source is located in Madison County, it is also under the jurisdiction of the City of Anderson, Air Management Division (AAMD). Therefore, IDEM, OAQ has made the following revisions to the permit in order to correctly indicate the authority of AAMD and include all requirements related to AAMD.

SECTION A SOURCE SUMMARY

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

* * *

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (b) If IDEM, OAQ, **and AAMD**, 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, until the renewal permit has been issued or denied.

* * *

B.4 Enforceability [326 IAC 2-8-6]

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

* * *

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ **and AAMD**, within a reasonable time, any information that IDEM, OAQ **and AAMD** 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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ **and AAMD** copies of records required to be kept by this permit.

* * *

B.8 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ **and AAMD** may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

* * *

B.10 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

- (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 **and AAMD** on or before the date it is due.
- (c) The annual compliance certification report shall include the following:

* * *

- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ **and AAMD** may require to determine the compliance status of the source.

* * *

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251**

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ **and AAMD** upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ **and AAMD**. IDEM, OAQ **and AAMD** 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 or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

* * *

B.12 Emergency Provisions [326 IAC 2-8-12]

* * *

- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ **and AAMD**, 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 Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865
Anderson Air Management Division phone: (765) 648-6158; fax: (765) 648-5924
- (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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

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

* * *

- (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 **and AAMD** may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ **and AAMD** 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 2-8 and any other applicable rules.

* * *

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

* * *

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

* * *

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, **and AAMD** determines any of the following:

* * *

- (c) Proceedings by IDEM, OAQ, **and AAMD** 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 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, **and AAMD** at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, **and AAMD** may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, **and AAMD** and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

- (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 **and AAMD**, 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 2-8 until IDEM, OAQ **and AAMD** 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 in writing by IDEM, OAQ **and AAMD** any additional information identified as being needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

* * *

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

* * *

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) 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 approval required by 326 IAC 2-8-11.1 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
Permits Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

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 2-8-15(b) through (d). 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 **and AAMD** in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

* * *

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

* * *

- (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
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

* * *

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ **and AAMD**, 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 **and AAMD**, the applicable fee is due April 1 of each year.

* * *

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

* * *

- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

* * *

C.9 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

* * *

- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ **and AAMD** not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ **and AAMD** 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.

* * *

C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

* * *

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ **and AAMD**, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

* * *

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

* * *

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

and

**City of Anderson
Air Management Division
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46018**

- (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 **and AAMD**, on or before the date it is due.

* * *

Conclusion and Recommendation

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 April 14, 2008.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Revision No. 095-26417-00006. The staff recommends to the Commissioner that this FESOP Significant Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Anne-Marie C. Hart 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) 234-5401 or toll free at 1-800-451-6027 extension 4-5401.
- (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
External Combustion Boiler
Emissions Summary**

Company Name: Pendleton Correctional Facility
Address City IN Zip: 4490 West Reformatory Road, Pendleton, Indiana 46064
Permit Number: 095-26417-00006
Plt ID: 095-00006
Reviewer: Anne-Marie C. Hart
Date: April 23, 2008

Fuel	tons/year						
	PM	PM10	SO2	NOx	VOC	CO	HAP*
Uncontrolled							
Bark or Bark & Wet Wood	67.45	67.27	3.01	26.50	1.57	72.27	4.25
Dry Wood	48.18	45.41	3.01	59.02	1.57	72.27	4.25
Wet Wood	39.75	36.98	3.01	26.50	1.57	72.27	4.25
Controlled							
Bark or Bark & Wet Wood	16.86	40.48	3.01	26.50	1.57	72.27	4.25
Dry Wood	12.05	29.52	3.01	59.02	1.57	72.27	4.25
Wet Wood	9.94	32.16	3.01	26.50	1.57	72.27	4.25

* Combination of all HAPs

Worst-Case HAP: Hydrogen Chloride = 2.3 tons/year

Emissions associated with corn combustion are less than the Bark or Bark & Wet Wood emissions are not considered the worst-case fuel for Boiler B-1.

No emission factors exist for the combustion of switchgrass as a fuel. A stack test will be required when the source initially combusts switchgrass in Boiler B-1 in order to determine appropriate emission factors.

**Appendix A: Emissions Calculations
External Combustion Boiler
Wood Waste Combustion (uncontrolled)
Bark/Bark and Wet Wood**

**Company Name: Pendleton Correctional Facility
Address City IN Zip: 4490 West Reformatory Road, Pendleton, Indiana 46064
Permit Number: 095-26417-00006
Plt ID: 095-00006
Reviewer: Anne-Marie C. Hart
Date: April 23, 2008**

Capacity (MMBtu/hr)

27.5

Cyclone Control Efficiency

75% PM 35% PM10

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO**
Emission Factor in lb/MMBtu	0.56	0.517	0.025	0.22	0.013	0.6
Potential Emissions in tons/yr	67.452	62.27265	3.01125	26.499	1.56585	72.27
Controlled Potential Emissions in tons/yr	16.86	40.48	3.01	26.50	1.57	72.27

Wet wood is considered to be greater than or equal to 20% moisture content. Dry wood is considered to be less than 20% moisture content.

*The PM10 and PM2.5 emission factors include the condensible PM emission factor of 0.017 lb/MMBtu, measured by EPA Method 202 (or equivalent) and the appropriate filterable PM emission factor, measured by EPA Method 5 (or equivalent). The PM emission factor is filterable PM measured by EPA Method 5 (or equivalent).

**The CO emission factor is for stokers and dutch ovens/fuel cells. Change the emission factor to 0.17 lb/MMBtu if the calculations are for a fluidized bed combustor.

326 IAC 6-2-4 limits the indirect heating source to 0.247 lb/mmBtu

Methodology

To convert from tons/hr capacity to MMBtu/hr capacity:

$$\text{Heat Input Capacity (MMBtu/hr)} = \text{Capacity (tons/hr)} \times \text{Higher Heating Value of wood fuel (Btu/lb)} \times (1 \text{ MMBtu}/10^6 \text{ Btu}) \times 2000 \text{ lbs}/1 \text{ ton}$$

Emission Factors are from AP-42 Chapter 1.6 (revised 3/02), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

$$\text{Emissions (tons/yr)} = \text{Capacity (MMBtu/hr)} \times \text{Emission Factor (lb/MMBtu)} \times 8760\text{hrs/yr} \times 1\text{ton}/2000\text{lbs}$$

**Appendix A: Emissions Calculations
External Combustion Boiler
Wood Waste Combustion (uncontrolled)
Dry Wood**

**Company Name: Pendleton Correctional Facility
Address City IN Zip: 4490 West Reformatory Road, Pendleton, Indiana 46064
Permit Number: 095-26417-00006
Plt ID: 095-00006
Reviewer: Anne-Marie C. Hart
Date: April 23, 2008**

Capacity (MMBtu/hr) 27.5

Cyclone Control Efficiency
75% PM 35% PM10

Emission Factor in lb/MMBtu	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO**
	0.4	0.377	0.025	0.49	0.013	0.6
Potential Emissions in tons/yr	48.18	45.40965	3.01125	59.0205	1.56585	72.27
Controlled Potential Emissions in tons/yr	12.05	29.52	3.01	59.02	1.57	72.27

Wet wood is considered to be greater than or equal to 20% moisture content. Dry wood is considered to be less than 20% moisture content.
*The PM10 and PM2.5 emission factors include the condensible PM emission factor of 0.017 lb/MMBtu, measured by EPA Method 202 (or equivalent) and the appropriate filterable PM emission factor, measured by EPA Method 5 (or equivalent). The PM emission factor is filterable PM measured by EPA Method 5 (or equivalent).

**The CO emission factor is for stokers and dutch ovens/fuel cells. Change the emission factor to 0.17 lb/MMBtu if the calculations are for a fluidized bed combustor.

326 IAC 6-2-4 limits the indirect heating source to 0.247 lb/mmBtu

Methodology

To convert from tons/hr capacity to MMBtu/hr capacity:

$$\text{Heat Input Capacity (MMBtu/hr)} = \text{Capacity (tons/hr)} \times \text{Higher Heating Value of wood fuel (Btu/lb)} \times (1 \text{ MMBtu}/10^6 \text{ Btu}) \times 2000 \text{ lbs/1 ton}$$

Emission Factors are from AP-42 Chapter 1.6 (revised 3/02), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

$$\text{Emissions (tons/yr)} = \text{Capacity (MMBtu/hr)} \times \text{Emission Factor (lb/MMBtu)} \times 8760\text{hrs/yr} \times 1\text{ton}/2000\text{lbs}$$

**Appendix A: Emissions Calculations
External Combustion Boiler
Wood Waste Combustion (uncontrolled)
Wet Wood**

**Company Name: Pendleton Correctional Facility
Address City IN Zip: 4490 West Reformatory Road, Pendleton, Indiana 46064
Permit Number: 095-26417-00006
Plt ID: 095-00006
Reviewer: Anne-Marie C. Hart
Date: April 23, 2008**

Capacity (MMBtu/hr)

27.5

Cyclone Control Efficiency

75% PM
35% PM10

Emission Factor in lb/MMBtu	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO**
0.33	0.307	0.025	0.22	0.013	0.6	
Potential Emissions in tons/yr	39.7485	36.97815	3.01125	26.499	1.56585	72.27
Controlled Potential Emissions in tons/yr	9.94	24.04	3.01	26.50	1.57	72.27

Wet wood is considered to be greater than or equal to 20% moisture content. Dry wood is considered to be less than 20% moisture content.

*The PM10 and PM2.5 emission factors include the condensible PM emission factor of 0.017 lb/MMBtu, measured by EPA Method 202 (or equivalent) and the appropriate filterable PM emission factor, measured by EPA Method 5 (or equivalent). The PM emission factor is filterable PM measured by EPA Method 5 (or equivalent).

**The CO emission factor is for stokers and dutch ovens/fuel cells. Change the emission factor to 0.17 lb/MMBtu if the calculations are for a fluidized bed combustor.

326 IAC 6-2-4 limits the indirect heating source to 0.247 lb/mmBtu

Methodology

To convert from tons/hr capacity to MMBtu/hr capacity:

Heat Input Capacity (MMBtu/hr) = Capacity (tons/hr) x Higher Heating Value of wood fuel (Btu/lb) x (1 MMBtu/10⁶ Btu) x 2000 lbs/1 ton

Emission Factors are from AP-42 Chapter 1.6 (revised 3/02), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

Emissions (tons/yr) = Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760hrs/yr x 1ton/2000lbs

**Appendix A: HAPs Emissions Calculations
External Combustion Boiler
Wood Waste Combustion (uncontrolled)
All Wood Waste Fuel Types**

**Company Name: Pendleton Correctional Facility
Address City IN Zip: 4490 West Reformatory Road, Pendleton, Indiana 46064
Permit Number: 095-26417-00006
Plt ID: 095-00006
Reviewer: Anne-Marie C. Hart
Date: April 23, 2008**

Capacity (MMBtu/hr) 27.5

Emission Factor in lb/MMBtu	Selected Hazardous Air Pollutants						
	Acrolein	Benzene	Formaldehyde	Hydrogen Chloride	Styrene	Acetaldehyde	Toluene
Potential Emissions in tons/yr	4.0E-03	4.2E-03	4.4E-03	1.9E-02	1.9E-03	8.3E-04	9.2E-04
	4.8E-01	5.1E-01	5.3E-01	2.3E+00	2.3E-01	1.0E-01	1.1E-01
	Total HAPs				4.25E+00		

Methodology

To convert from tons/hr capacity to MMBtu/hr capacity:

$$\text{Heat Input Capacity (MMBtu/hr)} = \text{Capacity (tons/hr)} \times \text{Higher Heating Value of wood fuel (Btu/lb)} \times (1 \text{ MMBtu}/10^6 \text{ Btu}) \times 2000 \text{ lbs/1 ton}$$

Emission Factors are from AP-42 Chapter 1.6 (revised 3/02), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

$$\text{Emissions (tons/yr)} = \text{Capacity (MMBtu/hr)} \times \text{Emission Factor (lb/MMBtu)} \times 8760\text{hrs/yr} \times 1\text{ton}/2000\text{lbs}$$

These factors include the seven HAPs with the highest AP-42 emission factors.