



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant  
DATE: April 5, 2005  
RE: Purdue University / 157-19509-00012  
FROM: Paul Dubenetzky  
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 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) 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.

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

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

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

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



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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April 5, 2005

Ms. Robin Mills Ridgway, Ph.D, P.E.  
Purdue University  
401 S. Grant Street  
1665 L.J. Freehafer Hall of Administrative Services  
West Lafayette, Indiana, 47907-1665

Re: 157-19509  
First Significant Permit Modification to  
Part 70 No.: T157-7340-00012

Dear Ms. Ridgway:

Purdue University was issued a permit on June 30, 2004 to operate stationary boilers and other support facilities for the educational services operations, located at Purdue University. A letter requesting changes to this permit was received on August 18, 2004. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the removal of the requirement in the Part 70 Permit to install and operate a Continuous Opacity Monitor (COM) for Boiler #3 and to incorporate an enforceable fuel usage limitation and Method 9 Opacity readings to demonstrate compliance with 40 CFR 60, Subpart D, 326 IAC 5-1 and 326 IAC 6-2.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original 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 Linda Quigley/EVP, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call Linda Quigley at (973) 575-2555, extension 3284, or call (800) 451-6027, press 0 and ask for extension (3-6878).

Sincerely,  
Original signed by

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments  
TSD, Significant Permit Modification

LQ/EVP  
cc: File - Tippecanoe County  
U.S. EPA, Region V  
Tippecanoe County Health Department  
Air Compliance Section Inspector – Wanda Stanfield



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Compliance Data Section  
Administrative and Development  
Technical Support and Modeling



Mitchell E. Daniels, Jr.  
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## PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Purdue University  
401 South Grant Street  
1665 L.J. Freehafer Hall of Administrative Service  
West Lafayette, Indiana 47907-1665**

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

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

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

Operation Permit No.: T157-7340-00012	
Issued by: Original Signed by Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: June 30, 2004 Expiration Date: June 30, 2009
First Significant Permit Modification: 157-19509	Pages Affected: entire permit
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 5, 2005

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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). The information describing the source contained in conditions A.1, A.3, and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee operates stationary boilers and other support facilities for the educational services operations, located at Purdue University.

Responsible Official: Vice President for Physical Facilities  
Source Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Mailing Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Source Telephone: 765-496-6405  
SIC Code: 8221  
County Location: Tippecanoe  
Source Location Status: Attainment for all criteria pollutants  
Source Status: Part 70 Permit Program  
Major Source, under PSD Rules;  
Major Source, Section 112 of the Clean Air Act  
1 of 28 Source Categories

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

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This source consists of air emission units located on the main campus in West Lafayette, Indiana, and facilities with regulated air emissions located at research farms in the vicinity of 5675 West, 600 North, West Lafayette, Indiana, for the Animal Sciences Research and Education Center.

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

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

- (a) One (1) spreader stoker coal fired boiler, identified as Boiler 1, with installation completed in 1960, with a maximum capacity of 281 MMBtu/hr, with a multi-cyclone collector and an electrostatic precipitator for particulate matter control, exhausting to stack WADE 01. Boiler 1 has two (2) auxiliary natural gas fired burners rated at 35 MMBtu/hr per burner, used for ignition and flame stabilization periods. Boiler 1 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NO<sub>x</sub>) and a continuous opacity monitor (COM).
- (b) One (1) spreader stoker coal fired boiler, identified as Boiler 2, with installation completed in 1967, with a maximum capacity of 274 MMBtu/hr, with a multi-cyclone collector and an electrostatic precipitator for particulate matter control, exhausting to stack WADE 02. Boiler 2 has two (2) auxiliary natural gas fired burners rated at 35 MMBtu/hr per burner, used for ignition and flame stabilization periods. Boiler 2 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NO<sub>x</sub>) and a continuous opacity monitor (COM).

- (c) One (1) circulating fluidized bed coal fired boiler, identified as Boiler 5, with installation started in 1989 and completed in 1991, with a design capacity of 279 MMBtu/hr, with a baghouse for particulate matter control and limestone injection for sulfur dioxide control, combusting natural gas for ignition, exhausting to stack WADE 05. Boiler 5 has continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) and a continuous opacity monitor (COM).
- (d) One (1) natural gas and distillate fuel oil fired boiler, identified as Boiler 3, with installation started in 1973 or 1974 and completed in 1974, with a maximum capacity of 286 MMBtu/hr, exhausting to stack WADE 03. Boiler 3 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NO<sub>x</sub>).
- (e) One (1) coal storage and handling system identified as COAL Segment 1, installed in 1960, with a maximum capacity of 110 tons/hr, including: truck unloading station with two (2) hoppers; outdoor coal storage piles; two (2) vibratory feeders; one (1) underground belt conveyor with a magnetic separator; and one (1) bucket elevator terminating at the top of Wade Power House. Coal is fed to the bunkers for Boilers 1 and 2, and to the precrusher ahead of the indoor storage silo for Boiler 5. Emissions from the Boiler 1 and Boiler 2 bunkers are controlled by a RotoClone for each bunker and exhaust to stack CB1 and CB2, respectively. COAL Segment 1 has been retained as a backup system for COAL Segment 2.
- (f) One (1) coal storage and handling system identified as COAL Segment 2, installed in 1996, with a maximum capacity of 150 tons/hr, including: truck unloading station with outdoor storage piles and two (2) in-ground hoppers, two (2) vibratory feeders; one (1) totally enclosed tubular conveyor identified as BC-1 equipped with a magnetic separator and with emissions controlled by a baghouse exhausting to stack CV1; one (1) transfer enclosure with one (1) coal sampler, with emissions controlled by a baghouse exhausting to stack CV2; and one (1) totally enclosed tubular conveyor identified as BC-2 terminating at the top of Wade Power House, with emissions from the final transfer point controlled by a baghouse exhausting to stack CV3. Coal is fed to the bunkers for Boilers 1 and 2, and to the precrusher ahead of the indoor storage silo for Boiler 5. Emissions from the Boiler 1 and Boiler 2 bunkers are controlled by a RotoClone for each bunker and exhaust to stack CB1 and CB2, respectively.
- (g) One (1) coal preparation system for Boiler 5, with installation started in 1989 or 1990 and completed in 1991, with a maximum capacity of 12.68 tons/hr, including: one (1) enclosed pre-crusher; one (1) coal storage silo (aka coal storage bunker) with a baghouse exhausting to stack CB5; two (2) weigh belt feeders; and two (2) enclosed crushers.
- (h) One (1) pneumatic ash handling system for fly ash and bottom ash from Boilers 1 and 2, identified as ASH Segment 1, with a maximum capacity of 14 tons per hour, installed in approximately 1960 and modified in 2002. Ash/particulate matter collected from the primary, secondary and tertiary (baghouse) collection units is transferred to the existing ash silo. Ash accumulated in this silo is removed via a water mixer into trucks. Particulate matter that passes through the tertiary (baghouse) filter is exhausted to stack ASH1 while air from the ash silo is directed to a final filter before exhausting to stack AB1. Ash/particulate matter is transported through the system by an electric vacuum pump.
- (i) One (1) pneumatic ash handling system for fly ash and bottom ash from Boiler 5, identified as ASH Segment 2, installed in 1991 and modified in 2002, exhausting to stacks ASH5A and ASH5B, with a maximum capacity of 20 tons/hr, with dust from ash transfer to the storage silo controlled by primary and secondary separator with tertiary baghouse filter. Ash is transferred from the silo to trucks at a maximum capacity of 300 tons/hr; dust is controlled by water mix, or by use of a telescoping spout with air displaced from the truck directed through a "filter module" with five canister filters which exhaust to the atmosphere through a vent, ASH 5C.

- (j) Material handling for the limestone injection system for Boiler 5, including pneumatic conveyance from truck to bulk storage in a silo outside or to a "day bin" inside the plant at an offload rate of approximately 12.5 tons per hour; gravity fed from day bin into the boiler. Particulate emissions are controlled by a baghouse on the silo and filter cartridges on the day bin. The feed rate of limestone to the boiler varies depending on the sulfur content of the coal being fired; the average feed rate is 1 ton per hour, and the maximum rate is approximately 5 tons/hour.
- (k) One (1) 6.5 MMBtu/hr natural gas fired dual chamber animal carcass incinerator, identified as ADDL, installed in 1991, with an 800 lb/hr waste capacity, exhausting to stack PUADDL1.
- (l) One (1) 17.7 MMBtu/hr no. 2 fuel oil fired Black Start electric generator, identified as BSG, exhausting through stack BSG-1, with a fuel limit of 113,000 gallons per year.
- (m) Two (2) portable pumps powered by 350 HP no. 2 diesel fueled engines and mounted on tri-axle trailers, operated intermittently (approximately 500 hours per year each), used for pumping lagoon material to the spray irrigation system and to transfer material from one lagoon to another.

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

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

- (a) Boilers using the following fuels:
  - (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including three (3) natural gas fired Aviation Tech Building Boilers with low-NO<sub>x</sub> combustion systems, installed in 2000, each with 2.8 MMBtu/hr heat input capacity, identified as AV Tech Boiler 1, AV Tech Boiler 2, and AV Tech Boiler 3.
  - (2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
  - (3) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3]
- (c) Cleaners and solvents characterized as follows: [326 IAC 8-3]
  - (1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100EF) or;
  - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (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]

- (e) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. [326 IAC 6-3]
- (f) Coal bunker and coal scale exhausts and associated dust collector vents. [326 IAC 6-3]
- (g) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume. [326 IAC 6-3]
- (h) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3]
- (i) Other activities or categories not previously identified with potential, uncontrolled emissions equal to or less than thresholds require listing only: Pb 0.6 ton per year or 3.29 pounds per day, SO<sub>2</sub> 5 pounds per hour or 25 pounds per day, NO<sub>x</sub> 5 pounds per hour or 25 pounds per day, CO 25 pounds per day, PM 5 pounds per hour or 25 pounds per day, VOC 3 pounds per hour or 15 pounds per day:
  - (1) One (1) No. 2 fuel oil fired animal carcass incinerator for poultry, installed in 1991 or 1992, with an afterburner and a 100 lb/hr waste capacity, located at the animal sciences farm, 5675 W 600 N, West Lafayette, Indiana; [326 IAC 4-2-1]
  - (2) One (1) No. 2 fuel oil fired animal carcass incinerator for swine, installed in 1991 or 1992, with an afterburner and a 100 lb/hr waste capacity, located at the animal sciences farm, 5675 W 600 N, West Lafayette, Indiana; [326 IAC 4-2-1]
  - (3) One (1) natural gas fired incinerator identified as RAD1, installed in 1986, with primary and secondary chambers and a 50 lb/hr waste capacity, for burning laboratory waste and non-infectious biological material contaminated with low level radioactivity, located at the By-Product Material Storage Building North (BMSN). [326 IAC 4-2-1]
  - (4) One (1) natural gas fired incinerator identified as RAD2, installed in 1996, with an afterburner and a 50 lb/hr waste capacity, for burning laboratory waste and non-infectious biological material contaminated with low level radioactivity, located at the By-Product Material Storage Building North (BMSN). [326 IAC 4-2-1]

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION B

## GENERAL CONDITIONS

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

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

### B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

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This permit 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.3 Enforceability [326 IAC 2-7-7]

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

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

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

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

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

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

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

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

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- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

---

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official 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, with each submittal requiring certification. One (1) certification can cover multiple forms in one (1) submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

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

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- (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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

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

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

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit.

The submittal of the PMP and the PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (d) To the extent the Permittee is required by 40 CFR Part 63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, 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: 317-233-5674 (ask for Compliance Section)  
Facsimile Number: 317-233-5967.

- (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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
  - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

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

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

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

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

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

**B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]**

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- (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, P.O. Box 6015  
Indianapolis, Indiana 46206-6015
- 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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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

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

- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4]

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

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

- (1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3] [326 IAC 2-7-4]  
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by a reasonable deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application. [326 IAC 2-7-4(a)(2)(D) and (E)]
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]  
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.17 Source Modification [326 IAC 1-2-42] [326 IAC 2-7-10.5]

- (a) The Permittee shall obtain approval as required by 326 IAC 2-7-10.5 from the IDEM, OAQ prior to making any modification to the source. Pursuant to 326 IAC 1-2-42, "Modification" means one (1) or more of the following activities at an existing source:

- (1) A physical change or change in the method of operation of any existing emissions unit that increases the potential to emit any regulated pollutant that could be emitted from the emissions unit, or that results in emissions of any regulated pollutant not previously emitted.
  - (2) Construction of one (1) or more new emissions units that have the potential to emit regulated air pollutants.
  - (3) Reconstruction of one (1) or more existing emission units that increases the potential to emit of any regulated air pollutant.
- (b) Any application requesting a source modification shall be submitted to:
- Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015
- Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee shall also comply with the applicable provisions of 326 IAC 2-7-11 (Administrative Permit Amendments) or 326 IAC 2-7-12 (Permit Modification) prior to operating the approved modification.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12] [40 CFR 72]**

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) 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, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

**B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]**

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- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under 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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

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

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
  - (2) The date on which the change will occur;
  - (3) Any change in emissions; and

- (4) Any permit term or condition that is no longer applicable as a result of the change.

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

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

**B.24 Credible Evidence [326 IAC 2-7-5(3)] [ 326 IAC 2-7-6] [ 62 FR 8314]**

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Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

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

#### C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P] [326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) 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. This condition is not federally enforceable.

#### C.2 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 forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

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

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

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

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

#### C.6 Motor Vehicle Fugitive Dust Sources [326 IAC 6-4-4]

Pursuant to 326 IAC 6-4-4, no vehicle shall be driven or moved on any public street, road, alley, highway, or other thoroughfare, unless such vehicle is so constructed as to prevent its contents from dripping, sifting, leaking, or otherwise escaping therefrom so as to create conditions which result in fugitive dust. This section applies only to the cargo any vehicle may be conveying and mud tracked by the vehicle.

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

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

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

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

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

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

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- (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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

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

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

**C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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

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

### **C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

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

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

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- (a) The Permittee shall calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment. For a boiler, the COM shall be in operation at all times that the induced draft fan is in operation.
- (b) All continuous opacity monitoring systems shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (c) In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (d) Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, compliance with the applicable opacity limits shall be demonstrated by the following:
  - (1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.
    - (A) 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.
    - (B) If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.
    - (C) VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.

- (2) If a COM is not online within twenty-four (24) hours of shutdown or malfunction of the primary COM, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
  - (A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
  - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
  - (C) Method 9 readings may be discontinued once a COM is online.
  - (D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5 and 40 CFR 60.

C.13 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.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading, unless applicable State or Federal statutes provide for a different level of accuracy.
- (b) Whenever a condition in this permit requires the measurement of a voltage, current, temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading, unless applicable State or Federal statutes provide for a different level of accuracy.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

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

**C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on December 28, 1979.
- (b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]**

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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.17 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. If a Permittee is required to have an Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan under 40 CFR 63, such plans shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan to include such response steps taken.

The OMM Plan or Parametric Monitoring and SSM Plan shall be submitted within the time frames specified by the applicable 40 CFR 63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

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

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

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

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
  - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

#### **C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]**

- (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.21 General Reporting Requirements [326 IAC 2-7-5(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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) 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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. 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.22 Compliance with 40 CFR 82 and 326 IAC 22-1**

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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.
- (d) Pursuant to 40 CFR 82, Subpart E (The Labeling of Products Using Ozone-Depleting Substances), all containers in which a Class I or Class II substance is stored or transported and all products containing a Class I substance shall be labeled as required under 40 CFR Part 82.

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) spreader stoker coal fired boiler, identified as Boiler 1, with installation completed in 1960, with a maximum capacity of 281 MMBtu/hr, with a multi-cyclone collector and an electrostatic precipitator for particulate matter control, exhausting to stack WADE 01. Boiler 1 has two (2) auxiliary natural gas fired burners rated at 35 MMBtu/hr per burner, used for ignition and flame stabilization periods. Boiler 1 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NOX) and a continuous opacity monitor (COM).
- (b) One (1) spreader stoker coal fired boiler, identified as Boiler 2, with installation completed in 1967, with a maximum capacity of 274 MMBtu/hr, with a multi-cyclone collector and an electrostatic precipitator for particulate matter control, exhausting to stack WADE 02. Boiler 2 has two (2) auxiliary natural gas fired burners rated at 35 MMBtu/hr per burner, used for ignition and flame stabilization periods. Boiler 2 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NOX) and a continuous opacity monitor (COM).

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

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

#### D.1.1 Nitrogen Oxides Emission Limitation [326 IAC 2-2]

In order to make the requirements of 326 IAC 2-2 (PSD Requirements) not applicable to the addition of natural gas fired burners to the existing Boilers 1 and 2, the following limits shall apply:

- (a) The combined natural gas usage for Boiler 1 and Boiler 2 shall not exceed 395 million cubic feet (MMCF) per twelve (12) consecutive month period. Compliance with this limit shall be determined at the end of each month.
- (b) NO<sub>x</sub> emissions from the Boiler 1 and 2 natural gas fired burners shall not exceed 200 pounds per million cubic feet (lb/MMCF) of natural gas.

#### D.1.2 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating), particulate matter (PM) emissions from Boiler 1 and Boiler 2 shall not exceed 0.64 pound per million BTU heat input, based on the following equation:

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

Where:	C	=	50 micrograms per cubic meter ( $\mu/m^3$ )
	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 (mmBtu/hr) heat input.
	N	=	Number of stacks in fuel burning operation.
	a	=	0.67
	h	=	Stack height in feet.

For Boilers 1 and 2, Q = 555 MMBtu/hr, N = 2, and h = 200 feet.

D.1.3 Sulfur Dioxide Emission Limitations [326 IAC 2-2] [326 IAC 7-1.1-2]

- (a) Pursuant to Construction Permit PC (79) 1680, issued June 6, 1988, 326 IAC 2-2 (Prevention of Significant Deterioration), and 326 IAC 7-1.1-2, the following conditions became effective upon start-up of Boiler 5:
- (1) Sulfur dioxide emissions from Boilers 1 and 2 shall be limited to 5.43 pounds per million Btu's of heat input and to a total of 26.5 tons from both boilers on any calendar day.
  - (2) The 24-hour emission limit for sulfur dioxide shall be calculated by using the sulfur content of the coal as presently reported to the OAQ in accordance with 326 IAC 3-7-2 or 3-7-3. The daily coal usage will be calculated by the use of steam production data and an evaporation factor (pounds of steam per pounds of coal). The evaporation factor shall be 8.4 pounds of steam per pound of coal. Purdue University may request a permit modification to adjust this factor if performance data warrants a review.
- (b) When the daily coal usage is 420 tons or less for these boilers, a daily sulfur dioxide emissions level need not be provided.
- (c) The stack height on the existing boilers may be increased to 65 meters without obtaining approval from the IDEM, OAQ.
- (d) The Permittee may at any time submit further modeling data in an effort to demonstrate that a higher 24-hour sulfur dioxide emission level from Boilers 1 and 2 will protect the sulfur dioxide air quality standards using procedures acceptable to the OAQ. The OAQ, after appropriate review, may adjust the 24-hour sulfur dioxide limit if the air quality analysis supports an adjusted level.

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

- (a) Pursuant to 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), the following applies:
- (1) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity limitation established by 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6)-minute averaging periods in any twenty-four (24) hour period. [326 IAC 5-1-3(a)]  
  
Operation of the electrostatic precipitator is not required during these times unless necessary to comply with these limits.
  - (2) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2 and stated in Section C - Opacity. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6)-minute averaging period in any sixty (60) minute period. The averaging periods in excess of the limit set in 326 IAC 5-1-2 shall not be permitted for more than three (3) six (6)-minute averaging periods in a twelve (12) hour period. [326 IAC 5-1-3(b)]
- (b) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(a) or (b), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

D.1.5 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

- (a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected sources, as designated by 40 CFR 63.7490(a), except when otherwise specified in 40 CFR 63 Subpart DDDDD. The Permittee must comply with these requirements on and after the effective date of 40 CFR 63, Subpart DDDDD.
- (b) Since the applicable requirements associated with the compliance options for the affected source for the large solid fuel subcategory are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.

D.1.6 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

- (a) The affected sources are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD), as of the effective date of 40 CFR 63, Subpart DDDDD. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart DDDDD on and after three years after the effective date of 40 CFR 63, Subpart DDDDD.
- (b) The following emissions units comprise the affected source for the large solid fuel subcategory: Boiler 1 and Boiler 2.
- (c) The definitions of 40 CFR 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected sources.
- (d) Since the applicable requirements associated with the compliance options for the affected source for the large solid fuel subcategory are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition for the affected source for the large solid fuel subcategory.

D.1.7 Operation Standards [326 IAC 2-1.1-5(a)(4)] [40 CFR 261] [40 CFR 279] [329 IAC 13]

- (a) All coal burned, including coal treated with any additive, shall meet ASTM specifications for classification as coal (ASTM D388).
- (b) The burning of hazardous waste, as defined by 40 CFR 261, is prohibited in these facilities without a Resource Conservation and Recovery Act (RCRA) permit. Any boiler tube chemical cleaning waste liquids evaporated in the boiler, and any binding agent or used oil combusted shall meet the toxicity characteristic requirements for non-hazardous waste. These requirements are not federally enforceable pursuant to the Title V permit.
- (c) Any boiler tube chemical cleaning waste liquids evaporated in the boiler shall only contain the cleaning solution and no more than two full volume boiler rinses.

D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

- (a) A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Boilers 1 and 2 and their emission control devices.

- (b) The PMP for a multiclone shall include inspections of the internal components of the multiclone, conducted annually in accordance with the Section B - Preventive Maintenance Plan. Items to be checked include air infiltration, plugging of inlet spinner vanes, outlet tube erosion, deposits on the inside surfaces of the cyclone tubes, and plugging of the bottom of the cyclone tubes.
- (c) The PMP for an electrostatic precipitator shall include the following inspections, performed according to the indicated schedules:
  - (1) Plate and electrode alignment, every major maintenance outage, but no less than every 2 years.
  - (2) Air infiltration, no less than every 2 years. The recommended method for this inspection is for audible checks around ash hoppers/hatches, duct expansion joints, and areas of corrosion.
  - (3) ESP TR set components, performed at least once per calendar year. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

At a minimum, the following inspections shall be performed:

- (A) Internal inspection of shell for corrosion (including but not limited to doors, hatches, insulator housings, and roof area).
- (B) Effectiveness of rapping (including but not limited to buildup of dust on discharge electrodes and plates).
- (C) Gas distribution (including but not limited to buildup of dust on distribution plates and turning vanes).
- (D) Dust accumulation (including but not limited to buildup of dust on shell and support members that could result in grounds or promote advanced corrosion).
- (E) Major misalignment of plates (including but not limited to a visual check of plate alignment).
- (F) Rapper, vibrator and TR set control cabinets (including but not limited to motors and lubrication).
- (G) Rapper assembly (including but not limited to loose bolts, ground wires, water in air lines, and solenoids).
- (H) Vibrator and rapper seals (including but not limited to air in-leakage, wear, and deterioration).
- (I) TR set controllers (including but not limited to low voltage trip point, over current trip point, and spark rate).

## Compliance Determination Requirements

### D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

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By December 31 of the second calendar year following the most recent stack test, or within 180 days after issuance of this permit, whichever is later, compliance with the PM limitation for Boilers 1 and 2 shall be determined by performance stack tests conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

### D.1.10 Operation of Multiclone and Electrostatic Precipitator [326 IAC 2-7-6(6)]

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Except as otherwise provided by statute or rule or in this permit, the multiclone and electrostatic precipitator (ESP) shall be operated at all times that the boiler vented to that multiclone and ESP is in operation.

### D.1.11 Continuous Emissions Monitoring [326 IAC 3-5]

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- (a) Pursuant to 326 IAC 3-5-1(2)(A) (Continuous Monitoring of Emissions), continuous emission monitoring systems for Boilers 1 and 2 shall be calibrated, maintained, and operated for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2.
- (b) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5 or 326 IAC 10-4.

### D.1.12 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

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- (a) Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed the equivalent of 5.43 pound per million BTU heat input, using a calendar month average.
- (b) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data shall be collected as follows:
  - (1) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or
  - (2) Pursuant to 326 IAC 3-7-2(b)(2) and 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval, that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring; or
  - (3) The Permittee shall meet the minimum sampling requirements specified in 326 IAC 3-7-2(b)(3), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e).

- (4) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (c) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]

**D.1.13 Cleaning Waste Characterization [326 IAC 2-1.1-5(a)(4)] [40 CFR 261]**

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The Permittee shall use appropriate methodology as identified in 40 CFR Part 261 to characterize all boiler chemical cleaning wastes that will be evaporated, to determine compliance with the Operation Standards condition in this D section. This condition is not federally enforceable pursuant to the Title V permit.

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

**D.1.14 Monitoring: Multiclone [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) The ability of each multiclone to control particulate emissions shall be monitored at least once per shift, when the unit is in operation, by measuring and recording the total static pressure drop across the multiclone. Pressure drop monitoring equipment shall be installed in accordance with Section C - Compliance Monitoring and Section C - Pressure Gauge and Other Instrument Specifications.
- (b) Normal operating range will be determined and provided to IDEM within the first ninety (90) calendar days following installation of the pressure drop monitoring equipment.
- (c) Reasonable response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports whenever the static pressure drop is outside of the normal operating range for the corresponding boiler steam load. A pressure drop reading that is outside normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records and Reports, shall be considered a deviation from this permit.

**D.1.15 Electrostatic Precipitator Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) The ability of each ESP to control particulate emissions shall be monitored once per shift, when the unit is in operation, by measuring and recording the primary and secondary voltages and the currents of the transformer-rectifier (T-R) sets.
- (b) When for any one reading, operation is outside one of the normal ranges shown below, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A voltage or current reading outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

Boiler 1:

- (1) Primary voltage: 350 - 430 V
- (2) Secondary voltage: 36 - 45 kV
- (3) T-R set secondary current: 250 - 400 mA

Boiler 2:

- (1) Primary voltage: 260 - 330 V
- (2) Secondary voltage: 29 - 38 kV
- (3) T-R set secondary current: 370 - 420 mA

**D.1.16 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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(a) For Boiler 1:

- (1) In the event of emissions exceeding twenty-five percent (25%) average opacity for three (3) consecutive six (6) minute averaging periods, appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%). Examples of expected response steps include, but are not limited to, boiler loads being reduced, adjustment of flue gas conditioning rate, and ESP T-R sets being returned to service.
- (2) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(b) For Boiler 2:

- (1) In the event of emissions exceeding twenty percent (20)% average opacity for three (3) consecutive six (6) minute averaging periods, appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty percent (20%). Examples of expected response steps include, but are not limited to, boiler loads being reduced, adjustment of flue gas conditioning rate, and ESP T-R sets being returned to service.
- (2) Opacity readings in excess of twenty percent (20%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

- (c) Periods of elevated opacity that are subject to a Temporary Alternative Opacity Limitation (TAOL) when building a new fire in a boiler, shutting down a boiler, removing ashes from the fuel bed or furnace in a boiler, or blowing tubes, need not be included in the averaging periods for (a) and (b) of this condition.

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

**D.1.17 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records including the following:
  - (1) Monthly records of total natural gas usage for Boilers 1 and 2.

- (2) Documentation of NO<sub>x</sub> emission rate for the Boiler 1 and 2 gas burners.
- (b) To document compliance with Section C- Opacity, Section C - Maintenance of Continuous Opacity Monitoring Equipment, and the particulate matter and opacity Conditions D.1.2, D.1.4, D.1.9, D.1.10, D.1.11, D.1.14, D.1.15, and D.1.16, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits in Section C- Opacity and Conditions D.1.2 and D.1.4.
  - (1) Data and results from the most recent stack test.
  - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5-6.
  - (3) The results of all visible emission (VE) notations and Method 9 visible emission readings taken during any periods of COM downtime.
  - (4) All multiclone and ESP parametric monitoring readings.
- (c) To document compliance with SO<sub>2</sub> Conditions D.1.3 and D.1.12, the Permittee shall maintain records in accordance with (1) and (2) below. Records shall be complete and sufficient to establish compliance with the SO<sub>2</sub> limits as required in Conditions D.1.3.
  - (1) All fuel sampling and analysis data, pursuant to 326 IAC 7-2.
  - (2) Daily fuel usage for each of Boilers 1 and 2.
- (d) Pursuant to 326 IAC 3-7-5(b), the Permittee shall maintain records sufficient to verify compliance with the coal sampling and analysis procedures specified in 326 IAC 3-7-2 through 326 IAC 3-7-3.
- (e) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of all boiler and emission control equipment inspections, including any additional inspections prescribed by the Preventive Maintenance Plan.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.18 Reporting Requirements

- (a) A quarterly report of opacity exceedances shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) A quarterly report of the calendar month average coal sulfur content, coal heat content, and sulfur dioxide emission rate in pounds per million Btus and the total monthly coal consumption shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. [326 IAC 7-2-1(c)(2)  
  
The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) A quarterly report of the natural gas usage for Boilers 1 and 2 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 "responsible official" as defined by 326 IAC 2-7-1(34).

- (d) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:
- (1) date of downtime;
  - (2) time of commencement;
  - (3) duration of each downtime;
  - (4) reasons for each downtime; and
  - (5) nature of system repairs and adjustments.

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

D.1.19 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Notification Requirements  
[40 CFR 63, Subpart DDDDD]

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- (a) Pursuant to 40 CFR 63.7545, the Permittee shall submit the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), and 63.9(b) through (h) that apply to the affected sources for the large solid fuel subcategory and chosen compliance methods by the dates specified. These notifications include, but are not limited to, the following:
- (1) An Initial Notification containing the information specified in 40 CFR 63.9(b)(2) not later than 120 days after the effective date of 40 CFR 63, Subpart DDDDD as required by 40 CFR 63.7545(b).
  - (2) If required to conduct a performance test, a notification of intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required by 40 CFR 63.7(b)(1) and 40 CFR 63.7545(d).
  - (3) If required to conduct an initial compliance demonstration as specified in 40 CFR 63.7530(a), a Notification of Compliance Status containing the information required by 40 CFR 63.9(h)(2)(ii) in accordance with 40 CFR 62.7545(e).
    - (A) For each initial compliance demonstration, the Permittee shall submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations according to 40 CFR 63.10(d)(2).
    - (B) The Notification of Compliance Status shall contain the items in 40 CFR 63.7545(e)(1) through (9), as applicable.
  - (4) If required to use a continuous monitoring system (CMS), notification of a performance evaluation, if required, as specified in 40 CFR 63.9(g), by the date of submission of the notification of intent to conduct a performance test.
- (b) The notifications required by paragraph (a) shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

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

D.1.20 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12]  
[326 IAC 2-7-5]

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The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information regarding which compliance option or options will be chosen in the Part 70 permit for the affected source for the large solid fuel subcategory.

- (a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 permit the applicable requirements of 40 CFR 63, Subpart DDDDD, a description of the affected sources and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
- (b) The significant permit modification application shall be submitted no later than nine months prior to the compliance date as specified in 40 CFR 63.7495(b).
- (c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (c) One (1) circulating fluidized bed coal fired boiler, identified as Boiler 5, with installation completed in 1991, with a design capacity of 279 MMBtu/hr, with a baghouse for particulate matter control and limestone injection for sulfur dioxide control, combusting natural gas for ignition, exhausting to stack WADE 05. Boiler 5 has continuous emissions monitoring systems (CEMS) for nitrogen oxides (NOX) and sulfur dioxide (SO<sub>2</sub>) and a continuous opacity monitor (COM).

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

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

#### D.2.1 Construction Permit Limitations [326 IAC 2] [326 IAC 7-1.1-2(a)] [326 IAC 6-2-1(g)]

Pursuant to Construction Permit PC (79) 1680, issued June 6, 1988, and 326 IAC 2-2 (Prevention of Significant Deterioration), the following requirements apply to Boiler 5:

- (a) Sulfur dioxide emissions shall not exceed:
  - (1) 0.9 pounds per million Btu's of heat input based on a 30 day rolling weighted average basis, and
  - (2) 1.1 pounds per million Btu's of heat input based on a block 24 hour average basis.
- (b) Particulate matter emissions shall not exceed 0.05 pounds per million Btu's of heat input.
- (c) Carbon monoxide emissions shall not exceed 0.27 pounds per million Btu's of heat input.
- (d) The rate of heat input into the boiler shall not exceed 279 million Btu's per hour.
- (e) The Permittee shall, prior to any change in the operation of Boiler 5 that may result in an increase in emissions, specified in 326 IAC 2-1.1, submit a Part 70 Source Modification application to the IDEM, OAQ. No change shall be made until approval is obtained. Further, no change in emission control equipment is to be made without prior approval.

#### D.2.2 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 326 IAC 12 and 40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units) and Construction Permit PC (79) 1680, issued on June 6, 1988, emissions from Boiler 5 shall not exceed the following:

- (a) For sulfur dioxide, pursuant to 40 CFR 60.42b, emissions shall not exceed 1.2 pounds per million Btu's (lb/MMBtu) of heat energy input and ten percent (10%) of the potential combustion concentration (ninety percent (90%) removal) when Boiler 5 is firing coal.

No owner or operator of an affected facility that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 10 percent (0.10) of the potential (90 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

$E_s = (K_a H_a + K_b H_b) / (H_a + H_b)$  where:

$E_s$  is the sulfur dioxide emission limit, in ng/J or lb/million Btu heat input,

$K_a$  is 520 ng/J (or 1.2 lb/million Btu),

$K_b$  is 340 ng/J (or 0.80 lb/million Btu),

$H_a$  is the heat input from the combustion of coal, in J (million Btu),

$H_b$  is the heat input from the combustion of oil, in J (million Btu). Only the heat input supplied to Boiler 5 from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to Boiler 5 from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat input to the affected facility from exhaust gases from another source, such as gas turbines, internal combustion engines, kilns, etc.

(b) For particulate matter:

(1) Pursuant to 40 CFR 60.43b, no owner or operator of an affected facility which combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 0.051 lb/million Btu heat input,

(A) If the affected facility combusts only coal, or

(B) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(C) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum design heat input capacity. [40 CFR 60.43b(e)]

(2) No owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43b(f)]

(c) For nitrogen oxides, pursuant to 40 CFR 60.44b:

(1) No owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as  $\text{NO}_2$ ) in excess of the following emission limits:

From fluidized bed combustion, not more than 0.60 lb/million Btu (lb/MMBtu) heat input.

- (2) Except as provided under paragraphs (k) and (l) of 40 CFR 60.44b, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of a limit determined by the use of the following formula:

$$E_n = [(EL_{go} H_{go}) + (EL_{ro} H_{ro}) + (EL_c H_c)] / (H_{go} + H_{ro} + H_c) \text{ where:}$$

$E_n$  is the nitrogen oxides emission limit (expressed as  $NO_2$ ), ng/J (lb/million Btu)

$EL_{go}$  is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu)

$H_{go}$  is the heat input from combustion of natural gas or distillate oil,

$EL_{ro}$  is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil,

$H_{ro}$  is the heat input from combustion of residual oil,

$EL_c$  is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

$H_c$  is the heat input from combustion of coal.

#### D.2.3 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

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- (a) Pursuant to 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), when building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity limitation established by 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6)-minute averaging periods in any twenty-four (24) hour period. [326 IAC 5-1-3(a)]
- (b) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(a), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

#### D.2.4 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

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- (a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected source, as designated by 40 CFR 63.7490(a), except when otherwise specified in 40 CFR 63 Subpart DDDDD. The Permittee must comply with these requirements on and after the effective date of 40 CFR 63, Subpart DDDDD.
- (b) Since the applicable requirements associated with the compliance options for the affected source for the large solid fuel subcategory are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.

**D.2.5 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]**

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- (a) The affected source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD), as of the effective date of 40 CFR 63, Subpart DDDDD. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart DDDDD on and after three years after the effective date of 40 CFR 63, Subpart DDDDD.
- (b) The following emissions units comprise the affected source for the large solid fuel subcategory: Boiler 5.
- (c) The definitions of 40 CFR 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected source.
- (d) Since the applicable requirements associated with the compliance options for the affected source for the large solid fuel subcategory are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition for the affected source for the large solid fuel subcategory.

**D.2.6 Operation Standards [326 IAC 2-1.1-5(a)(4)] [40 CFR 261] [40 CFR 279] [329 IAC 13]**

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- (a) All coal burned, including coal treated with any additive, shall meet ASTM specifications for classification as coal (ASTM D388).
- (b) The burning of hazardous waste, as defined by 40 CFR 261, is prohibited in this facility without a Resource Conservation and Recovery Act (RCRA) permit. Any boiler tube chemical cleaning waste liquids evaporated in the boiler, and any binding agent or used oil combusted shall meet the toxicity characteristic requirements for non-hazardous waste. These requirements are not federally enforceable pursuant to the Title V permit.
- (c) Any boiler tube chemical cleaning waste liquids evaporated in the boiler shall only contain the cleaning solution and no more than two full volume boiler rinses.

**D.2.7 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]**

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The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Boiler 5 except when otherwise specified in 40 CFR Part 60, Subpart Db.

**D.2.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its emission control devices.

**Compliance Determination Requirements**

**D.2.9 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]**

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By December 31 of the second calendar year following the most recent stack test, or within 180 days after issuance of this permit, whichever is later, compliance with the Boiler 5 PM limitation in Conditions D.2.1(b) and D.2.2(b)(1) and the CO limitation in Condition D.2.1(c) shall be determined by performance stack tests conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

#### D.2.10 Construction Permit Compliance Determination Requirements [326 IAC 2]

Pursuant to Construction Permit PC (79) 1680, issued June 6, 1988:

- (a) Compliance with the sulfur dioxide emission limitations shall be met by using a circulating fluidized bed boiler with alkali injection.
- (b) Compliance with the sulfur dioxide emission limits in Conditions D.2.1(a)(1) and D.2.2(a) shall be determined on a 30-day rolling weighted average emission basis. The emission rates shall be determined by using the SO<sub>2</sub> continuous monitoring data to calculate daily emission rates pursuant to 40 CFR 60.45b. The percent removal shall be determined by using fuel sampling and analysis to determine the incoming SO<sub>2</sub> emissions and using the SO<sub>2</sub> continuous monitoring data to determine the outlet SO<sub>2</sub> emissions, pursuant to 40 CFR 60.45b.
- (c) Compliance with the block 24 hour average sulfur dioxide emission limitation in Condition D.2.1(a)(2) shall be determined by using the continuous sulfur dioxide emission monitoring data. Excess 24 hour average emission rates due to startup and shutdown may be excluded from compliance determinations to the extent that they represent operation in a manner consistent with good air pollution control practice for minimizing emissions and are unavoidable.
- (d) Compliance with the particulate matter emissions limit of 0.05 pounds per million Btu's of heat input shall be met by using a baghouse.
- (e) Compliance with the heat input limit shall be determined on a 30-day rolling weighted average basis.

#### D.2.11 NSPS Compliance Provisions [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 326 IAC 12 and 40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units):

- (a) For sulfur dioxide:
  - (1) Compliance with the sulfur dioxide emission limits, fuel oil sulfur limits, and/or percent reduction requirements under 40 CFR 60.42b are determined on a 30-day rolling average basis. [40 CFR 60.42b(e)]
  - (2) The sulfur dioxide emission limits and percent reduction requirements under 40 CFR 60.42b apply at all times, including periods of startup, shutdown, and malfunction. [40 CFR 60.42b(g)] [40 CFR 60.45b(a)]
  - (3) Compliance with the sulfur dioxide emission limits and percent reduction requirements under 40 CFR 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for 30 successive steam generating unit operating days, except as provided under 60.42b(d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for sulfur dioxide are calculated to show compliance with the standard. [40 CFR 60.45b(g)]
  - (4) Except as provided under paragraph (i) of 40 CFR 60.45b, the owner or operator of an affected facility shall use all valid sulfur dioxide emissions data in calculating the percent sulfur dioxide emission rate (% P<sub>s</sub>) and the hourly sulfur dioxide emission rate (E<sub>ho</sub>) under paragraph (c) of 40 CFR 60.45b whether or not the minimum emissions data requirements under 40 CFR 60.46b are achieved. All valid emissions data, including valid sulfur dioxides emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating % P<sub>s</sub> and E<sub>ho</sub> pursuant to paragraph (c) of 40 CFR 60.45b. [40 CFR 60.45b(h)]

- (b) For particulate matter:

The particulate matter emission standards and opacity limits under 40 CFR 60.43b apply at all times except during periods of startup, shutdown, or malfunction. [40 CFR 60.46b(a)]

- (c) For nitrogen oxide:

- (1) The nitrogen oxides emission standards under 40 CFR 60.44b apply at all times including periods of startup, shutdown, or malfunction. [40 CFR 60.44b(h)] [40 CFR 60.46b(a)]
- (2) Compliance with the nitrogen oxide emission limits under 40 CFR 60.44b is determined on a 30-day rolling average basis. [40 CFR 60.44b(i)]
- (3) The owner or operator of an affected facility which combusts coal shall determine compliance with the nitrogen oxides emission standards under 40 CFR 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days. [40 CFR 60.46b(e)(2)]

D.2.12 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart Db] [326 IAC 2-2]

- (a) Pursuant to Construction Permit PC (79) 1680, issued June 6, 1988; 326 IAC 3-5 (Continuous Monitoring of Emissions); 326 IAC 2-2 (Prevention of Significant Deterioration); and 40 CFR 60 Subpart Db, continuous emission monitoring systems (CEMS) for Boiler 5 shall be calibrated, maintained, and operated for measuring opacity, SO<sub>2</sub>, NO<sub>x</sub> and either CO<sub>2</sub> or O<sub>2</sub>, which meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 60.47b and 60.48b.
- (b) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (c) For sulfur dioxides:
  - (1) The use of limestone injection for SO<sub>2</sub> control precludes the use of a CEM system to measure the pre-control SO<sub>2</sub> emission rates. The pre-control SO<sub>2</sub> emission rates and percent reduction shall be determined using daily as-fired fuel sampling and analysis. Pursuant to 40 CFR 60.47b(b), the owner or operator shall determine the average sulfur dioxide emissions and percent reduction by:
    - (A) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average sulfur dioxide input rate, or

- (B) Measuring sulfur dioxide according to Method 6B at the inlet or outlet to the sulfur dioxide control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable sulfur dioxide and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B, Method 6A, or a combination of Methods 6 and 3 or 3B or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.
  - (C) A daily sulfur dioxide emission rate,  $E_D$ , shall be determined using the procedure described in Method 6A, section 7.6.2 (Equation 6A-8) and stated in lb/million Btu heat input.
  - (D) The mean 30-day emission rate is calculated using the daily measured values in lb/million Btu for 30 successive steam generating unit operating days using equation 19-20 of Method 19.
  - (E) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (2) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of 40 CFR 60.47b. [40 CFR 60.47b(c)]
  - (3) The 1-hour average sulfur dioxide emission rates measured by the CEMS required by paragraph (a) of 40 CFR 60.47b and required under 40 CFR 60.13(h) is expressed in ng/J or lb/million Btu heat input and is used to calculate the average emission rates under 40 CFR 60.42b. Each 1-hour average sulfur dioxide emission rate must be based on more than 30 minutes of steam generating unit operation and include at least 2 data points with each representing a 15-minute period. Hourly sulfur dioxide emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day. [40 CFR 60.47b(d)]
  - (4) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the CEMS. [40 CFR 60.47b(e)]
  - (5) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of 40 CFR 60 Appendix B. [40 CFR 60.47b(e)(1)]

- (6) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of 40 CFR 60 Appendix F. [40 CFR 60.47b(e)(2)]
  - (7) For affected facilities combusting coal, alone or in combination with other fuels, the span value of the sulfur dioxide CEMS at the inlet to the sulfur dioxide control device is 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted. [40 CFR 60.47b(e)(3)]
- (d) For nitrogen oxides:
- (1) The continuous monitoring systems required under paragraph (b) of 40 CFR 60.48b shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]
  - (2) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of 40 CFR 60.48b and required under 40 CFR 60.13(h) shall be expressed in lb/million Btu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(b). At least two (2) data points must be used to calculate each 1-hour average. [40 CFR 60.48b(d)]
  - (3) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. [40 CFR 60.48b(e)]
  - (4) For affected facilities combusting coal, the span value for nitrogen oxides is 1,000 PPM. [40 CFR 60.48b(e)(2)]
  - (5) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [40 CFR 60.48b(f)]
- (e) For opacity:
- (1) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. [40 CFR 60.48b(e)]
  - (2) For affected facilities combusting coal, the span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent. [40 CFR 60.48b(e)(1)]
- (f) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 10-4, 40 CFR 60, or 40 CFR 75.

#### D.2.13 Operation of Baghouse [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the baghouse shall be operated at all times that Boiler 5 is in operation.

**D.2.14 Cleaning Waste Characterization [326 IAC 2-1.1-5(a)(4)] [40 CFR 261]**

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The Permittee shall use appropriate methodology as identified in 40 CFR Part 261 to characterize all boiler chemical cleaning wastes that will be evaporated, to determine compliance with the Operation Standards condition in this D section. This condition is not federally enforceable pursuant to the Title V permit.

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

**D.2.15 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) The Permittee shall record the total static pressure drop across the Boiler 5 baghouse at least once per shift when the boiler is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site with the Preventive Maintenance Plan.

**D.2.16 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) An inspection shall be performed at least once per calendar year of all bags controlling particulate emissions from Boiler 5. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
- (b) If an abnormal or improper condition is found during an inspection, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Discovery of an abnormal or improper condition is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

**D.2.17 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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In the event that bag failure has been observed, the affected baghouse compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

**D.2.18 SO<sub>2</sub> Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]**

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Whenever the SO<sub>2</sub> continuous emission monitoring system is malfunctioning or down for repairs or adjustments, the Permittee shall monitor and record boiler load, fuel sulfur content, and limestone injection rate, to demonstrate that the operation of the limestone injection system continues in a manner typical for the boiler load and sulfur content of the coal fired. Limestone injection parametric monitoring readings shall be recorded at least once per hour until the primary CEMS or a backup CEMS is brought online.

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

**D.2.19 Record Keeping Requirements**

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- (a) To document compliance with Section C - Maintenance of Continuous Opacity Monitoring Equipment, and the particulate matter and opacity requirements in Conditions D.2.1, D.2.2, D.2.3, D.2.10, D.2.12, D.2.13, D.2.15, D.2.16, and D.2.17, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits in Conditions D.2.1, D.2.2, and D.2.3.
- (1) Data and results from the most recent stack test.
  - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5-6 and 40 CFR 60.42(a)(2).
  - (3) The results of all visible emission (VE) notations and Method 9 visible emission readings taken during any periods of COM downtime.
  - (4) All baghouse parametric monitoring readings.
- (b) To document compliance with the SO<sub>2</sub> requirements in Conditions D.2.1, D.2.2, D.2.10, D.2.11, D.2.12, and D.2.18, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the applicable SO<sub>2</sub> limit(s) as required in Conditions D.2.1, D.2.2, D.2.10, D.2.11, and D.2.12. The Permittee shall maintain records in accordance with (3) and (4) below during SO<sub>2</sub> CEM system downtime.
- (1) All SO<sub>2</sub> continuous emissions monitoring data, pursuant to 326 IAC 3-5-6, 326 IAC 7-2-1(g), and 40 CFR 60.45.
  - (2) All startup periods and shutdown periods.
  - (3) All boiler load, fuel sampling and analysis, and limestone injection rate data collected for SO<sub>2</sub> CEMS downtime, in accordance with Conditions D.2.12 and D.2.18.
  - (4) Actual fuel usage during each SO<sub>2</sub> CEM system downtime.
- (c) To document compliance with the NO<sub>x</sub> requirements in Conditions D.2.2 and D.2.12, the Permittee shall maintain records of all NO<sub>x</sub> and CO<sub>2</sub> or O<sub>2</sub> continuous emissions monitoring data, pursuant to 326 IAC 3-5-6 and 40 CFR 60.45. Records shall be complete and sufficient to establish compliance with the NO<sub>x</sub> limit as required in Conditions D.2.2 and D.2.12.
- (d) To document compliance with the heat input limit in Condition D.2.1(d), the Permittee shall maintain records of Boiler 5 hourly heat input readings derived from CEMS data, or the amount of coal and the heat content of the coal fired in Boiler 5.

- (e) To document compliance with Conditions D.2.8 and D.2.16, the Permittee shall maintain records of the results of all boiler and emission control equipment inspections, including any additional inspections prescribed by the Preventive Maintenance Plan.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.20 Reporting Requirements

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- (a) A quarterly report of opacity exceedances and a quarterly summary of the information to document compliance with Conditions D.2.1, D.2.3, D.2.10, D.2.11, and D.2.12 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Pursuant to Condition D.2.10(c) regarding the block 24 hour average SO<sub>2</sub> emission limitation, the quarterly report for SO<sub>2</sub> shall explain whether any excess 24 hour average emission rates due to startup and shutdown were excluded from the compliance determination.

- (b) Pursuant to 40 CFR 60.49b, excess emissions and monitoring system performance (MSP) reports shall be submitted to the administrator semi-annually for each six month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in 40 CFR 60.7(c). The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

If the Permittee elects to combine the excess emission and MSP reports with the quarterly reports required under part (a) of this condition, the reports submitted pursuant to (a) must also include all information required in 40 CFR 60.7(c), and each report must state precisely which state and federal requirements are satisfied by the report.

- (c) All reports submitted pursuant to this condition shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (d) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

- (1) date of downtime;
- (2) time of commencement;
- (3) duration of each downtime;
- (4) reasons for each downtime; and
- (5) nature of system repairs and adjustments.

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

D.2.21 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Notification Requirements  
[40 CFR 63, Subpart DDDDD]

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- (a) Pursuant to 40 CFR 63.7545, the Permittee shall submit the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), and 63.9(b) through (h) that apply to the affected source for the large solid fuel subcategory and chosen compliance methods by the dates specified. These notifications include, but are not limited to, the following:
- (1) An Initial Notification containing the information specified in 40 CFR 63.9(b)(2) not later than 120 days after the effective date of 40 CFR 63, Subpart DDDDD as required by 40 CFR 63.7545(b).
  - (2) If required to conduct a performance test, a notification of intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required by 40 CFR 63.7(b)(1) and 40 CFR 63.7545(d).
  - (3) If required to conduct an initial compliance demonstration as specified in 40 CFR 63.7530(a), a Notification of Compliance Status containing the information required by 40 CFR 63.9(h)(2)(ii) in accordance with 40 CFR 62.7545(e).
    - (A) For each initial compliance demonstration, the Permittee shall submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations according to 40 CFR 63.10(d)(2).
    - (B) The Notification of Compliance Status shall contain the items in 40 CFR 63.7545(e)(1) through (9), as applicable.
  - (4) If required to use a continuous monitoring system (CMS), notification of a performance evaluation, if required, as specified in 40 CFR 63.9(g), by the date of submission of the notification of intent to conduct a performance test.

- (b) The notifications required by paragraph (a) shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

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

D.2.22 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12]  
[326 IAC 2-7-5]

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The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information regarding which compliance option or options will be chosen in the Part 70 permit for the affected source for the large solid fuel subcategory.

- (a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 permit the applicable requirements of 40 CFR 63, Subpart DDDDD, a description of the affected sources and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
- (b) The significant permit modification application shall be submitted no later than nine

months prior to the compliance date as specified in 40 CFR 63.7495(b).

- (c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

### SECTION D.3 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:** (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (d) One (1) natural gas and distillate fuel oil fired boiler, identified as Boiler 3, with installation started in 1973 or 1974 and completed in 1974, with a maximum capacity of 286 MMBtu/hr, exhausting to stack WADE 03. Boiler 3 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NOX).

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

##### D.3.1 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart D]

Pursuant to 326 IAC 12 and 40 CFR 60, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), emissions from Boiler No. 3 shall not exceed the following:

- (a) 0.10 pound PM per million Btu (MMBtu) heat input derived from fossil fuel. [40 CFR 60.42(a)(1)]
- (b) For opacity:
  - (1) Twenty percent (20%) opacity except for one six-minute period per hour of not more than twenty-seven percent (27%) opacity. [40 CFR 60.42(a)(2)]
  - (2) Pursuant to 40 CFR 60.11(c), the NSPS opacity standard of 40 CFR 60.42(a)(2) shall apply at all times except during periods of startup, shutdown, or malfunction. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions [40 CFR 60.11(d)].
- (c) For SO<sub>2</sub>:
  - (1) 0.80 pound SO<sub>2</sub> per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.43(a)(1)]
  - (2) When combusting different fossil fuels simultaneously, the applicable SO<sub>2</sub> limit shall be determined using the formula in 40 CFR 60.43(b).
  - (3) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels. [40 CFR 60.43(c)]
- (d) For NO<sub>x</sub>:
  - (1) 0.20 pound NO<sub>x</sub> per million Btu (MMBtu) heat input derived from gaseous fossil fuel. [40 CFR 60.44(a)(1)]
  - (2) 0.30 pound NO<sub>x</sub> per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.44(a)(2)]

- (e) The usage of distillate fuel oil in Boiler 3 shall be limited to 500,000 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (f) Any change in the type of fuel oil used in Boiler 3, other than distillate fuel oil and natural gas, must be approved by IDEM, OAQ.

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

- (a) Pursuant to 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), when building a new fire in a boiler, or shutting down a boiler, opacity may exceed the 40% opacity limitation established by 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6)-minute averaging periods in any twenty-four (24) hour period. [326 IAC 5-1-3(a)]
- (b) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(a), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

#### D.3.3 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1-2(a)(3), sulfur dioxide emissions from Boiler 3 shall not exceed five-tenths (0.5) pound per million Btu's when combusting only distillate oil or a combination of only distillate oil and natural gas.

#### D.3.4 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected source, as designated by 40 CFR 63.7506(b). The Permittee must comply with these requirements on and after the effective date of 40 CFR 63, Subpart DDDDD.

#### D.3.5 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

- (a) The affected source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD), as of the effective date of 40 CFR 63, Subpart DDDDD. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart DDDDD on and after three years after the effective date of 40 CFR 63, Subpart DDDDD.
- (b) The following emissions units comprise the affected source for the large liquid fuel subcategory: Boiler 3.
- (c) The definitions of 40 CFR 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected sources.

#### D.3.6 Operation Standards [326 IAC 2-1.1-5(a)(4)] [40 CFR 261] [40 CFR 279] [329 IAC 13]

- (a) The burning of hazardous waste, as defined by 40 CFR 261, is prohibited in this facility without a Resource Conservation and Recovery Act (RCRA) permit. Any boiler tube chemical cleaning waste liquids evaporated in the boiler, and any binding agent or used oil combusted shall meet the toxicity characteristic requirements for non-hazardous waste. These requirements are not federally enforceable pursuant to the Title V permit.
- (b) Any boiler tube chemical cleaning waste liquids evaporated in the boiler shall only contain the cleaning solution and no more than two full volume boiler rinses.

**D.3.7 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]**

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The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Boiler 3 except when otherwise specified in 40 CFR Part 60, Subpart D.

**D.3.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any emission control devices.

**Compliance Determination Requirements**

**D.3.9 Testing Requirements [326 IAC 2-7-6(1), (3), (6)] [326 IAC 2-1.1-11] [40 CFR 60.8] [40 CFR 60.46]**

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Within 180 days following issuance of this Part 70 permit, the Permittee shall conduct initial performance tests for Boiler 3 for NSPS Subpart D while firing fuel oil. Performance tests shall be conducted for particulate matter (PM), SO<sub>2</sub>, and NO<sub>x</sub>, and data reduced in accordance with the test methods and procedures contained in 40 CFR 60.8 and 40 CFR 60.46 unless the Administrator approves an alternative in accordance with 40 CFR 60.8(b).

**D.3.10 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart D] [326 IAC 2-2]**

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(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 40 CFR 60.45, continuous emission monitoring systems for Boiler 3 shall be calibrated, maintained, and operated for measuring NO<sub>x</sub> and either O<sub>2</sub> or CO<sub>2</sub>, which meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 60.45, except as provided in paragraph (b) of 40 CFR 60.45.

- (1) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. [40 CFR 60.13(b)]
  - (2) Pursuant to 40 CFR 60.13(e), except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of 40 CFR 60.13, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
    - (A) All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
  - (3) Excess NO<sub>x</sub> emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of exceed the applicable standards under 40 CFR 60.44. [40 CFR 60.45(g)(3)]
  - (4) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (b) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of 40 CFR 60 including, but not limited to, alternative monitoring requirements when the affected facility is infrequently operated. [40 CFR 60.13(i)]

“Administrator” means the Administrator of the Environmental Protection Agency or his authorized representative. [40 CFR 60.2]

- (c) If the Administrator approves alternative monitoring requirements in lieu of the COM requirements for Boiler 3, then IDEM, OAQ, may require additional PM stack testing and Method 9 opacity readings to demonstrate compliance with 326 IAC 5-1 and 326 IAC 6-2, pursuant to 326 IAC 3-5-1(c)(2)(A)(ii).
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 10-4, 40 CFR 60, or 40 CFR 75.
- (e) The following requirements shall apply in order to demonstrate compliance with 40 CFR 60, Subpart D, 326 IAC 5-1 and 326 IAC 6-2 in lieu of the COM requirements for Boiler 3 as approved by the Administrator:
  - (1) An observer certified in accordance with EPA Method 9 shall perform 6-minute visible emissions observations at least once per day during daylight hours when distillate fuel oil is burned in Boiler 3.
  - (2) If the average opacity for a 6-minute set of visible emissions observations made exceeds ten (10) percent, the observer shall collect two additional 6-minute sets of visible emissions observations for a total of three data sets. If excess emissions as defined in Condition D.3.14(b) occur during the three 6-minute sets of visible emissions observations, the observer shall collect additional 6-minute sets of visible emissions observations until excess emissions do not occur during three (3) consecutive 6-minute sets of visible emissions observations. Boiler 3 may be repaired or adjusted before the additional visible emissions observations are conducted.

D.3.11 Sulfur Dioxide Emissions and Sulfur Content [40 CFR 60.45] [326 IAC 12] [326 IAC 3]  
[326 IAC 7-2] [326 IAC 7-1.1-2 ]

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- (a) Pursuant to 40 CFR 60.45(b)(2), the Permittee shall monitor sulfur dioxide emissions by fuel sampling and analysis.
- (b) Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed the equivalents of the limits specified in Condition D.3.1(c) and D.3.3, using a calendar month average.
- (c) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7-4, fuel sampling and analysis data shall be collected as follows:
  - (1) The Permittee may rely upon vendor analysis of fuel delivered, if accompanied by a vendor certification [326 IAC 3-7-4(b)]; or,
  - (2) The Permittee shall perform sampling and analysis of fuel oil samples in accordance with 326 IAC 3-7-4(a).
    - (A) Oil samples shall be collected from the tanker truck load prior to transferring fuel to the storage tank; or
    - (B) Oil samples shall be collected from the storage tank immediately after each addition of fuel to the tank.

- (d) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]

**D.3.12 Cleaning Waste Characterization [326 IAC 2-1.1-5(a)(4)] [40 CFR 261]**

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The Permittee shall use appropriate methodology as identified in 40 CFR Part 261 to characterize all boiler chemical cleaning wastes that will be evaporated, to determine compliance with the Operation Standards condition in this D section. This condition is not federally enforceable pursuant to the Title V permit.

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

**D.3.13 Record Keeping Requirements**

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- (a) To document compliance with the particulate matter and opacity requirements in Conditions D.3.1, D.3.2, D.3.9, and D.3.10, the Permittee shall maintain records in accordance with (1) through (5) below. Records shall be complete and sufficient to establish compliance with the PM and opacity limits in Conditions D.3.1 and D.3.2.
- (1) Data and results from the most recent stack test;
  - (2) Actual distillate fuel oil usage in Boiler 3 per month since last compliance determination period.
  - (3) Calendar dates covered in the compliance determination period;
  - (4) The results of all once per day Method 9 visible emission (VE) readings and any additional VE observations due to opacity exceeding ten percent (10%).
  - (5) Hours of operation on fuel oil.
- (b) To document compliance with the SO<sub>2</sub> requirements in Conditions D.3.1, D.3.3, D.3.9, D.3.10, and D.3.11, the Permittee shall maintain records in accordance with (1) and (2) below. Records shall be complete and sufficient to establish compliance with the SO<sub>2</sub> limits in Conditions D.3.1 and D.3.3.
- (1) All fuel sampling and analysis data, pursuant to 326 IAC 7-2 and 40 CFR 60.45.
  - (2) Actual fuel usage since last compliance determination period.
- (c) To document compliance with Condition D.3.8 the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.3.14 Reporting Requirements**

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- (a) A quarterly summary of the information to document compliance with Condition D.3.1(e) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form 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 "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall submit an excess emissions report (EER) to IDEM, OAQ for each calendar quarter in which there are excess emissions of opacity during combustion of distillate fuel oil. If there are no excess emissions of opacity during a calendar quarter, the EER may be submitted on a semiannual basis. Excess emissions are defined as any 6-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one (1) 6-minute average per hour of up to 27% opacity need not be reported.
- (c) To document compliance with Condition D.3.1 and pursuant to 40 CFR 60.45(g), excess emissions and monitoring system performance (MSP) reports shall be submitted to the administrator semi-annually for each six month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in 40 CFR 60.7(c).

If the Permittee elects to combine the excess emission and MSP reports with the quarterly reports required under part (a) of this condition, the reports submitted pursuant to (a) must also include all information required in 40 CFR 60.7(c), and each report must state precisely which state and federal requirements are satisfied by the report.

These reports shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

- (d) The Permittee shall furnish the Administrator a written report of the results of the initial performance tests for NSPS Subpart D and any subsequent performance tests in accordance with 40 CFR 60.8.

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

- (e) Upon request of the IDEM, OAQ, reports of the calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per million Btus shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit. [326 IAC 7-2-1(c)(3)]

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

- (f) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

- (1) date of downtime;
- (2) time of commencement;
- (3) duration of each downtime;
- (4) reasons for each downtime; and

- (5) nature of system repairs and adjustments.

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

D.3.15 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Notification Requirements  
[40 CFR 63, Subpart DDDDD]

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(a) Pursuant to 40 CFR 63.7545(a) and 40 CFR 63.7506(b), the Permittee shall submit an Initial Notification containing the information specified in 40 CFR 63.9(b)(2) not later than 120 days after the effective date of 40 CFR 63, Subpart DDDDD as required by 40 CFR 63.7545(b).

(b) The notification required by paragraph (a) shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

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

## SECTION D.4

## FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]** (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (e) One (1) coal storage and handling system identified as COAL Segment 1, installed in 1960, with a maximum capacity of 110 tons/hr, including: truck unloading station with two (2) hoppers; outdoor coal storage piles; two (2) vibratory feeders; one (1) underground belt conveyor with a magnetic separator; and one (1) bucket elevator terminating at the top of Wade Power House. Coal is fed to the bunkers for Boilers 1 and 2, and to the precrusher ahead of the indoor storage silo for Boiler 5. Emissions from the Boiler 1 and Boiler 2 bunkers are controlled by a RotoClone for each bunker and exhaust to stack CB1 and CB2, respectively. COAL Segment 1 has been retained as a backup system for COAL Segment 2.
- (f) One (1) coal storage and handling system identified as COAL Segment 2, installed in 1996, with a maximum capacity of 150 tons/hr, including: truck unloading station with outdoor storage piles and two (2) in-ground hoppers, two (2) vibratory feeders; one (1) totally enclosed tubular conveyor identified as BC-1 equipped with a magnetic separator and with emissions controlled by a baghouse exhausting to stack CV1; one (1) transfer enclosure with one (1) coal sampler, with emissions controlled by a baghouse exhausting to stack CV2; and one (1) totally enclosed tubular conveyor identified as BC-2 terminating at the top of Wade Power House, with emissions from the final transfer point controlled by a baghouse exhausting to stack CV3. Coal is fed to the bunkers for Boilers 1 and 2, and to the precrusher ahead of the indoor storage silo for Boiler 5. Emissions from the Boiler 1 and Boiler 2 bunkers are controlled by a RotoClone for each bunker and exhaust to stack CB1 and CB2, respectively.
- (g) One (1) coal preparation system for Boiler 5, with installation started in 1989 or 1990 and completed in 1991, with a maximum capacity of 12.68 tons/hr, including: one (1) enclosed pre-crusher; one (1) coal storage silo (aka coal storage bunker) with a baghouse exhausting to stack CB5; two (2) weigh belt feeders; and two (2) enclosed crushers.

Insignificant Activities:

Coal bunker and coal scale exhausts and associated dust collector vents.

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

#### D.4.1 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart Y]

Pursuant to 326 IAC 12 and 40 CFR 60, Subpart Y (Standards of Performance for Coal Preparation Plants) the exhaust from the following coal processing and handling equipment shall not exhibit opacity greater than or equal to twenty percent (20%) [40 CFR 60.252(c)]:

- (a) the conveyors of COAL Segment 2, beginning after the coal storage piles, but not including the conveyor section(s) used solely to feed the bunkers for Boilers 1 and 2; and
- (b) the Boiler 5 coal preparation system.

#### D.4.2 PSD Minor Limit [326 IAC 2-2-1]

- (a) In order to make the requirements of 326 IAC 2-2-1(x) and 326 IAC 2-2-1(jj) (PSD Requirements) not applicable to COAL Segment 2, the emissions from the coal storage and handling equipment included in COAL Segment 2 shall be limited to less than twenty-five (25) tons of particulate matter (PM) per twelve (12) consecutive month period and less than fifteen (15) tons of PM<sub>10</sub> per twelve (12) consecutive month period. Compliance with these limits shall be determined at the end of each month.

- (b) Pursuant to Construction Permit CP 157-3617, issued July 7, 1994, emissions from the coal storage and handling equipment included in COAL Segment 2 shall be limited as follows:
- (1) Particulate matter (PM) emissions shall not exceed 5.7 pounds per hour.
  - (2)  $PM_{10}$  emissions shall not exceed 3.4 pounds per hour.
  - (3) All three baghouses (CV1, CV2, and CV3) shall remain operational at all times that the associated coal processing or conveyors are in use.

#### D.4.3 Particulate [326 IAC 6-3-2]

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- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the COAL Segment 1 shall not exceed 52.23 pounds per hour when operating at a process weight rate of 110 tons per hour, and the allowable particulate emission rate from the COAL Segment 2 shall not exceed 55.44 pounds per hour when operating at a process weight rate of 150 tons per hour. These pounds per hour limitations was calculated using the following equation:

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

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

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Boiler 5 coal preparation system shall not exceed 22.48 pounds per hour when operating at a process weight rate of 12.68 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

#### D.4.4 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

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The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the coal processing and conveying equipment identified in Condition D.4.1 except when otherwise specified in 40 CFR Part 60, Subpart Y.

#### D.4.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their emission control devices.

### Compliance Determination Requirements

#### D.4.6 NSPS Test Methods and Procedures [326 IAC 2-7-6(1), (3), (6)] [326 IAC 2-1.1-11] [40 CFR 60.8] [40 CFR 60.46]

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Within 180 days of issuance of this Part 70 permit, the Permittee shall conduct initial performance tests for NSPS Subpart Y. Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in 40 CFR 60.8 and 40 CFR 60.254 unless the Administrator approves an alternative in accordance with 40 CFR 60.8(b). [40 CFR 60.8]

**D.4.7 NSPS Compliance Provisions [326 IAC 12] [40 CFR 60, Subpart Y]**

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Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.  
[40 CFR 60.254(b)(2)]

**D.4.8 Particulate Control [326 IAC 2-7-6(6)]**

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Except as otherwise provided by statute or rule or in this permit, in order to comply with Conditions D.4.1, D.4.2, and D.4.3, the RotoClones, cartridge filters, and baghouses for particulate control shall be in operation and control emissions at all times the associated coal processing or conveying is in operation.

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

**D.4.9 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) Visible emission notations of the coal unloading station shall be performed once per shift during normal daylight operations when unloading coal. A trained employee shall record whether emissions are normal or abnormal.
- (b) Visible emission notations of each coal transfer exhaust point shall be performed once per shift during normal daylight operations when transferring coal. A trained employee shall record whether emissions are normal or abnormal.
- (c) If abnormal emissions are observed from the coal unloading station or at any transfer point exhaust, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (d) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.
- (e) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (f) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

**D.4.10 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the coal transfer drop points at least once per shift when coal is being transferred. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site with the Preventive Maintenance Plan.

D.4.11 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling particulate emissions from the coal processing or conveying. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
- (b) If an abnormal or improper condition is found during an inspection, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Discovery of an abnormal or improper condition is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.4.12 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected baghouse compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 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.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then 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).

D.4.13 RotoClone Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

An inspection shall be performed each calendar quarter of the RotoClones controlling the PM emissions. Inspections required by this condition shall not be performed in consecutive months.

D.4.14 RotoClone Failure Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that RotoClone failure has been observed:

The 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

### **D.4.15 Record Keeping Requirements**

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- (a) To document compliance with conditions D.4.1, D.4.2, D.4.3, and D.4.9, the Permittee shall maintain records of the visible emission notations of the coal unloading and coal transfer exhaust points.
- (b) To document compliance with Condition D.4.10 the Permittee shall maintain records of the total static pressure drop across each baghouse.
- (c) To document compliance with Condition D.4.11, the Permittee shall maintain records of the results of the baghouse inspections.
- (c) To document compliance with Condition D.4.13, the Permittee shall maintain records of the results of the RotoClone inspections.
- (d) To document compliance with Condition D.4.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### **D.4.16 Reporting Requirements**

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The Permittee shall furnish the Administrator a written report of the results of the initial performance tests for NSPS Subpart Y and any subsequent performance tests in accordance with 40 CFR 60.8.

## SECTION D.5

## FACILITY CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:** (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (h) One (1) pneumatic ash handling system for fly ash and bottom ash from Boilers 1 and 2, identified as ASH Segment 1, with a maximum capacity of 14 tons per hour, installed in approximately 1960 and modified in 2002. Ash/particulate matter collected from the primary, secondary and tertiary (baghouse) collection units is transferred to the existing ash silo. Ash accumulated in this silo is removed via a water mixer into trucks. Particulate matter that passes through the tertiary (baghouse) filter is exhausted to stack ASH1 while air from the ash silo is directed to a final filter before exhausting to stack AB1. Ash/particulate matter is transported through the system by an electric vacuum pump.

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

#### D.5.1 PSD Minor Limit [326 IAC 2-2-1]

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- (a) In order to make the requirements of 326 IAC 2-2-1(x) and 326 IAC 2-2-1(jj) (PSD Requirements) not applicable to the ash handling system identified as Ash Segment 1, the emissions from Ash Segment 1 shall be limited to less than twenty-five (25) tons of particulate matter (PM) per twelve (12) consecutive month period and less than fifteen (15) tons of PM<sub>10</sub> per twelve (12) consecutive month period. Compliance with these limits shall be determined at the end of each month.
- (b) Emissions from the ash handling equipment included in Ash Segment 1 shall be limited as follows:
- (1) Particulate matter (PM) emissions shall not exceed 5.7 pounds per hour.
  - (2) PM<sub>10</sub> emissions shall not exceed 3.4 pounds per hour.

#### D.5.2 Particulate [326 IAC 6-3-2]

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Pursuant to Minor Source Mod 157-15659-00012, issued September 23, 2002, and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the ash handling system identified as ASH Segment 1 shall not exceed 24.03 pounds per hour when operating at a process weight rate of 14 tons per hour.

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

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

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

#### D.5.3 Preventative Maintenance Plan [326 IAC 2-7-5(1)(13)]

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A Preventative Maintenance Plan, in accordance with section C - Preventative Maintenance Plan, of this permit, is required for these facilities and their emission control devices.

## Compliance Determination Requirements

### D.5.4 Particulate Control [326 IAC 2-7-10.5(d)(5)(C)]

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Pursuant to Minor Source Mod 157-15659-00012, issued September 23, 2002:

- (a) The fresh water/mixing operation for the ash truck loading system shall be in operation and control the PM emissions from the ash at all times that the ash truck loading system is in operation.
- (b) The baghouse of ASH1 stack and air filter for AB1 stack for PM control, shall be in operation and control the PM emissions from ash system at all times that the ash storage and handling system is in operation.

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

### D.5.5 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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- (a) Once per shift visible emission notations of the ASH1 and AB1 exhaust stacks shall be performed during normal daylight operations and when the silo is receiving ash. A trained employee shall record whether emissions are normal or abnormal.
- (b) Once per shift visible emission notations of the ash truck loading system shall be performed during normal daylight operations when the ash trucks are receiving ash. A trained employee shall record whether emissions are normal or abnormal.
- (c) If abnormal emissions are observed from the ash silo unloading station or at any baghouse exhaust, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (d) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (e) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (f) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

### D.5.6 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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- (a) The Permittee shall record the total static pressure drop across the baghouse and air filter controlling emissions from the ash handling system, at least once per shift when the ash handling system is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 4.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from

this permit.

- (b) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site with the Preventive Maintenance Plan.

**D.5.7 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) An inspection shall be performed each calendar quarter of all bags controlling particulate emissions from the ash handling operation. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
- (b) If an abnormal or improper condition is found during an inspection, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Discovery of an abnormal or improper condition is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

**D.5.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 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.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then 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).

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

**D.5.9 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.5.1, D.5.2, and D.5.5, the Permittee shall maintain records of the visible emission notations of the ash silo unloading station, and the baghouse stack exhaust.
- (b) To document compliance with Condition D.5.6, the Permittee shall maintain records of the total static pressure drop across each baghouse.
- (c) To document compliance with Condition D.5.7, the Permittee shall maintain records of the results of the baghouse inspections.

- (d) To document compliance with Condition D.5.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.6 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:** (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (i) One (1) pneumatic ash handling system for fly ash and bottom ash from Boiler 5, identified as ASH Segment 2, installed in 1991 and modified in 2002, exhausting to stacks ASH5A and ASH5B, with a maximum capacity of 20 tons/hr, with dust from ash transfer to the storage silo controlled by primary and secondary separator with tertiary baghouse filter. Ash is transferred from the silo to trucks at a maximum capacity of 300 tons/hr; dust is controlled by water mix, or by use of a telescoping spout with air displaced from the truck directed through a "filter module" with five canister filters which exhaust to the atmosphere through a vent, ASH 5C.

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

#### D.6.1 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the pneumatic ash handling system for Boiler 5 shall not exceed 30.5 pounds per hour when operating at a process weight rate of 20 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

- (b) Pursuant to 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes), for the ash unloading at the maximum throughput rate of 300 tons per hour, the concentration of particulate in the discharge gases to the atmosphere shall be less than 0.10 pounds per one thousand (1,000) pounds of gases.

#### D.6.2 Preventative Maintenance Plan [326 IAC 2-7-5(1)(13)]

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

### Compliance Determination Requirements

#### D.6.3 Particulate Control [326 IAC 2-7-6(6)]

- (a) Except as otherwise provided by statute or rule or in this permit, in order to comply with Section C - Opacity and Condition D.6.1 (Particulate), the baghouse filters for particulate control shall be in operation and control emissions at all times that the associated ash handling is in operation; the telescoping spout shall be in operation and control emissions at all times that the dry ash loading system is in operation; and water shall be mixed with the ash at all times to control emissions when the wet process ash loading system.
- (b) Pursuant to Minor Source Modification 157-15996-00012, issued February 17, 2003, the filter module and canister filters for the dry ash loading system, for PM control shall be in operation and control the PM emissions at all times that the dry ash loading system is in operation.

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

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

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- (a) Visible emission notations of the ASH5A and ASH5B exhaust stacks shall be performed at least once per shift during normal daylight operations when transferring ash. Visible emission notations of the ASH5C exhaust vent shall be performed at least once per shift during normal daylight operations when the dry ash truck loading system is in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) If abnormal emissions are observed from the ash silo unloading station or at any baghouse or filter module exhaust, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (c) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.
- (d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

### **D.6.5 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) The Permittee shall record the total static pressure drop across the ash silo baghouse at least once per shift when the ash handling is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The Permittee shall record the total static pressure drop across the air filters controlling emissions from the dry ash truck loading system, at least once per shift when the dry ash truck loading system is in operation. When for any one reading, the pressure drop across the air filter is outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (c) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site with the Preventive Maintenance Plan.

**D.6.6 Baghouse and Filter Module Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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- (a) An inspection shall be performed each calendar quarter of all bags and canister filters controlling particulate emissions from the ash handling. Inspections required by this condition shall not be performed in consecutive months. All defective bags or filters shall be replaced.
- (b) If an abnormal or improper condition is found during an inspection, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Discovery of an abnormal or improper condition is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

**D.6.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected baghouse compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 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.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then 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).

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

**D.6.8 Record Keeping Requirements**

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- (a) To document compliance with Condition D.6.4, the Permittee shall maintain records of the visible emission notations of the ASH5A and ASH5B exhaust stacks and the exhaust vent ASH 5C.
- (b) To document compliance with Condition D.6.5, the Permittee shall maintain records of the total static pressure drop across each baghouse.
- (c) To document compliance with Condition D.6.6, the Permittee shall maintain records of the results of the baghouse and filter module inspections.
- (d) To document compliance with Condition D.6.2, the Permittee shall maintain records of

any additional inspections prescribed by the Preventive Maintenance Plan.

- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.7

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (j) Material handling for the limestone injection system for Boiler 5, including pneumatic conveyance from truck to bulk storage in a silo outside or to a "day bin" inside the plant at an offload rate of approximately 12.5 tons per hour; gravity fed from day bin into the boiler. Particulate emissions are controlled by a baghouse on the silo and filter cartridges on the day bin. The feed rate of limestone to the boiler varies depending on the sulfur content of the coal being fired; the average feed rate is 1 ton per hour, and the maximum rate is approximately 5 tons/hour.

Insignificant Activity:

Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983.

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

#### D.7.1 Particulate [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 limestone handling system shall not exceed 22.2 pounds per hour when operating at a process weight rate of 12.5 tons per hour. This pounds per hour limitation was calculated using the following equation:

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

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

#### D.7.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

### Compliance Determination Requirements

#### D.7.3 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the baghouse and filter cartridges for PM control shall be in operation and control emissions at all times the associated limestone transfer points are in operation.

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

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

- (a) Visible emission notations of the limestone handling system exhaust points shall be performed at least once per shift during normal daylight operations when limestone is being transferred. A trained employee shall record whether emissions are normal or abnormal.

- (b) If visible emissions are observed crossing the property line or boundaries of the property, right-of-way, or easement on which the source is located, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports.
- (c) If abnormal emissions are observed from a limestone handling system exhaust point, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of an abnormal emission that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (d) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (e) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (f) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

D.7.5 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the limestone storage silo at least once per shift when limestone is being transferred into the silo. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site with the Preventive Maintenance Plan.

D.7.6 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling particulate emissions from the limestone storage silo and all filter cartridges controlling particulate emissions from the limestone day bin. Inspections required by this condition shall not be performed in consecutive months. All defective filters shall be replaced.
- (b) If an abnormal or improper condition is found during an inspection, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Discovery of an abnormal or improper condition is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

**D.7.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected baghouse compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 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.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then 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).

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

**D.7.7 Record Keeping Requirements**

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- (a) To document compliance with Condition D.7.4, the Permittee shall maintain records of the visible emission notations of the limestone exhaust vents.
- (b) To document compliance with Condition D.7.5, the Permittee shall maintain records of the total static pressure drop across each baghouse.
- (c) To document compliance with Condition D.7.6, the Permittee shall maintain records of the results of the baghouse inspections.
- (c) To document compliance with Condition D.7.2, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.8

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (k) One (1) 6.5 MMBtu/hr natural gas fired dual chamber animal carcass incinerator, identified as ADDL, installed in 1991, with an 800 lb/hr waste capacity, exhausting to stack PUADDL1.

Insignificant Activities:

- (1) One (1) No. 2 fuel oil fired animal carcass incinerator for poultry, installed in 1991 or 1992, with an afterburner and a 100 lb/hr waste capacity, located at the animal sciences farm, 5675 W 600 N, West Lafayette, Indiana;
- (2) One (1) No. 2 fuel oil fired animal carcass incinerator for swine, installed in 1991 or 1992, with an afterburner and a 100 lb/hr waste capacity, located at the animal sciences farm, 5675 W 600 N, West Lafayette, Indiana;
- (3) One (1) natural gas fired incinerator identified as RAD1, installed in 1986, with primary and secondary chambers and a 50 lb/hr waste capacity, for burning laboratory waste and non-infectious biological material contaminated with low level radioactivity, located at the By-Product Material Storage Building North (BMSN).
- (4) One (1) natural gas fired incinerator identified as RAD2, installed in 1996, with an afterburner and a 50 lb/hr waste capacity, for burning laboratory waste and non-infectious biological material contaminated with low level radioactivity, located at the By-Product Material Storage Building North (BMSN).

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

#### D.8.1 Incinerators [326 IAC 4-2-2]

- (a) Pursuant to 326 IAC 4-2-2 (Incinerators), all incinerators shall comply with the following requirements:
- (1) Consist of primary and secondary chambers or the equivalent.
  - (2) Be equipped with a primary burner unless burning only wood products.
  - (3) Comply with 326 IAC 5-1 and 326 IAC 2.
  - (4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in subsection (c).
  - (5) Not emit particulate matter in excess of one (1) of the following:
    - (A) For RAD1, with a 250 lb/hr waste capacity:

Three-tenths (0.3) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.
    - (B) For the poultry and swine incinerators, each with a 100 lb/hr waste capacity, and for RAD2, with a 50 lb/hr waste capacity:

Five-tenths (0.5) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with solid waste capacity less than two hundred (200) pounds per hour.

- (6) If any of the requirements of subdivisions (1) through (5) are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.
- (b) An incinerator is exempt from subsection (a)(5) if subject to a more stringent particulate matter emission limit in 40 CFR 52 Subpart P\*, State Implementation Plan for Indiana.
- (c) An owner or operator developing an operation and maintenance plan pursuant to subsection (a)(4) must comply with the following:
  - (1) The operation and maintenance plan must be designed to meet the particulate matter emission limitation specified in subsection (a)(5) and include the following:
    - (A) Procedures for receiving, handling, and charging waste.
    - (B) Procedures for incinerator startup and shutdown.
    - (C) Procedures for responding to a malfunction.
    - (D) Procedures for maintaining proper combustion air supply levels.
    - (E) Procedures for operating the incinerator and associated air pollution control systems.
    - (F) Procedures for handling ash.
    - (G) A list of wastes that can be burned in the incinerator.
  - (2) Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter.
  - (3) The operation and maintenance plan must be readily accessible to incinerator operators.
  - (4) The owner or operator of the incinerator shall notify the department, in writing, thirty (30) days after the operation and maintenance plan is initially developed pursuant to this section.
- (d) The owner or operator of the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

**D.8.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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

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

### **D.8.3 Record Keeping Requirements**

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- (a) To document compliance with Condition D.8.2, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
  
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (l) One (1) 17.7 MMBtu/hr no. 2 fuel oil fired Black Start electric generator, identified as BSG, exhausting through stack BSG-1, with a fuel limit of 113,000 gallons per year.

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

#### D.9.1 Source Modification Limits [326 IAC 2-7-10.5(d)(5)(D)] [326 IAC 2-2-1]

- (a) Pursuant to 326 IAC 2-7-10.5(d)(5) (Source Modifications), the potential to emit of nitrogen oxides (NO<sub>x</sub>) from the Black Start generator shall be limited to less than 25 tons per year, as follows:
- (1) The input of No. 2 fuel oil to the generator, BSG, shall be limited to less than 113,000 gallons per 12 consecutive month period, with compliance determined at the end of each month.
  - (2) NO<sub>x</sub> emissions shall not exceed 3.2 lb/MMBtu.
- (b) Compliance with this limit makes 326 IAC 2-7-10.5(f), (g), and (h) ("Significant Source Modifications") not applicable to this modification.
- (c) Compliance with this limit also makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-1.1-4 (Federal Provisions) not applicable to this modification.

#### D.9.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this approval, is required for this facility.

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

#### D.9.3 Record Keeping Requirements

- (a) Pursuant to Minor Source Modification 157-10906-00012, issued August 27, 1999, to document compliance with Condition D.9.1, the Permittee shall maintain records in accordance with (1) through (6) below.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel oil usage since last compliance determination period and equivalent nitrogen oxides (NO<sub>x</sub>) 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; and
  - (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) All records shall be maintained in accordance with Section C - General Record Keeping

Requirements, of this permit.

#### D.9.4 Reporting Requirements

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A quarterly summary of the information to document compliance with Condition D.9.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this approval, 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 "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.10

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Insignificant Activities:

Boilers using the following fuels:

- (A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including three (3) natural gas fired Aviation Tech Building Boilers with low-NO<sub>x</sub> combustion systems, installed in 2000, each with 2.8 MMBtu/hr heat input capacity, identified as AV Tech Boiler 1, AV Tech Boiler 2, and AV Tech Boiler 3.
- (B) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
- (C) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.

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

#### D.10.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission Limitations for Facilities Specified in 326 IAC 6-2-1(d)), the PM emissions from each of the boilers classified as an insignificant activity shall not exceed 0.1 pound per million Btu heat input (lb/MMBtu).

## SECTION D.11 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (m) Two (2) portable pumps powered by 350 HP no. 2 diesel fueled engines and mounted on tri-axle trailers, located at the Animal Sciences Research and Education Center, operated intermittently (approximately 500 hours per year each), used for pumping lagoon material to the spray irrigation system and to transfer material from one lagoon to another.

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

#### D.11.1 Sulfur Dioxide Emission Limitations [326 IAC 7-1.1]

Pursuant to Minor Source Modification 157-15944-00012, issued October 21, 2002, and 326 IAC 7-1.1-2, the sulfur dioxide emissions from fuel combustion facilities shall not exceed five-tenths (0.5) pound per million Btu for distillate oil combustion.

### Compliance Determination Requirements

#### D.11.2 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

Compliance with Condition D.11.1 shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed the equivalent of five-tenths (0.5) pound per million Btu heat input.
- (b) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7-4, fuel sampling and analysis data shall be collected as follows:
- (1) The Permittee may rely upon vendor analysis of fuel delivered, if accompanied by a vendor certification [326 IAC 3-7-4(b)]; or,
  - (2) The Permittee shall perform sampling and analysis of fuel oil samples in accordance with 326 IAC 3-7-4(a).
    - (A) Oil samples shall be collected from the tanker truck load prior to transferring fuel to the storage tank; or
    - (B) Oil samples shall be collected from the storage tank immediately after each addition of fuel to the tank.

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

#### D.11.3 Record Keeping Requirements

- (a) To document compliance with the requirements in Conditions D.11.1 and D.11.2, the Permittee shall maintain records of all fuel sampling and analysis data, pursuant to 326 IAC 7-2. Records shall be complete and sufficient to establish compliance with the SO<sub>2</sub> limit in Condition D.11.1.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.12 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

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

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

Cleaners and solvents characterized as follows: [326 IAC 8-3]

Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;

Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

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

#### D.12.1 Organic Solvent Degreasing Operations: Cold Cleaner Operation [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

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

#### D.12.2 Organic Solvent Degreasing Operations: Cold Cleaner Degreaser Operation and Control [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs, constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

- (B) The solvent is agitated; or
  - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38<sup>o</sup>C) (one hundred degrees Fahrenheit (100<sup>o</sup>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<sup>o</sup>C) (one hundred degrees Fahrenheit (100<sup>o</sup>F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9<sup>o</sup>C) (one hundred twenty degrees Fahrenheit (120<sup>o</sup>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.

## SECTION D.13

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Insignificant Activities:**

The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume.

Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

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

#### D.13.1 Particulate [326 IAC 6-3-2] [40 CFR 52 Subpart P]

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) 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. This condition is not federally enforceable.
- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the brazing, cutting, soldering, welding, melt furnace(s), grinding, and machining operations shall not exceed an amount determined by the following, for a process weight rate equal to or greater than 100 pounds per hour:

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:

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

#### D.13.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

### Compliance Determination Requirement

#### D.13.3 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the particulate control shall be in operation and control emissions from the grinding and machining operations at all times that the associated process is in operation.

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

**D.13.4 Record Keeping Requirements**

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- (a) To document compliance with Condition D.13.2, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION E Nitrogen Oxides Budget Trading Program - NO<sub>x</sub> Budget Permit for NO<sub>x</sub> Budget Units Under 326 IAC 10-4-1(a)**

**ORIS Code:** 50240

NO<sub>x</sub> Budget Source [326 IAC 2-7-5(15)] (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (a) One (1) spreader stoker coal fired boiler, identified as Boiler 1, with installation completed in 1960, with a maximum capacity of 281 MMBtu/hr, with a multi-cyclone collector and an electrostatic precipitator for particulate matter control, exhausting to stack WADE 01. Boiler 1 has two (2) auxiliary natural gas fired burners rated at 35 MMBtu/hr per burner, used for ignition and flame stabilization periods. Boiler 1 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NO<sub>x</sub>) and a continuous opacity monitor (COM).
- (b) One (1) spreader stoker coal fired boiler, identified as Boiler 2, with installation completed in 1967, with a maximum capacity of 274 MMBtu/hr, with a multi-cyclone collector and an electrostatic precipitator for particulate matter control, exhausting to stack WADE 02. Boiler 2 has two (2) auxiliary natural gas fired burners rated at 35 MMBtu/hr per burner, used for ignition and flame stabilization periods. Boiler 2 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NO<sub>x</sub>) and a continuous opacity monitor (COM).
- (c) One (1) circulating fluidized bed coal fired boiler, identified as Boiler 5, with installation completed in 1991, with a design capacity of 279 MMBtu/hr, with a baghouse for particulate matter control and limestone injection for sulfur dioxide control, combusting natural gas for ignition, exhausting to stack WADE 05. Boiler 5 has continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) and a continuous opacity monitor (COM).
- (d) One (1) natural gas and distillate fuel oil fired boiler, identified as Boiler 3, with installation started in 1973 or 1974 and completed in 1974, with a maximum capacity of 286 MMBtu/hr, exhausting to stack WADE 03. Boiler 3 has a continuous emissions monitoring system (CEMS) for nitrogen oxides (NO<sub>x</sub>).

**E.1 Automatic Incorporation of Definitions [326 IAC 10-4-7(e)]**

This NO<sub>x</sub> budget permit is deemed to incorporate automatically the definitions of terms under 326 IAC 10-4-2.

**E.2 Standard Permit Requirements [326 IAC 10-4-4(a)]**

- (a) The owners and operators of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit shall operate each unit in compliance with this NO<sub>x</sub> budget permit.
- (b) The NO<sub>x</sub> budget units subject to this NO<sub>x</sub> budget permit include the following: Boiler 1, Boiler 2, Boiler 5, and Boiler 3.

**E.3 Monitoring Requirements [326 IAC 10-4-4(b)]**

- (a) The owners and operators and, to the extent applicable, the NO<sub>x</sub> authorized account representative of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit at the source shall comply with the monitoring requirements of 40 CFR 75 and 326 IAC 10-4-12.
- (b) The emissions measurements recorded and reported in accordance with 40 CFR 75 and 326 IAC 10-4-12 shall be used to determine compliance by each unit with the NO<sub>x</sub> budget emissions limitation under 326 IAC 10-4-4(c) and Condition E.4, Nitrogen Oxides Requirements.

E.4 Nitrogen Oxides Requirements [326 IAC 10-4-4(c)]

- (a) The owners and operators of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit at the source shall hold NO<sub>x</sub> allowances available for compliance deductions under 326 IAC 10-4-10(j), as of the NO<sub>x</sub> allowance transfer deadline, in each unit's compliance account and the source's overdraft account in an amount:
- (1) Not less than the total NO<sub>x</sub> emissions for the ozone control period from the unit, as determined in accordance with 40 CFR 75 and 326 IAC 10-4-12;
  - (2) To account for excess emissions for a prior ozone control period under 326 IAC 10-4-10(k)(5); or
  - (3) To account for withdrawal from the NO<sub>x</sub> budget trading program, or a change in regulatory status of a NO<sub>x</sub> budget opt-in unit.
- (b) Each ton of NO<sub>x</sub> emitted in excess of the NO<sub>x</sub> budget emissions limitation shall constitute a separate violation of the Clean Air Act (CAA) and 326 IAC 10-4.
- (c) Each NO<sub>x</sub> budget unit shall be subject to the requirements under (a) above and 326 IAC 10-4-4(c)(1) starting on May 31, 2004.
- (d) NO<sub>x</sub> allowances shall be held in, deducted from, or transferred among NO<sub>x</sub> allowance tracking system accounts in accordance with 326 IAC 10-4-9 through 11, 326 IAC 10-4-13, and 326 IAC 10-4-14.
- (e) A NO<sub>x</sub> allowance shall not be deducted, in order to comply with the requirements under (a) above and 326 IAC 10-4-4(c)(1), for an ozone control period in a year prior to the year for which the NO<sub>x</sub> allowance was allocated.
- (f) A NO<sub>x</sub> allowance allocated under the NO<sub>x</sub> budget trading program is a limited authorization to emit one (1) ton of NO<sub>x</sub> in accordance with the NO<sub>x</sub> budget trading program. No provision of the NO<sub>x</sub> budget trading program, the NO<sub>x</sub> budget permit application, the NO<sub>x</sub> budget permit, or an exemption under 326 IAC 10-4-3 and no provision of law shall be construed to limit the authority of the U.S. EPA or IDEM, OAQ to terminate or limit the authorization.
- (g) A NO<sub>x</sub> allowance allocated under the NO<sub>x</sub> budget trading program does not constitute a property right.
- (h) Upon recordation by the U.S. EPA under 326 IAC 10-4-10, 326 IAC 10-4-11, or 326 IAC 10-4-13, every allocation, transfer, or deduction of a NO<sub>x</sub> allowance to or from each NO<sub>x</sub> budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, this NO<sub>x</sub> budget permit of the NO<sub>x</sub> budget unit by operation of law without any further review.

E.5 Excess Emissions Requirements [326 IAC 10-4-4(d)]

The owners and operators of each NO<sub>x</sub> budget unit that has excess emissions in any ozone control period shall do the following:

- (a) Surrender the NO<sub>x</sub> allowances required for deduction under 326 IAC 10-4-10(k)(5).
- (b) Pay any fine, penalty, or assessment or comply with any other remedy imposed under 326 IAC 10-4-10(k)(7).

E.6 Record Keeping Requirements [326 IAC 10-4-4(e)] [326 IAC 2-7-5(3)]

Unless otherwise provided, the owners and operators of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit at the source shall keep, either on site at the source or at a central location within Indiana for those owners or operators with unattended sources, each of the following documents for a period of five (5) years:

- (a) The account certificate of representation for the NO<sub>x</sub> authorized account representative for the source and each NO<sub>x</sub> budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 326 IAC 10-4-6(h). The certificate and documents shall be retained either on site at the source or at a central location within Indiana for those owners or operators with unattended sources beyond the five (5) year period until the documents are superseded because of the submission of a new account certificate of representation changing the NO<sub>x</sub> authorized account representative.
- (b) All emissions monitoring information, in accordance with 40 CFR 75 and 326 IAC 10-4-12, provided that to the extent that 40 CFR 75 and 326 IAC 10-4-12 provide for a three (3) year period for record keeping, the three (3) year period shall apply.
- (c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the NO<sub>x</sub> budget trading program.
- (d) Copies of all documents used to complete a NO<sub>x</sub> budget permit application and any other submission under the NO<sub>x</sub> budget trading program or to demonstrate compliance with the requirements of the NO<sub>x</sub> budget trading program.

This period may be extended for cause, at any time prior to the end of five (5) years, in writing by IDEM, OAQ or the U.S. EPA. Records retained at a central location within Indiana shall be available immediately at the location and submitted to IDEM, OAQ or U.S. EPA within three (3) business days following receipt of a written request. Nothing in 326 IAC 10-4-4(e) shall alter the record retention requirements for a source under 40 CFR 75. Unless otherwise provided, all records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

E.7 Reporting Requirements [326 IAC 10-4-4(e)]

- (a) The NO<sub>x</sub> authorized account representative of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit at the source shall submit the reports and compliance certifications required under the NO<sub>x</sub> budget trading program, including those under 326 IAC 10-4-8, 326 IAC 10-4-12, or 326 IAC 10-4-13.
- (b) Pursuant to 326 IAC 10-4-6(e), each submission shall include the following certification statement by the NO<sub>x</sub> authorized account representative: "I am authorized to make this submission on behalf of the owners and operators of the NO<sub>x</sub> budget sources or NO<sub>x</sub> budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."
- (c) Where 326 IAC 10-4 requires a submission to IDEM, OAQ, the NO<sub>x</sub> authorized account representative shall submit required information to:

Indiana Department of Environmental Management  
Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (d) Where 326 IAC 10-4 requires a submission to U.S. EPA, the NO<sub>x</sub> authorized account representative shall submit required information to:

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

E.8 Liability [326 IAC 10-4-4(f)]

The owners and operators of each NO<sub>x</sub> budget source shall be liable as follows:

- (a) Any person who knowingly violates any requirement or prohibition of the NO<sub>x</sub> budget trading program, a NO<sub>x</sub> budget permit, or an exemption under 326 IAC 10-4-3 shall be subject to enforcement pursuant to applicable state or federal law.
- (b) Any person who knowingly makes a false material statement in any record, submission, or report under the NO<sub>x</sub> budget trading program shall be subject to criminal enforcement pursuant to the applicable state or federal law.
- (c) No permit revision shall excuse any violation of the requirements of the NO<sub>x</sub> budget trading program that occurs prior to the date that the revision takes effect.
- (d) Each NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit shall meet the requirements of the NO<sub>x</sub> budget trading program.
- (e) Any provision of the NO<sub>x</sub> budget trading program that applies to a NO<sub>x</sub> budget source, including a provision applicable to the NO<sub>x</sub> authorized account representative of a NO<sub>x</sub> budget source, shall also apply to the owners and operators of the source and of the NO<sub>x</sub> budget units at the source.
- (f) Any provision of the NO<sub>x</sub> budget trading program that applies to a NO<sub>x</sub> budget unit, including a provision applicable to the NO<sub>x</sub> authorized account representative of a NO<sub>x</sub> budget unit, shall also apply to the owners and operators of the unit. Except with regard to the requirements applicable to units with a common stack under 40 CFR 75 and 326 IAC 10-4-12, the owners and operators and the NO<sub>x</sub> authorized account representative of one (1) NO<sub>x</sub> budget unit shall not be liable for any violation by any other NO<sub>x</sub> budget unit of which they are not owners or operators or the NO<sub>x</sub> authorized account representative and that is located at a source of which they are not owners or operators or the NO<sub>x</sub> authorized account representative.

E.9 Effect on Other Authorities [326 IAC 10-4-4(g)]

No provision of the NO<sub>x</sub> budget trading program, a NO<sub>x</sub> budget permit application, a NO<sub>x</sub> budget permit, or an exemption under 326 IAC 10-4-3 shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the NO<sub>x</sub> authorized account representative of a NO<sub>x</sub> budget source or NO<sub>x</sub> budget unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the CAA.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Purdue University  
Source Address: 401 S. Grant Street, 1665 L..J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Mailing Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Part 70 Permit No.: T157-7340-00012

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Purdue University  
Source Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Mailing Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Part 70 Permit No.: T157-7340-00012

**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"><li>C The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and</li><li>C The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.</li></ul> |
|--|

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

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

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

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , 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

### Boiler 1 and 2 Natural Gas Usage - Quarterly Report

Source Name: Purdue University  
Emission Unit Location: Wade Powerhouse, West Lafayette, IN  
Mailing Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Source Modification No.: 157-10906-00012  
Facility: Boiler 1 and Boiler 2 - natural gas-fired burners  
Parameter: natural gas usage  
Limit: not more than 395 MMCF per 12 consecutive month period

YEAR:

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

No deviation occurred in this quarter.

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

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

### Fuel Oil-Fired Electric Generator (BSG) Quarterly Report

Source Name: Purdue University  
Emission Unit Location: Wade Powerhouse, West Lafayette, IN  
Mailing Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Source Modification No.: 157-10906-00012  
Facility: 17.7 MMBtu/hr electric generator, BSG  
Parameter: no. 2 fuel oil usage  
Limit: less than 113,000 gallons per 12 consecutive month period

YEAR:

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

No deviation occurred in this quarter.

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

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

### Boiler 3 Fuel Usage Limit - Quarterly Report

Source Name: Purdue University  
Emission Unit Location: Wade Powerhouse, West Lafayette, IN  
Mailing Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Permit Modification No.: 157-19509-00012  
Facility: 286 MMBtu/hr Boiler (Boiler 3)  
Parameter: distillate fuel oil usage (opacity)  
Limit: The usage of distillate fuel oil in Boiler 3 shall be limited to 500,000 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:

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

9 No deviation occurred in this quarter.

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

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

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

Source Name: Purdue University  
Source Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Mailing Address: 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services,  
West Lafayette, Indiana, 47907-1665  
Part 70 Permit No.: T157-7340-00012

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

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".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

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

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**Addendum to the Technical Support Document for a  
Significant Permit Modification to a Part 70 Permit**

**Source Background and Description**

<b>Source Name:</b>	<b>Purdue University</b>
<b>Source Location:</b>	<b>1665 L.J. Freehafer Hall of Administrative Services West Lafayette, Indiana 47907-1665</b>
<b>County:</b>	<b>Tippecanoe</b>
<b>SIC Code:</b>	<b>8221</b>
<b>Operation Permit No.:</b>	<b>T157-7340-00012</b>
<b>Permit Modification No.:</b>	<b>SPM157-19509-00012</b>
<b>Permit Reviewer:</b>	<b>Linda Quigley/EVP</b>

On December 6, 2004, the Office of Air Quality (OAQ) had a notice published in the Journal & Courier in Lafayette, Indiana, stating that Purdue University had applied for a Permit Modification to their Part 70 Operating Permit to remove the requirement to install and operate a Continuous Opacity Monitor (COM) for Boiler #3 and to incorporate a fuel usage limitation. The notice also stated that OAQ proposed to issue a Significant Permit Modification for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this modification should be issued as proposed.

On December 16, 2004, Purdue University submitted comments on the proposed Significant Permit Modification. The summary of comments and corresponding responses are as follows (bolded language has been added and the language with a line through it has been deleted):

**Comment 1**

Condition D.3.1(e) and D.3.13(a)(2) – These conditions both contain the phrase “distillate fuel oil and distillate fuel oil equivalents.” It is not clear to Purdue what is intended by reference to “distillate fuel oil equivalents” in these conditions. Purdue believes that the phrase “distillate fuel oil equivalents” can simply be removed from both of these conditions. In the event that IDEM wishes to retain this language in the permit, Purdue requests that this term be defined in the text of the permit.

**Response 1**

Condition D.3.1(e) limits the amount of distillate fuel oil that can be burned in Boiler 3. It is possible for Boiler 3 to burn other types of fuel oils. Therefore, it is necessary to specify in the condition that the limit of 500,000 U.S. gallons of distillate oil does not necessarily apply to all types of oil, but rather the equivalent gallons based on emissions. However, according to Purdue, this boiler will not burn any fuel other than distillate fuel and natural gas, therefore D.3.1(f) has been added to state that any change in the type of fuel oil used, other than distillate fuel oil and natural gas, must be approved by IDEM, OAQ.

**D.3.1 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart D]**

- 
- (e) The usage of distillate fuel oil ~~and distillate fuel oil equivalents~~ in Boiler 3 shall be limited to 500,000 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  
  - (f) **Any change in the type of fuel oil used in Boiler 3, other than distillate fuel oil and natural gas, must be approved by IDEM, OAQ.**

### D.3.13 Record Keeping Requirements

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- (a) To document compliance with the particulate matter and opacity requirements in Conditions D.3.1, D.3.2, D.3.9, and D.3.10, the Permittee shall maintain records in accordance with (1) through (5) below. Records shall be complete and sufficient to establish compliance with the PM and opacity limits in Conditions D.3.1 and D.3.2.
- (1) Data and results from the most recent stack test;
  - (2) Actual distillate fuel oil and distillate fuel oil equivalent usage in Boiler 3 per month since last compliance determination period.
  - (3) Calendar dates covered in the compliance determination period;
  - (4) The results of all once per shift Method 9 visible emission (VE) readings and any additional VE observations due to opacity exceeding ten percent (10%).
  - (5) Hours of operation on fuel oil.

The reporting form for Boiler 3 has also been revised with the above referenced changes.

### Comment 2

Condition D.3.10(e)(1) – This condition specifies that Purdue perform visible emission observations of Boiler 3 once per shift. Purdue requests that this condition be revised to require such observations once per day rather than once per shift. This language would be consistent with Purdue's permit modification request and would be consistent with approvals granted by USEPA for exemptions at other facilities.

### Response 2

OAQ agrees that Method 9 visible emission observations performed on a once per day frequency will adequately demonstrate compliance with 40 CFR 60, Subpart D, 326 IAC 5-1 and 326 IAC 6-2. The following revisions have been made as a result of this comment:

### D.3.10 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart D] [326 IAC 2-2]

---

- (e) The following requirements shall apply in order to demonstrate compliance with 40 CFR 60, Subpart D, 326 IAC 5-1 and 326 IAC 6-2 in lieu of the COM requirements for Boiler 3 as approved by the Administrator:
- (1) An observer certified in accordance with EPA Method 9 shall perform 6-minute visible emissions observations at least once per ~~shift~~ **day** during daylight hours when distillate fuel oil is burned in Boiler 3.
  - (2) If the average opacity for a 6-minute set of visible emissions observations made exceeds ten (10) percent, the observer shall collect two additional 6-minute sets of visible emissions observations for a total of three data sets. If excess emissions occur during the three 6-minute sets of visible emissions observations, the observer shall collect additional 6-minute sets of visible emissions observations until excess emissions do not occur during three (3) consecutive 6-minute sets of visible emissions observations. Boiler 3 may be repaired or adjusted before the additional visible emissions observations are conducted.

**D.3.13 Record Keeping Requirements**

---

- (a) To document compliance with the particulate matter and opacity requirements in Conditions D.3.1, D.3.2, D.3.9, and D.3.10, the Permittee shall maintain records in accordance with (1) through (5) below. Records shall be complete and sufficient to establish compliance with the PM and opacity limits in Conditions D.3.1 and D.3.2.
- (1) Data and results from the most recent stack test;
  - (2) Actual distillate fuel oil usage in Boiler 3 per month since last compliance determination period.
  - (3) Calendar dates covered in the compliance determination period;
  - (4) The results of all once per ~~shift~~ **day** Method 9 visible emission (VE) readings and any additional VE observations due to opacity exceeding ten percent (10%).
  - (5) Hours of operation on fuel oil.

**Comment 3**

Condition D.3.10(e)(2) – This condition includes a requirement to perform additional observations if excess emissions occur. In order to clarify the intent of this wording Purdue requests that the sentence of this condition be reworded as follows;

“If excess emissions **as defined in Condition D.3.14(b)** occur during the three 6-minute sets of visible emissions observations...”

**Response 3**

Condition D.3.10(e)(2) has been revised for clarity as follows:

**D.3.10 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart D] [326 IAC 2-2]**

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- (e) The following requirements shall apply in order to demonstrate compliance with 40 CFR 60, Subpart D, 326 IAC 5-1 and 326 IAC 6-2 in lieu of the COM requirements for Boiler 3 as approved by the Administrator:
- (1) An observer certified in accordance with EPA Method 9 shall perform 6-minute visible emissions observations at least once per day during daylight hours when distillate fuel oil is burned in Boiler 3.
  - (2) If the average opacity for a 6-minute set of visible emissions observations made exceeds ten (10) percent, the observer shall collect two additional 6-minute sets of visible emissions observations for a total of three data sets. If excess emissions **as defined in Condition D.3.14(b)** occur during the three 6-minute sets of visible emissions observations, the observer shall collect additional 6-minute sets of visible emissions observations until excess emissions do not occur during three (3) consecutive 6-minute sets of visible emissions observations. Boiler 3 may be repaired or adjusted before the additional visible emissions observations are conducted.

#### Comment 4

Condition D.3.13(a)(4) – This condition summarizes record keeping requirements and requires that Purdue maintain results “of all once per shift visible emissions (VE) observations and Method 9 visible emission readings, ...” The wording implies that Purdue is required to maintain records of “visible emission (VE) observations” which are different from Method 9 visible emission readings.” Purdue believes that the permit only requires that Purdue perform Method 9 visible emission readings. Purdue requests that the wording of this condition be reworded as follows:

“The results of all once per shift ~~visible emissions (VE) observations and~~ Method 9 visible emission **(VE)** readings and any addition VE readings due to opacity exceeding 10 percent (10%).”

#### Response 4

Condition D.3.13(a)(4) has been revised for clarity as follows:

#### D.3.13 Record Keeping Requirements

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- (a) To document compliance with the particulate matter and opacity requirements in Conditions D.3.1, D.3.2, D.3.9, and D.3.10, the Permittee shall maintain records in accordance with (1) through (5) below. Records shall be complete and sufficient to establish compliance with the PM and opacity limits in Conditions D.3.1 and D.3.2.
- (1) Data and results from the most recent stack test;
  - (2) Actual distillate fuel oil usage in Boiler 3 per month since last compliance determination period.
  - (3) Calendar dates covered in the compliance determination period;
  - (4) The results of all once per day ~~visible emission (VE) observations and~~ Method 9 visible emission **(VE)** readings and any additional VE observations due to opacity exceeding ten percent (10%).
  - (5) Hours of operation on fuel oil.

#### Comment 5

Condition D.3.14(b) – This condition defines excess emissions for the purpose of identifying what information must be reported to the Office of Air Quality (OAQ). Purdue requests that the last sentence of this condition be reworded as follows to be consistent with the requirements of New Source Performance Standards:

“Excess emissions are defined as any 6-minute period during which the average opacity of emissions exceeds 20 percent opacity, **except one (1) 6-minute average of up to 27% opacity per hour need not be reported.**”

#### Response 5

Condition D.3.14(b) has been revised to correctly reflect the definition of “Excess Emissions” as follows:

#### D.3.14 Reporting Requirements

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- (b) The Permittee shall submit an excess emissions report (EER) to IDEM, OAQ for each calendar quarter in which there are excess emissions of opacity during combustion of distillate fuel oil. If there are no excess emissions of opacity during a calendar quarter, the EER may be submitted on a semiannual basis. Excess emissions are defined as any 6-minute period during which the average opacity of emissions exceeds 20 percent opacity, **except that one (1) 6-minute average per hour of up to 27% opacity need not be reported.**

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

**Technical Support Document (TSD) for a Significant Permit Modification  
to a Part 70 Operating Permit**

**Source Background and Description**

<b>Source Name:</b>	<b>Purdue University</b>
<b>Source Location:</b>	<b>401 S. Grant Street 1665 L.J. Freehafer Hall of Administrative Services West Lafayette, Indiana 47907-1665</b>
<b>County:</b>	<b>Tippecanoe</b>
<b>SIC Code:</b>	<b>8221</b>
<b>Operation Permit No.:</b>	<b>T157-7340-00012</b>
<b>Operation Permit Issuance Date:</b>	<b>June 30, 2004</b>
<b>Permit Modification No.:</b>	<b>SPM157-19509-00012</b>
<b>Permit Reviewer:</b>	<b>Linda Quigley/EVP</b>

The Office of Air Quality (OAQ) has reviewed a significant permit modification application from Purdue University relating to the removal of the requirement in the Part 70 Permit to install and operate a Continuous Opacity Monitor (COM) for Boiler #3 and to incorporate an enforceable fuel usage limitation.

**History**

Purdue University received a letter from the USEPA Region V, dated April 29, 2004, which denied a request by Purdue University for Alternative Monitoring for Boiler 3. Purdue had requested approval to use Method 9 for determining opacity from Boiler 3 rather than using a COM, which is presently required under 40 CFR Part 60, Subpart D. USEPA denied the request for the following reason: "Purdue does not have a permitted limit for the amount of fuel oil they can burn and therefore could increase the use of fuel oil in Boiler 3."

On August 18, 2004, Purdue University submitted an application to the Office of Air Quality requesting to add a fuel usage limitation of 500,000 gallons per twelve (12) consecutive month period on Boiler 3. In addition, Purdue requested approval to use Method 9 for determining opacity from Boiler #3 rather than using a COM.

In a letter dated September 16, 2004, the USEPA, Region V conditionally approved Purdue's request to perform Method 9 opacity readings when burning fuel oil instead of installing and operating a COM upon IDEM's approval of a permit modification which will incorporate a fuel usage limitation on Boiler 3.

In addition to the above request, Purdue University submitted a separate request which has been combined into this Significant Permit Modification for the following:

- (1) Removal of Condition D.1.8(c)(3)(j) – This condition requires that an inspection of the vibrator air pressure settings be performed at least once per year on electrostatic precipitator TR sets. Purdue does not have air operated vibrators on its ESP; the vibrators are electric.
- (2) Condition D.6.4(a) – This condition requires visible emission notations of the ASH4A and ASH5B exhaust stacks and the exhaust vent ASH5C be performed once per shift when transferring ash. Exhaust vent ASH5C is only operating during times when the dry ash truck loading system is in operation. Purdue requested that this condition be changed to accurately reflect when visible emission notations should be performed on exhaust vent ASH5C.
- (3) Condition D.3.14(b) – This condition specifies that excess emission and monitoring system performance reports be submitted semi-annually to U.S. EPA Region V and to IDEM. Purdue requested to submit the indicated reports only to IDEM and remove reference to the U.S. EPA.

The July 16, 1984, Federal Register included full delegation to the State of Indiana for NSPS and NESHAPs for which the State has promulgated appropriate regulations and subsequently notified the Regional Administrator, and partial delegation to the State of Indiana for new NSPS and NESHAPS pollutants and source categories and for amendments to existing NSPS and NESHAPS which the State of Indiana has not promulgated regulations or amendments. For all NSPS and NESHAPS, the delegation includes administrative responsibilities with respect to notifications and record keeping.

Therefore, the reports required by NSPS Subpart D do not need to be submitted to EPA. The NSPS reporting requirements can be met by combining the reports required for 40 CFR 60 with quarterly reports submitted to document compliance with State reporting requirements, provided that all state and federal reporting requirements are met. For clarity, each report submitted should state precisely which reporting requirements are satisfied by that report.

### **Proposed Changes**

#### **D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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- (a) A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Boilers 1 and 2 and their emission control devices.
- (b) The PMP for a multiclone shall include inspections of the internal components of the multiclone, conducted annually in accordance with the Section B - Preventive Maintenance Plan. Items to be checked include air infiltration, plugging of inlet spinner vanes, outlet tube erosion, deposits on the inside surfaces of the cyclone tubes, and plugging of the bottom of the cyclone tubes.
- (c) The PMP for an electrostatic precipitator shall include the following inspections, performed according to the indicated schedules:
  - (1) Plate and electrode alignment, every major maintenance outage, but no less than every 2 years.
  - (2) Air infiltration, no less than every 2 years. The recommended method for this inspection is for audible checks around ash hoppers/hatches, duct expansion joints, and areas of corrosion.

- (3) ESP TR set components, performed at least once per calendar year. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

At a minimum, the following inspections shall be performed:

- (A) Internal inspection of shell for corrosion (including but not limited to doors, hatches, insulator housings, and roof area).
- (B) Effectiveness of rapping (including but not limited to buildup of dust on discharge electrodes and plates).
- (C) Gas distribution (including but not limited to buildup of dust on distribution plates and turning vanes).
- (D) Dust accumulation (including but not limited to buildup of dust on shell and support members that could result in grounds or promote advanced corrosion).
- (E) Major misalignment of plates (including but not limited to a visual check of plate alignment).
- (F) Rapper, vibrator and TR set control cabinets (including but not limited to motors and lubrication).
- (G) Rapper assembly (including but not limited to loose bolts, ground wires, water in air lines, and solenoids).
- (H) Vibrator and rapper seals (including but not limited to air in-leakage, wear, and deterioration).
- (I) TR set controllers (including but not limited to low voltage trip point, over current trip point, and spark rate).
- ~~(J) Vibrator air pressure settings.~~

D.3.1 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart D]

Pursuant to 326 IAC 12 and 40 CFR 60, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), emissions from Boiler No. 3 shall not exceed the following:

- (a) 0.10 pound PM per million Btu (MMBtu) heat input derived from fossil fuel. [40 CFR 60.42(a)(1)]
- (b) For opacity:
  - (1) Twenty percent (20%) opacity except for one six-minute period per hour of not more than twenty-seven percent (27%) opacity. [40 CFR 60.42(a)(2)]
  - (2) Pursuant to 40 CFR 60.11(c), the NSPS opacity standard of 40 CFR 60.42(a)(2) shall apply at all times except during periods of startup, shutdown, or malfunction. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions [40 CFR 60.11(d)].

- (c) For SO<sub>2</sub>:
  - (1) 0.80 pound SO<sub>2</sub> per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.43(a)(1)]
  - (2) When combusting different fossil fuels simultaneously, the applicable SO<sub>2</sub> limit shall be determined using the formula in 40 CFR 60.43(b).
  - (3) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels. [40 CFR 60.43(c)]
- (d) For NO<sub>x</sub>:
  - (1) 0.20 pound NO<sub>x</sub> per million Btu (MMBtu) heat input derived from gaseous fossil fuel. [40 CFR 60.44(a)(1)]
  - (2) 0.30 pound NO<sub>x</sub> per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.44(a)(2)]
- (e) **The usage of distillate fuel oil and distillate fuel oil equivalents in Boiler 3 shall be limited to 500,000 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.**

D.3.10 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart D]  
[326 IAC 2-2]

- (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 40 CFR 60.45, continuous emission monitoring systems for Boiler 3 shall be calibrated, maintained, and operated for measuring opacity, NO<sub>x</sub> and either O<sub>2</sub> or CO<sub>2</sub>, which meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 60.45, except as provided in paragraph (b) of 40 CFR 60.45.
  - (1) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. [40 CFR 60.13(b)]
  - (2) Pursuant to 40 CFR 60.13(e), except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of 40 CFR 60.13, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
    - ~~(A) — All continuous monitoring systems referenced by paragraph (c) of this section for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.~~
    - ~~(B)~~ **(A)** All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
  - (3) Excess NO<sub>x</sub> emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of exceed the applicable standards under 40 CFR 60.44. [40 CFR 60.45(g)(3)]

- (4) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (b) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of 40 CFR 60 including, but not limited to, alternative monitoring requirements when the affected facility is infrequently operated. [40 CFR 60.13(i)]
- “Administrator” means the Administrator of the Environmental Protection Agency or his authorized representative. [40 CFR 60.2]
- (c) If the Administrator approves alternative monitoring requirements in lieu of the COM requirements for Boiler 3, then IDEM, OAQ, may require additional PM stack testing and Method 9 opacity readings to demonstrate compliance with 326 IAC 5-1 and 326 IAC 6-2, pursuant to 326 IAC 3-5-1(c)(2)(A)(ii).
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 10-4, 40 CFR 60, or 40 CFR 75.
- (e) **The following requirements shall apply in order to demonstrate compliance with 40 CFR 60, Subpart D, 326 IAC 5-1 and 326 IAC 6-2 in lieu of the COM requirements for Boiler 3 as approved by the Administrator:**
- (1) **An observer certified in accordance with EPA Method 9 shall perform 6-minute visible emissions observations at least once per shift during daylight hours when distillate fuel oil is burned in Boiler 3.**
- (2) **If the average opacity for a 6-minute set of visible emissions observations made exceeds ten (10) percent, the observer shall collect two additional 6-minute sets of visible emissions observations for a total of three data sets. If excess emissions occur during the three 6-minute sets of visible emissions observations, the observer shall collect additional 6-minute sets of visible emissions observations until excess emissions do not occur during three (3) consecutive 6-minute sets of visible emissions observations. Boiler 3 may be repaired or adjusted before the additional visible emissions observations are conducted.**

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

##### D.3.13 Record Keeping Requirements

- (a) To document compliance ~~Section C – Maintenance of Continuous Opacity Monitoring Equipment, and~~ with the particulate matter and opacity requirements in Conditions D.3.1, D.3.2, D.3.9, and D.3.10, the Permittee shall maintain records in accordance with (1) through (4) **(5)** below. Records shall be complete and sufficient to establish compliance with the PM and opacity limits in Conditions D.3.1 and D.3.2.
- (1) Data and results from the most recent stack test;
- (2) ~~All continuous opacity monitoring data, pursuant to 326 IAC 3-5-6 and 40 CFR 60.45.~~ **Actual distillate fuel oil and distillate fuel oil equivalent usage in Boiler 3 per month since last compliance determination period.**
- (3) **Calendar dates covered in the compliance determination period;**

- ~~(3)~~ **(4)** The results of all **once per shift** visible emissions (VE) ~~notations~~ **observations** and Method 9 visible emission readings, **and any additional VE observations due to opacity exceeding ten percent (10%)**, taken during any periods of COM downtime.
- ~~(4)~~ **(5)** Hours of operation on fuel oil.
- (b) To document compliance with the SO<sub>2</sub> requirements in Conditions D.3.1, D.3.3, D.3.9, D.3.10, and D.3.11, the Permittee shall maintain records in accordance with (1) and (2) below. Records shall be complete and sufficient to establish compliance with the SO<sub>2</sub> limits in Conditions D.3.1 and D.3.3.
- (1) All fuel sampling and analysis data, pursuant to 326 IAC 7-2 and 40 CFR 60.45.
- (2) Actual fuel usage since last compliance determination period.
- (c) To document compliance with Condition D.3.8 the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.3.14 Reporting Requirements

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- ~~(a)~~ **(a)** ~~A quarterly report of opacity exceedances shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported.~~ **A quarterly summary of the information to document compliance with Condition D.3.1(e) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form 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 "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The Permittee shall submit an excess emissions report (EER) to IDEM, OAQ for each calendar quarter in which there are excess emissions of opacity during combustion of distillate fuel oil. If there are no excess emissions of opacity during a calendar quarter, the EER may be submitted on a semiannual basis. Excess emissions are defined as any 6-minute period during which the average opacity of emissions exceeds 20 percent opacity.**
- ~~(b)~~ **(c)** To document compliance with Condition D.3.1 and pursuant to 40 CFR 60.45(g), excess emissions and monitoring system performance (MSP) reports shall be submitted to the administrator semi-annually for each six month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in 40 CFR 60.7(c).

**If the Permittee elects to combine the excess emission and MSP reports with the quarterly reports required under part (a) of this condition, the reports submitted pursuant to (a) must also include all information required in 40 CFR 60.7(c), and each report must state precisely which state and federal requirements are satisfied by the report.**

These reports shall be submitted to:

~~U.S. Environmental Protection Agency  
Director, Air and Radiation Division  
77 West Jackson Boulevard  
Chicago, IL 60604-3590~~

and

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- ~~(e)~~ (d) The Permittee shall furnish the Administrator a written report of the results of the initial performance tests for NSPS Subpart D and any subsequent performance tests in accordance with 40 CFR 60.8.

The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- ~~(d)~~ (e) Upon request of the IDEM, OAQ, reports of the calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per million Btus shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit. [326 IAC 7-2-1(c)(3)]

The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- ~~(e)~~ (f) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

- (1) date of downtime;
- (2) time of commencement;
- (3) duration of each downtime;
- (4) reasons for each downtime; and
- (5) nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

*Note: A new Quarterly Report form for the amount of fuel oil burned in Boiler 3 is included with the Significant Permit Modification.*

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

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- (a) Visible emission notations of the ASH5A and ASH5B exhaust stacks ~~and the exhaust vent ASH5C~~ shall be performed at least once per shift during normal daylight operations when transferring ash. **Visible emission notations of the ASH5C exhaust vent shall be performed at least once per shift during normal daylight operations when the dry ash truck loading system is in operation.** A trained employee shall record whether emissions are normal or abnormal.
- (b) If abnormal emissions are observed from the ash silo unloading station or at any baghouse or filter module exhaust, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (c) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.
- (d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

### Existing Approvals

The source was issued a Part 70 Operating Permit T157-7340-00012 on June 30, 2004.

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on August 18, 2004. Additional information was received on September 24, 2004.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations, page one (1) of one (1).

### Justification for Modification

The Title V permit is being modified through a Significant Permit Modification. This modification is being performed pursuant to 326 IAC 2-7-12(d)(1) because the modification involves significant changes to existing monitoring conditions in the Part 70 permit. See Proposed Changes, page two (2) above, for permit changes.

### County Attainment Status

The source is located in Tippecanoe County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
1-hour Ozone	attainment
8-hour Ozone	attainment
CO	attainment
Lead	attainment

- (a) 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 emissions and NOx are considered when evaluating the rule applicability relating to ozone. Tippecanoe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (b) Tippecanoe County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

### Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM-10	37
SO <sub>2</sub>	2529
VOC	11
CO	300
NOx	696

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon 2002 IDEM, OAQ emission data.

### Federal Rule Applicability

#### Boiler 3

Boiler 3 is subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971)), because construction of Boiler 3 began in 1973 or 1974 and it has a heat input rate of 286 MMBtu/hr. These requirements include:

New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart D]  
Pursuant to 326 IAC 12 and 40 CFR 60, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), emissions from Boiler No. 3 shall not exceed the following:

- (a) 0.10 pound PM per million Btu (MMBtu) heat input derived from fossil fuel. [40 CFR 60.42(a)(1)]
- (b) For opacity:
  - (1) Twenty percent (20%) opacity except for one six-minute period per hour of not more than twenty-seven percent (27%) opacity. [40 CFR 60.42(a)(2)]
  - (2) Pursuant to 40 CFR 60.11(c), the NSPS opacity standard of 40 CFR 60.42(a)(2) shall apply at all times except during periods of startup, shutdown, or malfunction. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions [40 CFR 60.11(d)].
- (c) For SO<sub>2</sub>:
  - (1) 0.80 pound SO<sub>2</sub> per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.43(a)(1)]
  - (2) When combusting different fossil fuels simultaneously, the applicable SO<sub>2</sub> limit shall be determined using the formula in 40 CFR 60.43(b).
  - (3) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels. [40 CFR 60.43(c)]
- (d) For NO<sub>x</sub>:
  - (1) 0.20 pound NO<sub>x</sub> per million Btu (MMBtu) heat input derived from gaseous fossil fuel. [40 CFR 60.44(a)(1)]
  - (2) 0.30 pound NO<sub>x</sub> per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.44(a)(2)]
  - (3) When combusting different fossil fuels simultaneously, the applicable NO<sub>x</sub> limit shall be determined using the formula in 40 CFR 60.44(b).

General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]  
The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Boiler 3 except when otherwise specified in 40 CFR Part 60, Subpart D.

Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart D]  
[326 IAC 2-2]

- (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 40 CFR 60.45, continuous emission monitoring systems for Boiler 3 shall be calibrated, maintained, and operated for measuring NO<sub>x</sub> and either O<sub>2</sub> or CO<sub>2</sub>, which meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 60.45, except as provided in paragraph (b) of 40 CFR 60.45.

- (1) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8.  
[40 CFR 60.13(b)]
  - (2) Pursuant to 40 CFR 60.13(e), except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of 40 CFR 60.13, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
    - (A) All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
  - (3) Excess NO<sub>x</sub> emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of exceed the applicable standards under 40 CFR 60.44.  
[40 CFR 60.45(g)(3)]
  - (4) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (b) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of 40 CFR 60 including, but not limited to, alternative monitoring requirements when the affected facility is infrequently operated. [40 CFR 60.13(i)]

“Administrator” means the Administrator of the Environmental Protection Agency or his authorized representative. [40 CFR 60.2]

**Note:** The Administrator has conditionally approved alternative monitoring requirements in lieu of the COM requirements for Boiler 3. Condition D.3.1(e) has been added to the permit to limit the amount of fuel oil burned to 500,000 gallons per twelve (12) consecutive month period, which is equivalent to a capacity factor of approximately 5% based on the maximum operating capacity of Boiler 3. The Permittee shall be required to utilize Method 9 opacity readings to demonstrate compliance with 40 CFR Part 60, Subpart D, 326 IAC 5-1 and 326 IAC 6-2. The Part 70 Permit requires an initial PM test within 180 days following the issuance of the Part 70 Permit.

Sulfur Dioxide Emissions and Sulfur Content [40 CFR 60.45] [326 IAC 12] [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2 ]

- (a) Pursuant to 40 CFR 60.45(b)(2), the Permittee shall monitor sulfur dioxide emissions by fuel sampling and analysis.
- (b) Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed the equivalents of the SO<sub>2</sub> limits specified in 40 CFR 60.43 and 326 IAC 7-1.1-2(a)(3), using a calendar month average.
- (c) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7-4, fuel sampling and analysis data shall be collected as follows:
  - (1) The Permittee may rely upon vendor analysis of fuel delivered, if accompanied by a vendor certification [326 IAC 3-7-4(b)]; or,
  - (2) The Permittee shall perform sampling and analysis of fuel oil samples in accordance with 326 IAC 3-7-4(a).

- (A) Oil samples shall be collected from the tanker truck load prior to transferring fuel to the storage tank; or
- (B) Oil samples shall be collected from the storage tank immediately after each addition of fuel to the tank.
- (d) Boiler 3 is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD), as of the effective date of 40 CFR 63, Subpart DDDDD. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart DDDDD on and after three years after the effective date of 40 CFR 63, Subpart DDDDD. There has been no change to the requirements of this NESHAP as a result of this permit modification.

### **State Rule Applicability - Entire Source**

There have been no changes to any state rule applicability for the entire source as a result of this permit modification.

### **State Rule Applicability – Individual Facilities**

There have been no changes to any state rule applicability for Boiler 3 as a result of this permit modification.

### **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

The gas and oil-fired Boiler 3 has no applicable compliance monitoring conditions other than those included in the NSPS provisions as outlined under Proposed Changes on page two (2) above.

### **Conclusion**

The operation of Boiler 3 shall be subject to the conditions of the attached proposed **Significant Permit Modification No. 157-19509-00012**.

**Appendix A: Emissions Calculations**  
**No. 2 fuel oil combustion**

**Company Name:** Purdue University  
**Address, City IN Zip:** 401 S. Grant Street, 1665 L.J. Freehafer Hall of Administrative Services  
 West Lafayette, Indiana 47907-1665  
**Permit Number:** SPM157-19509-00012  
**Plt ID:** 157-00012  
**Reviewer:** Linda Quigley/EVP  
**Date:** September 24, 2004

Heat Input Capacity                      Potential Throughput                      S = Weight % Sulfur  
 MMBtu/hr                                      kgals/year                                      0.5

286                                      17895.4286

Emission Factor in lb/kgal	Pollutant				
	PM*	SO2	NOx	VOC	CO
	2.0	78.5 (157.0S)	24.0	0.20	5.0
Potential Emission in tons/yr	17.90	702.40	214.75	1.79	44.74

The following calculations determine the amount of emissions created by distillate fuel oil @ 0.50 % sulfur based on a fuel usage limitation of 500,000 gal/yr:

**Distillate Fuel Oil:**  $\frac{500,000 \text{ gal/yr}}{2,000 \text{ lb/ton}}$  \* Ef (lb/1,000 gal) = (ton/yr)

**P M:**                      2.0 lb/1000 gal =                      **0.50 ton/yr**  
**S O 2:**                      78.5 lb/1000 gal =                      **19.63 ton/yr**  
**N O x:**                      24.0 lb/1000 gal =                      **6.00 ton/yr**  
**V O C:**                      0.2 lb/1000 gal =                      **0.05 ton/yr**  
**C O:**                      5.0 lb/1000 gal =                      **1.25 ton/yr**

**Methodology:**

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-02-005-01/02/03) Supplement E 9/98

\*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton