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June 29, 2004

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TO: Interested Parties / Applicant

RE: Indiana University / 105-6642-00005

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

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204.

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

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

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and

- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

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

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

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

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

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Indiana University
700 North Walnut Grove
Bloomington, Indiana 47405-2206**

(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.: T105-6642-00005	
Issued by: Original Signed by Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: June 29, 2004 Expiration Date: June 29, 2009

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

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

The Permittee owns and operates a stationary source power plant that supplies campus with process heat from boilers.

Responsible Official:	Vice President and Chief Administrative Officer
Source Address:	700 North Walnut Grove, Bloomington, Indiana 47405-2206
Mailing Address:	2735 East 10 th Street, Room 160, Bloomington Indiana 47408
General Source Phone Number:	(812)855-3231
SIC Code:	8221
County Location:	Monroe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules

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

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

- (a) Two (2) coal fired boilers, identified as EU-01 and EU-02, both constructed in 1955, each with a maximum design capacity of 100 MMBtu per hour heat input each (operating at a maximum capacity of 80 MMBtu per hour heat input each), and each equipped with a multiclone for particulate control and a portable startup/shutdown natural gas fired burner rated at 4.2 MMBtu per hour heat input each, both exhausting to stack 001.
- (b) Two (2) coal, natural gas, No.1 or No.2 fuel oil fired boilers, identified as EU-03 and EU-04, both constructed in 1959, with a maximum design capacity of 125 MMBtu per hour heat input each (operating at a maximum capacity of 100 MMBtu per hour heat input each when combusting coal or a combination of fuels), and with a maximum design capacity of 80 MMBtu per hour heat input each when combusting natural gas and/or fuel oil, each equipped with low NOx burners for natural gas and/or fuel oil, and each with a multiclone for particulate control when combusting coal and/or fuel oil, both exhausting at stack 002.
- (c) One (1) natural gas, No.1 or No.2 fuel oil fired boiler, identified as EU-05, constructed in 1964 and modified in 1989, with a maximum design capacity of 190 MMBtu per hour heat input, equipped with low NOx burners (two natural gas fired burners at 75 MMBtu per hour heat input each) for natural gas and/or fuel oil, and a multiclone for particulate control when combusting fuel oil, exhausting to stack 002.
- (d) One (1) coal, natural gas, No.1 or No.2 fuel oil fired boiler, identified as EU-06, constructed in 1970, with a maximum design capacity of 190 MMBtu per hour heat input when combusting coal and/or fuel oil, and 150 MMBtu per hour heat input (two natural gas fired burners rated at 75 MMBtu per hour heat input each) when combusting natural gas, equipped with low NOx burners for natural gas and/or fuel oil, a multiclone and an electrostatic precipitator for particulate control when combusting coal and/or fuel oil, and a continuous opacity monitor for monitoring opacity, exhausting to stack 003.
- (e) One (1) coal storage and handling system, with a maximum design throughput of 200 tons of coal per hour and 210,000 tons of coal per year, consisting of the following:
 - (1) One (1) coal truck receiving system, consisting of an interior wet suppression system to control coal dust emissions during coal receiving, and two (2) truck hoppers.

- (2) Four (4) enclosed belt conveyors, and one (1) enclosed bucket conveyor, with particulate emissions controlled by a fabric filter system, with four (4) dust collectors, identified as DC1 through 4, located internally at various points along the enclosed conveyor system, with all dust collectors exhausting internally.
- (3) One (1) coal storage silo with a storage capacity of 1,000 tons of coal, with particulate emissions controlled by one (1) dust collector, identified as DC6, exhausting externally at vent 6.

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

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour heat input [326 IAC 6-2]:
 - (1) Twenty-two (22) boilers constructed before 1972, with a combined total heat input of 29.130 MMBtu per hour. [326 IAC 6-2-3(b) and (d)]
 - (2) One (1) boiler constructed in 1977, with a heat input of 0.60 MMBtu per hour. [326 IAC 6-2-3(c)]
 - (3) One (1) boiler constructed in 1981, with a heat input of 0.110 MMBtu per hour. [326 IAC 6-2-3(c)]
 - (4) Fifty-seven (57) boilers constructed after 1983, with a combined heat input of 135.39 MMBtu per hour. [326 IAC 6-2-4(a) and (b)]
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3]

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

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

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

SECTION B

GENERAL CONDITIONS

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

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

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

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.

B.3 Enforceability [326 IAC 2-7-7]

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)]

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)]

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

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

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

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

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. 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.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. 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;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require 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]

- (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), or a job title, 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 PMP 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 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

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

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, 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]

- (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 in 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]

- (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) deletedby 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)]

- (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]

- (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 2-7-4]

- (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]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.
- (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 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

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

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

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

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

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

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the 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.

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

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

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

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]

- (a) The Permittee shall pay annual fees to IDEM, OAQ in accordance with 326 IAC 2-7-19.
- (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]

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 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.2 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.3 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.4 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.5 Stack Height [326 IAC 1-7]

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

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

C.7 Performance Testing [326 IAC 3-6]

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

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, 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 source 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.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional thirty (30) 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.10 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall install, 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, except during COM maintenance downtime or when natural gas is the only fuel being combusted.
- (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) 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) The affected boiler(s) shall combust only fuel oil or natural gas and visible emission (VE) notations shall be performed once per shift during daylight operations following the shutdown

or malfunction of the certified 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) VE notations may be discontinued, and the affected boiler(s) may resume combustion of coal, once a COM is online.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5.

C.11 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.12 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.
- (b) Whenever a condition in this permit requires the measurement of a voltage or current, 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.
- (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.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval 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 ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the

pollutants, and a brief description of the manner in which the reduction will be achieved.

- (f) 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.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. 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 and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (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
 - (2) If none of the reasonable response steps listed in the Compliance Response 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 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 status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation of 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.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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.17 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.18 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.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The source 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.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

MACT Standards [326 IAC 2-7-5(1)]

C.21 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) for boilers EU-01, EU-02,

EU-03, EU-04 and EU-06 and 40 CFR 63.7506(b) for boiler EU-05, 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 (boilers EU-01, EU-02, EU-03, EU-04 and EU-06) 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.

C.22 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 date of publication of the final rule for 40 CFR 63, Subpart DDDDD in the *Federal Register*.
- (b) The following emissions units comprise the affected source for the large solid fuel subcategory: boilers EU-01, EU-02, EU-03, EU-04 and EU-06.
- (c) The following emissions unit comprises the affected source for the large liquid fuel subcategory: boiler EU-05.
- (d) The definitions of 40 CFR 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected sources.
- (e) Since the applicable requirements associated with the compliance options for the affected sources for the large solid fuel subcategory (boilers EU-01, EU-02, EU-03, EU-04 and EU-06) 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 sources for the large solid fuel subcategory.

C.23 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Notification Requirements [40 CFR 63, Subpart DDDDD]

- (a) Pursuant to 40 CFR 63.7545(a) and 40 CFR 63.7506(b), the Permittee shall submit an Initial Notification for boiler EU-05 containing the information specified in 40 CFR 63.9(b)(2) not later than 120 days after the date of publication of the final rule for 40 CFR 63, Subpart DDDDD in the *Federal Register*, as required by 40 CFR 63.7545(b).
- (b) 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 (boilers EU-01, EU-02, EU-03, EU-04 and EU-06) 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 date of publication of the final rule for 40 CFR 63, Subpart DDDDD in the *Federal Register*, 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.
- (c) The notifications required by paragraphs (a) and (b) 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

and

United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

C.24 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5]

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 sources for the large solid fuel subcategory (boilers EU-01, EU-02, EU-03, EU-04 and EU-06).

- (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.1

FACILITY OPERATION CONDITIONS

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

- (a) Two (2) coal fired boilers, identified as EU-01 and EU-02, both constructed in 1955, each with a maximum design capacity of 100 MMBtu per hour heat input each (operating at a maximum capacity of 80 MMBtu per hour heat input each), and each equipped with a multiclone for particulate control and a portable startup/shutdown natural gas fired burner rated at 4.2 MMBtu per hour heat input each, both exhausting to stack 001.

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

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

D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-2-3]

Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, and 326 IAC 6-2-3(b)(Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(c)), the PM emissions from boilers EU-01 and EU-02 shall in no case exceed 0.38 pounds of particulate matter per million British thermal units heat input. This limitation is based on the following equation:

$$P_t = (C * a * h) / (76.5 * Q^{0.75} * N^{0.25})$$

where: P_t - PM limit in pounds per MMBtu
C - Maximum ground level concentration
a - Plume rise factor
h - Stack height in feet
Q - total source permitted capacity in MMBtu/hr
N - Number of stacks

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

Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, and 326 IAC 7-1.1-2, sulfur dioxide emissions from each boiler shall not exceed 6.0 pounds per million British thermal units (lb/MMBtu) of heat input.

D.1.3 Heat Input Capacity Limitation

Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, condition 4, boilers EU-01 and EU-02 shall not operate above 80% of the maximum rated capacity (80 million Btu per hour of heat input).

D.1.4 Operation Standards [40 CFR 279] [329 IAC 13]

All coal burned, including coal treated with any additive, shall meet ASTM specifications for classification as coal (ASTM D388).

D.1.5 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 these facilities and their control devices.
- (b) The PMP for a multiclone shall include inspections of the internal components of the multiclone, conducted every six thousand (6,000) hours of operation, 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.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Pursuant to the Amendment to OP 53-02-92-0079 through 0084, issued October 19, 1990, the Permittee shall stack test for particulate matter emissions to determine compliance with 326 IAC 6-2 for boilers EU-01 and EU-02.

- (1) Boiler EU-02 shall be tested for particulate matter emissions every three years starting from the most recent compliant test.
- (2) Boiler EU-01 shall be tested for particulate matter emissions every three years starting from the most recent compliant test.

These tests shall be performed no later than thirty-six (36) months after the most recent compliant stack test.

D.1.7 Particulate Matter Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the multiclones for particulate control shall be operated at all times that the boilers (EU-01 and EU-02) vented to the multiclones are in operation.

D.1.8 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7] [326 IAC 7-2] [326 IAC 7-1.1-2]

- (a) Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, and pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu using a calendar month average when combusting coal.
- (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).
- (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)]

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

D.1.9 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission (VE) notations of the boiler stack exhaust (stack 001) shall be performed once per shift during normal daylight operations while combusting coal. A trained employee shall record whether emissions are normal or abnormal.
- (b) If abnormal emissions are observed at any boiler 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 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 violation of this permit.
- (c) "Normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for the boilers.

D.1.10 Monitoring: Multiclones [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The ability of the multiclones to control particulate emissions shall be monitored at least once per shift, when their associated units are in operation, by measuring and recording the total static pressure drop across the collectors.
- (b) 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 violation of this permit.

D.1.11 Multiclone Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In the event that multiclone failure has been observed:

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

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

D.1.12 Record Keeping Requirements

- (a) Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, and to document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in D.1.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual coal usage since last compliance determination period;
 - (3) Sulfur content, heat content, and ash content;
 - (4) Sulfur dioxide emission rates.
- (b) To document compliance with Section C - Opacity and Conditions D.1.1 and D.1.10, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity, and in Conditions D.1.1 and D.1.10. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
 - (1) Data and results from the most recent stack tests;
 - (2) All parametric monitoring readings;
 - (3) Records of the results of the multiclones' inspections (including usage hours); and
 - (4) All preventive maintenance measures taken.
- (c) To document compliance with Condition D.1.3, the Permittee shall maintain records of monthly average heat input (MMBtu per hour) for each boiler.
- (d) To document compliance with Condition D.1.9, the Permittee shall maintain records of daily visible emission notations of stack exhaust, 001.
- (e) To document compliance with Condition D.1.5, the Permittee shall maintain of records of 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.1.13 Reporting Requirements

- (a) Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, a quarterly summary of the information to document compliance with Condition D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, 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.
- (b) A quarterly summary of the information to document compliance with Condition D.1.3 shall be submitted to the address listed in Section C - General Reporting Requirements, 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.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

- (b) Two (2) coal, natural gas, No.1 or No.2 fuel oil fired boilers, identified as EU-03 and EU-04, both constructed in 1959, with a maximum design capacity of 125 MMBtu per hour heat input each (operating at a maximum capacity of 100 MMBtu per hour heat input each when combusting coal or a combination of fuels), and with a maximum design capacity of 80 MMBtu per hour heat input each when combusting natural gas and/or fuel oil, each equipped with low NOx burners for natural gas and/or fuel oil, and each with a multicclone for particulate control when combusting coal and/or fuel oil, both exhausting at stack 002.
- (c) One (1) natural gas, No.1 or No.2 fuel oil fired boiler, identified as EU-05, constructed in 1964 and modified in 1989, with a maximum design capacity of 190 MMBtu per hour heat input, equipped with low NOx burners (two natural gas fired burners at 75 MMBtu per hour heat input each) for natural gas and/or fuel oil, and a multicclone for particulate control when combusting fuel oil, exhausting to stack 002.

(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 Particulate Matter Limitation (PM) [326 IAC 6-2-3]

Pursuant to OP 53-02-92-0081 and 0082, issued January 12, 1990, and 326 IAC 6-2-3(b)(Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(c)), the PM emissions from EU-03, EU-04, and EU-05, shall not exceed 0.38 pounds of particulate matter per million British thermal units heat input each. This limitation is based on the following equation:

$$P_t = (C * a * h) / (76.5 * Q^{0.75} * N^{0.25})$$

where: P_t - PM limit in pounds per MMBtu
C - Maximum ground level concentration
a - Plume rise factor
h - Stack height in feet
Q - total source permitted capacity in MMBtu/hr
N - Number of stacks

D.2.2 Sulfur Dioxide (SO₂) [326 IAC 7-1.1]

- (a) Pursuant to 326 IAC 7-1.1-2, sulfur dioxide emissions from each boiler, EU-03 and EU-04, shall not exceed 6.0 pounds per million British thermal units (lb/MMBtu) of heat input when combusting coal, and when combusting coal and oil simultaneously, and 0.5 pounds per million British thermal units (lb/MMBtu) of heat input when combusting No.1 or No.2 fuel oil.
- (b) Pursuant to 326 IAC 7-1.1-2, sulfur dioxide emissions shall not exceed 0.5 pounds per million British thermal units (lb/MMBtu) of heat input from boiler EU-05 when combusting No.1 or No.2 fuel oil.
- (c) Pursuant to PC (55) 1731 and OP 53-02-92-0083, issued February 15, 1989 and January 5, 1990, for EU-05, the No.2 fuel oil shall have a maximum sulfur content of five tenths percent (0.5%).

D.2.3 Nitrogen Oxide Emission Limitation

Pursuant to PC (55) 1731 and OP 53-02-92-0083, issued February 15, 1989 and January 5, 1990, the nitrogen oxide emissions from boiler EU-05 shall in no case exceed 0.1 pounds per million British thermal units (lb/MMBtu) of heat input when combusting natural gas, No.1 or No.2 fuel oil.

D.2.4 Heat Input Capacity Limitation

Pursuant to OP 53-02-92-0081 and 0082, issued January 12, 1990, condition 4, boilers EU-03 and EU-04 shall not operate above 80% of the maximum rated capacity (100 million Btu per hour of heat input).

D.2.5 Heat Input Capacity Limitations

- (a) Pursuant to 1265 Exemption Qualification 105-8180, issued February 24, 1997, the total heat input to boilers No.3 and No.4 when burning coal, natural gas, No.2 fuel oil, or any combination of these three fuels shall not exceed 100 million British thermal units per hour for each boiler.

- (b) The total heat input to boilers EU-03 and EU-04 with the use of No.1 fuel oil, by itself or in combination, with any of the fuels listed above shall not exceed 100 million British thermal units per hour for each boiler.

D.2.6 Fuel Usage Equivalency Limits

- (a) The input of natural gas to boiler EU-05 shall be limited in total to 571.4 MMCF per twelve month period, rolled on a monthly basis. For purposes of determining compliance, every 5.87 kilo-gallons of No.1 or No.2 fuel oil combusted shall be equivalent to 1 MMCF of natural gas based on NOx emissions and 0.08% sulfur content of No.1 fuel and 0.49% sulfur content of No.2 fuel such that the total MMCF of natural gas and natural gas equivalents input does not exceed 571.4 MMCF of natural gas per year;

$$(EU-05 \text{ No.1 fuel oil usage in kgal/yr} \div 5.87 \text{ kgal/MMCF}) + (EU-05 \text{ No.2 fuel oil usage in kgal/yr} \div 5.87 \text{ kgal/MMCF}) + (EU-05 \text{ natural gas usage in MMCF/yr}) < 571.4 \text{ MMCF/year}$$

- (b) The input of fuel oil to boiler EU-05 shall be limited in total to the equivalent of 133,333.33 MMCF of natural gas per twelve month period, rolled on a monthly basis. For purposes of determining compliance, every 0.053 kilo-gallons of No.1 fuel oil combusted shall be equivalent to 1 MMCF of natural gas based on SO₂ emissions and 0.08% sulfur content of fuel and every 0.009 kgals of No.2 fuel oil burned shall be equivalent to 1 MMCF of natural gas based on SO₂ emissions and 0.49% sulfur content of fuel such that the total MMCF of natural gas and natural gas equivalents input does not exceed 133,333.33 MMCF of natural gas per year;

$$(EU-05 \text{ No.1 fuel oil usage in kgal/yr} \div 0.053 \text{ kgal/MMCF}) + (EU-05 \text{ No.2 fuel oil usage in kgal/yr} \div 0.009 \text{ kgal/MMCF}) + (EU-05 \text{ natural gas usage in MMCF/yr}) < 133,333.33 \text{ MMCF/year}$$

The fuel usage from boiler EU-05 shall be limited as required above so the potential to emit of NO_x and SO₂, regulated pollutants under the Prevention of Significant Deterioration (PSD) rule 326 IAC 2-2, would not exceed 40 tons per year, or the significant level for those particular pollutants.

D.2.7 Operation Standards [40 CFR 279] [329 IAC 13]

All coal burned in boilers EU-03 and EU-04, including coal treated with any additive, shall meet ASTM specifications for classification as coal (ASTM D388).

D.2.8 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 these facilities and their control devices.
- (b) The PMP for a multiclone shall include inspections of the internal components of the multiclone, conducted every six thousand (6,000) hours of operation, 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.

Compliance Determination Requirements

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

- (a) Pursuant to the Amendment to OP 53-02-92-0079 through 0084, issued October 19, 1990, the Permittee shall stack test for particulate matter emissions to determine compliance with 326 IAC 6-2 for boilers EU-03 and EU-04.
- (1) Boiler EU-03 shall be tested for particulate matter emissions every three years starting from the most recent compliant stack test; and
- (2) Boiler EU-04 shall be tested for particulate matter emissions every three years starting from the most recent compliant stack test.

These tests shall be performed no later than thirty-six (36) months after the most recent compliant stack test.

- (b) Pursuant to the Amendment to OP 53-02-92-0079 through 0084, issued October 19, 1990, the Permittee shall stack test boiler EU-05 for nitrogen oxide emissions every three years starting from the most recent compliant stack test. During testing, the Permittee shall combust only No.1 fuel oil.
- (c) Compliance with Conditions D.2.1 and D.2.3 will be determined based on the testing schedule in parts (a) and (b) of this condition, utilizing the appropriate methods, or other methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing.

D.2.10 Particulate Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit;

- (a) The multiclones for particulate control shall be in operation at all times when boilers EU-03, EU-04, and EU-05 are in operation and EU-05 is combusting oil, and EU-03 and EU-04 are combusting oil and/or coal.
- (b) Pursuant to the Amendment to Operating Permits 53-02-92-0079 through 0084, issued October 19, 1990, operation condition 12, one scheduled employee on each daytime shift shall be certified to read visible emissions.

D.2.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7] [326 IAC 7-2] [326 IAC 7-1.1-2]

- (a) Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, and pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu using a calendar month average when EU-03 and EU-04 are combusting coal, or coal in combination with another fuel.
- (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).
- (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.2.12 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7] [326 IAC 7-2] [326 IAC 7-1.1-2]

When EU-03, EU-04, and EU-05 are combusting fuel oil, or fuel oil in combination with natural gas, compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, 326 IAC 7-2, and 326 IAC 7-1.1-2, the Permittee shall demonstrate that the sulfur dioxide do not exceed the equivalent of 0.5 pounds per MMBtu, using a calendar month average.
- (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.
- (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)]

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

D.2.13 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission (VE) notations of stack exhaust 002 shall be performed once per shift during normal daylight operations while boilers EU-03 and EU-04 combust coal and/or fuel oil, and EU-05 combusts fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) If abnormal emissions are observed at exhaust 002 while boilers EU-03 and EU-04 combust coal and/or fuel oil, and EU-05 combusts fuel oil, 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 violation of this permit.
- (c) "Normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for the boilers.

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

- (a) The ability of the multiclones to control particulate emissions shall be monitored at least once per shift, when their associated units are in operation, by measuring and recording the total static pressure drop across the collectors.
- (b) 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 violation of this permit.

D.2.15 Multiclone Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In the event that multiclone failure has been observed:

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

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

D.2.16 Record Keeping Requirements

- (a) Pursuant to OP 53-02-92-0081 and 0082, issued January 12, 1990, and 1265 Exemption Qualification 105-8180, issued February 24, 1997, and to document compliance with Conditions D.2.2, D.2.11 and

D.2.12, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in D.2.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) Calendar dates covered in the compliance determination period;
 - (2) Actual coal and fuel oil usage since last compliance determination period;
 - (3) Sulfur content, heat content, and ash content;
 - (4) Sulfur dioxide emission rates.
- (b) To document compliance with Section C - Opacity and Conditions D.2.1, D.2.9, D.2.10, and D.2.12, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity, and in Condition D.2.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (1) Data and results from the most recent stack tests;
 - (2) All parametric monitoring readings;
 - (3) Records of the results of the multiclones' inspections (including usage hours); and
 - (4) All preventive maintenance measures taken.
- (c) To document compliance with Condition D.2.4 and D.2.5, the Permittee shall maintain records of monthly average heat input (MMBtu per hour) for each boiler.
- (d) To document compliance with Condition D.2.6, the Permittee shall maintain records of fuel usage for boiler EU-05.
- (e) To document compliance with Condition D.2.13, the Permittee shall maintain records of daily visible emission notations of the stack 002 exhaust, during times when fuels other than natural gas are combusted.
- (f) To document compliance with Condition D.2.8, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.17 Reporting Requirements

- (a) Pursuant to OP 53-02-92-0081 and 0082, issued January 12, 1990, and 1265 Exemption Qualification 105-8180, issued February 24, 1997, a quarterly summary of the information to document compliance with Condition D.2.2 in any compliance period when coal or oil was combusted, and the natural gas fired boiler certification, shall be submitted to the address listed in Section C - General Reporting Requirements, 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.
- (b) A quarterly summary of the information to document compliance with Conditions D.2.3 and D.2.6 shall be submitted to the address listed in Section C - General Reporting Requirements, 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.

SECTION D.3

FACILITY OPERATION CONDITIONS

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

- (d) One (1) coal, natural gas, No.1 or No.2 fuel oil fired boiler, identified as EU-06, constructed in 1970, with a maximum design capacity of 190 MMBtu per hour heat input when combusting coal and/or fuel oil, and 150 MMBtu per hour heat input (two natural gas fired burners rated at 75 MMBtu per hour heat input each) when combusting natural gas, equipped with low NOx burners for natural gas and/or fuel oil, a multiclone and an electrostatic precipitator for particulate control when combusting coal and/or fuel oil, and a continuous opacity monitor for monitoring opacity, exhausting to stack 003.

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

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

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

Pursuant to PC (55) 1731 issued February 15, 1989, and OP 53-02-92-0083 and 0084, issued January 5, 1990, and 326 IAC 6-2-3(d) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(b)), the PM emissions from EU-06 shall not exceed 0.38 pounds of particulate matter per million British thermal units heat input. This limitation is based on the following equation:

$$P_t = (C * a * h) / (76.5 * Q^{0.75} * N^{0.25})$$

where: P_t - PM limit in pounds per MMBtu
C - Maximum ground level concentration
a - Plume rise factor
h - Stack height in feet
Q - total source permitted capacity in MMBtu/hr
N - Number of stacks

D.3.2 Sulfur Dioxide (SO₂) [326 IAC 7-1.1]

- (a) Pursuant to OP 53-02-92-0083 and 0084, issued January 5, 1990, and 326 IAC 7-1.1-2, sulfur dioxide emissions from boiler EU-06 shall not exceed 6.0 pounds per million British thermal units (lb/MMBtu) of heat input when combusting coal.
- (b) Pursuant to 326 IAC 7-1.1-2, for facilities (EU-06) combusting coal and oil simultaneously, sulfur dioxide emissions shall not exceed six and zero-tenths (6.0) pounds per million British thermal units (lb/MMBtu) of heat input, and when EU-06 is combusting No.1 or No.2 fuel oil, solely, sulfur dioxide emissions shall not exceed 0.5 pounds per million British thermal units (lb/MMBtu) of heat input.

D.3.3 Fuel Usage

Pursuant to 1265 Exemption Qualification 105-8527-00005, issued October 27, 1997, boiler EU-06 may use No.2 fuel oil as an alternative fuel source because it is cleaner than coal and causes no emissions increase when used in boiler EU-06.

D.3.4 Operation Standards [40 CFR 279] [329 IAC 13]

All coal burned in boiler EU-06, including coal treated with any additive, shall meet ASTM specifications for classification as coal (ASTM D388).

D.3.5 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 these facilities and their emission control devices.
- (b) 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) ESP TR set components, performed whenever there is an outage of any nature lasting more than three days, unless such inspections have been performed within the last six months. 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).
 - (3) Air and water infiltration, once per month. The recommended method for this inspection is for audible checks around ash hoppers/hatches, duct expansion joints, and areas of corrosion.
- (b) The PMP for a multiclone shall include inspections of the internal components of the multiclone, conducted every 2 years or six thousand (6,000) hours of operation, whichever occurs first, 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.

Compliance Determination Requirements

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

- (a) Pursuant to the Amendment to OP 53-02-92-0079 through 0084, issued October 19, 1990, the Permittee shall stack test boiler EU-06 for particulate matter emissions to determine compliance with 326 IAC 6-2 every three years starting from the most recent compliant stack test.

These tests shall be performed no later than thirty-six (36) months after the most recent compliant stack test.
- (b) Compliance with Conditions D.3.1 will be determined based on the testing schedule in part (a) of this condition, utilizing the appropriate methods, or other methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing.

D.3.7 Particulate and Opacity Control [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit;

- (a) The electrostatic precipitator shall be operated at all times (except periods of boiler startup) boiler EU-06 is operating and combusting coal and/or oil.

- (b) The multiclones for particulate control shall be in operation at all times when boiler EU-06 is in operation and EU-06 is combusting oil and/or coal.
- (c) The ability of the ESP to control particulate emissions shall be monitored continuously, when boiler EU-06 is in operation and combusting coal and/or fuel oil, by measuring and recording the opacity of emissions with a certified continuous opacity monitor.
- (d) Pursuant to the Amendment to Operating Permits 53-02-92-0079 through 0084, issued October 19, 1990, operation condition 12, one scheduled employee on each daytime shift shall be certified to read visible emissions.

D.3.8 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12]

- (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), continuous emission monitoring system for boiler EU-06 (stack 003) 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.

D.3.9 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7] [326 IAC 7-2] [326 IAC 7-1.1-2]

- (a) Pursuant to OP 53-02-92-0083 and 0084, issued January 12, 1990, and pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu using a calendar month average when EU-06 is combusting coal, or coal in combination with another fuel.
- (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).
- (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.3.10 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7] [326 IAC 7-2] [326 IAC 7-1.1-2]

When EU-06 is combusting fuel oil, but not simultaneously with coal, compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, 326 IAC 7-2, and 326 IAC 7-1.1-2, the Permittee shall demonstrate that the sulfur dioxide do not exceed the equivalent of 0.5 pounds per MMBtu, demonstrated on a calendar month average.

- (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.
- (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)]

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

D.3.11 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) In the event of opacity 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, and ESP T-R sets being returned to service.
- (b) Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.3.12 Electrostatic Precipitator Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) The ability of the ESP to control particulate emissions shall be monitored once per shift, when boiler EU-06 is in operation and combusting coal and/or fuel oil, 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 most recent 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 of 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 violation of this permit.
 - (1) Primary voltage: 260 - 300 V
 - (2) Secondary voltage: 35 - 55 kV
 - (3) T-R set primary current: 50 -75 A

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

- (a) The ability of the multiclones to control particulate emissions from EU-06 shall be monitored at least once per shift, when this boiler is in operation and combusting coal and/or fuel oil, by measuring and recording the total static pressure drop across the collector.
- (b) 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 violation of this permit.

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

D.3.14 Record Keeping Requirements

(a) Pursuant to OP 53-02-92-0083, issued January 5, 1990, and to document compliance with Condition D.3.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide and particulate matter emission rates;
- (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

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

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the fuel supplier that certifies the sulfur content and heat content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) Pursuant to OP 53-02-92-0083 and 0084, issued January 5, 1990, to document compliance with Condition D.3.2, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in D.3.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual coal usage since last compliance determination period;
- (3) Sulfur content, heat content, ash content;
- (4) Sulfur dioxide emission rates.

(c) To document compliance with Section C- Opacity and Conditions D.3.1, D.3.7, D.3.8, D.3.11, D.3.12, and D.3.13, the Permittee shall maintain records in accordance with (1) through (5) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C- Opacity, and in Condition D.3.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) Data and results from the most recent stack test(s).
- (2) All continuous monitoring data, pursuant to 326 IAC 3-5.

- (3) The results of all visible emission (VE) notations and/or Method 9 visible emission readings taken during any periods of COM downtime for stack 003.
- (4) All ESP and multiclone parametric monitoring readings.
- (5) Records of the results of the ESP and multiclones' inspections (including usage hours).
- (d) Pursuant to the Amendment to Operating Permits 53-02-92-0079 through 0084, issued October 19, 1990, operation conditions 9 and 15, daily operating reports, boiler operation logs, and boiler shutdown checklists which are generated in the ordinary course of operation shall be kept and made available upon request of the Office of Air Quality. These records shall be kept for the last 24 month time period.
- (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.
- (f) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

D.3.15 Reporting Requirements

- (a) Pursuant to PC (55) 1731, issued February 15, 1989 and OP 53-02-92-0083 and 0084, issued January 5, 1990, a quarterly summary of the information to document compliance with Conditions D.3.2, D.3.9 and D.3.10 in any compliance period when coal, natural gas, or fuel oil was combusted, and the natural gas fired boiler certification, shall be submitted to the address listed in Section C - General Reporting Requirements, 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.
- (b) 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).

SECTION D.4

FACILITY OPERATION CONDITIONS

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

- (e) One (1) coal storage and handling system, with a maximum design throughput of 200 tons of coal per hour and 210,000 tons of coal per year, consisting of the following:
- (1) One (1) coal truck receiving system, consisting of an interior wet suppression system to control coal dust emissions during coal receiving, and two (2) truck hoppers.
 - (2) Four (4) enclosed belt conveyors, and one (1) enclosed bucket conveyor, with particulate emissions controlled by a fabric filter system, with four (4) dust collectors, identified as DC1 through 4, located internally at various points along the enclosed conveyor system, with all dust collectors exhausting internally.
 - (3) One (1) coal storage silo with a storage capacity of 1,000 tons of coal, with particulate emissions controlled by one (1) dust collector, identified as DC6, exhausting externally at vent 6.

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

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

D.4.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the coal storage and handling system shall not exceed 58.5 pounds per hour when operating at a process weight rate of 400,000 pounds per hour as established in the following formula:

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:

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

D.4.2 Fugitive Dust Emissions [326 IAC 6-4]

Pursuant to Minor Source Modification 105-11356-00005, issued July 21, 2000, and 326 IAC 6-4 (Fugitive Dust Emissions), 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.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Pursuant to Minor Source Modification 105-11356-00005, issued July 21, 2000, a Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and the control device(s).

Compliance Determination Requirements

D.4.4 Particulate Matter (PM)

Pursuant to Minor Source Modification 105-11356-00005, issued July 21, 2000;

- (a) The coal truck receiving interior wet suppression system shall be in operation and control the PM emissions from the associated equipment at all times that the coal receiving system is in operation.
- (b) The dust collectors (DC1 through DC4), all for PM control, shall be in operation and control the PM emissions from their associated equipment at all times that the coal storage and handling system is in operation.
- (c) All equipment exhausting internally (DC1 through DC4) for the coal storage and handling system shall not exhaust to the atmosphere at any time the system is in operation.

- (d) Dust collector DC6, for PM control, shall be in operation and control the PM emissions from the silo when it is receiving coal.

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

D.4.5 Visible Emissions Notations

- (a) Pursuant to Minor Source Modification 105-11356-00005, issued July 21, 2000;
 - (1) Once per shift visible emission notations of the dust collector DC6 vent exhaust shall be performed during normal daylight operations when exhausting to the atmosphere, and when the silo is receiving coal. A trained employee shall record whether emissions are normal or abnormal.
 - (2) Once per shift visible emission notations of the coal truck receiving system shall be performed during normal daylight operations when either of the two (2) truck hoppers are receiving coal. A trained employee shall record whether emissions are normal or abnormal.
 - (3) 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.
 - (4) 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.
 - (5) 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 any visible emissions of dust are observed from the coal storage and handling system, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of visible emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit.
- (c) If abnormal emissions are observed from the coal storage and handling system, 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.
- (d) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.4.6 Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) By calendar, quarterly inspections shall be performed to verify the placement, integrity and particle loading of the filter, DC6. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. 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) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

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

D.4.7 Record Keeping Requirements

- (a) Pursuant to Minor Source Modification 105-11356-00005, issued July 21, 2000;

- (1) To document compliance with Condition D.4.5, the Permittee shall maintain records of visible emission notations of the dust collector vent for DC6, and of the coal truck receiving system at each time when coal is being received by the silo and either of the truck hoppers, respectively.
 - (2) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.
- (b) To document compliance with condition D.4.6, the Permittee shall maintain a log of quarterly inspections and those additional inspections prescribed by the Preventive Maintenance Plan.
 - (c) Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

SECTION D.5 FACILITY OPERATION CONDITIONS- Insignificant Operations

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) Twenty-two (22) boilers constructed before 1972, with a combined total heat input of 29.130 MMBtu per hour.
 - (2) One (1) boiler constructed in 1977, with a heat input of 0.60 MMBtu per hour.
 - (3) One (1) boiler constructed in 1981, with a heat input of 0.110 MMBtu per hour.
 - (4) Fifty-seven (57) boilers constructed after 1983, with a combined heat input of 135.39 MMBtu per hour.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

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

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

D.5.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2]

- (b) Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(c)), part (b), the emission limitations for those indirect heating facilities which were existing and in operation on or before June 8, 1972, shall not exceed the pound per million Btu heat input (lb/MMBtu) calculated using the following equation:

$$Pt = \frac{(C)(a)(h)}{76.5(Q^{0.75})(N^{0.25})} \quad \text{Where } C = 50 \text{ F/m}^3$$

Q = total source capacity (MMBtu/hr)
 N = number of stacks
 a = 0.67
 h = average stack height (feet)

Pursuant to 326 IAC 6-2-3(b), the emission limitations for those indirect heating facilities which were existing and in operation on or before June 8, 1972, shall be calculated using the above equation where Q , N , and h include the parameters for all facilities in operation on June 8, 1972.

- (c) Pursuant to 326 IAC 6-2-3(c), the emission limitations for those indirect heating facilities which began operation after June 8, 1972, and before September 21, 1983, shall be calculated using the above equation where Q , N , and h include the parameters for the facility in question and for those facilities which were previously constructed.
- (d) Pursuant to 326 IAC 6-2-3(d), particulate emissions from all facilities used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.8 lb/MMBtu heat input.
- (e) 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 indirect heating facilities constructed after September 21, 1983, shall not exceed the pound per million Btu heat input (lb/MMBtu) calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} \quad \text{Where } Q = \text{total source capacity (MMBtu/hr)}$$

D.5.2 Volatile Organic Compounds (VOC)

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

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;

- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the 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.5.3 Volatile Organic Compounds (VOC)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Indiana University
Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
Mailing Address: Same
Part 70 Permit No.: T105-6642-00005

**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 DATA SECTION**

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

Source Name: Indiana University
Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
Mailing Address: Same
Part 70 Permit No.: T105-6642-00005

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE 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: Indiana University
Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
Mailing Address: Same
Part 70 Permit No.: T105-6642-00005

This form consists of 2 pages

Page 1 of 2

- 9** This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 - 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.

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

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

Part 70 Quarterly Report for Boilers EU-01 and EU-02

Source Name: Indiana University
 Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
 Mailing Address: Same
 Part 70 Permit No.: T105-6642-00005
 Facility: Boilers EU-01 and EU-02
 Parameters: Heat input, SO₂ emissions, coal usage & analysis
 Limits: 80 MMBtu per hour heat input to each boiler.
 SO₂ emissions shall not exceed 6.0 pounds per million Btu when combusting coal.

QUARTER: _____ **YEAR:** _____

Month	Coal Usage (tons)	Monthly Average Heat Content* (MMBtu/lb)	Monthly Average Sulfur Content (%)	SO ₂ Emission Rate (lbs/MMBtu)
# of Deviations				

- 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: _____
 Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report for Boilers EU-03 and EU-04

Source Name: Indiana University
 Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
 Mailing Address: 2735 East 10th Street, Room 160, Bloomington, Indiana 47408
 Permit No.: T105-6642-00005, and EQ 105-8180-00005
 Facility: Boilers EU-03 and EU-04
 Parameter: Heat input from all fuels used
 Limit: 100 MMBtu per hour heat input to each boiler

QUARTER/YEAR: _____ **MONTH:** _____

Fuel Type	Amount of fuel burned this month	High heat value of fuel burned this month	Total heat input from fuel this month (MMBtu/mo)	Hours of boiler operation this month (hrs/mo)	Average monthly heat input from fuel this month (MMBtu/hr)
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Boiler EU-03

coal	_____ tons/mo	_____ MMBtu/ton			
natural gas	_____ MMCF/mo	1050 MMBtu/MMCF			
fuel oil	_____ gals/mo	0.139 MMBtu/gal			

Average monthly heat input from all fuels this month (MMBtu/hr) _____

Boiler EU-04

coal	_____ tons/mo	_____ MMBtu/ton			
natural gas	_____ MMCF/mo	1050 MMBtu/MMCF			
fuel oil	_____ gals/mo	0.139 MMBtu/gal			

Average monthly heat input from all fuels this month (MMBtu/hr) _____

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

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

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report for Boiler EU-05

Source Name: Indiana University
 Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
 Mailing Address: 2735 East 10th Street, Room 160, Bloomington, Indiana 47408
 Part 70 Permit No.: T105-6642-00005
 Facility: Boiler EU-05
 Parameters: fuel oil usage & analysis, natural gas usage
 Limits: Fuel equivalencies for NO_x emissions- every 5.87 kgals of No.1 or No.2 fuel oil combusted shall each be equivalent to 1 MMCF of natural gas; (EU-05 No.1 fuel oil usage in kgal/yr ÷ 5.87 kgal/MMCF) + (EU-05 No.2 fuel oil usage in kgal/yr ÷ 5.87 kgal/MMCF) + (EU-05 natural gas usage in MMCF/yr) < 571.4 MMCF/year

Fuel equivalencies for SO₂ emissions- every 0.053 kgals of No.1 fuel oil burned shall be equivalent to 1 MMCF of natural gas, and every 0.009 kgals of No.2 fuel oil combusted shall be equivalent to 1 MMCF of natural gas; (EU-05 No.1 fuel oil usage in kgal/yr ÷ 0.053 kgal/MMCF) + (EU-05 No.2 fuel oil usage in kgal/yr ÷ 0.009 kgal/MMCF) + (EU-05 natural gas usage in MMCF/yr) < 133,333.33 MMCF/year

QUARTER: _____ **YEAR:** _____

Month	A No.1 Oil Usage per month (kgals)	B No.2 Oil Usage per month (kgals)	C Nat. Gas Usage per month (MMCF)	Column 1	Column 2	Column 1 + Column 2
				This Month NO_x (A/5.87)+(B/5.87)+C < 571.4 MMCF/yr	Previous 11 Months NO_x	12 Month Total NO_x

SO ₂ (A/0.053)+(B/0.009)+C < 133,333.33 MMCF/yr	SO ₂	SO ₂

# of Deviations						
-----------------	--	--	--	--	--	--

- 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: _____
 Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report for Boiler EU-06

Source Name: Indiana University
 Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
 Mailing Address: 2735 East 10th Street, Room 160, Bloomington, Indiana 47408
 Part 70 Permit No.: T105-6642-00005
 Facility: Boiler EU-06
 Parameters: SO₂ emissions, coal usage & analysis
 Limits: SO₂ emissions shall not exceed 6.0 pounds per million Btu when combusting coal, and when coal and fuel oil are used simultaneously; and
 SO₂ emissions shall not exceed 0.5 pounds per million Btu when combusting fuel oil

QUARTER: _____ **YEAR:** _____

Month	Coal Usage (tons)	Fuel Oil Usage (gallons)	Monthly Average Heat Content (MMBtu/lb)		Monthly Average Sulfur Content (%)		SO ₂ Emission Rate (lbs/MMBtu)	
			coal	oil	coal	oil	coal	oil
# of Deviations								

- 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: _____
 Phone: _____

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: Indiana University
 Source Address: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
 Mailing Address: 2735 East 10th Street, Room 160, Bloomington, Indiana 47408
 Part 70 Permit No.: T105-6642-00005

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

This report shall be submitted quarterly based on a calendar year. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive. 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. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

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 Part 70 Operating Permit

Source Name: Indiana University
Source Location: 700 North Walnut Grove, Bloomington, Indiana 47405
County: Monroe
SIC Code: 8221
Operation Permit No.: T105-6642-00005
Permit Reviewer: Melissa Groch

On November 17 2003, the Office of Air Quality (OAQ) had a notice published in The Herald Times, Bloomington, Indiana, stating that Indiana University had applied for a Part 70 Operating Permit to operate a campus power plant used for process heat. The notice also stated that OAQ proposed to issue a permit 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 permit should be issued as proposed.

All of the comments received during this comment period were submitted by representatives of Indiana University. The IDEM has addressed each one of these comments in this document. In some instances, language has been added or omitted as a result of the comments. Added language is shown in bold and language with strikethrough has been deleted.

Comment 1: Condition A.1 – We would like to change the Responsible Official to the Director of the University Office of Environmental, Health, and Safety Management, as authorized by the Vice-President and Chief Administrative Officer.

Response to Comment 1: It is not clear, based on the comment above and in conversations with Indiana University, if the Director of the University Office of Environmental, Health, and Safety Management, is a position that complies with 326 IAC 2-7-1(34), the provisions which define the term “responsible official”. As a result, no change has been made to this condition.

Comment 2: Conditions A.2.(e)(2), Facility Description in Section D.4, D.4.4.(b) and (c), TSD p.1 – The coal storage and handling system has four dust collectors that exhaust internally, not five.

Response to Comment 2: The changes requested above have been made to the permit. Condition A.2(e)(2) and the facility description in Section D.4 now read as follows:

Four (4) enclosed belt conveyors, and one (1) enclosed bucket conveyor, with particulate emissions controlled by a fabric filter system, with ~~five~~ **four (54)** dust collectors, identified as DC1 through ~~54~~, located internally at various points along the enclosed conveyor system, with all dust collectors exhausting internally.

Also, for condition D.4.4, parts (b) and (c) now read as:

- (b) The dust collectors (DC1 through DC~~54~~), all for PM control, shall be in operation and control the PM emissions from their associated equipment at all times that the coal storage and handling system is in operation.
- (c) All equipment exhausting internally (DC1 through DC~~54~~) for the coal storage and handling system shall not exhaust to the atmosphere at any time the system is in operation.

Since IDEM prefers that the Technical Support Document (TSD) reflect the permit at the time of public notice, no changes have been made to that document.

Comment 3: Condition A.3.(a), Facility description in Section D.5, TSD P.2 – The list of natural gas fired boilers with heat inputs less than 10 MMBtu (“insignificant activities”) needs to be updated per the list of boilers submitted to IDEM in June of this year.

Response to Comment 3: Since IDEM prefers that the Technical Support Document (TSD) remains as it was during the public notice comment period, no changes will be made to that document. In Appendix A of this document, page 9 of the TSD calculations has been updated to show new calculations for all of the insignificant boilers. Because there are numerous insignificant boilers, and to simplify matters, condition A.3 and the Section D.5 description box have been revised to list the boilers by construction year and combined heat input in order to correspond to the rule criteria for applicability purposes. The details of each boiler (year, location or ID, and MMBtu/hr) can be found below:

Year Built	NAME	Quantity	SIZE (MMBtu/hr)	Year Built	NAME	Quantity	SIZE (MMBtu/hr)
1950	703 E 7TH ST		0.350	1993	HILLTOP GARDENS	2 @ 0.167	0.334
1950	815 E 8TH ST		0.500	1995	POPLARS	2 @ 3.5	7.000
1950	809 E 7TH ST		0.660	1995	422 N INDIANA		0.350
1950	809 E 7TH ST		0.300	1995	OPTOMETRY	2 @ 3	6.000
1950	519 N COLLEGE		0.500	1996	B1 and B2	2 @ 3.0	6.000
1960	825 E 8TH St		0.420	1997	MATHERS MUSEUM		1.656
1960	802 E 3RD ST		0.375	1998	MATHERS ANNEX		1.357
1960	814 E 3RD St		1.145	1998	HEPBURN	2 @ 1.129	2.580
1960	306 N UNION		0.672	1998	NUTT	2 @ 0.886	1.772
1960	ANIMAL BEHAVIOR LAB		0.360	1998	BICKNELL	2 @ 1.129	2.258
1960	914 ATWATER		0.300	1998	BANTA	2 @ 1.372	2.744
1960	317 E 2ND ST		0.480	1998	EVERMANN	2 @ 4.378	8.756
1970	501 N PARK		0.300	1998	REDBUD II WEST	2 @ 1.904	3.808
1970	CYCLOTRON	2 @ 5.54	11.080	1998	REDBUD I EAST	2 @ 1.904	3.808
1970	FOOD STORE	2 @ 3.2	6.400	1998	B3 through B16	Combined	50.8
1971	BLACK LAB		1.688	1999	1022 E 3RD ST	2 @ 0.5	1.000
1971	PUBLICATIONS		2.100	1999	WILKIE CTR	6 @ 0.35	2.100
1971	PUBLICATIONS		1.500	1999	B17 through B22	6 @ 3.5	21.00
1977	822 E 12TH ST		0.600	2000	625 N JORDAN	2 @ 0.27	0.540
1981	PRESS		0.110	2000	MASON	2 @ 1.84	3.680
1985	MATHERS MUSEUM		0.650	2002	MCCALLA	6 @ 0.18	1.080
1990	712 E 8TH ST		0.266	2002	736 E 3RD ST		0.916
1990	BOT. GREENHOUSE		1.125	2002	INFOMATICS		0.835
1991	ANIMAL BEHAVIOR LAB		0.470	Not known	1321 E 10TH		0.175
1993	300 N JORDAN	2 @ 0.5	1.000	Not known	HARLOS WAREHOUSE		1.330

Condition A.3(a) and the description box in Section D.5 now read as follows:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour heat input [326 IAC 6-2-3]:
- (1) ~~Two (2) boilers, identified as B1 and B2, rated at 3.0 MMBtu per hour heat input each, both constructed in 1996. Emissions shall be exhausted at S1 and S2, respectively. Twenty-two (22) boilers constructed before 1972, with a combined total heat input of 29.130 MMBtu per hour. [326 IAC 6-2-3(b) and (d)]~~
 - (2) ~~Fourteen (14) boilers, identified as B3 through B16, with B3 and B4 rated at 1.6 MMBtu per hour heat input each, B5 and B6 rated at 1.0 MMBtu per hour heat input each, B7 through B10 rated at 1.3 MMBtu per hour heat input each, and B11 through B14 rated at 2.1 MMBtu per hour heat input each, B15 and B16 rated at 5.5 MMBtu per hour heat input each, all constructed in 1998. Emissions shall be exhausted at S3 through S16, respectively. One (1) boiler constructed in 1977, with a heat input of 0.60 MMBtu per hour. [326 IAC 6-2-3(c)]~~
 - (3) ~~Six (6) boilers, identified as B17 through B22, rated at 3.5 MMBtu per hour heat input each, constructed in 1999. Emissions shall be exhausted at S17 through S22, respectively. One (1) boiler constructed in 1981, with a heat input of 0.110 MMBtu per hour. [326 IAC 6-2-3(c)]~~
 - (4) **Fifty-seven (57) boilers constructed after 1983, with a combined heat input of 135.39 MMBtu per hour. [326 IAC 6-2-4(a) and (b)]**

Because it is easier to delineate the particulate limitations of the boilers based on rule applicability criteria, condition D.5.1 has been rewritten to include the other applicable parts of 326 IAC 6-2 that apply to the insignificant boilers. The condition now reads as:

D.5.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

- (a) Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(c)), part (b), the emission limitations for those indirect heating facilities which were existing on or before June 8, 1972, shall not exceed the pound per million Btu heat input (lb/MMBtu) calculated using the following equation:

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

Where C = 50 μ /m³
Q = total source capacity (MMBtu/hr)
N = number of stacks
a = 0.67
h = average stack height (feet)

Pursuant to 326 IAC 6-2-3(b), the emission limitations for those indirect heating facilities which were existing and in operation on or before June 8, 1972, shall be calculated using the above equation where Q, N, and h include the parameters for all facilities in operation on June 8, 1972.

- (b) Pursuant to 326 IAC 6-2-3(c), the emission limitations for those indirect heating facilities which began operation after June 8, 1972, and before September 21, 1983, shall be calculated using the above equation where Q, N, and h include the parameters for the facility in question and for those facilities which were previously constructed.
- (c) Pursuant to 326 IAC 6-2-3(d), particulate emissions from all facilities used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.8 lb/MMBtu heat input.
- (d) 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 **indirect heating facilities constructed after September 21, 1983**, ~~boilers B1 through B22~~ shall not exceed ~~0.2~~ the pound per million Btu heat input (lb/MMBtu) ~~each. This limitation was calculated, using the following equation:~~

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

Where Q = total source capacity (MMBtu/hr)

Comment 4: Condition B.10.(a)(1) – IDEM should replace the term “individual(s)” in this condition with the term “job title(s)”, or add the following phrase at the end: “Permittee will make this designation by job title.”.

This would avoid confusion about responsibilities in the future when various individuals move on to take new roles within our organization, as well as avoid the necessity of rewriting and distributing the plan every time people leave or are hired.

Response to Comment 4: B.10 Preventive Maintenance Plan. Since listing an individual’s job title fulfills the “Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;” portion of this condition, this condition part has been revised. The term “job title” has been added to part (a)(1). This condition part now reads as follows:

Identification of the individual(s), **or a job title**, responsible for inspecting, maintaining, and repairing emission control devices;

Comment 5: Condition B.23.(a) – this condition should be worded as follows:

“The Permittee shall pay annual fees to IDEM, OAM in accordance with 326 IAC 2-7-19.”

Response to Comment 5: As suggested above, part (a) has been revised because the sentence suggested does not change the intent of the condition or rule provisions. Part (a) now reads as follows:

~~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. The Permittee shall pay annual fees to IDEM, OAQ in accordance with 326 IAC 2-7-19.~~

Also, there has been a change in part (c) to update the name of the section referenced. This part now reads as:

The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, ~~I/M & Billing~~ **Billing, Licensing and Training** Section), to determine the appropriate permit fee.

Comment 6: Condition C.1 - As currently written, this provision will be impossible to comply with on an ongoing basis. As IDEM is aware, the current particulate technologies cannot prevent *all* six-minute opacity exceedances no matter how well the control equipment is maintained and operated. Historically, IDEM has handled this situation by allowing somewhere between two and five percent of the operating time to have opacity exceedances for all reasons before beginning an inquiry that could lead to an enforcement action.

While this practice has been highly successful under the past permitting and compliance scheme, it will not work under Title V. However, since the facility utilizes the same equipment that has been in place for many years to successfully comply with particulate and opacity limits, it is still necessary to have this same allowance in place. We therefore believe that IDEM should add a provision to this condition that allows up to 3% of the operating hours to exceed the opacity standard for the facility and still allow the certification of full compliance with the provisions of the permit under this section.

Putting this threshold into the permit is not a permanent action that cannot be reconsidered if control technologies improve. IDEM will still have the opportunity to revisit the threshold each time the Title V permit is renewed. This opportunity would allow changes if appropriate.

In addition, other states and courts have provided such an allowance. For example, the district court in the Eastern District of Tennessee found that Tennessee's 2% allowance was reasonable, as follows:

Finally, NPCA claims that TDEC's interpretation that COM monitoring, with its 2% de minimis exception, is a more restrictive emission standard is unreasonable and, perhaps, therefore not facially valid. I disagree. I agree with the D.C. Circuit Court of Appeals that changing the method of measuring compliance with an emission limitation can affect the stringency of the limitation itself. See *Appalachian Power Company v. EPA*, 208 F.3d 1015, 1027 (D.C. Cir. 2000); *Portland Cement Association v. Ruckelshaus*, 486 F.2d 375, 396-97 (D.C. Cir. 1973). Obviously, monitoring the smokestack emissions continuously with equipment capable of reliably measuring the opacity will identify many more exceedances than will be identified by an operator "eyeballing" the smokestack emissions once a day, or less. I believe that it was completely reasonable for TDEC to consider the COM monitoring by TVA at its plants to be a more restrictive standard than the Tennessee SIP required and therefore concluding that EPA approval of that more restrictive standard was not necessary.

National Parks Conservation Association Inc. v. Tennessee Valley Authority, 175 F.Supp.2d 1071, 1078 (E.D. Tenn 2002). Other states such as Ohio, North Carolina, Kentucky, and Florida also have recognized exemption levels.

In order to implement this necessary provision, we recommend that IDEM change Condition C.1 as follows by adding the language of a new subsection (c) as set forth below:

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 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.

Add:

(c) For units for which opacity is monitored continuously, any opacity in excess of the applicable limitations contained in this condition will not be considered a violation provided that the total time in excess does not exceed 3% of the total boiler operating time on a quarterly basis and the primary causes of the exceedances are not due to lack of maintenance or improper operations.

Response to Comment 6: 326 IAC 5-1 does not allow exemptions from the opacity limit up to three percent (3%) of the boiler operating time; therefore, IDEM cannot create such an exemption in the permit when one does not exist in the rule. IDEM will continue to use enforcement discretion; however, the permit will not include the suggested blanket exemption for exceeding the opacity limit up to 3% of the boiler operating time. As a result, no changes are made to this condition.

Comment 7: Condition C.5. – This condition should be modified as follows (see 326 IAC 1-6, 2-7-16 and 5.1):

“All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation, except for cases of startup, shutdown, emergency and malfunction, as allowed by applicable regulations.”

Response to Comment 7: Instead of modifying condition C.5, Operation of Equipment, it has been deleted. As necessary, the requirement to operate control equipment is included in Section D. All subsequent Section C conditions and the Table of Contents have been renumbered as a result. Below is the deleted condition:

~~Operation of Equipment [326 IAC 2-7-6(6)]~~

~~Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.~~

Comment 8: Condition C.10 – We believe that several of the conditions referenced below are not supported by the rules and should be taken out of the permit, as is reflected in our other comments. However, to the extent that these conditions remain in the permit, we request that IDEM confirm that the specific following plans and operational/monitoring activities are not required to be developed and implemented until 90 days after issuance of the permit: Preventive Maintenance Plan (B.10, D.1.5, D.2.9, D.3.5, D.4.3); Pressure Gauge and Other Instrument Specifications (C.14); Emergency Reduction Plan (C.13); Compliance Response Plan (C.16); Transformer-Rectifier (T-R) Sets (D.1.12, D.2.12); Opacity Readings (D.3.12); Visible Emission Notations (D.1.9, D.2.15, D.4.5); Baghouse Parametric Monitoring (D.4.6); Baghouse Inspections (D.4.7); Broken or Failed Bag Detection (D.4.8); Maintenance of Continuous Opacity Monitoring Equipment (C.11); and all related recordkeeping and reporting.

This is consistent with other Title V permits and draft permits that have been issued by IDEM to date.

Response to Comment 8: As stated in other responses to comments, IDEM disagrees with the Permittee's position that certain conditions in the Part 70 operating permit are not supported by the rules. Condition C.10, Compliance Monitoring, is now listed as C.9. To give the Permittee more time in developing and implementing compliance monitoring, IDEM has changed this condition to read as:

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ~~thirty ninety (30 90)~~ **thirty ninety (30 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 ~~thirty ninety (30 90)~~ **thirty ninety (30 90)**, the Permittee may extend the compliance schedule related to the equipment for an additional thirty (30) 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 ~~thirty ninety (30 90)~~ **thirty ninety (30 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.

Comment 9: Condition C.11.(a) – the phrase “except during maintenance or gas firing only” should be added to the end of the last sentence because the COM is not required by the regulations to be operating during these times.

Response to Comment 9: IDEM agrees to add language for clarification. The language as suggested however, is not entirely appropriate. Language has been added to condition C.11, Maintenance of Continuous Opacity Monitoring Equipment, now C.10, which explains that the COM does not need to be in operation during times of COM maintenance and when natural gas is the only fuel being combusted. As a result, the second sentence of part (a) now reads as:

For a boiler, the COM shall be in operation at all times that the induced draft fan is in operation, **except during COM maintenance downtime or when natural gas is the only fuel being combusted.**

Comment 10: Condition C.11.(d) – Please cite the rule(s) where these requirements came from, as we believe that IDEM is not authorized to impose this condition. This condition should be replaced and reworded as follows to make it more consistent with the applicable regulations:

“In the event that a breakdown of the monitoring equipment occurs, Permittee shall follow Indiana regulations at 326 IAC 3 in connection with its continuous opacity monitor.”

Indiana University could agree that Method 9 readings for ½ hour every 4 hours beginning 24 hours after the downtime commences is reasonable, and could agree that VE notations once per hour is reasonable, but we request that this process not be required until 4 hours after the commencement of the downtime. We believe that this provision should be revised to allow more flexibility and that subsection (d) should be modified as follows:

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

(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, **beginning four (4) hours after the commencement of the COM malfunction/shutdown** 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.

Response to Comment 10: IDEM disagrees that the change above should be made to condition C.11, now C.10, Maintenance of Continuous Opacity Monitoring Equipment, part (d). The rule providing authority for the requirements of this condition is 326 IAC 2-7-5(3)(A)(iii), as stated in the title line. The visible emission notations required in this condition are taken in response to COM downtime and, therefore, are required to assure continuous compliance pursuant to 326 IAC 2-7-5(3). The visible emission notations required by condition C.10(d)(1) are only normal/abnormal observations made by an employee trained in the appearance of normal emissions from that particular stack, rather than Method 9 visible emission readings required to be taken by a certified opacity reader. A trained employee for the purposes of this condition is defined as follows: “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.” It clearly is not an overly burdensome task for a trained employee to briefly observe the emissions from the stack once per hour, after a COM malfunction occurs, to assure that emissions are normal. To provide an alternative requirement for the Permittee, the following changes have been made to this condition:

- (a) The Permittee shall install, 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, except during COM maintenance downtime or when natural gas is the only fuel being combusted.
- (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 times and reasons 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) **The affected boiler(s) shall combust only fuel oil or natural gas and** visible emission (VE) notations shall be performed once per hour ~~shift~~ during daylight operations following the shutdown or malfunction of the ~~primary certified~~ 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, **and the affected boiler(s) may resume combustion of coal**, 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 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 violation of this permit.~~
- (e)(d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5.

Comment 11: Condition C.16.(a) and (b)– IDEM should delete the requirement to implement a compliance response plan because Indiana University cannot predict in advance every eventuality and because IDEM does not have jurisdiction to impose this requirement. Condition C.16.(a) and (b) should be deleted and replaced with the following language:

“(a) For each compliance monitoring condition of the permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition.”

Response to Comment 11: Condition C.16, now C.15, is Compliance Response Plan - Preparation, Implementation, Records, and Reports. An important goal of the Part 70 Operating Permit program is to assure that each Permittee has the ability to assure compliance with applicable requirements on a continuous basis.

During the development of the Part 70 permit program, IDEM worked with interested parties, such as the:

Clean Air Strong Economy (CASE),
Clean Air Act Advisory Council's Permit Committee,
Indiana Manufacturing Association,
Indiana Chamber of Commerce, and
individual Part 70 sources.

A consensus was reached that written plans, outside of the permit document, such as the Compliance Response Plan (CRP), are vital tools that the Permittee can implement to ensure compliance. Plans are also the documents implemented if an emission unit or air pollution control device deviates from its normal operation.

It is correct that 326 IAC 2-7-5 and 326 IAC 2-7-6 do not use the exact term “CRP” however, 326 IAC 2-7-6(6) provides the Department the authority to specify provisions in the Part 70 Operating Permit, as the Commissioner may require, with respect to ensuring compliance with applicable requirements. IDEM has determined that a CRP provision is necessary with respect to compliance assurance.

The requirement to develop and implement the plan does not prescribe any new applicable requirement. The CRP is a compilation of reasonable responses, schedules, work practices and other information developed by the Permittee from the standpoint of good business practices and the prevention of environmental problems. The Permittee is required to implement these reasonable responses and schedules to maintain or return to compliance. The steps documented in the plan are reasonable actions to be taken for specific deviations that occur at the emission unit or control device.

Permittees already have maintenance schedules and trouble shooting guidelines that specify options and steps to be taken when an emission unit or control device is not operating or functioning properly. The Permittee has the knowledge, expertise and experience on how to operate the equipment at their plant, and is required to develop the CRP based on this knowledge, experience and expertise. The CRP maintains the documentation, such that changes in personnel will not hinder the proper operation of emission units and control devices. The CRP provides the plant's employees a quick reference on how to respond when an emission unit or air pollution control device deviates from its normal operation, thus avoiding long periods of deviations. As a result, no changes are made to this condition.

Comment 12: Condition C.17.(c) – IDEM should amend this condition to allow for more flexibility for negotiations which take place on the spot depending on specific circumstances. The condition should be modified to read:

“(c) IDEM, OAM and the Permittee may agree to a different schedule of activities than those delineated in (a) and (b) above in response to a non-compliant stack test.”

Response to Comment 12: Condition C.17, Actions Related to Noncompliance Demonstrated by a Stack Test, now C.16, as currently written, provides sufficient flexibility for IDEM, OAM and the Permittee to establish a different schedule of activities if appropriate. The change suggested above has been provided for under part (c), and part (b) already states that “Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline.” As a result, it is not necessary to make any revisions to this condition.

Comment 13: Conditions C.20., D.1.13., D.2.20., and D.3.15. – Although these conditions do not change the rules governing how Indiana University is to submit quarterly reports, the forms attached at the end of the draft permit

substantially change the type of information that is to be submitted and the form in which it is submitted. Indiana University believes that its current reporting method is sufficient to supply all of the required data to IDEM, and wishes to retain the forms it currently uses for the reports.

Response to Comment 13: Condition C.20, now C.19, is General Reporting Requirements, and conditions D.1.13, D.2.20, and D.3.15 are titled "Reporting Requirements". IDEM agrees that the Permittee may continue to use the forms by which they currently use to report. The submittal of reports, and the content thereof, as required by the provisions of Part 70 operating permits, are tracked by the Office of Air Quality Compliance Section. Any reporting discrepancies or deficiencies noted by the inspector or otherwise, would be addressed by that section to the Permittee. Note that the reporting requirements specify "or equivalent forms" so that the Permittee of a Part 70 source may use their own reporting forms as long as they fulfill the requirements.

Comment 14: Conditions D.1.5., D.2.9., and D.3.5. – These conditions should be modified to indicate that it is required for the control devices, not the emitting units, to be consistent with the Preventive Maintenance Plan rule set out at 326 IAC 1-6-3. The wording of these conditions should be changed as follows:

"A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for the control devices for units (EU-01 and EU-02 for D.1.4., EU-03 and EU-04 for D.2.5, and EU-05 and EU-06 for D.3.7.).

Response to Comment 14: Conditions D.1.5, D.2.9, and D.3.5 are each titled Preventive Maintenance Plan. The Preventive Maintenance Plan requirement must be included in every applicable Part 70 permit pursuant to 326 IAC 2-7-5 (13). This rule refers back to the Preventive Maintenance Plan requirement found in 326 IAC 1-6-3. This Preventive Maintenance Plan rule sets out the requirements for:

- (1) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),
- (2) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and
- (3) The identification and quantification of the replacement parts for the facility which the Permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(2)).

It is clear from the structure of 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Only 326 IAC 1-6-3 (a)(1) is limited, in that it requires identification of the personnel in charge of only the emission control equipment, and not any other facility equipment. 326 IAC 1-6-3(b) provides that "...as deemed necessary by the commissioner, any person operating a facility shall comply with the requirements of subsection (a) of this section."

Comment 15: Conditions D.1.5(b), D.2.9(b) – please provide a justification for these limits and the exact regulatory language that requires them. Inspections should not need to occur more frequently than every two years (17,520 hours) on these devices, as is reflected in Condition D.3.5(c).

Response to Comment 15: Conditions D.1.5, D.2.9, and D.3.5 are titled Preventive Maintenance Plan. Part (c) of D.3.5 was mistakenly listed as (b). This has been corrected to (c). As noted earlier, the Preventive Maintenance Plan requirement must be included in every applicable Part 70 permit pursuant to 326 IAC 2-7-5(13). Part (b) of D.1.5 and D.2.9, now D.2.8, addresses both multiclone PMPs and inspections. The inspections must be conducted annually or every 6,000 hours, whichever occurs first. On May 10, 2004, Mike Jenson of Indiana University verbally agreed to change the requirement for D.1.5 and D.2.8 to only every 6,000 operating hours. The terms of inspecting annually, regardless of how many hours operated, have been deleted from these conditions. As a result, the first sentence of part (b) for these two conditions now reads as:

The PMP for a multiclone shall include inspections of the internal components of the multiclone, conducted ~~annually or~~ every six thousand (6,000) hours of operation, ~~whichever occurs first~~, in accordance with the Section B- Preventive Maintenance Plan.

Comment 16: Conditions D.1.6, D.2.7, D.3.8, and D.4.3 – All of our units should be stack tested once per permit term instead of once every three years, due to the relatively small size of the boilers and the fact that they have tested well within compliance for the past several tests. In addition, we would like to request that if a unit tests at less than 50% of the limit for the tested parameter, that the unit be allowed to skip the next required test.

Response to Comment 16: On April 26, 2004, the Permittee revised the conditions referenced in their comment above to D.2.10 and D.3.6, in place of D.2.7 and D.3.8. Conditions D.1.6, D.2.10 and D.3.6 are titled Testing Requirements. Section D.4 does not have a testing requirement condition. These testing schedules were required in previous permits. Generally, boilers as large as the ones IU operates, have testing requirements every two years. Because of their size and the nature of the fuels combusted, testing once every five years is not sufficient, and would not provide enough assurance to indicate continuous compliance. No change has been made to the permit as a result.

Comment 17: Condition D.1.6 – We would like to change the phrasing of this requirement for stack testing so that we are not required to do stack tests during in any particular part of the year. In this way, the test can be conducted when there is sufficient load on campus to provide an outlet for the steam that is generated when the boiler is being run. This would allow us to conduct tests during times of the year when the boiler to be tested typically is running and supplying steam to the campus.

Using this schedule, applying Comment #14, and switching the boilers to go in numerical order would then yield the following language for D.1.6:

“Permittee shall stack test for particulate matter emissions to determine compliance with 326 IAC 6-2 for boilers EU-01 and EU-02 as follows:

- a. Boiler EU-01 shall be tested for particulate matter emissions in 2004 and again in 2009 and thereafter on a five year cycle.
- b. Boiler EU-02 shall be tested for particulate matter emissions in 2003 and again 2008 and thereafter on a five year cycle.”

Response to Comment 17: Condition D.1.6 contains the testing requirements for boilers EU-01 and EU-02. The requirements were carried over from a previous permit that was issued prior to the inception of the Part 70 program. As stated earlier in the response to comment 16, testing once every five years would not provide enough assurance to indicate continuous compliance. To give the Permittee more options to stagger the testing of these boilers, a new sentence has been added to the end of part (a). This sentence reads as:

These tests shall be performed no later than thirty-six (36) months after the most recent compliant stack test.

Comment 18: Conditions D.1.10(a), D.2.16(a), and D.3.13(a) – Measurement of the static pressure drops across the multiclones should not be taken more than once per week. A higher frequency would constitute a waste of manpower and create needless paper. Please provide a justification for these limits and the exact regulatory language that requires them.

Response to Comment 18: These conditions are titled Monitoring: Multiclones. The authority for requiring this monitoring is found under rules 326 IAC 2-7-6(1) and 326 IAC 2-7-5(1). The monitoring of the pressure drop of each multiclone provides an indication of whether the control device is operating properly. Monitoring of the static pressure drop can alert the operator to relative changes (such as the plugging of cones) over a period of time. The operator can use this information to chart trends and determine if the unit is operating within the optimal range as determined by baseline testing of the unit and manufacturer’s specifications. Pressure drop is an indicator of a variety of conditions within the multiclone. Any deviations from the normal operational range of the unit, whether gradual or sudden, should alert the operator that the unit needs maintenance. The Compliance Response Plan should include response steps to anticipate corrective actions when abnormal conditions arise. Further, while the nature of a facility’s operation may not vary from shift to shift, the personnel at the facility does change from shift to shift. The OAQ believes that all shifts should be in tune with the work practices necessary to ensure continual compliance with permit requirements. These work practices should include an understanding and awareness of proper operating parameters of the control equipment. This knowledge and awareness during all shifts can minimize lag time in addressing control failure. Therefore, the OAQ believes that pressure drop readings should be taken at least once per shift. The requirements to measure the pressure drops across the multiclones will not be deleted from the permit.

Failure to take any response steps after observing a pressure drop that is outside the normal range is considered a deviation from the permit. An abnormal pressure drop can indicate a pending or current malfunction of the control device, which could cause an exceedance of a particulate matter limitation or an exceedance of an opacity limit. Without taking any response steps or conducting a stack test, the only information available regarding emissions would be that the pressure drop of the multiclone was outside the normal operating range. Without any other evidence to the contrary,

the out of range pressure drop would be credible evidence that the control device was not functioning properly and emissions from the stack could be in violation of the particulate matter and opacity limits in the permit. For these reasons, the Permittee is required to take response steps whenever the pressure drop is outside the normal range, and the failure to take any response steps in accordance with the CRP will be considered a deviation from the permit.

Comment 19: Condition D.1.11 - Please cite the specific regulatory language that requires this condition. IDEM does not have jurisdiction to impose this limit.

Response to Comment 19: Condition D.1.11 is Multiclone Failure Detection. Rules 326 IAC 2-7-6(1) and 326 IAC 2-7-5(1) provide IDEM the authority to require compliance monitoring conditions as necessary to assure continuous compliance with the emission limits. The multiclones must operate properly in order for the processes to achieve compliance with the applicable PM emission limits; therefore, it is reasonable and necessary for IDEM to require that the source take appropriate response steps, as specified in condition D.1.11, whenever equipment failure occurs. There has been no change to the permit as a result of this comment.

Comment 20: Conditions D.1.9(b), D.1.10(b), D.1.11, D.2.15(b), D.2.16(b), D.2.17, D.2.18(a), D.3.11(a) & (b), D.3.12(b), D.3.13(b) – The sections of these conditions which discuss a compliance response plan should be deleted because IDEM has no jurisdiction to require a compliance response plan.

Response to Comment 20: Conditions D.1.9 and D.2.15 are Visible Emissions Notations, D.1.10, D.2.16 and D.3.13 are Monitoring: Multiclones, D.1.11 and D.2.17 are Multiclone Failure Detection, D.2.18 and D.3.11 are Opacity Readings, and D.3.12 is Electrostatic Precipitator Parametric Monitoring. Rules 326 IAC 2-7-6(1) and 326 IAC 2-7-5(1) provide IDEM the authority to require compliance monitoring conditions as necessary to assure continuous compliance with the emission limits. There has been no change to the permit as a result of this comment.

Comment 21: Condition D.1.13(b) – This represents a new and greatly expanded reporting requirement for these boilers. The submission of this data is unnecessary and would create a large amount of needless paperwork. Submission of quarterly coal analyses is sufficient to document compliance with the regulatory requirements for EU-01 and EU-02 and keeping the other required information as records would allow IDEM to inspect it whenever a problem was suspected. This requirement should therefore be deleted.

Response to Comment 21: This condition is titled Reporting Requirements. These reports were required prior to this permit as noted in the condition itself and are not “new and greatly expanded” requirements. There has been no change to the permit as a result of this comment.

Comment 22: Condition D.2.6(a) – This condition needs to be rewritten to add more flexibility to burn natural gas. The amount of fossil fuel burned at this facility depends entirely upon steam demand from the campus. If there is a need for steam and the allowance for natural gas under this condition is used up, we will be forced to switch to burning coal, thus increasing the overall emissions from the plant. IDEM should change this condition because restricting the use of a cleaner fuel is contradictory to its mission, and in order to reduce overall emissions.

Response to Comment 22: This condition is titled Fuel Usage Equivalency Limits. Fuel limits set by previous permitting prior to the Part 70 Program kept the units from undergoing Prevention of Significant Deterioration (PSD) review. At the time the limits were set, the Permittee agreed to the terms because they did not want to undergo PSD review. To simplify these limits in terms of the various fuels the units are permitted to combust, equivalent limits were calculated for the purposes of the Part 70 operating permit. This allows more flexibility to use multiple fuels. No change has been made to the permit as a result.

Comment 23: Condition D.2.6(a) – OP53-02-92-0083 grants Indiana University the right to burn 798 MMCF of gas in Boiler EU-05 per 12 month consecutive period. This limit was placed in the permit as a “synthetic minor” limitation to avoid PSD permitting when our gas burners were added, and was based on the emission factor that was currently in use at that time: 0.1 lb NO_x/MMBtu. Although the emission factors have changed since the change was made in 1992, it is the rules and factors that were in place at the time of the change which govern this condition. Therefore, the original limit of 798 MMCF of natural gas or gas equivalents per year (based on the emission factor of 0.1 lb. NO_x per MMBtu) is the correct limit to apply in this case. See U.S. v. Southern Indiana Gas and Electric Company, 2002 U.S. Dist. LEXIS 13353; 32 ELR 20821 (“Thus, the Court concludes that the issue of whether SIGECO's projects required a preconstruction permit must be determined by reviewing evidence of the projected post-project emissions increases, and not by reviewing evidence of the actual post-project emissions data.”).

Response to Comment 23: IDEM disagrees with the comment above regarding the original limit for natural gas usage. The conclusion referenced in the last sentence of the comment above does not refute updated emission factors. As shown by the TSD calculations performed for boiler EU-05 when it combusts natural gas, 798 MMCF of natural gas would yield more than 40 tons per year of NOx. In order to avoid PSD review at this time, the 798 MMCF limit was revised accordingly. No change has been made to the permit as a result.

Comment 24: Condition D.2.8 – As per Agreed Order Cause No. 96-A-J-1600 and Exemption Qualification Status letter EQ 105-8180, Boilers EU-03 and EU-04 are exempt from the continuous monitoring rules because of the “synthetic minor” limitation that keeps their emissions below 100 MMBtu per hour. IDEM does not have the authority to override the terms of this Agreed Order by way of a permit condition. This requirement and the references to it in D.2.14, D.2.15, D.2.18, and D.2.19 should therefore be stricken. If for any reason these new monitoring requirements are allowed to stand, the requirement limiting EU-03 and EU-04 to a maximum capacity of 100 MMBtu per hour should be removed.

Boiler EU-05 falls under the exemption to 326 IAC 3-5 located at 365 IAC 3-5-1(c)(2)(A)(ii) when firing fuel oil. Method 9 readings taken during 20% of the time that EU-05 was fired on fuel oil since 1996 indicate that it is well within compliance with 326 IAC 5-1. The AP-42 emission factors referenced on page 13 of the Technical Support Document indicate that the particulate matter emissions from EU-05 when firing fuel oil are at approximately 2% of our current particulate matter limit, indicating compliance with 326 IAC 6-2 as well.

For these reasons, the continuous monitoring requirements in Condition D.2.8 should be removed from the permit.

Response to Comment 24: Since boiler EU-05 falls under an exemption listed in 326 IAC 3-5, or specifically 326 IAC 3-5-1(c)(2)(A)(ii) when firing fuel oil, condition D.2.8, Compliance Schedule for Continuous Monitoring of Emissions, has been deleted in its entirety from the permit. Because this condition has been deleted, conditions D.2.14 and D.2.18 have also been deleted. As a result, subsequent conditions in this section have been renumbered, the Table of Contents has been revised, and the first sentence of D.2.15, now D.2.13, has been deleted in addition to part (e) of this same condition. D.2.13 now reads as follows:

~~Until the time a certified continuous opacity monitoring system is installed, calibrated, and operated on stack 002:~~

- (a) Visible emission (VE) notations of stack exhaust 002 shall be performed once per shift during normal daylight operations while boilers EU-03 and EU-04 combust coal and/or fuel oil, and EU-05 combusts fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) If abnormal emissions are observed at exhaust 002 while boilers EU-03 and EU-04 combust coal and/or fuel oil, and EU-05 combusts fuel oil, 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 violation of this permit.
- (c) “Normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for the boilers.
- ~~(e) After the COM system commences operation on stack 002, the Permittee is not required to comply with this condition while the COM system for boilers Eu-03, EU-04, and EU-05 is operating.~~

Also, the condition references in the first sentence of D.2.19(a), now D.2.16(a), have been revised as follows:

Pursuant to OP 53-02-92-0081 and 0082, issued January 12, 1990, and 1265 Exemption Qualification 105-8180, issued February 24, 1997, and to document compliance with Conditions D.2.2, D.2.121 and D.2.132, the Permittee shall maintain records in accordance with (1) through (4) below.

Also, parts (b), (e), (f) and (g) of this condition have been changed. They now read as:

- (b) To document compliance with Section C - Opacity and Conditions D.2.1, ~~D.2.8~~, ~~D.2.109~~, ~~D.2.140~~, ~~D.2.14~~, and ~~D.2.152 and D.2.18~~, the Permittee shall maintain records in accordance with (1) through (64) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity, and in

Condition D.2.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) Data and results from the most recent stack tests;
 - ~~(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.~~
 - (42) All parametric monitoring readings;
 - (53) Records of the results of the multiclones' inspections (including usage hours); and
 - (64) All preventive maintenance measures taken.
- (e) To document compliance with Condition D.2.153, the Permittee shall maintain records of daily visible emission notations of the stack 002 exhaust, during times when fuels other than natural gas are combusted, ~~and until the required COM system commences operation.~~
- (f) To document compliance with Condition D.2.98, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (g) ~~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.~~
- (h) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

As a result of the COM requirement being deleted, D.2.20(c), now D.2.17(c), has also been deleted. It read as:

- ~~(e) 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).~~

Comment 25: Condition D.2.10 (a) and (b) – See comments 14 and 15. Using this schedule and applying Comment #14 would then yield the following language for D.2.7(a):

"Permittee shall stack test for particulate matter emissions to determine compliance with 326 IAC 6-2 for boilers EU-03 and EU-04 as follows:

- (1) Boiler EU-03 shall be tested for particulate matter emissions in 2003 and again in 2008 and thereafter on a five year cycle.
- (2) Boiler EU-04 shall be tested for particulate matter emissions in 2005 and again in 2010 and thereafter on a five year cycle."

D.2.10(b) should then read "...Permittee shall test boiler EU-05 for nitrogen oxide emissions in 2008 and thereafter on a five year cycle."

Response to Comment 25: Condition D.2.10, Testing Requirements, is now listed as D.2.9. Because of the reasons discussed in the response to comment 17, testing schedules will not be changed to five year cycles, and a new sentence has been added to part (a) of this condition as follows:

These tests shall be performed no later than thirty-six (36) months after the most recent compliant stack test.

Comment 26: Condition D.3.5 – Indiana University should be allowed to determine the preventive maintenance needs of its own equipment, as we are more familiar with it than others. It is excessive and unnecessary to perform the inspections listed here on our equipment more than annually. This section should be reworded as follows:

"Inspections of the electrostatic precipitator shall be performed in accordance with the Preventive Maintenance Plan prepared in accordance with Section B – Preventive Maintenance Plan."

Response to Comment 26: The ESP must operate properly in order for boiler EU-06 to achieve compliance; therefore, it is reasonable and necessary to require the source to inspect the ESP periodically. The detailed requirements for inspecting the ESPs are taken from a US EPA Publication titled "Operation and Maintenance Manual for Electrostatic Precipitators", which is document number EPA/625/1-85/017. Also, please see the response to comment 14 regarding PMPs in general. No change has been made to the permit as a result.

Comment 27: Condition D.3.6(a) – See comments 14 and 15. Using this schedule and applying Comment #14 would then yield the following language for D.2.7: "...Permittee shall stack test boiler EU-06 for particulate matter emissions to determine compliance with 326 IAC 6-2 in 2005 and thereafter on a five year cycle."

Response to Comment 27: Because of the reasons discussed in the response to comment 17, testing schedules will not be changed to five year cycles, and a new sentence has been added to part (a) of this condition as follows:

These tests shall be performed no later than thirty-six (36) months after the most recent compliant stack test.

Comment 28: Conditions D.3.7. – Sections (a) through (c) of this section should be modified to reflect the exceptions to these conditions for malfunctions, emergencies, startups and shutdowns. The phrase "except for cases of malfunction and emergency." Should be added to the end of Sections (a) and (b). The phrase "except for cases of startup, shutdown, malfunction and emergency." Should be added to the end of Section (c).

Response to Comment 28: Condition D.3.7 is Particulate and Opacity Control. The phrase "except during periods of startup, shutdown, or emergency" is not necessary because the first phrase in the condition already states "Except as otherwise provided by statute or rule or in this permit..." The applicable requirements regarding the ESP operation during startups, shutdowns, and emergencies are provided elsewhere in the permit. As a result, no change to this condition has been made.

Comment 29: Conditions D.3.11.(a) and D.2.18 – These sections effectively change the opacity rules and cut the allowable opacity by over one third. Such action cannot be taken absent a formal rulemaking. In order to make this section consistent with Condition C.2. and the applicable opacity rules, as well as to allow for greater flexibility under the opacity regulations, this condition should be reworded as follows:

"Appropriate response steps shall be when any monitored six (6) minute averaging period of opacity exceeds 40 percent, except during exempt periods. In the event of opacity exceeding 40 percent, Permittee will take all action necessary so that the cause of the excess opacity readings can be corrected."

Response to Comment 29: Conditions D.2.18 and D.3.11 are titled Opacity Readings. D.2.18 has been deleted from the permit due to changes made in the response to comment 24. Indiana University is required pursuant to 326 IAC 3-5 to operate continuous opacity monitors (COMs) to measure opacity from specific boilers. Pursuant to 326 IAC 5-1, these boilers are subject to a 40% opacity limit. These boilers are also subject to particulate matter emission rates. The particulate matter emission limits and the opacity limits were established completely independently of one another. Therefore, compliance with a 40% opacity limit does not indicate compliance with the applicable particulate matter emissions limit.

During normal operations, opacity from the boilers is significantly less than twenty-five percent as evidenced by the results of IDEM approved stack testing. Since the stack testing demonstrated compliance with the PM emissions when opacity levels were well below the opacity limits, it is appropriate for the Permittee to take response steps when the observed opacity is significantly above the levels demonstrated during a compliant stack test.

Condition D.3.11 does not establish an opacity limit that is more stringent than the opacity limits established by 326 IAC 5-1. Rather, the condition requires the Permittee to take response steps when the opacity is above the level indicative of normal operating conditions. An opacity reading that is in compliance with 326 IAC 5-1, but above the level of normal operating conditions and requires a response step is not considered a violation. It is only a violation if the Permittee fails to take any response steps. IDEM has the authority to require such monitoring pursuant to 326 IAC 2-7-5(1) and 326 IAC 2-7-6(1).

Unusually high opacity levels can indicate a process upset or a malfunction of the control device. Either of these situations could cause an exceedance of a particulate matter limitation. Without performing a stack test, the Permittee could not affirm that the unusually high opacity levels were not indicating a violation of the particulate matter limits in the

permit. It is unlikely that the Permittee would be able to perform a particulate matter stack test immediately upon observing unusually high opacity levels from a stack. Without taking any response steps or conducting any stack test, the only information available regarding emissions would be that the opacity levels were unusually high. Without any other evidence to the contrary, the unusually high opacity levels would be credible evidence that the emissions from the stack could be in violation of the particulate matter limits in the permit. For these reasons, the Permittee is required to take response steps whenever unusually high opacity levels are observed and the failure to take any response steps in accordance with the CRP will be considered a violation of the permit.

Comment 30: Conditions D.3.12., D.3.13. and D.3.14(c)(5) – These conditions should be deleted. The continuous monitoring requirements under D.3.8. are adequate to determine whether the ESP and the mechanical collectors are functioning appropriately to maintain compliance with particulate matter emission limits. The additional requirements in these conditions are repetitive and unnecessary.

Response to Comment 30: Conditions D.3.12, D.3.13 and D.3.14 are titled Electrostatic Precipitator Parametric Monitoring, Monitoring: Multiclones, and Record Keeping Requirements, respectively. Complying with opacity limits under the COM requirements required by condition D.3.8, Continuous Emissions Monitoring, does not indicate compliance with required particulate matter emission limits. A COM's function is to document compliance or exceedances of the opacity limit. Although opacity may be used as a surrogate parameter for particulate emissions, compliance monitoring of particulate control equipment is needed to assure continuous compliance with the particulate limitations. Levels noted during compliant stack tests are used as parameters. As stated earlier in the Response to Comment 29, the particulate matter emission limits and the opacity limits in this permit were established completely independently of one another, and compliance with an opacity limit does not indicate compliance with the applicable particulate matter emissions limit. Unusually high opacity levels can indicate a process upset or a malfunction of the control device. These conditions are not changed as a result.

Comment 31: Condition D.3.15(a) - Please state the exact information that IDEM wants for documentation of condition D.3.4. Please remove mention of condition D.3.4 from this section if this cannot be specified.

Response to Comment 31: Condition D.3.15 is a Reporting provision. Part (a) should have referenced D.3.9 and D.3.10 instead of D.3.4. Conditions D.3.9 and D.3.10 are titled Sulfur Dioxide Emissions and Sulfur Content. Part (a) has been revised to correct this. It now reads as:

Pursuant to PC (55) 1731, issued February 15, 1989 and OP 53-02-92-0083 and 0084, issued January 5, 1990, a quarterly summary of the information to document compliance with Conditions D.3.2, **D.3.9** and **D.3.410** in any compliance period when coal, natural gas, or fuel oil was combusted, and the natural gas fired boiler certification, shall be submitted to the address listed in Section C - General Reporting Requirements, 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.

Comment 32: Conditions D.4.6, D.4.7, D.4.8, D.4.9 – the mechanical collector at the top of the coal silo is not a baghouse, but a fabric filter, and is only in operation when coal is being delivered to the silo. Visual emission readings are being taken on this piece of equipment once per shift if it is in operation. Because of the limited use of this equipment and the controls already in place on it, as well as the difficulty of performing this measurement on this piece of equipment, the requirements in D.4.6 should be eliminated. If they cannot be eliminated, the monitoring should at least be held to once per week at a maximum.

Response to Comment 32: The monitoring frequency of dust collector DC6 will not be lessened. By nature, coal handling can be very dusty, and because of the size of the operation, once per shift visible emission notations during operation are justifiable. Since there are no bags present, conditions D.4.6, D.4.7 and D.4.8 have been combined into one condition, D.4.6, and the term “baghouse” is no longer used. Condition D.4.6 now reads as:

D.4.6 Baghouse Parametric Monitoring [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

- (a) ~~The Permittee shall record the total static pressure drop across dust collector DC6 at least once per shift when coal is being received by the silo and/or either of the truck hoppers. When for any one reading, the pressure drop across the collector is outside the normal range of 2.0 and 5.0 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 violation of this permit. By calendar, quarterly inspections shall be performed to verify the placement, integrity and particle loading of the filter, DC6. The Compliance Response Plan shall be followed whenever a condition exists~~

which should result in a response step. 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.~~ **Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.**

Conditions D.4.7 and D.4.8 have been deleted as follows:

~~D.4.7 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 violation of this permit.~~

~~D.4.8 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, 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).~~

As a result of the changes above, condition D.4.9, now listed as D.4.7, has revisions to parts (b), (c) and (d). They are:

- (b) ~~To document compliance with Condition D.4.6, the Permittee shall maintain records of the total static pressure drop across dust collector DC6 each time when coal is being received by the silo and either of the truck hoppers, respectively.~~ **To document compliance with condition D.4.6, the Permittee shall maintain a log of quarterly inspections and those additional inspections prescribed by the Preventive Maintenance Plan.**
- (c) ~~To document compliance with Condition D.4.7, the Permittee shall maintain records of the results of the inspections for dust collector DC6.~~
- (d) ~~Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.~~

Also the Table of Contents has been revised to reflect the deletions and/or renumbering of conditions in this section.

Comment 33: P. 53 – gas fired boiler certification – Please cite the exact regulatory language which authorizes the requirement of this report. We cannot find any such regulatory language and request that the requirement for this form be dropped. During our informal meeting on 3/7/03, IDEM agreed to drop this requirement.

Response to Comment 33: IDEM did not agree to removing the Natural Gas Certification or the reporting requirement associated with this form. It was stated that this requirement is not necessary for boilers that only have the ability to combust natural gas. The boilers at Indiana University have the ability and are permitted to combust other fuels. Because there are visible emission notations or continuous opacity monitor provisions required during times when other fuels are being combusted, reporting of times when only natural gas is combusted is necessary. This reporting is in lieu of performing visible emissions notations during times when natural gas is the only fuel being combusted for a particular boiler. There is no change to the permit as a result.

Comment 34: We would like to continue to use the quarterly reporting forms that we have used in the past and would like IDEM to insert a comment in the permit that this is acceptable.

Response to Comment 34: As noted in the response to comment 13, the reporting conditions contain the phrase “or equivalent” to accomplish this. No change to the permit has been made as a result.

Comment 35: We request that all record keeping and reporting requirements contained in the permit be modified to reflect the changes that we have suggested in this document.

Response to Comment 35: If previous comments resulted in changes to the requirements in this permit which affected record keeping or reporting, changes were made those conditions as well. No further changes are necessary as a result.

Comment 36: (Submitted March 10, 2004) As noted in IU's original comments, the above draft permit contained extensive requirements for Method 9 opacity readings and various other monitoring and “parametric monitoring” schemes not called for by any applicable requirements, any rule or regulation, or anything else. Those earlier comments are buttressed by U.S. EPA's recent rulemaking entitled “Revisions to Clarify the Scope of Certain Monitoring Requirements for Federal and State Operating Permits Programs,” which appears at 69 Fed. Reg. 3202 *et seq.* (Jan. 22, 2004).

In that rulemaking, EPA clarified the “periodic monitoring” rule at 40 CFR § 70.6(a)(3)(i)(B) and the “umbrella monitoring” rule at 40 CFR § 70.6(c)(1). The Indiana counterparts are basically identical and are at 326 IAC §§ 2-7-5(3)(A)(ii) and 2-7-6(1), respectively, and are usually cited in the draft permits as the authority for the objected-to monitoring requirements. EPA's recent rulemaking said the following:

Today EPA is committing to exercise its discretion under the Act to require any necessary improvements to existing monitoring through rulemaking, except where the periodic monitoring rules authorize the case-by-case addition of monitoring to individual permits. The EPA's interpretation of the Act, its own regulations, recent Court decisions, and several policy considerations underlie this decision. EPA believes, as a matter of policy, that it will be less burdensome on State, local and tribal permitting authorities and on sources, and far more equitable and efficient, to require any necessary improvements in monitoring requirements through rulemakings to revise federal applicable requirements or SIP rules, rather than by requiring permitting authorities to conduct case-by-case sufficiency monitoring reviews of individual permits.

Furthermore, EPA has decided not to adopt the changes to the regulatory text of the umbrella monitoring rules that were proposed in September 2002. For various reasons, *EPA also has determined that the correct interpretation of the umbrella monitoring rules is that they do not establish a separate regulatory standard or basis requiring or authorizing the review and enhancement of existing monitoring independent of such review and enhancement as may be required under different provisions of the operating permits program rules that specifically set forth permit content requirements for monitoring.* Upon reflection, EPA now believes that the plain language of the umbrella monitoring rules indicates that they constitute “umbrella provisions” for monitoring that direct permitting authorities to include monitoring required under existing statutory and regulatory authorities in permits, and which include and gain meaning from the more specific requirements for monitoring set forth in different provisions of the rules. The policy considerations described in this preamble as relevant to EPA's exercise of its discretion under the Act also inform EPA's interpretation of the umbrella monitoring rules. *Thus, the effect of today's action will be that the umbrella monitoring rules neither require nor authorize permitting authorities to create new monitoring in operating permits, apart from including in permits such monitoring as may be required under the periodic monitoring rules and under applicable requirements, including the CAM rule where it applies.* (69 Fed. Reg. 3202; emphasis added.)

Thus, based on this new authority, we again reiterate that IDEM should remove from IU's permit its various parametric monitoring schemes (such as continuous opacity monitoring requirements and inspection requirements) that are not found anywhere in the rules.

Response to Comment 36: It's not clear whether this comment is directed toward compliance monitoring provisions that have been added because the underlying applicable requirement does not require periodic monitoring or testing, or toward the types of monitoring that is the subject of the U.S. EPA's January 22, 2004 notice. State and federal rules clearly require that Part 70 permits establish periodic monitoring and testing requirements when the applicable requirements contain no such requirements. Nothing in the referenced federal notice changed that.

The January notice did not change anything in 40 CFR 70. The notice merely publishes the U.S. EPA's interpretation of the 1992 rule. Indiana's Part 70 (326 IAC 2-7-5) rules concerning compliance monitoring are significantly different than the corresponding federal counterpart (40 CFR 70.6). 40 CFR 70.6(c)(1) states that all Part 70 permits shall contain sufficient compliance monitoring to demonstrate compliance. The provisions of 326 IAC 2-7-5(3) state that the Part 70 permits must include: “Monitoring and related record keeping and reporting requirements which assure that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.” Therefore, it is not clear what the Permittee's objection is because the Part 70 rules specifically state that if an applicable requirement does not contain sufficient monitoring, then additional provisions need to be created in the operating permit. The need to

ensure continuous compliance in 326 IAC 2-7-5(3) gives IDEM broader authority than what is specified in 40 CFR 70.6(c)(1). Additionally, the language of 326 IAC 2-7-5(3) clearly suggests that existing federal monitoring requirements are considered only as minimum permit requirements. Therefore, the difference between the corresponding state and federal rules results in IDEM's warranted and legal ability to institute additional and more stringent compliance monitoring.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

1. The title of condition B.21, Inspection and Entry, has been revised to include an additional rule cite as follows:

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

2. Inadvertently, the Table of Contents included a condition title, B.21- Construction Permit Requirement, which did not appear in the permit. This title has been deleted from the Table of Contents and the subsequent titles were renumbered to match their condition numbers as they appear in Section B.

3. Condition C.6, now C.5, Stack Height, has been revised to clarify which parts of the regulation are not federally enforceable. The last sentence of this condition now reads as:

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(d), (e), and (f), and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

4. In condition C.8, now C.7, Performance Testing, the term "source" is replaced with "Permittee" in the second sentence of part (c) as follows:

An extension may be granted by IDEM, OAQ, if the ~~source~~ **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.

5. In condition C.15, now C.14, Risk Management Plan, the CFR rule cite in the title line has been shortened to [40 CFR 68-245], also the term "source" has been replaced with "Permittee", as follows:

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

6. Condition C.16, now C.15, Compliance Response Plan - Preparation, Implementation, Records, and Reports has been clarified with respect to what should be included with the notification. This will provide OAQ with an opportunity to assess the situation and determine whether any additional actions are necessary to demonstrate compliance with applicable requirements. Part (b)(3) now reads as:

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.

7. IDEM has revised condition C.18, now C.17, Emission Statement. Rule 326 IAC 2-6 has new revisions that are in effect. The condition has been rewritten as a result, and the Permittee is now required to follow the provisions of the new rule. The changes to this condition are as follows:

(a) ~~The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements~~ **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 criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting)~~ **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 Part 70 fee assessment.

(b) ~~The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission 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).

(be) The ~~annual~~ 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.

8. In condition C.20 – General Reporting Requirements, now C.19, the term "source" is replaced with "Permittee" in the first sentence of part (a) as follows:

The ~~source~~ **Permittee** shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent.

9. Because there is a new federal requirement titled National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD], which affects the boilers at Indiana University, condition C.22 has been deleted in its entirety, and replaced with a new condition, C.21(due to renumbering based on an earlier comment). This revision reads as follows:

~~C.221 Application Requirements for Section 112(j) of the Clean Air Act [40 CFR 63.52(e)] [40 CFR 63.56(a)] [40 CFR 63.9(b)] [326 IAC 2-7-12]~~

(a) ~~The Permittee shall submit a Part 2 MACT Application in accordance with 40 CFR 63.52(e)(1). The Part 2 MACT Application shall meet the requirements of 40 CFR 63.53(b).~~

(b) ~~Notwithstanding paragraph (a), the Permittee is not required to submit a Part 2 MACT Application if the Permittee no longer meets the applicability criteria of 40 CFR 63.50 by the application deadline in 40 CFR 63.52(e)(1). For example, the Permittee would not have to submit a Part 2 MACT Application if, by the application deadline:~~

- (1) ~~The source is no longer a major source of hazardous air pollutants, as defined in 40 CFR 63.2;~~
- (2) ~~The source no longer includes one or more units in an affected source category for which the U.S. EPA failed to promulgate an emission standard by May 15, 2002; or~~
- (3) ~~The MACT standard or standards for the affected source categories included at the source are promulgated.~~

(c) ~~Notwithstanding paragraph (a), pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The initial notification 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

and

United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 West Jackson Boulevard

Chicago, Illinois 60604-3590

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) for boilers EU-01, EU-02, EU-03, EU-04 and EU-06 and 40 CFR 63.7506(b) for boiler EU-05, 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 (boilers EU-01, EU-02, EU-03, EU-04 and EU-06) 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.

Due to the new rule, along with the above change, three other new conditions have been added to Section C. The conditions are:

C.22 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 date of publication of the final rule for 40 CFR 63, Subpart DDDDD in the Federal Register.
- (b) The following emissions units comprise the affected source for the large solid fuel subcategory: boilers EU-01, EU-02, EU-03, EU-04 and EU-06.
- (c) The following emissions unit comprises the affected source for the large liquid fuel subcategory: boiler EU-05.
- (d) The definitions of 40 CFR 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected sources.

Since the applicable requirements associated with the compliance options for the affected sources for the large solid fuel subcategory (boilers EU-01, EU-02, EU-03, EU-04 and EU-06) 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 sources for the large solid fuel subcategory.

C.23 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Notification Requirements [40 CFR 63, Subpart DDDDD]

- (a) Pursuant to 40 CFR 63.7545(a) and 40 CFR 63.7506(b), the Permittee shall submit an Initial Notification for boiler EU-05 containing the information specified in 40 CFR 63.9(b)(2) not later than 120 days after the date of publication of the final rule for 40 CFR 63, Subpart DDDDD in the Federal Register, as required by 40 CFR 63.7545(b).
- (b) 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 (boilers EU-01, EU-02, EU-03, EU-04 and EU-06) 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 date of publication of the final rule for 40 CFR 63, Subpart DDDDD in the Federal Register, 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.
- (c) The notifications required by paragraphs (a) and (b) 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

and

United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

C.24 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5]

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 sources for the large solid fuel subcategory (boilers EU-01, EU-02, EU-03, EU-04 and EU-06).

- (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

Because of these new conditions, the Table of Contents has also been revised, and the title of this section is now "**MACT Standards [326 IAC 2-7-5(1)]**", instead of "**Part 2 MACT Application Submittal Requirement**".

- 10. In accordance with the credible evidence rule (62 Fed. Reg. 8314, Feb 24, 1997); Section 113(a) of the Clean Air Act, 42 U.S. C. § 7413 (a); and a letter from the United States Environmental Protection Agency (USEPA) to IDEM, OAQ dated May 18, 2004, all permits must address the use of credible evidence; otherwise, USEPA will object to the permits. The following has been incorporated into the permit to address credible evidence:

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

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.

Indiana Department of Environmental Management

Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name: Indiana University
Source Location: 700 North Walnut Grove, Bloomington, Indiana 47405-2206
County: Monroe
SIC Code: 8221
Operation Permit No.: T105-6642-00005
Permit Reviewer: Melissa Groch

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Indiana University relating to the operation of a campus power plant used for process heat.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Two (2) coal fired boilers, identified as EU-01 and EU-02, both constructed in 1955, each with a maximum design capacity of 100 MMBtu per hour heat input each (operating at a maximum capacity of 80 MMBtu per hour heat input each), and each equipped with a multiclone for particulate control and a portable startup/shutdown natural gas fired burner rated at 4.2 MMBtu per hour heat input each, both exhausting to stack 001.
- (b) Two (2) coal, natural gas, No.1 or No.2 fuel oil fired boilers, identified as EU-03 and EU-04, both constructed in 1959, with a maximum design capacity of 125 MMBtu per hour heat input each (operating at a maximum capacity of 100 MMBtu per hour heat input each when combusting coal or a combination of fuels), and with a maximum design capacity of 80 MMBtu per hour heat input each when combusting natural gas and/or fuel oil, each equipped with low NOx burners for natural gas and/or fuel oil, and each with a multiclone for particulate control when combusting coal and/or fuel oil, both exhausting at stack 002.
- (c) One (1) natural gas, No.1 or No.2 fuel oil fired boiler, identified as EU-05, constructed in 1964 and modified in 1989, with a maximum design capacity of 190 MMBtu per hour heat input, equipped with low NOx burners (two natural gas fired burners at 75 MMBtu per hour heat input each) for natural gas and/or fuel oil, and a multiclone for particulate control when combusting fuel oil, exhausting to stack 002.
- (d) One (1) coal, natural gas, No.1 or No.2 fuel oil fired boiler, identified as EU-06, constructed in 1970, with a maximum design capacity of 190 MMBtu per hour heat input when combusting coal and/or fuel oil, and 150 MMBtu per hour heat input (two natural gas fired burners rated at 75 MMBtu per hour heat input each) when combusting natural gas, equipped with low NOx burners for natural gas and/or fuel oil, a multiclone and an electrostatic precipitator for particulate control when combusting coal and/or fuel oil, and a continuous opacity monitor for monitoring opacity, exhausting to stack 003.
- (e) One (1) coal storage and handling system, with a maximum design throughput of 200 tons of coal per hour and 210,000 tons of coal per year, consisting of the following:
 - (1) One (1) coal truck receiving system, consisting of an interior wet suppression system to control coal dust emissions during coal receiving, and two (2) truck hoppers.
 - (2) Four (4) enclosed belt conveyors, and one (1) enclosed bucket conveyor, with particulate emissions controlled by a fabric filter system, with five (5) dust collectors, identified as DC1 through 5, located internally at various points along the enclosed conveyor system, with all dust collectors exhausting internally.

- (3) One (1) coal storage silo with a storage capacity of 1,000 tons of coal, with particulate emissions controlled by one (1) dust collector, identified as DC6, exhausting externally at vent 6.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (a) Two (2) boilers, identified as B1 and B2, each rated at 3.0 MMBtu per hour, both constructed in 1996. Emissions shall be exhausted at S1 and S2, respectively.
 - (b) Fourteen (14) boilers, identified as B3 through B16, with B3 and B4 rated at 1.6 MMBtu per hour each, B5 and B6 rated at 1.0 MMBtu per hour each, B7 through B10 rated at 1.3 MMBtu per hour each, and B11 through B14 rated at 2.1 MMBtu per hour each, B15 and B16 rated at 5.5 MMBtu per hour each, all constructed in 1998. Emissions shall be exhausted at S3 through S16, respectively.
 - (c) Six (6) boilers, identified as B17 through B22, each rated at 3.5 MMBtu per hour, constructed in 1999. Emissions shall be exhausted at S17 through S22, respectively.
- (2) 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.
- (3) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu per hour.
- (4) Combustion source flame safety purging on startup.
- (5) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (6) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (7) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (8) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (9) Refractory storage not requiring air pollution control equipment.
- (10) Equipment used exclusively for filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (11) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (12) Closed loop heating and cooling systems.
- (13) Infrared cure equipment.
- (14) Noncontact cooling tower systems with natural draft cooling towers, and a forced and induced draft cooling tower system not regulated under a NESHAP.

- (15) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (16) Heat exchanger cleaning and repair.
- (17) Process vessel degassing and cleaning to prepare for internal repairs.
- (18) Paved and unpaved roads and parking lots with public access.
- (19) Asbestos abatement projects regulated by 326 IAC 14-10.
- (20) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (21) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (22) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (23) On-site fire and emergency response training approved by the department.
- (24) Emergency diesel generators not exceeding 1600 horsepower.
- (25) Vents from ash transport systems not operated at positive pressure.
- (26) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (27) Farm operations.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (1) Section 112(j) Applicability Determination, issued August 22, 2002;
- (2) Minor Source Modification 105-11356-00005, issued July 21, 2000;
- (3) 1265 Exemption Qualification 105-8527-00005, issued October 27, 1997;
- (4) 1265 Exemption Qualification 105-8180-00005, issued February 24, 1997;
- (5) 1265 Exemption Qualification 105-6355-00005, issued August 19, 1996;
- (6) Amendment to OP 53-02-92-0084, issued June 15, 1994;
- (7) Registration 105-2289-00005, issued January 14, 1992;
- (8) Amendment to OP 53-02-92-0079 through 0084, issued October 19, 1990;
- (9) OP 53-02-92-0079, through 0082, issued January 12, 1990;
- (10) OP 53-02-92-0083, and 0084, issued January 5, 1990;
- (11) PC (55) 1731, issued February 15, 1989;
- (12) OP 53-05-91-0068 through 0071, issued January 25, 1988;
- (13) OP 53-02-88-0058 through 0063, issued November 22, 1985;
- (14) OP 53-02-84-0038 through 0043, issued on February 17, 1981; and

(15) OP 53-06-81-0036, issued June 22, 1979.

The following existing conditions were not incorporated into this Part 70 permit:

(a) From PC (55) 1731, issued February 15, 1989, and OP 53-02-92-0083, issued January 5, 1990:

- (1) Boilers EU-05 and EU-06 shall not be operated at the same time with both units burning coal, and whenever boiler EU-05 is in operation burning coal, the flue gas shall be ducted through the electrostatic precipitator and to stack 003;
- (2) Boilers EU-05 and EU-06 shall only be in service at the same time only when boiler EU-05 is burning natural gas and/or oil as the sole combustion fuels, and during periods of natural gas or oil combustion, boiler EU-05 flue gases shall be ducted through stack 002.

(b) From OP 53-02-92-0083, issued January 5, 1990:

During periods of natural gas or fuel oil combustion the boiler EU-05 flue gases shall be ducted through stack 002 which serves boilers EU-03 and EU-04.

Pursuant to 326 IAC 7-1.1-2, sulfur dioxide emissions from boiler EU-5, shall in no case exceed 6.0 pounds per million British thermal units (lb/MMBtu) of heat input when combusting coal, and when coal and oil are used simultaneously.

(c) From OP 53-02-92-0084, issued January 5, 1990:

Boilers EU-05 and EU-06 shall not be operated at the same time with both units burning coal, and shall only be in service at the same time when boiler EU-05 is burning natural gas and/or oil as the sole combustion fuels.

Reason (a) through (c) are not incorporated: On January 10, 2003, the source notified OAQ that boiler EU-05 no longer has the capability to burn coal. Also, it is now able to only exhaust to stack 002. Therefore, the conditions above are no longer applicable.

(d) From PC (55) 1731, issued February 15, 1989, and OP 53-02-92-0083, issued January 5, 1990:

The fuel limitations for boiler EU-05 will ensure that emissions of regulated pollutants do not exceed the Prevention of Significant Deterioration (PSD) tons per year significant levels (or in this case 40 tons per year of NO_x and SO₂). The fuel use shall be limited as shown below:

- (a) Natural gas usage shall be limited to 133 MMcuft per calendar month and 798 MMcuft per 12 consecutive month period.
- (b) No. 2 fuel oil (emergency fuel) shall be limited to 200,000 gallons per month and 1,000,000 gallons per 12 month consecutive period.
- (c) Total heat input from natural gas and oil shall be limited to 133,000 MMBtu per month and 798,000 MMBtu per 12 consecutive month period.

Reason not incorporated: The source now uses No.1 fuel oil on boiler EU-05. Fuel equivalency limits have been calculated (See the section for State Rule Applicability) in place of the limits above. The source must demonstrate that NO_x and SO₂ will not exceed their significant PSD level (40tpy of NO_x or SO₂) by complying with the fuel equivalency limits.

(e) OP 53-02-92-0083, issued January 5, 1990:

The No.2 fuel oil shall be used as an emergency fuel only. The Office of Air Management (now the Office of Air Quality) shall be notified by phone within 24 hours of any emergency situations requiring the use of No.2 fuel oil.

Reason not incorporated: Because fuel equivalency limits for all three fuels have been calculated in terms of natural gas, it is not necessary to limit No.2 fuel oil as an emergency fuel only.

(f) Registration 105-2289-00005, issued January 14, 1992, is no longer valid.
 Reason not incorporated: This incinerator has been permanently decommissioned.

(g) 1265 Exemption Qualification 105-6355-00005, issued August 19, 1996, is no longer valid;

Reason not incorporated: This exemption is superseded and nullified by 1265 Exemption Qualification 105-8180-00005, issued February 24, 1997.

(h) Section 112(j) Applicability Determination, issued August 22, 2002, is no longer valid.

Reason not incorporated: At the time the determination was issued, HAPs emissions from coal combustion had not been reviewed. These calculations (Appendix A) demonstrate that this source is major for HAPs.

Enforcement Issue

There are no enforcement actions pending. An enforcement referral has been made because the Permittee does not have a continuous opacity monitoring system on stack 002 as required by 326 IAC 3-5.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit 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 administratively complete Part 70 permit application for the purposes of this review was received on September 23, 1996.

A notice of completeness letter was mailed to the source on October 29, 1996.

Emission Calculations

See Appendix A, pages 1 through 9 of 9, of this document for detailed emissions calculations for significant and insignificant units at this source.

Unrestricted Potential To Emit

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

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	greater than 250
PM-10	greater than 250
SO ₂	greater than 250
VOC	less than 100
CO	greater than 250
NO _x	greater than 250

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's*	Potential Emissions (tons/year)
Hydrogen Chloride (HCL)	greater than 10
Hydrogen Fluoride (HF)	greater than 10
TOTAL	single greater than 10

*This table lists only the two highest HAPs. See Appendix A calculations for other HAPs.

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10, SO₂, CO, and NO_x are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) **Fugitive Emissions**
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2001 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	45.08
PM-10	45.08
SO ₂	2750.01
VOC	2.39
CO	147.69
NO _x	323.79
Pb	0.037

Potential To Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 operating permit.

Process/facility	Limited Potential to Emit						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
EU-01	0.38 lb/MMBtu	53.96	6.0 lb/MMBtu	0.73	73	< 250	-
EU-02	0.38 lb/MMBtu	53.96	6.0 lb/MMBtu	0.73	73	< 250	-
EU-03	0.38 lb/MMBtu	48.18	6.0 lb/MMBtu	1.95	91.25	< 250	> 10
EU-04	0.38 lb/MMBtu	48.18	6.0 lb/MMBtu	1.95	91.25	< 250	> 10
EU-06	0.38 lb/MMBtu	41.1	6.0 lb/MMBtu	3.6	173.38	> 250	> 10
EU-05 (After 1977)	0.38 lb/MMBtu	6.3	< 0.5% sulfur content (No.2 oil), 0.5 lb/MMBtu (No.1& No.2 oil), & < 40 t/y	4.6	69.9	0.1 lb/MMBtu emission factor (nat.gas &/or oil), & < 40 t/y	< 10
Coal Storage and Handling System	58.5 lb/hr	-	-	-	-	-	-
Total Emissions	> 250	> 250	> 250	< 100	> 250	> 250	> 10 t/y

For the table above, where a rule has not determined a lb/MMBtu limit, the tons per year potential was used.

Boilers EU-01 through EU-06 also have MMBtu per hour maximum capacity limits which indirectly restrict the PTE for the pollutants that do not have additional limits based on rule applicability.

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21, this source is a major source. However, with the exception of EU-05, the other five boilers did not undergo PSD review because they were not modified since their dates of construction, which were before August 1977, when PSD limits were established.

Boiler EU-05 was modified in 1989, and received a construction permit with conditions to keep from exceeding the PSD significant levels (<40 t/y) for NO_x and SO₂. In conjunction with the other boilers, the entire source NO_x and SO₂ emissions remain greater than 250 tons per year.

County Attainment Status

The source is located in Monroe County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Monroe County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) Boilers EU-01 through EU-06 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, and 40 CFR 60.4, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), due to their construction dates which predate the applicable date of August 17, 1971, and each of their maximum capacities being less than 250 MMBtu per hour.
- (b) Boilers EU-01 through EU-06 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, and 40 CFR 60.4, Subpart Da (Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978), due to each of their maximum capacities being less than 250 MMBtu per hour, and each of their individual construction dates predating the applicable date of September 18, 1978.
- (c) Boilers EU-01 through EU-06 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, and 40 CFR 60.4, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units), due to their construction dates which predate the applicable date of June 19, 1984.
- (d) Boilers EU-01 and EU-02 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, and 40 CFR 60.4, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units), due to their construction in 1955.
- (e) Boilers EU-03 and EU-04 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, and 40 CFR 60.4, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units), due to their construction in 1959, and their true maximum design capacities (when not limited by an operating permit) being greater than 100 MMBtu per hour.
- (f) Boiler EU-05 is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, and 40 CFR 60.4, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units), due to its construction in 1964, and the maximum design capacity being greater than 100 MMBtu per hour.
- (g) Boiler EU-06 is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, and 40 CFR 60.4, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional

Steam Generating Units), due to its construction in 1970, and the maximum design capacity being greater than 100 MMBtu per hour. Also, pursuant to the Amendment to OP 53-02-92-0084, the addition of two natural gas fired burners added in 1994 shall not be subject to the requirements of the New Source Performance Standard because the emission rate using the natural gas fired burners will be less than the rate for all pollutants when combusting coal.

- (h) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to the coal storage and handling system approved under Minor Source Modification 105-11356-00005, issued July 21, 2000. 40 CFR 60 Subpart Y (Coal Preparation Plants) does not apply to the coal storage and handling system because the plant does not prepare the coal by crushing, breaking, screening, wet or dry cleaning, or thermal drying.
- (i) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to the coal storage and handling system approved under Minor Source Modification 105-11356-00005, issued July 21, 2000.
- (j) This source is not subject to the Acid Rain Program (40 CFR 72) because they do not produce electricity. The source produces steam heat.
- (k) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR 63) applicable to this source. 40 CFR 63, Subpart T (Halogenated Solvent Degreasing) does not apply because the solvents the source uses are not listed in 40 CFR 63.460, applicability and designation of source.
- (l) The requirements of Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56) are applicable to this source because the source is a major source of HAPs (i.e., the source has the potential to emit 10 tons per year or greater of a single HAP, or 25 tons per year or greater of a combination of HAPs) and the source includes one or more units that belong to one or more source categories affected by the Section 112(j) Maximum Achievable Control Technology (MACT) Hammer date of May 15, 2002.

(1) This rule requires the source to:

- (A) Submit a Part 1 MACT Application by May 15, 2002; and
- (B) Submit a Part 2 MACT Application for each affected source category in accordance with the appropriate Part 2 MACT Application deadline listed in Table 1 to 40 CFR 63, Subpart B for the affected source category.

(2) The Permittee submitted a request for a Section 112(j) Applicability Determination on April 26, 2002. The affected source categories for this source are Industrial, Commercial, & Institutional Boilers and Process Heaters (Subpart DDDDD) and Reciprocating Internal Combustion Engines (RICE)(Subpart ZZZZ). The Part 2 MACT application deadline for these two categories is April 28, 2004.

At the time the determination was issued on August 22, 2002, HAPs emissions from coal combustion had not been reviewed. These calculations (Appendix A) confirmed that this source is in fact major for HAPs. Therefore, the Permittee must fulfill the remaining requirements regarding MACT applicability.

(3) Pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The MACT and the General Provisions of 40 CFR 63, Subpart A will become new applicable requirements, as defined by 326 IAC 2-7-1(6), that must be incorporated into the Part 70 permit. After IDEM, OAQ receives the initial notification, any of the following will occur:

- (A) If three or more years remain on the Part 70 permit term at the time the MACT is promulgated, IDEM, OAQ will notify the source that IDEM, OAQ will reopen the permit to include the MACT requirements pursuant to 326 IAC 2-7-9; or
- (B) If less than three years remain on the Part 70 permit term at the time the MACT is promulgated, the Permittee must include information regarding the MACT in the renewal application, including the information required in 326 IAC 2-7-4(c); or
- (C) The Permittee may submit an application for a significant permit modification under 326 IAC 2-7-12 to incorporate the MACT requirements. The application may include information regarding which portions of the MACT are applicable to the emission units at the source and which compliance options will be followed.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21, this source is a major source.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year each of PM, SO₂, CO, and NO_x. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

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

- (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.

326 IAC 10-4 (Nitrogen Oxides Budget Trading Program)

The units at this source are not subject to 326 IAC 10-4-1 because they are not "Electricity Generating Units" or "EGUs" as defined in 326 IAC 10-4-2(16) and they are not a "large affected units" as defined in 326 IAC 10-4-2(27). The units are not EGUs because they do not serve a generator that has a nameplate capacity greater than twenty-five (25) megawatts and produces electricity for sale under a firm contract to the electric grid. The units are not a large affected units because they do not have a maximum design heat input greater than two hundred fifty million (250,000,000) Btus per hour.

State Rule Applicability - Individual Facilities

Boilers

Note: Generally, limits set in existing operating permits have not been carried over into Title V Operating Permits as the operating permit program had not been federally approved (as the construction permit program was). However, in the case of limits set in operating permits for Indiana University, limits were included to make PSD not applicable. This is documented in operating permits for Indiana University. In this permit, it is determined that the existing operating permit limits that remain applicable shall be carried over into the Title V operating permit for Indiana University.

OP 53-02-92-0079 and 0080, issued January 12, 1990

Pursuant to OP 53-02-92-0079 and 0080, issued January 12, 1990, condition 4, boiler EU-01 and EU-02 shall not operate above 80% of the maximum design capacity (80 million Btu per hour of heat input).

OP 53-02-92-0081 and 0082, issued January 12, 1990

Pursuant to OP 53-02-92-0081 and 0082, issued January 12, 1990, condition 4, boilers EU-03 and EU-04 shall

not operate above 80% of the maximum design capacity (100 million Btu per hour of heat input).

OP 53-02-92-0083, issued January 5, 1990

Pursuant to OP 53-02-92-0083, issued January 5, 1990, condition 6, when required to be used, the No.2 fuel oil shall have a maximum sulfur content of 0.5%. Records of the sulfur content of all No.2 fuel oil received shall be maintained and made available to the OAM (now OAQ) upon request.

On December 28, 2000, the source submitted a letter stating that No.1 fuel oil is also being used as a backup fuel for the boilers. This fuel has a lower sulfur content and heating value compared to No.2 fuel oil.

OP 53-02-92-0083, issued January 5, 1990

Pursuant PC (55) 1731 and OP 53-02-92-0083, issued February 15, 1989 and January 5, 1990, when boiler EU-05 burns natural gas or fuel oil, nitrogen oxide emissions shall be limited to 0.1 pounds of NOx per MMBtu of heat input. This level shall be achieved by the use of low NOx burners.

Testing from January 12, 2001, shows the NOx emission rate at 0.088 pounds per MMBtu when combusting only natural gas, which is less than the allowable of 0.1 pounds of NOx per MMBtu. Therefore this boiler, EU-05, is in compliance with this limit when combusting natural gas.

Based on calculations using AP-42 emission factors, the NOx emission rate from EU-05 when combusting No.2 fuel oil is 0.36 lb/MMBtu (68.1 lb/hr ÷ 190 MMBtu/hr), and when combusting No.1 fuel oil is 0.35 lb/MMBtu (66.1 lb/hr ÷ 190 MMBtu/hr). These calculations indicate noncompliance with the NOx limit of 0.1 lb/MMBtu. Therefore, testing is required by this permit if No.1 or No.2 fuel oil is combusted in boiler EU-05.

On December 28, 2000, the source submitted a letter stating that No.1 fuel oil is also being used as a backup fuel for the boilers. This fuel has a lower sulfur content and heating value compared to No.2 fuel oil.

Amendment to OP 53-02-92-0084, issued June 15, 1994

Pursuant to the Amendment to OP 53-02-92-0084, issued June 15, 1994, the two natural gas fired burners heat input for boiler EU-06 shall be 75 MMBtu per hour each resulting in an emission rate less than that of the coal for all pollutants.

Pursuant to OP 53-02-92-0081 and 0082, issued January 12, 1990, 1265 Exemption Qualification 105-8180, issued February 24, 1997, and 326 IAC 7-1.1-2, sulfur dioxide emissions from each boiler shall not exceed 6.0 pounds per million British thermal units (lb/MMBtu) of heat input when combusting coal, and when combusting coal and oil simultaneously.

1265 Exemption Qualification 105-8180, issued February 24, 1997

Pursuant to 1265 Exemption Qualification 105-8180, issued February 24, 1997, the total heat input to boilers no.3 and no.4 when burning coal, natural gas, no.2 fuel oil, or any combination of these three fuels shall not exceed 100 million British thermal units per hour for each boiler.

On December 28, 2000, the source submitted a letter stating that No.1 fuel oil is also being used as a backup fuel for the boilers. This fuel has a lower sulfur content and heating value than No.2 fuel oil.

1265 Exemption Qualification 105-8527, issued October 27, 1997

Pursuant to 1265 Exemption Qualification 105-8527-00005, issued October 27, 1997, boiler EU-06 may use No.2 fuel oil as an alternative fuel source because it is cleaner than coal and causes no emissions increase when used in boiler EU-06.

Fuel Usage Equivalency limits for Natural Gas, No.1 and No.2 Fuel Oil for boiler EU-05:

The source notified OAQ on December 28, 2000, that they added the use of No.1 fuel oil to all boilers. Boiler EU-05 had existing limits for coal, No.2 fuel oil, and natural gas, and not No.1 fuel oil. This boiler no longer has the capabilities to use coal, and now that it also uses No.1 fuel oil, the existing limits were revised by setting fuel equivalency limits for the three fuels as follows:

- (a) The input of natural gas to boiler EU-05 shall be limited in total to 571.4 MMCF per twelve month period, rolled on a monthly basis. For purposes of determining compliance, every 5.87 kilo-gallons of No.1 or No.2 fuel oil burned, each shall be equivalent to 1 MMCF of natural gas based on NOx emissions and 0.08% sulfur content of No.1 fuel and 0.49% sulfur content of No.2 fuel such that the total MMCF of natural gas and natural gas equivalents input does not exceed 571.4 MMCF of natural gas per year;

$$(EU-05 \text{ No.1 fuel oil usage in kgal/yr} \div 5.87 \text{ kgal/MMCF}) + (EU-05 \text{ No.2 fuel oil usage in kgal/yr} \div 5.87 \text{ kgal/MMCF}) + (EU-05 \text{ natural gas usage in MMCF/yr}) < 571.4 \text{ MMCF/year}$$

- (b) The input of fuel oil to boiler EU-05 shall be limited in total to the equivalent of 133,333.33 MMCF of natural gas per twelve month period, rolled on a monthly basis. For purposes of determining compliance, every 0.053 kilo-gallons of No.1 fuel oil burned shall be equivalent to 1 MMCF of natural gas based on SO₂ emissions and 0.08% sulfur content of fuel and every 0.009 kgals of No.2 fuel oil burned shall be equivalent to 1 MMCF of natural gas based on SO₂ emissions and 0.49% sulfur content of fuel such that the total MMCF of natural gas and natural gas equivalents input does not exceed 133,333.33 MMCF of natural gas per year;

$$(EU-05 \text{ No.1 fuel oil usage in kgal/yr} \div 0.053 \text{ kgal/MMCF}) + (EU-05 \text{ No.2 fuel oil usage in kgal/yr} \div 0.009 \text{ kgal/MMCF}) + (EU-05 \text{ natural gas usage in MMCF/yr}) < 133,333.33 \text{ MMCF/year}$$

The fuel usage from boiler EU-05 shall be limited as required above so the potential to emit of NO_x and SO₂, regulated pollutants under the Prevention of Significant Deterioration (PSD) rule 326 IAC 2-2, would not exceed 40 tons per year, or the significant level for those particular pollutants. (See the TSD Appendix A, pages 6 and 7 of 8)

326 IAC 3-5 (Continuous Monitoring of Emissions)

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), section (b)(2), this rule applies to fossil fuel-fired steam generators of greater than one hundred million (100,000,000) British thermal units (Btus) per hour heat input capacity.

Boilers EU-01 and EU-02 are not subject to this rule because they are restricted to using their portable 4.2 MMBtu per hour natural gas fired burner during periods of startup and shutdown only, and each of their maximum design capacities are 100 MMBtu per hour each and no greater.

Boilers EU-03 and EU-04 are subject to this rule because each are fossil fuel-fired steam generators of greater than 100 MMBtu per hour heat input, and they have the ability to use coal in addition to natural gas and fuel oil.

Boiler EU-05 is subject to this rule because it is a fossil fuel-fired steam generator of greater than 100 MMBtu per hour heat input, and it has not been tested to comply with 326 IAC 5-1 and 6-2 by combusting oil or a mix of gas and oil without using particulate matter collection equipment [326 IAC 3-5-1(c)(2)(A)(ii)].

Stack 003 for Boiler EU-06 is equipped with a continuous opacity monitor.

The source has not requested an alternative monitoring requirement under 326 IAC 3-5-1(c)(2)(A)(iii). A compliance schedule is required for the installation of a COM on stack 002 for boilers EU-03, EU-04, and EU-05. The Permittee is required to equip stack 002 with a continuous opacity monitoring system within ninety (90) days after issuance of this permit. If the source does not wish to use the COM while EU-05 is the only boiler operating for stack 002, they would need to show compliance with 326 IAC 5-1 and 6-2 by testing EU-05 without control equipment while combusting oil or a mix of gas and oil [326 IAC 3-5-1(c)(2)(A)(ii)].

326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-3 the PM emission limitation for boilers EU-01, EU-02, EU-03, EU-4, EU-5, and EU-6, shall not exceed 0.38 pounds of particulate matter per million British thermal units heat input. This limitation is based on the following equation:

$$P_t = (C * a * h) / (76.5 * Q^{0.75} * N^{0.25})$$

where: P_t - PM limit in pounds per MMBtu
 C - Maximum ground level concentration
 a - Plume rise factor
 h - Stack height in feet
 Q - total source permitted capacity in MMBtu/hr
 N - Number of stacks

$$P_t = \frac{(50)(0.67)(162.5)}{(76.5)(740^{0.75})(3^{0.25})} = \frac{5443.75}{14284.5} =$$

$$P_t = 0.38 \text{ lb/MMBtu}$$

With Q being the total source permitted capacity for boilers EU-01, EU-02, EU-03, EU-4, EU-5, and EU-6, in MMBtu/hr (80 MMBtu/hr + 80 MMBtu/hr + 100 MMBtu/hr + 190 MMBtu/hr + 190 MMBtu/hr = 740 MMBtu/hr), Q for boilers constructed prior to September 21, 1983 is 740 MMBtu per hour.

Previously, Q was calculated when EU-05 and EU-06 had fuel restrictions (Between the two, only one boiler

at a time was permitted to combust coal while in operation). Since EU-05 no longer uses coal as fuel, Q has been recalculated based on the current permitted capacities of the units.

Coal

Stack tests from July 1, 1999, show an emission rate of 0.27 lb/MMBtu PM for boiler EU-01, and stack tests from February 28, 2001, show an emission rate of 0.34 lb/MMBtu PM for boiler EU-02. These rates are less than the allowable limit of 0.38 lb/MMBtu PM. Therefore, boilers EU-01 and EU-02, are in compliance with 326 IAC 6-2-3 when combusting coal.

Stack tests from January 10, 2001, show an emission rate of 0.19 lb/MMBtu PM for boiler EU-03 when combusting only coal which is less than the allowable limit of 0.38 lb/MMBtu PM. Therefore, boiler EU-03 is in compliance with 326 IAC 6-2-3 when combusting coal.

Stack test results from March 27, 2002, show an emission rate of 0.28 lb/MMBtu PM for boiler EU-04 when combusting only coal which is less than the allowable limit of 0.38 lb/MMBtu PM. Therefore, according to the results sent in by the stack testing company, boiler EU-04, is in compliance with 326 IAC 6-2-3 when combusting coal. These results are not yet validated by the OAQ Compliance Data Section because additional information has been requested regarding the submitted test results.

Stack testing from February 11, 2000, shows an emission rate of 0.073 lb/MMBtu PM for boiler EU-06 when combusting only coal. This rate is less than the allowable limit of 0.38 lb/MMBtu PM. Therefore, boiler EU-06 is in compliance with 326 IAC 6-2-3 when combusting coal.

Natural Gas

Since the PM potential emission rates, based on AP42 emission factors, of 0.002 lb/MMBtu ($0.15 \text{ lb/hr} \div 80 \text{ MMBtu/hr} = 0.002 \text{ lb/MMBtu}$) each from boilers EU-03 and EU-04, when combusting natural gas, is less than the allowable limit of 0.38 lb/MMBtu each, these boilers are in compliance with 326 IAC 6-2-3 when combusting natural gas.

Since the PM potential emission rate of 0.002 lb/MMBtu ($0.37 \text{ lb/hr} \div 190 \text{ MMBtu/hr} = 0.002 \text{ lb/MMBtu}$) from boiler EU-05, when combusting natural gas, is less than the allowable limit of 0.38 lb/MMBtu, this boiler is in compliance with 326 IAC 6-2-3 when combusting natural gas.

Since the PM potential emission rate of 0.002 lb/MMBtu ($0.274 \text{ lb/hr} \div 150 \text{ MMBtu/hr} = 0.002 \text{ lb/MMBtu}$) from boiler EU-06, when combusting natural gas, is less than the allowable limit of 0.38 lb/MMBtu, this boiler is in compliance with 326 IAC 6-2-3.

Fuel Oil

Since the PM potential emission rates, based on AP42 emission factors, of 0.01 lb/MMBtu ($0.78 \text{ lb/hr} \div 80 \text{ MMBtu/hr} = 0.01 \text{ lb/MMBtu}$) each from boilers EU-03 and EU-04, when combusting No.1 fuel oil, is less than the allowable limit of 0.38 lb/MMBtu each, these boilers are in compliance with 326 IAC 6-2-3 when combusting No.1 fuel oil.

Since the PM potential emission rates, based on AP42 emission factors, of 0.009 lb/MMBtu ($0.75 \text{ lb/hr} \div 80 \text{ MMBtu/hr} = 0.009 \text{ lb/MMBtu}$) each from boilers EU-03 and EU-04, when combusting No.2 fuel oil, is less than the allowable limit of 0.38 lb/MMBtu each, these boilers are in compliance with 326 IAC 6-2-3 when combusting No.2 fuel oil.

Since the PM potential emission rate of 0.01 lb/MMBtu ($1.84 \text{ lb/hr} \div 190 \text{ MMBtu/hr} = 0.01 \text{ lb/MMBtu}$) each from boilers EU-05 and EU-06, when combusting No.1 fuel oil, is less than the allowable limit of 0.38 lb/MMBtu each, these boilers are in compliance with 326 IAC 6-2-3 when combusting No.1 fuel oil.

Since the PM potential emission rate of 0.009 lb/MMBtu ($1.79 \text{ lb/hr} \div 190 \text{ MMBtu/hr} = 0.009 \text{ lb/MMBtu}$) each from boilers EU-05 and EU-06, when combusting No.2 fuel oil, is less than the allowable limit of 0.38 pounds per MMBtu each, these boilers are in compliance with 326 IAC 6-2-3 when combusting No.2 fuel oil.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)- Coal

Pursuant to OP 53-02-92-0079 through 0084, issued January 12, 1990, and 326 IAC 7-1.1-2, sulfur dioxide emissions, the emissions from boilers EU-01, EU-02, EU-03, EU-04, and EU-06, shall not exceed 6.0 pounds

per million British thermal units (lb/MMBtu) of heat input when combusting coal, and when coal and oil are used simultaneously.

Since the SO₂ potential emission rate of 4.99 lb/MMBtu each from boilers EU-01 and EU-02, when combusting coal, is less than the allowable limit of 6.0 lb/MMBtu each, they are in compliance with 326 IAC 7-1.1-2.

Since the SO₂ potential emission rate of 4.99 lb/MMBtu each from boilers EU-03 and EU-04, when combusting coal, is less than the allowable limit of 6.0 lb/MMBtu each, they are in compliance with 326 IAC 7-1.1-2.

Since the SO₂ potential emission rate of 4.99 lb/MMBtu from boiler EU-06, when combusting coal, is less than the allowable limit of 6.0 lb/MMBtu, it is in compliance with 326 IAC 7-1.1-2.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)- Fuel Oil

Pursuant to PC (55)1731, issued February 15, 1989, and OP 53-02-92-0083, issued January 5, 1990 for boiler EU-05, the No.2 fuel oil used shall have a maximum sulfur content of 0.5%.

Pursuant to 326 IAC 7-1.1-2 for boilers EU-03, EU-04, EU-05, and EU-06, the sulfur dioxide emissions from each shall not exceed 0.5 pounds per million British thermal units (lb/MMBtu) of heat input when combusting No.1 or No.2 fuel oil.

On December 28, 2000, the source submitted a letter stating that No.1 fuel oil is also being used as a backup fuel for the boilers. This fuel has a lower sulfur content and heating value than No.2 fuel oil.

The compliance of each boiler with the sulfur dioxide emission limitation listed above shall be determined using a calendar month average sulfur dioxide emission rate in pounds per MMBtu as specified in 326 IAC 7-1.1-2.

Coal Storage and Handling System

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the coal storage and handling system shall not exceed 58.5 pounds per hour when operating at a process weight rate of 400,000 pounds per hour as established in the following formula:

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:

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

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to Minor Source Modification 105-11356-00005, issued July 21, 2000, and 326 IAC 6-4 (Fugitive Dust Emissions), 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.

To ensure compliance with 326 IAC 5-1-2, 6-3, and 6-4 on a continuous basis, the coal truck receiving system wet suppression system, and the dust collectors, all for PM control shall be in operation and control the PM emissions from their associated equipment at all times that the coal storage and handling system is in operation. Also, all equipment exhausting internally (DC1 through DC5) for the coal storage and handling system shall not exhaust to the atmosphere at any time the system is in operation.

Insignificant Activities

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from boilers shall not exceed the pound per million Btu heat input (lb/MMBtu) listed in the table below:

Units	Year Constructed	MMBtu per hour of units	Q* (see equation below)	pound per million Btu heat input (lb/MMBtu)
B1 and B2	1996	3.0	746.0	0.2

B3 to B16	1998	21.4	767.4	0.2
B17 to B22	1999	21.0	788.4	0.2

* Prior to 1996, "Q" is 740 MMBtu/hr

The limitations in the table above were calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} \quad \text{Where } Q = \text{total source capacity (MMBtu/hr)}$$

326 IAC 8-3-2 (Cold Cleaner Operations)

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

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the 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.

326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control)

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

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit

(120°F)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility 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.

Testing Requirements

Boilers EU-01, EU-02, EU-03, EU-04, and EU-06 are required to stack test every three (3) years for particulate matter emissions.

Boiler EU-05 is required to stack test every three (3) years for NOx.

In order to modify the monitoring for the T-R sets (ie, operating with one set in service), the source will have to demonstrate compliance while operating the ESP with only one field. If the source chooses, they may test for particulate with only one (1) set in service to demonstrate that EU-06 is able to operate in compliance with the particulate and opacity limit with only one (1) T-R set in service.

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 compliance monitoring requirements applicable to this source are as follows:

1. The boilers (EU-01 through EU-06) have applicable compliance monitoring conditions as specified below:
 - (a) Visible emission (VE) notations of the boilers' stack exhausts shall be performed once per shift during normal daylight operations while combusting coal (stacks 001 and 002) and/or fuel oil (stacks 001 and 002), and until a certified COM is installed on stack 002. A trained employee shall record whether emissions are normal or abnormal. If abnormal emissions are observed at any boiler 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 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 violation of this permit. "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. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for the boilers.

- (b) The Permittee shall calibrate, maintain, and operate the continuous monitoring systems installed in stacks 002 and 003 for the measurement of the opacity of emissions discharged into the atmosphere from the boilers when they combust coal and/or fuel oil.
- (c) For stacks 002 (after installation of a COM) and 003, appropriate response steps shall be taken in accordance with Section C- Compliance Response Plan- Preparation, Implementation, Records, and Reports, whenever the opacity exceeds twenty-five percent (25%) for three (3) consecutive six (6) minute averaging periods. In the event of opacity exceeding twenty-five percent (25%), response steps will be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty-five percent (25%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets (for EU-06) being returned to service.

Opacity readings in excess of twenty-five percent (25%) but not exceeding the opacity limits for these boilers is not a deviation from this permit.

- (d) The ability of the ESP (EU-06) 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.

When for any one reading, operation is outside one of the normal ranges shown below, or a range established during the most recent 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 of the normal range is not a deviation from this permit.

(1)	Primary voltage:	260 - 300 V
(2)	Secondary voltage:	35 - 55 kV
(3)	T-R set primary current:	50 -75 A

- (e) The ability of the multiclones to control particulate emissions shall be monitored at least once per shift, when their associated boilers are in operation, by measuring and recording the total static pressure drop across the collectors.

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.

For all of the above (a) through (e), reasonable response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports for any improper or abnormal conditions found during an inspection. 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 violation of this permit.

These monitoring conditions are necessary because:

The multiclones for boilers EU-01, EU-02, EU-03, EU-04, EU-05, and EU-06 must operate properly to ensure compliance with 326 IAC 6-2-3 (Process Operations) and 326 IAC 2-7 (Part 70); and

The continuous opacity monitoring systems installed in stacks 002 and 003, must be operating properly to ensure compliance with 326 IAC 5-1 (Opacity), 326 IAC 3-5 (Continuous Monitoring), and 326 IAC 2-7 (Part 70).

The electrostatic precipitator for boiler EU-06 must be operating properly to ensure compliance with 326 IAC 6-2-3 (Process Operations) and 326 IAC 2-7 (Part 70).

2. The coal storage and handling system has applicable compliance monitoring conditions as specified below:
 - (a) Pursuant to Minor Source Modification 105-11356-00005, issued July 21, 2000, compliance monitoring requirements for the coal storage and handling system that are applicable to the silo dust collector (DC6) and coal truck receiving system are as follows:
 - (1) Once per shift visible emission notations of the dust collector DC6 vent exhaust shall be performed during normal daylight operations when exhausting to the atmosphere, and when the silo is receiving coal. A trained employee shall record whether emissions are normal or abnormal.
 - (2) Once per shift visible emission notations of the coal truck receiving system shall be performed during normal daylight operations when either of the two (2) truck hoppers are receiving coal. A trained employee shall record whether emissions are normal or abnormal.
 - (3) 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.
 - (4) 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.
 - (5) 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 any visible emissions of dust are observed from the coal storage and handling system, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of visible emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit.
 - (c) If abnormal emissions are observed from the coal storage and handling system, 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.
 - (d) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
 - (e) The Permittee shall record the total static pressure drop across dust collector DC6 at least once per shift when coal is being received by the silo and/or either of the truck hoppers. When for any one reading, the pressure drop across the collector is outside the normal range of 2.0 and 5.0 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 violation of this permit.
 - (f) 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.

- (g) An inspection shall be performed within the last month of each calendar quarter of all bags controlling particulate emissions from the coal processing or conveying. All defective bags shall be replaced.
- (h) 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 violation of this permit.
- (i) In the event that bag failure has been observed, 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).

These monitoring conditions are necessary because dust collector DC6 and the coal receiving system must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations), 326 IAC 6-4 (Fugitive Dust Emissions), and 326 IAC 2-7 (Part 70).

As noted in the Technical Support Document for Minor Source Modification 105-11356-00005, issued July 21, 2000, since there are no stacks or vents associated with dust collectors DC1 through DC5, compliance monitoring is not required. Dust collector DC6 is vented to the atmosphere through vent 6 only when the silo is receiving coal.

Conclusion

The operation of this campus power plant for process steam heat shall be subject to the conditions of the attached proposed Part 70 Permit No. T105-6642-00005.

**Appendix A: Emission Calculations
 Natural Gas Combustion Only
 MMBtu per Hour < 10
 Stand Alone Insignificant Boilers
 and Two Portable Burners for EU-01 and 02**

ATSD App A

**Company Name: Indiana University
 Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
 TV Permit #: T105-6642-00005
 Reviewer: Melissa Groch
 Date: April 2004**

Heat Input Capacity Total MMBtu/hr	Potential Throughput MMCF/yr	Construction Year
163.420 insignificant boilers combined	1431.56	See ATSD page 2
8.400 two portable burners (4.2 each)	73.584	2000

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	7.6	7.6	0.6	100.0	5.5	84.0
insignificant boilers combined:	5.44	5.44	0.43	2.63	0.14	2.21
Potential Emissions in tons per year:	5.4399	5.4399	0.4295	71.5780	3.9368	60.1255

Two portable burners combined for EU-01 and 02:	0.2796	0.2796	0.0221	3.6792	0.2024	3.0905
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Methodology:

Stand alone boilers were installed to reduce the load on the large boilers at the central heating plant.

The stand alone boilers' construction dates range from 1950 to 2002.

The two portable burners aid in the start-up and shutdown of boilers EU-01 and EU-02.

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

Coal Combustion for Boilers EU-01, EU-02, EU-03, EU-04, and EU-06

Company Name: Indiana University
Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
TV Permit #: T105-6642-00005
Reviewer: Melissa Groch

S = Weight % Sulfur =	3.15
A = Weight % ash =	9.7

Heat Input Capacity MMBtu/hr	Potential Throughput tons/yr	Stack	Construction Date	Multiclone Control Eff. %	#SCC	
80	EU-01 and EU-02	29,200	001	1955	72	1-03-002-09
100	EU-03 and EU-04	36,500	002	1959	80	1-03-002-09
190	EU-06	69,350	003	1970	86.6, 33 (ESP)	1-03-002-09

Emission Factor	Pollutant (lbs/ton)					
	PM	PM-10	SO2	NOx	VOC	CO
	66.0	13.2	119.7 (38S)	11.0	0.05	5.0
Potential Emissions in tons per year:						
combined EU-01, EU-02	1927.20	385.44	3495.24	321.20	1.46	146.00
combined EU-03, EU-04	2409.00	481.80	4369.05	401.50	1.83	182.50
EU-06	2288.55	457.71	4150.60	381.43	1.73	173.38
Total (TPY)	6624.75	1324.95	12014.89	1104.13	5.02	501.88

Methodology:

EU-01 and EU-02 share the same stack, 001

EU-03 and EU-04 share the same stack, 002

EU-06 uses stack 003

EU-01 and EU-02 have maximum design capacities of 100 MMBtu per hour each, but are limited to 80 MMBtu per hour each when using coal.

EU-03 and EU-04 have maximum design capacities of 125 MMBtu per hour each, but are limited to 100 MMBtu per hour of heat input each when using coal or coal with a combination of fuels.

Per the TV application for this source, 1 lb bituminous coal has a BTU rating of 12,000

Emission Factors are from AP 42 (updated 9/98), Tables 1.1-3, 1.1-4, and 1.1-19 (SCC 1-03-002-09)

Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1,000,000 Btu/MMBtu x (Btu/lb coal) / 2,000 lb/ton

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

Coal is the worst case fuel for after control potential emissions for PM and PM-10 for EU-01 through EU-04, and EU-06.

After control emissions for PM or PM-10 = Potential emissions (tons per year) x (1- multiclone control efficiency) and for EU-06 use the after control emissions from equation above and multiply by (1- ESP control eff.)

Coal Combustion for Boilers EU-01, EU-02, EU-03, EU-04, and EU-06

HAPs Emissions

Company Name: Indiana University
Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
TV Permit #: T105-6642-00005
Reviewer: Melissa Groch

HAPs from Coal

Heat Input Capacity MMBtu/hr	Potential Throughput tons/yr
80	EU-01 and EU-02 29,200
100	EU-03 and EU-04 36,500
190	EU-06 69,350

Emission Factor	Pollutant (lbs/ton)					
	Hydrogen Chloride	Hydrogen Fluoride	Acetalde- hyde	Benzyl Chloride	Cyanide	Isophorone
	1.2	0.15	5.7E-04	7.0E-04	2.5E-03	5.8E-04
Potential Emissions in tons per year:						
combined EU-01, EU-02	35.04	4.38	0.02	0.02	0.07	0.02
combined EU-03, EU-04	43.80	5.48	0.02	0.03	0.09	0.02
EU-06	41.61	5.20	0.02	0.02	0.09	0.02
Total (TPY)	120.45	15.06	0.06	0.07	0.25	0.06

Methodology:

Same as page 1.

HAPs emission factors are from AP42 (update 9/98), Tables 1.1-15 and 1.1-14 (see this ta

ble for other haps)

**Appendix A: Potential Emissions Calculations
Natural Gas Combustion for Boilers EU-03, EU-04, EU-05, and EU-06**

**Company Name: Indiana University
Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
TV Permit #: T105-6642-00005
Reviewer: Melissa Groch**

MMBTU/HR <100

Heat Input each MMBtu/hr	Potential Throughput of both in MMCF/yr	Construction Date	Stack	SCC#	
80	EU-03 and EU-04	1,402	1959	002	1-03-006-01

	Pollutant	PM*	PM10*	SO2	Low NOx**	VOC	CO
Emission Factor in lb/MMCF		1.9	7.6	0.6	50	5.5	84.0
Potential Emissions in tons per year combined:		1.3	5.3	0.4	35.0	3.9	58.9

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirc.= 32

Methodology:

Pursuant to Exemption 105-8180-00005, issued February 24, 1997, EU-03 and EU-04 have natural gas capacities of 80 MMBtu per hour heat input for each boiler because of the burner capacities.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42 (Supp. D 7/98), Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, Small Industrial Boilers

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

MMBTU/HR >100

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Construction Date	Stack	SCC#	
190	EU-05	1664	1964	002	1-03-006-01
150	EU-06	1314	1970	003	1-03-006-01

	Pollutant	PM*	PM10*	SO2	Low NOx**	VOC	CO
Emission Factor in lb/MMCF		1.9	7.6	0.6	140	5.5	84.0
Potential Emissions in tons/year:							
	EU-05	1.6	6.3	0.5	116.5	4.6	69.9
	EU-06	1.2	5.0	0.4	92.0	3.6	55.2

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 280, Low NOx Burner = 140, Low NOx Burners/Flue gas recirc.= 100

Methodology:

EU-05 has two low NOx natural gas fired burners rated at 95 MMBtu per hour heat input each.

EU-06 has two low NOx natural gas fired burners rated at 75 MMBtu per hour heat input each.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 280, Low NOx Burner = 140, Flue gas recirculation = 100

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42 (Supp. D 7/98), Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, Large Industrial Boilers

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

**Appendix A: Potential Emissions Calculations
Natural Gas Combustion for Boilers EU-03, EU-04, EU-05, and EU-06**

HAPs Emissions

**Company Name: Indiana University
Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
TV Permit #: T105-6642-00005
Reviewer: Melissa Groch**

MMBtu/hr <100 and MMBtu/hr > 100

HAPs - Organics

Emission Factor in lb/MMcf		Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	EU-03 and EU-04	0.00147	0.00084	0.05256	1.26144	0.00238
	EU-05	0.00175	0.00100	0.06242	1.49796	0.00283
	EU-06	0.00138	0.00079	0.04928	1.18260	0.00223

HAPs - Metals

Emission Factor in lb/MMcf		Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	EU-03 and EU-04	0.00035	0.00077	0.00098	0.00027	0.00147
	EU-05	0.00042	0.00092	0.00117	0.00032	0.00175
	EU-06	0.00033	0.00072	0.00092	0.00025	0.00138

Methodology is the same as page 3 of 9.

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Potential Emissions Calculations
#1 and #2 Fuel Oil for Boilers EU-03, EU-04, EU-05 and EU-06**

**Company Name: Indiana University
Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
TV Permit #: T105-6642-00005
Reviewer: Melissa Groch**

Fuel Oil

Heat Input Capacity MMBtu/hr	Stack	Potential Throughput kgals/ year		Construction Date	SCC	
		No.1	No.2			
80	EU-03 and EU-04	002	10460	10157	1959	1-03-006-01
190	EU-05	002	12421	12061	1966	1-03-005-01
190	EU-06	003	12421	12061	1970	1-03-005-01
S= Weight%			0.08	0.49		

#1 Fuel Oil	Pollutant	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	EU-03 and EU-04	1.3	(142S) 11.4	20.0	0.34	5.0
	EU-05 and EU-06	1.3	11.4	24.0	0.2	5.0
Potential Emissions in tons per year:	EU-03 and EU-04	6.8	59.4	104.6	1.78	26.1
	EU-05 and EU-06	16.1	141.1	298.1	2.48	62.1

#2 Fuel Oil	Pollutant	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	EU-03 and EU-04	1.3	(142S) 69.6	20.0	0.34	5.0
	EU-05 and EU-06	1.3	69.6	24.0	0.2	5.0
Potential Emissions in tons per year:	EU-03 and EU-04	6.6	353.3	101.6	1.73	25.4
	EU-05 and EU-06	15.7	839.2	289.5	2.41	60.3

Methodology:

Boilers EU-03 and EU-04, are limited to 80 MMBtu per hour heat input each when using only fuel oil

Boilers EU-03, EU-04, and EU-05 share the same stack, 002

EU-06 uses stack 003

1 gallon of No. 2 Fuel Oil has a heating value of 138,000 Btu

1 gallon of No. 1 Fuel Oil has a heating value of 134,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon
x 1 gal per 0.138 MMBtu

Emission Factors are from AP 42 (9/98), Tables 1.3-2 and 1.3-4

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

**Appendix A: Potential Emissions Calculations
#1 and #2 Fuel Oil for Boilers EU-03, EU-04, EU-05 and EU-06**

HAPs Emissions

**Company Name: Indiana University
Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
TV Permit #: T105-6642-00005
Reviewer: Melissa Groch**

Fuel Oil

Heat Input Capacity MMBtu/hr	Stack	Potential Throughput		Construction Date	SCC	
		kgals/ year				
		No.1	No.2			
80	EU-03 and EU-04	002	10460	10157	1959	1-03-006-01
190	EU-05	002	12421	12061	1966	1-03-005-01
190	EU-06	003	12421	12061	1970	1-03-005-01

Pollutant		Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/kgal		4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emissions in tons per year:	No.1 Fuel Oil					
	EU-03, EU-04	0.00002	0.00002	0.00002	0.00002	0.00005
	EU-05, EU-06	0.00005	0.00004	0.00004	0.00004	0.00011
	No.2 Fuel Oil					
	EU-03, EU-04	0.00002	0.00002	0.00002	0.00002	0.00005
	EU-05, EU-06	0.00005	0.00004	0.00004	0.00004	0.00011

Pollutant		Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/kgal		3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emissions in tons per year:	No.1 Fuel Oil				
	EU-03, EU-04	0.00002	0.00003	0.00002	0.00008
	EU-05, EU-06	0.00004	0.00007	0.00004	0.00019
	No.2 Fuel Oil				
	EU-03, EU-04	0.00002	0.00003	0.00002	0.00008
	EU-05, EU-06	0.00004	0.00007	0.00004	0.00018

Methodology:

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (mmBtu/hr) * Emission Factor (lb/mmBtu) * 8,760 hr

rs/yr / 2,000 lb/ton

Appendix A: Fuel Equivalency Limits for EU-05

For the purposes of demonstrating compliance while using fuel oil as emergency back-up, natural gas equivalency limits were calculated to show that when using these fuels for EU-05, NOx and SO2 would not exceed 40 tpy each, the significant limits for PSD applicability.

NOx Based on the potential emissions calculations, a limit based on NOx was derived for natural gas, since it is the primary fuel. To keep NOx below 40 tpy when using natural gas only, the limit was determined by multiplying the natural gas emission factor for NOx (140 lb/MMCF) by 40 tpy:

$$40\text{t/y} * 2000 \text{ lb/t} * 1 \text{ MMCF}/140 \text{ lb} = 571.4 \text{ MMCF of natural gas per year}$$

So, a maximum of 571.4 MMCF per year of natural gas may be consumed while keeping NOx below 40 tpy. Next it is determined how much natural gas in MMCF equals one ton of NOx:

$$(2000 \text{ lb/t}) / (140 \text{ lb}/1 \text{ MMCF}) = 14.2 \text{ MMCF of natural gas will generate 1 ton of NOx}$$

Because boiler EU-05 also uses No.1 and No.2 fuel oil, fuel oil limits in terms of natural gas were also determined. Since the NOx emission factor is the same for each oil (24 lb/kgal), it is determined how many kilo-gallons of either oil will equal one ton of NOx:

$$(2000 \text{ lb/t}) / (24 \text{ lb}/1 \text{ kgal}) = 83.3 \text{ kgal of either oil will generate 1 ton of NOx}$$

Now that it has been determined how much natural gas and oil will generate one ton of NOx, calculations are performed to show the equivalent fuel oil (in kilo-gallons) to 1 MMCF of natural gas, or how much fuel oil will equal 1 MMCF of natural gas to generate one ton of NOx:

$$83.3 \text{ kgal/ton NOx} * \text{ton NOx}/14.2 \text{ MMCF} = 83.3 \text{ kgal}/14.2 \text{ MMCF} = 5.87 \text{ kgal oil per 1 MMCF nat. gas}$$

For purposes of determining compliance based on NOx emissions:

- (a) Every 5.87 kgals of No.1 or No.2 fuel oil burned shall each be equivalent to 1 MMCF of natural gas based on NOx emissions; and
- (b)
$$\frac{(\text{No.1 fuel oil usage in kgal/yr})}{5.87 \text{ kgals/MMCF}} + \frac{(\text{No.2 fuel oil usage in kgal/yr})}{5.87 \text{ kgals/MMCF}} + (\text{Natural gas usage in MMCF/yr})$$
- < 571.4 MMCF/year

Based on NOx emissions, and in terms of natural gas usage, total yearly usage of the three fuels shall not exceed 571.4 MMCF per year.

Appendix A: Fuel Equivalency Limits for EU-05 (continued)

SO2 The potential emissions of SO2 for both fuel oils are over 40 tpy. Therefore, equivalent limits, in terms of natural gas, are necessary. By multiplying the natural gas emission factor for SO2 (0.6 lb/MMCF) by 40 tpy, a limit was calculated in terms of natural gas MMCF per year:

$$40\text{t/y} * 2000 \text{ lb/t} * 1 \text{ MMCF}/0.6 \text{ lb} = 133,333.33 \text{ MMCF of natural gas per year}$$

So, a fuel oil equivalent of 133,333.33 MMCF of natural gas may be consumed while keeping SO2 below 40 tpy.

Since the SO2 emission factor is different for each oil, it is determined how many kgal of each oil will generate one ton of SO2:

No.1: $(2000 \text{ lb/t}) / (11.4 \text{ lb/1 kgal}) = 175 \text{ kgal of No.1 fuel oil will generate 1 ton of SO2}$

No.2: $(2000 \text{ lb/t}) / (69.6 \text{ lb/1 kgal}) = 28.7 \text{ kgal of No.2 fuel oil will generate 1 ton of SO2}$

Now that it has been determined how much of each fuel oil equals one ton of SO2, calculations are performed to show the equivalent fuel oil (in kilo-gallons) to 1 MMCF of natural gas:

No.1: $175 \text{ kgal/ton SO2} * \text{ton SO2}/3333.3 \text{ MMCF} = 175 \text{ kgal}/3333.3 \text{ MMCF} = 0.053 \text{ kgal of No.1 fuel oil per 1 MMCF natural gas}$

No.2: $28.7 \text{ kgal/ton SO2} * \text{ton SO2}/3333.3 \text{ MMCF} = 28.7 \text{ kgal}/3333.3 \text{ MMCF} = 0.009 \text{ kgal of No.2 fuel oil per 1 MMCF natural gas}$

For purposes of determining compliance based on SO2 emissions:

- (a) Every 0.053 kgal of No.1 fuel oil burned shall be equivalent to 1 MMCF of natural gas based on SO2 emissions; and
- (b) Every 0.009 kgal of No.2 fuel oil burned shall be equivalent to 1 MMCF of natural gas based on SO2 emissions; and
- (c)
$$\frac{(\text{No.1 fuel oil usage in kgal/yr})}{0.053 \text{ kgal/MMCF}} + \frac{(\text{No.2 fuel oil usage in kgal/yr})}{0.009 \text{ kgal/MMCF}} + (\text{Natural gas usage in MMSCF/yr})$$

< 133,333.33 MMCF/year based on SO2 emissions

Based on SO2 emissions, and in terms of natural gas usage, total yearly usage of the three fuels shall not exceed 133,333.33 MMCF per year.

**Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBtu per Hour < 10
Stand Alone Insignificant Boilers
and Two Portable Burners for EU-01 and 02**

**Company Name: Indiana University
Address City IN Zip: 700 North Walnut Grove, Bloomington, Indiana 47405
TV Permit #: T105-6642-00005
Reviewer: Melissa Groch**

Heat Input Capacity Total MMBtu/hr	Potential Throughput MMCF/yr	Construction Year
6.000	B1, B2 (each 3.0)	1996
3.200	B3, B4 (each are 1.6)	1998
2.000	B5, B6 (each are 1.0)	1998
5.200	B7, B8, B9, B10 (each are 1.3)	1998
11.000	B15, B16 (each are 5.5)	1998
21.000	B17 - B22 (each are 3.5)	1999
8.400	two portable burners (4.2 each)	2000

		Pollutant					
Emission Factor in lb/MMCF		PM 7.6	PM10 7.6	SO2 0.6	NOx 100.0	VOC 5.5	CO 84.0
Potential Emissions in tons per year	B1 and B2	0.20	0.20	0.02	2.63	0.14	2.21
	B3 and B4	0.11	0.11	0.01	1.40	0.08	1.18
	B5 and B6	0.07	0.07	0.01	0.88	0.05	0.74
	B7, B8, B9, and B10	0.17	0.17	0.01	2.28	0.13	1.91
	B15, B16	0.37	0.37	0.03	4.82	0.26	4.05
	B17 through B22	0.70	0.70	0.06	9.20	0.51	7.73

Tons per year total of stand alone boilers:	1.61	1.61	0.13	21.20	1.17	17.81
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Two portable burners combined for EU-01 and 02:	0.2796	0.2796	0.0221	3.6792	0.2024	3.0905
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Methodology:

Stand alone boilers B1 through B22 were installed to reduce the load on the large boilers at the central heating plant. The two portable burners aid in the start-up and shutdown of boilers EU-01 and EU-02.

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02,

1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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