INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: December 21, 2006

RE: University of Evansville / 163-16842-00064

FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06

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NEW SOURCE CONSTRUCTION PERMIT
AND
SOURCE SPECIFIC OPERATING AGREEMENT (SSOA)
OFFICE OF AIR QUALITY
AND EVANSVILLE ENVIRONMENTAL PROTECTION AGENCY

University of Evansville
1800 Lincoln Avenue
Evansville, Indiana 47722

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 Permit under 326 IAC 2-7.

Operation Permit No.: 163-16842-00064	
Issued by:Original signed by Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date:December 21, 2006 Expiration Date December 21, 2011:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Evansville Environmental Protection Agency (EEPA). The information describing the source contained in conditions A.1 and A.2 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 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates stationary boilers, generators, and other university activities including maintenance activities and teaching laboratories.

Authorized Individual:	Director of Facilities Management and Planning
Source Address:	1800 Lincoln Avenue, Evansville, Indiana 47722
Mailing Address:	1800 Lincoln Avenue, Evansville, Indiana 47722
General Source Phone:	(812) 488-2721
SIC Code:	8221
County:	Vanderburgh
Source Location Status:	Nonattainment for PM2.5 Attainment for all other criteria pollutants
Source Status:	Source Specific Operating Agreement (SSOA) Minor Source, under PSD and Nonattainment NSR Rules; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) One (1) Superior, Model 2408G natural gas-fired,1600 HP, 4 stroke generator (identified as Unit #1), installed in 1996 and having a maximum heat input capacity of 10.88 MMBtu per hour. Uncontrolled emissions are exhausted through stack S-1. For the purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".

(b) One (1) Caterpillar, Model 3512 blended fuel-fired, 4 stroke generator (identified as Unit #2), installed in 1996 and converted to a diesel fuel-fired generator in 2006, and having a maximum heat input capacity of 11.33 MMBtu per hour and a 1135 kilowatt capacity. The generator was fired on a mixture of natural gas and fuel oil No. 2 from 1996 until 2006. Uncontrolled emissions are exhausted through stack S-2. For the purpose of determining emission limits as provided in Table 2, upon conversion to diesel fuel use only, this unit will be considered a "Diesel, Large Stationary".

(c) One (1) emergency Kohler Generator Set Model 100RZ, natural gas-fired 4-stroke generator (identified as Unit # 7) with a maximum heat input capacity of 1.68 MMBtu per hour and a 100 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-7. For purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".

(d) One (1) emergency Onan generator Model 75 ENT, natural gas-fired 4-stroke generator (identified as Unit #8) with a maximum heat input capacity of 1.26 MMBtu per hour and a 75 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-8. For purpose of determining emission limits as provided in Table 2, this unit is considered an "uncontrolled natural gas prime mover – 4 cycle lean burn".

(e) One (1) natural gas-fired Cleaver Brooks boiler (identified as Unit #6), constructed in 1973 and having a maximum heat input capacity of 40.14 MMBtu per hour. Emissions are

exhausted through stack S-6.

(f) Natural gas-fired combustion sources with heat input equal to or less than 10 MMBtu per hour, including:

(1) Two (2) natural gas-fired boilers (identified as Units #3 and #4), constructed in 1959 and each having a maximum heat input capacity of 6.69 MMBtu per hour. Emissions from Units #3 and #4 are exhausted through stacks S-3 and S-4, respectively.

(2) One (1) natural gas-fired boiler (identified as Unit #5), constructed in 1961 and having a maximum heat input capacity of 6.69 MMBtu per hour. Emissions from Unit #5 are exhausted through stack S-5.

(3) One (1) natural gas-fired hot water heater located in Powell Residence Hall, with a maximum heat input capacity of 0.25 MMBtu per hour;

(4) Three (3) natural gas-fired hot water heaters, located in Powell Residence Hall, each with a maximum heat input capacity of 0.299 MMBtu per hour;

(5) One (1) natural gas-fired hot water heater located in Schroeder Residence Hall, with a maximum heat input capacity of 0.25 MMBtu per hour;

(6) Four (4) natural gas-fired hot water heaters, located in Schroeder Residence Hall, each with a maximum heat input capacity of 0.299 MMBtu per hour;

(7) One (1) natural gas-fired steam space heater, constructed in 1989, located at the Armory, with a maximum heat input capacity of 4.2 MMBtu per hour;

(8) One (1) natural gas-fired hot water heater, located at the Armory, with a maximum heat input capacity of 0.5 MMBtu per hour;

(9) One (1) natural gas-fired steam space heater, constructed in 2001, located at Fehn Guest House, with a maximum heat input capacity of 0.28 MMBtu per hour;

(10) One (1) natural gas-fired hot water space heater, located at the Ramona Apartments, with a maximum heat input capacity of 4.2 MMBtu per hour;

(11) One (1) natural gas-fired hot water heater, located at the Ramona Apartments, with a maximum heat input capacity of 0.199 MMBtu per hour;

(12) One (1) natural gas-fired space heater, located at the Lincoln Park Apartments, with a maximum heat input capacity of 4.2 MMBtu per hour;

(13) One (1) natural gas-fired hot water heater, located at the Lincoln Park Apartments, with a maximum heat input capacity of 0.3 MMBtu per hour; and

(14) One (1) natural gas-fired space heater, located at Vize Guest House, with a maximum heat input of 0.175 MMBtu per hour.

(15) One (1) natural gas-fired kiln with a maximum heat input capacity of 299,000 Btu per hour.

A.3 SSOA Applicability [326 IAC 2-9-1]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Source Specific Operating Agreement (SSOA).

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1 shall prevail.

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.5 Enforceability

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, EEPA,, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.6 Severability

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.7 Property Rights or Exclusive Privilege

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

B.8 Duty to Provide Information

(a) The Permittee shall furnish to IDEM, OAQ, and EEPA within a reasonable time, any information that IDEM, OAQ, and EEPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the

certification by an "authorized individual" as defined by 326 IAC 2-1.1-1. Upon request, the Permittee shall also furnish to IDEM, OAQ, and EEPA 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.9 Certification

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than January 30 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and EEPA on or before the date it is due.

B.11 Preventive Maintenance Plan [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) 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
Indianapolis, Indiana 46204-2251

and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

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

(b) A copy of the PMPs shall be submitted to IDEM, OAQ, and EEPA upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and EEPA. IDEM, OAQ, and EEPA may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to and issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.13 Termination of Right to Operate [326 IAC 2-6.1-7(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 2-6.1-7.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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
Indianapolis, Indiana 46204-2251

and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

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

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 2-6.1-6(d)]

B.15 Source Modification Requirement

A modification, construction, or reconstruction is governed by 326 IAC 2.

B.16 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)] [IC 13-14-2-2] [IC13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, EEPA, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.17 Transfer of Ownership or Operation [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6-1-6 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

Indianapolis, Indiana 46204-2251

and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

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

(c) The Permittee may implement notice only changes addressed in the request for a notice only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. The Permittee shall pay annual fees to the City of Evansville EPA by the date specified on the invoice.

(b) 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. The Permittee may call the Evansville EPA at 812-435-6145 to determine the appropriate municipal permit fee.

B.19 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

B.20 Source Specific Operating Agreement Program [326 IAC 2-9]

This document shall also become a source specific operating agreement pursuant to 326 IAC 2-9-1 when, prior to start of operation of the internal and external combustion equipment, the following requirements are met.

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.

(1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(2) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2-9 and an Operation Permit Validation Letter is issued.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.

(d) The operating agreement will be subject to a one time application fee of $500 pursuant to 326 IAC 2-9-1(g) (Source Specific Operating Agreement Program).

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 Source Status [326 IAC 2-9]

(a) The requirements of 326 IAC 2-9-13(b)(2)(B) and 326 IAC 2-9-14(a)(2) are applicable to this SSOA.

(b) Pursuant to 326 IAC 2-9-1(g), the source may apply for up to four (4) different SSOAs contained in 326 IAC 2-9.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, OAQ and EEPA, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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).

C.5 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

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

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

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

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. 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 and EEPA.

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
Indianapolis, Indiana 46204-2251

and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14 days) prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and EEPA not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, and EEPA, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.7 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

C.8 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.9 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.10 Instrument Specifications [326 IAC 2-1.1-11]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.11 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
Indianapolis, Indiana 46204-2251
and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by an “authorized individual” as defined by 326 IAC 2-1.1(1).

(c) If the ERP is disapproved by IDEM, OAQ, and EEPA, 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, and EEPA, 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.12 Actions Related to Noncompliance Demonstrated by a Stack Test

(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 emissions unit 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 re-testing in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the re-testing deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to non-compliant stack tests.

The response action documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.13 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), Evansville Environmental Protection Agency (EEPA), or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ and EEPA, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.14 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or EEPA makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or EEPA within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented when operation begins.

C.15 General Reporting Requirements [326 IAC 2-1.1-1(1)] [326 IAC 2-6.1-5] [IC 13-14-1-13]

(a) 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
Indianapolis, Indiana 46204-2251

and

Evansville EPA
C.K. Newsome Community Center
100 East Walnut Street, Suite 100
Evansville, Indiana 47713

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and EEPA on or before the date it is due.

(c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) 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.

SECTION D.1 EMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description: External Combustion Sources

External combustion sources consisting of the following:

(e) One (1) natural gas-fired Cleaver Brooks boiler (identified as Unit #6), constructed in 1973 and having a maximum heat input capacity of 40.14 MMBtu per hour. Emissions are exhausted through stack S-6.

(f) Natural gas-fired combustion sources with heat input equal to or less than 10 MMBtu per hour, including:

(1) Two (2) natural gas-fired boilers (identified as Units #3 and #4), constructed in 1959 and each having a maximum heat input capacity of 6.69 MMBtu per hour. Emissions from Units #3 and #4 are exhausted through stacks S-3 and S-4, respectively.

(2) One (1) natural gas-fired boiler (identified as Unit #5), constructed in 1961 and having a maximum heat input capacity of 6.69 MMBtu per hour. Emissions from Unit #5 are exhausted through stack S-5.

(3) One (1) natural gas-fired hot water heater located in Powell Residence Hall, with a maximum heat input capacity of 0.25 MMBtu per hour;

(4) Three (3) natural gas-fired hot water heaters, located in Powell Residence Hall, each with a maximum heat input capacity of 0.299 MMBtu per hour;

(5) One (1) natural gas-fired hot water heater located in Schroeder Residence Hall, with a maximum heat input capacity of 0.25 MMBtu per hour;

(6) Four (4) natural gas-fired hot water heaters, located in Schroeder Residence Hall, each with a maximum heat input capacity of 0.299 MMBtu per hour;

(7) One (1) natural gas-fired steam space heater, constructed in 1989, located at the Armory, with a maximum heat input capacity of 4.2 MMBtu per hour;

(8) One (1) natural gas-fired hot water heater, located at the Armory, with a maximum heat input capacity of 0.5 MMBtu per hour;

(9) One (1) natural gas-fired steam space heater, constructed in 2001, located at Fehn Guest House, with a maximum heat input capacity of 0.28 MMBtu per hour;

(10) One (1) natural gas-fired hot water space heater, located at the Romona Apartments, with a maximum heat input capacity of 4.2 MMBtu per hour;

(11) One (1) natural gas-fired hot water heater, located at the Romona Apartments, with a maximum heat input capacity of 0.199 MMBtu per hour;

(12) One (1) natural gas-fired space heater, located at the Lincoln Park Apartments, with a maximum heat input capacity of 4.2 MMBtu per hour;

(13) One (1) natural gas-fired hot water heater, located at the Lincoln Park Apartments, with a maximum heat input capacity of 0.3 MMBtu per hour; and

(14) One (1) natural gas-fired space heater, located at Vize Guest House, with a maximum heat input of 0.175 MMBtu per hour.

(15) One (1) natural gas-fired kiln with a maximum heat input capacity of 299,000 Btu per hour.

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

Emission Limitations and Standards

D.1.1 Fuel Usage Limit [326 IAC 2-9-13(b)(2)(B)]

Pursuant to 326 IAC 2-9-13(b)(2)(B), the fuel usage for the natural gas-fired external combustion units at this source shall be limited to less than two hundred ninety million cubic feet (290 MMcf) of natural gas for every twelve (12) consecutive month period.

D.1.2 Opacity [326 IAC 2-9-13(b)(1)]

Pursuant to 326 IAC 2-9-13(b)(1), the visible emissions from the source shall not exceed twenty percent (20%) opacity in twenty-four (24) consecutive readings in a six (6) minute period. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.

D.1.3 Particulate Matter (PM) [326 IAC 6-2-3]

(a) Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating)**,** the PM emissions from boiler #6 shall be limited to 0.48 pounds per MMBtu heat input.

(b) Pursuant to 326 IAC 6-2-3(d) (Particulate Matter Emission Limitations for Sources of Indirect Heating)**,** the PM emissions from boilers #3, #4 and #5 shall each be limited to 0.8 pounds per MMBtu heat input.

(c) Pursuant to 326 IAC 6-3-2 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the space heaters at the Armory and at Fehn Guest House shall each be limited to 0.37 pounds per MMBtu heat input.

D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for boiler #6.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.5 Record Keeping Requirements [326 IAC 2-9-13]

(a) The Permittee shall maintain the following records for the external combustion units at this source:

(1) Hours operated for each combustion unit.

(2) Records of annual fuel usage for the external combustion units.

(3) Routine maintenance records.

These records shall be kept for a minimum period of five (5) years, and made available upon request of the Office of Air Quality (OAQ) and Evansville Environmental Protection Agency.

(b) To document compliance with Condition D.1.4, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

D.1.6 Annual Notification [326 IAC 2-9-13]

The Permittee shall provide an annual notice to the commissioner, stating that the source is in operation, and certifying that its operations are in compliance with the requirements of this Source Specific Operating Agreement. The above annual notice will be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
Indianapolis, IN 46204-2251

and

Evansville Environmental Protection Agency
100 E. Walnut Street, Suite 100
Evansville, IN 47713

no later than January 30 of each year, with the annual notice being submitted in the format attached to the operating agreement.

D.1.7 Reporting Requirements [326 IAC 2-9-13]

Any exceedance of any requirement contained in this operating agreement shall be reported, in writing, within one (1) week of its occurrence. Said report shall include information on the actions taken to correct the exceedance, including measures to reduce emissions, in order to comply with the established limits. If an exceedance is the result of a malfunction, then the provisions of 326 IAC 1-6 apply.

SECTION D.2 EMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description: Internal Combustion Sources

Internal combustion sources consisting of the following:

(a) One (1) Superior, Model 2408G natural gas-fired,1600 HP, 4 stroke generator (identified as Unit #1), installed in 1996 and having a maximum heat input capacity of 10.88 MMBtu per hour. Uncontrolled emissions are exhausted through stack S-1. For the purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".

(b) One (1) Caterpillar, Model 3512 blended fuel-fired, 4 stroke generator (identified as Unit #2), installed in 1996 and converted to a diesel fuel-fired generator in 2006, and having a maximum heat input capacity of 11.33 MMBtu per hour and a 1135 kilowatt capacity. The generator was fired on a mixture of natural gas and fuel oil No. 2 from 1996 until 2006. Uncontrolled emissions are exhausted through stack S-2. For the purpose of determining emission limits as provided in Table 2, upon conversion to diesel fuel use only, this unit will be considered a "Diesel, Large Stationary".

(c) One (1) emergency Kohler Generator Set Model 100RZ, natural gas-fired 4-stroke generator (identified as Unit # 7) with a maximum heat input capacity of 1.68 MMBtu per hour and a 100 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-7. For purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".

(d) One (1) emergency Onan generator Model 75 ENT, natural gas-fired 4-stroke generator (identified as Unit #8) with a maximum heat input capacity of 1.26 MMBtu per hour and a 75 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-8. For purpose of determining emission limits as provided in Table 2, this unit is considered an "uncontrolled natural gas prime mover – 4 cycle lean burn".

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

Emission Limitations and Standards

D.2.1 Fuel Usage Limit [326 IAC 2-9-14(a)(2)]

Pursuant to 326 IAC 2-9-14(a)(2), the fuel usage for the internal combustion units at this source shall be limited as follows:

(a) less than fifty million cubic feet (50 MMcf) of natural gas for every twelve (12) consecutive month period.

(b) less than three hundred seventy-six and seventy-two hundredths (376.72) kilogallons of diesel fuel for every twelve (12) consecutive month period.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.2 Record Keeping Requirements [326 IAC 2-9-13]

The Permittee shall maintain the following records for the internal combustion units at this source:

(a) Hours operated for each combustion unit.

(b) Records of annual fuel usage for the internal combustion units.

(c) Routine maintenance records.

D.2.3 Annual Notification [326 IAC 2-9-14]

The Permittee shall provide an annual notice to the commissioner, stating that the source is in operation, and certifying that its operations are in compliance with the requirements of this Source Specific Operating Agreement. The above annual notice will be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
Indianapolis, IN 46204-2251

and

Evansville Environmental Protection Agency
100 E. Walnut Street, Suite 100
Evansville, IN 47713
no later than January 30 of each year, with the annual notice being submitted in the format attached to the operating agreement.

D.2.4 Reporting Requirements [326 IAC 2-9-14]

Any exceedance of any requirement contained in this operating agreement shall be reported, in writing, within one (1) week of its occurrence. Said report shall include information on the actions taken to correct the exceedance, including measures to reduce emissions, in order to comply with the established limits. If an exceedance is the result of a malfunction, then the provisions of 326 IAC 1-6 apply.

Source Specific Operating Agreement
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-9.

Company Name:	University of Evansville
Address:	1800 Lincoln Avenue
City:	Evansville, Indiana 47722
Phone #:	(812) 479-2721
SSOA #:	163-16842-00064

I hereby certify that University of Evansville is still in operation and is in compliance with the requirements of Source Specific Operating Agreement (SSOA) 163-16842-00064.

Name (typed):
Title:
Signature:
Date:

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

University of Evansville
1800 Lincoln Avenue
Evansville, Indiana 47722

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____(Title) for _____
(Company Name)

3. By virtue of my position with_____,I have personal
(Company Name)

knowledge of the representations contained in this affidavit and am authorized to make

these representations on behalf of _____.
(Company Name)

4. I hereby certify that University of Evansville, located at 1800 Lincoln Avenue, Evansville, Indiana 47722, completed construction of the diesel-fired generator facility on _____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on March 5, 2003 and as permitted pursuant to New Source Construction Permit and Source specific Operating Agreement (SSOA) No. 163-16842-00064, Plant ID No. 163-00064 issued on _____.

5. Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature_____

Date_____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____ .

My Commission expires:

Signature_____

_____
Name (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document
for New Source Construction and Source Specific Operating Agreement

Source Background and Description

Source Name:	University of Evansville
Source Location:	1800 Lincoln Avenue, Evansville, Indiana 47722
County:	Vanderburgh
SIC Code:	8221
Operation Permit No.:	163-16842-00064
Permit Reviewer:	ERG/SE

On October 31, 2006, the Office of Air Quality (OAQ) had a notice published in the Evansville Courier, Evansville, Indiana, stating that the University of Evansville had applied for a Source Specific Operating Agreement (SSOA) to operate boilers, generators and other university activities such as maintenance activities and teaching laboratories. 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.

On November 6, 2006, the University of Evansville submitted comments on the proposed SSOA. The summary of the comments is as follows. Language shown in **bold** has been added and language shown in ~~strikethrough~~ has been deleted. The Table of Contents has been updated as necessary.

Comment #1:
The language in Conditions D.1.1 and D.2.1 "based on a straight twelve (12) month total" makes it unclear as to whether the limit is based on a rolling twelve (12) month period or if the counting period is twelve (12) consecutive months and then it starts over.

Response to Comment #1:
The limit is based on a rolling twelve month total, where compliance is determined each month by adding the fuel usage for current month to the total fuel usage for the previous eleven months. The following changes have been made to Conditions D.1.1 and D.2.1:

D.1.1 Fuel Usage Limit [326 IAC 2-9-13(b)(2)(B)]

Pursuant to 326 IAC 2-9-13(b)(2)(B), the fuel usage for the natural gas-fired external combustion units at this source shall be limited to less than two hundred ninety million cubic feet (290 MMcf) of natural gas ~~per year, based on a straight twelve (12) month total~~ **for every twelve (12) consecutive month period**.

D.2.1 Fuel Usage Limit [326 IAC 2-9-14(a)(2)]

Pursuant to 326 IAC 2-9-14(a)(2), the fuel usage for the internal combustion units at this source shall be limited as follows:

(a) less than fifty million cubic feet (50 MMcf) of natural gas ~~per year, based on a straight twelve (12) month total~~ **for every twelve (12) consecutive month period**.

(b) less than three hundred seventy-six and seventy-two hundredths (376.72) kilogallons of diesel fuel ~~per year, based on a straight twelve (12) month total~~ **for every twelve (12) consecutive month period**.

Comment #2:
Is opacity testing required?

Response to Comment #2
Unless requested by IDEM, opacity testing is not required for this source. No changes have been made to the permit as a result of this comment.

Comment #3:
The University of Evansville commented that on page 9 of 12 of the TSD Appendix A, the Potential to emit at 500 hours is wrong for all elements, as is the annual PTE for SO_2. The heat input capacities for the two pieces of equipment were combined into one factor, yet the 500 hour PTE results are approximately double the calculated amount. The SO_2 annual PTE is also wrong by the same magnitude. The University of Evansville also commented that on page 10 of 12 of the TSD Appendix A, the calculations for the kiln appear to be for a propane-fired kiln. The kiln is natural gas-fired, and the heat input capacity for the kiln is also incorrect.

Response to Comment #3:
No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the version that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. The Potential to Emit for the source table and the source status table in the TSD showed the correct potential to emit; therefore, none of the applicable rules have changed. See Attachment A for the correct calculations.

On November 10, 2006, the Evansville Environmental Protection Agency (EEPA) submitted comments on the proposed SSOA. The summary of the comments is as follows:

Comment #1:
EEPA commented that unless they receive instructions to the contrary, EEPA will assume that an Affidavit of Construction will be required only for the one (1) Caterpillar blended fuel-fired generator listed in Section D.2 and that the affidavit of construction will be due when the generator is returned to single fuel (diesel) use.

Response to Comment #1:
IDEM agrees. No changes have been made to the permit as a result of this comment.

Comment #2:
EEPA believes the correct date by which the Annual Notification must be submitted is January 30 of each year, pursuant to 326 IAC 2-9-1(d). EEPA requests the Annual Notification date in Condition B.10 be revised from March 1 to January 30.

Response to Comment #2:
IDEM agrees. The following changes have been made to Condition B.10:

B.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]

. . .

(b) The annual notice shall be submitted in the format attached no later than ~~March 1~~ **January 30** of each year to:

. . .

Comment #3:
EEPA understands that there are no annual state fees required of sources operating under SSOAs for external or internal combustion units. However, the Municipal Code of Evansville (MCE 3.30.226(1)(C)) authorizes EEPA to collect annual fees from sources operating under the SSOA program. EEPA requests to revise Condition B.18 to require payment to EEPA.

Response to Comment #3:
The following changes have been made to Condition B.18:

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. **The Permittee shall pay annual fees to the City of Evansville EPA by the date specified on the invoice.**

(b) 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. **The Permittee may call the Evansville EPA at 812-435-6145 to determine the appropriate municipal permit fee.**

Comment #4:
EEPA comments that the language in Conditions D.1.1 and D.2.1 that says, "per year, based on a straight twelve (12) month total" should be changed to "for every twelve (12) month period", in order to reflect the language in 326 IAC 2-9-13(b)(2)(B) and 326 IAC 2-9-14(a)(2).

Response to Comment #4:
See response to University of Evansville Comment #1 above.

Comment #5:
EEPA commented that the third item in the emission unit descriptions box in Section D.2 should be (c) instead of (e). EEPA also stated that the equipment descriptions in 326 IAC 2-9-14(f), Table 2 are difficult to match with the emission unit descriptions in the proposed SSOA. EEPA suggests the following revisions for the emission unit descriptions:

Internal combustion sources consisting of the following:

(a) One (1) **Superior, Model 2408G** natural gas-fired**, 1600 HP, 4 stroke** generator (identified as Unit #1), **installed** ~~constructed~~ in 1996 and having a maximum heat input capacity of 10.88 MMBtu per hour. **Uncontrolled emissions** are exhausted through Stack S-1. **For the purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".**

(b) One (1) **Caterpillar, Model 3512** blended fuel-fired**, 4 stroke** generator (identified as Unit #2), ~~constructed~~ **installed** in 1996 and converted to a diesel fuel-fired generator in 2006, and having a maximum heat input capacity of 11.33 MMBtu per hour **and a 1135 kilowatt capacity.** The generator ~~is~~ **was** fired on a mixture of natural gas and fuel oil No.2 from 1996 until 2006. **Uncontrolled** emissions are exhausted through stack S-2. **For the purpose of determining**

emission limits as provided in Table 2, upon conversion to diesel fuel use only, this unit will be considered a "Diesel, Large Stationary."

(c) **One (1)** emergency **Kohler Generator Set Model 100RZ,** natural gas-fired **4-stroke generator** (identified as Unit # 7) with a maximum heat input capacity of 1.68 MMBtu per hour **and a 100 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-7. For purposes of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".**

(d) One (1) emergency GenSet generator Model 75 ENT, natural gas-fired 4-stroke generator (identified as Unit #8) with maximum heat input capacities of 1.26 MMBtu per hour and a 75 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-8. For purposes of determining emission limits as provided in Table 2, this unit is considered an "uncontrolled natural gas prime mover – 4 cycle lean burn".

Response to Comment #5:
The University of Evansville has confirmed the changes to the emission unit descriptions proposed by EEPA are accurate. The permit has been revised as follows:

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) One (1) **Superior, Model 2408G** natural gas-fired**,1600 HP, 4 stroke** generator (identified as Unit #1), **installed** ~~constructed~~ in 1996 and having a maximum heat input capacity of 10.88 MMBtu per hour. **Uncontrolled** ~~Emissions~~ **emissions** are exhausted through stack S-1. **For the purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".**

(b) One (1) **Caterpillar, Model 3512 blended fuel-fired, 4 stroke** ~~diesel-fired~~ generator (identified as Unit #2), ~~constructed~~ **installed** in 1996 **and converted to a diesel fuel-fired generator in 2006,** and having a maximum heat input capacity of 11.33 MMBtu per hour **and a 1135 kilowatt capacity**. The generator was **fired on a mixture of natural gas and fuel oil No. 2 from 1996 until 2006** ~~converted from a dual fuel generator (mixture of natural gas and fuel oil No. 2) to a diesel-fired generator in 2006~~. **Uncontrolled** ~~E~~**e**missions are exhausted through stack S-2. **For the purpose of determining emission limits as provided in Table 2, upon conversion to diesel fuel use only, this unit will be considered a "Diesel, Large Stationary".**

(c) One (1) emergency Kohler Generator Set Model 100RZ, natural gas-fired 4-stroke generator (identified as Unit # 7) with a maximum heat input capacity of 1.68 MMBtu per hour and a 100 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-7. For purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".

(d) One (1) emergency Onan generator Model 75 ENT, natural gas-fired 4-stroke generator (identified as Unit #8) with a maximum heat input capacity of 1.26 MMBtu per hour and a 75 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-8. For purpose of determining emission limits as provided in Table 2, this unit is considered an "uncontrolled natural gas prime mover – 4 cycle lean burn".

(~~c~~**e**) One (1) natural gas-fired Cleaver Brooks boiler (identified as Unit #6), constructed in 1973 and having a maximum heat input capacity of 40.14 MMBtu per hour. Emissions are exhausted through stack S-6.

(~~d~~**f**) Natural gas-fired combustion sources with heat input equal to or less than 10 MMBtu per hour, including:

. . .

~~(e) Emergency generators consisting of two (2) natural gas-fired reciprocating engines (identified as Units #7 and #8), with maximum heat input capacities of 1.68 MMBtu per hour and 1.26 MMBtu per hour, respectively. Emissions from Units #7 and #8 are exhausted at stacks S-7 and S-8.~~

SECTION D.1 EMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description: External Combustion Sources

External combustion sources consisting of the following:

(~~c~~)**(e)** One (1) natural gas-fired Cleaver Brooks boiler (identified as Unit #6), constructed in 1973 and having a maximum heat input capacity of 40.14 MMBtu per hour. Emissions are exhausted through stack S-6.

(~~d~~)**(f)** Natural gas-fired combustion sources with heat input equal to or less than 10 MMBtu per hour, including:

. . .

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

SECTION D.2 EMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description: Internal Combustion Sources

Internal combustion sources consisting of the following:

(a) One (1) **Superior, Model 2408G** natural gas-fired**,1600 HP, 4 stroke** generator (identified as Unit #1), **installed** ~~constructed~~ in 1996 and having a maximum heat input capacity of 10.88 MMBtu per hour. **Uncontrolled** ~~Emissions~~ **emissions** are exhausted through stack S-1. **For the purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".**

(b) One (1) **Caterpillar, Model 3512 blended fuel-fired, 4 stroke** ~~diesel-fired~~ generator (identified as Unit #2), ~~constructed~~ **installed** in 1996 **and converted to a diesel fuel-fired generator in 2006,** and having a maximum heat input capacity of 11.33 MMBtu per hour **and a 1135 kilowatt capacity**. The generator was **fired on a mixture of natural gas and fuel oil No. 2 from 1996 until 2006** ~~converted from a dual fuel generator (mixture of natural gas and fuel oil No. 2) to a diesel-fired generator in 2006~~. **Uncontrolled** ~~E~~**e**missions are exhausted through stack S-2. **For the purpose of determining emission limits as provided in Table 2, upon conversion to diesel fuel use only, this unit will be considered a "Diesel, Large Stationary".**

(c) One (1) emergency Kohler Generator Set Model 100RZ, natural gas-fired 4-stroke generator (identified as Unit # 7) with a maximum heat input capacity of 1.68 MMBtu per hour and a 100 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-7. For purpose of determining emission limits as provided in Table 2, this unit is considered an "Uncontrolled natural gas prime mover – 4 cycle lean burn".

(d) One (1) emergency Onan generator Model 75 ENT, natural gas-fired 4-stroke generator (identified as Unit #8) with a maximum heat input capacity of 1.26 MMBtu per hour and a 75 kilowatt capacity. Uncontrolled emissions are exhausted through Stack S-8. For purpose of determining emission limits as provided in Table 2, this unit is considered an "uncontrolled natural gas prime mover – 4 cycle lean burn".

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

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a New Source Construction and Source Specific Operating Agreement (SSOA)

Source Background and Description

Source Name:	University of Evansville
Source Location:	1800 Lincoln Avenue, Evansville, Indiana 47722
County:	Vanderburgh
SIC Code:	8221
Operation Permit No.:	163-16842-00064
Permit Reviewer:	ERG/SE

The Office of Air Quality (OAQ) has reviewed an application from the University of Evansville, relating to the operation of boilers, generators and other university activities such as maintenance activities and teaching laboratories.

Emission Units and Pollution Control Equipment

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

(a) One (1) natural gas-fired generator (identified as Unit #1), constructed in 1996 and having a maximum heat input capacity of 10.88 MMBtu per hour. Emissions are exhausted through stack S-1.

(b) One (1) blended fuel-fired generator (identified as Unit #2), constructed in 1996 and having a maximum heat input capacity of 11.33 MMBtu per hour. The generator is fired on a mixture of natural gas and fuel oil No.2. Emissions are exhausted through stack S-2.

(c) One (1) natural gas-fired Cleaver Brooks boiler (identified as Unit #6), constructed in 1973 and having a maximum heat input capacity of 40.14 MMBtu per hour. Emissions are exhausted through stack S-6.

(d) Natural gas-fired combustion sources with heat input equal to or less than 10 MMBtu per hour, including:

(1) Two (2) natural gas-fired boilers (identified as Units #3 and #4), constructed in 1959 and each having a maximum heat input capacity of 6.69 MMBtu per hour. Emissions from Units #3 and #4 are exhausted through stacks S-3 and S-4, respectively.

(2) One (1) natural gas-fired boiler (identified as Unit #5), constructed in 1961 and having a maximum heat input capacity of 6.69 MMBtu per hour. Emissions from Unit #5 are exhausted through stack S-5.

(3) One (1) natural gas-fired hot water heater located in Powell Residence Hall, with a maximum heat input capacity of 0.25 MMBtu per hour;

(4) Three (3) natural gas-fired hot water heaters, located in Powell Residence Hall, each with a maximum heat input capacity of 0.299 MMBtu per hour;

(5) One (1) natural gas-fired hot water heater located in Schroeder Residence Hall, with a maximum heat input capacity of 0.25 MMBtu per hour;

(6) Four (4) natural gas-fired hot water heaters, located in Schroeder Residence Hall, each with a maximum heat input capacity of 0.299 MMBtu per hour;

(7) One (1) natural gas-fired steam space heater, constructed in 1989, located at the Armory, with a maximum heat input capacity of 4.2 MMBtu per hour;

(8) One (1) natural gas-fired hot water heater, located at the Armory, with a maximum heat input capacity of 0.5 MMBtu per hour;

(9) One (1) natural gas-fired steam space heater, constructed in 2001, located at Fehn Guest House, with a maximum heat input capacity of 0.28 MMBtu per hour;

(10) One (1) natural gas-fired hot water space heater, located at the Ramona Apartments, with a maximum heat input capacity of 4.2 MMBtu per hour;

(11) One (1) natural gas-fired hot water heater, located at the Ramona Apartments, with a maximum heat input capacity of 0.199 MMBtu per hour;

(12) One (1) natural gas-fired space heater, located at the Lincoln Park Apartments, with a maximum heat input capacity of 4.2 MMBtu per hour;

(13) One (1) natural gas-fired hot water heater, located at the Lincoln Park Apartments, with a maximum heat input capacity of 0.3 MMBtu per hour; and

(14) One (1) natural gas-fired space heater, located at Vize Guest House, with a maximum heat input of 0.175 MMBtu per hour.

(15) One (1) natural gas-fired kiln with a maximum heat input capacity of 299,000 Btu per hour.

(e) Emergency generators consisting of two (2) natural gas-fired reciprocating engines (identified as Units #7 and #8), with maximum heat input capacities of 1.68 MMBtu per hour and 1.26 MMBtu per hour, respectively. Emissions from Units #7 and #8 are exhausted at stacks S-7 and S-8.

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

The application includes information relating to the prior approval for the modification of the dual fueled generator as follows:

(b) One (1) diesel-fired generator (identified as Unit #2), constructed in 1996 and having a maximum heat input capacity of 11.33 MMBtu per hour. The generator will be converted from a dual fuel generator (mixture of natural gas and fuel oil No. 2) to a diesel-fired generator in 2006. Emissions are exhausted through stack S-2.

Unpermitted Emission Units and Pollution Control Equipment

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

Existing Approvals

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

(a) OP 064-000-001, issued on May 1, 1996;

(b) OP 064-000-004, issued on May 1, 1996; and

(c) Modification to 064-000-004, issued January 15, 1997.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this SSOA. All previous registrations and permits are superseded by this SSOA.

The following terms and conditions from previous approvals have been revised in this SSOA:

(a) OP 064-000-004, issued on May 1, 1996

Condition for Boiler #6: PM emissions limited to 0.6 pounds per MMBtu.

Reason not incorporated: The PM emission limit is 0.48 pounds per MMBtu based on 326 IAC 6-2-3(a).

(b) OP 064-001-001, issued on May 1, 1996

Condition for Boilers #3, 4, and 5: PM emissions limited to 0.6 pounds per MMBtu.

Reason not incorporated: The PM emission limit for these boilers is 0.8 pounds per MMBtu based on 326 IAC 6-2-3(d).

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this SSOA.

(a) OP 064-000-004, issued on May 1, 1996

Condition for Units #3, 4, 5, and 6:

(1) Emissions shall be at a level acceptable to 326 IAC 7-1.

(2) Sulfur dioxide emissions limited to 6.0 pounds per MMBtu.

Reason not incorporated: 326 IAC 7-1 has been repealed. 326 IAC 7-1.1 replaces this rule. Since the potential to emit sulfur dioxide from each of the emission units is less than 25 tons per year, there are no applicable requirements for these units under Article 7.

(b) Modification to 064-000-004, issued on January 15, 1997

Condition 5: Per manufacturer's specifications: nitrogen oxide shall not exceed 13.9 tons per year, carbon monoxide shall not exceed 43.2 tons per hour, and VOCs shall not exceed 15.4 tons per year on the Superior model 2408 G and 38.42 nitrogen oxides, 8.87 carbon monoxide, or 0.68 VOC [units omitted in original permit] on the Caterpiller model 3512.

Condition 6: The two gensets may not be run simultaneously.

Reason not incorporated: The source previously operated under a *Municipal Operating Permit* issued by the Evansville Environmental Protection Agency. This type of permitting classification was made obsolete by revisions to 326 IAC 2. Since the source will now operate under a SSOA, these conditions are no longer required.

(c) Modification to 064-000-004, issued on January 15, 1997

Condition for 10.88 MMBtu per hour generator: PM emissions limited to 0.1 pounds per MMBtu.

Reason not incorporated: There are currently no applicable State or Federal rules limiting the particulate emissions from this generator.

Enforcement Issue

IDEM is aware that the source exceeded the committed permit level during the period 1999 through 2001 and also violated conditions in their operating permits. These compliance problems were discovered by an Evansville Environmental Protection Agency (EEPA) inspector during March 5, 2001 and March 28, 2002 inspections of the source. Note that the source had previously operated under the EEPA Committed Permit Program. Revisions to 326 IAC 2 have made this classification obsolete.

The source should have applied for a Title V operating permit or FESOP in 1999, when the source began operating the backup generator (Unit #2) for more than 500 hours per year. In addition, the source installed add-on equipment to the back-up generator Unit #2, which allowed simultaneous burning of natural gas and fuel oil, without submitting an application for the modification. Since no emissions factors were available for the dual-fuel fired generators, EEPA extended the source's current permit until stack tests could be completed and a permit level determination made.

These compliance issues were resolved by an Agreed Order in January 2006. This proposed SSOA and construction permit is intended to satisfy the requirements of the construction and operating permit rules.

Recommendation

The staff recommends to the Commissioner that the construction and operation 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 application for the purposes of this review was received on March 5, 2003. Additional information was received on April 24, 2003, June 13, 2005, and July 11, 2006.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 12).

Potential To Emit for the Source

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	6.08
PM-10	7.96
SO_2	25.3
VOC	12.0
CO	85.3

Pollutant	Potential To Emit (tons/year)
NO_x	389

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

HAPs	Potential To Emit (tons/year)
Single HAP	Less than 10
Total	Less than 25

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of NOx is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) Pursuant to 326 IAC 2-9, this source, otherwise required to obtain a Title V permit, has agreed to accept two (2) source specific operating agreements (SSOAs) that restrict PTE to below Title V emission levels. Therefore, this source will be issued two (2) SSOAs.

(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 emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Vanderburgh County.

Pollutant	Status
PM2.5	Nonattainment
PM10	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

Note: On August 7, 2006, a temporary emergency rule took effect redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard, and revoking the one-hour ozone standard in Indiana. The Indiana Air Pollution Control Board has approved a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 will take effect prior to the expiration of the emergency rule.

(a) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Vanderburgh County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability – Entire Source section.

(b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Vanderburgh County has been designated as attainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Vanderburgh County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

Source Status

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

Pollutant	Emissions (tons/yr)
PM	Less than 100
PM-10	Less than 100
SO_2	Less than 100
VOC	Less than 100
CO	Less than 100
NO_x	Less than 100
Single HAP	Less than 10
Combination HAPs	Less than 25

This source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit for this source.

(b) Although constructed after the August 17, 1971 applicability date, the requirements of the New Source Performance Standard 40 CFR 60, Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators for which Construction is Commenced After August 17, 1971 (326 IAC 12) are not included in this permit for boiler #6, because boiler #6 has a maximum heat input capacity of less than 250 MMBtu/hour.

The requirements of New Source Performance Standard 40 CFR 60, Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators for which Construction is Commenced After August 17, 1971 (326 IAC 12) are not included in this permit for boilers #3, #4, and #5, because these boilers were constructed prior to August 17, 1971 and have maximum heat input capacities that are less than 250 MMBtu/hour.

The requirements of New Source Performance Standard 40 CFR 60, Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for which Construction is Commenced After September 18, 1978 (326 IAC 12) are not included in this permit for boilers #3 #4, #5 and #6, because these boilers were constructed prior to the applicability date and are not used to generate electricity.

The requirements of New Source Performance Standard 40 CFR 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in this permit for boilers #3, #4, #5, and #6, because these boilers were constructed prior to the June 19, 1984 applicability date and have maximum heat input capacities that are less than 100 MMBtu per hour.

The requirements of New Source Performance Standard 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in this permit for boilers #3, #4, #5, and #6, because these boilers were constructed prior to the June 9, 1989 applicability date.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, and 40 CFR Parts 61and 63) included in this permit for this source.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD are not included in this permit for this source, because this source is not a major source of Hazardous Air Pollutants.

(e) The requirements of 40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) are not included in this permit for this source, because this source is not a major source of Hazardous Air Pollutants.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

Since this source accepted limits that restrict the PTE to below Part 70 emission levels, the provisions of 326 IAC 2-6 are not applicable.

326 IAC 5-1 (Opacity Limitations)

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

(a) Opacity shall not exceed an average of thirty percent (30%) 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 2-2 (Prevention of Significant Deterioration)

This source was constructed in the late 1950s and does not belong to one of the 28 listed source categories. At the time of initial construction, the source was an existing minor source as defined under 326 IAC 2-2 (PSD). The source was modified in 1961, 1973, and 1996. In 1996, generators #1 and #2 were constructed. The combined potential to emit NOx from these generators is more than 250 tons per year. However, generator #2 was used as a backup generator and the only time they have been operated simultaneously was for short periods for testing purposes and subsequently during a commercial power outage. Therefore the actual emissions of NOx have never been near 250 tons per year for these generators. The source has not triggered 326 IAC 2-2 (PSD). The source will convert the dual fuel-fired generator (#2) to use only diesel fuel within the terms of the construction permit when issued. This will result in a potential to emit NOx greater than 250 tons per year. However, the source has agreed to limit NOx emissions to less than 100 tons per year pursuant to 326 IAC 2-9-1(b). The potential to emit for the entire source will remain less than 250 tons per year for all regulated pollutants; therefore, this source is a minor source under 326 IAC 2-2.

326 IAC 2-3 (Emission Offset)

This source was constructed in the late 1950s and modified in 1961, 1973, 1996, and 1999. The PM10 emissions did not exceed 100 tons per year after any of the modifications. Therefore, the source has not triggered 326 IAC 2-3 (Emission Offset) and is considered an existing minor stationary source. The source will convert the dual fuel fired generator to a diesel fired generator within the terms of the construction permit when issued, which will not result in a significant increase of PM10 emissions. Therefore, the requirements of 326 IAC 2-3 are not applicable.

326 IAC 2-7 (Part 70 Permit Program)

Pursuant to 326 IAC 2-9-1(b), a source issued a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9 is not subject to the requirements of 326 IAC 2-7 unless otherwise required by federal, state, or local law. In accordance with 326 IAC 2-9-1, until the source is issued the

operating agreement, this source is subject to the Part 70 Permit Program requirements because the unrestricted potential to emit (PTE) of at least one of the criteria pollutants is greater than or equal to one hundred (100) tons per year.

The source has concurrently applied for a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9-13(b)(2)(B) and a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9-14(a)(2). Since this source is not exempt from the construction permit requirements under 326 IAC 2-1.1-3, construction permit requirements will be included in the SSOA for this source.

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, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Emissions)

This source is not a source of fugitive particulate emissions. Therefore, it is not subject to the requirements of 326 IAC 6-5.

State Rule Applicability - Generators (Units #1 and #2) and Emergency Generators (Units #7 and #8)

326 IAC 2-9-14 (Internal Combustion Sources)

The internal combustion facilities at this source shall be granted a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9-14(a)(2) provided that:

(a) The following records are kept at the source:

(1) Hours operated for each combustion unit.

(2) Records of annual fuel usage for the internal combustion units.

(3) Routine maintenance records.

(b) The fuel usage for the internal combustion units listed in this Source Specific Operating Agreement (SSOA) shall be limited as follows:

(1) less than fifty million cubic feet (50 MMcf) of natural gas per year, based on a straight twelve (12) month total.

(2) than three hundred seventy-six and seventy-two hundredths (376.72) kilogallons of diesel fuel per year, based on a straight twelve (12) month total.

326 IAC 6.5-1-2 (Particulate Emission Limitations)

Although this source is located in Vanderburgh County and is not specifically listed in 326 IAC 6.5-8, it does not have actual particulate emissions ten (10) tons or more per year; therefore, the requirements of 326 IAC 6.5-1-2 are not applicable to the internal combustion units at this source.

326 IAC 7-1.1-1(Sulfur Dioxide Emissions)

326 IAC 7-1.1 (SO_2 Emissions Limitations) is not applicable to generators Units #1, #2, #7, and #8) because these generators have a potential to emit sulfur dioxide of less than twenty-five (25) tons per year.

State Rule Applicability – External Combustion Sources

326 IAC 2-9-13 (External Combustion Sources)

The external combustion facilities at this source shall be granted a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9-13(b)(2)(B) provided that:

(a) Visible emissions from the source shall not exceed twenty percent (20%) opacity in twenty-four (24) consecutive readings in a six (6) minute period. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.

(b) The following records are kept at the source:

(1) Hours operated for each combustion unit.

(2) Records of annual fuel usage for the external combustion units.

(3) Routine maintenance records.

(c) The fuel usage for the external combustion units listed in this Source Specific Operating Agreement (SSOA) shall be limited as follows:

(1) less than two hundred ninety million cubic feet (290 MMcf) of natural gas per year, based on a straight twelve (12) month total, and

326 IAC 6.5-1-2 (Particulate Emission Limitations)

Although this source is located in Vanderburgh County and is not specifically listed in 326 IAC 6.5-8, it does not have actual particulate emissions ten (10) tons or more per year; therefore, the requirements of 326 IAC 6.5-1-2 are not applicable to the external combustion units at this source.

326 IAC 7-1.1-1(Sulfur Dioxide Emissions)

326 IAC 7-1.1 (SO_2 Emissions Limitations) is not applicable to the Cleaver Brooks Boiler (Unit #6) or the insignificant boilers (Units #3, #4, and #5) because these boilers have a potential to emit sulfur dioxide of less than twenty-five (25) tons per year each.

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

(a) Boiler #6 is subject to 326 IAC 6-2-3 because it was constructed after June 8, 1972 and prior to September 21, 1983. Pursuant to 326 IAC 6-2-3(a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1 (b)), particulate emissions from this boiler must be calculated using the following equation:

$$P_t = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

Where:

C = maximum ground level concentration with respect to distance from the point source at “critical” wind speed for level terrain (50).
P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
Q = total source operating capacity (3 boilers each with a heat input of 6.69 MMBtu/hour and 1 boiler with a heat input of 40.14 MMBtu/hour, for a total of 60.21 MMBtu/hr)
N = number of stacks in fuel burning operation (4)
a = 0.67 rise factor
h = stack height (3 stacks each 30 feet high and 1 stack 35 feet high)

$$P_t = \frac{(50)\ (0.67)\ (33.3)}{(76.5)\ (60.21)^{0.75}\ (4)^{0.25}}$$

P_t = 0.48 lb/MMBtu

Pursuant to 326 IAC 6-2-3(e), boilers that were constructed after June 8, 1972, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input. Since the limit calculated using the formula in 326 IAC 6-2-3(a) is less than the limit in 326 IAC 6-2-3(e), the boiler must comply with a PM limit of 0.48 lb per MMBtu heat input.

(b) Boilers #3, #4, and #5 are subject to 326 IAC 6-2-3 because they were constructed prior to September 21, 1983. Pursuant to 326 IAC 6-2-3(a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1 (b)), particulate emissions from these boilers must be calculated using the following equation:

$$P_t = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

Where:

C = maximum ground level concentration with respect to distance from the point source at "critical" wind speed for level terrain (50).
P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
Q = total source operating capacity (3 boilers each with a heat input of 6.69 MMBtu/hour, for a total of 20.07 MMBtu/hr)
N = number of stacks in fuel burning operation (3)
a = 0.67 rise factor
h = stack height (3 stacks each 30 feet high)

$$P_t = \frac{(50)\ (0.67)\ (30)}{(76.5)\ (20.07)^{0.75}\ (3)^{0.25}}$$

P_t = 1.05 lb/MMBtu

Pursuant to 326 IAC 6-2-3(d), boilers that were existing and in operation before June 8, 1972, shall in no case exceed 0.8 pounds of particulate matter per million British thermal units heat input. Since the limit calculated using the formula in 326 IAC 6-2-3(a) is greater than the limit in 326 IAC 6-2-3(d), the boilers must comply with a PM limit of 0.8 lb per MMBtu heat input.

(c) The natural gas-fired steam space heater located at the Armory is subject to 326 IAC 6-2-4 because it was constructed after September 21, 1983. Pursuant to 326 IAC 6-2-4 (a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from this space heater must be calculated using the following equation:

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

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
Q = total source operating capacity (3 boilers each with a heat input of 6.69 MMBtu/hour, 1 boiler with a heat input of 40.14 MMBtu/hour, and one space heater with a heat input of 4.2 MMBtu/hour for a total of 64.41 MMBtu/hr).

$$P_t = \frac{1.09}{(64.41)^{0.26}}$$

P_t = 0.37 lb/MMBtu

The space heater at the Armory must comply with a PM limit of 0.37 lb/MMBtu.

(d) The natural gas-fired steam space heater located at Fehn Guest House is subject to 326 IAC 6-2-4 because it was constructed after September 21, 1983. Pursuant to 326 IAC 6-2-4 (a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from this space heater must be calculated using the following equation:

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

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
Q = total source operating capacity (3 boilers each with a heat input of 6.69 MMBtu/hour, 1 boiler with a heat input of 40.14 MMBtu/hour, one space heater with a heat input of 4.2 MMBtu/hour, and one space heater with a heat input of 0.28 MMBtu/hour for a total of 64.69 MMBtu/hr).

$$P_t = \frac{1.09}{(64.69)^{0.26}}$$

P_t = 0.37 lb/MMBtu

The space heater at Fehn Guest House must comply with a PM limit of 0.37 lb/MMBtu.

Conclusion

The operation of the boilers and generators at this university shall be subject to the conditions of the attached SSOA No.: 163-16842-00064.

Appendix A: Emission Calculations
Summary

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

		Uncontrolled/Unlimited PTE in tons/yr						
Emission Unit	**Unit I.D.**	**PM**	**PM10**	**SO_2**	**NOx**	**VOC**	**CO**	**Total HAPs**
Boilers	3, 4, 5, and 6	0.49	1.96	0.16	25.9	1.42	21.7	4.88E-01
*Prime Generator (Emergency Generator)	1	0.48	0.48	0.03	194	5.62	15.1	3.44
Backup Generator	2	5.0	5.0	25.1	159	4.47	42.2	0.07
Emergency Generators	7 and 8	0.01	0.01	8.64E-04	6.00	0.17	0.47	0.11
Kiln	NA	0.01	0.01	9.25E-04	0.18	4.63E-03	0.03	
Insignificant Space and Water Heaters	NA	0.14	0.54	0.043	7.15	0.39	6.00	0.13
Totals		**6.09**	**7.97**	**25.3**	**392**	**12.1**	**85.5**	**4.24**

*The SSOA plan proposed by U of E identifies #1 as an emergency generator, but the original application does not list #1 as an emergency generato

Appendix A: Emission Calculations
Natural Gas-fired Boiler
Unit 6

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
40.1	345

	Pollutant					
	PM*	PM10*	SO_2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84.0
Potential to Emit in tons/yr	0.33	1.31	0.10	17.2	0.95	14.5

*PM emission factor is for filterable PM. PM10 emission factor is for filterable and condensible PM combined.
**Emission Factors for NO_x: Uncontrolled = 100
All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF= 1,000,000 Cubic Feet of Gas
Emission factors are from AP42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP42 Supplement D 7/98)

Methodology
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x 1 ton/2000 lbs
See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas-fired Boiler
Unit 6

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential to Emit in tons/yr	3.62E-04	2.07E-04	1.29E-02	3.10E-01	5.86E-04

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential to Emit in tons/yr	8.62E-05	1.90E-04	2.41E-04	6.55E-05	3.62E-04

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
AP-42, Chapter 1.4, Table 1.4-2, 1.4-3 and 1.4-4.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Natural Gas-fired Boilers
Units 3, 4, and 5

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
20.1	172

(includes Boilers 3, 4, and 5. Boilers 3, 4 and 5 each have a maximum heat input capacity of 6.69 MMBtu/hour)

	Pollutant					
	PM*	PM10*	SO_2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84.0
Potential to Emit in tons/yr	0.16	0.65	0.05	8.62	0.47	7.24

*PM emission factor is for filterable PM. PM10 emission factor is for filterable and condensible PM combined.
**Emission Factors for NO_x: Uncontrolled = 100
All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission factors are from AP42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP42 Supplement D 7/98)

Methodology
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x 1 ton/2,000 lbs

See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas-fired Boilers
Units 3, 4, and 5

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.81E-04	1.03E-04	6.46E-03	1.55E-01	2.93E-04

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.31E-05	9.48E-05	1.21E-04	3.27E-05	1.81E-04

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
AP-42, Chapter 1.4, Tables 1.4-2, 1.4-3, and 1.4-4.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Natural Gas fired Generator
Unit #1

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

Heat Input Capacity
MMBtu/hr

10.9

	Pollutant						
	PM*	PM10*	SO2	NOx**	VOC	CO**	HAPs
Emission Factor in lb/MMBtu	9.99E-03	9.99E-03	5.88E-04	4.08	0.12	0.32	7.22E-02
Potential to Emit in tons/yr	0.48	0.48	0.03	194	5.62	15.1	3.44
Potential to Emit in tons/yr at 500 hours	0.03	0.03	1.60E-03	11.1	0.32	0.86	0.20

Emission factors are from AP42, Chapter 3.2, Table 3.2-2 (7/00) for 4-stroke Lean Burn Engines
*Assume PM = PM10; PM and PM10 emission factor is for filterable PM10 and condensable PM combined.
**Emission factors represent 90-105% load conditions.

Methodology
Potential to Emit (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760 hrs/yr x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Blended-Fuel Backup Generator
Fired on 1 to 1 mixture of Natural Gas and No.2 Fuel Oil
Unit #2

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

	Pollutant					
	PM	PM10	SO2	NO_x	VOC	CO
Emission Factor in lb/hour*	ND	1.45	0.15	27.5	2.64	13.5
Potential to Emit in tons/yr		6.35	0.66	120	11.6	59.3

*Emission factors for PM10, sulfur dioxide, nitrogen oxides, VOC , and carbon monoxide are based on stack tests conducted on August 15, 2002.
conducted on August 15, 2002. These tests were approved and the results validated by the Compliance Data Section.
ND - No data provided

Methodology

Potential to Emit (tons/year) = Emission Factor (lbs/hour) * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emission Calculations
Blended-Fuel Backup Generator
Switched to Diesel Fuel
Unit #2

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

Maximum Heat Input Capacity: 11.3 MMBtu/hr

Sulfur Content (%): 0.5

	Pollutant						
	PM*	PM10*	SO2	NO_x	VOC	CO	HAPs
Emission Factor in lb/MMBtu	0.10	0.10	0.51 *1.01S*	3.20	0.09	0.85	1.49E-03
Potential to Emit in tons/yr	4.96	4.96	25.1	159	4.47	42.2	0.07

Emission factors are from AP42, Chapter 3.4, Tables 3.4-1 through 3.4-4 [10/96].
*Assume PM equals PM10

Methodology
Potential to Emit (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760 hrs/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Natural Gas Fired Emergency Generators
Units #7 and #8

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: July 18, 2006

Heat Input Capacity
MMBtu/hr

2.94

(includes emergency generator #7 (1.68 MMBtu/hour) and #8 (1.26 MMBtu/hour))

	Pollutant						
	PM*	PM10*	SO2	NOx**	VOC	CO**	HAPs
Emission Factor in lb/MMBtu	9.99E-03	9.99E-03	5.88E-04	4.08	0.12	0.32	7.22E-02
Potential to Emit in tons/yr	0.13	0.13	0.01	52.5	1.52	4.08	0.93
Potential to Emit in tons/yr at 500 hours Operation per Generator	0.01	0.01	8.64E-04	6.00	0.17	0.47	0.11

Emission factors are from AP42, Chapter 3.2, Table 3.2-2 (7/00) for 4-stroke Lean Burn Engines
*Assume PM = PM10; PM and PM10 emission factor is for filterable PM10 and condensable PM combined.
**Emission factors represent 90-105% load conditions.

Methodology
Potential to Emit (tons/yr) = Heat Input Capacity (MMBtu/hr) * Emission Factor (lb/MMBtu) * 8,760 hrs/yr * 1 ton/2,000 lbs

Appendix A: Emission Calculations
Propane Fired Kiln

Company Name: **University of Evansville**
Address: **1800 Lincoln Avenue, Evansville, Indiana 47722**
SSOA: **163-16842-00064**
Reviewer: **ERG/SE**
Date: **July 18, 2006**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/yr	S = Sulfur content =	grains/100ft^3
0.193	18.5	1.00	

	Pollutant					
	PM	PM10	SO_2	NOx	VOC	CO
Emission Factor in lb/kgal	0.6	0.6	0.10 *(0.10 S)*	19.0	0.5	3.2
Potential to Emit in tons/yr	0.006	0.006	0.001	0.176	0.005	0.030

1 gallon of propane has a heating value of 91,500 Btu
Emission Factors are from AP42, Chapter 1.5, Table 1.5-1 (SCC #1-02-010-02) [Supplement B 10/96]

Methodology
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal/1000 gallons x 1 gallon/0.0915 MMBtu
Potential to Emit (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) x 1 ton/2,000 lbs

TSD Addendum Attachment A: Revised Emission Calculations
Natural Gas-fired Space and Water Heaters

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: December 13, 2006

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
16.6	143

(includes space and water heaters located at the Powell and Schroeder Resident Halls, the Armory, the Fehn and Vize Guest Houses, and the Ramona and Lincoln Park apartments)

	Pollutant					
	PM*	PM10*	SO_2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84.0
Potential to Emit in tons/yr	0.14	0.54	0.043	7.15	0.39	6.00

*PM emission factor is for filterable PM. PM10 emission factor is for filterable and condensible PM combined.
**Emission Factors for NO_x: Uncontrolled = 100
All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors from AP42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP42 Supplement D 7/98)

Methodology
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x 1 ton/2,000 lbs

See next page for HAPs emissions calculations.

TSD Addendum Attachment A: Revised Emission Calculations
Natural Gas-fired Space and Water Heaters

Company Name: University of Evansville
Address: 1800 Lincoln Avenue, Evansville, Indiana 47722
SSOA: 163-16842-00064
Reviewer: ERG/SE
Date: November 30, 2006

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential to Emit in tons/yr	1.50E-04	8.58E-05	5.36E-03	1.29E-01	2.43E-04

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential to Emit in tons/yr	3.57E-05	7.86E-05	1.00E-04	2.72E-05	1.50E-04

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
AP42, Chapter 1.4, Tables 1.4-2, 1.4-3, and 1.4-4.
Additional HAPs emission factors are available in AP42, Chapter 1.4.