

Mr. Marty Dwyer  
Purdue University  
1665 Freehafer Hall  
West Lafayette, IN 47907-1665

Re: Minor Source Modification No:  
**157-10906-00012**

Dear Mr. Dwyer:

Purdue University applied for a Part 70 operating permit on December 3, 1996, for educational services including support facilities. An application to modify the source was received on April 28, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) 17.7 MMBtu/hr #2 fuel oil fired electric generator, identified as BSG, exhausting through stack BSG-1, with a voluntary fuel limit of 114,000 gallons per year.

The proposed Minor Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). The source may begin operation upon issuance of the source modification approval.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Vickie Cordell or extension 3-1782, or dial (317) 233-1782.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

Attachments

VKC

cc: File - Tippecanoe County  
U.S. EPA, Region V  
Tippecanoe County Health Department  
Air Compliance Section Inspector (Eric Courtright)  
Compliance Data Section - Karen Nowak  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

# **PART 70 MINOR SOURCE MODIFICATION OFFICE OF AIR MANAGEMENT**

**Purdue University  
1665 Freehafer Hall  
West Lafayette, Indiana 47907-1665**

(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 approval.

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

Source Modification No.: 157-10906-00012	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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**Certification**

**Quarterly Report**

**Emergency/Deviation Occurrence Report**

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## SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through 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 of this unit that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

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The Permittee owns and operates support facilities for educational services.

Responsible Official: Director of Utilities  
Emission Unit Location: Wade Powerhouse, West Lafayette, Indiana  
Mailing Address: 1650 Freehafer Hall, West Lafayette, Indiana 47907-1650  
Telephone Number: 765-494-8690 (Martin Dwyer, Utilities Engineer)  
SIC Code: 8221  
County Location: Tippecanoe  
County Status: Attainment for all criteria pollutants  
Source Status: Part 70 Permit Program  
Major Source, under PSD Rules;  
Major Source, Section 112 of the Clean Air Act

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

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This stationary source is approved to operate the following emission unit:

One (1) 17.7 MMBtu/hr no. 2 fuel oil fired electric generator, identified as BSG, exhausting through stack BSG-1, with a voluntary fuel limit of 114,000 gallons per year.

### A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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

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

## **SECTION B GENERAL CONSTRUCTION CONDITIONS**

### **B.1 Permit No Defense [IC 13]**

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- (a) This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- (b) Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this approval, are those applicable at the time the approval was issued.

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

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

### **B.3 Effective Date of the Permit [IC13-15-5-3]**

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Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

### **B.4 Revocation of Permits [326 IAC 2-1.1-9(5)] [326 IAC 2-7-10.5(i)]**

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval 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.5 Affidavit of Construction [326 IAC 2-1.1-9]**

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The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application.

### **B.6 Part 70 Permit [326 IAC 2-7-10.5(l)(3)]**

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The source has submitted their Part 70 permit application T-157-7340-00012 on December 3, 1996. The equipment covered under this permit shall be incorporated in the submitted Part 70 application.

## SECTION C GENERAL OPERATION CONDITIONS

### C.1 Opacity [326 IAC 5-1]

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

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

### C.2 Enforceability [326 IAC 2-7-7(a)]

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

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

- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

### C.4 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after completion of construction of the generator, BSG, including the following information on that facility:
  - (1) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (2) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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 Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to

ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.5 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this approval, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this approval.

C.6 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

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

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

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

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

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

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

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

within ten (10) calendar days from the date of the discovery of the deviation.

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
  - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) An emergency as defined in 326 IAC 2-7-1(12); or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring

provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

#### C.8 Construction Permit Requirement [326 IAC 2]

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A modification, construction, or reconstruction shall be approved if required by and in accordance with the applicable provisions of 326 IAC 2. [326 IAC 2-7-6(6)]

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

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

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, 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, OAM.

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

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

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

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

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

#### C.10 Emergency Provisions [326 IAC 2-7-16]

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Management, Compliance Section), or  
Telephone Number: 317-233-5674 (ask for Compliance Section)  
Facsimile Number: 317-233-5967.

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted notice, either in writing or facsimile, of the emergency to:

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

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) IDEM, OAM, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAM, by telephone or facsimile of an emergency lasting more than

one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

- (g) Operations may continue during an emergency only if the following conditions are met:
- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

C.11 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information 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 kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this approval;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;

- (4) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of completion of construction of the generator, BSG.

C.12 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this approval shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval 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, OAM, on or before the date it is due.
- (c) Unless otherwise specified in this approval, any report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of the completion of construction of the generator, BSG, and ending on the last day of the reporting period.

## SECTION D FACILITY OPERATION CONDITIONS

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

One (1) 17.7 MMBtu/hr no. 2 fuel oil fired electric generator, identified as BSG, exhausting through stack BSG-1, with a voluntary fuel limit of 114,000 gallons per year.

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

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

- (a) Pursuant to 326 IAC 2-7-10.5(d)(5), the input no. 2 fuel oil to the generator, BSG, shall be limited to less than 114,000 gallons per 12 consecutive month period. This voluntary fuel limitation limits the potential to emit of nitrogen oxides (NO<sub>x</sub>) from this modification to less than 25 tons per year.
- (b) Compliance with this limit makes 326 IAC 2-7-10.5(f), (g), and (h) ("Significant Source Modifications") not applicable to this modification.
- (c) Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration), 40 CFR 52.21, and 326 IAC 2-1.1-4 (Federal Provisions) not applicable to this modification.

### D.2 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1]

- (a) Pursuant to 326 IAC 7-1.1-1, the potential sulfur dioxide (SO<sub>2</sub>) emissions shall remain below ten (10) pounds per hour.
- (b) Compliance with this limit and with the fuel limit in Condition D.1 makes 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations) and 326 IAC 7-2-1 (Reporting Requirements; Methods to Determine Compliance) not applicable to this modification.
- (c) Any change or modification which may increase potential sulfur dioxide (SO<sub>2</sub>) emissions from the generator, BSG, to 10 pounds per hour shall require a source modification pursuant to 326 IAC 2-7-12 and 326 IAC 7-1.1-1 before such change may occur.

### D.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

## Compliance Determination Requirements

### D.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the NO<sub>x</sub> and SO<sub>2</sub> limits specified in Conditions D.1 and D.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

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

### **D.5 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1 and D.2, the Permittee shall maintain records in accordance with (1) through (6) below.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel oil usage since last compliance determination period and equivalent nitrogen oxides (NO<sub>x</sub>) emissions;
  - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
  - (4) Fuel supplier certifications;
  - (5) The name of the fuel supplier; and
  - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

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

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

### **D.6 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this approval, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

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

**PART 70 SOURCE MODIFICATION  
CERTIFICATION**

Source Name: Purdue University  
Emission Unit Location: Wade Powerhouse, West Lafayette, IN  
Mailing Address: 1665 Freehafer Hall, West Lafayette, IN 47907-1665  
Source Modification No.: 157-10906-00012  
Facility: 17.7 MMBtu/hr electric generator, BSG

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

Please check what document is being certified:

- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

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

Signature:

Printed Name:

Title/Position:

Date:

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

**Part 70 Source Modification Quarterly Report**

Source Name: Purdue University  
Emission Unit Location: Wade Powerhouse, West Lafayette, IN  
Mailing Address: 1665 Freehafer Hall, West Lafayette, IN 47907-1665  
Source Modification No.: 157-10906-00012  
Facility: 17.7 MMBtu/hr electric generator, BSG  
Parameter: no. 2 fuel oil usage  
Limit: less than 114,000 gallons per 12 consecutive month period

YEAR: \_\_\_\_\_

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

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

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

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

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

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

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

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

**PART 70 OPERATING PERMIT  
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: Purdue University  
Emission Unit Location: Wade Powerhouse, West Lafayette, IN  
Mailing Address: 1665 Freehafer Hall, West Lafayette, IN 47907-1665  
Source Modification No.: 157-10906-00012  
Facility: 17.7 MMBtu/hr electric generator, BSG

**This form consists of 2 pages**

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Check either No. 1 or No.2	
<input checked="" type="radio"/>	1. This is an emergency as defined in 326 IAC 2-7-1(12) C The Permittee must notify the Office of Air Management (OAM), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and C The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
<input checked="" type="radio"/>	2. This is a deviation, reportable per 326 IAC 2-7-5(3)(C) C The Permittee must submit notice in writing within ten (10) calendar days

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

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

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

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

Form Completed by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for a Minor Source Modification to a Part 70 Operating Permit

#### Source Background and Description

<b>Source Name:</b>	<b>Purdue University</b>
<b>Emission Unit Location:</b>	<b>Wade Powerhouse, West Lafayette, IN</b>
<b>Mailing Address:</b>	<b>1665 Freehafer Hall, West Lafayette, IN 47907-1665</b>
<b>County:</b>	<b>Tippecanoe</b>
<b>SIC Code:</b>	<b>8221</b>
<b>Operation Permit No.:</b>	<b>T 157-7340-00012</b>
<b>Source Modification No.:</b>	<b>157-10906-00012</b>
<b>Permit Reviewer:</b>	<b>Vickie Cordell</b>

The Office of Air Management (OAM) has reviewed a modification application from Purdue University relating to the construction and operation of a stationary 17.7 MMBtu/hr no. 2 fuel oil fired electric generator, identified as BSG, exhausting through stack BSG-1, with a voluntary fuel limit of 114,000 gallons per year.

#### History

The source applied for a Part 70 Operating Permit on December 3, 1996; the Title V permit has not been issued yet.

#### Enforcement Issue

There are no enforcement actions pending.

#### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
BSG-1	generator	15	1.33	15,000	900

#### Recommendation

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

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

An application for the purposes of this review was received on April 28, 1999.

#### Emission Calculations

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

**Potential To Emit - 17.7 MMBtu/hr no. 2 fuel oil fired generator (BSG)**

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.”

Pollutant	Potential To Emit (tons/year)
PM	7.8
PM-10	4.4
SO <sub>2</sub>	37.8
VOC	7.0
CO	65.9
NO <sub>x</sub>	248.1

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

**Limited Potential to Emit**

The table below summarizes the total potential to emit of the new unit, as limited to 114,000 gallons of no. 2 fuel oil used per year (no alternate fuels).

	Limited Potential to Emit (tons/year)					
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>
generator (BSG)	0.78	0.45	3.81	0.70	6.64	24.99

**County Attainment Status**

The source is located in Tippecanoe County.

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

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Tippecanoe County has been designated as attainment for ozone.
- (b) Tippecanoe County has been designated as attainment or unclassifiable for all other criteria pollutants.

### **Federal Rule Applicability**

- (a) The generator, BSG, is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.330), Subpart GG, because it is not a gas-fired turbine.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR part 63) applicable to this source.

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

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

### **State Rule Applicability - Individual Facilities**

#### 326 IAC 2-7-10.5(d)(5) (Source Modification Limits)

- (a) Pursuant to 326 IAC 2-7-10.5(d)(5), the input no. 2 fuel oil to the generator, BSG, shall be limited to less than 114,000 gallons per 12 consecutive month period. This voluntary fuel limitation limits the potential to emit of nitrogen oxides (NO<sub>x</sub>) from this modification to less than 25 tons per year.
- (b) Compliance with this limit makes 326 IAC 2-7-10.5(f), (g), and (h) ("Significant Source Modifications") not applicable to this modification.
- (c) Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration), 40 CFR 52.21, and 326 IAC 2-1.1-4 (Federal Provisions) not applicable to this modification.

#### 326 IAC 7-1.1-1 (Sulfur Dioxide (SO<sub>2</sub>))

- (a) The potential to emit of sulfur dioxide (SO<sub>2</sub>) shall remain less than ten (10) pounds per hour.
- (b) Compliance with this limit and with the fuel limit in Condition D.1 makes 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations) and 326 IAC 7-2-1 (Reporting Requirements; Methods to Determine Compliance) not applicable to this modification.
- (c) Any change or modification which may increase potential sulfur dioxide (SO<sub>2</sub>) emissions from the generator, BSG, to 10 pounds per hour shall require a source modification pursuant to 326 IAC 2-7-12 and 326 IAC 7-1.1-1 before such change may occur.

**Note:** This pound per hour limitation is equivalent to a 0.559 maximum weight percent (%) sulfur content for the fuel oil, at 17.7 MMBtu/hr heat input capacity and the stated heating value of the fuel. The 0.483 weight percent (%) sulfur stated in the application will be in compliance with this limit. The source may keep the supplier's sulfur content certifications to show compliance.

### **Conclusion**

The operation of this generator, BSG, shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 157-10906-00012.

