



Joseph E. Kernan  
Governor

Lori F. Kaplan  
Commissioner

January 22, 2004

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.in.gov/idem

TO: Interested Parties / Applicant

RE: PSEG Lawrenceburg Energy Co., LLC / MPR 029-18381-00033

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) 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-MOD.dot 9/16/03

January 22, 2004

Mr. Roger Tietz  
Project Manager  
PSEG Lawrenceburg Energy Company LLC  
P. O. Box 4146  
Lawrenceburg, IN 47025

Re: 029-18381-00033  
Second Minor Permit Revision  
to CP/PSD Permit 029-12517-00033

Dear Mr. Tietz:

PSEG Lawrenceburg Energy Company LLC was issued a Prevention of Significant Deterioration (PSD) Permit on June 7, 2001 for the construction and operation of a merchant plant. A letter requesting a revision to this permit was received on November 17, 2003. Pursuant to the provisions of 326 IAC 2-6.1-6 a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The following construction conditions are applicable to the revision:

1. The data and information supplied with the application shall be considered part of this permit revision approval. Prior to any proposed change in construction, which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. 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.
3. Pursuant to IC 13-15-5-3, this permit revision approval becomes effective upon its issuance.

Pursuant to 326 IAC 2-6.1-6, the minor source operating permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please find enclosed the entire permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Iryn Calilung at OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for extension 3-5692, or dial (317) 233-5692.

Sincerely,

Original signed by Paul Dubenetzky  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments - Revised Permit and TSD

cc: File - Dearborn County  
Dearborn County Health Department  
Air Compliance Section Inspector - PBB  
Compliance Data Section  
Technical Support and Modeling - Michele Boner

# NEW SOURCE CONSTRUCTION PERMIT Prevention of Significant Deterioration (PSD) Permit Office of Air Quality

PSEG Lawrenceburg Energy Facility  
582 West Eads Parkway  
Lawrenceburg, IN 47025

(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.

This permit is also issued under the provisions of 326 IAC 2-2, 40 CFR 52.21, and 40 CFR 52.124 (Prevention of Significant Deterioration), with conditions listed on the attached pages.

Construction Permit No.: CP 029-12517-00033	
Original Signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 7, 2001

First Notice Only Change No.: 029-16091-00033, issued on July 3, 2002  
 First Minor Permit Revision No.: 029-15867-00033, issued on August 30, 2002  
 First Significant Modification No.: 029-16235-00033, issued on December 23, 2002  
 Second Notice Only Change No.: 029-16780-00033, issued on February 19, 2003

Second Minor Permit Revision No. 029-18381-00033	Section Affected: D.1.15(b)
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 22, 2004

## TABLE OF CONTENTS

### A SOURCE SUMMARY

- A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]
- A.2 Emission Units and Pollution Control Equipment Summary
- A.3 Part 70 Permit Applicability [326 IAC 2-7-2]
- A.4 Acid Rain Permit Applicability [326 IAC 2-7-2]

### B GENERAL CONSTRUCTION CONDITIONS

- B.1 Permit No Defense [IC 13]
- B.2 Definitions
- B.3 Effective Date of the Permit [IC 13-15-5-3]
- B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]
- B.5 First Time Operation Permit [326 IAC 2-6.1]
- B.6 NSPS Reporting Requirements

### C SOURCE OPERATION CONDITIONS

- C.1 PSD Major Source Status [326 IAC 2-2]
- C.2 Preventive Maintenance Plan [326 IAC 1-6-3]
- C.3 Source Modification [326 IAC 2-7-10.5]
- C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]
- C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]
- C.6 Permit Revocation [326 IAC 2-1-9]
- C.7 Opacity [326 IAC 5-1]
- C.8 Fugitive Dust Emissions [326 IAC 6-4]
- C.9 Stack Height [326 IAC 1-7]
- C.10 Performance Testing [326 IAC 3-6]
- C.11 Compliance Monitoring [326 IAC 2-1.1-11]
- C.12 Maintenance of Monitoring Equipment [IC 13-14-1-13]
- C.13 Monitoring Methods [326 IAC 3]
- C.14 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]
- C.15 Actions Related to Noncompliance Demonstrated by a Stack Test

#### Record Keeping and Reporting Requirements

- C.16 Malfunctions Report [326 IAC 1-6-2]
- C.17 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-3]
- C.18 General Record Keeping Requirements [326 IAC 2-6.1-2]
- C.19 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

### D.1 Combined Cycle Operation (Four Combustion Turbines w/Duct Burners) Emission Limitations and Standards

- D.1.1 Prevention of Significant Deterioration [326 IAC 2-2]
- D.1.2 Particulate Matter Emission Limitations for Combustion Turbines/Duct Burners
- D.1.3 Opacity Limitations
- D.1.4 Particulate Matter Emission Limitations for Cooling Towers
- D.1.5 Startup and Shutdown Limitations for Combustion Turbines
- D.1.6 Nitrogen Oxide (NOX) Emission Limitations for Combustion Turbines/Duct Burners
- D.1.7 Carbon Monoxide (CO) Emission Limitations for Combustion Turbines/Duct Burners
- D.1.8 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations for Combustion Turbines/Duct Burners
- D.1.9 Volatile Organic Compound Emission Limitations for Combustion Turbines/Duct Burners

- D.1.10 40 CFR 60, Subpart GG (Stationary Gas Turbines)
- D.1.11 40 CFR 60, Subpart Da (Small Electric Utility Steam Generating Units)
- D.1.12 Formaldehyde Limitations
- D.1.13 Ammonia Limitations
- D.1.14 Preventive Maintenance Plan [326 IAC 1-6-3]

**Compliance Determination Requirements**

- D.1.15 Performance Testing
- D.1.16 40 CFR 60, Subpart GG Compliance Requirements (Stationary Gas Turbines)
- D.1.17 Continuous Emission Monitoring (CEMs)

**Record Keeping and Reporting Requirements**

- D.1.18 Record Keeping Requirements
- D.1.19 Reporting Requirements

**D.2 Auxiliary Boiler**

**Emission Limitations and Standards**

- D.2.1 Prevention of Significant Deterioration [326 IAC 2-2]
- D.2.2 Particulate Matter Emission Limitations for Auxiliary Boiler
- D.2.3 Opacity Limitations
- D.2.4 Nitrogen Oxide (NOX) Emission Limitations for Auxiliary Boiler
- D.2.5 Carbon Monoxide (CO) Emission Limitations for Auxiliary Boiler
- D.2.6 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations for Auxiliary Boiler
- D.2.7 Volatile Organic Compound Emission Limitations for Auxiliary Boiler
- D.2.8 40 CFR Par 60, subpart Db (Industrial Steam Generating Units)
- D.2.9 Natural Gas Limitations
- D.2.10 Preventive Maintenance Plan [326 IAC 1-6-3]

**Compliance Determination Requirements**

- D.2.11 Performance Testing
- D.2.12 NO<sub>x</sub> Emissions Monitoring [40 CFR 60.48b]9326 IAC 3-5]

**Record Keeping and Reporting Requirements**

- D.2.13 Record Keeping Requirements
- D.2.14 Reporting Requirements

**D.3 Backup Equipment**

**Emission Limitations and Standards**

- D.3.1 BACT Limitation for the Fire Pump
- D.3.2 BACT Limitation for the Emergency Generator

**Compliance Determination Requirements**

- D.3.3 Testing Requirements

**Record Keeping and Reporting Requirements**

- D.3.4 Record Keeping Requirements
- D.3.5 Reporting Requirements

**D.4 Startup Gas Heater**

**Emission Limitations and Standards**

- D.4.1 Opacity Limitations
- D.4.2 BACT Limitations for the Startup Gas Heater

**Record Keeping and Reporting Requirements**

- D.4.3 Record Keeping Requirements
- D.4.4 Reporting Requirements

## SECTION A SOURCE SUMMARY

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

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a natural gas merchant power plant.

Authorized Individual: Frederick Pastor  
Source Address: 582 West Eads Parkway, Lawrenceburg, Indiana 47025  
Mailing Address: P.O. Box 4146, Lawrenceburg, Indiana 47025  
Phone Number: (812)-537-3188  
SIC Code: 4911  
County Location: Dearborn  
County Status: Attainment for all Criteria Pollutants  
Source Status: Major, under PSD rules

### A.2 Emissions units and Pollution Control Equipment Summary

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

- (a) Four (4) natural gas-fired combustion turbine generators, designated as units CT1, CT2, CT3, CT4, with a maximum heat input capacity of 1906.4 MMBtu/hr (per unit on a higher heating value), and exhausts to stacks designated as S1, S2, S3, S4, respectively.
- (b) Four (4) heat recovery steam generators, designated as units HRSG1, HRSG2, HRSG3, HRSG4 with duct burners, and a maximum rate heat input capacity of 310 MMBtu/hr (per unit on a higher heating value), exhausting to stacks designated as S1, S2, S3, and S4, respectively.
- (c) Four (4) selective catalytic reduction systems, designated as units SCR11, SCR12, SCR21, SCR22.
- (d) Two (2) steam turbines, designated as units ST1 and ST2.
- (e) Two (2) cooling towers, designated as units Cooling Tower 1 and Cooling Tower 2, exhausting to stacks designated S6 and S7, respectively.
- (f) One (1) natural gas fired auxiliary boiler, designated Auxiliary Boiler, with a maximum heat input capacity of 124.6 MMBtu/hr (higher heating value), and exhausting to stack S5.
- (g) One (1) diesel fire pump, with a rated capacity of 265 horsepower (hp), exhausting to stack S9.

- (h) One (1) diesel backup electric generator, with a rated capacity of 1000 kilowatts (KW), exhausting to stack S8.
- (i) One (1) startup gas heater, designated as GH1 with a maximum heat input capacity of 2.4 MMBtu/hr (higher heating value basis), and exhausts to stacks GH1.

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 an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);
- (c) 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).

A.4 Acid Rain Permit Applicability [326 IAC 2-7-2]

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This stationary source shall be required to have a Phase II, Acid Rain permit by 40 CFR 72.30 (Applicability) because:

- (a) The combustion turbines are new units under 40 CFR 72.6.
- (b) The source cannot operate the combustion units until their Phase II, Acid Rain permit has been issued.

## **SECTION B GENERAL CONSTRUCTION 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 Permit No Defense [IC 13]**

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This permit 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.2 Definitions**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

### **B.3 Effective Date of the Permit [40 CFR 124]**

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Pursuant to 40 CFR 124.15, 40 CFR 124.19, and 40 CFR 124.20, the effective date of this permit will be thirty (30) days after the service of notice of the decision, as comments were received during the public comment period for this permit. Three (3) days shall be added to the thirty (30) day period if service of notice is by mail.

### **B.4 Revocation of Permits [326 IAC 2-2-8]**

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Pursuant to 326 IAC 2-2-8(a)(1) and 40 CFR 52.21, this permit to construct shall expire if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is discontinued for a period of eighteen (18) months or more.

### **B.5 First Time Operation Permit [326 IAC 2-6.1]**

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This document shall also become a first time operating permit pursuant to 326 IAC 2-5.1-3 when, prior to start of operation, the following requirements are met:

- (a) Any modifications required by 326 IAC 2-1.1 and 326 IAC 2-7-10.5 as a result of a change in the design or operation of emissions units described by this permit have been obtained prior to obtaining an Operation Permit Validation Letter.
- (b) 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 the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.

- (c) 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.
- (d) 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.
- (e) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
- (f) Pursuant to 326 IAC 2-7-4(a)(1)(A)(ii) and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit within twelve (12) months of the date on which the source first meets an applicability criterion of 326 IAC 2-7-2.

#### B.6 NSPS Reporting Requirement

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Pursuant to the New Source Performance Standards (NSPS), Part 60.7, Part 60.8, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- (c) Actual start-up date (within 15 days after such date); and
- (d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

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

The application and enforcement of these standards have been delegated to the IDEM, OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### C.1 Major Source

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21, and 326 IAC 2-7 (Part 70 Permit Program) this source is a major source.

### C.2 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 (PMP) ninety (90) days after the commencement of normal operations after the first construction phase, including the following information on each emissions unit:
- (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;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (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, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

### C.3 Source Modification [326 IAC 2-7-10.5]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-10.5 whenever the Permittee seeks to construct new emissions units, modify existing emissions units, or otherwise modify the source.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Any such application 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.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

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

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) 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) 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) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)]

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by a notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ shall issue a revised permit.

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

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(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, the fact that continuance of this permit is not consistent with purposes of this article.

**C.7 Opacity [326 IAC 5-1]**

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

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

**C.8 Fugitive Dust Emissions [326 IAC 6-4]**

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

**C.9 Stack Height [326 IAC 1-7]**

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The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

**Testing Requirements**

**C.10 Performance Testing [326 IAC 3-6]**

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- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 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.

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

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

no later than thirty-five (35) days prior to the intended test date. The 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) IDEM, OAQ must receive all test reports within forty-five (45) days after the completion of the testing. IDEM, OAQ may grant an extension, if the source submits to IDEM, OAQ, 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 "authorized individual" as defined by 326 IAC 2-1.1-1.

### **Compliance Monitoring Requirements**

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

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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.12 Maintenance of Monitoring Equipment [IC 13-14-1-13]**

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- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

#### **C.13 Monitoring Methods [326 IAC 3]**

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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, or other approved methods as specified in this permit.

#### **C.14 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6] [326 IAC 2-2-4]**

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;

- (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
- (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after the commencement of normal operation after the first phase of construction and shall be maintained on site, and is comprised of:
  - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
  - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

**C.15 Actions Related to Noncompliance Demonstrated by a Stack Test**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the

Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserve the authority to use enforcement activities to resolve noncompliant stack tests.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

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

### **Record Keeping and Reporting Requirements**

#### **C.16 Malfunctions Report [326 IAC 1-6-2]**

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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), 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, 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.17 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]**

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- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the

equipment is operating at normal representative conditions.

- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.18 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (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, OAQ 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 permit;

- (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.19 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The reports require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations must be clearly identified in such reports. A reportable 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) A malfunction as described in 326 IAC 1-6-2; or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance 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 or failure to monitor or record the required compliance monitoring is a deviation.

- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date start of normal operation after the first phase of construction and ending on the last day of the reporting period.

## SECTION D.1 FACILITY CONDITIONS – Combined Cycle Operation

<p>Facility Description [326 IAC 2-5.1-3]</p> <p>(a) Four (4) natural gas-fired combustion turbine generators, designated as units CT1, CT2, CT3, CT4, with a maximum heat input capacity of 1906.4 MMBtu/hr (per unit on a higher heating value), and exhausts to stacks designated as S1, S2, S3, S4, respectively.</p> <p>(b) Four (4) heat recovery steam generators, designated as units HRSG1, HRSG2, HRSG3, HRSG4 with duct burners, and a maximum rate heat input capacity of 310 MMBtu/hr (per unit on a higher heating value), exhausting to stacks designated as S1, S2, S3, and S4, respectively.</p> <p>(c) Four (4) selective catalytic reduction systems, designated as units SCR11, SCR12, SCR21, SCR22.</p> <p>(d) Two (2) steam turbines, designated as units ST1 and ST2.</p> <p>(e) Two (2) cooling towers, designated as units Cooling Tower 1 and Cooling Tower 2, exhausting to stacks designated S6 and S7, respectively.</p> <p>(The information describing the process contained in this facility description box is descriptive information, and does not constitute enforceable conditions.)</p>
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### Emission Limitations and Standards

#### D.1.1 Prevention of Significant Deterioration [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD), this new source is subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) for emissions of PM, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and VOC because the potential to emit for these pollutants exceed the PSD major significant thresholds. Therefore, the PSD provisions require that this new source be reviewed to ensure compliance with the National Ambient Air Quality Standards (NAAQS), the applicable PSD air quality increments, and the requirements to apply the Best Available Control Technology (BACT) for the affected pollutants.

#### D.1.2 Particulate Matter (PM/PM<sub>10</sub>) Emission Limitations for Combustion Turbines/Duct Burners

- (a) Pursuant to 326 IAC 2-2 (PSD Requirements), the total PM, which is the sum of PM (filterable) and PM<sub>10</sub> (filterable and condensible), emissions from each combustion turbine shall not exceed twenty one (21) pounds per hour for each combustion turbine, during normal operation normal operation (fifty (50) percent load or more).
- (b) Pursuant to 326 IAC 2-2 (PSD Requirements), the total PM, which is the sum of PM (filterable) and PM<sub>10</sub> (filterable and condensible), emissions from each combustion turbine when its associated duct burner is operating, shall not exceed 24.10 pounds per hour for each combustion turbine and duct burner.

#### D.1.3 Opacity Limitations

Pursuant to 326 IAC 2-2 (PSD Requirements) the opacity from each associated combustion turbine stack shall not exceed twenty (20) percent (6-minute average), except for one 6-minute

period per hour of not more than 27 percent. The opacity standards apply at all times, except during periods of startup, shutdown or malfunction. This satisfies the opacity limitations required by 326 IAC 5-1 (Opacity Limitations).

#### D.1.4 Particulate Matter Emissions (PM/PM<sub>10</sub>) for Cooling Towers

Pursuant to 326 IAC 2-2 (PSD Requirements) each cooling tower shall comply with the following:

- (1) PM, which is the sum of PM (filterable) and PM<sub>10</sub> (filterable and condensable), emissions shall not exceed 0.876 pounds per hour, and
- (2) Employ good design and operation practices to limit emissions from the cooling towers.

#### D.1.5 Startup and Shutdown Limitations for Combustion Turbines

Pursuant to 326 IAC 2-2 (PSD Requirements), a startup or shutdown is defined as less than fifty (50) percent load. Each combustion turbine generating unit shall comply with the following:

- (a) A startup or shutdown period shall not exceed 3.5 hours. The facility shall not exceed a total of 2,240 turbine hours per year for startups and shutdowns.
- (b) During periods of startup and shutdown good combustion practice shall be used to limit NO<sub>x</sub> and CO emissions.
- (c) The NO<sub>x</sub> and CO emissions during startup and shutdown periods shall be monitored.
- (d) The startup and shutdown data for the first thirty-six (36) months of operation shall be submitted to the OAQ Permits Branch in order to evaluate and establish a short-term limit (pounds per startup and pounds per shutdown) during periods of startup and shutdown. The short-term limit shall consider, but will not be limited to, performance degradation of the combustion turbine up to the first major overhaul. The startup and shutdown data shall be submitted within 90 days after the 36-month monitoring period.

#### D.1.6 Nitrogen Oxides (NO<sub>x</sub>) Emission Limitations for Combustion Turbines/Duct Burners

(a) Pursuant to 326 IAC 2-2 (PSD Requirements) each combustion turbine/steam generating unit shall comply with the following, excluding periods of startup and shutdown:

- (1) During normal combined cycle operation (fifty (50) percent load or more), the NO<sub>x</sub> emissions from each combustion turbine stack shall not exceed 3.0 ppmvd corrected to fifteen (15) percent oxygen, based on a three (3) hour averaging period, which is equivalent to 21.0 pounds per hour for each combustion turbine.
- (2) During normal combined cycle operation (fifty (50) percent load or more), the NO<sub>x</sub> emissions from each combustion turbine stack, when its associated duct burner is operating, shall not exceed 3.0 ppmvd corrected to fifteen (15) percent oxygen, based on a three (3) hour averaging period, which is equivalent to 24.41 pounds per hour for each combustion turbine and duct burner.
- (3) The duct burners shall not be operated until the associated combustion turbine reaches normal operation.

- (4) Each combustion turbine shall be equipped with dry low-NO<sub>x</sub> burners and operated using good combustion practices to control NO<sub>x</sub> emissions.
  - (5) A selective catalytic reduction (SCR) system shall be installed and operated at all times, except during periods of startup and shutdown, to control NO<sub>x</sub> emissions.
  - (6) Use natural gas as the only fuel.
- (b) Pursuant to 326 IAC 2-2 (PSD Requirements), the annual NO<sub>x</sub> emission from each of the four (4) combustion turbines and associated duct burners, excluding startup and shutdown periods, shall not exceed 78.1 tons per year.

#### D.1.7 Carbon Monoxide (CO) Emission Limitations for Combustion Turbines/Duct Burners

- (a) Pursuant to 326 IAC 2-2 (PSD Requirements), each steam generating unit shall comply with the following, excluding startup and shutdown emissions:
- (1) During normal combined cycle operation (fifty (50) percent load or more), the CO emissions from each combustion turbine shall not exceed 6 ppmvd corrected to 15% O<sub>2</sub> on a 24 hour averaging period, which is equivalent to 21.3 pounds per hour for each combustion turbine.
  - (2) During normal operation (fifty (50) percent load or more), the CO emissions from each combustion turbine stack, when its associated duct burner is operating, shall not exceed 9 ppmvd corrected to 15% O<sub>2</sub> on a 24 hour averaging period, which is equivalent to 40.5 pounds per hour for each combustion turbine and duct burner.
  - (3) The duct burners shall not be operated until normal operation begins.
  - (4) Good combustion practices shall be applied to minimize CO emissions.
  - (5) Use natural gas as the only fuel.
- (b) Pursuant to 326 IAC 2-2 (PSD Requirements), the annual CO emission from each of the four (4) combustion turbines and associated duct burners, excluding startup and shutdown periods, shall not exceed 102.21 tons per year.

#### D.1.8 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations for Combustion Turbines/Duct Burners

Pursuant to 326 IAC 2-2 (PSD Requirements), each combustion turbine and duct burner shall comply with the following, excluding startup and shutdown emissions:

- (1) During normal combined cycle operation (fifty (50) percent load or more), the SO<sub>2</sub> emissions from each combustion turbine shall not exceed 11.0 pounds per hour for each combustion turbine.
- (2) During normal combined cycle operation of each combustion turbine when its associated duct burner is operating, the SO<sub>2</sub> emissions from each turbine stack shall not exceed 12.71 pounds per hour.

- (3) The use of low sulfur natural gas as the only fuel for the combustion turbines and duct burners. The sulfur content of the natural gas shall not exceed two (2) grains per 100 scf.
- (4) Perform good combustion practice.

D.1.9 Volatile Organic Compound (VOC) Emission Limitations for Combustion Turbines/Duct Burners

Pursuant to 326 IAC 8-1-6 (VOC Requirements) and 326 2-2 (PSD Requirements), each combustion turbine and duct burner shall comply with the following, excluding startup and shutdown emissions:

- (1) The VOC emissions from each combustion turbine shall not exceed 3.0 pounds VOC per hour for each combustion turbine.
- (2) The VOC emissions from each combustion turbine stack, when its associated duct burner is operating shall not exceed 7.7 pounds VOC per hour.
- (3) The use of natural gas as the only fuel.
- (4) Good combustion practice shall be implemented to minimize VOC emissions.

D.1.10 40 CFR 60, Subpart GG (Stationary Gas Turbines)

The four (4) natural gas combustion turbines are subject to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines) because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour (10 MMBtu per hour), based on the lower heating value of the fuel fired.

Pursuant to 326 IAC 12-1 and 40 CFR 60, Subpart GG (Stationary Gas Turbines), the Permittee shall:

- (1) Limit nitrogen oxides emissions from the natural gas turbines to 0.0113% by volume at 15% oxygen on a dry basis, as required by 40 CFR 60.332, to:

$$STD = 0.0075 \frac{(14.4)}{Y} + F,$$

where STD = allowable NO<sub>x</sub> emissions (percent by volume at 15 percent oxygen on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.

F = NO<sub>x</sub> emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of 40 CFR 60.332.

- (2) Limit sulfur dioxide emissions, as required by 40 CFR 60.333, to 0.015 percent by volume at 15 percent oxygen on a dry basis, or use natural gas fuel with a sulfur content less than or equal to 0.8 percent by weight;

D.1.11 40 CFR Part 60, Subpart Da (Electric Utility Steam Generating Units)

The four (4) heat recovery steam generator (HRSG) duct burners (DB) are subject to 40 CFR

Part 60, Subpart Da because the heat input capacity is greater than 250 MMBtu/hr.

Pursuant to 40 CFR Part 60, Subpart Da, the Permittee shall:

- (a) The opacity from each combustion turbine stack, when its associated duct burner is operating, shall not exceed twenty (20) percent (6-minute average), except for a 6-minute period per hour of not more than 27 percent. The opacity standards apply at all times, except during periods of startup, shutdown or malfunction. This satisfies the opacity limitations required by 326 IAC 5-1 (Opacity Limitations).
- (b) The PM emissions from each duct burner shall not exceed 0.03 pounds per MMBtu heat input on a higher heating value basis.
- (c) Each duct burner shall not exceed 1.6 lb/MW-hr NO<sub>x</sub> on a thirty (30) day rolling average.
- (d) Each duct burner shall not exceed 0.20 pounds SO<sub>2</sub> per MMBtu heat input, determined on a 30-day rolling average basis.

#### D.1.12 Formaldehyde Limitations

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Pursuant to 326 IAC 2-1.1-5 (Air Quality Requirements), the formaldehyde emissions from each combustion turbine shall not exceed 0.00013 pound of formaldehyde per MMBtu.

#### D.1.13 Ammonia Limitations

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Pursuant to 326 IAC 2-1.1-5 (Air Quality Requirements), the ammonia emissions from each combustion turbine stack shall not exceed ten (10) ppmvd corrected to 15% O<sub>2</sub> on a 3 hour block average.

#### D.1.14 Preventive Maintenance Plan [326 IAC 1-6-3]

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A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for each combustion turbine and its control device.

### Compliance Determination Requirements

#### D.1.15 Performance Testing

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- (a) Pursuant to 326 IAC 3-5 the Permittee shall conduct a performance test, no later than one-hundred and eighty days (180) after the facility startup or monitor installation, on the combustion turbine exhaust stack (S1, S2, S3, S4) in order to certify the continuous emission monitoring systems for NO<sub>x</sub> and CO.
- (b) Within one-hundred and eighty (180) days after initial startup, the Permittee shall perform formaldehyde stack test for one of the four (4) combustion turbine stacks (S1, S2, S3, or S4) utilizing a method approved by the Commissioner when operating at 60%, 75%, and 100% load. These tests shall be performed in accordance with Section C – Performance Testing, in order to verify the formaldehyde emission factor specified in Condition D.1.12.
- (c) Within one-hundred and eighty (180) days after initial startup, the Permittee shall perform NO<sub>x</sub> and CO stack tests for each combustion turbine stack (S1, S2, S3, S4) during a startup/shutdown period, utilizing a certified continuous emission monitoring system and

a flue flow meter. These tests shall be performed in accordance with Section C – Performance Testing, in order to document compliance with Condition D.1.5.

- (d) Within sixty (60) days of achieving maximum production rate, but no later than one-hundred and eighty (180) days after initial startup, the Permittee shall conduct NO<sub>x</sub> and SO<sub>2</sub> stack tests for each combustion turbine stack (S1, S2, S3, S4) utilizing methods approved by the Commissioner. These tests shall be performed in accordance with 40 CFR 60.335 and Section C – Performance Testing, in order to document compliance with Condition D.1.10.
- (e) Within one-hundred and eighty (180) days after initial startup, the Permittee shall perform PM, PM<sub>10</sub> (filterable and condensable), VOC, and ammonia stack tests for each combustion turbine stack (S1, S2, S3, S4) utilizing methods approved by the Commissioner. These tests shall be performed in accordance with 40 CFR 60.335, 40 CFR 60.48(a), and Section C – Performance Testing, in order to document compliance with D.1.2, D.1.9, and D.1.13.
- (f) IDEM, OAQ retain the authority under 326 IAC 2-1-4(f) to require the Permittee to perform additional and future compliance testing as necessary.

D.1.16 40 CFR Part 60, Subpart GG Compliance Requirements (Stationary Gas Turbines)

Pursuant to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines), the Permittee shall monitor the nitrogen and sulfur content of the natural gas on a monthly basis as follows:

- (a) Determine compliance with the nitrogen oxide and sulfur dioxide standards in 40 CFR 60.332 and 60.333(a), per requirements described in 40 CFR 60.335(c);
- (b) Determine the sulfur content of the natural gas being fired in the turbine by ASTM Methods D 1072-80, D 3030-81, D 4084-82, or D 3246-81. The applicable ranges of some ASTM methods mentioned are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator; and
- (c) Determine the nitrogen content of the natural gas being fired in the turbine by using analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator.

The analyses required above may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor or any other qualified agency.

Owners, operators or fuel vendors may develop custom fuel schedules for determination of the nitrogen and sulfur content based on the design and operation of the affected facility and the characteristics of the fuel supply. These schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with the above requirements.

D.1.17 Continuous Emission Monitoring (CEMs)

- (a) The owner or operator of a new source with an emission limitation or permit requirement established under 326 IAC 2-5.1-3 and 326 IAC 2-2, shall be required to install a

continuous emissions monitoring system or alternative monitoring plan as allowed under the Clean Air Act and 326 IAC 3-5-1(d).

- (b) The Permittee shall install, calibrate, certify, operate and maintain a continuous emission monitoring system for NO<sub>x</sub> and CO, for stacks designated as S1, S2, S3, S4 in accordance with 326 IAC 3-5-2 and 3-5-3.
- (1) The continuous emission monitoring system (CEMS) shall measure NO<sub>x</sub> and CO emissions rates in pounds per hour and parts per million (ppmvd) corrected to 15% O<sub>2</sub>. The use of CEMS to measure and record the NO<sub>x</sub> and CO hourly limits, is sufficient to demonstrate compliance with the limitations established in the BACT analysis and set forth in the permit. To demonstrate compliance with the NO<sub>x</sub> limit, the source shall take an average of the parts per million (ppmvd) corrected to 15% O<sub>2</sub> over a three (3) hour averaging period. To demonstrate compliance with the CO limit, the source shall take an average of the parts per million (ppmvd) corrected to 15% O<sub>2</sub> over a twenty four (24) hour block averaging period. The source shall maintain records of the parts per million and the pounds per hour.
  - (2) The Permittee shall determine compliance with Condition D.1.5 utilizing data from the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMS, the fuel flow meter, and Method 19 calculations.
  - (3) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after monitor installation, a complete written continuous monitoring standard operating procedure (SOP), in accordance with the requirements of 326 IAC 3-5-4.
  - (4) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.
- (c) Pursuant to 40 CFR 60.47(d), the Permittee shall install, calibrate, certify and operate continuous emissions monitors for carbon dioxide or oxygen at each location where nitrogen oxide emissions are monitored.

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

#### **D.1.18 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1.2, D.1.6 through D.1.9, and D.1.12, the Permittee shall maintain records of the following:
- (1) Amount of natural gas combusted (in MMSCF) per turbine during each month.
  - (2) Percent sulfur of the natural gas.
  - (3) Heat input on a higher heating value basis of each turbine on a 30-day rolling average.

- (b) To document compliance with Condition D.1.5, the Permittee shall maintain records of the following:
  - (1) The type of operation (i.e. startup or shutdown) with supporting operational data.
  - (2) The total number of minutes for startup or shutdown per 24-hour averaging period per turbine.
  - (3) The CEMS data, fuel flow meter data, and Method 19 calculations corresponding to each startup and shutdown period.
- (c) To document compliance with Conditions D.1.6 and D.1.7, the Permittee shall maintain records of the emission rates of NO<sub>x</sub> and CO in pounds per hour and parts per million (ppmvd) at 15% oxygen.
- (d) To document compliance with Condition D.1.17, the Permittee shall maintain records, including raw data of all monitoring data and supporting information, for a minimum of five (5) years from the date described in 326 IAC 3-5-7(a). The records shall include the information described in 326 IAC 3-5-7(b).
- (e) To document compliance with D.1.10, the Permittee shall maintain records of the natural gas analyses, including the sulfur and nitrogen content of the gas, for a period of three (3) years.
- (f) All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.

#### D.1.19 Reporting Requirements

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The Permittee shall submit the following information on a quarterly basis:

- (a) Records of excess NO<sub>x</sub> and CO emissions (defined in 326 IAC 3-5-7 and 40 CFR Part 60.7) from the continuous emissions monitoring system. These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C – General Reporting Requirements of this permit.
- (b) The Permittee shall report periods of excess emissions, as required by 40 CFR 60.334(c).
- (c) A quarterly summary of the CEMs data to document compliance with D.1.6, and D.1.7 shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported.
- (d) A quarterly summary of the total number of startup and shutdown hours of operation to document compliance with Condition D.1.5, shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported.

## SECTION D.2 FACILITY CONDITIONS – Auxiliary Boiler

### Facility Description [326 IAC 2-5.1-3]

One (1) natural gas fired auxiliary boiler, designated Auxiliary Boiler, with a maximum heat input capacity of 124.6 MMBtu/hr (higher heating value), and exhausting to stack S5.

(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 Prevention of Significant Deterioration [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD), this new source is subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) for emissions of PM, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and VOC because the potential to emit for these pollutants exceed the PSD major significant thresholds. Therefore, the PSD provisions require that this new source be reviewed to ensure compliance with the National Ambient Air Quality Standards (NAAQS), the applicable PSD air quality increments, and the requirements to apply the Best Available Control Technology (BACT) for the affected pollutants.

#### D.2.2 Particulate Matter Emissions (PM/PM<sub>10</sub>) for the Auxiliary Boiler

Pursuant to 326 IAC 2-2 (PSD Requirements) the auxiliary boiler shall comply with the following:

- (a) PM and PM<sub>10</sub> emissions from the auxiliary boiler shall not exceed 0.928 pounds per hour.
- (b) Use natural gas as the only fuel for the auxiliary boiler.
- (c) Perform good combustion practices.

#### D.2.3 Opacity Limitations

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

- (c) 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.
- (d) 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.

#### D.2.4 Nitrogen Oxide (NO<sub>x</sub>) Emission Limitations for the Auxiliary Boiler

Pursuant to 326 IAC 2-2 (PSD Requirements), the auxiliary boiler shall comply with the following:

- (a) NO<sub>x</sub> emissions from the auxiliary boiler shall not exceed 0.036 lb/MMBtu on a higher heating value basis, which is equivalent to 4.49 pounds per hour.

- (b) Use natural gas as the only fuel for the auxiliary boiler.
- (c) Operate auxiliary boiler using low-NOx burners.

#### D.2.5 Carbon Monoxide (CO) Emission Limitations for the Auxiliary Boiler

Pursuant to 325 IAC 2-2 (PSD Requirements) the auxiliary boiler shall comply with the following:

- (a) CO emissions from the auxiliary boiler shall not exceed 0.082 lb/MMBtu on a higher heating value basis, which is equivalent to 10.28 pounds per hour.
- (b) Use natural gas as the only fuel for the auxiliary boiler.
- (c) Operate utilizing good combustion practices.

#### D.2.6 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations for the Auxiliary Boiler

Pursuant to 326 IAC 2-2 (PSD Requirements) the auxiliary boiler shall comply with the following:

- (a) SO<sub>2</sub> emissions from the auxiliary boiler shall not exceed 0.006 lb/MMBtu on a higher heating value basis, which is equivalent to 0.70 pounds per hour.
- (b) Use natural gas, with a sulfur content of less than or equal to 0.8 percent by weight, as the only fuel for the auxiliary boiler.
- (c) Operate utilizing good combustion practices.

#### D.2.7 Volatile Organic Compound (VOC) Emission Limitations for the Auxiliary Boiler

Pursuant to 326 IAC 2-2 (PSD Requirements) and 326 IAC 8-1-6 (General Reduction Requirements) the auxiliary boiler shall comply with the following:

- (a) VOC emissions from the auxiliary boiler shall not exceed 0.0054 lb/MMBtu on a higher heating value basis, which is equivalent to 0.672 pounds per hour.
- (b) Use natural gas as the only fuel for the auxiliary boiler.
- (c) Operate using good combustion practices.

#### D.2.8 40 CFR Part 60, Subpart Db (Industrial Steam Generating Units)

The auxiliary boiler is subject to the requirements of 40 CFR Part 60, Subpart Db because the heat input capacity of the boiler is greater than 100 MMBtu/hr. Pursuant to 40 CFR Part 60, Subpart Db, the NO<sub>x</sub> emission from the natural gas fired boiler shall not exceed 0.2 lb/MMBtu on a 30-day rolling average.

#### D.2.9 Natural Gas Limitations

Pursuant to 326 IAC 2-2 (PSD Requirements), the natural gas usage from the auxiliary boiler shall not exceed 122.2 MMscf per year per year, based on a twelve (12) consecutive month period.

#### D.2.10 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan must be prepared, in accordance with Section C - Preventive Maintenance Plan, of this permit.

### **Compliance Determination Requirements**

#### **D.2.11 Performance Testing**

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Pursuant to 326 IAC 2-2 (PSD Requirements) and 40 CFR 60.46b(e), the Permittee shall perform NO<sub>x</sub> testing on the auxiliary boiler to determine compliance with Condition D.2.4 and D.2.8, within 60 days after achieving maximum capacity but not later than one hundred and eighty (180) days, using a continuous system for monitoring nitrogen oxides under 40 CFR 60.48b.

#### **D.2.12 NO<sub>x</sub> Emissions Monitoring [40 CFR 60.48b] [326 IAC 3-5]**

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Pursuant to 40 CFR 60.48b(g), the Permittee shall comply with Condition D.2.8 on an on-going basis using either of the following methods:

- (a) Install, calibrate, maintain, and operate a continuous emission monitoring system to monitor NO<sub>x</sub> emissions, pursuant to 40 CFR 60.48b(b), (c), (d), (e), and (f), and 326 IAC 3-5; or
- (b) Monitor steam generating operating conditions and predict NO<sub>x</sub> emission rates as specified in a plan submitted to and approved by IDEM, OAQ pursuant to 40 CFR 60.49b(c).

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

#### **D.2.13 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.2.9, the Permittee shall maintain records of the amount of natural gas combusted for the auxiliary boiler during each month;
- (b) To document compliance with condition D.2.8, the Permittee shall maintain records required under 40 CFR 60.49b(d), (g), (o), and (p), as applicable.
- (c) All records shall be maintained in accordance with Section C – General Record Keeping Requirements.

#### **D.2.14 Reporting Requirements**

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- (a) The Permittee shall submit on a quarterly basis a summary of the information to document compliance with Condition D.2.8 to the addresses listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) To document compliance with Condition D.2.8 either by monitoring of steam generating unit operating conditions or by operating a continuous emissions monitoring system for NO<sub>x</sub> emissions, the Permittee shall also submit reports under 40 CFR 60.49b(a), (b), (h), and (q), in addition to one of the following:
  - (1) If the Permittee elects to determine compliance with Condition D.2.8 through monitoring steam generating unit operating conditions, pursuant to 40 CFR 60.49b(c), the Permittee shall submit to IDEM, OAQ, within 360 days of the initial startup, a plan that identifies the operating conditions to be monitored and records to be maintained.
  - (2) If the Permittee elects to document compliance with Condition D.2.8 by operation of a continuous emissions monitoring system for NO<sub>x</sub> emissions, the Permittee shall submit reports as required under (b), 40 CFR 60.49b(i), 326 IAC 3-5-5(e) and 326 IAC 3-5-7.

## SECTION D.3

## FACILITY CONDITIONS – Backup Equipment

### Facility Description [326 IAC 2-5.1-3]

- (a) One (1) diesel fire pump, with a rated capacity of 265 horsepower (hp), exhausting to stack S9.
- (b) One (1) diesel backup electric generator, with a rated capacity of 1000 kilowatts (KW), exhausting to stack S8.

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

## Emission Limitations and Standards

### D.3.1 BACT Limitation for the Fire Pump

Pursuant to 326 IAC 2-2 (PSD Requirements) the diesel fire pump shall comply with the following:

- (a) The total input of the fire pumps shall be limited to 7,554 gallons per twelve (12) consecutive month period, rolled on a monthly basis.
- (b) The sulfur content of the diesel fuel used by the fire pump shall not exceed 0.05 percent by weight.
- (c) Perform good combustion practice.

### D.3.2 BACT Limitation for the Emergency Generator

Pursuant to 326 IAC 2-2 (PSD Requirements) the emergency generators shall comply with the following:

- (a) The total input of the emergency generator shall be limited to 35,252 gallons per twelve (12) consecutive month period, rolled on a monthly basis.
- (b) The sulfur content of the diesel fuel used by the fire pump shall not exceed 0.05 percent by weight.
- (c) Perform good combustion practice.

## Compliance Determination Requirements

### D.3.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test these emission units by this permit. However, IDEM, OAQ retain the authority under 326 IAC 2-1-4(f) to require the Permittee to perform additional and future compliance testing as necessary. If testing is required by the OAQ, compliance shall be determined by a performance test conducted in accordance with Section C – Performance Testing.

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

### D.3.4 Record Keeping Requirements

To document compliance with Conditions D.3.1 and D.3.2, the Permittee shall maintain records of the following:

- (1) Amount of diesel fuel combusted each month in the fire pump.

- (2) Amount of diesel fuel combusted each month in the emergency generator.
- (3) The percent sulfur content of the diesel fuel.

#### D.3.5 Reporting Requirements

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A quarterly summary of the information to document compliance with D.3.1 and D.3.2 shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

## SECTION D.4 FACILITY DESCRIPTION – Startup Gas Heater

### Facility Description [326 IAC 2-5.1-3]

One (1) startup gas heater, designated as GH1 with a maximum heat input capacity of 2.4 MMBtu/hr (higher heating value basis), and exhausts to stack GH1.

(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.4.1 Opacity Limitations

Pursuant to 326 IAC 2-2 (PSD Requirements) the opacity of the startup gas heater shall not exceed twenty (20) percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent. The opacity standards apply at all times, except during periods of startup, shutdown or malfunction.

#### D.4.2 BACT Limitations for the Startup Gas Heater:

Pursuant to 326 IAC 2-2 (PSD Requirement), the source shall comply with the following:

- (a) Use natural gas as the only fuel for the gas heater.
- (b) Perform good combustion practices.
- (c) The natural gas usage for the startup gas heater shall not exceed 5.3 million standard cubic feet (MMSCF) per twelve (12) consecutive month period rolled on a monthly basis.
- (d) The NO<sub>x</sub> emissions from the startup gas heater shall be limited to 0.14 lb/ MMBtu.

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

#### D.4.3 Record Keeping Requirements

- (a) To document compliance with Conditions D.4.2, the Permittee shall maintain records of the amount of natural gas combusted by the Startup Gas Heater during each month.
- (b) All records shall be maintained in accordance with Section C – General Record Keeping Requirements.

#### D.4.4 Reporting Requirements

The Permittee shall submit on a quarterly basis a summary of the information to document compliance with Condition D.4.2 to the addresses listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

### MALFUNCTION REPORT

#### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER - 317 233-5967

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATE MATTER ? \_\_\_\_\_, 100 LBS/HR VOC ? \_\_\_\_\_, 100 LBS/HR SULFUR DIOXIDE ? \_\_\_\_\_ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? \_\_\_\_\_ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?    Y        N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y        N

COMPANY: \_\_\_\_\_ PHONE NO. ( \_\_\_\_\_)

LOCATION: (CITY AND COUNTY) \_\_\_\_\_

PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_        AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:  
\_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_        AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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**Indiana Department of Environmental Management  
Office of Air Quality  
Compliance Data Section**

**Quarterly Report**

Company Name: PSEG Lawrenceburg Energy Facility  
Location: 582 West Eads Parkway, Lawrenceburg, IN 47025  
Permit No.: CP-029-12517-00033  
Source: Auxiliary Boiler  
Limit: 122.2 MMSCF per twelve (12) consecutive month period

Year: \_\_\_\_\_

Month	Usage (MMCF/month)	Usage for previous month(s) (MMCF)	Usage for twelve month period (MMCF)

? No deviation occurred in this quarter.

? 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 Quality Compliance Data Section

### Quarterly Report

Company Name: PSEG Lawrenceburg Energy Facility  
Location: 582 West Eads Parkway, Lawrenceburg, IN 47025  
Permit No.: CP-029-12517-00033  
Source: Diesel Fire Pump  
Limit: 7,554 gallons per twelve (12) consecutive month period

**Year:** \_\_\_\_\_

Month	Diesel Fuel Oil Usage (gallons/month)	Diesel Fuel Oil Usage for previous month(s) (gallons)	Diesel Fuel Oil Usage for twelve month period (gallons)

? No deviation occurred in this quarter.

? 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 Quality  
Compliance Data Section**

**Quarterly Report**

Company Name: PSEG Lawrenceburg Energy Facility  
Location: 582 West Eads Parkway, Lawrenceburg, IN 47025  
Permit No.: CP-029-12517-00033  
Source: Emergency Generator  
Limit: 35,252 gallons per twelve (12) consecutive month period

**Year:** \_\_\_\_\_

Month	Diesel Fuel Oil Usage (gallons/month)	Diesel Fuel Oil Usage for previous month(s) (gallons)	Diesel Fuel Oil Usage for twelve month period (gallons)

? No deviation occurred in this quarter.

? 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 QUALITY

### Compliance Data Section Quarterly Report

Source Name: PSEG Lawrenceburg Energy Facility  
Source Address: 582 West Eads Parkway, Lawrenceburg, IN 47025  
Permit No.: CP-029-12517-00033  
Source: Startup Gas Heater  
Limit: 5.3 MMSCF per twelve (12) consecutive month period rolled on a monthly basis

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

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

? No deviation occurred in this quarter.

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

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Permit Modification to a Construction and PSD Permit

#### Source Background and Description

Source Name:	PSEG Lawrenceburg Energy Company, Inc.
Source Location:	582 West Eads Parkway, Lawrenceburg, IN 47025
County:	Dearborn
SIC Code:	4911
Permit No.:	CP/PSD-029-12517-00033
Permit Issuance Date:	June 07, 2001
Significant Modification No.:	029-18381-00033
Permit Writer:	Iryn Calilung

#### Permitting History and Source Status

On June 07, 2001, PSEG Lawrenceburg Energy Company, Inc. (PSEG) was issued a Prevention of Significant Deterioration (PSD) Permit to construct and operate a natural gas merchant power plant.

This merchant plant has since received the following approvals:

- (1) Acid Rain Permit No.: 029-12561-00033, issued on June 25, 2001;
- (2) First Notice Only Change No.: 029-16091-00033, issued on July 3, 2002;
- (3) First Minor Permit Revision No.: 029-15867-00033, issued on August 30, 2002;
- (4) First Significant Modification No.: 029-16235-00033, issued on December 23, 2002; and
- (5) Second Notice Only Change No.: 029-16780-00033, issued on February 19, 2003.

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.

In February, 2003, the Office of Air Quality (OAQ) received a notification from PSEG that the merchant plant has started operation.

## Proposed Revision

On November 17, 2003, the Office of Air Quality (OAQ) received a letter from PSEG Lawrenceburg Energy Company, Inc. (PSEG) proposing to revise the formaldehyde testing requirements for each of the four (4) permitted combined cycle combustion turbines.

Condition No. D.1.15(c) of the PSD permit required PSEG to confirm that the entire plant is a minor source in terms of hazardous air pollutants (HAPs) by performing formaldehyde compliance tests on each of the four (4) combustion turbines.

Instead of testing each turbine, PSEG is proposing to test one of the 4 turbines because:

- (1) Identical Turbines  
All 4 turbines are identical:
  - - they have similar ratings (1,906.4 MMBTU/hour each), and
  - - they use the same fuel (natural gas).
- (2) Hazardous Air Pollutants (HAPs) Emission Factor  
The formaldehyde testings were required at 3 different loads (60%, 75% and 100% of the full load) of the turbines. Testing was required at these loads to confirm the theoretical and manufacturers' specifications of the HAPs emission rates.
- (3) Cost  
In addition to the routine testing costs (such as services and instrumentation), turbine testing at 3 different loads would add a cost of approximately \$90,000 in fuel costs. This fuel cost will not be recovered due to the low energy demand and sales.

IDEM agrees with the proposed revision based on the justifications enumerated above. Based on this, the following condition is revised (changes are shown either in **bold** fonts or ~~strikeout~~ fonts to show the differences):

- D.1.15(b) Within one-hundred and eighty (180) days after initial startup, the Permittee shall perform formaldehyde stack test for ~~each~~ **one of the four (4)** combustion turbine stacks (S1, S2, S3, **or** S4) utilizing a method approved by the Commissioner when operating at 60%, 75%, and 100% load. These tests shall be performed in accordance with Section C – Performance Testing, in order to verify the formaldehyde emission factor specified in Condition D.1.12.

## Emission Calculations

There are no new emission units being constructed or existing units being modified. Also the allowable emissions remain unchanged from the original permit. Therefore no emission calculations are required for this change.

## Justification for Modification

The formaldehyde emission factors were established for each combustion turbine such that the entire merchant plant was considered a minor source for HAPs. Since these HAPs emission factors

were not subject to the PSD requirement, the revision to the HAPs testing requirements is not subject to the PSD review.

The testing revision will maintain the limited potential to emit of HAPs to less than 10 tons/year of any single HAP and less than 25 tons/year of any combination of HAPs.

Pursuant to 326 IAC 2-6.1-6(g)(5), such revision shall be processed as a minor permit modification to the existing permit.

### County Attainment Status

The source is located in Dearborn County. There has been no change in the attainment status of Dearborn County.

Pollutant	Status
PM <sub>10</sub>	Attainment
SO <sub>2</sub>	Unclassified
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Dearborn County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Dearborn County has been classified as attainment or unclassifiable for PM, PM<sub>10</sub>, SO<sub>2</sub> and CO. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### State and Federal Rule Applicability

There are no new or additional state and federal rules due to this revision.

### Recommendation

The staff recommends to the Commissioner that this modification be approved.

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

### Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed permit modification: 029-18381-00033.