



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: August 1, 2008

RE: Duke Energy Ohio, Inc. - Vermillion Energy Facility / 165-25496-00022

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval – Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

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

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

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

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

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

- (1) the name and address of the person making the request;

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

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

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

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

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



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**Part 70 Operating Permit Renewal  
OFFICE OF AIR QUALITY**

**Duke Energy Ohio, Inc - Vermillion Energy Facility  
2777 North State Road 63  
Cayuga, Indiana 47928**

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

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

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

Operation Permit No.: T165-25496-00022	
Issued by: Original Signed By:	Issuance Date: August 1, 2008
Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality	Expiration Date: August 1, 2013

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**Appendix A: Phase II Acid Rain Permit Renewal AR 165-19814-00022**

## SECTION A SOURCE SUMMARY

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

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

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The Permittee owns and operates a stationary 640 MW merchant power plant.

Source Address:	2777 North State Road 63, Cayuga, Indiana 47928
Mailing Address:	1000 East Main Street, Plainfield, IN 46168
General Source Phone Number:	(317) 838-2108
SIC Code:	4911
County Location:	Vermillion
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### 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 consists of the following emission units and pollution control devices:

- (a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, equipped with low-NO<sub>x</sub> combustors, exhausting to stacks designated as # 1 through # 8, with a maximum heat input capacity of 1,272 million British thermal units per hour for each turbine, and a nominal output of 80 MW, each.
- (b) Two (2) emergency diesel generators, identified as units #9 and #10, installed in 2000, exhausting to stacks designated as #9 and #10, with a maximum heat input capacity of 17.21 million British thermal units per hour, each.
- (c) One (1) emergency diesel fire pump, identified as unit #11, installed in 2000, exhausting to stack designated as #11, with a maximum heat input capacity of 1.6 million British thermal units per hour.

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

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

Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

### A.4 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).

## SECTION B GENERAL CONDITIONS

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

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

### B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

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- (a) This permit, T165-25496-00022, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

### B.3 Term of Conditions [326 IAC 2-1.1-9.5]

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

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### B.4 Enforceability [326 IAC 2-7-7]

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

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

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

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

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

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

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

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

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

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

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

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

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

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

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 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.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,  
Compliance Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
  - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed

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

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

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

**B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]**

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- (a) All terms and conditions of permits established prior to T165-25496-00022 and issued pursuant to permitting programs approved into the state implementation plan have been either:

- (1) incorporated as originally stated,
  - (2) revised under 326 IAC 2-7-10.5, or
  - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

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

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

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

- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

**B.17 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]**

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
  - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue

MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
  - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
  - (4) The Permittee notifies the:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
and  
  
United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590  
  
in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

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

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

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

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

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.
- (f) This condition does not apply to emission trades of SO<sub>2</sub> or NO<sub>x</sub> under 326 IAC 21 or 326 IAC 10-4.

**B.21 Source Modification Requirement [326 IAC 2-7-10.5]**

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- (a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.
- (b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2.

**B.22 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]**

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

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

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

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

B.25 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

- (a) The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.26 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

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

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

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

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

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

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

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

C.6 Stack Height [326 IAC 1-7]

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

### C.8 Performance Testing [326 IAC 3-6]

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

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

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

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

### C.9 Compliance Requirements [326 IAC 2-1.1-11]

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

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

### C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

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

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

**C.11 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]**

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- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.
- (b) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (c) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, a calibrated backup CEMS shall be brought online within four (4) hours of shutdown of the primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2 and 326 IAC 3-5.

**C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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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, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

**C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

**C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on September 11, 2000.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.16 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

#### **C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]**

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

The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

#### **C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]**

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain the following records:
    - (A) A description of the project.
    - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
    - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
      - (i) Baseline actual emissions;
      - (ii) Projected actual emissions;
      - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
      - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A) and/or 40 CFR 51.166 (r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
  - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

**C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]**

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period.

The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and
  - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
  - (2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C - General Record Keeping Requirements.
  - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
  - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management  
Air Compliance Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

### **Stratospheric Ozone Protection**

#### **C.21 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS - Turbines

### Emissions Unit Description:

- (a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, equipped with low-NO<sub>x</sub> combustors, exhausting to stacks designated as # 1 through # 8, with a maximum heat input capacity of 1,272 million British thermal units per hour for each turbine, and a nominal output of 80 MW, each.

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

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

#### D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart GG.

#### D.1.2 Nitrogen Oxides (NO<sub>x</sub>) – Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

- (a) Use of dry low-NO<sub>x</sub> combustors in conjunction with natural gas.
- (b) When burning natural gas the NO<sub>x</sub> emission rate shall not exceed a one (1) hour average concentration of fifteen (15) parts per million (ppmvd) of NO<sub>x</sub> at fifteen (15%) percent O<sub>2</sub> in conjunction with dry low-NO<sub>x</sub> combustors.
- (c) When burning natural gas, the NO<sub>x</sub> emission rate shall not exceed an average of twelve (12) parts per million (ppmvd) of NO<sub>x</sub> per year, based on a twelve (12) consecutive month period with compliance determined at the end of each month, at fifteen (15%) percent O<sub>2</sub> in conjunction with dry low-NO<sub>x</sub> combustors.
- (d) The NO<sub>x</sub> emissions from the eight (8) combustion turbines shall be limited to a total of 426.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

#### D.1.3 Sulfur Dioxide (SO<sub>2</sub>) – Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with BACT by using natural gas as the only fuel for the combustion turbines.

#### D.1.4 Carbon Monoxide (CO) – Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

- (a) The CO emission rate shall not exceed a one (1) hour average concentration of twenty-five (25) parts per million (ppmvd) of CO at fifteen (15%) percent O<sub>2</sub> in conjunction with firing natural gas during a steady-state operating condition.

- (b) The CO emissions from the eight (8) combustion turbines shall be limited to a total of 432.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Perform good combustion practices.

D.1.5 Volatile Organic Compounds (VOC) – Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

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Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall perform good combustion practices.

D.1.6 Particulate Matter (PM/PM<sub>10</sub>) – Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

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Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

- (a) Natural gas as the only fuel.
- (b) Perform good combustion practices.

D.1.7 Operation and Monitoring Definitions [326 IAC 2-2]

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(a) Pursuant to 326 IAC 2-2, the following operation definitions shall apply:

- (1) Startup is defined as the period of time from the initiation of combustion firing to the attainment of a steady-state operating condition (dry low NO<sub>x</sub> (premix) mode as indicated by DAHS). Premix mode shall be defined as the low emissions mode during which all burner nozzles are in use, burning a lean premix gas for steady-state operation.
- (2) Steady-state operating condition shall be defined as the period of time that the combustion turbine is operating in dry low NO<sub>x</sub> (premix) mode.
- (3) Shutdown is defined as that period of time from the end of a steady-state operating condition to the complete cessation of fuel combustion in the unit.
- (4) A startup/shutdown cycle is a pair of subsequent shutdown and startup events (i.e., one startup followed by one shutdown represents one startup/shutdown cycle).

(b) The following monitoring definitions shall apply:

- (1) The data acquisition and handling system (DAHS) process codes shall be defined as follows:
  - (A) DAHS Process Code 3 shall mean that a combustion turbine is operating in startup mode.
  - (B) DAHS Process Code 8 shall mean that a combustion turbine is operating in a steady-state condition.
  - (C) DAHS Process Code 4 shall mean that a combustion turbine is in shutdown mode.
  - (D) DAHS Process Code 5 shall mean that a combustion turbine is offline.

- (2) The DAHS monitoring codes shall be defined as follows:
- (A) DAHS Monitoring Code 00 shall mean that the NO<sub>x</sub> or CO CEMS is online and is functioning properly.
- (B) A DAHS monitoring code other than Monitoring Code 00 shall mean that the NO<sub>x</sub> and/or CO CEMS is down.

D.1.8 Startup/Shutdown Limits [326 IAC 2-2]

- (a) Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003, and 326 IAC 2-2 (PSD Requirements), the maximum number of startup/shutdown cycles from each turbine shall not exceed 240 per twelve (12) consecutive months period rolled on a monthly basis as determined at the end of each calendar month. The duration of each startup/ shutdown cycle shall not exceed one (1) hour.
- (b) The NO<sub>x</sub> and CO emission limitations in Conditions D.1.2(d) and D.1.4(b) for the eight (8) combustion turbines shall also include emissions from startup and shutdown.

D.1.9 Non-Criteria PSD Pollutants (Beryllium and H<sub>2</sub>SO<sub>4</sub>) – Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

- (a) Use natural gas as the only fuel for the combustion turbines.
- (b) Perform good combustion practices.

D.1.10 Stationary Gas Turbines [40 CFR Part 60, Subpart GG]

- (a) The eight (8) combustion turbines are subject to 40 CFR Part 60, Subpart GG because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.
- (b) Pursuant to 326 IAC 12-1 and 40 CFR 60, Subpart GG (Stationary Gas Turbines), the Permittee shall:

- (1) Limit nitrogen oxides emissions, as required by 40 CFR 60.332, to:

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

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 fifteen (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 Carbon Monoxide Emission Limitations [326 IAC 9-1]

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This source is subject to 326 IAC 9-1 because it is a stationary source of CO emissions commencing operation after March 21, 1972. There are no applicable CO emission limits, under this state rule, established for this type of operation.

#### D.1.12 Preventive Maintenance Plan [326 IAC 1-6-3]

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A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for the eight (8) simple cycle combustion turbines and their control devices.

### Compliance Determination Requirements

#### D.1.13 Compliance Requirements [40 CFR Part 60, Subpart GG]

---

Pursuant to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines), the Permittee must comply with the following custom fuel monitoring schedule approved by the EPA on May 30, 2000:

- (a) Monitor the sulfur content of the natural gas being fired in the turbine by ASTM method D 5504-94, or one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82.
- (b) Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
- (c) Sulfur Monitoring
  - (1) Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The approved alternative method is ASTM Method D5504-94.
  - (2) Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six (6) months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted one per quarter for six quarters.
  - (3) If after the monitoring required in item c(2) above, or herein, the sulfur content of the fuel shows little variability and calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.
  - (4) Should any sulfur analysis as required in items c(2) or c(3) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the U.S. EPA Region V Air and Radiation Division of such excess emissions and the custom schedule shall be re-examined by the U.S. EPA. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
- (d) If there is change in fuel supply, the owner or operator must notify the EPA of such change for re-examination of this custom schedule. A substantial change in fuel quality

shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

- (e) Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state and local air pollution control agencies.

#### D.1.14 Continuous Emission Monitoring System (CEMS) [326 IAC 3-5]

- (a) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a source with an emission limitation or permit requirement established under 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.
- (b) Pursuant to PSD Permit CP 165-10476-00022, issued on July 1, 1999, for NO<sub>x</sub> and CO, the Permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system for stacks designated as # 1 through # 8 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). The use of CEMS to measure and record the NO<sub>x</sub> and CO hourly limits, is sufficient to demonstrate compliance with the fifteen (15) parts per million (ppmvd) NO<sub>x</sub> limit and twenty-five (25) parts per million (ppmvd) CO limit, during a steady-state operating condition. To demonstrate compliance with the twelve (12) parts per million (ppmvd) NO<sub>x</sub> annual limit, the source shall average the parts per million (ppmvd) over a twelve (12) consecutive month period.
  - (2) The CEMS shall be in operation at all times when the eight (8) turbines are in operation.
  - (3) 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) The Permittee shall follow parametric monitoring requirements for determining SO<sub>2</sub> emissions contained in the "*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*" in lieu of continuous emission monitoring systems (CEMS).
  - (1) Pursuant to the procedures contained in 40 CFR 75.20, the Permittee shall complete all testing requirements to certify the use of the "*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*" protocol.
  - (2) The Permittee shall apply to IDEM for initial certification to use the "*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*" protocol, no later than 45 days after the compliance of all certification tests. The initial plan was received by the IDEM, OAQ on March 7, 2000.
  - (3) All certification and compliance methods shall be conducted in accordance with the procedures outlined in 40 CFR Part 75, Appendix D.

#### D.1.15 CEMS NO<sub>x</sub> and CO Missing Data Substitution [326 IAC 2-2]

In order to demonstrate compliance with Conditions D.1.2, D.1.3, D.1.4 and D.1.7, whenever the DAHS monitoring code is not Monitoring Code 00 (the NO<sub>x</sub> and/or CO CEMS is down), until the DAHS is restored to Monitoring Code 00, as an alternative to the missing data substitution requirements in Section C – Maintenance of Continuous Emission Monitoring Equipment, the Permittee may use the following missing data substitution procedures utilizing the DAHS Process Codes defined in Conditions D.1.7(b) and (c):

- (a) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods of startup, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by DAHS Process Code 3 within the past twelve (12) consecutive months.
- (b) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods of a steady-state operating condition, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by DAHS Process Code 8 within the past twelve (12) consecutive months.
- (c) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods of shutdown, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by DAHS Process Code 4 within the past twelve (12) consecutive months.
- (d) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods where the DAHS records two (2) or more process codes, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by those DAHS process codes within the past twelve (12) consecutive months.
- (e) The alternative missing data procedures in paragraphs (a) through (d) of this condition do not relieve the Permittee of the responsibility to comply with the requirements listed in Section C – Maintenance of Continuous Emission Monitoring Equipment for 40 CFR 75 (Title IV Acid Rain Program) and 326 IAC 10-4 (NO<sub>x</sub> Budget Trading Program) or the requirement to operate the CEMS.

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

##### **D.1.16 Compliance Requirements [40 CFR Part 60, Subpart GG]**

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Pursuant to 40 CFR Part 60, Subpart GG, the Permittee shall operate a Continuous Monitoring System to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine.

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

##### **D.1.17 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1.2(e), D.1.4(b), D.1.6, D.1.9 and D.1.10, the Permittee shall maintain records of the following:
  - (1) The amount of NO<sub>x</sub> emissions (in pounds or tons) per turbine recorded by the CEMS each month.
  - (2) The amount of CO emissions (in pounds or tons) per turbine recorded by the CEMS each month.
- (b) To document compliance with Conditions D.1.2(b) and (c) and D.1.4(a), the Permittee shall record the emission rates of NO<sub>x</sub> and CO in parts per million (ppmvd) based on a hourly and monthly average. The source shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.
- (c) To document compliance with Conditions D.1.7(a) and D.1.8, the Permittee shall maintain records of the following:
  - (1) The type of operation (startup, steady-state operating condition, or shutdown) with supporting operational data.

- (2) The total number of minutes for startup and shutdown per 24-hour period per turbine.
- (d) To document compliance with Condition D.1.15, the Permittee shall maintain records of any hour that CEMS data was missing, the DAHS process code recorded for that hour, and the emission rate (in pounds or tons) substituted for that hour.
- (e) To document compliance with Condition D.1.16, the Permittee shall record the fuel consumption and the ratio of water to fuel being fired in each turbine.
- (f) All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.

#### D.1.18 NSPS Reporting Requirements

Pursuant to the New Source Performance Standards (NSPS), Part 60.330, Subpart GG, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Date of performance testing (at least thirty (30) days prior to such date), when required by a condition elsewhere in this permit.
- (b) Report periods of excess emissions, as required by 40 CFR 60.334(c).

Reports are to be sent to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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.

#### D.1.19 Reporting Requirements

- (a) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for NO<sub>x</sub> and CO, pursuant to 326 IAC 3-5-7 and 40 CFR 60.334(c). 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) A quarterly summary of the information to document compliance with Conditions D.1.2(e) and D.1.4(b) shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (c) A quarterly summary of the total number of startup and shutdown hours of operation and emissions corresponding to startup and shutdown to document compliance with Condition D.1.8(a), 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.2 EMISSIONS UNIT OPERATION CONDITIONS - Emergency Generators and Fire Pump

### Emissions Unit Description:

- (b) Two (2) emergency diesel generators, identified as units #9 and #10, installed in 2000, exhausting to stacks designated as #9 and #10, with a maximum heat input capacity of 17.21 million British thermal units per hour, each.
- (c) One (1) emergency diesel fire pump, identified as unit #11, installed in 2000, exhausting to stack designated as #11, with a maximum heat input capacity of 1.6 million British thermal units per hour.

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

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

#### D.2.1 Nitrogen Oxides (NO<sub>x</sub>) – Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

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Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the source shall perform good combustion practices as BACT.

#### D.2.2 Sulfur Dioxide (SO<sub>2</sub>) – Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

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Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the source shall comply to the following BACT:

- (a) Perform good combustion practices.
- (b) The sulfur content of the diesel fuel used by the generators shall not exceed 0.05 percent by weight.
- (c) The total input of the diesel fuel to the generators shall be limited to 6,029 gallons per day and shall not exceed a total of 125,620 gallons per twelve consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 0.435 tons of SO<sub>2</sub> per year and 27.5 tons of NO<sub>x</sub> per year.

#### D.2.3 Carbon Monoxide (CO) – Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

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Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the source shall perform good combustion practices as BACT.

#### D.2.4 Particulate Matter (PM/PM<sub>10</sub>) – Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

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Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the source shall comply with the following BACT:

- (a) The limit of diesel fuel established under the SO<sub>2</sub> BACT analysis.
- (b) Perform good combustion practices.

#### **D.2.5 Best Available Control Technology for the Emergency Diesel Fire Pump [326 IAC 2-2-3]**

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Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the source shall comply with the following BACT:

- (a) Perform good combustion practices.
- (b) The sulfur content of the diesel fuel used by the fire pump shall not exceed 0.05 percent by weight.
- (c) The total input of the diesel fuel to the fire pump shall be limited to 5,840 gallons per twelve consecutive month period, rolled on a monthly basis.

#### **Compliance Determination Requirements**

##### **D.2.6 Sulfur Dioxide Emissions and Sulfur Content**

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Compliance shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two (2) emergency diesel fired generators, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

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

##### **D.2.7 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.2.2, D.2.4, and D.2.5, the Permittee shall maintain records of the following:

- (1) Amount of diesel fuel combusted per unit (in gallons) during each month; and
- (2) The percent sulfur content of diesel fuel.

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

- (3) Fuel supplier certifications;
- (4) The name of the fuel supplier; and

- (5) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.

#### D.2.8 Reporting Requirements

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A quarterly summary of the information to document compliance with Conditions D.2.2 and D.2.5 shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

## SECTION E

## TITLE IV CONDITIONS

### Emissions Unit Description:

- (a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, equipped with low-NO<sub>x</sub> combustors, exhausting to stacks designated as # 1- # 8, with a maximum heat input capacity of 1,272 million British thermal units per hour for each turbine, and a nominal output of 80 MW, each.

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

### Acid Rain Program

#### E.1 Acid Rain Permit [326 IAC 2-7-5(1)(C)] [326 IAC 21] [40 CFR 72 through 40 CFR 78]

- (a) The attached Acid Rain permit for this source, AR 165-19814-00022, issued on August 29, 2005, is incorporated by reference into this Part 70 permit. Pursuant to 326 IAC 21 (Acid Deposition Control), the Permittee shall comply with all provisions of the Acid Rain permit issued for this source, and any other applicable requirements contained in 40 CFR 72 through 40 CFR 78.
- (b) Where an applicable requirement of the Clean Air Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall apply.

#### E.2 Title IV Emissions Allowances [326 IAC 2-7-5(4)] [326 IAC 21]

Emissions exceeding any allowances that the Permittee lawfully holds under the Title IV Acid Rain Program of the Clean Air Act are prohibited, subject to the following limitations:

- (a) No revision of this permit shall be required for increases in emissions that are authorized by allowances acquired under the Title IV Acid Rain Program, provided that such increases do not require a permit revision under any other applicable requirement.
- (b) No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not use allowances as a defense to noncompliance with any other applicable requirement.
- (c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act.

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

**ORIS Code: 55111**

**NO<sub>x</sub> Budget Source:**

- (a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, equipped with low-NO<sub>x</sub> combustors, exhausting to stacks designated as # 1- # 8, with a maximum heat input capacity of 1,272 million British thermal units per hour for each turbine, and a nominal output of 80 MW, each.

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

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

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

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

- (a) The owners and operators of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit shall operate each unit in compliance with this NO<sub>x</sub> budget permit.
- (b) The NO<sub>x</sub> budget units subject to this NO<sub>x</sub> budget permit are: combustion turbine units CT#1 through CT#8.

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

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

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

- (a) The owners and operators of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit at the source shall hold NO<sub>x</sub> allowances available for compliance deductions under 326 IAC 10-4-10(j), as of the NO<sub>x</sub> allowance transfer deadline, in each unit's compliance account and the source's overdraft account in an amount:
- (1) Not less than the total NO<sub>x</sub> emissions for the ozone control period from the unit, as determined in accordance with 40 CFR 75 and 326 IAC 10-4-12;
  - (2) To account for excess emissions for a prior ozone control period under 326 IAC 10-4-10(k)(5); or
  - (3) To account for withdrawal from the NO<sub>x</sub> budget trading program, or a change in regulatory status of a NO<sub>x</sub> budget opt-in unit.
- (b) Each ton of NO<sub>x</sub> emitted in excess of the NO<sub>x</sub> budget emissions limitation shall constitute a separate violation of the Clean Air Act (CAA) and 326 IAC 10-4.

- (c) NO<sub>x</sub> allowances shall be held in, deducted from, or transferred among NO<sub>x</sub> allowance tracking system accounts in accordance with 326 IAC 10-4-9 through 11, 326 IAC 10-4-13, and 326 IAC 10-4-14.
- (d) A NO<sub>x</sub> allowance shall not be deducted, in order to comply with the requirements under (a) above and 326 IAC 10-4-4(c)(1), for an ozone control period in a year prior to the year for which the NO<sub>x</sub> allowance was allocated.
- (e) A NO<sub>x</sub> allowance allocated under the NO<sub>x</sub> budget trading program is a limited authorization to emit one (1) ton of NO<sub>x</sub> in accordance with the NO<sub>x</sub> budget trading program. No provision of the NO<sub>x</sub> budget trading program, the NO<sub>x</sub> budget permit application, the NO<sub>x</sub> budget permit, or an exemption under 326 IAC 10-4-3 and no provision of law shall be construed to limit the authority of the U.S. EPA or IDEM, OAQ to terminate or limit the authorization.
- (f) A NO<sub>x</sub> allowance allocated under the NO<sub>x</sub> budget trading program does not constitute a property right.
- (g) Upon recordation by the U.S. EPA under 326 IAC 10-4-10, 326 IAC 10-4-11, or 326 IAC 10-4-13, every allocation, transfer, or deduction of a NO<sub>x</sub> allowance to or from each NO<sub>x</sub> budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, this NO<sub>x</sub> budget permit of the NO<sub>x</sub> budget unit by operation of law without any further review.

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

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

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

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

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

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

- (d) Copies of all documents used to complete a NO<sub>x</sub> budget permit application and any other submission under the NO<sub>x</sub> budget trading program or to demonstrate compliance with the requirements of the NO<sub>x</sub> budget trading program.

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

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

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- (a) The NO<sub>x</sub> authorized account representative of the NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit at the source shall submit the reports and compliance certifications required under the NO<sub>x</sub> budget trading program, including those under 326 IAC 10-4-8, 326 IAC 10-4-12, or 326 IAC 10-4-13.
- (b) Pursuant to 326 IAC 10-4-4(e) and 326 IAC 10-4-6(e)(1), each submission shall include the following certification statement by the NO<sub>x</sub> authorized account representative: "I am authorized to make this submission on behalf of the owners and operators of the NO<sub>x</sub> budget sources or NO<sub>x</sub> budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."
- (c) Where 326 IAC 10-4 requires a submission to IDEM, OAQ, the NO<sub>x</sub> authorized account representative shall submit required information to:

Indiana Department of Environmental Management  
Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

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

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

- (a) Any person who knowingly violates any requirement or prohibition of the NO<sub>x</sub> budget trading program, a NO<sub>x</sub> budget permit, or an exemption under 326 IAC 10-4-3 shall be subject to enforcement pursuant to applicable state or federal law.

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

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

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

**SECTION G Clean Air Interstate (CAIR) Nitrogen Oxides Annual, Sulfur Dioxide, and Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a), and 326 IAC 24-3-1(a)**

**CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a), and 326 IAC 24-3-1(a)**

- (a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, equipped with low-NO<sub>x</sub> combustors, exhausting to stacks designated as # 1 through # 8, with a maximum heat input capacity of 1,272 million British thermal units per hour for each turbine, and a nominal output of 80 MW, each.

G.1 Automatic Incorporation of Definitions [326 IAC 24-1-7(e)] [326 IAC 24-2-7(e)] [326 IAC 24-3-7(e)] [40 CFR 97.123(b)] [40 CFR 97.223(b)] [40 CFR 97.323(b)]

This CAIR permit is deemed to incorporate automatically the definitions of terms under 326 IAC 24-1-2, 326 IAC 24-2-2, and 326 IAC 24-3-2.

G.2 Standard Permit Requirements [326 IAC 24-1-4(a)] [326 IAC 24-2-4(a)] [326 IAC 24-3-4(a)] [40 CFR 97.106(a)] [40 CFR 97.206(a)] [40 CFR 97.306(a)]

- (a) The owners and operators of the CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source and CAIR NO<sub>x</sub> units, CAIR SO<sub>2</sub> units, and CAIR NO<sub>x</sub> ozone season units shall operate each unit in compliance with this CAIR permit.
- (b) The CAIR NO<sub>x</sub> units, CAIR SO<sub>2</sub> units, and CAIR NO<sub>x</sub> ozone season units subject to this CAIR permit are:
- (1) Natural gas-fired combustion turbine CT#1
  - (2) Natural gas-fired combustion turbine CT#2
  - (3) Natural gas-fired combustion turbine CT#3
  - (4) Natural gas-fired combustion turbine CT#4
  - (5) Natural gas-fired combustion turbine CT#5
  - (6) Natural gas-fired combustion turbine CT#6
  - (7) Natural gas-fired combustion turbine CT#7
  - (8) Natural gas-fired combustion turbine CT#8

G.3 Monitoring, Reporting, and Record Keeping Requirements [326 IAC 24-1-4(b)] [326 IAC 24-2-4(b)] [326 IAC 24-3-4(b)] [40 CFR 97.106(b)] [40 CFR 97.206(b)] [40 CFR 97.306(b)]

- (a) The owners and operators, and the CAIR designated representative, of each CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source and CAIR NO<sub>x</sub> units, CAIR SO<sub>2</sub> units, and CAIR NO<sub>x</sub> ozone season units at the source shall comply with the monitoring, reporting, and record keeping requirements of 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11.
- (b) The emissions measurements recorded and reported in accordance with 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11 shall be used to determine compliance by each CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source with the CAIR NO<sub>x</sub> emissions limitation under 326 IAC 24-1-4(c), CAIR SO<sub>2</sub> emissions limitation under 326 IAC 24-2-4(c), and CAIR NO<sub>x</sub> ozone season emissions limitation under 326 IAC 24-3-4(c) and Condition G.4.1, Nitrogen Oxides Emission Requirements, Condition G.4.2, Sulfur Dioxide Emission Requirements, and Condition G.4.3, Nitrogen Oxides Ozone Season Emission Requirements.

**G.4.1 Nitrogen Oxides Emission Requirements [326 IAC 24-1-4(c)] [40 CFR 97.106(c)]**

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- (a) As of the allowance transfer deadline, the owners and operators of each CAIR NO<sub>x</sub> source and each CAIR NO<sub>x</sub> unit at the source shall hold, in the source's compliance account, CAIR NO<sub>x</sub> allowances available for compliance deductions for the control period under 326 IAC 24-1-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO<sub>x</sub> units at the source, as determined in accordance with 326 IAC 24-1-11.
- (b) A CAIR NO<sub>x</sub> unit shall be subject to the requirements under (a) above and 326 IAC 24-1-4(c)(1) starting on January 1, 2008.
- (c) A CAIR NO<sub>x</sub> allowance shall not be deducted for compliance with the requirements under (a) above and 326 IAC 24-1-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO<sub>x</sub> allowance was allocated.
- (d) CAIR NO<sub>x</sub> allowances shall be held in, deducted from, or transferred into or among CAIR NO<sub>x</sub> allowance tracking system accounts in accordance with 326 IAC 24-1-9, 326 IAC 24-1-10, and 326 IAC 24-1-12.
- (e) A CAIR NO<sub>x</sub> allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO<sub>x</sub> annual trading program. No provision of the CAIR NO<sub>x</sub> annual trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-1-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.
- (f) A CAIR NO<sub>x</sub> allowance does not constitute a property right.
- (g) Upon recordation by the U.S. EPA under 326 IAC 24-1-8, 326 IAC 24-1-9, 326 IAC 24-1-10, or 326 IAC 24-1-12, every allocation, transfer, or deduction of a CAIR NO<sub>x</sub> allowance to or from a CAIR NO<sub>x</sub> source's compliance account is incorporated automatically in this CAIR permit.

**G.4.2 Sulfur Dioxide Emission Requirements [326 IAC 24-2-4(c)] [40 CFR 97.206(c)]**

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- (a) As of the allowance transfer deadline, the owners and operators of the CAIR SO<sub>2</sub> source and each CAIR SO<sub>2</sub> unit at the source shall hold, in the source's compliance account, a tonnage equivalent of CAIR SO<sub>2</sub> allowances available for compliance deductions for the control period under 326 IAC 24-2-8(j) and 326 IAC 24-2-8(k) not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO<sub>2</sub> units at the source, as determined in accordance with 326 IAC 24-2-10.
- (b) A CAIR SO<sub>2</sub> unit shall be subject to the requirements under (a) above and 326 IAC 24-2-4(c)(1) starting on January 1, 2009.
- (c) A CAIR SO<sub>2</sub> allowance shall not be deducted for compliance with the requirements under (a) above and 326 IAC 24-2-4(c)(1), for a control period in a calendar year before the year for which the CAIR SO<sub>2</sub> allowance was allocated.
- (d) CAIR SO<sub>2</sub> allowances shall be held in, deducted from, or transferred into or among CAIR SO<sub>2</sub> allowance tracking system accounts in accordance with 326 IAC 24-2-8, 326 IAC 24-2-9, and 326 IAC 24-2-11.
- (e) A CAIR SO<sub>2</sub> allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO<sub>2</sub> trading program. No provision of the CAIR SO<sub>2</sub> trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-2-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.

- (f) A CAIR SO<sub>2</sub> allowance does not constitute a property right.
- (g) Upon recordation by the U.S. EPA under 326 IAC 24-2-8, 326 IAC 24-2-9, or 326 IAC 24-2-11, every allocation, transfer or deduction of a CAIR SO<sub>2</sub> allowance to or from a CAIR SO<sub>2</sub> source's compliance account is incorporated automatically in this CAIR permit.

G.4.3 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]

- (a) As of the allowance transfer deadline, the owners and operators of the each CAIR NO<sub>x</sub> ozone season source and each CAIR NO<sub>x</sub> ozone season unit at the source shall hold, in the source's compliance account, CAIR NO<sub>x</sub> ozone season allowances available for compliance deductions for the control period under 326 IAC 24-3-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO<sub>x</sub> ozone season units at the source, as determined in accordance with 326 IAC 24-3-11.
- (b) A CAIR NO<sub>x</sub> unit shall be subject to the requirements under (a) above and 326 IAC 24-3-4(c)(1) starting on May 1, 2008.
- (c) A CAIR NO<sub>x</sub> ozone season allowance shall not be deducted for compliance with the requirements under (a) above and 326 IAC 24-3-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO<sub>x</sub> ozone season allowance was allocated.
- (d) CAIR NO<sub>x</sub> ozone season allowances shall be held in, deducted from, or transferred into or among CAIR NO<sub>x</sub> ozone season allowance tracking system accounts in accordance with 326 IAC 24-3-9, 326 IAC 24-3-10, and 326 IAC 24-3-12.
- (e) A CAIR NO<sub>x</sub> allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO<sub>x</sub> ozone season trading program. No provision of the CAIR NO<sub>x</sub> ozone season trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-3-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.
- (f) A CAIR NO<sub>x</sub> allowance does not constitute a property right.
- (g) Upon recordation by the U.S. EPA under 326 IAC 24-3-8, 326 IAC 24-3-9, 326 IAC 24-3-10, or 326 IAC 24-3-12, every allocation, transfer, or deduction of a CAIR NO<sub>x</sub> ozone season allowance to or from a CAIR NO<sub>x</sub> ozone season source's compliance account is incorporated automatically in this CAIR permit.

G.5 Excess Emissions Requirements [326 IAC 24-1-4(d)] [326 IAC 24-2-4(d)] [326 IAC 24-3-4(d)] [40 CFR 97.106(d)] [40 CFR 97.206(d)] [40 CFR 97.306(d)]

The owners and operators of a CAIR NO<sub>x</sub> source and each CAIR NO<sub>x</sub> unit that emits nitrogen oxides during any control period in excess of the CAIR NO<sub>x</sub> emissions limitation shall do the following:

- (a) Surrender the CAIR NO<sub>x</sub> allowances required for deduction under 326 IAC 24-1-9(j)(4).
- (b) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-1-4, the Clean Air Act (CAA), and applicable state law.

The owners and operators of a CAIR SO<sub>2</sub> source and each CAIR SO<sub>2</sub> unit that emits sulfur dioxide during any control period in excess of the CAIR SO<sub>2</sub> emissions limitation shall do the following:

- (a) Surrender the CAIR SO<sub>2</sub> allowances required for deduction under 326 IAC 24-2-8(k)(4).
- (b) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-2-4, the Clean Air Act (CAA), and applicable state law.

The owners and operators of a CAIR NO<sub>x</sub> ozone season source and each CAIR NO<sub>x</sub> ozone season unit that emits nitrogen oxides during any control period in excess of the CAIR NO<sub>x</sub> ozone season emissions limitation shall do the following:

- (a) Surrender the CAIR NO<sub>x</sub> ozone season allowances required for deduction under 326 IAC 24-3-9(j)(4).
- (b) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-3-4, the Clean Air Act (CAA), and applicable state law.

G.6 Record Keeping Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)]  
[326 IAC 2-7-5(3)] [40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]

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Unless otherwise provided, the owners and operators of the CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source and each CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit at the source shall keep on site at the source or at a central location within Indiana for those owners or operators with unattended sources, each of the following documents for a period of five (5) years from the date the document was created:

- (a) The certificate of representation under 326 IAC 24-1-6(h), 326 IAC 24-2-6(h), 326 IAC 24-3-6(h) for the CAIR designated representative for the source and each CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation. The certificate and documents shall be retained on site at the source or at a central location within Indiana for those owners or operators with unattended sources beyond such five (5) year period until such documents are superseded because of the submission of a new account certificate of representation under 326 IAC 24-1-6(h), 326 IAC 24-2-6(h), 326 IAC 24-3-6(h) changing the CAIR designated representative.
- (b) All emissions monitoring information, in accordance with 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11, provided that to the extent that 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11 provides for a three (3) year period for record keeping, the three (3) year period shall apply.
- (c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and CAIR NO<sub>x</sub> ozone season trading program.
- (d) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and CAIR NO<sub>x</sub> ozone season trading program or to demonstrate compliance with the requirements of the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and

CAIR NO<sub>x</sub> ozone season trading program.

This period may be extended for cause, at any time before the end of five (5) years, in writing by IDEM, OAQ or the U.S. EPA. Unless otherwise provided, all records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

G.7 Reporting Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)]  
[40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]

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- (a) The CAIR designated representative of the CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source and each CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit at the source shall submit the reports required under the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and CAIR NO<sub>x</sub> ozone season trading program, including those under 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11.
- (b) Pursuant to 326 IAC 24-1-4(e), 326 IAC 24-2-4(e), and 326 IAC 24-3-4(e) and 326 IAC 24-1-6(e)(1), 326 IAC 24-2-6(e)(1), and 326 IAC 24-3-6(e)(1), each submission under the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and CAIR NO<sub>x</sub> ozone season trading program shall include the following certification statement by the CAIR designated representative: "I am authorized to make this submission on behalf of the owners and operators of the source or units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."
- (c) Where 326 IAC 24-1, 326 IAC 24-2, and 326 IAC 24-3 requires a submission to IDEM, OAQ, the CAIR designated representative shall submit required information to:

Indiana Department of Environmental Management  
Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (d) Where 326 IAC 24-1, 326 IAC 24-2, and 326 IAC 24-3 requires a submission to U.S. EPA, the CAIR designated representative shall submit required information to:

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

G.8 Liability [326 IAC 24-1-4(f)] [326 IAC 24-2-4(f)] [326 IAC 24-3-4(f)] [40 CFR 97.106(f)]  
[40 CFR 97.206(f)] [40 CFR 97.306(f)]

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The owners and operators of each CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source and each CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit shall be liable as follows:

- (a) Each CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source and each CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit shall meet the requirements of the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and

CAIR NO<sub>x</sub> ozone season trading program.

- (b) Any provision of the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and CAIR NO<sub>x</sub> ozone season trading program that applies to a CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source or the CAIR designated representative of a CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source shall also apply to the owners and operators of such source and of the CAIR NO<sub>x</sub> units, CAIR SO<sub>2</sub> units, and CAIR NO<sub>x</sub> ozone season units at the source
- (c) Any provision of the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and CAIR NO<sub>x</sub> ozone season trading program that applies to a CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit or the CAIR designated representative of a CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit shall also apply to the owners and operators of such units.

G.9 Effect on Other Authorities [326 IAC 24-1-4(g)] [326 IAC 24-2-4(g)] [326 IAC 24-3-4(g)]  
[40 CFR 97.106(g)] [40 CFR 97.206(g)] [40 CFR 97.306(g)]

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No provision of the CAIR NO<sub>x</sub> annual trading program, CAIR SO<sub>2</sub> trading program, and CAIR NO<sub>x</sub> ozone season trading program, a CAIR permit application, a CAIR permit, or an exemption under 326 IAC 24-1-3, 326 IAC 24-2-3, and 326 IAC 24-3-3 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO<sub>x</sub> source, CAIR SO<sub>2</sub> source, and CAIR NO<sub>x</sub> ozone season source or CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit, and CAIR NO<sub>x</sub> ozone season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act (CAA).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
Part 70 Permit No.: T165-25496-00022

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
Part 70 Permit No.: T165-25496-00022

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

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

Page 2 of 2

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

Form Completed by: \_\_\_\_\_

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

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

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

A certification is not required for this report.

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

### Part 70 Quarterly Report

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
 Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
 Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
 Part 70 Permit No.: T165-25496-00022  
 Facilities: Eight (8) simple cycle combustion turbines  
 Parameter: Total NOx emissions, including emissions from startup and shutdown  
 Limit: 426.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

	Month	Total NOx Emissions for This Month	Total NOx Emissions for Previous 11 Months	Total NOx Emissions for 12-Month Period
<b>Emissions from Startup</b>				
<b>Emissions from Normal Operation</b>				
<b>Emissions from Shutdown</b>				
<b>Emissions from Startup, Normal Operation, and Shutdown combined</b>				

- No deviation occurred in this month.
- Deviation/s occurred in this month.  
 Deviation has been reported on:

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
 Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
 Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
 Part 70 Permit No.: T165-25496-00022  
 Facilities: Eight (8) simple cycle combustion turbines  
 Parameter: Total CO emissions, including emissions from startup and shutdown  
 Limit: 432.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

	Month	Total CO Emissions for This Month	Total CO Emissions for Previous 11 Months	Total CO Emissions for 12-Month Period
<b>Emissions from Startup</b>				
<b>Emissions from Normal Operation</b>				
<b>Emissions from Shutdown</b>				
<b>Emissions from Startup, Normal Operation, and Shutdown combined</b>				

No deviation occurred in this month.

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

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
 Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
 Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
 Part 70 Permit No.: T165-25496-00022  
 Facility: Two (2) emergency diesel generators  
 Parameter: Diesel fuel usage  
 Limit: 6,029 gallons per day

MONTH :

YEAR:

Day	Diesel Fuel Oil Usage This Day (gallons)	Day	Diesel Fuel Oil Usage This Day (gallons)
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16		no. of deviations	

No deviation occurred in this quarter.

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

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

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
Part 70 Permit No.: T165-25496-00022  
Facility: Two (2) emergency diesel generators  
Parameter: Diesel fuel usage  
Limit: 125,620 gallons per twelve (12) consecutive month period

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

Month	Diesel Fuel Usage for This Month (gallons)	Diesel Fuel Usage for Previous 11 Months (gallons)	Diesel Fuel Usage for 12-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: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
Part 70 Permit No.: T165-25496-00022  
Facility: One (1) emergency diesel fire pump  
Parameter: Diesel fuel usage  
Limit: 5,840 gallons per twelve (12) consecutive month period

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

Month	Diesel Fuel Usage for This Month (gallons)	Diesel Fuel Usage for Previous 11 Months (gallons)	Diesel Fuel Usage for 12-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: \_\_\_\_\_

Attach a signed certification to complete this report.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY Compliance Data Section and Vermillion County Air Pollution Control Part 70 Quarterly Report

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
 Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
 Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
 Part 70 Permit No.: T165-25496-00022  
 Facility: Each of the eight (8) natural gas combustion turbines operating in simple cycle  
 Limit: 240 hour startups/shutdowns per twelve (12) consecutive month period

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

		Startup/Shutdown										Startup/Shutdown							
Day/Turbine		1	2	3	4	5	6	7	8	Day/Turbine		1	2	3	4	5	6	7	8
1.										17.									
2.										18.									
3.										19.									
4.										20.									
5.										21.									
6.										22.									
7.										23.									
8.										24.									
9.										25.									
10.										26.									
11.										27.									
12.										28.									
13.										29.									
14.										30.									
15.										31.									
16.										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: \_\_\_\_\_

Attach a signed certification to complete this report

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
 Source Address: 2777 North State Road 63, Cayuga, Indiana 47928  
 Mailing Address: 1000 East Main Street, Plainfield, IN 46168  
 Part 70 Permit No.: T165-25496-00022

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

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

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

Form Completed by: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

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

**Source Background and Description**

<b>Source Name:</b>	<b>Duke Energy Ohio, Inc - Vermillion Energy Facility</b>
<b>Source Location:</b>	<b>2777 North State Road 63, Cayuga, IN 47928</b>
<b>County:</b>	<b>Vermillion</b>
<b>SIC Code:</b>	<b>4911</b>
<b>Permit Renewal No.:</b>	<b>T165-25496-00022</b>
<b>Permit Reviewer:</b>	<b>Summer Keown</b>

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Duke Energy Ohio, Inc - Vermillion Energy Facility relating to the operation of a stationary 640 MW merchant power plant source.

**History**

On November 2, 2007, Duke Energy Ohio, Inc - Vermillion Energy Facility submitted an application to the OAQ requesting to renew its operating permit. Duke Energy Ohio, Inc - Vermillion Energy Facility was issued a Part 70 Operating Permit, No. T165-14185-00022, on May 14, 2003.

**Permitted Emission Units and Pollution Control Equipment**

- (a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, equipped with low-NO<sub>x</sub> combustors, exhausting to stacks designated as # 1 through # 8, with a maximum heat input capacity of 1,272 million British thermal units per hour for each turbine, and a nominal output of 80 MW, each.
- (b) Two (2) emergency diesel generators, identified as units #9 and #10, installed in 2000, exhausting to stacks designated as #9 and #10, with a maximum heat input capacity of 17.21 million British thermal units per hour, each.
- (c) One (1) emergency diesel fire pump, identified as unit #11, installed in 2000, exhausting to stack designated as #11, with a maximum heat input capacity of 1.6 million British thermal units per hour.

**Insignificant Activities**

- (a) The following VOC and HAP storage containers: storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (b) Closed loop heating and cooling systems.
- (c) Paved and unpaved roads and parking lots with public access. (326 IAC 6-4)
- (d) Flue gas conditioning systems and associated chemicals such as the following: sodium sulfate; ammonia; and sulfur trioxide.
- (e) Other emergency equipment as follows: stationary fire pumps.

## Existing Approvals

Since the issuance of the Part 70 Operating Permit (T165-14185-00022) on May 14, 2003, the source has constructed or has been operating under the following approvals as well:

- (a) 112(j) Applicability Determination No. 165-16415-00022, issued on November 12, 2004.
- (b) Acid Rain Permit First Renewal No. 165-19814-00022, issued on August 29, 2005.
- (c) Significant Source Modification No. 165-21133-00022, issued on May 17, 2006.
- (d) Significant Permit Modification No. 165-18731-00022, issued on May 26, 2006.
- (e) Administrative Amendment No. 165-23065-00022, issued on June 9, 2006.
- (f) Administrative Amendment No. 165-23464-00022, issued on October 13, 2006.
- (g) Administrative Amendment No. 165-23834, issued on December 22, 2006.

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

## Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justifications such that the low-NO<sub>x</sub> combustors be considered as an integral part of the turbines:

The combustor is an integral part of the combustion turbines located at the source. The combustion section of the unit is where fuel is introduced, ignited and burned. Without the combustor, the turbine could not operate. Based on this information, the low-NO<sub>x</sub> combustors are considered integral to the turbines.

Pursuant to CP 165-10476-00022, issued on July 1, 1999, the IDEM, OAQ has evaluated the justifications and agreed that the low-NO<sub>x</sub> combustors will be considered as an integral part of the turbines. Therefore, the permitting level will be determined using the potential emissions after the low-NO<sub>x</sub> combustors. Operating conditions will be specified in the proposed permit that this low-NO<sub>x</sub> combustors shall operate at all times when the turbines are in operation.

## Enforcement Issue

There are no enforcement actions pending.

## Emission Calculations

See Appendix A (pages 1 through 5) of this document for detailed emissions calculations.

## County Attainment Status

The source is located in Vermillion County

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>

Pollutant	Designation
PM <sub>10</sub>	Attainment effective October 27, 1997, for the part of Clinton Township that includes sections 15, 16, 21, 22, 27, 28, 33, and 34. Unclassifiable effective November 15, 1990, for the remainder of Vermillion County.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM <sub>2.5</sub> .	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Vermillion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM 2.5

Vermillion County has been classified as attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions.

(c) Other Criteria Pollutants

Vermillion County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, and there are no applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source:

Pollutant	tons/year
PM	176.10
PM <sub>10</sub>	175.72
SO <sub>2</sub>	21.92
VOC	73.08
CO	1899.81
NO <sub>x</sub>	1521.5

HAPs	tons/year
Benzene	0.53
Formaldehyde	31.65
Toluene	5.79
Acetaldehyde	1.78
Xylene	2.85
Napthalene	0.06
Acrolein	0.29
<b>Total</b>	<b>42.95</b>

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of CO, NO<sub>x</sub>, and PM/PM<sub>10</sub> is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (d) This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, and there are no applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

### Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

### Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential to Emit (tons/year)								
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	formaldehyde	toluene	Total HAPs
turbines	175.2	175.2	21.0	72.18	432.0	426.0	<9.9	<9.9	<24.9
generators	0.86	0.50	0.86	0.86	7.31	27.52	negl.	negl.	negl.
fire pump	0.04	0.02	0.04	0.04	0.34	1.28	negl.	negl.	negl.
<b>Total</b>	<b>176.1</b>	<b>175.7</b>	<b>21.9</b>	<b>73.08</b>	<b>439.65</b>	<b>454.8</b>	<b>&lt;10</b>	<b>&lt;10</b>	<b>&lt;25</b>
<b>PSD Major Source Threshold</b>	n/a	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>10</b>	<b>10</b>	<b>less than 10 for individual HAP; less than 25 for total HAPs</b>

- (a) This existing stationary source is major for PSD because the potential emissions of CO and NO<sub>x</sub> are greater than two hundred fifty (>250) tons per year, and is not one of the twenty-eight (28) listed source categories.
- (b) Fugitive Emissions  
 This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, and there are no applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

### Federal Rule Applicability

The following federal rules are applicable to the source:

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to existing emission units that involve a pollutant-specific emission unit and meet the following criteria:
  - (1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;
  - (2) is subject to an emission limitation or standard for that pollutant; and
  - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

There are no facilities at this source that use a control device to comply with an emission limitation or standard. Therefore, the requirements of 40 CFR Part 64, CAM are not applicable to any of the existing units as part of this Part 70 permit renewal.

- (b) The eight (8) combustion turbines are subject to 40 CFR Part 60, Subpart GG because the heat input at peak load is equal to or greater than 10.7 gigajoules 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, as required by 40 CFR 60.332, to:

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

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) Operate a Continuous Monitoring System to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine as required by 40 CFR 60.334(a);
- (3) Limit sulfur dioxide emissions, as required by 40 CFR 60.333, to 0.015 percent by volume at fifteen (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.
- (4) Report periods of excess emissions, as required by 40 CFR 60.334(c).

The Permittee must comply with the following custom fuel monitoring schedule approved by the U.S. EPA on May 30, 2000:

- (5) Monitor the sulfur content of the natural gas being fired in the turbine by ASTM method D 5504-94.
- (6) Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine. As soon as the Permittee installs the equipment capable of using low sulfur (0.05%) distillate oil as the backup fuel, monitoring of fuel nitrogen content will be required pursuant to 40 CFR 60.334(b).
- (7) Sulfur Monitoring
- (A) Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The approved alternative method is ASTM Method D5504-94.

- (B) Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted one per quarter for six quarters.
  - (C) If after the monitoring required in item 7(B) above, or herein, the sulfur content of the fuel shows little variability and calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.
  - (D) Should any sulfur analysis as required in items 7(B) or 7(C) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the U.S. EPA Region V Air and Radiation Division of such excess emissions and the custom schedule shall be re-examined by the U.S. EPA. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
- (8) If there is change in fuel supply, the owner or operator must notify the EPA of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being reexamined.
  - (9) Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state and local air pollution control agencies.
- (c) This source is not subject to the requirements of 40 CFR Part 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) because the limited emissions of the source are less than ten (10) tons per year of each individual HAP and less than twenty-five (25) tons per year for total HAPs.
  - (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.
  - (e) This source is subject to the requirements of 40 CFR Part 72 through 80 (Acid Rain Program). The requirements of this program are detailed in the Acid Rain Permit, No. AR165-19814-00022, issued on August 29, 2005, attached as Attachment A to this permit.

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

#### **326 IAC 1-5-2 (Emergency Reduction Plans)**

The source has submitted an Emergency Reduction Plan (ERP) on September 11, 2000. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

#### **326 IAC 1-7 (Stack Height Provisions)**

Stacks #1 through #8 are subject to the requirements of 326 IAC 1-7 (Stack Height Provisions) because the potential emissions which exhaust through the above mentioned stacks, are greater than twenty-five (25) tons per year of PM. This rule requires that the stack be constructed using Good Engineering Practice (GEP), unless field studies or other methods of modeling show to the

satisfaction of IDEM that no excessive ground level concentrations, due to less than adequate stack height, will result.

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to CP165-10476-00022, issued on July 1, 1999, this source is subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) for emissions of PM, PM<sub>10</sub>, VOC, SO<sub>2</sub>, CO, and NO<sub>x</sub>, Be and H<sub>2</sub>SO<sub>4</sub>. The potential to emit of NO<sub>x</sub> and CO are greater than 250 tons per year.

326 IAC 2-3 (Emission Offset)

326 IAC 2-3 is applicable to major stationary sources located in nonattainment areas. This source is located in Vermillion County, which is attainment for all criteria pollutants; therefore 326 IAC 2-3 is not applicable.

326 IAC 2-4.1-1 (New Source Toxics Control)

The eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, the two (2) Emergency diesel generators, identified as units #9 and #10, installed in 2000, and the one (1) emergency diesel fire pump, identified as unit #11, installed in 2000, are not subject to the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) because the potential to emit each individual hazardous air pollutant (HAP) is less than ten (10) tons per year and the potential to emit total HAPs is less than a total of twenty-five (25) tons per year, from each unit.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. In accordance with the compliance schedule specified in 326 IAC 2-6-3, an emission statement must be submitted annually by July 1. Therefore, the next emission statement for this source must be submitted by July 1, 2008. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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 the permit:

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

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

326 IAC 6-5 applies to sources of fugitive particulate matter located in a nonattainment county. This source is located in Vermillion County, which is in attainment for all criteria pollutants. Therefore, 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations) is not applicable.

**326 IAC 7-4-8 (Sulfur Dioxide Emission Limitations: Vermillion County)**

This source is not subject to the requirements of 326 IAC 7-4-8 (Sulfur Dioxide Emission Limitations: Vermillion County) because even though it is located in Vermillion county it is not one of the listed sources pursuant to this rule.

**326 IAC 9-1 (Carbon Monoxide Emission Limits):**

This source is subject to 326 IAC 9-1 because it is a stationary source of CO emissions commencing operation after March 21, 1972. There are no applicable CO emission limits, under this state rule, established for this type of operation.

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

Pursuant to 326 IAC 10-4-2(16), combustion turbine units CT#1 through CT#8 are each considered an "electricity generating unit (EGU)" because they commenced operation after January 1, 1999 and each unit serves a generator at any time that has a nameplate capacity greater than twenty-five (25) megawatts that produces electricity for sale under a firm contract to the electric grid. Pursuant to 326 IAC 10-4-1(a)(1), an "EGU" is a NO<sub>x</sub> budget unit. Because this source meets the criteria of having one (1) or more NO<sub>x</sub> budget units, it is a NO<sub>x</sub> budget source.

The NO<sub>x</sub> budget permit requirements will be incorporated as Section F of the Part 70 Operating Permit.

**State Rule Applicability – Turbines**

**326 IAC 2-2 (Prevention of Significant Deterioration) Startup/Shutdown Limits**

- (a) Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003, and 326 IAC 2-2 (PSD Requirements), the maximum number of startup/shutdown cycles from each turbine shall not exceed 240 per twelve (12) consecutive months period rolled on a monthly basis as determined at the end of each calendar month. The duration of each startup/ shutdown cycle shall not exceed one (1) hour.
- (b) The NO<sub>x</sub> and CO emissions limitations of 326 IAC 2-2-3 (BACT) for the eight (8) combustion turbines shall also include emissions from startup and shutdown.
- (c) Pursuant to 326 IAC 2-2, the following operation definitions shall apply:
  - (1) Startup is defined as the period of time from the initiation of combustion firing to the attainment of a steady-state operating condition (dry low NO<sub>x</sub> (premix) mode as indicated by DAHS). Premix mode shall be defined as the low emissions mode during which all burner nozzles are in use, burning a lean premix gas for steady-state operation.
  - (2) Steady-state operating condition shall be defined as the period of time that the combustion turbine is operating in dry low NO<sub>x</sub> (premix) mode.
  - (3) Shutdown is defined as that period of time from the end of a steady-state operating condition to the complete cessation of fuel combustion in the unit.
  - (4) A startup/shutdown cycle is a pair of subsequent shutdown and startup events (i.e., one startup followed by one shutdown represents one startup/shutdown cycle).
- (d) The following monitoring definitions shall apply:
  - (1) The data acquisition and handling system (DAHS) process codes shall be defined as follows:

- (A) DAHS Process Code 3 shall mean that a combustion turbine is operating in startup mode.
  - (B) DAHS Process Code 8 shall mean that a combustion turbine is operating in a steady-state condition.
  - (C) DAHS Process Code 4 shall mean that a combustion turbine is in shutdown mode.
  - (D) DAHS Process Code 5 shall mean that a combustion turbine is offline.
- (2) The DAHS monitoring codes shall be defined as follows:
- (A) DAHS Monitoring Code 00 shall mean that the NO<sub>x</sub> or CO CEMS is online and is functioning properly.
  - (B) A DAHS monitoring code other than Monitoring Code 00 shall mean that the NO<sub>x</sub> and/or CO CEMS is down.

326 IAC 2-2-3 (Nitrogen Oxides (NO<sub>x</sub>) Best Available Control Technology)

For the eight (8) combustion turbines, the source shall comply with the following BACT pursuant to CP 165-10476-00022:

- (a) Use dry low-NO<sub>x</sub> combustors in conjunction with natural gas.
- (b) When burning natural gas the NO<sub>x</sub> emission rate shall not exceed a one (1) hour average concentration of fifteen (15) parts per million (ppmvd) of NO<sub>x</sub> at fifteen (15%) percent O<sub>2</sub> in conjunction with dry low-NO<sub>x</sub> combustors.
- (c) When burning natural gas, the NO<sub>x</sub> emission rate shall not exceed an average of twelve (12) parts per million (ppmvd) of NO<sub>x</sub> per year, based on a twelve (12) consecutive month period with compliance determined at the end of each month, at fifteen (15%) percent O<sub>2</sub> in conjunction with dry low-NO<sub>x</sub> combustors.
- (d) The NO<sub>x</sub> emissions from the eight (8) combustion turbines shall be limited to a total of 426.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

326 IAC 2-2-3 (Sulfur Dioxide (SO<sub>2</sub>) Best Available Control Technology)

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with BACT by using natural gas as the only fuel for the combustion turbines.

326 IAC 2-2-3 (Carbon Monoxide (CO) Best Available Control Technology)

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

- (a) The CO emission rate shall not exceed a one (1) hour average concentration of twenty-five (25) parts per million (ppmvd) of CO at fifteen (15%) percent O<sub>2</sub> in conjunction with firing natural gas during a steady-state operating condition.
- (b) The CO emissions from the eight (8) combustion turbines shall be limited to a total of 432.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Perform good combustion practices.

326 IAC 2-2-3 (Particulate Matter (PM/PM<sub>10</sub>) Best Available Control Technology)

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

- (a) Use natural gas as the only fuel for the combustion turbines.
- (b) Perform good combustion practices.

326 IAC 2-2-3 (Volatile Organic Compound (VOC) Best Available Control Technology)

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall perform good combustion practices.

326 IAC 2-2-3 (Non-Criteria PSD Pollutants (Beryllium and H<sub>2</sub>SO<sub>4</sub>) Best Available Control Technology)

Pursuant to 326 IAC 2-2-3 (PSD – Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

- (a) Use natural gas as the only fuel for the combustion turbines.
- (b) Perform good combustion practices.

326 IAC 3-5 (Continuous Monitoring of Emissions)

(a) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a source with an emission limitation or permit requirement established under 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.

(b) Pursuant to PSD Permit CP 165-10476-00022, issued on July 1, 1999, for NO<sub>x</sub> and CO, the Permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system for stacks designated as # 1 through # 8 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). The use of CEMS to measure and record the NO<sub>x</sub> and CO hourly limits, is sufficient to demonstrate compliance with the fifteen (15) parts per million (ppmvd) NO<sub>x</sub> limit and twenty-five (25) parts per million (ppmvd) CO limit, during a steady-state operating condition. To demonstrate compliance with the twelve (12) parts per million (ppmvd) NO<sub>x</sub> annual limit, the source shall average the parts per million (ppmvd) over a twelve (12) consecutive month period.

(2) The CEMS shall be in operation at all times when the eight (8) turbines are in operation.

(3) 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) The Permittee shall follow parametric monitoring requirements for determining SO<sub>2</sub> emissions contained in the “*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*” in lieu of continuous emission monitoring systems (CEMS).

(1) Pursuant to the procedures contained in 40 CFR 75.20, the Permittee shall complete all testing requirements to certify the use of the “*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*” protocol.

- (2) The Permittee shall apply to IDEM for initial certification to use the “*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*” protocol, no later than 45 days after the compliance of all certification tests. The initial plan was received by the IDEM, OAQ on March 7, 2000.
- (3) All certification and compliance methods shall be conducted in accordance with the procedures outlined in 40 CFR Part 75, Appendix D.

326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983)

The eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, are not subject to the requirements of 326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983) because these combustion units are not used for indirect heating.

326 IAC 6-3-2 (Particulate Emission Limitations, Work Practices, and Control Technologies)

The eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, are not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations, Work Practices, and Control Technologies) because the eight (8) turbines are not manufacturing processes.

326 IAC 8-1-6 (New facilities; general reduction requirements):

Pursuant to 326 IAC 8-1-6 (New facilities; general reduction requirements), the requirements of BACT shall apply to each turbine because the potential to emit of VOC is greater than or equal to twenty-five (25) tons per year per unit. The requirements of 326 IAC 8-1-6 have been met through the PSD BACT Review (326 IAC 2-2-3). Pursuant to CP 165-10476-00022, issued July 1, 1999, the source shall also perform good combustion practices as BACT.

**State Rule Applicability – Emergency Diesel Fire Pump**

326 IAC 2-2-3 (Best Available Control Technology)

For the one (1) emergency diesel fire pump, the source shall comply to the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

- (a) Perform good combustion practices.
- (b) The sulfur content of the diesel fuel used by the fire pump shall not exceed 0.05 percent by weight.
- (c) The total input of the diesel fuel to the fire pump shall be limited to 5,840 gallons per twelve (12) consecutive month period, rolled on a monthly basis.

**State Rule Applicability – Emergency Diesel Generators**

326 IAC 2-2-3 (Nitrogen Oxides (NO<sub>x</sub>) Best Available Control Technology)

For the two (2) emergency diesel generators, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

The source shall perform good combustion practices.

326 IAC 2-2-3 (Sulfur Dioxide (SO<sub>2</sub>) Best Available Control Technology)

For the two (2) emergency diesel generators, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

- (a) Perform good combustion practices.

- (b) The sulfur content of the diesel fuel used by the generators shall not exceed 0.05 percent by weight.
- (c) The total input of the diesel fuel to the generators shall be limited to 6,029 gallons per day and shall not exceed a total of 125,620 gallons per twelve consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 0.435 tons of SO<sub>2</sub> per year and 27.5 tons of NO<sub>x</sub> per year.

326 IAC 2-2-3 (Particulate Matter (PM/PM<sub>10</sub>) Best Available Control Technology)

For the two (2) emergency diesel generators, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

- (1) The limit of diesel fuel established under the SO<sub>2</sub> BACT analysis as listed above.
- (2) Perform good combustion practices.

326 IAC 2-2-3 (Carbon Monoxide (CO) Best Available Control Technology)

For the two (2) emergency diesel generators, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

The source shall perform good combustion practices.

### Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5 or 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

The compliance monitoring requirements applicable to this source are as follows:

- (a) The eight (8) simple cycle combustion turbines have applicable compliance determination conditions as specified below:
  - (1) Pursuant to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines), the Permittee must comply with the following custom fuel monitoring schedule approved by the EPA on May 30, 2000:
    - (A) Monitor the sulfur content of the natural gas being fired in the turbine by ASTM method D 5504-94, or one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82.

- (B) Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
  - (C) Sulfur Monitoring
    - (1) Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The approved alternative method is ASTM Method D5504-94.
    - (2) Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six (6) months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted one per quarter for six quarters.
    - (3) If after the monitoring required in item c(2) above, or herein, the sulfur content of the fuel shows little variability and calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.
    - (4) Should any sulfur analysis as required in items c(2) or c(3) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the U.S. EPA Region V Air and Radiation Division of such excess emissions and the custom schedule shall be re-examined by the U.S. EPA. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
  - (D) If there is change in fuel supply, the owner or operator must notify the EPA of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
  - (E) Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state and local air pollution control agencies.
- (2) 326 IAC 3-5 (Continuous Monitoring of Emissions)
- (A) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a source with an emission limitation or permit requirement established under 326 IAC 2-1-3(i)(8) 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.

- (B) Pursuant to PSD Permit CP 165-10476-00022, issued on July 1, 1999, for NO<sub>x</sub> and CO, the Permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system for stacks designated as # 1 through # 8 in accordance with 326 IAC 3-5-2 and 3-5-3.
- (i) 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). The use of CEMS to measure and record the NO<sub>x</sub> and CO hourly limits, is sufficient to demonstrate compliance with the fifteen (15) parts per million (ppmvd) NO<sub>x</sub> limit and twenty-five (25) parts per million (ppmvd) CO limit, during a steady-state operating condition. To demonstrate compliance with the twelve (12) parts per million (ppmvd) NO<sub>x</sub> annual limit, the source shall average the parts per million (ppmvd) over a twelve (12) consecutive month period.
  - (ii) The CEMS shall be in operation at all times when the eight (8) turbines are in operation.
  - (ii) 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) The Permittee shall follow parametric monitoring requirements for determining SO<sub>2</sub> emissions contained in the "*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*" in lieu of continuous emission monitoring systems (CEMS).
- (i) Pursuant to the procedures contained in 40 CFR 75.20, the Permittee shall complete all testing requirements to certify the use of the "*Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units*" protocol.
  - (ii) The Permittee shall apply to IDEM for initial certification to use the "*Optional SO<sub>2</sub> - Emissions Data Protocol for Gas-Fired and Oil-Fired Units*" protocol, no later than 45 days after the compliance of all certification tests. The initial plan was received by the IDEM/OAQ on March 7, 2000.
  - (iii) All certification and compliance methods shall be conducted in accordance with the procedures outlined in 40 CFR Part 75, Appendix D.

(3) CEMS NO<sub>x</sub> and CO Missing Data Substitution

Whenever the DAHS monitoring code is not Monitoring Code 00 (the NO<sub>x</sub> and/or CO CEMS is down), until the DAHS is restored to Monitoring Code 00, as an alternative to the missing data substitution requirements in Section C – Maintenance of Continuous Emission Monitoring Equipment, the Permittee may use the following missing data substitution procedures utilizing the DAHS Process Codes defined in Conditions D.1.7(b) and (c):

- (a) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods of startup, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by DAHS Process Code 3 within the past twelve (12) consecutive months.

- (b) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods of a steady-state operating condition, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by DAHS Process Code 8 within the past twelve (12) consecutive months.
  - (c) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods of shutdown, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by DAHS Process Code 4 within the past twelve (12) consecutive months.
  - (d) Whenever a NO<sub>x</sub> and/or CO CEMS is down during periods where the DAHS records two (2) or more process codes, the Permittee shall substitute the maximum NO<sub>x</sub>/CO emission rate (in pounds or tons per hour) recorded by those DAHS process codes within the past twelve (12) consecutive months.
  - (e) The alternative missing data procedures in paragraphs (a) through (d) of this condition do not relieve the Permittee of the responsibility to comply with the requirements listed in Section C – Maintenance of Continuous Emission Monitoring Equipment for 40 CFR 75 (Title IV Acid Rain Program) and 326 IAC 10-4 (NO<sub>x</sub> Budget Trading Program) or the requirement to operate the CEMS.
- (b) The two (2) emergency diesel generators, identified as units #9 and #10, and the one (1) emergency diesel fire pump, identified as unit #11, have applicable compliance determination conditions as specified below:

Compliance shall be determined utilizing one of the following options:

- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
  - (A) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
  - (B) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two (2) emergency diesel fired generators, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

## **Recommendation**

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal 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 November 2, 2007.

## **Conclusion**

The operation of this stationary 640 MW merchant power plant source shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T165-25496-00022.

**Appendix A: Emissions Calculations  
Emissions Summary**

**Company Name: Duke Energy Ohio, Inc - Vermillion Energy Facility  
Address, City IN Zip: 2777 North State Road 63, Cayuga, IN 47928  
Permit Number: T165-25496-00022  
Reviewer: Summer Keown  
Date: February 7, 2008**

**Uncontrolled Potential Emissions (tons/year)**

Emissions Generating Activity				
Pollutant	Turbines	Generators	Fire Pump	TOTAL
PM	175.20	0.86	0.04	<b>176.1</b>
PM10	175.20	0.49	0.02	<b>175.7</b>
SO2	21.02	0.86	0.04	<b>21.9</b>
NOx	1,492.70	27.52	1.28	<b>1,521.5</b>
VOC	72.18	0.86	0.04	<b>73.1</b>
CO	1,892.16	7.31	0.34	<b>1,899.8</b>
total HAPs	42.95	negl.	negl.	<b>43.0</b>
worst case single HAP	31.65	negl.	negl.	

(formaldehyde)

Total emissions based on rated capacity at 8,760 hours/year.

**Limited Potential Emissions (tons/year)**

Emissions Generating Activity				
Pollutant	Turbines	Generators	Fire Pump	TOTAL
PM	175.2	0.86	0.04	<b>176.1</b>
PM10	175.2	0.49	0.02	<b>175.7</b>
SO2	21.0	0.86	0.04	<b>21.9</b>
NOx*	426.0	27.52	1.28	<b>454.8</b>
VOC	72.18	0.86	0.04	<b>73.1</b>
CO*	432.0	7.31	0.34	<b>439.7</b>
total HAPs	42.95	negl.	negl.	<b>43.0</b>
worst case single HAP	31.65	negl.	negl.	

(formaldehyde)

\*NOx and CO emissions from the eight (8) turbines limited by BACT.

**Appendix A: Emissions Calculations**  
**Eight (8) Combustion Turbines**

Page 2 of 5 TSD App A

**Company Name:** Duke Energy Ohio, Inc - Vermillion Energy Facility  
**Address, City IN Zip:** 2777 North State Road 63, Cayuga, IN 47928  
**Permit Number:** T165-25496-00022  
**Reviewer:** Summer Keown  
**Date:** February 7, 2008

and worst case operating conditions (information supplied by the General Electric vendor). Compliance shall be demonstrated by use of a continuous monitoring system for CO and NO<sub>x</sub>. Compliance for SO<sub>2</sub> shall be demonstrated by utilizing 40 CFR Part 75, Appendix D. The following calculations are from CP 165-10476-00022, issued on July 1, 1999. Please note that the worst case emissions calculations are based on data from GE dated 1998. These pound per hour emission factors have been accepted by the IDEM, OAQ, pursuant to CP 165-10476-00022, issued on July 1, 1999.

**Unrestricted Potential to Emit of Eight (8) Combustion Turbines**

**NO<sub>x</sub>** = 42.6 pounds of NO<sub>x</sub> per hour per turbine \* 8760 hours per year \* ton/2,000 pounds =  
186.59 tons per year per turbine.  
186.59 tons per year per turbine \* 8 (total number of turbines) = **1492.70 tons per year.**

**SO<sub>2</sub>** = 0.6 pounds of SO<sub>2</sub> per hour per turbine \* 8760 hours per year \* ton/2000 pounds =  
2.63 tons per year per turbine  
2.63 tons per year per turbine \* 8 (total number of turbines) = **21.01 tons per year.**

**CO** = 54.0 pounds of CO per hour per turbine \* 8760 hours per year \* ton/2000 pounds =  
236.52 tons per year per turbine.  
236.52 tons per year per turbine \* 8 (total number of turbines) = **1892.16 tons per year.**

**VOC** = 2.06 pounds of CO per hour per turbine \* 8760 hours per year \* ton/2000 pounds =  
9.02 tons per year per turbine.  
9.02 tons per year per turbine \* 8 (total number of turbines) = **72.18 tons per year.**

**PM/PM10** = 5.0 pounds of PM/PM10 per hour per turbine \* 8760 hours per year \* ton/2000 pounds =  
21.90 tons per year.  
21.90 tons per year \* 8 (total number of turbines) = **175.20 tons per year.**

**Appendix A: Emission Calculations**  
**HAPs Emissions for the Eight (8) Turbines**

**Company Name:**  
**Address City IN Zip:**  
**Permit Number:**  
**Reviewer:**  
**Date:**

Total Heat Input (MMBtu/hr) = 10176.0 (8 turbines at 1272 MMBtu each)

Natural Gas			
Hazardous Air Pollutant (HAP)	Emission Factor (lb/MMBtu)	Potential Emissions for 8 turbines combined (tons/yr)	Potential Emissions per turbine (tons/yr)
Acetaldehyde	4.00E-05	1.78	0.22
Acrolein	6.40E-06	0.29	0.04
Benzene	1.20E-05	0.53	0.07
Formaldehyde	7.10E-04	31.65	3.96
Napthalene	1.30E-06	0.06	0.01
Toluene	1.30E-04	5.79	0.72
Xylene	6.40E-05	2.85	0.36
<b>Total HAPs:</b>		<b>42.95</b>	<b>5.37</b>

**Methodology:**

Limited Emissions are based on a limit of 2500 operating hours per year for each turbine.

Emission Factors for organic HAPs are from AP-42, Table 3.1

Formaldehyde emissions were assumed to be 100% of the VOC emissions, therefore the vendor VOC information supplied was used.

Emissions (tons/yr) = Heat input rate (MMBtu/hr) \* Emission Factor (lb/MMBtu) \* 8760 hr/yr / 2,000 lb/ton

**Appendix A: Emissions Calculations  
Two (2) Emergency Diesel Generators  
#1 and #2 Fuel Oil**

**Company Name: Duke Energy Ohio, Inc - Vermillion Energy Facility**  
**Address, City IN Zip: 2777 North State Road 63, Cayuga, IN 47928**  
**Permit Number: T165-25496-00022**  
**Reviewer: Summer Keown**  
**Date: February 7, 2008**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Weight % Sulfur  
0.05

2 generators rated at 17.2 each

34.4

2152.457143

	Pollutant					CO
	PM*	PM10*	SO2	NOx*	VOC	
Emission Factor in lb/kgal	0.1	0.1	0.1	3.2	0.10	0.85
Potential Emission in tons/yr	0.860	0.493	0.860	27.520	0.860	7.310

\*NOx emissions: uncontrolled = 3.2 lb/MMBtu

**Methodology**

Emissions factors are from AP-43, Tables 3.4-1 and 3.4-2

Emission (tons/yr) = Heat input rate (MMBtu/hr) \* Emission Factor (lb/MMBtu) \* 500 hr/yr \* 1/2,000 lb/ton

**Appendix A: Emissions Calculations**  
**Emergency Diesel Fire Pump**  
**#1 and #2 Fuel Oil**

**Company Name:** Duke Energy Ohio, Inc - Vermillion Energy Facility  
**Address, City IN Zip:** 2777 North State Road 63, Cayuga IN 47928  
**Permit Number:** T165-25496-00022  
**Reviewer:** Summer Keown  
**Date:** February 7, 2008

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Weight % Sulfur  
0.05

1.6

100.1142857

Emission Factor in lb/kgal	Pollutant					CO
	PM*	PM10*	SO2	NOx*	VOC	
0.1	0.1	0.1	0.1	3.2	0.10	0.85
Potential Emission in tons/yr	0.040	0.023	0.040	1.280	0.040	0.340

\*NOx emissions: uncontrolled = 3.2 lb/MMBtu

**Methodology**

Emissions factors are from AP-43, Tables 3.4-1 and 3.4-2

Emission (tons/yr) = Heat input rate (MMBtu/hr) \* Emission Factor (lb/MMBtu) \* 500 hr/yr \* 1/2,000 lb/ton