

## Phase II Draft Acid Rain Permit

### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT Office of Air Management

**Source Name:** Duke Energy Vermillion, LLC  
Vermillion Generating Station  
**Source Location:** County Road 300 N and State Road 63  
Eugene Township, Indiana 47928  
**ORIS Code:** 55111  
**Effective:** April 3, 2000 through April 2, 2005

The Duke Energy Vermillion, LLC is hereby authorized to operate subject to the conditions contained herein: eight (8) simple cycle natural gas combustion turbines, designated as units 1, 2, 3, 4, 5, 6, 7, and 8, with a maximum heat input capacity of 1,000,000,000 British thermal units per hour (1,000 mmBtu/hr) each, a nominal output of 80,000,000 watts (80 MW) each, utilizing diesel fuel as a back-up fuel source, controlled by low-NOx combustors in conjunction with natural gas usage, controlled by wet-injection in conjunction with diesel fuel usage and exhausts to stacks designated as #1-#8.

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| Operation Permit No.: AR No.165-10727 - 00022  |  |
| Issued by<br><br>Janet G. McCabe, Assistant Commissioner<br>Office of Air Management | Issuance Date: April 3, 2000<br><br>Expiration Date: April 2, 2005 |

## Section E

## Title IV Acid Rain

### 326 IAC 21 and 40 CFR 72, 40 CFR 75 through 40 CFR 78, and 58 FR 3590

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

Facilities Description: eight (8) simple cycle natural gas combustion turbines, designated as units 1, 2, 3, 4, 5, 6, 7, and 8, with a maximum heat input capacity of 1,000,000,000 British thermal units per hour (1,000 mmBtu/hr) each, a nominal output of 80,000,000 watts (80 MW) each, utilizing diesel fuel as a back-up fuel source, controlled by low-NOx combustors in conjunction with natural gas usage, controlled by wet-injection in conjunction with diesel fuel usage and exhausts to stacks designated as #1-#8.

#### **E.1.1 Statement of Basis**

Statutory and Regulatory Authorities: In accordance with IC 13-17-3-4, IC 13-17-3-11, IC 13-17-8-1, and IC 13-17-8-2 as well as Title IV - Acid Deposition Control - Section 400 and Title V – Permits - Section 500 of the Clean Air Act, the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) issues this permit pursuant to 326 IAC 2 and 326 IAC 21 (incorporates by reference 40 CFR 72 through 78).

#### **E.1.2 Standard Permit Requirements [326 IAC 21]**

- (a) The designated representative has submitted a complete Acid Rain Permit application, by submitting a sulfur dioxide application and compliance plan in accordance with the deadlines in 40 CFR 72.30.
- (b) The owners and operators shall operate the unit in compliance with this Acid Rain Permit.

#### **E.1.3 Monitoring Requirements [326 IAC 21]**

- (a) The owners and operators and, to the extent applicable, the designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR 75, and 76.
- (b) The emissions measurements shall be recorded and reported in accordance with 40 CFR 75 to determine compliance by each unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (c) The requirements of 40 CFR 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or emissions characteristics at the unit required by the Clean Air Act and any provisions of the operating permit for the source.

#### **E.1.4 Sulfur Dioxide Requirements [326 IAC 21]**

- (a) The owners and operators of each source and each affected unit at the source shall:
  - (1) Hold allowances, as of the allowance transfer deadline (as defined in 40 CFR 72.2), in the unit's compliance subaccount, after deductions under 40 CFR 73.34(c), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (2) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

- (b) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Clean Air Act.
- (c) An affected unit shall be subject to the requirements under paragraph (a) of the sulfur dioxide requirements as follows: starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2) or starting on the latter of January 1, 2000 or the deadline for monitor certification under 40 CFR 75, an affected unit under 40 CFR 72.6(a)(3).
- (d) Allowances shall be transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (e) These units were not allocated allowances by U.S. EPA under 40 CFR part 73. However, these units must still comply with the requirement to hold allowances to account for SO<sub>2</sub> emissions under E.1.4(a) and 326 IAC 21.
- (f) An allowance allocated by the U.S. Environmental Protection Agency (U.S. EPA ) under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain Permit application, the Acid Rain Permit, the Acid Rain portion of an operating permit, or the written exemption under 40 CFR 72.7 and 72.8 and 326 IAC 21, and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. Pursuant to 40 CFR 72.9(c)(7), allowance allocated by U.S. EPA do not constitute a property right.
- (g) Sulfur dioxide allowances shall be allocated to each unit at the source as follows:

| SO <sub>2</sub> Allowance Allocations for Unit 1 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| Tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

| SO <sub>2</sub> Allowance Allocations for Unit 2 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

| SO <sub>2</sub> Allowance Allocations for Unit 3 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| Tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

| SO <sub>2</sub> Allowance Allocations for Unit 4 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| Tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

| SO <sub>2</sub> Allowance Allocations for Unit 5 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

| SO <sub>2</sub> Allowance Allocations for Unit 6 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| Tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

| SO <sub>2</sub> Allowance Allocations for Unit 7 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| Tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

| SO <sub>2</sub> Allowance Allocations for Unit 8 |      |      |      |      |      |
|--|------|------|------|------|------|
| year   | 2000 | 2001 | 2002 | 2003 | 2004 |
| tons   | NA*  | NA*  | NA*  | NA*  | NA*  |

\* Not Applicable (NA), these units have no present SO<sub>2</sub> allowances allocations from U.S. EPA. The allowances shall be obtained from other sources to account for the SO<sub>2</sub> emissions from these units as required by 40 CFR 72.9(c).

**E.1.5 Excess Emissions Requirements [40 CFR 77] [326 IAC 21]**

- (a) The designated representative of an affected unit that has excess emissions of sulfur dioxide in any calendar year shall submit a proposed offset plan to U.S. EPA and IDEM, OAM as required under 40 CFR 77 and 326 IAC 21.
- (b) The designated representative shall submit such required information to:

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

and

Ms. Cecilia Mijares  
Air and Radiation Division  
U.S. Environmental Protection Agency, Region V  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

and

U.S. Environmental Protection Agency  
Acid Rain Program (6204J)  
Attn.: Annual Reconciliation  
401 M Street, SW  
Washington, DC 20460

- (c) The owners and operators of an affected unit that has excess emissions in any calendar year shall:
  - (1) Pay to U.S. EPA without demand the penalty required, and pay to U.S. EPA upon demand the interest on that penalty, as required by 40 CFR 77 and 326 IAC 21; and
  - (2) Comply with the terms of an approved sulfur dioxide offset plan, as required by 40 CFR 77 and 326 IAC 21.

**E.1.6 Record Keeping and Reporting Requirements [326 IAC 21]**

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- (a) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years, as required by 40 CFR 72.9(f), from the date the document is created:
  - (1) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (2) All emissions monitoring information required by 40 CFR 75.54 shall be collected and shall be retained on site for at least 3 years.
  - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and
  - (4) Copies of all documents used to complete an Acid Rain Permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
  - (5) This period may be extended for cause, at any time prior to the end of 5 years, in writing by U.S. EPA or IDEM, OAM
- (b) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 72.90 subpart I, 40 CFR 75, and 326 IAC 21. Submit required information to the appropriate authority(ies) as specified in 40 CFR 72.90 subpart I and 40 CFR 75.

**E.1.7 Submissions [326 IAC 21]**

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- (a) The designated representative shall submit a certificate of representation and any superseding certificate of representation to U.S. EPA in accordance with 40 CFR 72 and 326 IAC 21.
- (b) The designated representative shall submit such required information to:

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

and

U.S. Environmental Protection Agency  
Acid Rain Program (6204J)  
Attn.: Designated Representative  
401 M Street, SW  
Washington, DC 20460

- (c) Each such submission under the Acid Rain Program shall be submitted, signed and certified by the designated representative for all sources on behalf of which the submission is made.
- (d) In each submission under the Acid Rain Program, the designated representative shall certify, by his or her signature:
  - (1) The following statement, which shall be included verbatim in the submission: "I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made." and
  - (2) The following statement which shall be included verbatim in the submission: "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."
- (e) The designated representative of a source shall notify each owner and operator of the source and of an affected unit at the source:
  - (1) By the date of submission, of any Acid Rain Program submissions by the designated representative,
  - (2) Within 10 business days of receipt of any written determination by U.S. EPA or IDEM, OAM, and
  - (3) Provided that the submission or determination covers the source or the unit.
- (f) The designated representative of a source shall provide each owner and operator of an affected unit at the source a copy of any submission or determination under condition (d) of this section, unless the owner or operator expressly waives the right to receive a copy.

**E.1.8 Severability [326 IAC 21]**

- (a) Invalidation of the acid rain portion of an operating permit does not affect the continuing validity of the rest of the operating permit, nor shall invalidation of any other portion of the operating permit affect the continuing validity of the acid rain portion of the permit. [40 CFR 72.72(b), 326 IAC 21, and 326 IAC 2-7-5(5)].

### **E.1.9 Liability [326 IAC 21]**

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- (a) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, an Acid Rain Permit, an Acid Rain portion of an operation permit, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement by U.S. EPA pursuant to section 113(c) of the Clean Air Act and IDEM pursuant to 326 IAC 21 and IC 13-30-3.
- (b) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Clean Air Act and 18 U.S.C. 1001 and IDEM pursuant to 326 IAC 21 and IC 13-30-6-2.
- (c) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (d) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (e) Any provision of the Acid Rain Program that applies to an affected source, including a provision applicable to the designated representative of an affected source, shall also apply to the owners and operators of such source and of the affected units at the source.
- (f) Any provision of the Acid Rain Program that applies to an affected unit, including a provision applicable to the designated representative of an affected unit, shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO<sub>x</sub> averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR 75, including 40 CFR 75.16, 75.17, and 75.18, the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (g) Each violation of a provision of 40 CFR 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Clean Air Act.

### **E.1.10 Effect on Other Authorities [326 IAC 21]**

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No provision of the Acid Rain Program, an Acid Rain Permit application, an Acid Rain Permit, an Acid Rain portion of an operation permit, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (a) Except as expressly provided in Title IV of the Clean Air Act (42 USC 7651 to 7651(o)), exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Clean Air Act, including the provisions of Title I of the Clean Air Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (b) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Clean Air Act;

- (c) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law;
- (d) Modifying the Federal Power Act (16 USC 791(a) et seq.) or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (e) Interfering with or impairing any program for competitive bidding for power supply in a state in which such a program is established.



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

**Information Regarding Issuance of  
Title IV Acid Rain Operating Permit**

**Source Name:** Duke Energy Vermillion, LLC  
**Source Location:** Vermillion Generating Station  
County Road 300 N and State Road 63,  
Vermillion County -- Eugene Township  
**Acid Rain Permit No.:** AR 165 - 10727 - 00022  
**Permit Reviewer:** Robert Ondrusek

**Facilities to be Title IV Permitted**

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The Office of Air Management (OAM) has reviewed an application from Duke Energy Vermillion, LLC relating to the issuance of an Acid Rain operation permit, Title IV, for eight (8) simple cycle natural gas combustion turbines, designated as units 1, 2, 3, 4, 5, 6, 7, and 8, with a maximum heat input capacity of 1,000,000,000 British thermal units per hour (1,000 mmBtu/hr) each, a nominal output of 80,000,000 watts (80 MW) each, utilizing diesel fuel as a back-up fuel source, controlled by low-NO<sub>x</sub> combustors in conjunction with natural gas usage, controlled by wet-injection in conjunction with diesel fuel usage and exhausts to stacks designated as #1-#8.

**Statement of Basis**

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The goal of the 1990 Clean Air Act Amendments, Acid Rain Program is to reduce the impact of man-made emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>) on lakes, streams, forests, crops and, most important, the health of the public, by a nationwide SO<sub>2</sub> allocation of emissions from power plants. While acid rain may not seem to be a local problem, the information collected shows a need for this reduction. This is because these emissions can be transported great distances. Results of the SO<sub>2</sub> and NO<sub>x</sub> program, along with past, present, and future plans, can be found on the Internet under <http://www.epa.gov/acidrain/>. Additional information in the form of maps showing the results of the SO<sub>2</sub> and NO<sub>x</sub> limitations can be found on the Internet under <http://nadp.sws.uiuc.edu/>.

**Federal Rule Applicability 40CFR 72 through 40 CFR 78**

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The emission allowances and conditions in the draft permit were taken from the limits developed by the EPA for the Acid Rain Program pursuant to Title IV of the Clean Air Act 42 United States Code 7401, as amended by Public Law 101-5049 (November 15, 1990). Sections 40 Code of Federal Register (CFR) 72 through 40 CFR 78, 61 Federal Register (FR) 59142, 61 FR 67111, 61 FR 68821, and 62 FR 3463 apply to acid rain permitted sources. EPA requires that the Title IV Acid Rain operation permit include the application as part of the permit which details compliance requirements.

### **State Rule Applicability (326 IAC 21 Acid Deposition Control)**

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326 IAC 21 Acid Deposition Control has adopted the federal rule by referencing 40 CFR 72 through 78, 60 FR 59142, 60 FR 67111, 61 FR 68821, and 62 FR 3463. Rule 326 IAC 21-1-1; filed May 25, 1994, and 17 Indiana Register (IR) 2283; December 1, 1997. The rule incorporates the requirements of the Title IV, Clean Air Act Acid Rain program of the 1990 Clean Air Act.

### **Sulfur Dioxide Emission Allocations**

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The Sulfur Dioxide (SO<sub>2</sub>) allowance allocations rule (40 CFR part 73) was revised in August 1998. The nation wide allocated SO<sub>2</sub> emissions are 9,480,000 tons per year for 2000-2009. The 2010 cap is projected to reduce SO<sub>2</sub> emissions to 8,900,000 tons per year. This level is approximately one half of the nation wide emissions in 1980.

Generally, the Title IV acid rain program does not allocate SO<sub>2</sub> allowances for new sources starting operation after November 15, 1990. The new SO<sub>2</sub> emissions units will be required to seek allowances from other sources to account for their SO<sub>2</sub> emissions as required by 40 CFR 72.9(c).

The source's SO<sub>2</sub> emissions are also regulated by the construction permit CP-165-10476-00022 and the Part 70 Operating Permit Program.

### **Nitrogen Oxide Limitations**

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There are no established nitrogen oxide Limitations for combustion turbines in the Title IV program. The source's NO<sub>x</sub> emissions are regulated by the construction permit PSD-165-10476-00022 and the Part 70 Operating Permit Program.

### **Monitoring Requirements [326 IAC 21] [40 CFR 74, 75, and 76]**

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The owners and operators and, to the extent applicable, the designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR 75 and 76. The emissions measurements recorded and reported shall be used to determine compliance emissions limitations and emissions reduction requirements for sulfur dioxide. The requirements of this permit shall not affect the responsibility to monitor emissions of other pollutants or other emissions characteristics applicable requirements of the Clean Air Act and other operating permit provisions. Monitoring requirements outlined in the application are considered as part of the Title IV operation permit.

### **Record Keeping and Reporting Requirements [326 IAC 21]**

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Copies of all reports and compliance certifications for each affected unit submitted to demonstrate compliance with the requirements of the Acid Rain Program shall be kept for a period of at least five years. The reports and compliance certifications required by the Acid Rain Program shall be submitted to the appropriate authority(ies). Recordkeeping and reporting requirements outlined in the application are considered as part of the Title IV operation permit.

### **Submissions [326 IAC 21]**

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The designated representative shall submit a certificate of representation and any superseding certificate of representation to U.S. EPA and IDEM, OAM. Each submission under the Acid Rain Program shall be submitted, signed, and certified by the designated representative for all sources. The designated representative shall include the following statement for all submissions:

"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.”

The designated representative shall notify each owner and operator of the source and of an affected unit of the date of submission and within 10 business days of receipt of any written determination by U.S. EPA or IDEM, OAM.

Standard requirements outlined in the application are considered as part of the permit for Title IV operation permit.

### **Approval**

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Based on the information received, the source has been preliminarily determined to meet IC 13-17-3-4, IC 13-17-3-11, IC 13-17-8-1, and IC 13-17-8-2, as well as, Titles IV and V of the Clean Air Act, the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) proposes this draft permit pursuant to 326 IAC 21 (incorporates by reference 40 CFR 72 through 78).

The application contained no request for compliance options.

The source is also regulated by conditions in the construction permit PSD-165-10476-00022 issued by Office of Air Management pursuant to 326 IAC 2 .

### **Additional Information**

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Questions regarding the proposed acid rain permit can be directed to Robert Ondrusek at the OAM address below or by telephone at 317/233-4227 or at 1-800-451-6027 ext. (3-4227).

The source will be inspected by the OAM, Compliance Branch Section. Persons seeking to obtain information regarding the plant compliance status or to report any potential violation of the construction permit conditions should contact Wanda Stanfield at the above Office of Air Management (OAM) address or by telephone at 317/233-6864 or at 1-800-451-6027 ext. (3-6864)

Copies of the Code of Federal Regulations (CFR) and Federal Register (FR) referenced in the permit may be obtained from:

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

or

The Government Printing Office,  
Washington, D.C. 20402

or

on website

<http://www.access.gpo.gov/nara/cfr/index.html>