



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

TO: Interested Parties / Applicant

DATE: September 3, 2008

RE: Indiana Michigan Power (dba AEP) Rockport / 147-25360-00020

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 according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07



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

John LaGrange
Indiana Michigan Power Company
d.b.a. American Electric Power
2791 North US Highway 231
Rockport, Indiana 47635

September 3, 2008

Re: 147-25360-00020
First Significant Source Modification to
Part 70 Permit No.: T147-6786-00020

Dear Mr. LaGrange:

Indiana Michigan Power Company was issued Part 70 operating permit T147-6786-00020 on August 7, 2006 for a stationary electric utility generating station located at 2791 North US Highway 231, Rockport, Indiana 47635. An application to modify the source was received on October 1, 2007. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

PAC Injection system:

- (a) One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2)

PAC Handling and Storage Operations:

- (b) Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, with particulate emissions controlled by a bin vent filter.
- (c) Two (2) silos for storing activated carbon, each with a maximum storage capacity of 800 tons, with particulate emissions from each silo controlled by a bin vent filter.
- (d) Four (4) capacity metering pressure tanks, each with a maximum capacity of injecting 1,000 pounds per hour of activated carbon into the exhaust ductwork, with particulate emissions controlled by a bin vent filter.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit

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

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Stephen Treimel, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7902 to speak directly to Mr. Treimel. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely/Original Signed By:

Tripurari P. Sinha, Section Chief
Permits Branch
Office of Air Quality

Attachments

ERG/ST

cc: File - Spencer County
Spencer County Health Department
IDEM - Southwest Regional Office
Air Compliance Section Inspector
Compliance Data Section
Administrative and Development
Billing, Licensing and Training Section



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

PART 70 Significant Source Modification OFFICE OF AIR QUALITY

**Indiana Michigan Power - Rockport Plant
d.b.a. American Electric Power (AEP)
2791 North US Highway 231
Rockport, Indiana 47635**

(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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Significant Source Modification No. 147-25360-00020	
Signed by/Original Signed By: Tripurari P. Sinha, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 3, 2008

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)]

The Permittee owns and operates a stationary electric utility generating station.

Source Address:	2791 North US Highway 231, Rockport, Indiana 47635
Mailing Address:	c/o Manager, Air Quality Services, American Electric Power 1 Riverside Plaza, Columbus, OH 43215
Source Telephone:	812-649-9171
SIC Code:	4911
County Location:	Spencer
Source Location Status:	Nonattainment for PM2.5 (Ohio Township) Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD and Nonattainment NSR Rules; Major Source, Section 112 of the Clean Air Act; 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)]

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

- (a) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB1 (Main Boiler 1), with construction commenced in 1977 and completed in 1984, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system have been installed for NO_x control. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2). Emissions from Units MB1 and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.
- (b) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB2 (Main Boiler 2), with construction commenced in 1977 and completed in 1989, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system for NO_x control are scheduled for installation in 2004. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2). Emissions from Units MB1

and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.

- (c) Two (2) No. 2 fuel oil-fired boilers, identified as Auxiliary Boiler 1 and Auxiliary Boiler 2, with construction commenced in 1977 and completed in 1983, each with a design heat input capacity of 603 million Btu per hour, both exhausting through Stack AB12.
- (d) A coal storage and handling system for MB1 and MB2, with installation started in 1981 and completed in 1984, consisting of the following equipment:
 - (1) Two (2) barge unloading stations, identified as Stations 1 and 2, each with a baghouse, or a dust extraction system using water injection, and foam or water spray for particulate control, each with a bucket elevator with foam or water spray and partial enclosure for particulate control, and Conveyors 1 and 2 with water spray for particulate control.
 - (2) Enclosed conveyor systems, including fully and partially enclosed conveyors, with foam, water, or other equivalent dust suppression measures for particulate control, with the transfer points enclosed by buildings with baghouses, or a dust extraction system using water injection, for particulate control at Stations 5, 6 and 7. A stacker reclaim system is used to drop coal to the storage pile(s). The coal handling system has a design throughput capacity of 4000 tons per hour up to the stacker-reclaimers, and 1600 tons per hour from Station 7E and 7W to the coal bunkers in the units.
 - (3) Coal storage pile(s), with fugitive dust emissions controlled by watering.
 - (4) Coal crushing Station 8, with a maximum throughput of 1780 tons per hour for the east system and 1649 tons per hour for the west system, with a baghouse for particulate control, or a dust extraction system using water injection.
 - (5) Blending and transfer Station 9, with foam, water, or other equivalent dust suppression measures for particulate control.
 - (6) Blending and transfer Station 10.
 - (7) Two (2) storage silos for Station 9, with foam, water, or other equivalent dust suppression measures for particulate control.
 - (8) Coal sampling and transfer Stations A and D, each with a baghouse for particulate control, or a dust extraction system using water injection.
 - (9) Bunkering conveyors AB, BC, CB, DC, and FD, each fully enclosed, each with a baghouse for particulate control, or a dust extraction system using water injection.
 - (10) Fourteen (14) storage silos for Unit 1, with particulate control as follows:
 - (A) four (4) bag type filters, two for each set of seven bunkers on each side of Main Boiler 1, or
 - (B) one or more dust extraction systems using water injection.
 - (11) Fourteen (14) storage silos for Unit 2, with particulate control as follows:

- (A) four (4) bag type filters, two for each set of seven bunkers on each side of Main Boiler 2, or
 - (B) one or more dust extraction systems using water injection.
- (e) Dry fly ash handling:
- (1) Fly ash handling for MB1, installed in approximately 1982, including the following:
 - (A) Vacuum system to convey fly ash to four (4) storage silos with particulate emissions controlled by a bin vent filter on each silo, with a maximum throughput rate of 58 tons per hour.
 - (B) Each of the four fly ash silos is equipped with two telescoping chutes for loading dry ash into tanker trucks. Each chute has a vacuum system to control dust and transport it back into the storage silo. Process rate for loading the tanker trucks is estimated at 300 tons per hour.
 - (C) Each of the four fly ash silos is equipped with two wet ash conditioners, for loading ash into open trucks for disposal. Dust is controlled by mixing water with the ash prior to depositing the ash in the truck. Process rate is estimated at 150 tons per hour.
 - (D) Water spray curtains on each silo can be used to prevent dust generated in the loading operation from leaving the loading gallery in the silo base, if the outdoor temperature is above freezing.
 - (2) Fly ash handling for MB2, with installation completed in 1986, including the following:
 - (A) Vacuum system to convey fly ash to four (4) storage silos with particulate emissions controlled by two (2) bin vent filters on each silo, with a maximum throughput rate of 58 tons per hour.
 - (B) Each of the four fly ash silos is equipped with two telescoping chutes for loading dry ash into tanker trucks. Each chute has a vacuum system to control dust and transport it back into the storage silo. Process rate for loading the tanker trucks is estimated at 300 tons per hour.
 - (C) Each of the four fly ash silos is equipped with two wet ash conditioners, for loading ash into open trucks for disposal. Dust is controlled by mixing water with the ash prior to depositing the ash in the truck. Process rate is estimated at 150 tons per hour.
 - (D) Water spray curtains on each silo can be used to prevent dust generated in the loading operation from leaving the loading gallery in the silo base, if the outdoor temperature is above freezing.
 - (3) One (1) fly ash barge loading facility, with pneumatic unloading system from covered truck to covered barge with a maximum throughput rate of 52.5 tons ash per hour, with a baghouse on a river cell for particulate control.
 - (4) Rail loading equipment associated with the former fly ash temporary storage facility, with a maximum throughput rate of 52.5 tons ash per hour. The loader has a baghouse for dust control.
- (f) Wet process bottom ash handling, with hydroveyors conveying ash to storage ponds,

with water level sufficient to prevent ash re-entrainment.

- (g) Emergency generators as follows: Three (3) No. 2 fuel oil-fired emergency diesel generators designated as DG1, DG2, and DG3, each with 25.16 MMBtu/hr heat input capacity. [326 IAC 7][326 IAC 2]
- (h) Five (5) No. 2 fuel oil-fired space heaters designated as WHU-5, WHU-6, WHU-7, WHU-8, and WHU-9, with heat input capacities of 4.5 MMBtu/hr, 3.0 MMBtu/hr, 2.75 MMBtu/hr, 3.5 MMBtu/hr, and 4.5 MMBtu/hr, respectively.

PAC Handling and Storage Operations

- (i) Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, approved for construction in 2008, with particulate emissions controlled by a bin vent filter located on the silos described in Condition A.2(j).
- (j) Two (2) silos for storing activated carbon, each with a maximum storage capacity of 800 tons, approved for construction in 2008, with particulate emissions from each silo controlled by a bin vent filter.
- (k) Four (4) capacity metering pressure tanks, each with a maximum capacity of injecting 1,000 pounds per hour of activated carbon into the exhaust ductwork, approved for construction in 2008, with particulate emissions controlled by a bin vent filter.

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

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

- (a) Space heaters using the following fuels: Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than three-tenths (0.3) percent sulfur by weight, including space heaters WHU-1 and WHU-2, each with 1.1 MMBtu/hr heat input capacity, and a 2 MMBtu/hr No. 2 fuel oil fired heater located in Station 10. [326 IAC 7]
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3]
- (c) Cleaners and solvents characterized as follows: [326 IAC 8-3]
 - (1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (d) Coal bunker and coal scale exhausts and associated dust collector vents.
[326 IAC 6-3][326 IAC 12][40 CFR 60, Subpart Y]
- (e) Other activities or categories not previously identified with potential, uncontrolled emissions equal to or less than thresholds require listing only: Pb 0.6 ton per year or 3.29 pounds per day, SO₂ 5 pounds per hour or 25 pounds per day, NO_x 5 pounds per hour or 25 pounds per day, CO 25 pounds per day, PM 5 pounds per hour or 25 pounds per day, VOC 3 pounds per hour or 15 pounds per day:

Ponded bottom ash handling and management, including dredging bottom ash ponds and loading material into trucks. [326 IAC 6-4]

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability); and
- (c) 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.20 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) Pursuant to 326 IAC 2-2-8(b) and/or 326 IAC 2-3-2(m), if there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a Clean Unit, 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 a significant emissions increase and the Permittee elects to use 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(ll)) 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 (NSR) 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 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(ll)) 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.

SECTION D.1

FACILITY OPERATION CONDITIONS

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

- (a) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB1 (Main Boiler 1), with construction commenced in 1977 and completed in 1984, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system have been installed for NO_x control. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2). Emissions from Units MB1 and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.
- (b) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB2 (Main Boiler 2), with construction commenced in 1977 and completed in 1989, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system for NO_x control are scheduled for installation in 2004. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2). Emissions from Units MB1 and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.

PAC Handling and Storage Operations

- (i) Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, approved for construction in 2008, with particulate emissions controlled by a bin vent filter located on the silos described in Condition A.2(j).
- (j) Two (2) silos for storing activated carbon, each with a maximum storage capacity of 800 tons, approved for construction in 2008, with particulate emissions from each silo controlled by a bin vent filter.
- (k) Four (4) capacity metering pressure tanks, each with a maximum capacity of injecting 1,000 pounds per hour of activated carbon into the exhaust ductwork, approved for construction in 2008, with particulate emissions controlled by a bin vent filter.

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

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

D.1.1 Pollution Control Project (PCP) [326 IAC 2-2-1(x)(2)(H)]

Pursuant to Source Modification 147-17468-00020, issued November 13, 2003, and 326 IAC 2-2-1(x)(2)(H):

The replacement of the LNB and the installation of an OFA system for each of the boilers MB1 and MB2 to reduce NO_x emissions are considered to be a pollution control project; therefore, the project's CO collateral emissions are excluded from the 326 IAC 2-2 PSD requirements.

D.1.2 New Source Performance Standard (NSPS) [326 IAC 12][40 CFR 60, Subpart D]

Pursuant to 326 IAC 12 and 40 CFR 60, Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), emissions from Boilers MB1 and MB2 shall not exceed the following:

(a) For particulate matter:

- (1) 0.10 pound PM per million Btu (MMBtu) heat input derived from fossil fuel. [40 CFR 60.42(a)(1)]
- (2) Twenty percent (20%) opacity except for one six-minute period per hour of not more than twenty-seven percent (27%) opacity. [40 CFR 60.42(a)(2)] [40 CFR 60.45(g)(1)]

Pursuant to 40 CFR 60.11(c), this opacity standard is not applicable during periods of startup, shutdown, or malfunction.

(b) For sulfur dioxide:

- (1) 0.80 pound SO₂ per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.43(a)(1)]
- (2) 1.2 pound SO₂ per million Btu (MMBtu) heat input derived from solid fossil fuel. [40 CFR 60.43(a)(2)]
- (3) When combusting different fossil fuels simultaneously, the applicable SO₂ limit shall be determined using the formula in 40 CFR 60.43(b).
- (4) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels. [40 CFR 60.43(c)]

(c) For nitrogen oxides:

- (1) 0.30 pound NO_x per million Btu (MMBtu) heat input derived from liquid fossil fuel. [40 CFR 60.44(a)(2)]
- (2) 0.70 pound NO_x per million Btu (MMBtu) heat input derived from solid fossil fuel (except lignite or a solid fossil fuel containing twenty-five percent (25%), by weight, or more of coal refuse). [40 CFR 60.44(a)(3)]
- (3) When combusting different fossil fuels simultaneously, the applicable NO_x limit shall be determined using the formula in 40 CFR 60.44(b).

D.1.3 PSD Limits [40 CFR 52.21][326 IAC 6-2-1(g)][326 IAC 7-1.1-2]

Pursuant to Approval to Construct EPA-5-78-A-1, issued October 27, 1977, 40 CFR 52.21 (Federal Regulations for the Prevention of Significant Deterioration of Air Quality), 326 IAC 6-2-1(g), and 326 IAC 7-1.1-2(a):

- (a) MB1 and MB2 (a.k.a. Units 1 and 2) must meet emission limitations of 0.1 pound of particulate matter per million BTU heat input and 1.2 pounds of sulfur dioxide per million BTU heat input. These limitations are equivalent to the New Source Performance Standards (40 CFR Part 60) for fossil-fuel fired steam generating units and are defined as best available control technology. This condition is required by 40 CFR 52.21(d)(2)(ii).

- (b) The Permittee may not alter the height of the boilerhouse as presented in the construction application. The dispersion modeling in the application relies upon a stack height expressed as 22 times the height of the boilerhouse. Any change in the boilerhouse height would alter the dispersion of sulfur dioxide and particulates.
- (c) The Permittee may not alter the design stack parameters identified in the construction application including, but not limited to, exit gas temperature, exit gas velocity and stack diameter (inside top). The air quality analysis relies heavily on the combination of stack parameters, control devices, the emission limitations and any change in those factors could change the results of the air quality analysis. Therefore, design changes in Units 1 and 2 must receive the prior written authorization of IDEM, OAQ.

D.1.4 Opacity Limitations [326 IAC 5-1]

- (a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations), the following applies:
 - (1) Except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity from boilers MB1 and MB2 shall meet the following during time periods exempted from the opacity limit of 40 CFR 60 Subpart D, 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.
 - (2) For sources or facilities that cannot meet the alternative opacity emission limitation requirements of 326 IAC 5-1-3(a), (b), or (c), the commissioner may grant a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). Pursuant to 326 IAC 5-1-3(d)(7) and 326 IAC 5-1-7, the temporary alternative opacity limit shall be submitted to the U.S. EPA as a state implementation plan (SIP) revision and shall not become effective until approved as a SIP revision by the U.S. EPA.
- (b) The Permittee is not in compliance with (a) of this condition because a site specific SIP revision has not yet been approved. Until such time that the site specific SIP revision is approved by U.S. EPA, the Permittee shall comply with the following:
 - (1) When building a new fire in a boiler, opacity may exceed the applicable limitation established in 326 IAC 5-1-2 for a period not to exceed a total of four (4) hours (forty (40) six (6)-minute averaging periods) during the startup period, or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit at the inlet of the electrostatic precipitator, whichever occurs first.
 - (2) When shutting down a boiler, opacity may exceed the applicable limitation established in 326 IAC 5-1-2 for a period not to exceed a total of one (1) hour (ten (10) six (6)-minute averaging periods) during the shutdown period.
 - (3) Operation of the electrostatic precipitator is not required during these times.

D.1.5 Hourly SO₂ Emission Limitations [326 IAC 2-2]

In accordance with the modeling analysis required for Approval to Construct EPA-5-78-A-1, issued October 27, 1977, and 40 CFR 52.21, the combined SO₂ emission rate for Boilers MB1

and MB2 shall not exceed 28,663 pounds of SO₂ per hour.

D.1.6 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart D.

D.1.7 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the PAC handling and storage operations shall not exceed the emission limits specified in the table below:

Unit Description	Max. Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (lbs/hr)
PAC Handling and Storage Operations	25	35.4

The allowable particulate emission rates were calculated using the equation below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Compliance Determination Requirements

D.1.8 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Condition D.1.8, the bin vent filters for particulate control shall be in operation and control emissions at all times the respective unloading stations, silos and pressure tanks are in operation.

D.1.9 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

By December 31 of 2010, compliance with the PM limitation in Conditions D.1.2 and D.1.3 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

D.1.10 Operation of Electrostatic Precipitator [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, the electrostatic precipitator (ESP) shall be operated at all times that the boiler vented to the ESP is in operation.

D.1.11 Operation of Low NO_x Burners and Overfire Air Systems [326 IAC 2-7-6(6)]

Pursuant to SSM 147-17468-00020, issued November 13, 2003, except as otherwise provided by statute or rule, or in this permit, the low NO_x burners and overfire air system for each boiler, MB1 and MB2, shall be operated at all times that the respective boiler is firing coal.

D.1.12 Continuous Emissions Monitoring [326 IAC 3-5][326 IAC 12][40 CFR 60, Subpart D] [326 IAC 7-2][40 CFR 52.21]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 12, 40 CFR 60.45, Approval to Construct EPA-5-78-A-1, issued October 27, 1977, and 40 CFR 52.21, continuous emission monitoring systems for Units MB1 and MB2 shall be calibrated, maintained, and operated for measuring opacity, SO₂, NO_x, and either CO₂ or O₂, which meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 60.45.

- (b) Pursuant to 40 CFR 60.11(c), the opacity standard in Condition D.1.2(a)(2) and 40 CFR 60.42(a)(2) shall apply at all times except during periods of startup, shutdown, or malfunction. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions [40 CFR 60.11(d)].
- (c) Pursuant to 40 CFR 60.13(e), except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of 40 CFR 60.13, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
 - (1) All continuous monitoring systems referenced by paragraph (c) of 40 CFR 60.13 for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
 - (2) All continuous monitoring systems referenced by paragraph (c) of 40 CFR 60.13 for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
- (d) Pursuant to 40 CFR 60.45(g)(2)(i), Approval to Construct EPA-5-78-A-1, and 40 CFR 52.21, excess SO₂ emissions for affected facilities are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard under 40 CFR 60.43.
- (e) Excess NO_x emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under 40 CFR 60.44. [40 CFR 60.45(g)(3)]
- (f) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (g) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (h) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 10-4, 40 CFR 60, or 40 CFR 75.

D.1.13 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-5][326 IAC 7-2][326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-2-1(c), the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed the SO₂ limits in Conditions D.1.2 and D.1.3. Compliance with these limits shall be determined using SO₂ CEMS data, and demonstrated using a thirty (30) day rolling weighted average.

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

D.1.14 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

- (a) The ability of the ESP to control particulate emissions shall be monitored once per day, when the unit is in operation, by measuring and recording the number of T-R sets in

service and the primary and secondary voltages and the currents of the T-R sets.

- (b) Reasonable response steps shall be taken in accordance with Section C - Response to Excursions or Exceedances whenever the percentage of T-R sets in service falls below ninety percent (90%). T-R set failure resulting in less than ninety percent (90%) availability is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.1.15 SO₂ Monitoring System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(3)]

Whenever the SO₂ continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments, the following shall be used to provide information related to SO₂ emissions:

- (a) If the CEMS is down for less than twenty-four (24) hours, the Permittee shall substitute an average of the quality-assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data.
- (b) If the CEMS is down for twenty-four (24) hours or more, fuel sampling shall be conducted as follows:
 - (1) Solid fuel sampling shall be conducted as specified in 326 IAC 3-7-2(b). Fuel sample preparation and analysis shall be conducted as specified in 326 IAC 3-7-2(c), 326 IAC 3-7-2(d), and 326 IAC 3-7-2(e). Pursuant to 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval, that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring.
 - (2) If fuel oil is fired in the unit during the CEMS downtime, pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7-4, oil sampling and analysis data shall be collected as follows:
 - (A) The Permittee may rely upon vendor analysis of fuel delivered, if accompanied by a vendor certification [326 IAC 3-7-4(b)]; or,
 - (B) The Permittee shall perform sampling and analysis of fuel oil samples in accordance with 326 IAC 3-7-4(a).

D.1.16 Visible Emissions Notations

- (a) Daily visible emission notations of the exhaust from the bin vent filters on the storage silos shall be performed during normal daylight operations when loading or unloading material. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, at least eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps

in accordance with Section C – Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

D.1.17 Broken or Failed Bin Vent Filter Detection

In the event that filter failure has been observed, for single compartment filters, failed units and the associated process will be shut down as soon as possible until the failed units have been repaired or replaced.

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

D.1.18 Record Keeping Requirements

- (a) To document compliance with Section C - Opacity, Section C - Maintenance of Continuous Opacity Monitoring Equipment, and the particulate matter and opacity requirements in Conditions D.1.2(a), D.1.3, D.1.4, D.1.12, and D.1.14, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits in Section C - Opacity and Conditions D.1.2(a), D.1.3, and D.1.4.
- (1) Data and results from the most recent stack test.
 - (2) All continuous opacity monitoring data, pursuant to 326 IAC 3-5-6, 40 CFR 60.7, and 40 CFR 60.45.
 - (3) The results of all Method 9 visible emission readings taken during any periods of COM downtime.
 - (4) All ESP parametric monitoring readings.
- (b) To document compliance with the SO₂ requirements in Conditions D.1.2(b), D.1.3(a), D.1.5, D.1.12, D.1.13, and D.1.15, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the applicable SO₂ limit(s) as required in Conditions D.1.2(b), D.1.3(a), D.1.12, and D.1.13. The Permittee shall maintain records in accordance with (3) and (4) below during SO₂ CEMS malfunction or downtime.
- (1) All SO₂ continuous emissions monitoring data, pursuant to 326 IAC 3-5-6, 326 IAC 7-2-1(g), 40 CFR 60.7, and 40 CFR 60.45.
 - (2) Actual fuel usage since last compliance determination period.
 - (3) All fuel sampling and analysis data collected for SO₂ CEMS downtime, in accordance with Condition D.1.15.
 - (4) Actual fuel usage during each SO₂ CEMS downtime.
- (c) To document compliance with the NO_x requirements in Conditions D.1.2 and D.1.12, the Permittee shall maintain records of all NO_x and CO₂ or O₂ continuous emissions monitoring data, pursuant to 326 IAC 3-5-6, 326 IAC 2-2, 40 CFR 60.7, and 40 CFR 60.45. Records shall be complete and sufficient to establish compliance with the NO_x limits as required in Condition D.1.2.
- (d) Pursuant to 326 IAC 2-2 and 326 IAC 2-3, the Permittee shall maintain records as specified by Conditions C.20(c) and (d) (General Record Keeping Requirements).
- (e) To document compliance with Condition D.1.16, the Permittee shall maintain records of the visible emission notations required by that condition. The Permittee shall include in

its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

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

D.1.19 Reporting Requirements

- (a) A quarterly report of opacity exceedances and a quarterly summary of the information to document compliance with the PM and SO₂ requirements of Conditions D.1.2, D.1.3, D.1.4, and D.1.12 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) Pursuant to 326 IAC 12, 40 CFR 60.7(c), Approval to Construct EPA-5-78-A-1, and 40 CFR 52.21, to document compliance with Conditions D.1.2 and D.1.3 and pursuant to 40 CFR 60.45(g), excess emissions and monitoring system performance (MSP) reports shall be submitted on a quarterly basis. All reports shall be postmarked by the 30th day following the end of each quarter. Each excess emission and MSP report shall include the information required in 40 CFR 60.7(c). These reports shall be submitted to:

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

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

- (c) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:
- (1) Date of downtime.
 - (2) Time of commencement.
 - (3) Duration of each downtime.
 - (4) Reasons for each downtime.
 - (5) Nature of system repairs and adjustments.

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

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

**Addendum to the Technical Support Document
for a Significant Source Modification and Significant Permit Modification
to a Part 70 Operating Permit**

Source Background and Description

Source Name:	Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Source Location:	2791 North US Highway 231, Rockport, Indiana 47635
County:	Spencer
SIC Code:	4911 (Electric Services)
Significant Source Modification No.:	147-25360-00020
Significant Permit Modification No.:	147-25437-00020
Permit Reviewer:	ERG/ST

On July 31, 2008, the Office of Air Quality (OAQ) had a notice published in The Journal Democrat, Rockport, Indiana, stating that Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant had applied for a Significant Source Modification and Significant Permit Modification to a Part 70 Operating Permit. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 29, 2008, Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant submitted comments on the proposed Significant Source Modification and Significant Permit Modification. The summary of the comments is as follows:

Comment 1:

Based on the limited changes being made to the Title V permit to allow the installation and operation of the Activated Carbon Injection System at Rockport, the permittee requests that the description of the control devices for the PAC Handling and Storage Operations be revised as follows to clarify the location of the bin vent filters:

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

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

PAC Handling and Storage Operations

- (i) Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, approved for construction in 2008, with particulate emissions controlled by a bin vent filter **located on the silos described in Condition A.2(j)**.

IDEM Response to Comment 1:

The following changes have been made to the permit:

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

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

PAC Handling and Storage Operations

- (i) Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, approved for construction in 2008, with particulate emissions controlled by a bin vent filter **located on the silos described in Condition A.2(j)**.
- (j) Two (2) silos for storing activated carbon, each with a maximum storage capacity of 800 tons, approved for construction in 2008, with particulate emissions from each silo controlled by a bin vent filter.

Comment 2:

In accordance with Condition D.1.9, the permittee just completed the required testing to show compliance with Conditions D.1.2 and D.1.3. The permittee notes that the revised testing language in Condition D.1.9 could allow for the interpretation that a second test would be required by the end of 2008 or during the first quarter of 2009. The permittee does not believe IDEM intended to require a second test in 2008 and requests that the language in this condition be restored to its original state.

IDEM Response to Comment 2:

IDEM agrees that the permittee has met the testing requirements for 2008 and has revised the language in this condition as follows:

D.1.9 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

~~By December 31, 2008, or within 180 days after issuance of this permit, whichever is later,~~ **By December 31 of 2010,** compliance with the PM limitation in Conditions D.1.2 and D.1.3 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

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

**Technical Support Document (TSD) for a
Part 70 Significant Source Modification and a
Part 70 Significant Permit Modification**

Source Description and Location

Source Name: Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Source Location: 2791 North US Highway 231, Rockport, Indiana 47635
County: Spencer
SIC Code: 4911 (Electric Services)
Operation Permit No.: T147-6786-00020
Operation Permit Issuance Date: August 7, 2006
Significant Source Modification No.: 147-25360-00020
Significant Permit Modification No.: 147-25437-00020
Permit Reviewer: ERG/ST

Existing Approvals

The source was issued a Part 70 Operating Permit No. T147-6786-00020 on August 7, 2006. The source has since received the following approvals:

- (a) Title IV (Acid Rain) Permit Renewal AR 147-16151-00020, issued August 17, 2006; and
- (b) Minor Permit Modification 147-23860-00020, issued on February 20, 2007.

County Attainment Status

The source is located in Spencer County, Ohio Township.

Pollutant	Status
PM10	Attainment
PM2.5	Nonattainment
SO ₂	Attainment
NO ₂	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

Note: 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.

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Spencer County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Spencer County, Ohio as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of

Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM_{2.5} promulgated on May 8th, 2008, and effective on July 15th 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5.

- (c) Spencer County has been classified as attainment or unclassifiable 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) Since this source is classified as an electric utility generating station, it is considered to be in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) Fugitive Emissions
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Potential To Emit (tons/year)
PM	Greater than 100
PM10	Greater than 100
PM2.5	Greater than 100
SO ₂	Greater than 100
VOC	Greater than 100
CO	Greater than 100
NO _x	Greater than 100
Single HAP	Greater than 10
TOTAL HAPs	Greater than 25

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because the nonattainment regulated pollutant PM10 (as surrogate for PM_{2.5}) is emitted at a rate of 100 tons per year or more.
- (c) This existing source is a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM_{2.5} and/or SO₂ is emitted at a rate of 100 tons per year or more.
- (d) This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).
- (e) These emissions are based upon the TSD for Part 70 Operating Permit No. T147-6786-00020.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2005 OAQ emission data.

Pollutant	Emissions (tons/yr)
PM	Not Reported
PM10	173
PM2.5	Not Reported
SO ₂	68,364
NO _x	21,659
VOC	290
CO	2,424
Lead	0.22
Worst Single HAP	Not Reported
Total HAPs	Not Reported

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant on October 1, 2007, relating to the addition of an activated carbon injection system to the utility boiler stack exhaust for control of mercury emissions, with associated storage and handling facilities for the activated carbon.

The following is a list of the emission units and pollution control devices addressed by this proposed modification:

Modified Emission Units

- (1) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB1 (Main Boiler 1), and
- (2) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB2 (Main Boiler 2).

MB1 and MB2 will be outfitted with a powdered activated carbon (PAC) injection system that will reduce mercury emissions from the boilers. The PAC injection system identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2), with particulate emissions controlled by an electrostatic precipitator (ESP) system, will exhaust through stack CS012

New Emission Units

- (1) Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, approved for construction in 2008, with particulate emissions controlled by a bin vent filter.
- (2) Two (2) silos for storing activated carbon, approved for construction in 2008, each with a maximum storage capacity of 800 tons, with particulate emissions from each silo controlled by a bin vent filter.
- (3) Four (4) capacity metering pressure tanks, approved for construction in 2008, each with a maximum capacity of injecting 1,000 pounds per hour of activated carbon into the exhaust ductwork, with particulate emissions controlled by a bin vent filter.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Stack Summary

There are no new stacks associated with this modification. The two (2) silos are each equipped with a bin vent filter. Emissions due to injection of pulverized activated carbon (PAC) into the exhaust ductwork will be controlled by existing electrostatic precipitator system and exhausted through existing stack CS012.

Emission Calculations

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

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE of the modification before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential to Emit (tons/yr)
PM	Greater than 25
PM10	Greater than 25
PM2.5	Greater than 25
SO ₂	0
VOC	0
CO	0
NO _x	0
HAPs	0

This source modification is subject to 326 IAC 2-7-10.5(f)(4) because this modification has a potential to emit greater than or equal to twenty-five (25) tons per year of particulate matter (PM) or particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM10). Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because this modification requires a case-by-case determination of an emission limitation or other standard.

Permit Level Determination – PSD, Emission Offset, or Nonattainment New Source Review

The table below summarizes the emissions increase, reflecting all limits, of the emission units being added in this modification. Any control equipment is considered federally enforceable only after issuance of this Part 70 Source Modification and Part 70 Permit Modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/Emission Unit	PM	PM10	PM2.5	SO2
PAC Loading and Storage	0.011	0.0073	0.0073	0.0
PAC Injection	23.1	5.3	2.33	0.0
Paved and Unpaved Roads	0.53	0.11	0.0	0.0
Total for Modification	23.6	5.42	2.34	0.0
Significant Level or Major Source Threshold	25	15	10	40

This modification to an existing major stationary source is not major because the emissions increase is less than the Emission Offset and Nonattainment NSR significant levels. Therefore, pursuant to 326 IAC 2-3 and 326 IAC 2-1.1-5, the Emission Offset and Nonattainment NSR requirements do not apply.

The Permittee completed an Actual to Potential test (pursuant to 326 IAC 2-2-2, 326 IAC 2-3-2, and 326 IAC 2-1.1-5) for this modification at a major stationary source that indicates that the modification will not be major for Prevention of Significant Deterioration (PSD) (326 IAC 2-2), Emission Offset (326 IAC 2-3), or Nonattainment NSR (326 IAC 2-1.1.5). IDEM, OAQ has not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with 326 IAC 2-2-8 (Source Obligation).

This modification to an existing major stationary source is not major because the limited emissions increase is less than the Prevention of Significant Deterioration (326 IAC 2-2), Emission Offset (326 IAC 2-3), and Nonattainment NSR (326 IAC 2-1.1-5) significant levels. Therefore, pursuant to 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Non-attainment NSR), the PSD, Emission Offset and Nonattainment NSR requirements do not apply.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR 61, 63) included in this modification.
- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified 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.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
PAC Injection (PM)	ESP	Y	3,160	23.1	100	Y	N
PAC Injection (PM10)	ESP	Y	727	5.33	100	Y	N
PAC Handling and Storage (PM)	Bin Vent Filter	Y	1.15	0.01	100	N	N
Paved Roads (PM)	None	Y	0.53	0.53	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable for PM and PM10 upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2, 2-3, and 2-1.1 (Prevention of Significant Deterioration (PSD), Emission Offset (EO), and Nonattainment New Source Review (NSR))

Source status

This source belongs to one of the listed 28 PSD source categories with a PSD major threshold of 100 tons per year.

Evaluation of PSD and EO Applicability

As indicated in the *Description of Modification* section of this document, this modification involves a physical change to an existing unit at a major PSD source. In order to determine the emissions increases of the modification (or "project" pursuant to 326 IAC 2-2 and 326 IAC 2-3), the OAQ used the "actual-to-projected actual test" described in 326 IAC 2-2-2(d)(3) and 326 IAC 2-3-2(c)(3). The following paragraphs describe how the test was conducted and how the emissions increases of the project were calculated. See *Appendix A* for detailed emission calculations.

The actual-to-projected actual test specifies how the emission increases from new and modified units should be calculated in order to evaluate the applicability of 326 IAC 2-2 and 326 IAC 2-3:

The emissions increases are the difference between a unit's projected actual emissions and baseline actual emissions excluding the portion of emissions that a unit could have accommodated during the baseline period (as provided by 326 IAC 2-2-1(rr)(2)(A)(iii) and 326 IAC 2-3-1(mm)(2)(A)(iii)).

Pursuant to 326 IAC 2-2-1, fugitive emissions, to the extent quantifiable, must be included in the assessment of baseline actual and projected actual emissions. Fugitive emissions from vehicular traffic associated with this modification have been evaluated.

Finally, the net emissions increase of the modification is equal to the sum of the emission increases from new, modified and increasingly utilized units coupled with the contemporaneous and creditable emissions increases and decreases. Since the emissions increases are less than the PSD significant thresholds, an evaluation of net emissions increases is not necessary. As indicated by the *Permit Level Determination - PSD* section of this document and the emission calculations in Appendix A, the emissions increases of the project is less than the relevant PSD significant thresholds for all pollutants.

Therefore, this modification is not subject to the requirements of 326 IAC 2-2 or 326 IAC 2-3.

Evaluation of Nonattainment New Source Review Applicability

Nonattainment New Source Review applicability is discussed under the Permit Level Determination – PSD, Emission Offset, Nonattainment New Source Review section.

Source Obligation Under 326 IAC 2-2 and 326 IAC 2-3

Pursuant to 326 IAC 2-2-8 and 326 IAC 2-3-1(m), the following requirements apply to this modification:

The following provisions apply to projects at an existing emissions unit at a major stationary source, other than projects at a source with a PAL, in circumstances where there is a reasonable possibility that a project that is not a part of a major modification may result in a significant emissions increase and the owner or operator elects to use the method specified in section 1(rr)(2)(A) of this rule for calculating projected actual emissions:

- (1) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
 - (A) A description of the project.
 - (B) Identification of any emissions unit whose emissions of a regulated NSR 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) the baseline actual emissions;
 - (ii) the projected actual emissions;
 - (iii) the amount of emissions excluded under section 1(rr)(2)(A)(iii) of this rule; and
 - (iv) an explanation for why the amount was excluded, and any netting calculations, if applicable.
- (2) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the department if the annual emissions, in tons per year, from the project identified in subdivision (1) exceed the baseline actual emissions, as documented and maintained under subdivision (1)(C), by a significant amount, as defined in section 1(xx) of this rule, for that regulated NSR pollutant and if the emissions differ from the preconstruction projection as documented and maintained under subdivision (1)(C). The report shall be submitted to the department within sixty (60) days after the end of the year. The report shall contain the following:
 - (A) The name, address, and telephone number of the major stationary source.
 - (B) The annual emissions as calculated under subdivision (3).
 - (C) The emissions calculated under the actual-to-projected actual test stated in section 2(d)(3) of this rule.
 - (D) Any other information that the owner or operator wishes to include in the report, such as an explanation as to why the emissions differ from the preconstruction projection.

The owner or operator of the source shall make the information required to be documented and maintained under subsection (b) available for review upon a request for inspection by the department. The general public may request this information from the department under 326 IAC 17.1.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the activated carbon injection (ACI) and the activated carbon handling and storage operations will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 6-5 (Fugitive Particulate Emissions Limitations)

Although constructed after December 13, 1985, the provisions of 326 IAC 6-5 do not apply to this modification because the fugitive emissions from this modification are less than 5 tons per year.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the PAC handling and storage operations shall not exceed the emission limits specified in the table below:

Unit Description	Max. Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (lbs/hr)
PAC Handling and Storage	25	35.4

The allowable particulate emission rates were calculated using the equation below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

In order to comply with this limit, the electrostatic precipitator and the bin vent filters for the PAC injection and the PAC handling and storage operations shall be in operation and control emissions from the facilities at all times when the facilities are in operation.

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. 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 Permittee is required to perform daily visible emission notations of the exhaust from the bin vent filters on the storage silos.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 147-6786-00020. Deleted language appears as ~~strike throughs~~ and new language appears in **bold**:

1. Sections A.2 and D.1 have been revised to include the new emission units and their requirements as follows:

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

The Permittee owns and operates a stationary electric utility generating station.

Source Address: 2791 North US Highway 231, Rockport, Indiana 47635
Mailing Address: c/o Manager, Air Quality Services, American Electric Power
1 Riverside Plaza, Columbus, OH 43215
Source Telephone: 812-649-9171
SIC Code: 4911
County Location: Spencer
Source Location Status: Nonattainment for PM2.5 (Ohio Township)
Attainment for all other criteria pollutants
Source Status: Part 70 Permit Program
Major Source, under PSD Rules and ~~Emission Offset~~
Nonattainment NSR Rules;
Major Source, Section 112 of the Clean Air Act;
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)]

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

- (a) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB1 (Main Boiler 1), with construction commenced in 1977 and completed in 1984, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system have been installed for NO_x control. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. **One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2).** Emissions from Units MB1 and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.
- (b) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB2 (Main Boiler 2), with construction commenced in 1977 and completed in 1989, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system for NO_x control are scheduled for installation in 2004. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. **One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008,**

with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2). Emissions from Units MB1 and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.

...

PAC Handling and Storage Operations

- (i) Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, approved for construction in 2008, with particulate emissions controlled by a bin vent filter.**
- (j) Two (2) silos for storing activated carbon, each with a maximum storage capacity of 800 tons, approved for construction in 2008, with particulate emissions from each silo controlled by a bin vent filter.**
- (k) Four (4) capacity metering pressure tanks, each with a maximum capacity of injecting 1,000 pounds per hour of activated carbon into the exhaust ductwork, approved for construction in 2008, with particulate emissions controlled by a bin vent filter.**

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6][326 IAC 2-2]
[326 IAC 2-3]

...

- (c) Pursuant to 326 IAC 2-2-8(b) and/or 326 IAC 2-3-2(m), if there is a reasonable possibility 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 Clean Unit, 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 a significant emissions increase and the Permittee elects to use 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 (NSR) 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 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.

~~(2) Monitor the emissions of any regulated NSR pollutant that could increase as a~~

~~result of the project and that is emitted by any emissions unit identified in (1)(B) above; and~~

~~(3) 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.~~

(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.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (a) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB1 (Main Boiler 1), with construction commenced in 1977 and completed in 1984, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system have been installed for NO_x control. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. **One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2).** Emissions from Units MB1 and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.
- (b) One (1) pulverized coal opposed wall fired dry bottom boiler, identified as MB2 (Main Boiler 2), with construction commenced in 1977 and completed in 1989, with a design heat input capacity of 12,374 million Btu per hour, with an electrostatic precipitator (ESP) system for control of particulate matter. Low NO_x burners and an overfire air (OFA) system for NO_x control are scheduled for installation in 2004. No. 2 fuel oil is fired during startup, shutdown, and load stabilization periods. No. 2 fuel oil may also be burned to maintain boiler temperature to ensure boiler availability on short notice, and to maintain boiler temperature required during chemical cleaning. **One (1) powdered activated carbon (PAC) injection system, identified as ACI, approved for construction in 2008, with a combined maximum capacity of injecting 2,100 pounds of activated carbon per hour into the exhaust ductwork for Boilers 1 and 2 (MB1 and MB2).** Emissions from Units MB1 and MB2 are exhausted through the common stack, Stack CS012. Continuous emissions monitoring systems (CEMS) for nitrogen oxides (NO_x) and for sulfur dioxide (SO₂) and a continuous opacity monitoring (COM) system are located on the common stack.

...

PAC Handling and Storage Operations

- (i) **Two (2) pneumatic truck unloading stations and one (1) railcar unloading station for transferring activated carbon from transports to storage silos, approved for construction in 2008, with particulate emissions controlled by a bin vent filter.**
- (j) **Two (2) silos for storing activated carbon, each with a maximum storage capacity of 800 tons, approved for construction in 2008, with particulate emissions from each silo controlled by a bin vent filter.**
- (k) **Four (4) capacity metering pressure tanks, each with a maximum capacity of injecting 1,000 pounds per hour of activated carbon into the exhaust ductwork, approved for construction in 2008, with particulate emissions controlled by a bin vent filter.**

D.1.7 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the PAC handling and storage operations shall not exceed the emission limits specified in the table below:

Unit Description	Max. Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (lbs/hr)
PAC Handling and Storage Operations	25	35.4

The allowable particulate emission rates were calculated using the equation below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Compliance Determination Requirements

D.1.8 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Condition D.1.8, the bin vent filters for particulate control shall be in operation and control emissions at all times the respective unloading stations, silos and pressure tanks are in operation.

~~D.1.7~~ D.1.9 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

~~By December 31, 2008,~~ By December 31 of the second calendar year following the most recent stack test, or within 180 days after issuance of this permit, whichever is later, compliance with the PM limitation in Conditions D.1.2 and D.1.3 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

~~D.1.8~~ D.1.10 Operation of Electrostatic Precipitator [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, the electrostatic precipitator (ESP) shall be operated at all times that the boiler vented to the ESP is in operation.

~~D.1.9~~ D.1.11 Operation of Low NO_x Burners and Overfire Air Systems [326 IAC 2-7-6(6)]

~~D.1.10~~ D.1.12 Continuous Emissions Monitoring [326 IAC 3-5][326 IAC 12][40 CFR 60, Subpart D] [326 IAC 7-2][40 CFR 52.21]

~~D.1.14~~ D.1.13 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-5][326 IAC 7-2][326 IAC 7-1.1-2]

~~D.1.12~~ D.1.14 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

~~D.1.13~~ D.1.15 SO₂ Monitoring System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(3)]

D.1.16 Visible Emissions Notations

- (a) Daily visible emission notations of the exhaust from the bin vent filters on the storage silos shall be performed during normal daylight operations when loading or unloading material. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, at least eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) **If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.**

D.1.17 Broken or Failed Bin Vent Filter Detection

In the event that filter failure has been observed, for single compartment filters, failed units and the associated process will be shut down as soon as possible until the failed units have been repaired or replaced.

~~D.1.14~~ D.1.18 Record Keeping Requirements

- (a) To document compliance with Section C - Opacity, Section C - Maintenance of Continuous Opacity Monitoring Equipment, and the particulate matter and opacity requirements in Conditions D.1.2(a), D.1.3, D.1.4, ~~D.1.10 D.1.12~~, and ~~D.1.12 D.1.14~~, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the limits in Section C - Opacity and Conditions D.1.2(a), D.1.3, and D.1.4.
- ...
- (b) To document compliance with the SO₂ requirements in Conditions D.1.2(b), D.1.3(a), D.1.5, ~~D.1.10 D.1.12~~, ~~D.1.11 D.1.13~~, and ~~D.1.13 D.1.15~~, the Permittee shall maintain records in accordance with (1) through (4) below. Records shall be complete and sufficient to establish compliance with the applicable SO₂ limit(s) as required in Conditions D.1.2(b), D.1.3(a), ~~D.1.10 D.1.12~~, and ~~D.1.11 D.1.13~~. The Permittee shall maintain records in accordance with (3) and (4) below during SO₂ CEMS malfunction or downtime.
- ...
- (3) All fuel sampling and analysis data collected for SO₂ CEMS downtime, in accordance with Condition ~~D.1.13~~ **D.1.15**.
- ...
- (c) To document compliance with the NO_x requirements in Conditions D.1.2 and ~~D.1.10 D.1.12~~, the Permittee shall maintain records of all NO_x and CO₂ or O₂ continuous emissions monitoring data, pursuant to 326 IAC 3-5-6, 326 IAC 2-2, 40 CFR 60.7, and 40 CFR 60.45. Records shall be complete and sufficient to establish compliance with the NO_x limits as required in Condition D.1.2.
- (d) **Pursuant to 326 IAC 2-2 and 326 IAC 2-3, the Permittee shall maintain records as specified by Conditions C.20(c) and (d) (General Record Keeping Requirements).**
- (e) **To document compliance with Condition D.1.16, the Permittee shall maintain records of the visible emission notations required by that condition. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).**
- (df) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.1.15~~ **D.1.19** Reporting Requirements

- (a) A quarterly report of opacity exceedances and a quarterly summary of the information to document compliance with the PM and SO₂ requirements of Conditions D.1.2, D.1.3, D.1.4, and ~~D.1.10~~ **D.1.12** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- ...
2. IDEM, OAQ has updated its telephone numbers and decided to add the specific mail codes (MC) for each of the IDEM branches to improve mail delivery, as follows:
- Permits Branch: **MC 61-53 IGCN 1003**
Compliance Branch: **MC 61-53 IGCN 1003**
Air Compliance Section: **MC 61-53 IGCN 1003**
Compliance Data Section: **MC 61-53 IGCN 1003**
Asbestos Section: **MC 61-52 IGCN 1003**
Technical Support and Modeling: **MC 61-50 IGCN 1003**
3. IDEM, OAQ has removed the identification of the Responsible Official in Condition A.1. IDEM will continue to maintain records of the name, title, and contact information for the responsible official.
- A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]
-
- The Permittee owns and operates a stationary electric utility generating station.

Responsible Official: _____ Plant Manager

...

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 147-25360-00020 and Part 70 Significant Permit Modification No. 147-25437-00020. The staff recommends to the Commissioner that this Part 70 Significant Source Modification and Significant Permit Modification be approved.

Appendix A: Emission Calculations
Powdered Activated Carbon Silo Loading and Transfer to Pressure Tank

Company Name: Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Address: 2791 North US Highway 231, Rockport, Indiana 47635
SSM to TV: 147-25360-00020
Reviewer: ERG/ST
Date: July 11, 2008

Particulate Emissions from Powered Activated Carbon (PAC) Handling and Storage

Emissions are generated when: 1) the PAC is loaded into the storage silos from trucks or railcar, and 2) when it is transferred to the pressure tank from the storage silos.

Process Description	Maximum Throughput (tons/yr)	PM Emission Factor * (lbs/ton)	PM10 Emission Factor * (lbs/ton)	PTE of PM Before Controls (tons/yr)	PTE of PM10 Before Controls (tons/yr)	Control Efficiency (%)	PTE of PM After Controls (tons/yr)	PTE of PM10 After Controls (tons/yr)
Silo Loading and Storage	3,160	0.72	0.46	1.14	0.73	99.0%	1.1E-02	7.3E-03
Pressure Tank Loading	3,160	5.1E-03	2.4E-03	0.008	0.004	99.0%	8.1E-05	3.8E-05
Totals				1.15	0.73		0.011	0.007

* Emission factors are from AP-42, Chapter 11.12, Table 11.12.2-2 (6/06).

NOTE: For the purpose of determining NSR applicability, the emissions increases associated with the silo loading and pressure tank loading are equal to the controlled potential to emit (PTE).

Methodology

PTE of PM/PM10 Before Controls (tons/yr) = Maximum Yearly Throughput (tons/yr) x PM/PM10 Emission Factor (lbs/ton) x 1 ton/2000 lbs

PTE of PM/PM10 After Controls (tons/yr) = PTE of PM/PM10 Before Controls (tons/yr) x (1 - Control Efficiency %)

**Appendix A: Emission Calculations
Particulate Emissions from the Boiler Stack**

**Company Name: Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Address: 2791 North US Highway 231, Rockport, Indiana 47635
SSM to TV: 147-25360-00020
Reviewer: ERG/ST
Date: July 11, 2008**

Projected Actual Emissions

Unit	Throughput ⁽²⁾	Units of Throughput	PM Emission Factor ⁽³⁾	PM10 Emission Factor ⁽³⁾	PM2.5 Emission Factor ⁽³⁾	Units of Emission Factor	PM Emissions (tons/yr)	PM10 Emissions (tons/yr)	PM2.5 Emissions (tons/yr)
Boiler Operation (MB1 and MB2) ⁽¹⁾	205,060,000	MMBtu/yr	0.0288	0.0193	0.0085	lbs/MMBtu	2975.9	1983.7	872.8

Baseline Actual Emissions

Unit	Throughput	Units of Throughput	PM Emission Factor ⁽³⁾	PM10 Emission Factor ⁽³⁾	PM2.5 Emission Factor ⁽³⁾	Units of Emission Factor	PM Emissions (tons/yr)	PM10 Emissions (tons/yr)	PM2.5 Emissions (tons/yr)
Boiler Operation (MB1 and MB2) ⁽⁵⁾	205,060,000	MMBtu/yr	0.0288	0.0193	0.0085	lbs/MMBtu	2952.9	1978.4	870.5

(1) Projected actual emissions include emissions from the injection of activated carbon.

(2) Projected fuel consumption following the installation of the PAC injection system. Aside from what the boilers' are already capable of accommodating, the projected fuel consumption of the boilers is not expected to exceed the average fuel consumption of the baseline period.

(3) The PM emission factor is from testing completed on 8/31/06 and accounts for the effect of the ESP. According to AP42, Table 1.1-6, PM10 is estimated to be 23% of PM and PM2.5 is estimated to be 44% of PM10.

(5) Baseline fuel consumption for the boilers is equal to the average 12 month fuel use over the baseline period. The baseline period is from 10/1/02 to 9/31/04.

Methodology

PM/PM10/PM2.5 Emissions from Boiler Operation = Throughput (MMBtu/yr) x Emission Factor (lbs/MMBtu) x 1/2000 ton/lb

**Appendix A: Emission Calculations
Particulate Emissions from PAC Injection**

**Company Name: Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Address: 2791 North US Highway 231, Rockport, Indiana 47635
SSM to TV: 147-25360-00020
Reviewer: ERG/ST
Date: July 11, 2008**

Emissions Associated with PAC Injection ⁽¹⁾

	Throughput ⁽⁴⁾	Units of Throughput	PM Emission Factor ⁽²⁾	PM10 Emission Factor ⁽³⁾	PM2.5 Emission Factor ⁽³⁾	Units of Emission Factor	PM Emissions (tons/yr)	PM10 Emissions (tons/yr)	PM2.5 Emissions (tons/yr)
PAC Injection	3,160	ton/yr	23.1	5.3	2.3	ton/yr	23.1	5.3	2.3

(1) Emissions from the injection of PAC into the boiler stack prior to the ESP.

(2) The PM emission factor is from testing completed on 8/31/06 and accounts for an ESP control efficiency of 99.27%.

(3) According to AP42, Table 1.1-6, PM10 is estimated to be 23% of PM and PM2.5 is estimated to be 44% of PM10.

(4) Expected PAC injection rate.

Methodology

PM/PM10/PM2.5 Emissions = Emission Factor (lb/hr) x 8760 hr/yr x 1/2000 ton/lb.

The Emission Factors are equal to the amount of uncontrolled PAC injected into the stack.

**Appendix A: Emission Calculations
Fugitive Emissions from Unpaved Roads**

**Company Name: Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Address: 2791 North US Highway 231, Rockport, Indiana 47635
SSM to TV: 147-25360-00020
Reviewer: ERG/ST
Date: July 11, 2008**

Unpaved Roads

According to AP-42, Chapter 13.2.2 - Unpaved Roads (11/06), the PM/PM10 emission factors for unpaved roads can be estimated from the following equation:

Method:
$$E_f = k * [(s/12)^a] * [(W/3)^b] * [(365-p) / 365]$$

where:

k =	4.9	(Particle size multiplier) (k = 4.9 for PM, k = 1.5 for PM10)
s =	6.0	mean % silt content of unpaved roads
a =	0.7	Empirical constant (a = 0.7 for PM-30 or TSP, a = 0.9 for PM10)
b =	0.45	Empirical constant (b = 0.45 for PM and PM10)
W =	25	tons average vehicle weight
p =	120	no. of days with at least 0.254 mm of precipitation

PM Emission Factor (trucks) =	$(4.9 \times (6.0/12)^{0.7} \times (25/3)^{0.45}) \times ((365 - 120)/365) =$	5.26 lbs/mile
PM10 Emission Factor (trucks) =	$(1.5 \times (6.0/12)^{0.9} \times (25/3)^{0.45}) \times ((365 - 120)/365) =$	1.40 lbs/mile
	Length of Unpaved Roads in One Direction =	0.08 miles

Potential to Emit (PTE) of PM/PM10 Before Control from Unpaved Roads:

PAC Delivery - Maximum Yearly Throughput: 3,160 tons/year

Vehicle Type	Maximum Trucks Per Year	Average Vehicle Weight	Total Trip Number	Traffic Component	Vehicle Mile Traveled (VMT)	PTE of PM	PTE of PM10
		(tons)	(trips/yr)	(%)	(miles/yr)	(tons/yr)	(tons/yr)
Truck (PAC Delivery)	158	25	158	100.0%	25	0.07	0.02

NOTE: For the purpose of determining NSR applicability, the emissions increases associated with vehicular traffic on unpaved roads are equal to the potential to emit (PTE).

Methodology

PTE of PM/PM10 (tons/yr) = Vehicle Miles Traveled (mi/yr) x PM/PM10 Emission Factor (lbs/mi) x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Fugitive Emissions from Paved Roads

Company Name: Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Address: 2791 North US Highway 231, Rockport, Indiana 47635
SSM to TV: 147-25360-00020
Reviewer: ERG/ST
Date: July 11, 2008

Emission Factors: AP-42

According to AP-42, Chapter 13.2.1 - Paved Roads (11/06), the PM/PM10 emission factors for paved roads can be estimated from the following equation:

$$E = (k \times (sL/2)^a \times (w/3)^b - C) \times (1 - p/(4 \times 365))$$

where:

E = emission factor (lb/vehicle mile traveled)
sL = road surface silt loading (g/m²) = 12.0 (g/m²)
w = mean vehicle weight (tons) = 25.0 tons
k = empirical constant = 0.082 for PM and 0.016 for PM10
a = empirical constant = 0.65
b = empirical constant = 1.5
C = emission factor for exhaust, brake and tire wear = 0.00047 for PM and PM10
p = number of days per year with 0.01 inches precipitation = 120

PM Emission Factor (trucks) = $(0.082 \times (7.0/2)^{0.65} \times (25/3)^{1.5} - 0.00047) \times (1 - 120/1460) = 5.80$ lbs/mile
PM10 Emission Factor (trucks) = $(0.016 \times (7.0/2)^{0.65} \times (25/3)^{1.5} - 0.00047) \times (1 - 120/1460) = 1.13$ lbs/mile
Length of Paved Roads in One Direction = 0.50 miles

Potential to Emit (PTE) of PM/PM10 Before Control from Paved Roads:

PAC Delivery - Maximum Yearly Throughput: 3,160 tons/year

Vehicle Type	Maximum Trucks Per Year	Average Vehicle Weight (tons)	Total Trip Number (trips/yr)	Traffic Component (%)	Vehicle Mile Traveled (VMT) (miles/yr)	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)
Truck (PAC Delivery)	158	25	158	100.0%	158	0.46	0.09

NOTE: For the purpose of determining NSR applicability, the emissions increases associated with vehicular traffic on paved roads are equal to the potential to emit (PTE).

Methodology

Average Vehicle Weight (tons) = (Weight of Unloaded Vehicles + Weight of Loaded Vehicles) / 2
Total Trip Number (trips/yr) = Maximum Yearly Throughput / 25 tons per load
VMT (miles/yr) = Length of Paved Roads in One Direction (miles) x 2 x Total Trip Number (trips/yr)
PTE of PM/PM10 (tons/yr) = VMT (miles/yr) x Emission Factor (lbs/mile) x 1 tons/ 2000 lbs

**Appendix A: Emission Calculations
Emissions Summary**

Company Name: Indiana Michigan Power d.b.a. American Electric Power (AEP) Rockport Plant
Address: 2791 North US Highway 231, Rockport, Indiana 47635
SSM to TV: 147-25360-00020
Reviewer: ERG/ST
Date: July 11, 2008

Activity	Projected Actual Emissions (tpy)			Baseline Actual Emissions ⁽¹⁾ (tpy)			Emissions Increases (tpy)		
	PM	PM10	PM2.5	PM	PM10	PM2.5	PM	PM10	PM2.5
PAC Handling	0.01	0.01	0.0	0.0	0.0	0.0	0.01	0.01	0.00
Boiler Operation	2975.9	1983.7	872.8	2952.9	1978.4	870.5	23.07	5.31	2.33
Unpaved Roads	0.07	0.02	0.0	0.0	0.0	0.0	0.07	0.02	0.00
Paved Roads	0.5	0.1	0.0	0.0	0.0	0.0	0.46	0.09	0.00
	Total Emissions Increases for the Modification						23.60	5.42	2.33

(1) Baseline Actual Emissions for PAC Handling, Unpaved Roads and Paved Roads are zero because these are new units/operations.