



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant

DATE: September 1, 2011

RE: Advanced Bearing Materials, LLC / 031-30545-00002

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



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Steve Leahy  
Advanced Bearing Materials, LLC  
1515 West Main Street  
Greensburg, IN 47240

September 1, 2011

Re: 031-30545-00002  
First Significant Revision to  
F031-24769-00002

Dear Steve Leahy:

Advanced Bearing Materials, LLC was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F031-24769-00002 on July 3, 2008 for a stationary bearings manufacturing source located at 1515 West Main Street, Greensburg, Indiana 47240. On May 13, 2011, the Office of Air Quality (OAQ) received an application from the source requesting to upgrade their current Cast Bronze Strip (CBS) Line Baghouse controlling emissions from stack 8 with the addition of two (2) additional filtration modules. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions  
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 (Revocation), 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.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Sarah Conner, Ph. D., of my staff, at 317-234-6555 or 1-800-451-6027, and ask for extension 4-6555.

Sincerely,



Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/slc

cc: File - Decatur County  
Decatur County Health Department  
U.S. EPA, Region V  
Compliance and Enforcement Branch  
Billing, Licensing and Training Section



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**Federally Enforceable State Operating Permit  
Renewal  
OFFICE OF AIR QUALITY**

**Advanced Bearing Materials, LLC  
1515 West Main Street  
Greensburg, Indiana 47240**

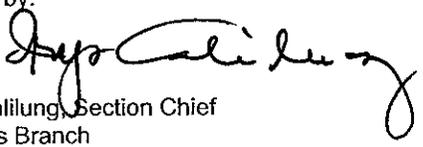
(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**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. 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 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F031-24769-00002	
Original signed by: Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 3, 2008  Expiration Date: July 3, 2018

First Significant Permit Revision No.: 031-30545-00002	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 1, 2011  Expiration Date: July 3, 2018

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## 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 2-8-3(b)]

---

The Permittee owns and operates a stationary a bearing manufacturing source that melts ready to melt bronze ingots and applies the bronze to steel sheets.

Source Address:	1515 W. Main Street, Greensburg, Indiana 47240
General Source Phone Number:	(812) 663-3401
SIC Code:	3417 (Motor Vehicle Parts and Accessories)
County Location:	Decatur
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

One (1) Cast Bronze Strip (CBS) Line, constructed after 1990, approved in 2011 for modification, with a maximum capacity of 3,000 pounds per hour of steel, to which a maximum of 750 pounds per hour of bronze is applied, consisting of the following:

- (a) One (1) coreless furnace, identified as PT #6, with a maximum capacity of 0.13 tons of copper per hour, using the CBS baghouse (approved in 2011 for modification) as control, and exhausting to stack #8;
- (b) Two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, each with a maximum capacity of 1.87 tons of metal per hour, using the CBS baghouse (approved in 2011 for modification) as control, and exhausting to stack #8;
- (c) One (1) hot oil quench unit, identified as PT #15; and
- (d) Two (2) rough milling units, identified as PT #13, with a combined maximum capacity of 0.5 tons of metal per hour, using the CBS cyclone/bag filter as control and exhausting to stack #10.

### A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

---

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
  - (1) Two (2) oxygen scavenging flames (units 81 and 82), each with a total capacity of 0.3 million British thermal unit per hour (MMBtu/hr);

- (2) Two (2) pre-ladle heaters (units 9 and 10) with a total capacity of 0.7 million British thermal unit per hour (MMBtu/hr); and
- (3) One (1) natural gas-fired boiler, identified as boiler #1 (unit 50), constructed prior to 1996, with heat input capacity of 2.93 million British thermal units per hour (MMBtu/hr). [326 IAC 6-2-3]
- (b) Refractory storage not requiring air pollution control equipment;
- (c) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings;
- (d) Machining where an aqueous cutting coolant continuously floods the machining interface;
- (e) Three (3) cold cleaner degreasing operations, each with a capacity of 15 gallons, to clean small parts, installed in 1997 [326 IAC 8-3-2] [326 IAC 8-3-5];
- (f) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment:
  - (1) Welding operations using much less than six hundred and twenty-five (625) pounds of wire or rod per day;
- (g) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume;
- (h) Quenching operations used with heat treating processes;
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (j) Paved and unpaved roads and parking lots with public access [326 IAC 6-4];
- (k) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (l) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume [326 IAC 6-3-2];
- (m) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations [326 IAC 6-3-2];
- (n) A laboratory as defined in 326 IAC 2-7-1(21)(D);
- (o) Other activities or categories not previously identified:
  - (1) Miscellaneous dry machining and deburring operations producing large shavings;
  - (2) Miscellaneous metal washing operations;
  - (3) One (1) finish mill, with a maximum capacity of 0.6 tons per hour.

- (p) Three (3) electric holding furnaces, identified as PT #7, #12, and #11, each with a maximum capacity of 1.65 tons of metal per hour, and exhausting inside the building.

A.4 FESOP Applicability [326 IAC 2-8-2]

---

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

## **SECTION B GENERAL CONDITIONS**

### **B.1 Definitions [326 IAC 2-8-1]**

---

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

### **B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]**

---

- (a) This permit, F031-24769-00002, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

---

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

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

### **B.4 Enforceability [326 IAC 2-8-6]**

---

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

### **B.5 Severability [326 IAC 2-8-4(4)]**

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

### **B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]**

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

### **B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]**

---

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

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
- (1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
  - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:
- Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

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

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

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

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

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

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;

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

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

#### B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F031-24769-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,

- (2) revised, or
- (3) deleted.

(b) All previous registrations and permits are superseded by this permit.

**B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]**

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

**B.15 Reserved**

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**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]**

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]**

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

**B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]**

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

(b) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
The application which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

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

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

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

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

#### C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.3 Opacity [326 IAC 5-1]

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

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

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

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

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

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

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meet the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

### **Testing Requirements [326 IAC 2-8-4(3)]**

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

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- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meet the requirements of 326 IAC 2-8-5(a)(1) certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meet the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

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

### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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

## **Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

### **C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]**

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Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

### **C.12 Reserved**

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### **C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

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

## **Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

### **C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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

C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

### **C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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- (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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

### **C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## **Stratospheric Ozone Protection**

### **C.19 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### **Emissions Unit Description:** Cast Bronze Strip (CBS) Line

One (1) Cast Bronze Strip (CBS) Line, constructed after 1990, approved in 2011 for modification, with a maximum capacity of 3,000 pounds per hour of steel, to which a maximum of 750 pounds per hour of bronze is applied, consisting of the following:

- (a) One (1) coreless furnace, identified as PT #6, with a maximum capacity of 0.13 tons of copper per hour, using the CBS baghouse (approved in 2011 for modification) as control, and exhausting to stack #8;
- (b) Two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, each with a maximum capacity of 1.87 tons of metal per hour, using the CBS baghouse (approved in 2011 for modification) as control, and exhausting to stack #8;
- (c) One (1) hot oil quench unit, identified as PT #15; and
- (d) Two (2) rough milling units, identified as PT #13, with a combined maximum capacity of 0.5 tons of metal per hour, using the CBS cyclone/bag filter as control and exhausting to stack #10.

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

### **Emission Limitations and Standards [326 IAC 2-8-4(1)]**

#### **D.1.1 Particulate Matter [326 IAC 2-8-4]**

- (a) PM10 emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (b) PM2.5 emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (c) PM10 emissions from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.
- (d) PM2.5 emissions from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.

Compliance with these limits, combined with the PM10 and PM2.5 emissions from all other emission units at this source, shall limit the source-wide total PM10 and PM2.5 emissions to less than 100 tons per 12 consecutive month period each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable. The furnaces shall melt ready to melt bronze ingots only and pour the bronze on steel sheets. Compliance with this requirement renders 326 IAC 2-2-1(gg) and 40 CFR 60 Subpart M not applicable.

#### **D.1.2 PSD Minor Limits for Particulate [326 IAC 2-2]**

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

- (a) PM emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.

Compliance with this limit, combined with the PM emissions from all other emission units at this source, shall limit the source-wide total PM emissions to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

#### D.1.3 Particulate [326 IAC 6-3-2]

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- (a) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the one (1) coreless furnace, identified as PT #6, exhausting to the CBS Line baghouse and stack #8, shall not exceed 1.05 pounds per hour when operating at a process weight rate of 0.13 tons per hour.
- (b) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, exhausting to the CBS Line baghouse and stack #8, each shall not exceed 6.24 pounds per hour when operating at a process weight rate of 1.87 tons per hour.
- (c) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) rough milling units, identified as PT #13, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall each not exceed 1.62 pounds per hour when operating at a process weight rate of 0.25 tons per hour.

The particulate emissions limitations above shall be calculated using the following equation:

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:

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

#### D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)][326 IAC 1-6-3]

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A Preventative Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

### Compliance Determination Requirements

#### D.1.5 Particulate Control

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- (a) In order to comply with Conditions D.1.1, D.1.2, and D.1.3(b), the baghouse for particulate control shall be in operation and control emissions from the Cast Bronze Strip (CBS) Line furnaces at all times that any of the furnaces are in operation.
- (b) In order to comply with Conditions D.1.1 and D.1.3(c), the cyclone/bag filter for particulate control shall be in operation and control emissions from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line at all times that either or both of the rough milling units are in operation.

#### D.1.6 Testing Requirements [326 IAC 2-8-5(a), (4)][326 IAC 2-1.1-11]

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No later than five (5) years after the most recent valid compliance demonstration, the Permittee shall conduct PM, PM10, and PM2.5 testing on stack #8 and stack #10 to verify compliance with Conditions D.1.1, D.1.2, D.1.3(b), and D.1.3(c), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5)

years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 includes filterable and condensable PM. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

### **Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **D.1.7 Visible Emissions Notations**

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- (a) Visible emission notations of the CBS Line stack (stack #8 and stack #10) exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. 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, 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### **D.1.8 Parametric Monitoring**

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- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the CBS Line furnaces, at least once per day when the furnaces are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The Permittee shall record the pressure drop across the cyclone/bag filter combination used in conjunction with the CBS Line rough milling units, at least once per day when the CBS Line is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.4 and 8.4 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (c) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

#### D.1.9 Broken or Failed Bag Detection

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- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the current batch. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### D.1.10 Cyclone Failure Detection

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Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

#### D.1.11 Record Keeping Requirement

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- (a) To document the compliance status with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the CBS Line stacks (stack #8 and stack #10) exhausts once per day. 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 (i.e., the process did not operate that day).
- (b) To document the compliance status with Condition D.1.8, the Permittee shall maintain daily records of the pressure drop readings during normal operation. 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 (i.e., the process did not operate that day).
- (c) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description: Insignificant Activities

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
  - (1) Two (2) oxygen scavenging flames (units 81 and 82), each with a total capacity of 0.3 million British thermal unit per hour (MMBtu/hr);
  - (2) Two (2) pre-ladle heaters (units 9 and 10) with a total capacity of 0.7 million British thermal unit per hour (MMBtu/hr); and
  - (3) One (1) natural gas-fired boiler, identified as boiler #1 (unit 50), constructed prior to 1996, with heat input capacity of 2.93 million British thermal units per hour (MMBtu/hr). [326 IAC 6-2-3]
- (b) Refractory storage not requiring air pollution control equipment;
- (c) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings;
- (d) Machining where an aqueous cutting coolant continuously floods the machining interface;
- (e) Three (3) cold cleaner degreasing operations, each with a capacity of 15 gallons, to clean small parts, installed in 1997 [326 IAC 8-3-2] [326 IAC 8-3-5];
- (f) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment:
  - (1) Welding operations using much less than six hundred and twenty-five (625) pounds of wire or rod per day;
- (g) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume;
- (h) Quenching operations used with heat treating processes;
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (j) Paved and unpaved roads and parking lots with public access [326 IAC 6-4];
- (k) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (l) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume [326 IAC 6-3-2];

- (m) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations [326 IAC 6-3-2];
- (n) A laboratory as defined in 326 IAC 2-7-1(21)(D);
- (o) Other activities or categories not previously identified:
  - (1) Miscellaneous dry machining and deburring operations producing large shavings;
  - (2) Miscellaneous metal washing operations;
  - (3) One (1) finish mill, with a maximum capacity of 0.6 tons per hour.
- (p) Three (3) electric holding furnaces, identified as PT #7, #12, and #11, each with a maximum capacity of 1.65 tons of metal per hour, and exhausting inside the building.

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

### **Emission Limitations and Standards [326 IAC 2-8-4(1)]**

#### **D.2.1 Particulate [326 IAC 6-2-4]**

Pursuant to 326 IAC 6-2-4(a) (Emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from the one (1) boiler, identified as boiler #1 (unit 50), shall not exceed 0.6 pounds of particulate matter per million British thermal units heat input.

#### **D.2.2 Particulate [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Particulate emission limitations, work practices, and control technologies), the particulate emission rate from the insignificant grinding and machining operations and the insignificant furnaces shall each be limited by the following:

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

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

#### **D.2.3 Volatile Organic Compounds [326 IAC 8-3-2] [326 IAC 8-3-5]**

The three (3) degreasing operation shall comply with the following requirements:

- (a) Pursuant to 326 IAC 8-3-2, the owner or operator shall:
  - (1) Equip the cleaner with a cover;
  - (2) Equip the cleaner with a facility for draining cleaned parts;
  - (3) Close the degreaser cover whenever parts are not being handled in the cleaner;
  - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

- (5) Provide a permanent, conspicuous label summarizing the operation requirements; and
  - (6) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.
- (b) Pursuant to 326 IAC 8-3-5(a), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one hand if:
    - A) The solvent volatility is greater than three-tenths (0.3) pounds per square inch (15 millimeters of mercury) measured at 38 degrees Celsius (100 degrees Fahrenheit);
    - B) The solvent is agitated; or
    - C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than six-tenths (0.6) pounds per square inch (thirty-two (32) millimeters of mercury) measured at thirty-eight degrees Celsius (38<sup>o</sup>C) (one hundred degrees Fahrenheit (100<sup>o</sup>F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in 326 IAC 8-3-5(b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than six-tenths (0.6) pounds per square inch (thirty-two (32) millimeters of mercury) measured at thirty-eight degrees Celsius (38<sup>o</sup>C) (one hundred degrees Fahrenheit (100<sup>o</sup>F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9<sup>o</sup>C) (one hundred twenty degrees Fahrenheit (120<sup>o</sup>F)):
    - A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

- (c) Pursuant to 326 IAC 8-3-5(b), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name:           Advanced Bearing Materials, LLC  
Source Address:       1515 W. Main Street, Greensburg, Indiana 47240  
FESOP Permit No.:    F031-24769-00002

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Advanced Bearing Materials, LLC  
Source Address: 1515 W. Main Street, Greensburg, Indiana 47240  
FESOP Permit No.: F031-24769-00002

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16</li></ul> |
|--|

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

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

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

**Page 2 of 2**

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

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

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

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

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Advanced Bearing Materials, LLC  
Source Address: 1515 W. Main Street, Greensburg, Indiana 47240  
FESOP Permit No.: F031-24769-00002

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

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

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

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

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

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

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

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

Technical Support Document (TSD) for a Significant Permit Revision to a  
Federally Enforceable State Operating Permit (FESOP) Renewal

**Source Description and Location**

**Source Name:** Advanced Bearing Materials, LLC  
**Source Location:** 1515 West Main Street, Greensburg, Indiana 47240  
**County:** Decatur  
**SIC Code:** 3714 (Motor Vehicle Parts and Accessories)  
**Operation Permit No.:** F031-24769-00002  
**Operation Permit Issuance Date:** July 3, 2008  
**Significant Permit Revision No.:** 031-30545-00002  
**Permit Reviewer:** Sarah Conner, Ph. D.

On May 13, 2011, the Office of Air Quality (OAQ) received an application from Advanced Bearing Materials, LLC related to a modification to an existing stationary bearings manufacturing source.

**Existing Approvals**

The source was issued FESOP Renewal No. F031-24769-00002 on July 3, 2008.

**County Attainment Status**

The source is located in Decatur County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	
Unclassifiable or attainment effective April 5, 2005, for PM <sub>2.5</sub> .	

- (a) **Ozone Standards**  
 Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Decatur County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM<sub>2.5</sub>**  
 Decatur County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> emissions. These rules became effective on July 15, 2008. Indiana has three years from the

publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM<sub>2.5</sub> emissions until 326 IAC 2-2 is revised.

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

**Fugitive Emissions**

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

**Status of the Existing Source**

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

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8***	98.08	42.05	42.05	-	-	-	-	-	0.01	0.01 (Pb)
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.29	0.29	0.29	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	0.19	0.19	0.19	-	-	-	-	-	-	-
Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack #10	95.73	42.05	42.05	-	-	-	-	-	0.07	0.07 (Pb)
Natural Gas Units	0.03	0.12	0.12	0.01	1.63	0.09	1.37	1,972.42	0.03	0.03 (Hexane)
One (1) hot oil quench unit	-	-	-	-	-	1.00	-	-	-	-
One (1) finish mill	3.05E-06	3.05E-06	3.05E-06	-	-	-	-	-	-	-
Three (3) electric holding furnaces, identified as PT #7, #12, and #11	-	-	-	-	-	-	-	-	-	-
<b>Total PTE of Entire Source</b>	<b>194.32</b>	<b>84.70</b>	<b>84.70</b>	<b>0.01</b>	<b>1.63</b>	<b>1.09</b>	<b>1.37</b>	<b>1,972.42</b>	<b>0.11</b>	<b>0.07 (Pb)</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	NA	NA
- = negligible These emissions are based upon FESOP Renewal No. F031-24769-00002, issued on July 3, 2008. * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". **The 100,000 CO <sub>2</sub> e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD. *** PM was not limited in FESOP Renewal No. F031-24769-00002, issued on July 3, 2008; however, the controlled PM emissions are equal to those shown above in the table for PM10.										

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

**Description of Proposed Revision**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Advanced Bearing Materials, LLC on May 13, 2011, relating to the addition of two (2) additional filtration modules to the Cast Bronze Strip (CBS) Line Baghouse controlling emissions from stack 8. Based on the stack test conducted by the source, the control efficiency of the baghouse controlling stack 8 was tested at 98.9%, which is higher than the initial assumption of 96%. In addition, the flow rate of the blower associated with stack 8 is being corrected to 46,000 acfm. These changes revise the potential to emit for stack 8.

The following is a list of the modified emission units and pollution control devices:

- (1) One (1) Cast Bronze Strip (CBS) Line, constructed after 1990, approved in 2011 for modification, with a maximum capacity of 3,000 pounds per hour of steel, to which a maximum of 750 pounds per hour of bronze is applied, consisting of the following:
  - (a) One (1) coreless furnace, identified as PT #6, with a maximum capacity of 0.13 tons of copper per hour, using the CBS baghouse (approved in 2011 for modification) as control, and exhausting to stack #8;
  - (b) Two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, each with a maximum capacity of 1.87 tons of metal per hour, using the CBS baghouse (approved in 2011 for modification) as control, and exhausting to stack #8;
- (2) Three (3) electric holding furnaces, identified as PT #7, #12, and #11, each with a maximum capacity of 1.65 tons of metal per hour, and exhausting inside the building.
- (3) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
  - (a) Two (2) oxygen scavenging flames (units 81 and 82, each with a total capacity of 0.3 million British thermal unit per hour (MMBtu/hr);

**Emission Units and Pollution Control Equipment Removed From the Source**

The source has removed the following insignificant activities: Note: the numbering of these units corresponding to the sequence as they appear in the permit.

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
  - (1) One (1) oxygen scavenging flames (unit 16).
  - ...
- (h) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs;
  - ...
- (o) Other activities or categories not previously identified:
  - ...
  - (3) One (1) nickel electroplating operation, rated at 6.69 pounds per hour of bath solution;
  - ...
- (q) One (1) groundwater remediation system, identified as GWR-1, with the volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions controlled by one (1) air stripper

**Enforcement Issues**

There are no pending enforcement actions related to this revision.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

**Permit Level Determination – FESOP Revision**

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8 **	784.99	784.99	784.99	-	-	-	-	-	0.02	0.02 (Pb)
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.33	0.33	0.33	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	0.12	0.12	0.12	-	-	-	-	-	-	-
Natural Gas Units	0.04	0.14	0.14	0.01	1.85	0.10	1.56	2,236.82	0.03	0.03 (Hexane)
<b>Total PTE of Proposed Revision</b>	<b>785.47</b>	<b>785.58</b>	<b>785.58</b>	<b>0.01</b>	<b>1.85</b>	<b>0.10</b>	<b>1.56</b>	<b>2,236.82</b>	<b>0.05</b>	<b>0.03 (Hexane)</b>
- = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". ** PTE before control based on 98.9% control efficiency and 46,000 acfm. Since the PTE before control is greater than 250 tons per year, PSD minor limits have to be specified in the permit.										

This FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1(f)(1)(E)(i), because the revision involves the construction of two (2) additional filtration modules to the Cast Bronze Strip (CBS) Line Baghouse with potential to emit (PTE) greater than 25 tons per year. In addition, this FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1(g) because it involves adjustment to the existing source-wide emissions limitations to maintain the FESOP status of the source (see PTE of the Entire Source After The Issuance of the FESOP Revision Section).

**PTE of the Entire Source After Issuance of the FESOP Revision**

The table below summarizes the potential to emit of the entire source reflecting adjustment of existing limits, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8***	<del>98.08</del> <b>42.05</b>	42.05	42.05	-	-	-	-	-	<b>0.01</b> <b>0.02</b>	<del>0.01 (Pb)</del> <b>0.02 (Ib)</b>
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	<del>0.29</del> <b>0.33</b>	<del>0.29</del> <b>0.33</b>	<del>0.29</del> <b>0.33</b>	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	<del>0.19</del> <b>0.12</b>	<del>0.19</del> <b>0.12</b>	<del>0.19</del> <b>0.12</b>	-	-	-	-	-	-	-
Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack #10	95.73 ****	42.05	42.05	-	-	-	-	-	<del>0.07</del> <b>0.05</b>	<del>0.07 (Pb)</del> <b>0.05 (Pb)</b>
Natural Gas Units	<del>0.03</del> <b>0.04</b>	<del>0.12</del> <b>0.14</b>	<del>0.12</del> <b>0.14</b>	0.01	<del>1.63</del> <b>1.85</b>	<del>0.09</del> <b>0.10</b>	<del>1.37</del> <b>1.56</b>	<del>1972.42</del> <b>2,236.82</b>	0.03	0.03 (Hexane)
One (1) hot oil quench unit	-	-	-	-	-	1.00	-	-	-	-
One (1) finish mill	3.05E-06	3.05E-06	3.05E-06	-	-	-	-	-	-	-
Three (3) electric holding furnaces, identified as PT #7, #12, and #11	-	-	-	-	-	-	-	-	-	-
Total PTE of Entire Source	<del>194.32</del> <b>138.27</b>	<del>84.70</del> <b>84.69</b>	<del>84.70</del> <b>84.69</b>	0.01	<del>1.63</del> <b>1.85</b>	<del>1.09</del> <b>1.10</b>	<del>1.37</del> <b>1.56</b>	<del>1972.42</del> <b>2,236.82</b>	<del>0.11</del> <b>0.10</b>	<del>0.07 (Pb)</del> <b>0.05 (Pb)</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	NA	NA
<p>- = negligible</p> <p>* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".</p> <p>**The 100,000 CO<sub>2</sub>e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.</p> <p>*** PM emissions from stack #8 shall not exceed 9.6 pounds per hour in order for the source to comply with 326 IAC 2-8 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable.</p> <p>**** PTE before control</p>										

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM10 *	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAP s	Worst Single HAP
Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8***	42.05	42.05	42.05	-	-	-	-	-	0.02	0.02 (lb)
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.33	0.33	0.33	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	0.12	0.12	0.12	-	-	-	-	-	-	-
Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack #10	95.73****	42.05	42.05	-	-	-	-	-	0.05	0.05 (Pb)
Natural Gas Units	0.04	0.14	0.14	0.01	1.85	0.10	1.56	2,236.82	0.03	0.03 (Hexane)
One (1) hot oil quench unit	-	-	-	-	-	1.00	-	-	-	-
One (1) finish mill	3.05E-06	3.05E-06	3.05E-06	-	-	-	-	-	-	-
Three (3) electric holding furnaces, identified as PT #7, #12, and #11	-	-	-	-	-	-	-	-	-	-
<b>Total PTE of Entire Source</b>	<b>138.27</b>	<b>84.69</b>	<b>84.69</b>	<b>0.01</b>	<b>1.85</b>	<b>1.10</b>	<b>1.56</b>	<b>2,236.82</b>	<b>0.10</b>	<b>0.05 (Pb)</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	NA	NA
<p>- = negligible</p> <p>* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".</p> <p>**The 100,000 CO<sub>2</sub>e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.</p> <p>*** PM emissions from stack #8 shall not exceed 9.6 pounds per hour in order for the source to comply with 326 IAC 2-8 (FESOP) and to render the requirements of 326 IAC 2-2 (PSD) not applicable.</p> <p>**** PTE before control</p>										

(a) FESOP Status

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) The PM10 emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (2) The PM2.5 emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (3) The PM10 emissions from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.
- (4) The PM2.5 emissions from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.

Compliance with these limits, combined with the PM10 and PM2.5 emissions from all other emission units at this source, shall limit the source-wide total PM10 and PM2.5 emissions to less than 100 tons per 12 consecutive month period each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) **PSD Minor Source**  
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will be limited to less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

- (1) The PM emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.

Compliance with this limit, combined with the PM emissions from all other emission units at this source, shall limit the source-wide total PM emissions to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

- (d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per year.
- (e) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

<b>Federal Rule Applicability Determination</b>
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New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)  
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the modified units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (d) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) 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.
  - (2) 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.

- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS Line Baghouse and stack #8

- (g) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
- (1) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the one (1) coreless furnace, identified as PT #6, exhausting to the CBS Line baghouse and stack #8, shall not exceed 1.05 pounds per hour when operating at a process weight rate of 0.13 tons per hour.
  - (2) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, exhausting to the CBS Line baghouse and stack #8, shall each not exceed 6.24 pounds per hour when operating at a process weight rate of 1.87 tons per hour.
  - (3) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) rough milling units, identified as PT #13, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall each not exceed 1.62 pounds per hour when operating at a process weight rate of 0.25 tons per hour.

The particulate emissions limitations above shall be calculated using the following equation:

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:

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

The one (1) coreless furnace, identified as PT #6 is able to comply with the limits established in 326 IAC 6-3-2 without the use of controls.

The potential to emit particulate at the CBS Line baghouse, exhausting to stack #8, is 179.2 pounds per hour before control. Therefore, the CBS Line Baghouse shall be in operation at all times the two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, are in operation, in order to comply with 326 IAC 6-3-2.

The potential to emit particulate at the CBS cyclone/bag filter, exhausting to stack #10, is 21.9 pounds per hour before control. Therefore, the CBS cyclone/bag filter shall be in operation at all times the two (2) rough milling units, identified as PT #13, are in operation, in order to comply with 326 IAC 6-3-2.

- (4) Pursuant to 326 IAC 6-3-1(b)(14), the requirements of 326 IAC 6-3-2 do not apply to the finish mill or the electric holding furnaces, because manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour are exempt from the requirements of 326 IAC 6-3.

**Compliance Determination, Monitoring and Testing Requirements**

(a) The compliance determination and monitoring requirements applicable to this proposed revision are as follows:

Emission Unit/Control	Parameter	Frequency	Range	Excursions and Exceedances
CBS Line baghouse and stack #8	Visible Emissions	Once per day	Normal-Abnormal	Response Steps
CBS Line baghouse	Pressure Drop	Once per day	3 to 7 inches	Response Steps

(b) The testing requirements applicable to this proposed revision are as follows:

Testing Requirements				
Emission Unit/Stack	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Cast Bronze Strip (CBS) Line furnaces/stack #8	CBS Line baghouse	PM	five (5) years from the date of the last valid compliance demonstration	once every five (5) years
		PM10		
		PM2.5		

**Proposed Changes**

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strike through~~ text and new language appears as **bold** text:

- The source is upgrading their current Cast Bronze Strip (CBS) Line Baghouse controlling emissions from stack 8 with the addition of two (2) additional filtration modules. In addition the descriptive information in the permit has been revised to reflect current operations at the source. IDEM, OAQ has updated the descriptive information in the permit as follows: Note: the numbering of the units correspond to the numbering in the permit.*

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

One (1) Cast Bronze Strip (CBS) Line, constructed after 1990, **approved in 2011 for modification**, with a maximum capacity of ~~2,400~~ **3,000** pounds per hour of steel, to which a maximum of ~~3,300~~ **750** pounds per hour of bronze is applied, consisting of the following:

- One (1) ~~old start~~ **coreless** furnace, identified as PT #6, **with a maximum capacity of 0.13 tons of copper per hour**, ~~controlled by using~~ the CBS baghouse (**approved in 2011 for modification**) as control, and exhausting to stack #8, ~~capacity: 0.75 tons of metal per hour;~~
- ~~Three (3) electric holding furnaces, identified as PT #7, #12, and #11, controlled by the CBS baghouse and exhausting to stack #8, capacity: 1.65 tons of metal per hour, each;~~

- (eb) Two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, **each with a maximum capacity of 1.87 tons of metal per hour, controlled by using the CBS baghouse (approved in 2011 for modification) as control**, and exhausting to stack #8, ~~capacity: 1.65 tons of metal per hour, each;~~
- (ec) One (1) hot oil quench unit, identified as PT #15; and
- (ed) Two (2) rough milling units, identified as PT #13, **with a combined maximum capacity of 0.5 tons of metal per hour, controlled by the using the CBS cyclone/bag filter as control** and exhausting to stack #10.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(l)]

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:
  - (1) ~~Three (3)~~ **Two (2)** oxygen scavenging flames (units 81, **and 82 and 16**), **each** with a total capacity of ~~0.4~~ **0.3** million British thermal unit per hour (**MMBtu/hr**);
  - (2) Two (2) pre-ladle heaters (units 9 and 10) with a total capacity of 0.7 million British thermal unit per hour (**MMBtu/hr**); and
  - (3) One (1) natural gas-fired boiler, identified as boiler #1 (unit 50), constructed prior to 1996, with heat input capacity of 2.93 million British thermal units per hour (**MMBtu/hr**). [326 IAC 6-2-3]
- ...
- (f) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment:
  - (1) Welding operations ~~use~~ **using much** less than six hundred and twenty-five (625) pounds of wire or rod per day;
- (g) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume;
- ~~(h) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs;~~
- (ih) Quenching operations used with heat treating processes;
- (ji) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (kj) Paved and unpaved roads and parking lots with public access [326 IAC 6-4];
- (lk) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (ml) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume [326 IAC 6-3-2];

- (am) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations [326 IAC 6-3-2];
  - (en) A laboratory as defined in 326 IAC 2-7-1(21)(D);
  - (po) Other activities or categories not previously identified:
    - (1) Miscellaneous dry machining and deburring operations producing large shavings;
    - (2) Miscellaneous metal washing operations;
    - ~~(3) One (1) nickel electroplating operation, rated at 6.69 pounds per hour of bath solution;~~
    - ~~(4) Two (2) rough dry mills, capacity: 80 pounds per hour, each; and~~
    - (53) One (1) finish mill, capacity: 70 pounds per hour with a maximum capacity of 0.6 tons per hour.**
  - ~~(g) One (1) groundwater remediation system, identified as GWR-1, with the volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions controlled by one (1) air stripper~~
  - (p) Three (3) electric holding furnaces, identified as PT #7, #12, and #11, each with a maximum capacity of 1.65 tons of metal per hour, and exhausting inside the building.**
2. *The uncontrolled increase in PTE from the addition of two (2) additional filtration modules to the Cast Bronze Strip (CBS) Line Baghouse controlling emissions from stack 8 is greater than the PSD Major Source Thresholds of 250 tons/yr for pollutants PM, PM10 and PM2.5. Therefore, pollutants PM and PM2.5 have also been limited to 9.6 pounds per hour. These are new requirements for Stack #8 and Stack #10 in order to comply with the requirements of 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable due to this revision.*

*In addition, for clarity, IDEM, OAQ has changed references to the general conditions such as "in accordance with Section B", "in accordance with Section C", or other similar language to "Section C...contains the Permittee's obligation with regard to the records required by this condition."*

*IDEM has clarified Section D - Testing Requirements.*

*IDEM has included the replacement of an instrument as an acceptable action in Section D - Parametric Monitoring.*

*The word "status" has been added to the Record Keeping Requirements. The Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this.*

*Therefore Section D.1 of the permit has been revised as described below:*

**D.1.1 Particulate Matter (PM<sub>10</sub>) [326 IAC 2-8-4]**

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- (a) ~~The potential to emit PM<sub>10</sub> emissions~~ **PM<sub>10</sub> emissions** from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (b) **PM<sub>2.5</sub> emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.**
- (bc) ~~The potential to emit PM<sub>10</sub> emissions~~ from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.
- (d) **PM<sub>2.5</sub> emissions from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.**

~~Compliance with the above limits will limit PM<sub>10</sub> emissions to less than one hundred (100) tons per year. Therefore, 326 IAC 2-2 and 326 IAC 2-7 are not applicable.~~ **Compliance with these limits, combined with the PM<sub>10</sub> and PM<sub>2.5</sub> emissions from all other emission units at this source, shall limit the source-wide total PM<sub>10</sub> and PM<sub>2.5</sub> emissions to less than 100 tons per 12 consecutive month period each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.** The furnaces shall melt ready to melt bronze ingots only and pour the bronze on steel sheets. Compliance with this requirement renders 326 IAC 2-2-1(gg) and 40 CFR 60 Subpart M not applicable.

**D.1.2 PSD Minor Limits for Particulate [326 IAC 2-2]**

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**In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:**

- (a) **PM emissions from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.**

**Compliance with this limit, combined with the PM emissions from all other emission units at this source, shall limit the source-wide total PM emissions to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.**

**D.1.23 Particulate [326 IAC 6-3-2]**

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- (a) ~~Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS Line baghouse and stack #8, shall not exceed 8.27 pounds per hour when operating at a process weight rate of 5,700 pounds per hour.~~

~~The pounds per hour limitation was calculated with the following equation:~~

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

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

- (b) ~~Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not~~

~~exceed 8.27 pounds per hour when operating at a process weight rate of 5,700 pounds per hour.~~

~~The pounds per hour limitation was calculated with the following equation:~~

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

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

- (a) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the one (1) coreless furnace, identified as PT #6, exhausting to the CBS Line baghouse and stack #8, shall not exceed 1.05 pounds per hour when operating at a process weight rate of 0.13 tons per hour.
- (b) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) on-line electric induction melting furnaces, identified as PT #2 and PT #4, exhausting to the CBS Line baghouse and stack #8, each shall not exceed 6.24 pounds per hour when operating at a process weight rate of 1.87 tons per hour.
- (c) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) rough milling units, identified as PT #13, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall each not exceed 1.62 pounds per hour when operating at a process weight rate of 0.25 tons per hour.

The particulate emissions limitations above shall be calculated using the following equation:

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:

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

...

D.1.34 Preventive Maintenance Plan [326 IAC 2-8-4(9)][326 IAC 1-6-3]

~~A Preventative Maintenance Plan, in accordance with Section B - Preventative Maintenance Plan, of this permit, is required for these facilities and any control devices.~~ **Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.**

**Compliance Determination Requirements**

D.1.45 Particulate Control

- (a) In order to comply with Conditions D.1.1, ~~and D.1.2,~~ **and D.1.3(b)**, the baghouse for particulate control shall be in operation and control emissions from the Cast Bronze Strip (CBS) Line furnaces at all times that any of the furnaces are in operation.

- (b) In order to comply with Conditions D.1.1 and D.1.3(c)2, the cyclone/bag filter for particulate control shall be in operation and control emissions from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line at all times that either or both of the rough milling units are in operation.

**D.1.56 Testing Requirements [326 IAC 2-8-5(a), (4)][326 IAC 2-1.1-11]**

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**No later than five (5) years after the most recent valid compliance demonstration, the Permittee shall conduct PM, PM10, and PM2.5 testing on stack #8 and stack #10 in order to demonstrate to verify compliance with Conditions D.1.1, and D.1.2, D.1.3(b), and D.1.3(c), the Permittee shall perform PM, and PM<sub>10</sub> testing utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last most recent valid compliance demonstration. PM<sub>40</sub> PM10 and PM2.5 includes filterable and condensable PM<sub>40</sub>. Testing shall be conducted in accordance with Section C - Performance Testing. the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

**Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

**D.1.67 Visible Emissions Notations**

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- (a) Visible emission notations of the CBS Line stack (stack #8 and stack #10) exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. 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, 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 or Exceedances.~~ **Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.** Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

**D.1.78 Parametric Monitoring**

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- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the CBS Line furnaces, at least once per day when the furnaces are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of ~~2.0~~ **3.0** and ~~5.0~~ **7.0** inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. ~~in accordance with Section C - Response to Excursions and Exceedances.~~ **Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.** A pressure reading that is outside the above mentioned range 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.

- (b) The Permittee shall record the pressure drop across the cyclone/bag filter combination used in conjunction with the CBS Line rough milling units, at least once per day when the CBS Line is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.4 and 8.4 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. ~~in accordance with Section C - Response to Excursions and Exceedances.~~ **Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.** A pressure reading that is outside the above mentioned range 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.
- (c) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated **or replaced** at least once every six (6) months.

#### D.1.89 Broken or Failed Bag Detection

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...

#### D.1.910 Cyclone Failure Detection

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Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

#### D.1.4011 Record Keeping Requirement

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- (a) To document **the compliance status** with Condition D.1.76, the Permittee shall maintain records of visible emission notations of the CBS Line stacks (stack #8 and stack #10) exhausts once per day. 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 (i.e., the process did not operate that day).
- (b) To document **the compliance status** with Condition D.1.87, the Permittee shall maintain daily records of the pressure drop readings during normal operation. 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 (i.e., the process did not operate that day).
- ~~(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~
- (c) **Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.**

IDEM, OAQ has made model changes to some of the B and C permit conditions to clarify the intent of these conditions. These changes are described below in #3 through #25. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

3. *Several of IDEM's branches and sections have been renamed. Therefore, IDEM has updated the addresses listed in the permit. References to "Permit Administration and Development Section" and the "Permits Branch" have been changed to "Permit Administration and Support Section". References to "Asbestos Section", "Compliance Data Section", "Air Compliance Section", and "Compliance Branch" have been changed to "Compliance and Enforcement Branch".*

4. *Section A.1 of the permit and the reporting forms have been revised to remove all references to the source mailing address. IDEM, OAQ will continue to maintain records of the mailing address.*

~~Mailing Address: 1515 W. Main Street, Greensburg, Indiana 47240~~

5. *IDEM has decided that the phrases “no later than” and “not later than” are clearer than “within” in relation to the end of a timeline. Therefore all timelines have been switched to “no later than” or “not later than” except when the underlying rule states “within.”*

~~“...within no later than...” or “...within not later than...”~~

6. *IDEM has decided to clarify throughout the permit that a certification needs to meet the requirements of 326 IAC 2-8-5(a)(1). In addition, IDEM has decided to remove the last sentence dealing with the need for certification from the forms because the conditions requiring the forms already address this issue.*

7. *IDEM has decided to clarify the certification requirements in Section B - Duty to Provide Information and Section B - Certification.*

**B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]**

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- (a) ~~The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.~~

...

**B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]**

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- (a) ~~Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:~~

**(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and**

**(2) the certification states that,** based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- (b) ~~One (1) certification shall be included, using~~**The Permittee may use** the attached Certification Form, **or its equivalent** with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

...

8. *IDEM has decided to clarify the requirements of Section B – Preventive Maintenance Plan and to add a new paragraph (b) to handle a future situation where the Permittee adds units that need preventive maintenance plans. In addition, IDEM has revised the language of the Section B - Preventive Maintenance Plan, to allow the Permittee to not have to begin implementing the requirements of these conditions until ninety days after initial start up.*

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

~~(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:~~

**(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:**

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

**The Permittee shall implement the PMPs.**

**(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:**

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

**If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:**

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

**The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).**

**The Permittee shall implement the PMPs.**

**(bc) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance**

causes or is the primary contributor to an exceedance of any limitation on emissions. ~~of potential to emit.~~ The PMPs **and their submittal** do not require the certification a **certification that meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (ed) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

9. *In addition, IDEM has revised Section B - Emergency Provisions to delete paragraph (h). 326 IAC 2-8-4(3)(C)(ii) allows that deviations reported under an independent requirement do not have to be included in the Quarterly Deviation and Compliance Monitoring Report.*

**B.12 Emergency Provisions [326 IAC 2-8-12]**

---

...

- ~~(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.~~

10. *IDEM has decided that having a separate condition for the reporting of deviations is unnecessary. Therefore, IDEM has removed Section B - Deviations from Permit Requirements and Conditions and added the requirements of that condition to Section C - General Reporting Requirements. Paragraph (d) of Section C - General Reporting Requirements has been removed because IDEM already states the timeline and certification needs of each report in the condition requiring the report.*

**B.15 Reserved Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

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

~~Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2254~~

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

~~The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

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

**C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)][326 IAC 2-1.1-11]**

---

...

- ~~(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

...

- (ed) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

11. *IDEM has revised Section B - Permit Renewal paragraph (c) to state which rule establishes the authority to set a deadline for the Permittee to submit additional information.*

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

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require ~~the a~~ certification **that meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
~~Permits Branch~~ **Permit Administration and Support Section**, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

...

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, **pursuant to 326 IAC 2-8-3(g)**, in writing by IDEM, OAQ any additional information identified as being needed to process the application.

12. *IDEM has decided to reference 326 IAC 2 in Section B - Source Modification Requirements, rather than specific construction rule.*

**B.20 Source Modification Requirement [326 IAC 2-8-11.1]**

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2-~~and~~ **326 IAC 2-8-11.4**.

...

13. *IDEM has clarified Section C - Overall Source Limit as follows:*

**C.2 Overall Source Limit [326 IAC 2-8]**

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...

- (b) ~~The~~ **Pursuant to 326 IAC 2-2 (PSD)**, potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. ~~This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.~~

...

14. *IDEM has added 326 IAC 5-1-1 to the exception clause of Section C - Opacity, since 326 IAC 5-1-1 does list exceptions.*

C.3 Opacity [326 IAC 5-1]

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

...

15. *IDEM has revised Section C - Incineration to more closely reflect the two underlying rules.*

C.5 Incineration [326 IAC 4-2][326 IAC 9-1-2]

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The Permittee shall not operate an incinerator ~~or incinerate any waste or refuse~~ except as provided in 326 IAC 4-2 and ~~326 IAC 9-1-2~~ **or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.**

16. *IDEM has removed the first paragraph of Section C - Performance Testing as due to the fact that specific testing conditions elsewhere in the permit will specify the timeline and procedures.*

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

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(a) ~~Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.~~

**AF**or performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification **that meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification **that meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

...

17. *IDEM has revised Section C - Compliance Monitoring. The reference to recordkeeping has been removed due to the fact that other conditions already address recordkeeping. The voice of the condition has been change to clearly indicate that it is the Permittee that must follow the requirements of the condition. In addition, IDEM has revised the language of the Section C -*

*Compliance Monitoring to not have to begin implementing the requirements of these conditions until ninety days after initial start up.*

C.11 ~~Compliance Monitoring [326 IAC 2-8-4(3)]~~**[326 IAC 2-8-5(a)(1)]**

Unless otherwise specified in this permit, ~~for all monitoring and record keeping requirements not already legally required, the Permittee shall be allowed up to~~ **shall be implemented within ninety (90) days of from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring.** If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond ~~the Permittee's control, that any monitoring~~ **equipment required by this permit cannot be installed and operated within no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later,** the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

18. *IDEM has removed Section C - Monitoring Methods. The conditions that require the monitoring or testing, if required, state what methods shall be used.*

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

~~Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.~~

19. *IDEM has revised Section C - Response to Excursions or Exceedances. The introduction sentence has been added to clarify that it is only when an excursion or exceedance is detected that the requirements of this condition need to be followed. The word "excess" was added to the last sentence of paragraph (a) because the Permittee only has to minimize excess emissions. The middle of paragraph (b) has been deleted as it was duplicative of paragraph (a). The phrase "or are returning" was added to subparagraph (b)(2) as this is an acceptable response assuming the operation or emission unit does return to normal or its usual manner of operation. The phrase "within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable" was replaced with "normal or usual manner of operation" because the first phrase is just a limited list of the second phrase. The recordkeeping required by paragraph (e) was changed to require only records of the response because the previously listed items are required to be recorded elsewhere in the permit.*

C.15 ~~Response to Excursions or Exceedances [326 IAC 2-8-4]~~**[326 IAC 2-8-5]**

**Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:**

- (a) ~~Upon detecting an excursion or exceedance, the~~ **The Permittee shall take reasonable response steps to** restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing **excess** emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction ~~and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions).~~ **Corrective actions. The response may include, but are is not limited to, the following:**
- (1) initial inspection and evaluation;

- (2) recording that operations returned **or are returning** to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to ~~within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable~~ **normal or usual manner of operation.**
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
- (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; **and/or**
  - (3) inspection of the control device, associated capture system, and the process.
- ...
- (e) The Permittee shall ~~record maintain the following records~~ **the reasonable response steps taken.:**
- (1) ~~monitoring data;~~
  - (2) ~~monitor performance data, if applicable; and~~
  - (3) ~~corrective actions taken.~~

20. *IDEM has revised Section C - Actions Related to Noncompliance Demonstrated by a Stack Test. The requirements to take response steps and minimize excess emissions have been removed because Section C - Response to Excursions or Exceedances already requires response steps related to exceedances and excess emissions minimization. The start of the timelines was switched from "the receipt of the test results" to "the date of the test." There was confusion if the "receipt" was by IDEM, the Permittee, or someone else. Since the start of the timelines has been moved up, the length of the timelines was increased. The new timelines require action within a comparable timeline; and the new timelines still ensure that the Permittee will return to compliance within a reasonable timeframe.*

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the ~~Permittee shall take appropriate response actions. The Permittee shall submit a description of these its response actions to IDEM, OAQ, within no later than thirty (30) days of receipt of the test results~~ **seventy-five (75) days after the date of the test.** ~~The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.~~
- (b) A retest to demonstrate compliance shall be performed ~~within~~ **no later than** one hundred ~~and twenty (120) days of receipt of the original test results~~ **eighty (180) days after the date of the test.** Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred ~~twenty (120)~~ **eighty (180)** days is not practicable, IDEM, OAQ may extend the retesting deadline.

- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require ~~the a~~ certification **that meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

21. *The voice of paragraph (b) of Section C - General Record Keeping Requirements has been changed to clearly indicate that it is the Permittee that must follow the requirements of the paragraph. In addition, IDEM has revised the language of the Section C - General Record Keeping to allow the Permittee to not have to begin implementing the requirements of these conditions until ninety days after initial start up.*

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

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...

- (b) Unless otherwise specified in this permit, **for all record keeping requirements not already legally required, the Permittee shall be allowed up to shall be implemented within ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.**

22. *IDEM has revised the language of the Section C - General Reporting to allow the Permittee to not have to begin implementing the requirements of these conditions until ninety days after initial start up.*

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)][326 IAC 2-1.1-11]

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported- **except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.** This report shall be submitted ~~with~~ **not later than thirty (30) days after** the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include ~~the a~~ certification **that meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). **A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.**

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

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

...

- ~~(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

- (ed) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

23. *IDEM has decided to simplify the referencing in Section C - Compliance with 40 CFR 82 and 326 IAC 22-1.*

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

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

24. *The phrase "of this permit" has been added to the paragraph of the Quarterly Deviation and Compliance Monitoring Report Form to match the underlying rule.*

...

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements **of this permit**, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

25. *The general source phone number has changed. Section A.1 has been revised as follows:*

General Source Phone Number: ~~(812) 663-1611~~ **(812) 663-3401**

**Conclusion and Recommendation**

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on May 13, 2011. Additional information was received on May 24, 2011.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Revision No. 031-30545-00002. The staff recommends to the Commissioner that this FESOP Significant Revision be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Sarah Conner, Ph. D. at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) (234-6555) or toll free at 1-800-451-6027 extension (4-6555).
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.in.gov/idem](http://www.in.gov/idem)

**Appendix A: Emission Calculations  
Summary of Modification**

**Company Name: Advanced Bearing Materials, LLC**  
**Address City IN Zip: 1515 West Main Street, Greensburg, Indiana 47240**  
**Significant Permit Revision: 031-30545-00002**  
**Second Permit Renewal No: F031-24769-00002**  
**Reviewer: Sarah Conner, Ph. D.**  
**Date: 6/15/2011**

Emission Unit	Uncontrolled PTE (tons/year) before Revision of existing units									
	PM (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)	SO <sub>2</sub> (tons/yr)	NO <sub>x</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHGs as CO2e (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (tons/yr)
Cast Bronze Strip (CBS) Line Baghouse exhausting to stack 8	98.08	98.08	98.08	-	-	-	-	-	0.02	0.02 (Pb)
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.33	0.33	0.33	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	0.12	0.12	0.12	-	-	-	-	-	-	-
Natural Gas Units	0.03	0.12	0.12	0.01	1.63	0.09	1.37	1972.42	0.03	0.03 (Hexane)
<b>Total PTE before Revision</b>	<b>98.56</b>	<b>98.66</b>	<b>98.66</b>	<b>0.01</b>	<b>1.63</b>	<b>0.09</b>	<b>1.37</b>	<b>1972.42</b>	<b>0.05</b>	0.03 (Hexane)

- = negligible

Emission Unit	Uncontrolled PTE (tons/year) after Revision of existing units									
	PM (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)	SO <sub>2</sub> (tons/yr)	NO <sub>x</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHGs as CO2e (tons/yr)	Total HAPs (tons/yr)	Worst Single HAP (tons/yr)
Cast Bronze Strip (CBS) Line Baghouse exhausting to stack 8	784.99	784.99	784.99	-	-	-	-	-	0.02	0.02 (Pb)
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.33	0.33	0.33	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	0.12	0.12	0.12	-	-	-	-	-	-	-
Natural Gas Units	0.04	0.14	0.14	0.01	1.85	0.10	1.56	2236.82	0.03	0.03 (Hexane)
<b>Total PTE after Revision</b>	<b>785.47</b>	<b>785.58</b>	<b>785.58</b>	<b>0.01</b>	<b>1.85</b>	<b>0.10</b>	<b>1.56</b>	<b>2236.82</b>	<b>0.06</b>	0.03 (Hexane)
<b>Total PTE before Revision</b>	<b>98.56</b>	<b>98.66</b>	<b>98.66</b>	<b>0.01</b>	<b>1.63</b>	<b>0.09</b>	<b>1.37</b>	<b>1972.42</b>	<b>0.05</b>	<b>0.03 (Hexane)</b>
<b>Increase from Revision (tons/yr)</b>	<b>686.91</b>	<b>686.92</b>	<b>686.92</b>	<b>0.00</b>	<b>0.22</b>	<b>0.01</b>	<b>0.18</b>	<b>264.40</b>	<b>0.004</b>	<b>0.00</b>

- = negligible

**Appendix A: Emissions Calculations  
Source-wide Summary**

Company Name: Advanced Bearing Materials, LLC  
 Address City IN Zip: 1515 West Main Street, Greensburg, Indiana 47240  
 Significant Permit Revision: 031-30545-00002  
 Second Permit Renewal No: F031-24769-00002  
 Reviewer: Sarah Conner, Ph. D.  
 Date: 6/15/2011

Uncontrolled PTE (tons/year) after Revision of existing units										
Emission Unit	PM (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHGs as CO2e (tons/yr)	Total HAP (tons/yr)	Single HAP (tons/yr)
<sup>1</sup> Cast Bronze Strip (CBS) Line Baghouse exhausting to stack 8	784.99	784.99	784.99	-	-	-	-	-	0.02	0.02 (Pb)
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.33	0.33	0.33	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	0.12	0.12	0.12	-	-	-	-	-	-	-
Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack 10	95.73	95.73	95.73	-	-	-	-	-	0.05	0.05 (Pb)
Natural Gas Units	0.04	0.14	0.14	0.01	1.85	0.10	1.56	2236.82	0.03	0.029 (Hexane)
<sup>2</sup> One (1) hot oil quench unit	-	-	-	-	-	1.00	-	-	-	-
<sup>2</sup> One (1) finish mill	3.05E-06	3.05E-06	3.05E-06	-	-	-	-	-	-	-
<sup>3</sup> Three (3) electric holding furnaces, identified as PT #7, #12, and #11	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>881.21</b>	<b>881.31</b>	<b>881.31</b>	<b>0.01</b>	<b>1.85</b>	<b>1.10</b>	<b>1.56</b>	<b>2236.82</b>	<b>0.10</b>	<b>0.05 (Pb)</b>

- = negligible

Note 1: The uncontrolled increase in PTE from the addition of two (2) additional filtration modules to the Cast Bronze Strip (CBS) Line controlling emissions from stack 8 is greater than the PSD Major Source Thresholds of 250 tons/yr for pollutants PM, PM10 and PM2.5. Therefore, this FESOP is being revised through a Significant Permit Revision pursuant to 326 IAC 2-8-11.1(f)(1)(E)(i), because the revision involves the construction of two (2) additional filtration modules to the Cast Bronze Strip (CBS) Line with potential to emit (PTE) of PM, PM10 and PM2.5 greater than 25 tons per year.

Note 2: The hot oil quench unit and finish mill calculations were not shown for the FESOP Renewal No. F031-24769-00002 on July 3, 2008. They were calculated for this revision. There are VOC emissions from the hot oil quench which are assumed to be less than or equal to 1.0 ton per year.

Note 3: Three (3) electric holding furnaces, identified as PT #7, #12, and #11 have negligible particulate emissions. The source has a furnace holding stand where furnaces are kept that are not being used in-line to their process. This holding stand has three slots where these furnaces are kept with the molten copper/bronze alloy being maintained in this phase.

Limited PTE (tons/year) after Revision of existing units										
Emission Unit	PM (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	GHGs as CO2e (tons/yr)	Total HAP (tons/yr)	Single HAP (tons/yr)
<sup>1,2,3</sup> Cast Bronze Strip (CBS) Line Baghouse exhausting to stack 8	42.05	42.05	42.05	-	-	-	-	-	0.02	0.02 (Pb)
Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.33	0.33	0.33	-	-	-	-	-	-	-
Casting Emissions from CBS Line (SCC 3-04-002-39)	0.12	0.12	0.12	-	-	-	-	-	-	-
<sup>2,3</sup> Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack 10	95.73	42.05	42.05	-	-	-	-	-	0.05	0.05 (Pb)
Natural Gas Units	0.04	0.14	0.14	0.01	1.85	0.10	1.56	2236.82	0.03	0.03 (Hexane)
One (1) hot oil quench unit	-	-	-	-	-	1.00	-	-	-	-
One (1) finish mill	3.05E-06	3.05E-06	3.05E-06	-	-	-	-	-	-	-
Three (3) electric holding furnaces, identified as PT #7, #12, and #11	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>138.27</b>	<b>84.69</b>	<b>84.69</b>	<b>0.01</b>	<b>1.85</b>	<b>1.10</b>	<b>1.56</b>	<b>2236.82</b>	<b>0.10</b>	<b>0.05 (Pb)</b>

- = negligible

Note 1: The uncontrolled increase in PTE from the addition of two (2) additional filtration modules to the Cast Bronze Strip (CBS) Line Baghouse controlling emissions from stack #8 is greater than the PSD Major Source Thresholds of 250 tons/yr for pollutants PM, PM10 and PM2.5.

Note 2: In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 not applicable, the source shall comply with the following:

- (a) The potential to emit PM from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (b) The potential to emit PM10 from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (c) The potential to emit PM2.5 from the Cast Bronze Strip (CBS) Line furnaces, all exhausting to the CBS baghouse and stack #8, shall not exceed a total of 9.6 pounds per hour.
- (d) The potential to emit PM10 from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.
- (e) The potential to emit PM2.5 from the two (2) rough milling units at the Cast Bronze Strip (CBS) Line, both exhausting to the CBS Line cyclone/bag filter and stack #10, shall not exceed a total of 9.6 pounds per hour.

Note 3: Stack #8 and stack #10 were already subject to the 9.6 pounds per hour limitation for pollutant PM10 in order to comply with the requirements of 326 IAC 2-8-4 (FESOP) prior to this revision. The 9.6 pounds per hour limitation for pollutants PM and PM2.5 as shown above for stack #8 and stack #10 are new requirements in order to comply with the requirements of 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable due to this revision.

**Appendix A: Emission Calculations  
Process Operations**

**Company Name: Advanced Bearing Materials, LLC**  
**Address City IN Zip: 1515 West Main Street, Greensburg, Indiana 47240**  
**Significant Permit Revision: 031-30545-00002**  
**Second Permit Renewal No: F031-24769-00002**  
**Reviewer: Sarah Conner, Ph. D.**  
**Date: 6/15/2011**

**Stack Emissions**

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cu. ft.)	Gas or Air Flow Rate (acfm.)	*PM Emission Rate Rate before Controls (lb/hr)	*PM Emission Rate Rate before Controls (tons/yr)	*PM Emission Rate Rate after Controls (lb/hr)	*PM Emission Rate Rate after Controls (tons/yr)
Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack #10	98.0%	0.020	2550	21.9	95.7	0.437	1.91
<b>Total:</b>					96	0.44	1.91

**Methodology**

\*Assume PM = PM10 = PM2.5

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Unit ID	Lead (Pb) Emissions* (lbs/hr)	<sup>1</sup> Process Weight Rate During Test (lbs/hr)	<sup>1</sup> Maximum Process Weight Rate (lbs/hr)	Pb Emission Rate after Controls (lb/hr)	Pb Emission Rate after Controls (tons/yr)	Control Efficiency (%)	Pb Emission Rate before Controls (lb/hr)	Pb Emission Rate before Controls (tons/yr)
Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack #10	0.000300	5255	3750	0.00021	0.0009	98.0%	0.011	0.047
<b>Total:</b>				0.0002	0.001		0.011	0.047

\*Based on stack test

Note 1: The process weight rate during the test is higher than the maximum process weight rate for the emission units exhausting through stack 10. The maximum process weight rate was confirmed for this Significant Permit Revision No. 031-30545-00002. The operations at the source have changed since the stack test.

**Methodology**

Emission Rate in lbs/hr after controls = Emission Rate in lbs/hr (based on the stack test) x Maximum Process weight rate/Process weight rate during test

Emission Rate in lbs/hr before controls = Emission Rate in lbs/hr before controls / (1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Company Name: Advanced Bearing Materials, LLC  
Address City IN Zip: 1515 West Main Street, Greensburg, Indiana 47240  
Significant Permit Revision: 031-30545-00002  
Second Permit Renewal No: F031-24769-00002  
Reviewer: Sarah Conner, Ph. D.  
Date: 6/15/2011

Stack Emissions

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cu. ft.)	Gas or Air Flow Rate (acfm.)	***PM Emission Rate before Controls (lb/hr)	***PM Emission Rate before Controls (tons/yr)	***PM Emission Rate after Controls (lb/hr)	***PM Emission Rate after Controls (tons/yr)	
Before Modification	Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8	*96%	0.005	**20900	22.4	98.1	0.896	3.92
After Modification	Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8	*98.9%	0.005	**46000	179.2	785.0	1.971	8.63
Total Before Revision						98.1		3.92
Total After Revision						785.0		8.63
Total Change in PTE:						687		4.71

\*The control efficiency of 96% was estimated in the second permit renewal No. F031-24769-00002, issued on July 3, 2008. The source stack tested at 98.9% control efficiency.

\*\*The blower is rated at a flow rate of 46000 acfm and is not changing as a result of this modification. A flow rate of 20900 acfm was used for the calculations in the second permit renewal No. F031-24769-00002, issued on July 3, 2008.

Methodology

\*\*\*Assume PM = PM10 = PM2.5  
Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)  
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)  
Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)  
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Unit ID	Lead (Pb) Emissions* (lbs/hr)	Process Weight Rate During Test (lbs/hr)	Maximum Process Weight Rate (lbs/hr)	Pb Emission Rate after Controls (lb/hr)	Pb Emission Rate after Controls (tons/yr)	Control Efficiency (%)	Pb Emission Rate before Controls (lb/hr)	Pb Emission Rate before Controls (tons/yr)	
Before Modification	Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8	0.000079	5255	3750	0.00006	0.0002	98.9%	0.005	0.022
After Modification	Cast Bronze Strip (CBS) Line Baghouse exhausting to stack #8	0.000079	5255	3750	0.00006	0.0002	98.9%	0.005	0.022
Total Before Revision					0.0002				0.0224
Total After Revision					0.0002				0.0224
Total Change in PTE:					0.0000				0.0000

\*Based on stack test

Note 1: The process weight rate during the test is higher than the maximum process weight rate for the emission units exhausting through stack 10. The maximum process weight rate was confirmed for this Significant Permit Revision No. 031-30545-00002. The operations at the source have changed since the stack test.

Methodology

Emission Rate in lbs/hr after controls = Emission Rate in lbs/hr (based on the stack test) x Maximum Process weight rate/Process weight rate during test  
Emission Rate in lbs/hr before controls = Emission Rate in lbs/hr before controls / (1-control efficiency)  
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Uncaptured Emissions

Unit ID	PM-10 Emission Factor (lbs/ton)	Maximum Process Weight Rate (lbs/hr)	PM and PM-10 Emission Rate (lb/hr)	PM and PM-10 Emission Rate (tons/yr)	
Before Modification	Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.040	3750	0.075	0.329
Before Modification	Casting Emissions from CBS Line (SCC 3-04-002-39)	0.015	3750	0.028	0.123
After Modification	Emissions from CBS Line based on Electric Induction Furnaces (SCC 3-04-002-38)	0.040	3750	0.075	0.329
After Modification	Casting Emissions from CBS Line (SCC 3-04-002-39)	0.015	3750	0.028	0.123
Total Before Revision			0.103	0.452	
Total After Revision			0.103	0.452	
Total Change in PTE:			0.000	0.000	

Methodology

Emission Rate in lbs/hr = Maximum Process Weight Rate in lbs/hr (weight of charge for furnace emissions and weight of product for casting emissions) x PM-10 Emission Factor (based on FIRES 6.23)  
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

**Appendix A: Emission Calculations  
Process Operations**

**Company Name: Advanced Bearing Materials, LLC**  
**Address City IN Zip: 1515 West Main Street, Greensburg, Indiana 47240**  
**Significant Permit Revision: 031-30545-00002**  
**Second Permit Renewal No: F031-24769-00002**  
**Reviewer: Sarah Conner, Ph. D.**  
**Date: 6/15/2011**

Unit ID	PM <sup>1</sup> Emission Factor (lb/ton)	Maximum Process Weight Rate (lbs/hr)	*PM Emission Rate Rate before Controls (lb/hr)	*PM Emission Rate Rate before Controls (tons/yr)	Pb <sup>1</sup> Emission Factor (lb/ton)	Maximum Process Weight Rate (lbs/hr)	Pb Emission Rate Rate before Controls (lb/hr)	Pb Emission Rate Rate before Controls (tons/yr)	
One (1) finish mill	0.000001	1200	6.96E-07	3.05E-06	0.000007	1200	4.14E-06	1.81E-05	
<b>Total:</b>			6.96E-07	3.05E-06	<b>Total:</b>			4.14E-06	1.81E-05

\*Assume PM = PM10 = PM2.5

Note 1: Emission Factors are based on the Stack Test done on June 19, 1997 for the source on a similar unit, this operation is insignificant. The emission factor based from the test is 11.6 x10<sup>-7</sup> lb PM/lb, and 6.9 x10<sup>-6</sup> lb lead/lb metal.

**Methodology**

Emission Rate in lbs/hr before controls = Emission Factor (lb/ton) x Maximum Process weight rate (lbs/hr) x 1 ton / 2,000 lbs

Emission Rate in tons/yr = Emission Rate in lbs/hr x 8760 hr/yr x 1 ton / 2000 lbs

Unit ID	PM <sup>1</sup> Emission Factor (lb/ton)	Maximum Process Weight Rate (lbs/hr)	*PM Emission Rate Rate before Controls (lb/hr)	*PM Emission Rate Rate before Controls (tons/yr)
<sup>2</sup> Two (2) rough milling units, identified as PT #13	1.60	1000	0.80	3.50
<b>Total:</b>			0.80	3.50

\*Assume PM = PM10 = PM2.5

Note 1: Use grinding emission factor of 1.6 lb PM/ton metal, from "An Inventory of Iron Foundry Emissions", Modern Castings, 1971.

Note 2: The two (2) rough milling units, identified as PT #13 are controlled by the Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack 10; therefore, their PTE is included on the summary page under Cast Bronze Strip (CBS) Line Cyclone/Baghouse exhausting to stack 10.

**Methodology**

Emission Rate in lbs/hr before controls = Emission Factor (lb/ton) x Maximum Process weight rate (lbs/hr) x 1 ton / 2,000 lbs

Emission Rate in tons/yr = Emission Rate in lbs/hr x 8760 hr/yr x 1 ton / 2000 lbs

Note: Three (3) electric holding furnaces, identified as PT #7, #12, and #11 have negligible particulate emissions. The source has a furnace holding stand where furnaces are kept that are not being used in-line to their process. This holding stand has three slots where these furnaces are kept with the molten copper/bronze alloy being maintained in this phase.

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only Before Revision  
MM BTU/HR >100**

**Company Name:** Advanced Bearing Materials, LLC  
**Address City IN Zip:** 1515 West Main Street, Greensburg, Indiana 47240  
**Significant Permit Revision:** 031-30545-00002  
**Second Permit Renewal No:** F031-24769-00002  
**Reviewer:** Sarah Conner, Ph. D.  
**Date:** 6/15/2011

Emission Units	Heat Input Capacity (MMBtu/hr)
Three (3) oxygen scavenging flames (units 81, 82 and 16)	0.1
Two (2) pre-ladle heaters (units 9 and 10)	0.7
One (1) natural gas-fired boiler, identified as boiler #1 (unit 50)	2.93
<b>Total</b>	<b>3.73</b>

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.73	32.7
Total	

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.031	0.124	0.124	0.010	1.634	0.090	1.372

\*PM emission factor is filterable PM only. PM10 and PM2.5 emission factors are filterable and condensable PM combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

NOx and CO Emission Factors are from AP 42, Chapter 1.4, Table 1.4-1

PM and SO<sub>2</sub> Emission Factors are from AP 42, Chapter 1.4, Table 1.4-2

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only Before Revision**  
**MM BTU/HR >100**  
**HAPs Emissions**

**Company Name: Advanced Bearing Materials, LLC**  
**Address City IN Zip: 1515 West Main Street, Greensburg, Indiana 47240**  
**Significant Permit Revision: 031-30545-00002**  
**Second Permit Renewal No: F031-24769-00002**  
**Reviewer: Sarah Conner, Ph. D.**  
**Date: 6/15/2011**

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
	3.43E-05	1.96E-05	0.0012	0.029	5.55E-05

Emission Factor in lb/MMcf	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Potential Emission in tons/yr	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
	8.17E-06	1.80E-05	2.29E-05	6.21E-06	3.43E-05	0.031

Methodology is the same as previous page.

Organic HAPs Emission Factors are from AP 42, Chapter 1.4, Table 1.4-3

Metal HAPs Emission Factors are from AP 42, Chapter 1.4, Table 1.4-4

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4, Tables 1.4-3 and 1.4-4

**Appendix A: Emissions Calculations  
 Natural Gas Combustion Only Before Revision  
 MM BTU/HR <100  
 Greenhouse Gas Emissions**

**Company Name:** Advanced Bearing Materials, LLC  
**Address City IN Zip:** 1515 West Main Street, Greensburg, Indiana 47240  
**Significant Permit Revision:** 031-30545-00002  
**Second Permit Renewal No:** F031-24769-00002  
**Reviewer:** Sarah Conner, Ph. D.  
**Date:** 6/15/2011

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	1960.5	0.0	0.0
Summed Potential Emissions in tons/yr	1960.56		
CO2e Total in tons/yr	1972.42		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21)  
 + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only After Revision  
MM BTU/HR >100**

**Company Name:** Advanced Bearing Materials, LLC  
**Address City IN Zip:** 1515 West Main Street, Greensburg, Indiana 47240  
**Significant Permit Revision:** 031-30545-00002  
**Second Permit Renewal No:** F031-24769-00002  
**Reviewer:** Sarah Conner, Ph. D.  
**Date:** 6/15/2011

Emission Units	Heat Input Capacity (MMBtu/hr)
Two (2) oxygen scavenging flames (units 81 and 82)	0.6
Two (2) pre-ladle heaters (units 9 and 10)	0.7
One (1) natural gas-fired boiler, identified as boiler #1 (unit 50)	2.93
<b>Total</b>	<b>4.23</b>

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
4.23 Total	37.1

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.035	0.141	0.141	0.011	1.853	0.102	1.556

\*PM emission factor is filterable PM only. PM10 and PM2.5 emission factors are filterable and condensable PM combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

NOx and CO Emission Factors are from AP 42, Chapter 1.4, Table 1.4-1

PM and SO<sub>2</sub> Emission Factors are from AP 42, Chapter 1.4, Table 1.4-2

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only After Revision  
MM BTU/HR >100  
HAPs Emissions**

**Company Name:** Advanced Bearing Materials, LLC  
**Address City IN Zip:** 1515 West Main Street, Greensburg, Indiana 47240  
**Significant Permit Revision:** 031-30545-00002  
**Second Permit Renewal No:** F031-24769-00002  
**Reviewer:** Sarah Conner, Ph. D.  
**Date:** 6/15/2011

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
	3.89E-05	2.22E-05	0.0014	0.033	6.30E-05

Emission Factor in lb/MMcf	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Potential Emission in tons/yr	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
	9.26E-06	2.04E-05	2.59E-05	7.04E-06	3.89E-05	0.035

Methodology is the same as previous page.

Organic HAPs Emission Factors are from AP 42, Chapter 1.4, Table 1.4-3

Metal HAPs Emission Factors are from AP 42, Chapter 1.4, Table 1.4-4

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4, Tables 1.4-3 and 1.4-4

**Appendix A: Emissions Calculations  
 Natural Gas Combustion Only After Revision  
 MM BTU/HR <100  
 Greenhouse Gas Emissions**

**Company Name:** Advanced Bearing Materials, LLC  
**Address City IN Zip:** 1515 West Main Street, Greensburg, Indiana 47240  
**Significant Permit Revision:** 031-30545-00002  
**Second Permit Renewal No:** F031-24769-00002  
**Reviewer:** Sarah Conner, Ph. D.  
**Date:** 6/15/2011

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	2223.3	0.0	0.0
Summed Potential Emissions in tons/yr	2223.37		
CO2e Total in tons/yr	2236.82		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21)  
 + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: 326 IAC 6-3-2 Compliance**

**Company Name:** Advanced Bearing Materials, LLC  
**Address City IN Zip:** 1515 West Main Street, Greensburg, Indiana 47240  
**Significant Permit Revision:** 031-30545-00002  
**Second Permit Renewal No:** F031-24769-00002  
**Reviewer:** Sarah Conner, Ph. D.  
**Date:** 6/15/2011

Emissions Units	Maximum Process Weight (tons/hour)	326 IAC 6-3 Limit (lbs/hr)	Emission factor (lb/ton)	Max PTE Particulate (lb/hour)	Emission Factor Source
One (1) coreless furnace, identified as PT #6	0.13	1.05	7.00	0.91	(SCC 3-04-002-23)
One (1) on-line electric induction melting furnace, identified as PT #2	1.87	6.24	20.00	37.40	(SCC 3-04-002-24)
One (1) on-line electric induction melting furnace, identified as PT #4	1.87	6.24	20.00	37.40	(SCC 3-04-002-24)
One (1) rough milling unit	0.25	1.62	1.60	0.40	See Note 1
One (1) rough milling unit	0.25	1.62	1.60	0.40	See Note 1
<sup>4</sup> One (1) finish mill	0.60	2.91	1.16E-06	6.96E-07	See Note 2
<sup>4</sup> One (1) electric holding furnace, identified as PT #7	1.65	5.73	N/A	Negligible	See Note 3
<sup>4</sup> One (1) electric holding furnace, identified as PT #12	1.65	5.73	N/A	Negligible	See Note 3
<sup>4</sup> One (1) electric holding furnace, identified as PT #11	1.65	5.73	N/A	Negligible	See Note 3

Pursuant to 326 IAC 6-3-2, the particulate emissions limitations from the above table shall be calculated using the following equation:

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:

$$E = 4.10 P^{0.67}$$

Where:

E = Rate of emission in pounds per hour.

P = Process weight rate in tons per hour.

**Notes:**

Note 1: Use grinding emission factor of 1.6 lb PM/ton metal, from "An Inventory of Iron Foundry Emissions", Modern Castings, 1971.

Note 2: Emission Factors are based on the Stack Test done on June 19, 1997 for the source on a similar unit, this operation is insignificant. The emission factor based from the test is 11.6 x10<sup>-7</sup> lb PM/lb, and 6.9 x10<sup>-6</sup> lb lead/lb metal.

Note 3: Three (3) electric holding furnaces, identified as PT #7, #12, and #11 have negligible particulate emissions. The source has a furnace holding stand where furnaces are kept that are not being used in-line to their process. This holding stand has three slots where these furnaces are kept with the molten copper/bronze alloy being maintained in this phase.

Note 4: Pursuant to 326 IAC 6-3-1(b)(14), the requirements of 326 IAC 6-3-2 do not apply to the finish mill or the electric holding furnaces, because manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour are exempt from the requirements of 326 IAC 6-3.



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

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

## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

**TO:** Steve Leahy  
Advanced Bearing Materials, LLC  
1515 W Main Street  
Greensburg, IN 47240

**DATE:** September 1, 2011

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
Significant Permit Revision  
031-30545-00002

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# 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](http://www.idem.IN.gov)

September 1, 2011

TO: Greensburg Decatur County Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Advanced Bearing Materials, LLC**  
**Permit Number: 031-30545-00002**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures  
Final Library.dot 11/30/07

# Mail Code 61-53

IDEM Staff	GHOTOPP 9/1/2011 Advanced Bearing Materials LLC 031-30545-00002 Final		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Steve Leahy Advanced Bearing Materials LLC 1515 W Main St Greensburg IN 47240 (Source CAATS) via confirmed delivery										
2		Greensburg Decatur Co Public Library 1110 East Main Greensburg IN 47240 (Library)										
3		Decatur County Commissioners 150 Courthouse Square Greensburg IN 47240 (Local Official)										
4		Greensburg City Council & Mayors office 314 W Washington Street Greensburg IN 47240 (Local Official)										
5		Decatur County Health Department 801 N. Lincoln St Greensburg IN 47240-1397 (Health Department)										
6		Mr. Leonard Rohls 8504 North County Road 300 West Batesville IN 47006 (Affected Party)										
7		Melanie Brassell 606 Nelsons Parkway, P.O. Box 465 Wakarusa IN 46573 (Affected Party)										
8												
9												
10												
11												
12												
13												
14												
15												

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
6			