

March 11, 2003

Re: Zimmer, Inc. 085-12778-00064

TO: Interested Parties / Applicant

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, 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, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen 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 consideration 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.

Enclosure

FNPER.wpd 8/21/02



Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

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

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR QUALITY**

**Zimmer, Inc.
1800 West Center Street
Warsaw, Indiana 46580**

(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.

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.

Operation Permit No.: F085-12778-00064	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 11, 2003



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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 prosthetic device manufacturing plant.

Authorized Individual:	Vice President of Operations
Source Address:	1800 West Center Street, Warsaw, Indiana 46580
Mailing Address:	1800 West Center Street, Warsaw, Indiana 46580
General Source Phone:	(574) 267-6131
SIC Code:	3842
Source Location Status:	Kosciusko County
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) 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)]

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

- (a) One (1) hip and stem production line (identified as Hip), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Collar polishing using a wet dust collector (stack ID Z-2) as particulate control with no external exhaust.
 - (2) Stem polishing using three (3) dry dust collectors (stack ID Z-8, Z-10, and Z-12) as particulate control with no external exhaust.
- (b) One (1) knee production line (identified as Knee), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Tumbleblasting using steel shot media with dry dust collectors (stack ID ZA1-ZA2) as particulate control with external exhaust.
 - (2) Grinding using a wet dust collector (stack ID Z1) as particulate control with no external exhaust.
 - (3) Buffing using dry dust collectors (stack ID Z3, Z5, Z7, Z9, Z11) as particulate control with no external exhaust.
- (c) One (1) casting process line (identified as casting), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Shell formation with two (2) fluidized bed sand units (stack ID ZA1) as particulate control with external exhaust.

- (2) One (1) shotblast unit with stainless steel shot media and a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
- (3) One (1) tumbleblast unit with stainless steel shot media and a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
- (4) Grinding using a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
- (5) Deburring with dry dust collectors (stack ID ZA1-ZA2) as particulate control with external exhaust.

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) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs [326 IAC 6-3-2]:
 - (1) Stem polishing using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (2) Burr grinding using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (3) Stem polishing using cartridge filtration as particulate control with no external exhaust.
 - (4) Abrasive blast cabinets using aluminum oxide or glass bead media with fabric filters as particulate control with no external exhaust.
 - (5) Buffing using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (6) Burr grinding using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (7) Grinding using an oil mist collector with electrostatic precipitation as particulate control with no external exhaust.
 - (8) Deburring with a dry cyclone as particulate control with external exhaust.
- (c) 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 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations [326 IAC 6-3-2]:
 - (1) Stem polishing using a Trimer Wet Cyclone (stack ID Z101) as particulate control with external exhaust.

- (2) Machine rasping using a Trimer Wet Cyclone (stack ID Z102) as particulate control with external exhaust.
- (d) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (1) Two (2) natural gas boilers (identified as B1 and B2) installed in 1991 and 1995, respectively, each having a maximum capacity of 500,000 BTU per hour [326 IAC 6-2-4];
 - (2) One (1) natural gas boiler (identified as B3) installed in 2000, having a maximum capacity of 1 million BTU per hour [326 IAC 6-2-4];
 - (3) Three (3) natural gas ceramic shell preheat furnaces (identified as WB1), installed in 1981, each having a maximum capacity of 2.8 million BTU per hour;
 - (4) Sixty-one (61) natural gas space heaters (identified as SH1), installed in 1972, each having a maximum capacity of 0.3 million BTU per hour; and
 - (5) Three (3) electric induction furnaces (identified as IF1), installed in 1972.
- (e) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (f) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (g) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).
- (h) A laboratory as defined in 326 IAC 2-7-1(21)(D).

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) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

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.

B.2 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.3 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

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

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.6 Severability [326 IAC 2-8-4(4)]

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.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

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

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the

“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.

- (c) 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.9 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.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; and
 - (3) Denial of a permit renewal application.
- (b) 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.
- (c) 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.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (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, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality

100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (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, IDEM, OAQ, may require to determine the compliance status of the source.

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

B.13 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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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 Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (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 contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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.14 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 describes 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 No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

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

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

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 the certification by the "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) 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.
- (h) Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), 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, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "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.

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]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP 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 the certification by the "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)]

- (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 certification by the “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, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) 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.

(2) If IDEM, OAQ upon receiving a timely and complete 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.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

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 in writing by IDEM, OAQ, any additional information identified as needed to process the application.

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

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

Any such application shall be certified by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement the 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]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without 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 emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

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 which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to 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 increases and decreases in emissions in 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.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

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

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) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

The application which shall be submitted by the Permittee does require the certification by the "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 317-233-4320 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions 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 [40 CFR 52 Subpart P][326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate 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. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD));
 - (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 (Prevention of Significant Deterioration (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 5-1-3 (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]

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(3)]

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

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

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

C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.8 Stack Height [326 IAC 1-7]

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

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "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 14-10-4 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) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

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

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "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 certification by the "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 source 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.11 Compliance Requirements [326 IAC 2-1.1-11]

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.12 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

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

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

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

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

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

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will

adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

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

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the

applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

- (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.17 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 response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be based on calendar years.

Stratospheric Ozone Protection

C.20 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 standards for recycling and emissions reduction:

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Prosthetic device manufacturing plant

- (a) One (1) hip and stem production line (identified as Hip), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Collar polishing using a wet dust collector (stack ID Z-2) as particulate control with no external exhaust.
 - (2) Stem polishing using three (3) dry dust collectors (stack ID Z-8, Z-10, and Z-12) as particulate control with no external exhaust.
- (b) One (1) knee production line (identified as Knee), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Tumbleblasting using steel shot media with dry dust collectors (stack ID ZA1-ZA2) as particulate control with external exhaust.
 - (2) Grinding using a wet dust collector (stack ID Z1) as particulate control with no external exhaust.
 - (3) Buffing using dry dust collectors (stack ID Z3, Z5, Z7, Z9, Z11) as particulate control with no external exhaust.
- (c) One (1) casting process line (identified as casting), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Shell formation with two (2) fluidized bed sand units (stack ID ZA1) as particulate control with external exhaust.
 - (2) One (1) shotblast unit with stainless steel shot media and a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
 - (3) One (1) tumbleblast unit with stainless steel shot media and a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
 - (4) Grinding using a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
 - (5) Deburring with dry dust collectors (stack ID ZA1-ZA2) as particulate control with external exhaust.

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

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

D.1.1 Particulate Emissions Limitations [326 IAC 2-8]

The PM10 emissions from each of the processes listed in this section shall not exceed 0.551 pounds per hour. This limit is equivalent to emissions of 24.13 per year of PM10 from the processes listed in this section. This limit is structured such that when including the PM10 emissions from the insignificant activities, source total PM10 emissions remain less than one hundred (100) tons per year. Compliance with this limit will render the requirements of 326 IAC 2-7 (Part 70 Program) not applicable.

D.1.2 Particulate Emission Limitations [326 IAC 6-3-2] [40 CFR 52, Subpart P]

-
- (a) Pursuant to 40 CFR 52 Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
 - (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate 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.

D.1.3 Preventative Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.1.4 Particulate

In order to comply with Conditions D.1.1 and D.1.2, the filters, wet dust collectors, fluidized bed sand units, and dry dust collectors for particulate control shall be in operation and control emissions from the facilities in the hip, knee, and casting production lines at all times that the prosthetic device manufacturing plant is in operation.

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

D.1.5 Visible Emissions Notations

-
- (a) Once per shift visible emission notations of Z-2, Z-8, Z-10, Z-12, ZA1-ZA2, and Z1 stack exhausts shall be performed 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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each dust collector used in the hip, knee, and casting production lines at least once per shift when the hip, knee, and casting production lines are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collectors is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instruments Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.7 Baghouse and Filter Inspections

An inspection shall be performed during the last month of each calendar quarter of all bags and filters controlling the hip, knee, and casting production lines, when venting to the atmosphere. All defective bags and filters shall be replaced. A baghouse or filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

D.1.8 Broken or Failed Bag or Filter Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, 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 Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.9 Record Keeping Requirements

- (a) To document compliance with Condition D.1.5, the Permittee shall maintain once per shift records of visible emission notations of the each stack exhaust in the hip, knee, and casting production lines when venting to the atmosphere.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain per shift records of the total static pressure drop during normal operation when venting to the atmosphere.
- (c) To document compliance with Conditions D.1.7 the Permittee shall maintain records of the results of the inspections required when venting to the atmosphere under Condition D.1.7 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs [326 IAC 6-3-2]:
 - (1) Stem polishing using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (2) Burr grinding using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (3) Stem polishing using cartridge filtration as particulate control with no external exhaust.
 - (4) Abrasive blast cabinets using aluminum oxide or glass bead media with fabric filters as particulate control with no external exhaust.
 - (5) Buffing using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (6) Burr grinding using a dry cyclone with secondary cloth filtration as particulate control with no external exhaust.
 - (7) Grinding using an oil mist collector with electrostatic precipitation as particulate control with no external exhaust.
 - (8) Deburring with a dry cyclone as particulate control with external exhaust.
- (c) 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 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations [326 IAC 6-3-2]:
 - (1) Stem polishing using a Trimer Wet Cyclone (stack ID Z101) as particulate control with external exhaust.
 - (2) Machine rasping using a Trimer Wet Cyclone (stack ID Z102) as particulate control with external exhaust.
- (d) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (1) Two (2) natural gas boilers (identified as B1 and B2) installed in 1991 and 1995, respectively, each having a maximum capacity of 500,000 BTU per hour [326 IAC 6-2-4];
 - (2) One (1) natural gas boiler (identified as B3) installed in 2000, having a maximum capacity of 1 million BTU per hour [326 IAC 6-2-4];

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

Emission Limitations and Standards

D.2.1 Particulate Emission Limitations [326 IAC 6-2-3(d)]

Pursuant to 326 IAC 6-3-2(d), the particulate emissions from B1, B2, and B3 shall in no case exceed 0.6 pounds each per million British thermal unit heat input.

D.2.2 Particulate Emission Limitations [326 IAC 6-3-2] [40 CFR 52, Subpart P]

- (a) Pursuant to 40 CFR 52 Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate 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.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (d) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (3) Three (3) natural gas ceramic shell preheat furnaces (identified as WB1), installed in 1981, each having a maximum capacity of 2.8 million BTU per hour;
 - (4) Sixty-one (61) natural gas space heaters (identified as SH1), installed in 1972, each having a maximum capacity of 0.3 million BTU per hour; and
 - (5) Three (3) electric induction furnaces (identified as IF1), installed in 1972.
- (e) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (f) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (g) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).
- (h) A laboratory as defined in 326 IAC 2-7-1(21)(D).

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

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

There are no specific regulations applicable to these facilities.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

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

Source Name: Zimmer, Inc.
Source Address: 1800 West Center Street, Warsaw, Indiana 46580
Mailing Address: 1800 West Center Street, Warsaw, Indiana 46580
FESOP No.: F085-12778-00064

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:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 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 BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Zimmer, Inc.
Source Address: 1800 West Center Street, Warsaw, Indiana 46580
Mailing Address: 1800 West Center Street, Warsaw, Indiana 46580
FESOP No.: F085-12778-00064

This form consists of 2 pages

Page 1 of 2

9 This is an emergency as defined in 326 IAC 2-7-1(12)
CThe Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
CThe Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

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

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

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

Page 2 of 2

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

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

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

Source Name: Zimmer, Inc.
 Source Address: 1800 West Center Street, Warsaw, Indiana 46580
 Mailing Address: 1800 West Center Street, Warsaw, Indiana 46580
 FESOP No.: F085-12778-00064

Months: _____ **to** _____ **Year:** _____

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do 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".</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>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	Zimmer, Inc.
Source Location:	1800 West Center Street, Warsaw, Indiana 46580
County:	Kosciusko
SIC Code:	3842
Operation Permit No.:	F085-12778-00064
Permit Reviewer:	ERG/KC

On January 24, 2003, the Office of Air Quality (OAQ) had a notice published in the Times Union, Warsaw, Indiana, stating that Zimmer, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) Renewal to operate a prosthetic device manufacturing plant with control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 6, 2003, Zimmer, Inc. submitted comments on the proposed FESOP Renewal. A summary of the comments follows. Bold text was added and text with a line through it was removed. The Table of Contents was updated as needed.

Comment 1:

The source noted that Condition A.2(a) includes two emission units, described as "stem polishing using a Trimer Wet Cyclone (stack Z101)" and "machine rasping using a Trimer Wet Cyclone (stack Z102)." The source believes these emission units qualify as insignificant activities as generically described in Condition A.3(c) since 1) the units are of the type described (deburring and polishing), 2) the units have wet scrubbers for particulate control, 3) the units have air flow rates equal to 4,000 cubic feet per minute, and 4) the units have grain loadings less than 0.03 grains per actual cubic feet. Since these units qualify as insignificant activities, the source requests that they be moved to A.3(c).

Response to Comment 1:

IDEM agrees that the units described in Condition A.3(a)(1) and (2) are insignificant activities. Therefore, the following changes were made to the permit. Note that changes made elsewhere (Comment 6) in this addendum are also shown here.

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:

- (a) One (1) hip and stem production line (identified as Hip), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) ~~Stem polishing using a Trimer Wet Cyclone (stack ID Z101) as particulate control with external exhaust.~~
 - (2) ~~Machine rasping using a Trimer Wet Cyclone (stack ID Z102) as particulate control with external exhaust.~~

- (3 1) Collar polishing using a wet dust collector (stack ID Z-2) as particulate control with no external exhaust.
- (4 2) Stem polishing using three (3) dry dust collectors (stack ID Z-8, Z-10, and Z-12) as particulate control with no external exhaust.

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):

- (c) 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 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodwork operations. [326 IAC 6-3-2]:
 - (1) **Stem polishing using a Trimer Wet Cyclone (stack ID Z101) as particulate control with external exhaust.**
 - (2) **Machine rasping using a Trimer Wet Cyclone (stack ID Z102) as particulate control with external exhaust.**

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Prosthetic device manufacturing plant

- (a) One (1) hip and stem production line (identified as Hip), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) ~~Stem polishing using a Trimer Wet Cyclone (stack ID Z101) as particulate control with external exhaust.~~
 - (2) ~~Machining using a Trimer Wet Cyclone (stack ID Z102) as particulate control with external exhaust.~~
 - (3 1) Collar polishing using a wet dust collector (stack ID Z-2) as particulate control with no external exhaust.
 - (4 2) Stem polishing using three (3) dry dust collectors (stack ID Z-8, Z-10, and Z-12) as particulate control with no external exhaust.

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

D.1.4 Particulate

In order to comply with Conditions D.1.1 and D.1.2 the ~~dry cyclones, wet cyclones,~~ filters, wet dust collectors, **fluidized bed sand units**, and dry dust collectors for particulate control shall be in operation and control emissions from the facilities in the hip, knee, and casting production lines at all times that the prosthetic device manufacturing plant is in operation.

D.1.5 Visible Emissions Notations

- (a) Once per shift visible emission notations of ~~Z101, Z102,~~ Z-2, Z-8, Z-10, Z-12, ZA1-ZA2, and Z1 stack exhausts shall be performed 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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each dust collector ~~and cyclone~~ used in the hip, knee, and casting production lines at least once per shift when the hip, knee, and casting production lines are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collectors ~~or cyclones~~ is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instruments Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

~~D.1.9 Cyclone Inspections~~

~~An inspection shall be performed during the last month of each calendar quarter of all cyclones controlling the hip, knee, and casting production lines. When venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.~~

~~D.1.10 Cyclone Failure Detection~~

~~In the event that cyclone failure has been observed:~~

~~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). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

D.1.149 Record Keeping Requirements

- (a) To document compliance with Condition D.1.5, the Permittee shall maintain **once per shift** records of visible emission notations of the each stack exhaust ~~once per shift~~ in the hip, knee, and casting production lines **when venting to the atmosphere**.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain per shift records of the total static pressure drop during normal operation **when venting to the atmosphere**.

- (c) To document compliance with Conditions D.1.7 ~~and D.1.9~~, the Permittee shall maintain records of the results of the inspections required **when venting to the atmosphere** under Conditions D.1.7 ~~and D.1.9~~ and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (c) 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 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, an woodworking operations. [326 IAC 6-3-2]:
 - (1) **Stem polishing using a Trimer Wet Cyclone (stack ID Z101) as particulate control with external exhaust.**
 - (2) **Machine rasping using a Trimer Wet Cyclone (stack ID Z102) as particulate control with external exhaust.**

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

Comment 2:

The source noted that A.3(b)(8) is a duplicate of A.3(b)(4) and should therefore be deleted from the permit. They also noted that the following description was removed from the permit even though it exists at the source: Deburring with a dry cyclone as particulate control with external exhaust. The source requests that this description be placed back in the permit. The source also requests that all stack ID references be removed for these insignificant activities. The stack IDs are arbitrarily assigned numbers based on the number of units currently in operation. Additionally, the majority of these units exhaust indoors and therefore do not have "stacks" as commonly described. Lastly, the source does not track small units such as these by stack ID.

Response to Comment 2:

IDEM agrees that A.3(b)(8) is a duplicate of A.3(b)(4) and therefore A.3(b)(8) has been removed. Additionally, the deburring operation was placed back in the permit as it was inadvertently removed in a previous draft. Lastly, stack IDs have been removed for the insignificant activities.

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):

- (b) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs [326 IAC 6-3-2]:
 - (1) Stem polishing using a dry cyclone with secondary cloth filtration (~~stack ID Z103-Z109~~) as particulate control with no external exhaust.
 - (2) Burr grinding using a dry cyclone with secondary cloth filtration (~~stack ID Z121-~~

Z125) as particulate control with no external exhaust.

- (3) Stem polishing using cartridge filtration (~~stack ID Z131-134~~) as particulate control with no external exhaust.
- (4) Abrasive blast cabinets using aluminum oxide or glass bead media with fabric filters (~~Z138~~) as particulate control with no external exhaust.
- (5) Buffing using a dry cyclone with secondary cloth filtration (~~stack ID Z110-120~~) as particulate control with no external exhaust.
- (6) Burr grinding using a dry cyclone with secondary cloth filtration (~~stack ID Z126-130~~) as particulate control with no external exhaust.
- (7) Grinding using an oil mist collector with electrostatic precipitation (~~stack ID Z135-136~~) as particulate control with no external exhaust.
- (8) ~~Abrasive blast cabinets using aluminum oxide or glass bead media with fabric filters (Z138) as particulate control with no external exhaust.~~ **Deburring with a dry cyclone as particulate control with external exhaust.**

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (b) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs [326 IAC 6-3-2]:
 - (8) ~~Abrasive blast cabinets using aluminum oxide or glass bead media with fabric filters (Z138) as particulate control with no external exhaust.~~ **Deburring with a dry cyclone as particulate control with external exhaust.**

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

Comment 3:

The source realizes that the limits in Condition D.1.1 are for the sole purpose of creating a limit on PM10 emissions such that the Part 70 permit requirements will not be applicable. However, the source is concerned that the values in the table are based on mass balance data and are extremely low. As an alternative, the source suggests that allowable PM10 emission rates be set equal to the PM emission limit in Condition D.1.2 of 0.551 pounds per hour. The source believes that this value provides a more reasonable PM10 emission rate while still assuring that potential PM10 emissions do not exceed 100 tons per year.

Response to Comment 3:

IDEM has agreed to change the PM10 limits in Condition D.1.1 to match the PM limits in Condition D.1.2. IDEM has verified that the new PM10 limits still ensure that the potential PM10 emissions are less than 100 tons per year.

D.1.1 Particulate Emissions Limitations [326 IAC 2-8]

The Permittee shall comply with the following limitations:

Line	Process	Stack	PM10 Limitation (lb/hr)

Hip	Stem Polishing	Z101	0.028
Hip	Machine Rasping	Z102	0.028
Hip	Collar Polishing	Z-2	0.035
Hip	Stem Polishing	Z-8, 10, 12	0.057
Knee	Tumbleblasting	ZA1-A2	0.033
Knee	Grinding	Z1	0.069
Knee	Buffing	Z3, 5, 7, 9, 11	0.095
Casting	Shell Formation	ZA1	0.00041
Casting	Shotblast Unit	ZA1	0.00041
Casting	Tumbleblast	ZA1	0.00041
Casting	Grinding	ZA1	0.00041
Casting	Duburring	ZA1-A2	0.0033

The PM10 emissions from each of the processes listed in this section shall not exceed 0.551 pounds per hour. These This limits are is equivalent to emissions of 4.40 24.13 per year of PM10 from the processes listed in this section. These This limits are is structured such that when including the PM10 emissions from the insignificant activities, source total PM10 emissions remain less than one hundred (100) tons per year. Compliance with these this limits will render the requirements of 326 IAC 2-7 (Part 70 Program) not applicable.

Comment 4:

The source requested that the language in Condition D.1.3 be changed to read "...is required for these emission units and any control devices."

Response to Comment 4:

The following changes were made to the permit in response to this comment:

D.1.3 Preventative Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and any control devices.

Comment 5:

The source requested that the sentence "When venting to the atmosphere" in Condition D.1.9 (Cyclone Inspections) be added to the end of the first sentence rather than shown as a separate sentence.

Response to Comment 5:

The error pointed out by the source is valid; however, Condition D.1.9 has been removed from Section D.1 because the only units controlled by a cyclone in this section have been removed and placed in the insignificant activity section pursuant to Comment 1.

Comment 6:

The source requests that the phrase "when venting to the atmosphere" be added to the record keeping requirements (a), (b), and (c) to clarify that such records are not required if the emission units exhaust inside the building.

Response to Comment 6:

The following changes were made as a result of this comment. Note that changes made elsewhere (Comment 1) in this addendum are also shown here.

D.1.419 Record Keeping Requirements

- (a) To document compliance with Condition D.1.5, the Permittee shall maintain **once per shift** records of visible emission notations of the each stack exhaust ~~once per shift~~ in the hip, knee, and casting production lines **when venting to the atmosphere**.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain per shift records of the total static pressure drop during normal operation **when venting to the atmosphere**.
- (c) To document compliance with Conditions D.1.7 ~~and D.1.9~~, the Permittee shall maintain records of the results of the inspections required **when venting to the atmosphere** under Conditions D.1.7 ~~and D.1.9~~ and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 7:

The source requested that the changes made as a result of Comments 1, 2, 3 be made to the Technical Support Document (TSD).

Response to Comment 7:

No changes were made as a result of this comment. The OAQ prefers that the Technical Support Document (TSD) reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the TSD. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comment 8:

The source noted that in the TSD under the heading "State Rule Applicability - Entire Source" there is a discussion of the applicability of 326 IAC 1-6-3 (Preventive Maintenance Plan (PMP)). The discussion of the rule notes that they submitted a PMP on May 31, 1996. Since then, they have made modifications to some units, control devices, and maintenance procedures. Thus, the May 31, 1996 PMP is not the most current version.

Response to Comment 8:

No changes have been made as a result of this comment. Updated PMPs are required to be maintained on site. They are not required to be submitted to IDEM. Therefore, IDEM is aware that the May 31, 1996 PMP is not the most recent version of the Permittee's PMP.

Comment 9:

The source noted that in the TSD under the heading "State Rule Applicability - Entire Source" there is a discussion of the applicability of 326 IAC 1-5-2 (Emergency Reduction Plan (ERP)). The discussion of the rule notes that they submitted a ERP on May 31, 1996. The source believes that even though it submitted an ERP in 1996, it is no longer subject to the requirements of 326 IAC 1-5-2 (ERP) since the PM and PM10 emissions are limited by the FESOP. The source requests clarification as to whether or not this rule does apply.

Response to Comment 9:

The Permittee is not subject to the requirements of 326 IAC 1-5-2 (ERP) because the potential to emit

PM10 is limited by the FESOP limitation in Condition D.1.1. The potential to emit PM is limited pursuant to 326 IAC 6-3-2 in Condition D.1.2. These limitations ensure the potential to emit both PM and PM10 is less than 100 tons per year.

Comment 10:

The source noted that in the TSD under the heading "Compliance Requirements" there is a discussion of the compliance monitoring requirements for several units, including inspections for the cyclones. The source requests that the TSD state that the cyclone inspections are only required when venting to the atmosphere.

Response to Comment 10:

No changes were made as a result of this comment. The OAQ prefers that the Technical Support Document (TSD) reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the TSD. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. However, please note that cyclone inspections are no longer necessary as described in Comment 1 and Comment 5.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name: Zimmer, Inc.
Source Location: 1800 West Center Street, Warsaw, Indiana 46580
County: Kosciusko
SIC Code: 3842
Operation Permit No.: F085-12778-00064
Permit Reviewer: ERG/EH

The Office of Air Quality (OAQ) has reviewed a FESOP application from Zimmer, Inc. relating to the operation of a prosthetic device manufacturing plant.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) hip and stem production line (identified as Hip), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Stem polishing using a Trimer Wet Cyclone (stack ID Z101) as particulate control with external exhaust.
 - (2) Machine rasping using a Trimer Wet Cyclone (stack ID Z102) as particulate control with external exhaust.
 - (3) Collar polishing using a wet dust collector (stack ID Z-2) as particulate control with no external exhaust.
 - (4) Stem polishing using three (3) dry dust collectors (stack ID Z-8, Z-10, and Z-12) as particulate control with no external exhaust.

- (b) One (1) knee production line (identified as Knee), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Tumbleblasting using steel shot media with dry dust collectors (stack ID ZA1-ZA2) as particulate control with external exhaust.
 - (2) Grinding using a wet dust collector (stack ID Z1) as particulate control with no external exhaust.
 - (3) Buffing using dry dust collectors (stack ID Z3, Z5, Z7, Z9, Z11) as particulate control with no external exhaust.

- (c) One (1) casting process line (identified as casting), with a maximum capacity of 99 pounds per hour, constructed in 1972, comprised of the following processes:
 - (1) Shell formation with two (2) fluidized bed sand units (stack ID ZA1) as particulate control with external exhaust.
 - (2) One (1) shotblast unit with stainless steel shot media and a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
 - (3) One (1) tumbleblast unit with stainless steel shot media and a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
 - (4) Grinding using a dry dust collector (stack ID ZA1) as particulate control with external exhaust.
 - (5) Deburring with dry dust collectors (stack ID ZA1-ZA2) as particulate control with external exhaust.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving New Source Review Approval

There are no new emission units and pollution control equipment received new source review approval at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs [326 IAC 6-3-2]:
 - (1) Stem polishing using a dry cyclone with secondary cloth filtration (stack ID Z103-Z109) as particulate control with no external exhaust.
 - (2) Burr grinding using a dry cyclone with secondary cloth filtration (stack ID Z121-Z125) as particulate control with no external exhaust.
 - (3) Stem polishing using cartridge filtration (stack ID Z131-134) as particulate control with no external exhaust.
 - (4) Abrasive blast cabinets using aluminum oxide or glass bead media with fabric filters (Z138) as particulate control with no external exhaust.
 - (5) Buffing using a dry cyclone with secondary cloth filtration (stack ID Z110-120) as particulate control with no external exhaust.
 - (6) Burr grinding using a dry cyclone with secondary cloth filtration (stack ID Z126-130) as particulate control with no external exhaust.
 - (7) Grinding using an oil mist collector with electrostatic precipitation (stack ID Z135-136) as particulate control with no external exhaust.

- (8) Abrasive blast cabinets using aluminum oxide or glass bead media with fabric filters (Z138) as particulate control with no external exhaust.
- (c) 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 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.
[326 IAC 6-3-2]
- (d) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (1) Two (2) natural gas boilers (identified as B1 and B2) installed in 1991 and 1995, respectively, each having a maximum capacity of 500,000 BTU per hour [326 IAC 6-2-4];
 - (2) One (1) natural gas boiler (identified as B3) installed in 2000, having a maximum capacity of 1 million BTU per hour [326 IAC 6-2-4];
 - (3) Three (3) natural gas ceramic shell preheat furnaces (identified as WB1), installed in 1981, each having a maximum capacity of 2.8 million BTU per hour;
 - (4) Sixty-one (61) natural gas space heaters (identified as SH1), installed in 1972, each having a maximum capacity of 0.3 million BTU per hour; and
 - (5) Three (3) electric induction furnaces (identified as IF1), installed in 1972.
- (e) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (f) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (g) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).
- (h) A laboratory as defined in 326 IAC 2-7-1(21)(D).

Existing Approvals

The source has constructed or has been operating under the following previous approvals:

- (a) Exemption Letter, issued on August 8, 1983; and
- (b) Permit # 43-01-83-0169, issued in 1979.

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

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the FESOP be approved. This recommendation is based on the following facts and conditions:

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

An administratively complete FESOP application for the purposes of this review was received on September 28, 2001. Additional information was received on December 27, 2001, March 13, 2002, June 24, 2002, August 1, 2002, and October 1, 2002.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 3).

Potential To Emit for the Source

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

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	160.34
PM-10	160.34
SO ₂	0.06
VOC	0.56
CO	8.60
NO _x	10.24

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Chromium Compounds	4.56
Nickel Compounds	1.33
Cobalt Compounds	5.52
TOTAL	11.41

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10 is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) Pursuant to 326 IAC 2-8, this source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict PTE to below Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP).

(c) Fugitive Emissions

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

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Federally Enforceable State Operating Permit.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	Total HAPs
Hip (Z2, Z8, Z10, Z12, Z101, Z102)	49.07	0.66 (326 IAC 2-8)	--	--	--	--	3.67
Knee (ZA1/ZA2, Z1, Z3, Z5, Z7, Z9, Z11)	79.39	0.72 (326 IAC 2-8)	--	--	--	--	5.94
Investment Casting (ZA1, ZA2)	21.80	0.02 (326 IAC 2-8)	--	--	--	--	1.63
Insignificant Particulate Activities (Z110-Z120, Z126-Z130, Z135-Z136, Z138, Z103-Z109, Z121-Z125, Z131-Z134, Z138)	9.3	9.3	--	--	--	--	0.70
Fuel Combustion	0.78	0.78	0.06	0.56	8.6	10.24	Neg.
Total Emissions	160.34	Less than 100	0.06	0.56	8.60	10.24	11.94

Neg. = Negligible

County Attainment Status

The source is located in Kosciusko County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Kosciusko County has been designated as attainment or unclassifiable for ozone.
- (b) Kosciusko County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- The boilers are not subject to the requirements of the New Source Performance Standard 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (236 IAC 12), because each boiler has a maximum heat input capacity of less than 10 MMBtu/hour and were constructed prior to 1989.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.
- 40 CFR 63 Subpart T- National Emission Standards for Halogenated Solvent Cleaning does not apply to this source because no halogenated solvents are used in the degreasing or cleaning at the plant.
- (c) This source is not subject to the provisions of 40 CFR 64, Compliance Assurance Monitoring (CAM). In order for this rule to apply, a specific emissions unit must meet three criteria for a given pollutant: 1) the unit is subject to an emission limitation or standard for the applicable regulated air pollutant, 2) the unit uses a control device to achieve compliance with any such emission limitation or standard, and, 3) the unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal or greater than 100 percent of the amount required for a source to be classified as a major source. Additionally, the source has to receive a Part 70 permit. This source is receiving a FESOP and is therefore not subject to 40 CFR 64, CAM.
- (d) The requirements of Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56) are not applicable to this source because the source's potential to emit of a single HAP is less than ten (10) tons per year and the potential to emit of any combination of HAPs is less than twenty-five (25) tons per year and the source does not include one or more units that belong to one or more source categories affected by the Section 112(j) MACT Hammer date of May 15, 2002.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a Preventive Maintenance Plan (PMP) on May 13, 1996. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

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

The source has submitted an Emergency Reduction Plan (ERP) on May 13, 1996. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 2-2 (Prevention of Significant Deterioration)

This source was constructed prior to the PSD rules and was an existing minor source when the PSD rules were implemented. This source is not 1 of the 28 listed source categories. Actual emissions from this source have never exceeded two hundred fifty (250) tons per year. No construction has taken place since the implementation of the PSD rules.

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

This source is not subject to the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) because this source has the potential to emit less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Also no facility was constructed after July 27, 1997.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is limiting the potential to emit of PM10 to less more than one hundred (100) tons per year and the source is located in Kosciusko County.

326 IAC 2-8 (FESOP)

The Permittee shall be subject to the following PM10 emission limitations

Line	Process	Stack	PM10 Limitation (lb/hr)
Hip	Stem Polishing	Z101	0.028
Hip	Machine Rasping	Z102	0.028
Hip	Collar Polishing	Z-2	0.035
Hip	Stem Polishing	Z-8, 10, 12	0.057
Knee	Tumbleblasting	ZA1-A2	0.033
Knee	Grinding	Z1	0.069
Knee	Buffing	Z3, 5, 7, 9, 11	0.095
Casting	Shell Formation	ZA1	0.00041
Casting	Shotblast Unit	ZA1	0.00041
Casting	Tumbleblast	ZA1	0.00041
Casting	Grinding	ZA1	0.00041
Casting	Duburring	ZA1-A2	0.0033

These limits are equivalent emissions of 1.40 tons per year of PM10. These limits are structured such that when including the PM10 emissions from the insignificant activities, source total PM10 emissions remain less than one hundred (100) tons per year. Compliance with these limits will render the requirements of 326 IAC 2-7 (Part 70 Program) not applicable.

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:

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

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

This source is not subject to the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) because no facility was constructed after January 1, 1980 and the source does not have the potential to emit twenty-five (25) tons of VOC per year.

326 IAC 8-6 (Organic Solvent Emission Limitations)

This source is not subject to the requirements of 326 IAC 8-6 (Organic Solvent Emission Limitations) because it was constructed prior to October 7, 1974 and it does not have the potential to emit one hundred (100) tons of VOC per year.

State Rule Applicability - Hip, Knee, and Casting Lines

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

On June 12, 2002, revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) became effective; this rule was previously referred to as 326 IAC 6-3 (Process Operations). As of the date this permit is being issued, these revisions have not been approved by EPA into the Indiana State Implementation Plan (SIP); therefore, the requirements from the previous version of 326 IAC 6-3 (Process Operations), which have been approved into the SIP, will remain applicable requirements until the revisions to 326 IAC 6-3 are approved into the SIP and the condition is modified in a subsequent permit action.

Pursuant to the previous version of 326 IAC 6-3-2 (Process Operations), which has been approved into the SIP and will remain applicable until the revisions to 326 IAC 6-3 are approved into the SIP, the allowable particulate emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.

Under the June 12, 2002 revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the following requirement applies: the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (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.

State Rule Applicability - Paved and Unpaved Roads and Parking Areas

326 IAC 6-4 (Fugitive Dust Emissions)

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

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

This source is not subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations) because the source does not have fugitive emissions exceeding twenty-five (25) tons per year.

State Rule Applicability - Insignificant Activities with PM and PM10 Emissions Less Than 5 TPY and Insignificant Deburring, Buffing, Polishing, Abrasive Blasting, Pneumatic Conveying, Woodworking

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

On June 12, 2002, revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) became effective; this rule was previously referred to as 326 IAC 6-3 (Process Operations). As of the date this permit is being issued, these revisions have not been approved by EPA into the Indiana State Implementation Plan (SIP); therefore, the requirements from the previous version of 326 IAC 6-3 (Process Operations), which have been approved into the SIP, will remain applicable requirements until the revisions to 326 IAC 6-3 are approved into the SIP and the condition is modified in a subsequent permit action.

Pursuant to the previous version of 326 IAC 6-3-2 (Process Operations), which has been approved into the SIP and will remain applicable until the revisions to 326 IAC 6-3 are approved into the SIP, the allowable particulate emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.

Under the June 12, 2002 revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the following requirement applies: the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (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.

State Rule Applicability - Insignificant Boilers (B1, B2, B3)

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

Boilers B1, B2, and B3 are subject to the requirements of 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) because they were constructed after September 21, 1983. Pursuant to this rule, the particulate from the following units shall be limited as follows:

Year	Unit	Q (MMBtu/hr)	Pt (lb/MMBtu)	Emission Limit (lb/MMBtu)
1991	B1	0.5	1.31	0.6
1995	B2	0.5 + 0.5 = 1.0	1.09	0.6
2000	B3	0.5 + 0.5 + 1 = 2	0.91	0.6

The limitations for B1, B2, and B3 calculated using the equation below is greater than 0.6 lb/MMBtu, therefore, particulate emissions from B1, B2, and B3 shall be limited to 0.6 lb/MMBtu.

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
 Q = total source maximum operating capacity rating (MMBtu/hr)

State Rule Applicability - Insignificant Wax Burn-Out Furnaces (WB1)

326 IAC 4-2 (Incinerator Requirements)

The wax burnout furnaces (WB1) are not subject to the requirements of 326 IAC 4-2 (Incinerator Requirements) because they are not incinerators. These furnaces preheat ceramic molds used in the casting process.

Testing Requirements

Testing is not required for each unit in the hip, knee, and casting production lines because each unit does not emit greater than 40% of the source's total potential to emit of particulate matter, the major pollutant. Additionally, no rules with emission limits apply other than 326 IAC 6-3-2 and there is no evidence that the facilities are out of compliance with this rule.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a

result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

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

1. The hip, knee, and casting manufacturing operation has applicable compliance monitoring conditions as specified below:
 - (a) Once per shift visible emissions notations of the Z101, Z102, Z-2, Z-8, Z-10, Z-12, ZA1-ZA2, and Z1 stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. 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. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
 - (b) The Permittee shall record the total static pressure drop across each dust collector and cyclone controlling the hip, knee, and casting production lines, at least once per shift when the hip, knee, and casting production lines are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors and cyclones shall be maintained within the range of 3.0 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
 - (c) An inspection shall be performed during the last month of each calendar quarter of all bags and filters controlling the hip, knee, and casting production lines. When venting to the atmosphere, a baghouse or filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. All defective bags and filters shall be replaced.
 - (d) In the event that bag failure has been observed:

- (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (2) For single compartment baghouses, 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).
- (e) An inspection shall be performed during the last month of each calendar quarter of all cyclones controlling the hip, knee, and casting production lines.
- (f) In the event that cyclone failure has been observed:

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). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

These monitoring conditions are necessary because the particulate control devices for the hip, knee, and casting production lines must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-8 (FESOP).

Conclusion

The operation of this prosthetic device manufacturing plant shall be subject to the conditions of the attached proposed FESOP No.: F085-12778-00064.

Appendix A : Summary of Emissions

Company Name: Zimmer
Address City IN Zip: Warsaw, IN 46580
CP: 085-12778
Pit ID: 085-00064
Reviewer: ERG/KC
Date: 03/15/02

Activity ID	Potential PM/PM-10 Emissions (ton/yr)	Controlled PM/PM-10 Emissions (ton/yr)	Potential CO Emissions (ton/yr)	Controlled CO Emissions (ton/yr)	Potential NOx Emissions (ton/yr)	Controlled NOx Emissions (ton/yr)	Potential SO2 Emissions (ton/yr)	Controlled SO2 Emissions (ton/yr)	Potential VOC Emissions (ton/yr)	Controlled VOC Emissions (ton/yr)	Potential Chromium Emissions (ton/yr)	Controlled Chromium Emissions (ton/yr)	Potential Cobalt Emissions (ton/yr)	Controlled Cobalt Emissions (ton/yr)	Potential Nickel Emissions (ton/yr)	Controlled Nickel Emissions (ton/yr)
Knee Total	84.98	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.54	0.03	3.08	0.03	0.74	0.01
Hip Total	52.78	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58	0.02	1.91	0.03	0.46	0.01
Investment Castings Total	21.80	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.53	0.00	0.13	0.00
Fuel Combustion	0.78	0.78	8.60	8.60	10.24	10.24	0.06	0.06	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00
Plant Total	160.34	2.43	8.60	8.60	10.24	10.24	0.06	0.06	0.56	0.56	4.56	0.05	5.52	0.06	1.33	0.01

Appendix A: Emission Calculations- Natural Gas Fuel Combustion Sources (<100 MMBTU/hr)

Company Name: Zimmer, Inc.
Address City IN Zip: Warsaw, IN 46580
CP: 085-12778
Plt ID: 085-00064
Reviewer: ERG/KC
Date: 03/15/02

Unit Description	Maximum Capacity (Btu/hr)
61 heaters @ 0.3 mmBtu/unit	18300000
Boilers*	2000000
Induction Furnace	300000
Wax Burnout Furnaces**	2773677
Total MMBtu/hr max. =	23.37
Total MMft3/hr =	0.02

* Boilers include two units @ 500,000 Btu/hr each and one unit @ 1,000,000 Btu/hr.

** 99.9% of wax is reclaimed from castings with steam induction - emissions from the wax are not included since they are negligible

Potential Emissions from Natural Gas Fuel Combustion Units

Natural Gas Combustion (<100 mmBtu/hr heat input)	CO	NOx	PM	PM10	SO2	VOC
Emission Factor (lb/MMcf)	84	100	7.6	7.6	0.6	5.5
(lb/hr)	1.96	2.34	0.18	0.18	0.01	0.13
(ton/yr)	8.60	10.24	0.78	0.78	0.06	0.56

Methodology

All Emission factors are based on normal firing. MMBTU = 1,000,000 Btu. MMCF = 1,000,000,000 Cubic Feet of Gas

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

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)

Emission (tons/yr) = Throughput (MMCF/hr) x Emission Factor (lb/MMCF) x 8760 hrs/yr x 1 ton/2000lb

Appendix A : Emissions from Hip, Knee, and Investment Casting Production Lines

Company Name: Zimmer
 Address City IN Zip: Warsaw, IN 46580
 CP: 085-12778
 Pit ID: 085-00064
 Reviewer: ERG/EH
 Date: 03/15/02

Process	Description	Control Equipment ID	Internal or External Exhaust	Control Equipment Efficiency (%)	Maximum Process Weight Rate (lb/hr)	PM/PM-10* Emission Factor (lb/ton processed)	Potential PM/PM-10 Emissions (lb/hr)	Potential PM/PM-10 Emissions (ton/yr)	Controlled PM/PM-10 Emissions (lb/hr)	Controlled PM/PM-10 Emissions (ton/yr)	Potential Chromium Emissions (ton/yr)**	Controlled Chromium Emission (ton/yr)**	Potential Cobalt Emissions (ton/yr)**	Controlled Cobalt Emissions (ton/yr)**	Potential Nickel Emissions (ton/yr)**	Controlled Nickel Emissions (ton/yr)**
Knee	Tumbleblast unit which uses steel shot	ZA1/ZA2	External	99.9	99	67.4	3.34	14.62	0.0033	0.01	0.4371	0.0004	0.5292	0.0005	0.1272	0.0001
Knee	Grinding wheels used to rough grind radius	Z1	Internal	98.7	99	107.8	5.33	23.36	0.0693	0.30	0.6985	0.0091	0.8457	0.0110	0.2032	0.0026
Knee	robotic stations and some manual stations	Z3, Z5, Z7, Z9, Z11	Internal	99	99	191.0	9.45	41.41	0.0945	0.41	1.2382	0.0124	1.4991	0.0150	0.3603	0.0036
Knee	Buffing of parts	Z110-Z120	Internal	99.0	99	128.4	0.58	2.53	0.0001	0.0004	0.0757	0.00001	0.0916	0.00001	0.0220	0.000004
Knee	Infrequent grinding to remove "burrs"	Z126-Z130	Internal	99.0	99	17.9	0.18	0.78	0.002	0.01	0.0232	0.0002	0.0281	0.0003	0.0068	0.0001
Knee	Grinding the finish radius	Z135-Z136	Internal	92.0	99	20.8	0.51	2.25	0.04	0.18	0.0674	0.0054	0.0815	0.0065	0.0196	0.0016
Knee	Dry Blast; apply glass bead or aluminum oxide blast	Z138***	Internal	0	99	5.0	0.01	0.03	0.01	0.03	0.0008	0.0008	0.0009	0.0009	0.0002	0.0002
KNEE TOTAL							19.40	84.98	0.2161	0.95	2.5408	0.0283	3.0761	0.0343	0.7393	0.0082

Hip	Polishing of collar on the part; some robotic, some manual	Z2	Internal	98.7	99	53.9	2.67	11.68	0.0347	0.15	0.3493	0.0045	0.4229	0.0055	0.1016	0.0013
Hip	Polishing of the stem of the part; some robotic, some manual	Z8, Z10, Z12	Internal	99	99	114.6	5.67	24.85	0.0567	0.25	0.7429	0.0074	0.8994	0.0090	0.2162	0.0022
Hip (Special Products)	Polishing the stem	Z101	External	98.0	15	191.0	1.43	6.27	0.03	0.13	0.1876	0.0038	0.2271	0.0045	0.0546	0.0011
Hip	Machine Rasp	Z102	External	98.0	20	143.2	1.43	6.27	0.03	0.13	0.1876	0.0038	0.2271	0.0045	0.0546	0.0011
Hip	Polishing the stem of the part	Z103-Z109	Internal	99.0	99	52.0	0.37	1.61	0.0001	0.0004	0.0481	0.00001	0.0583	0.00001	0.0140	0.000004
Hip	Infrequent grinding to remove "burrs"	Z121-Z125	Internal	99.0	99	17.9	0.18	0.78	0.002	0.01	0.0232	0.0002	0.0281	0.0003	0.0068	0.0001
Hip	Polishing the stem	Z131-Z134	Internal	99.0	99	23.9	0.30	1.29	0.003	0.01	0.0387	0.0004	0.0468	0.0005	0.0113	0.0001
Hip	Dry Blast; apply glass bead or aluminum oxide blast	Z138***	Internal	0	99	5.0	0.01	0.03	0.01	0.03	0.0008	0.0008	0.0009	0.0009	0.0002	0.0002
HIP TOTAL							12.05	52.78	0.1594	0.70	1.5782	0.0209	1.9108	0.0253	0.4592	0.0061

Investment Castings	Ceramic slurry with fluidized bed sand system (2 units)	ZA1	External	99.9	99	8.3	0.41	1.80	0.0004	0.002	0.0537	0.0001	0.0650	0.0001	0.0156	0.00002
Investment Castings	Shotblast Unit w/ stainless steel shot	ZA1	External	99.9	99	8.3	0.41	1.80	0.0004	0.002	0.0537	0.0001	0.0650	0.0001	0.0156	0.00002
Investment Castings	Tumble blast w/ stainless steel shot	ZA1	External	99.9	99	8.3	0.41	1.80	0.0004	0.002	0.0537	0.0001	0.0650	0.0001	0.0156	0.00002
Investment Castings	Grinding operation	ZA1	External	99.9	99	8.3	0.41	1.80	0.0004	0.002	0.0537	0.0001	0.0650	0.0001	0.0156	0.00002
Investment Castings	Deburring operation (performed by hand)	ZA1, ZA2	External	99.9	99	67.4	3.34	14.62	0.0033	0.01	0.4371	0.0004	0.5292	0.0005	0.1272	0.0001
INVESTMENT CASTINGS TOTAL							4.9770	21.7992	0.0050	0.0218	0.6518	0.0007	0.7891	0.0008	0.1897	0.0002

* Assumes PM-10 is equal to PM, per IDEM determination

** Based on metal concentrations in waste stream (2.99% Chromium, 3.62 Cobalt, 0.87% Nickel)

*** includes 45 blast cabinets for Hip and Knee process. Emission estimates divided equally between Hip and Knee

Example Calculations:

Z1: 5.26 lb/hr PM collected * (100 / collection efficiency of 98.7%) / process weight rate 99 lb/hr * 2000 lb/ton = 107.8 lb/ton material processed
 Emission factors for activities with more than one control device are the sum of the emission factors for each control device.
 Z1: 107.8 lb/ton material processed emission factor * 99 lb/hr process weight rate / 2000 lb per ton = 5.33 lb/hr
 Z1: potential PM emissions 5.33 lb/hr * (100%-98.7%control efficiency)/100 = 0.0693 lb/hr controlled PM emissions