



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: September 20, 2007
RE: Bahr Brothers Manufacturing, Inc. / 053-11804-00022
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06



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100 North Senate Avenue
MC 61-53 IGCN 1003
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New Source Review and Federally Enforceable State Operating Permit OFFICE OF AIR QUALITY

**Bahr Brothers Manufacturing, Inc.
2545 Lincoln Boulevard
Marion, Indiana 46952**

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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

Operation Permit No.: F053-11804-00022	
Issued by/Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: September 20, 2007 Expiration Date: September 20, 2012

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary ductile iron and steel foundry.

Source Address:	2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address:	P.O. Box 411, Marion, Indiana 46952
General Source Phone Number:	(765) 664-6235
SIC Code:	3321, 3325
County Location:	Grant
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

- (a) One (1) natural gas-fired thermal sand reclaimer, identified as EU6, constructed in 1993, with a maximum throughput of 1.0 tons sand per hour and a heat input rate of 1.0 million (MM) British thermal units (Btu) per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 1;
- (b) One (1) mechanical sand reclaimer, identified as EU7, constructed in 1993, with a maximum throughput of 1.5 tons sand per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 2;
- (c) One (1) steel shot pangborn table blast machine # 1, identified as EU13, constructed in 1979, with a maximum process rate of 0.88 tons of metal per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 3;
- (d) One (1) steel shot pangborn table machine # 2, identified as EU14, constructed in 1985, with a maximum process rate of 0.18 tons of metal per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4;
- (e) One (1) steel shot wheelabrator tumble blast machine # 1, identified as EU15, constructed in 1985, with a maximum process rate of 0.18 tons of metal per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4;
- (f) One (1) electric induction melting process, identified as EU2, constructed in 1978, with a maximum heat input capacity of 1.47 MMBtu/hr, consisting of two (2) "large" electric induction melting furnaces each rated at 1,750 pounds of metal per hour;
- (g) One (1) charge handling process, identified as EU1, constructed in 1970, with a maximum throughput of 1.47 tons of metal per hour;
- (h) One (1) pouring/casting process, identified as EU3, constructed in 1970, with a maximum throughput of 1.47 tons of metal per hour;

- (i) One (1) casting cooling process, identified as EU4, constructed in 1970, with a maximum throughput of 1.47 tons of metal per hour;
- (j) One (1) shakeout process, identified as EU5, constructed in 1970, with a maximum throughput of 1.47 tons of metal per year;
- (k) One (1) floor mixer, identified as EU8, constructed in 1999, with a maximum throughput of 15.0 tons of sand per hour;
- (l) One (1) bi-room mixer, identified as EU9, constructed in 1991, with a maximum throughput of 3.0 tons of sand per hour;
- (m) One (1) core room mixer, identified as EU10, constructed in 1991, with a maximum throughput of 3.0 tons of sand per hour;
- (n) One (1) line mixer, identified as EU11, constructed in 1981, with a maximum throughput of 7.5 tons of sand per hour;
- (o) One (1) mold release spray, identified as EU17, constructed in 1970, utilizing a hand brushing application system, coating a maximum of 0.45 metal patterns per hour;
- (p) One (1) mold/core painting process, identified as EU18, constructed in 1980, utilizing an air atomization spray application system, coating a maximum of 10 molds per hour;
- (q) Inoculation (with Ferrosilicon); and
- (r) One (1) natural gas-fired thermal sand reclaimer, identified as EU19, constructed in 2004, with a maximum throughput of 0.25 tons of sand per hour and a heat rate of 0.25 MMBtu/hr, utilizing one (1) baghouse for particulate matter control.

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:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
 - (1) One (1) natural gas-fired normalize heat treat furnace, identified as EU12, with a maximum throughput of 0.44 tons per hour and a heat input rate of 3.04 MMBtu per hour;
 - (2) Two (2) natural gas-fired ladle preheaters, identified as EU16, each with a maximum heat input rate of 0.33 MMBtu per hour;
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (c) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;
 - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (d) Refractory storage not requiring air pollution control equipment;

- (e) Equipment used exclusively for the following:
 - (1) Packaging lubricants and greases;
 - (2) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases;
- (f) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- (g) Machining where an aqueous cutting coolant continuously floods the machining interface;
- (h) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;
- (i) Cleaners and solvents characterized as follows:
 - (1) Having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;
- (j) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (k) Closed loop heating and cooling systems;
- (l) Any of the following structural steel and bridge fabrication activities:
 - (1) Cutting 200,000 linear feet or less of one inch (1") plate or equivalent;
 - (2) Using 80 tons or less of welding consumables;
- (m) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;
- (n) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs;
- (o) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (p) Paved or unpaved roads and parking lots with public access;
- (q) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;
- (r) Emergency generators as follows:
 - (1) Diesel generators not exceeding 1600 horsepower;
- (s) 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;

- (t) Filter or coalescer media changeout;
- (u) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C);
- (v) A laboratory as defined in 326 IAC 2-7-1(20)(C);
- (w) Outdoor Sand Storage Silos (2) with "Aqua Filter";
- (x) Indoor Sand Storage Silos and Tanks (3) with Bin Top Filters; and
- (y) Miscellaneous Woodworking Activities in Pattern Shop (Sawing, Cutting, Routing, Planing, etc.).

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).

SECTION B GENERAL CONDITIONS

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

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

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

-
- (a) This permit, F053-11804-00022, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

-
- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

- (a) 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. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. 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 no later than July 1 of each year to:

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

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

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

- (a) 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

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

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:

- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

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

- (a) All terms and conditions of permits established prior to F053-11804-00022 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted
- (b) All previous registrations and permits are superseded by this permit.

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

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

B.15 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 Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

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

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

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

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

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

- (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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

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

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

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

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

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

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

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

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

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

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

- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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 make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.
- (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) The potential to emit 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 make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.

(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]

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

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

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

All required notifications shall be submitted to:

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

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

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

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

C.9 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

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

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

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

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

- (b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

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

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

- (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][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 twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

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

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.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

Emissions Unit Description:

- (a) One (1) natural gas-fired thermal sand reclaimer, identified as EU6, constructed in 1993, with a maximum throughput of 1.0 tons sand per hour and a heat input rate of 1.0 million (MM) British thermal units (Btu) per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 1;
- (b) One (1) mechanical sand reclaimer, identified as EU7, constructed in 1993, with a maximum throughput of 1.5 tons sand per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 2;
- (c) One (1) steel shot pangborn table blast machine # 1, identified as EU13, constructed in 1979, with a maximum process rate of 0.88 tons of metal per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 3;
- (d) One (1) steel shot pangborn table machine # 2, identified as EU14, constructed in 1985, with a maximum process rate of 0.18 tons of metal per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4;
- (e) One (1) steel shot wheelabrator tumble blast machine # 1, identified as EU15, constructed in 1985, with a maximum process rate of 0.18 tons of metal per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4; and
- (f) One (1) natural gas-fired thermal sand reclaimer, identified as EU19, constructed in 2004, with a maximum throughput of 0.25 tons of sand per hour and a heat rate of 0.25 MMBtu/hr, utilizing one (1) baghouse for particulate matter control.

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

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

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emitted from the facilities listed below shall be limited as stated, based on the following:

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

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

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions (lbs/hr)
Thermal Sand Reclaimer (EU6)	1.0	4.10
Mechanical Sand Reclaimer (EU7)	1.5	5.38
Pangborn Table Blast Machine #1 (EU13)	0.88	3.76
Pangborn Table Blast Machine #2 (EU14)	0.18	1.30
Wheelabrator Tumble Blast Machine #1 (EU15)	0.18	1.30
Thermal Sand Reclaimer (EU19)	0.25	1.62

D.1.2 Particulate Matter (PM) [326 IAC 2-2] [326 IAC 2-8]

- (a) Particulate Matter (PM) emissions from the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), combined shall not exceed 1.55 pounds per hour.
- (b) Particulate matter with a diameter less than ten (10) microns (PM10) emission from the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), combined shall not exceed 1.55 pounds per hour.

The above limits, in addition to the limits in Condition D.2.1, and the potential emissions from all other units at this source, will limit source wide PM and PM10 emissions to less than 100 tons per year. Therefore, compliance with these limits will satisfy 326 IAC 2-8-4 (FESOP) and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70) not applicable.

D.1.3 Preventive 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 the mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), thermal sand reclaimer (EU6), and the wheelabrator tumble blast machine #1 (EU15), and their control devices.

Compliance Determination Requirements

D.1.4 Particulate Matter (PM)

In order to comply with Conditions D.1.1 and D.1.2, the baghouses for PM control shall be in operation at all times that the mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), thermal sand reclaimer (EU6), wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), are in operation.

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

D.1.5 Visible Emissions Notations

- (a) Visible emission notations of the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), wheelabrator tumble blast machine (EU15), and thermal sand reclaimer (EU19), stack exhaust shall be performed daily during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.6 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), the wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), at least once daily when the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), the wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.1.7 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line). 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).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.8 Record Keeping Requirements

- (a) To document compliance with Condition D.1.5, the Permittee shall maintain records of daily visible emission notations of the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), the wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g., the process did not operate that day).
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain a daily record of the pressure drop across the baghouses controlling the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), the wheelabrator tumble blast machine #1 (EU15), and the thermal sand reclaimer (EU19). The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) electric induction melting process, identified as EU2, constructed in 1978, with a maximum heat input capacity of 1.47 MMBtu/hr, consisting of two (2) "large" electric induction melting furnaces each rated at 1,750 pounds of metal per hour;
- (b) One (1) charge handling process, identified as EU1, constructed in 1970, with a maximum throughput of 1.47 tons of metal per hour;
- (c) One (1) pouring/casting process, identified as EU3, constructed in 1970, with a maximum throughput of 1.47 tons of metal per hour;
- (d) One (1) casting cooling process, identified as EU4, constructed in 1970, with a maximum throughput of 1.47 tons of metal per hour;
- (e) One (1) shakeout process, identified as EU5, constructed in 1970, with a maximum throughput of 1.47 tons of metal per year;
- (f) One (1) floor mixer, identified as EU8, constructed in 1999, with a maximum throughput of 15.0 tons of sand per hour;
- (g) One (1) bi-room mixer, identified as EU9, constructed in 1991, with a maximum throughput of 3.0 tons of sand per hour;
- (h) One (1) core room mixer, identified as EU10, constructed in 1991, with a maximum throughput of 3.0 tons of sand per hour;
- (i) One (1) line mixer, identified as EU11, constructed in 1981, with a maximum throughput of 7.5 tons of sand per hour; and
- (j) Inoculation (with Ferrosilicon); and

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

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

D.2.1 PSD Minor Limit [326 IAC 2-2] [326 IAC 2-8]

- (a) The input of metal to the electric induction melting (EU2) shall not exceed 9,460,800 pounds per 12 consecutive month period, with compliance determined at the end of each month. This shall limit the input of metal to the charge handling (EU1), pouring/casting (EU3), casting cooling (EU4), Inoculation (with Ferrosilicon), and casting shakeout (EU5) processes as well. The following emission limitations shall apply:

Process	Material	PM Emission Limitation (lb/ton material)	PM10 Emission Limitation (lb/ton material)
charge handling (EU1)	Metal	0.6	0.36
induction melting (EU2)	Metal	0.9	0.86
pouring/casting (EU3)	Metal	2.8	0.66
casting cooling (EU4)	Metal	1.4	1.4
Inoculation (with Ferrosilicon)	Metal	3.2	2.24
casting shakeout (EU5)	Metal	3.2	2.24

- (b) Particulate Matter (PM) emissions from the Floor Mixer (EU8), Bi-Room Mixer (EU9), Core Room Mixer (EU10), and Line Mixer (EU11) shall not exceed 10.26 pounds per hour.
- (c) Particulate matter with a diameter less than ten (10) microns (PM10) emissions from the Floor Mixer (EU8), Bi-Room Mixer (EU9), Core Room Mixer (EU10), and Line Mixer (EU11) shall not exceed 10.26 pounds per hour.

Compliance with the above limits, in addition to the limits in Condition D.1.2, and potential emissions from all other units at this source, will limit source wide PM and PM10 emissions to less than 100 tons per year. Therefore, compliance with these limits will satisfy 326 IAC 2-8-4 (FESOP) and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70) not applicable.

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emitted from the facilities listed below shall be limited as stated, based on the following:

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

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

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions (lbs/hr)
Electric Induction Melting (EU2)	1.47	5.31
Charge Handling (EU1)	1.47	5.31
Pouring/Casting (EU3)	1.47	5.31
Casting Cooling (EU4)	1.47	5.31
Shakeout (EU5)	1.47	5.31
Floor Mixer (EU8)	15.0	25.16
Bi-Room Mixer (EU9)	3.0	8.56
Core Room Mixer (EU10)	3.0	8.56
Line Mixer (EU11)	7.5	15.82
Inoculation (with Ferrosilicon)	1.47	5.31

D.2.3 Preventive 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 charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), shakeout process (EU5), the floor mixer (EU8), the bi-room mixer (EU9), core room mixer (EU10), and the line mixer (EU11) and their control devices.

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

D.2.4 Record Keeping Requirements

To document compliance with condition D.2.1, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the annual metal input limit to the charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), shakeout (EU5) established in conditions condition D.2.1.

- (1) Calendar dates covered in the compliance determination period;
- (2) Metal Input to the charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), shakeout (EU5) processes per month since the last compliance determination period; and

D.2.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) mold release spray, identified as EU17, constructed in 1970, utilizing a hand brushing application system, coating a maximum of 0.45 metal patterns per hour; and
- (b) One (1) mold/core painting process, identified as EU18, constructed in 1980, utilizing an air atomization spray application system, coating a maximum of 10 molds per hour.

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

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

D.3.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

The usage of VOC delivered to the applicators, including clean up solvents, in the one (1) mold/core painting process, (EU18), shall be limited to less than 25 tons per 12 consecutive month period, with compliance determined at the end of each month. Compliance with this limit will render the requirements of 326 IAC 8-1-6 not applicable to this facility.

D.3.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(d), particulate from the mold/core painting process, (EU18), shall be controlled by a dry particulate filter, waterwash, or equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.3.3 Preventive 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 the mold/core painting process (EU18).

Compliance Determination Requirements

D.3.4 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.3.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.3.5 VOC Emissions

Compliance with Condition D.3.1 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent month.

D.3.6 Particulate Matter (PM) Control

In order to comply with condition D.3.2 the dry particulate filter, waterwash, or equivalent control device for PM control shall be in operation at all times when mold/core painting process, (EU18), is in operation.

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

D.3.7 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.3.1.

- (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
 - (2) A log of the dates of use;
 - (3) The cleanup solvent usage for each month;
 - (4) The total VOC usage for each month; and
 - (5) The weight of VOCs used for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

Source Name: Bahr Brothers Manufacturing, Inc.
Source Address: 2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address: P.O. Box 411, Marion, Indiana 46952
FESOP Permit No.: F053-11804-00022

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

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

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

Source Name: Bahr Brothers Manufacturing, Inc.
Source Address: 2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address: P.O. Box 411, Marion, Indiana 46952
FESOP Permit No.: F053-11804-00022

This form consists of 2 pages

Page 1 of 2

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

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

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

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N 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**

FESOP Quarterly Report

Source Name: Bahr Brothers Manufacturing, Inc.
Source Address: 2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address: P.O. Box 411, Marion, Indiana 46952
FESOP Permit No.: F053-11804-00022
Facility: Electric induction melting (EU2)
Parameter: Metal Input
Limit: The total input of metal to this process, shall not exceed 9,460,800 pounds per 12 consecutive month period, rolled on a monthly basis.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Input This Month	Metal Input Previous 11 Months	Metal Input 12 Month Total
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Bahr Brothers Manufacturing, Inc.
Source Address: 2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address: P.O. Box 411, Marion, Indiana 46952
FESOP Permit No.: F053-11804-00022
Facility: Mold/core painting (EU18)
Parameter: VOC usage
Limit: The total usage of VOC delivered to the applicators, including clean up solvents, shall be limited to less than 25 tons per 12 consecutive month period.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Usage This Month	VOC Usage Previous 11 Months	VOC Usage 12 Month Total
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Source Name: Bahr Brothers Manufacturing, Inc.
Source Address: 2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address: P.O. Box 411, Marion, Indiana 46952
FESOP Permit No.: F053-11804-00022

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

Page 1 of 2

<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. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</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 Management**

Addendum to the Technical Support Document
for New Source Review and
Federally Enforceable State Operating Permit (FESOP)

Source Name: Bahr Brothers Manufacturing, Inc.
Source Location: 2545 Lincoln Boulevard, Marion, IN 46952
SIC Code: 3321, 3325
County: Grant
Operation Permit No.: F053-11804-00022
Permit Reviewer: Julia Handley/EVP

On August 17, 2000, the Office of Air Quality (OAQ) had a notice published in the Marion Chronicle Tribune, Marion, Indiana, stating that Bahr Brothers Manufacturing, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) for the operation of a ductile iron and steel foundry. The notice also stated that OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP 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 FESOP should be issued as proposed.

On August 23, 2000, Joseph M. VanCamp, P.E. of Cornerstone Environmental, Health & Safety, Inc., submitted comments on behalf of Bahr Brothers Manufacturing, Inc. on the proposed FESOP. The summary of the comments and corresponding responses is as follows below (bolded language has been added and language with a line through it has been deleted).

The OAQ prefers that the Technical Support Document 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 Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comment 1

We do not believe that the individual process operations specifically listed in Condition D.1.1 should be assigned an hourly PM-10 emission limitation to comply with 326 IAC 2-8-4. The requirement for any FESOP should be to simply accept a federally enforceable source wide emission limitation of 99 tons per year for each criteria pollutant to avoid the major source (i.e., Title V) applicability threshold. To break this "allowable" 99 tons per year threshold for the entire source into individual process emission limitations at this facility severely hampers the operational flexibility that is required in today's highly competitive market. This facility is concerned that at any given point in time one foundry process may not be in compliance with its hourly PM-10 emission limitation, but at the same time the whole source combined would easily be in compliance with the 99 tons per year limitation. We request that you remove these individual hourly PM-10 emission limitations from this FESOP since such limitations are not specifically mandated by either federal or state air regulations.

Similarly, we do not believe that the individual process operations identified in Condition D.1.1 should be assigned an hourly PM emission limitation to comply with 326 IAC 2-2. The requirement for this facility to avoid the PSD requirements should be to simply not exceed 100 tons of PM per year on a source wide basis. This facility has already agreed to accept an iron throughput limitation in order to remain an existing minor PSD source. This limitation is described in Section D.2.1. Monthly record keeping to verify that this iron throughput limitation is being met should be the only item necessary to ensure compliance with the PSD regulations. We request that you delete the individual hourly PM emission limitations from this FESOP since such limitations are not specifically mandated by either federal or state air regulations.

Response 1

IDEM has determined that the limits pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-2 (PSD), and 326 IAC 2-8 (FESOP) shall be included in the permit as two conditions. Furthermore federally enforceable PSD minor limits for PM and PM-10 must be included in the permit to satisfy the requirements of 326 IAC 2-8 (FESOP) and render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) not applicable. In order to be practically enforceable, these limits must be written in terms of pounds of pollutant per hour (lb/hr). The five (5) processes listed in Section D.1.1, identified as thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), thermal sand reclaimer (EU19), and wheelabrator tumble blast machine #1 (EU15) all utilize baghouses for PM and PM10 control. If the baghouses are in operation at all times that the five (5) processes are in operation, then the source should be able to comply with the limits. The hourly PM emission limitations are derived from the controlled emissions, which are based on the baghouses being in operation at all times (please refer to the calculations in Appendix A, pages 4 and 6). The allowable PM-10 limitation has been included in the permit at a rate equal to the PM limit. Compliance with these initiations will limit PM and PM10 emissions to less than 100 tons per year.

Accordingly,
The following changes have been made to Condition D.1.1:

D.1.1 Particulate Matter (PM) ~~[326 IAC 6-3-2] [326 IAC 2-2] [326 IAC 2-8]~~

Pursuant to 326 IAC 6-3-2 (~~Process Operations~~ **Particulate Emission Limitations for Manufacturing Processes**), 326 IAC 2-2 (~~Prevention of Significant Deterioration~~) and 326 IAC 2-8 (~~FESOP~~), particulate emissions from the following facilities shall be limited by the following: **particulate emitted from the facilities listed below shall be limited as stated, based on the following:**

~~Allowable PM Emissions (lbs/hr) are based on the following equation:~~

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

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

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions (lbs/hr)	PM Limit for PSD non-applicability (lbs/hr)	PM10 FESOP Limit (lbs/hr)
Thermal Sand Reclaimer (EU6)	1.0	4.10	0.18	0.03
Mechanical Sand Reclaimer (EU7)	1.5	5.38	0.27	0.04
Pangborn Table Blast Machine #1 (EU13)	0.88	3.76	0.75	0.08
Pangborn Table Blast Machine #2 (EU14)	0.18	1.30	0.15	0.02
Wheelabrator Tumble Blast Machine #1 (EU15)	0.18	1.30	0.15	0.02
Thermal Sand Reclaimer (EU19)	0.25	1.62		
Total	--	--	1.50	0.19

D.1.2 Particulate Matter (PM) [326 IAC 2-2] [326 IAC 2-8]

- (a) **Particulate Matter (PM) emissions from the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), combined shall not exceed 1.55 pounds per hour.**
- (b) **Particulate matter with a diameter less than ten (10) microns (PM10) emission from the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), combined shall not exceed 1.55 pounds per hour.**

The above limits, in addition to the limits in Condition D.2.1, and the potential emissions from all other units at this source, will limit source wide PM and PM10 emissions to less than 100 tons per year. Therefore, compliance with these limits will satisfy 326 IAC 2-8-4 (FESOP) and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70) not applicable.

Comment 2

The visible emissions (VE) notation requirement for the thermal sand reclaimer (EU6) in Condition D.1.4(a) should be removed from this FESOP since the uncontrolled PM emissions are less than the allowable PM emissions as designated by 326 IAC 6-3-2. Even without the associated baghouse for PM control, there is no way that the allowable PM emission limit for EU6 can be exceeded.

Response 2

The visible emission notations are used to indicate compliance with 326 IAC 5-1 and 326 IAC 6. This requirement is designed as a trigger that the source perform some corrective action on the facility if visible emissions are abnormal, to ensure continuous compliance with emission limitations. Even though the baghouse may not be needed for the thermal sand reclaimer (EU6) to stay in compliance (when it is operating properly), visible emission observations are required. No changes have been made to the permit as a result of this comment.

Comment 3

The parametric monitoring requirement for the thermal sand reclaimer (EU6) in Condition D.1.5 should be removed from this FESOP since the uncontrolled PM emissions are less than the allowable PM emissions as designated by 326 IAC 6-3-2. Even without the associated baghouse for PM control, there is no way that the allowable PM emission limit for EU6 can be exceeded.

Response 3

Compliance monitoring, including parametric monitoring, and baghouse failure detection, is required for the baghouse associated with the thermal sand reclaimer (EU6) because PM and PM10 emission limits are necessary to render 326 IAC 2-2 (PSD) not applicable for PM and PM10 emissions. Since the baghouse is required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance. No changes have been made to the permit as a result of this comment.

Comment 6

The baghouse inspection requirement for the thermal sand reclaimer (EU6) in Condition D.1.6 should be removed from this FESOP since the uncontrolled PM emissions are less than the allowable PM emissions as designated by 326 IAC 6-3-2. Even without the associated baghouse for PM control, there is no way that the allowable PM emission limit for EU6 can be exceeded.

Response 6

Upon further review, IDEM has determined that it is the Permittee's responsibility to include routine control device inspection requirements in the applicable preventive maintenance plan. Since the Permittee is in the best position to determine the appropriate frequency of control device inspections and the details regarding which components of the control device should be inspected, the conditions requiring control device inspections have been removed from the permit.

~~D.1.6 Baghouse Inspections~~

~~An inspection shall be performed each calendar quarter of all bags controlling the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) when venting to the atmosphere. A baghouse 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. All defective bags shall be replaced.~~

Comment 7

The record keeping requirement for the thermal sand reclaimer (EU6) in Condition D.1.8(a) should be removed from this FESOP since the uncontrolled PM emissions are less than the allowable PM emissions as designated by 326 IAC 6-3-2. Even without the baghouse for PM control, there is no way that the allowable PM emission limit for EU6 can be exceeded.

Response 7

The thermal sand reclaimer (EU6) utilizes a baghouse to be able to comply with PM and PM10 limitations necessary to render 326 IAC 2-2 (PSD) not applicable. Since the baghouse is required to comply with the emission limits, compliance monitoring must be performed to demonstrate compliance. No changes have been made to the permit as a result of this comment.

Comment 8

The record keeping requirement in Condition D.1.8(b)(1) should be changed to "Daily records of the following..."

Response 8

Upon further review, IDEM, OAQ has determined that once per day monitoring of the control device and of visible emission notations is generally sufficient to ensure proper operation of the control device. IDEM has also determined that monitoring these parameters once per day is sufficient to satisfy the requirements of 326 IAC 2-8-4 and 326 IAC 2-8-5. Condition D.1.8 has been revised as shown below.

D.1.8 Record Keeping Requirements

- (a) To document compliance with Condition ~~D.1.4~~ **D.1.5**, the Permittee shall maintain records of daily visible emission notations of the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14) ~~and the wheelabrator tumble blast machine #1 (EU15), and thermal sand reclaimer (EU19), stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g., the process did not operate that day).~~
- (b) ~~To document compliance with Condition D.1.5, the Permittee shall maintain the following:~~
- (1) ~~Daily records of the following operational parameters during normal operation when venting to the atmosphere:~~
 - (A) ~~Inlet and outlet differential static pressure.~~
 - (2) ~~Documentation of all response steps implemented, per event.~~
 - (3) ~~Operation and preventive maintenance logs, including work purchases orders, shall be maintained.~~
 - (4) ~~Quality Assurance/Quality Control (QA/QC) procedures.~~
 - (5) ~~Operator standard operating procedures (SOP).~~

- ~~(6) — Manufacturer's specifications or its equivalent.~~
- ~~(7) — Equipment "troubleshooting" contingency plan.~~
- ~~(8) — Documentation of the dates vents are redirected.~~

- (b) To document compliance with Condition D.1.6, the Permittee shall maintain a daily record of the pressure drop across the baghouses controlling the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), the wheelabrator tumble blast machine #1 (EU15), and the thermal sand reclaimer (EU19). The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).**
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 9

We do not believe that the individual process operations specifically listed in Condition D.2.2 should be assigned an hourly PM-10 emission limitation to comply with 326 IAC 2-8-4. Please refer to the discussion in item #1 above for further justification.

Similarly, we do not believe that the individual process operations specifically listed in Condition D.2.2 should be assigned an hourly PM emission limitation to comply with 326 IAC 2-2. Please refer to the discussion in item #2 above for further justification.

Response 9

IDEM has determined that the limits pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-2 (PSD), and 326 IAC 2-8 (FESOP) shall be included in the permit as two conditions. Furthermore, federally enforceable PSD minor limits for PM and PM10 must be included in the permit to satisfy the requirements of 326 IAC 2-8 (FESOP) and render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) not applicable. In order to be practically enforceable, these limits must be written in terms of pound of pollutant per hour (lb/hr) or pound of pollutant per ton of metal produced (lb/ton material). The iron throughput to the charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4) and shakeout (EU5) shall limit PM and PM10 emissions from these five processes. The hourly PM emission limitations are derived from the controlled emissions, which are based on the limited throughput (please refer to the calculations in Appendix A, page 2). The hourly PM emission limitations for the other four (4) processes, identified as floor mixer (EU8), bi-room mixer (EU9), core room mixer (EU10) and line mixer (EU11) are derived from the controlled emissions (please refer to the calculations in Appendix A, page 4). If the control devices associated with these four processes are in operation at all times that the processes are in operation, then the source should be able to comply with the limits. The allowable PM-10 limitation has been included in the permit at a rate equal to the PM limit. Compliance with these initiations will limit PM and PM10 emissions to less than 100 tons per year.

The following changes have been made to Conditions D.2.1 and D.2.2:

D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The input of metal to the following processes, ~~charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), shakeout (EU5)~~ shall be limited to less than 15,768,000 not **exceed 9,460,800** pounds per 12 consecutive month period, ~~rolled on a monthly basis~~ **with compliance determined at the end of each month. This shall limit the input of metal to the charge handling (EU1), pouring/casting (EU3), casting cooling (EU4), Inoculation (with Ferrosilicon), and casting shakeout (EU5) processes as well. The following emission limitations shall apply:**

Process	Material	PM Emission Limitation (lb/ton material)	PM10 Emission Limitation (lb/ton material)
charge handling (EU1)	Metal	0.6	0.36
induction melting (EU2)	Metal	0.9	0.86
pouring/casting (EU3)	Metal	2.8	0.66
casting cooling (EU4)	Metal	1.4	1.4
Inoculation (with Ferrosilicon)	Metal	3.2	2.24
casting shakeout (EU5)	Metal	3.2	2.24

(b) Particulate Matter (PM) emissions from the Floor Mixer (EU8), Bi-Room Mixer (EU9), Core Room Mixer (EU10), and Line Mixer (EU11) shall not exceed 10.26 pounds per hour.

(c) Particulate matter with a diameter less than ten (10) microns (PM10) emissions from the Floor Mixer (EU8), Bi-Room Mixer (EU9), Core Room Mixer (EU10), and Line Mixer (EU11) shall not exceed 10.26 pounds per hour.

Compliance with the ~~The~~ above limits, in addition to the limits in Condition D.1.2, **and the potential emissions from all other units at this source**, will limit source wide PM and PM10 emissions to less than 100 tons per year. ~~This usage limit is required to limit the potential to emit of PM to less than 100 tons per 12 consecutive month period. Compliance with this limit makes~~ **Therefore, compliance with these limits will satisfy 326 IAC 2-8-4 (FESOP) and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 326 IAC 2-7 (Part 70) not applicable.**

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2] [326 IAC 2-2] [326 IAC 2-8]

Pursuant to 326 IAC 6-3-2 (Process Operations Particulate Emission Limitations for Manufacturing Processes), ~~326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-8 (FESOP),~~ particulate emissions from the following facilities shall be limited by the following: **particulate emitted from the facilities listed below shall be limited as stated, based on the**

following:

Allowable PM Emissions (lbs/hr) are based on the following equation:

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

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

where E = rate of emission in pounds per hour and
 P = process weight rate in tons per hour

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions (lbs/hr)	PM Limit for PSD non-applicability (lbs/hr)	PM10 FESOP Limit (lbs/hr)
Charge Handling (EU1)	1.47	5.31	0.54	0.32
Electric Induction Melting (EU2)	1.47	5.31	0.84	0.77
Pouring/Casting (EU3)	1.47	5.31	2.52	0.59
Casting Cooling (EU4)	1.47	5.31	1.26	1.26
Shakeout (EU5)	1.47	5.31	2.88	2.02
Floor Mixer (EU8)	15.0	25.16	5.40	0.84
Bi-Room Mixer (EU9)	3.0	8.56	1.08	0.16
Core Room Mixer (EU10)	3.0	8.56	1.08	0.16
Line Mixer (EU11)	7.5	15.82	2.70	0.40
Inoculation (with Ferrosilicon)	1.47	5.31		
Total	--	--	18.27	6.49

Comment 10

The Preventive Maintenance Plan (PMP) requirement in Condition D.2.3 for the charge handling (EU1), pouring/casting (EU3), casting cooling (EU4) and shakeout (EU5) processes should not be required since the uncontrolled PM emissions for each process are less than the allowable PM emissions as designated by 326 IAC 6-3-2. In addition, none of these processes even has an associated baghouse for PM control because none is required for compliance.

The Preventive Maintenance Plan (PMP) requirement in Condition D.3.3 for the mold/core painting process (EU18) should not be required since the uncontrolled PM emissions are less than the allowable PM emissions as designated by 326 IAC 6-3-2. The real pollutant of concern with this process is VOC not PM. Also note that no control devices are used with this process because none is required for compliance.

Response 10

The Preventive Maintenance Plan requirement must be included in every applicable FESOP permit pursuant to 326 IAC 2-8-4(9). As such, operation of an emission control device is not the criteria for applicability to 326 IAC 1-6-3 (Preventive Maintenance Plans). This Preventive Maintenance Plan rule sets out the requirements for:

- (1) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),
- (2) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and
- (3) The identification and quantification of the replacement parts for the facility which the permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(2)).

It is clear from the structure of the wording in 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Only 326 IAC 1-6-3(a)(1) is limited, in that it requires identification of the personnel in charge of only the emission control equipment, and not any other facility equipment. 326 IAC 1-6-3(b) provides that "...as deemed necessary by the commissioner, any person operating a facility shall comply with the requirements of subsection (a) of this section."

A Preventive Maintenance Plan (PMP) is required for the mold/core painting process (EU18) because the source is limiting usage to this process to avoid 326 IAC 8-1-6 (General Reduction Requirements) applicability. Similarly, a PMP is required for the charge handling (EU1), pouring/casting (EU3), casting cooling (EU4) and shakeout (EU5) processes because these processes are limiting their throughput to avoid 326 IAC 2-2 (Prevention of Significant Deterioration) applicability. Maintaining the emission units in good working order is as important as maintaining the control devices in good working order to ensure compliance with the applicable emission limits. The OAQ has determined that a preventive maintenance plan is required for the emission units and their control devices in Conditions D.2 and D.3 of the permit.

Upon further review, it was noted that the Preventive Maintenance Plan failed to include the electric induction melting process (EU2). The following revision to include the electric induction melting process (EU2) is being made to Condition D.2.3.

D.2.3 Preventive 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 charge handling (EU1), **electric induction melting (EU2)**, pouring/casting (EU3), casting cooling (EU4), shakeout process (EU5), the floor mixer (EU8), the bi-room mixer (EU9), core room mixer (EU10), and the line mixer (EU11) **and their control devices**.

Comment 11

The reporting requirements in Condition D.2.4 should refer to documenting compliance with Condition D.2.1 and not D.2.2.

Response 11

The following change has been made to Condition D.2.4 (renumbered D.2.5).

D.2-4.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition ~~D.2.2~~ **D.2.1** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Comment 13

The Facility ID on the FESOP Quarterly Report (page 40 of 42) should be modified to include charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), and shakeout (EU5). The Limit Description should be modified to: "The total input of metal to each of these processes shall be limited to less than 15,768,000 pounds per 12 consecutive month period, rolled on a monthly basis."

Response 13

The following changes have been made to the FESOP Quarterly Report:

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

FESOP Quarterly Report

Source Name: Bahr Brothers Manufacturing, Inc.
Source Address: 2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address: P.O. Box 411, Marion, Indiana 46952
FESOP No.: F053-11804-00022
Facility: ~~Charge Handling (EU1)~~ **Electric induction melting (EU2)**
Parameter: **PM Metal Input**
Limit: The total input of metal to this process, shall be limited to less than 15,768,000 **not exceed 9,460,800** pounds per 12 consecutive month period, rolled on a monthly basis.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Input This Month	Metal Input Previous 11 Months	Metal Input 12 Month Total
Month 1			
Month 2			
Month 3			

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

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

~~A certification is not required for this report.~~
Attach a signed certification to complete this report.

Upon further review IDEM, OAQ has made the following changes to the FESOP (additions in bold, deletions in ~~strikeout~~):

- (1) The Table of Contents has been revised according to the proposed changes.
- (2) Subsequent conditions were renumbered if conditions were either added or deleted.
- (3) All occurrences of IDEM's contact information (Office name, address, phone number and fax number) have been updated in the permit. The Office name has been changed from Office of Air Management (OAM) to **Office of Air Quality (OAQ)**. The office phone number has been changed from 317-233-5474 to **327-233-0178** and the previous office facsimile number, 317-233-5967, has been replaced with **317-233-6865**. Any occurrences of the zip code 46204-6015 have been revised to **46204-2251**, and all addresses have been revised to include a mail code (MC) as follows:

Asbestos Section:	MC 61-52 IGCN 1003
Compliance Branch:	MC 61-53 IGCN 1003
Permits Branch:	MC 61-53 IGCN 1003

- (4) The FESOP cover page has been placed on IDEM letterhead.
- (5) The signature block on the first page of the Part 70 Operating permit has been updated to include the new Permits Branch Chief as the person signing the final permit.

Operation Permit No.: F053-11804-00022	
Issued by: Paul Dubonetzky, Branch Chief Office of Air Management Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

- (6) The permit reviewer name has been changed as follows:

Permit Reviewer:	Nishat Hydar/EVP Julia Handley/EVP
Permit Reviewer:	NH/EVP JH/EVP
- (7) Upon further review, IDEM has determined that it is no longer necessary to identify the Responsible Official (R.O.) and Authorized Individual (A.I.) in permits. Therefore, condition A.1 has been revised.
- (8) The emission units listed in condition A.2 have been revised to incorporate the addition and removal of equipment at the source as documented in Exemption No. 053-18626-00022, issued June 7, 2004. The emission unit descriptions included in A.2 have been updated to include construction date information. Also, the inoculation (with Ferrosilicon) emission activity formerly found under A.3(w) has been moved to A.2(q).
- (9) Section B - Permit No Defense has been deleted. The statements of this condition have been moved to the cover page.

- (10) Section B - Permit Term has been clarified to state that amendments, revisions, or modifications do not extend the expiration date of the permit. The expiration date will always be 5 years from the issuance date of the original permit. The expiration date will now be typed in the signature box as well.
- (11) Section B - Terms of Conditions has been added.
- (12) Section B - Duty to Supplement and Provide Information has been renamed Duty to Provide Information. The duty to supplement an application is not an ongoing requirement after the permit is issued; therefore, the condition has been revised accordingly. Also the condition has been revised to provide greater consistency with the language in the rule.
- (13) Section B - Compliance with Permit Conditions has been removed from the permit.
- (14) Section B - Certification paragraph (b) has been modified to clarify when a certification is needed.
- (15) Section B - Annual Compliance Certification has been revised to clarify that the initial certification is from the date of issuance until December 31 and provide greater consistency with the language in the rule. In an IDEM Nonrule Policy Document, a table is given as an example for how sources can submit annual compliance certifications. So the condition has also been revised to remove "in letter form" so that it does not contradict the guidance.
- (16) Section B - Preventive Maintenance Plan has been revised because IDEM has determined that the Permittee is not required to keep records of all preventive maintenance. However, where the Permittee seeks to demonstrate that an emergency has occurred, the Permittee must provide, upon request, records of preventive maintenance in order to establish that the lack of proper maintenance did not cause or contribute to the deviation.
- (17) Section B - Emergency Provisions has been revised because IDEM has determined that the Permittee is not required to keep records of all preventive maintenance. However, where the Permittee seeks to demonstrate that an emergency has occurred, the Permittee must provide, upon request, records of preventive maintenance in order to establish that the lack of proper maintenance did not cause or contribute to the deviation. Also the condition has been revised to include a reference to the Emergency Occurrence Report Form. The emergency form is for emergencies only, and is no longer an emergency and deviation form. All deviations will now be reported on the Quarterly Deviation and Compliance Monitoring Report.
- (18) Section B - Deviations from Permit Requirements and Conditions has been revised to eliminate the requirement for sources to report deviations in 10 days. Sources are now required to report deviations quarterly on the Quarterly Deviation and Compliance Monitoring Report. References to the emergency report have been removed since deviations will no longer be reported on that form. In addition, there is no longer a 5% exception for reporting deviations, since the previous 10 day notification requirement has been changed to a less burdensome quarterly report.
- (19) Section B - Prior Permits Superseded has been added.
- (20) Section B - Permit Renewal has been updated for clarity.
- (21) Section B – Inspection and Entry has been revised to include additional rule cites and clearly reference applicable regulations.
- (22) Section B - Annual Fee Payment has been updated to reflect the correct name of the section.

- (23) Section B - Credible Evidence has been added. Indiana has been required to incorporate credible evidence provisions into state rules consistent with the SIP call published by U.S. EPA in 1997 (62 FR 8314). Indiana has incorporated the credible evidence provision in 326 IAC 1-1-6. This rule is effective March 16, 2005; therefore, the condition reflecting this rule has been added to the permit.
- (24) Section C - Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour has been added to the FESOP.
- (25) Section C- Overall source limit has been revised to clarify the applicability of 326 IAC 2-2 (PSD).
- (26) Section C - Open Burning, Incineration, and Fugitive Dust Emissions have been revised to remove all statements that these conditions are not federally enforceable. All conditions found in FESOP Permits are federally enforceable.
- (27) Section C - Operation of Equipment has been deleted because this condition is a duplicate of section D conditions with the same requirement.
- (28) Section C - Asbestos Abatement Projects has been revised to provide a more accurate rule cite.
- (29) Section C - Compliance Monitoring has been revised to clarify that the permit will specify those instances when compliance monitoring is not required to commence within a 90 day period of permit issuance. Otherwise, compliance monitoring will be required to start within the 90 day time-frame stated in the condition.
- (30) Section C - Monitoring Methods has been revised to provide additional appropriate rule cites.
- (31) Section C – Pressure Gauge has been renamed Instrument Specifications and has been revised to clarify the requirements of this condition. IDEM realizes that these specifications can only be practically applied to analog units, and has therefore clarified the condition to state that the condition only applies to analog units. Upon further review, IDEM has also determined that the accuracy of the instruments is not nearly as important as whether the instrument has a range that is appropriate for the normal expected reading of the parameter. Therefore, the accuracy requirements have been removed from the condition. The Section D conditions that refer to this condition have been revised to reflect the new condition title.
- (32) Section C - Compliance Monitoring Plan - Failure to Take Response Steps has been renamed Response to Excursions or Exceedances. IDEM has reconsidered the requirement to develop and follow a Compliance Monitoring Plan. The Permittee will still be required to take reasonable response steps when a compliance monitoring parameter is determined to be out of range or abnormal. Replacing the requirement to develop and follow a Compliance Monitoring Plan with a requirement to take reasonable response steps will ensure that the control equipment is returned to proper operation as soon as practicable, while still allowing the Permittee the flexibility to respond to situations that were not anticipated. The Section D conditions that refer to this condition have been revised to reflect the new condition title.
- (33) The Section C - Recordkeeping Requirements have been revised to include NSR Reform provisions for major PSD sources and remove specific record keeping requirements in favor of more general requirements to reduce redundancy with Section D conditions.
- (34) Section C - Reporting Requirements has been revised to remove references to the Semi-Annual Compliance Monitoring Report in favor of the Quarterly Deviation and Compliance Monitoring Report.

- (35) Upon further review, IDEM has determined that it is the Permittee's responsibility to include routine control device inspection requirements in the applicable preventive maintenance plan. Since the Permittee is in the best position to determine the appropriate frequency of control device inspections and the details regarding which components of the control device should be inspected, the conditions requiring control device inspections have been removed from the permit. In addition, the requirement to keep records of the inspections has been removed.
- (36) The emission unit descriptions listed in the facility description box under Permit section D.1 have been revised.
- (37) Condition D.1.3 - Preventative Maintenance Plan has been revised to clarify the requirements of the rule.
- (38) Condition D.1.4 - Particulate Matter (PM) has been revised to incorporate the thermal sand reclaimer (EU19) added to the source under Exemption No. 053-18626-00022, issued June 7, 2004.
- (39) Condition D.1.5 - Visible Emission Notations and Condition D.1.6 - Parametric Monitoring have been revised to clarify that monitoring is required daily. These conditions have also been revised to reference Section C - Response to Excursions or Exceedances (previously named Section C - Compliance Monitoring Plan - Failure to Take Response Steps). These conditions have also been revised to incorporate the thermal sand reclaimer (EU19) added to the source under Exemption No. 053-18626-00022, issued June 7, 2004.
- (40) Condition D.1.7 - Broken or Failed Bag Detection has been revised for clarification and to incorporate changes to Section C - Response to Excursions or Exceedances (previously named Section C - Compliance Monitoring Plan - Failure to Take Response Steps).
- (41) The emission unit descriptions listed in the facility description box under Permit section D.2 have been revised.
- (42) Condition D.2.4 - Record Keeping Requirements has been added to the permit. The Permittee is required to maintain records of the metal input to the charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), shakeout (EU5) processes, in order to document compliance with the PSD minor limit found in Condition D.2.1.
- (43) The emission unit descriptions listed in the facility description box under Permit section D.3 have been revised.
- (44) Condition D.3.1 - Volatile Organic Compounds (VOCs) has been revised for clarification.
- (45) Condition D.3.2 has been revised. EU17 has no potential PM emissions and, therefore, is not subject to 326 IAC 6-3-2. Based on information submitted by the source, EU18 qualifies as a "surface coating" operation pursuant to 326 IAC 6-3-1.5(5) because it involves the application of a coating that serves a functional purpose, to obtain a good finish on the metal castings. Therefore, EU18 is subject to the 326 IAC 6-3-2(d) and Condition D.2.3 has been revised accordingly.
- (46) Condition D.3.6 - Particulate Matter (PM) Control has been clarified.
- (47) Condition D.3.7 - Record Keeping Requirements has been revised to clarify the record keeping requirements associated with Condition D.3.1.
- (48) The Inoculation process and any applicable requirements have been relocated to Section D.2. Therefore, Section D.4 has been removed from the permit.

- (49) IDEM and representatives of the foundry sector within Indiana have been made aware of certain previously unknown or unidentified carbon monoxide (CO) emissions generated by the pouring, cooling, and shakeout (PCS) operations common to the foundry sector. Each foundry must evaluate its Potential to Emit for CO and assess whether the Potential to Emit is consistent with its current level of operating permit and whether the requirements of PSD rules may apply as a result of the CO potential to emit. This evaluation may use the default emission factor of 6.0 lbs/ton of metal poured for the combined pouring, cooling and shakeout processes, or the results of facility specific CO testing data.

The source's emission calculations have been revised to incorporate the changes to CO emission calculations mentioned above and can be found on Pages 2 and 3 of 10 of the attached Appendix A to the TSD Addendum. The potential to emit of CO based on the default emission factor of 6.0 lbs/ton of metal poured for the combined pouring, cooling and shakeout processes and unlimited potential emissions (using maximum design capacity and 8,760 hrs per year) results in potential CO emissions from the PCS operations of 38.63 tons per year. Source wide potential CO emissions are 40.36 tons per year. Therefore, since source wide potential CO emissions are less than 100 tons per year, the source is in compliance with 326 IAC 2-8 and the requirements of 326 IAC 2-2 (PSD) do not apply.

- (50) The emission calculations have been revised to incorporate the addition and removal of equipment at the source as documented in Exemption No. 053-18626-00022, issued June 7, 2004, including the addition of thermal sand reclaimer (EU19) and removal of two (2) "small" electric induction melting furnaces each rated at 1,200 pounds per hour.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary ductile iron and steel foundry.

Authorized individual:	Jeff Jackson
Source Address:	2545 Lincoln Boulevard, Marion, Indiana 46952
Mailing Address:	P.O. Box 411, Marion, Indiana 46952
General Source Phone Number:	(765) 664-6235
SIC Code:	3321, 3325
Source County Location Status:	Grant
County Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD or Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

- (a) One (1) natural gas-fired thermal sand reclaimer, identified as EU6, **constructed in 1993**, with a maximum throughput of 1.0 tons sand per hour and a heat input rate of 1.0 million (MM) British thermal units (Btu) per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 1;
- (b) One (1) mechanical sand reclaimer, identified as EU7, **constructed in 1993**, with a maximum throughput of 1.5 tons sand per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 2;
- (c) One (1) steel shot pangborn table blast machine # 1, identified as EU13, **constructed in 1979**, with a maximum process rate of 0.88 tons **of metal** per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 3;

- (d) One (1) steel shot pangborn table machine # 2, identified as EU14, **constructed in 1985**, with a maximum process rate of 0.18 tons **of metal** per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4;
- (e) One (1) steel shot wheelabrator tumble blast machine # 1, identified as EU15, **constructed in 1985**, with a maximum process rate of 0.18 tons **of metal** per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4;
- (f) One (1) electric induction melting process, identified as EU2, **constructed in 1978**, with a maximum ~~met~~ **heat input** capacity of 1.47 MMBtu/hr, consisting of two (2) "large" electric induction melting furnaces each rated at 1,750 pounds **of metal** per hour ~~and two (2) "small" electric induction melting furnaces each rated at 1,200 pounds per hour;~~
- (g) One (1) charge handling process, identified as EU1, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per hour;
- (h) One (1) pouring/casting process, identified as EU3, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per hour;
- (i) One (1) casting cooling process, identified as EU4, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per hour;
- (j) One (1) shakeout process, identified as EU5, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per year;
- (k) One (1) floor mixer, identified as EU8, **constructed in 1999**, with a maximum throughput of 15.0 tons **of sand** per hour;
- (l) One (1) bi-room mixer, identified as EU9, **constructed in 1991**, with a maximum throughput of 3.0 tons **of sand** per hour;
- (m) One (1) core room mixer, identified as EU10, **constructed in 1991**, with a maximum throughput of 3.0 tons **of sand** per hour;
- (n) One (1) line mixer, identified as EU11, **constructed in 1981**, with a maximum throughput of 7.5 tons **of sand** per hour;
- (o) One (1) mold release spray, identified as EU17, **constructed in 1970**, utilizing a hand brushing application system, coating a maximum of 0.45 metal patterns per hour; ~~and~~
- (p) One (1) mold/core painting process, identified as EU18, **constructed in 1980**, utilizing an air atomization spray application system, coating a maximum of 10 molds per hour-;
- (q) **Inoculation (with Ferrosilicon); and**
- (r) **One (1) natural gas-fired thermal sand reclaimer, identified as EU19, constructed in 2004, with a maximum throughput of 0.25 tons of sand per hour and a heat rate of 0.25 MMBtu/hr, utilizing one (1) baghouse for particulate matter control.**

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

This stationary source also includes the following insignificant activities:

~~(w)~~ Inoculation (with Ferrosilicon);

~~(xw)~~ Outdoor Sand Storage Silos (2) with "Aqua Filter";

~~(yx)~~ Indoor Sand Storage Silos and Tanks (3) with Bin Top Filters; and

~~(zy)~~ Miscellaneous Woodworking Activities in Pattern Shop (Sawing, Cutting, Routing, Planing, etc.).

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)]~~

~~This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.~~

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)]~~

- ~~(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 Management
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, OAM, within a reasonable time, any information that IDEM, OAM, 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).~~

- ~~(c) — Upon request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, then the Permittee must furnish record directly to the 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, OAM 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, except those specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act and 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.~~

~~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 a 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, on the attached Certification Form, with each submittal.~~

~~(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 certification 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 July 1 of each year to:~~

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

~~(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, OAM, 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 based on continuous or intermittent data;~~
- ~~(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, OAM, 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 its 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 Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206 6015~~

~~The PMP and the PMP extension notification do 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, OAM, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, 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).~~

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, OAM, 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 Management, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967~~

~~Failure to notify IDEM, OAM, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]~~

- ~~(5) For each emergency lasting one (1) hour or more, the Permittee submitted notice either in writing or facsimile, of the emergency to:~~

~~Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
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) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.~~
- ~~(e) IDEM, OAM, 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, OAM, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.~~
- ~~(g) Operations may continue during an emergency only if the following conditions are met:~~
- ~~(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.~~
- ~~(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:~~

- ~~(A) — The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and~~
- ~~(B) — Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.~~

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

~~B.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 Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015~~

~~within ten (10) calendar days from the date of the discovery of the deviation. The failure to perform the monitoring or record the information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.~~

- ~~(b) — A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - ~~(1) — An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or~~
 - ~~(2) — An emergency as defined in 326 IAC 2-7-1(12); or~~
 - ~~(3) — Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.~~~~

~~A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.~~

- ~~(c) — Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~
- ~~(d) — Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.~~

~~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, OAM 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, OAM, 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, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, 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, OAM 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 Management
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, OAM, on or before the date it is due.~~

~~(2) If IDEM, OAM 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, OAM 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, OAM, 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 Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015~~

~~Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1) only if a certification is required by the terms of the applicable rule.~~

~~(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]~~

~~(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 Management
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, OAM, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) — The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

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

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) — 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).
- (d) — 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, OAM 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 applicable provisions of 326 IAC 2-8-11.1.

~~B.21 Inspection and Entry [326 IAC 2-8-5(a)(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, OAM, 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. [326 IAC 2-8-5(a)(4)]~~

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

~~The application 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).~~

- ~~(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]~~

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

- ~~(a) The Permittee shall pay annual fees to IDEM, OAM, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM 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 317-233-0425 (ask for OAM, Technical Support and Modeling 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 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 from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.~~

(b) ~~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.~~

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

C.2 Opacity [326 IAC 5-1]

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

(a) ~~Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.~~

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

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

~~The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.~~

C.4 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. 326 IAC 9-1-2 is not federally enforceable.~~

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

~~The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.~~

~~C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]~~

~~Except as otherwise provided 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.7 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.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]~~

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

~~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)]

G.9 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, OAM.~~

~~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 Management
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, OAM 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, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.~~

Compliance Requirements [326 IAC 2-1.1-11]

G.10 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. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.~~

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

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

~~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 Data Section, Office of Air Management
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).~~

~~Compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.~~

C.12 ~~Maintenance of Emission Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]~~

~~(a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.~~

~~(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.~~

C.13 ~~Monitoring Methods [326 IAC 3]~~

~~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, or other approved methods as specified in this permit.~~

C.14 ~~Pressure Gauge Specifications~~

~~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 (" 2%) of full scale reading.~~

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

~~C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]~~

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

~~(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.~~

~~(b) These ERPs shall be submitted for approval to:~~

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

~~within ninety (90) days from the date of issuance of this permit.~~

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

~~(c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.~~

~~(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.~~

~~(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.~~

~~(f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]~~

~~C.16 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 by the date provided in 40 CFR 68.10(a); 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~~

~~(c) A verification to IDEM, OAM, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.~~

~~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.17 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]~~

~~(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:~~

~~(1) This condition;~~

~~(2) The Compliance Determination Requirements in Section D of this permit;~~

~~(3) The Compliance Monitoring Requirements in Section D of this permit;~~

~~(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and~~

~~(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:~~

~~(A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and~~

~~(B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.~~

~~(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. Failure to take reasonable response steps shall constitute a violation of the permit.~~

~~(c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:~~

~~(1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that 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; or~~

~~(3) An automatic measurement was taken when the process was not operating; or~~

~~(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.~~

- (d) ~~Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.~~
- (e) ~~All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.~~
- (f) ~~If for reasons beyond its control, the Permittee fails to perform the monitoring and record keeping as required by Section D, then the reasons for this must be recorded.~~
 - (1) ~~At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent of the operating time in any quarter.~~
 - (2) ~~Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.~~

~~C.18 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 corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, 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 corrective 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, OAM that retesting in one hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline.~~
- (c) ~~IDEM, OAM reserves the authority to take any actions allowed under law in response to noncompliant stack tests.~~

~~The documents submitted pursuant to this condition do not 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.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]~~

- (a) ~~Records of all required monitoring data 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) ~~Records of required monitoring information shall include, where applicable:~~
 - (1) ~~The date, place, and time of sampling or measurements;~~

- ~~(2) The dates analyses were performed;~~
 - ~~(3) The company or entity performing the analyses;~~
 - ~~(4) The analytic techniques or methods used;~~
 - ~~(5) The results of such analyses; and~~
 - ~~(6) The operating conditions existing at the time of sampling or measurement.~~
- ~~(c) Support information shall include, where applicable:~~
- ~~(1) Copies of all reports required by this permit;~~
 - ~~(2) All original strip chart recordings for continuous monitoring instrumentation;~~
 - ~~(3) All calibration and maintenance records;~~
 - ~~(4) Records of preventive maintenance.~~
- ~~(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.~~

~~C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]~~

- ~~(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The 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 Management
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, OAM, on or before the date it is due.~~
- ~~(d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~
- ~~(e) All instances of deviations as described in Section B Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~
- ~~(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.~~

- (g) ~~The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.~~

Stratospheric Ozone Protection

C.21 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 B GENERAL CONDITIONS

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

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

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

- (a) This permit, F053-11804-00022, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

- (a) 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. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. 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 no later than July 1 of each year to:

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

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

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

- (a) 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251**

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

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

**100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251**

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

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

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

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

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

- (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

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

- (a) All terms and conditions of permits established prior to F053-11804-00022 and issued pursuant to permitting programs approved into the state implementation plan have been either:

- (1) incorporated as originally stated,
- (2) revised, or
- (3) deleted

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

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

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

B.15 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 Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

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

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

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

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

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

- (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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

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

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

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

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

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

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

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

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

- (b) **Emission Trades [326 IAC 2-8-15(c)]**
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) **Alternative Operating Scenarios [326 IAC 2-8-15(d)]**
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) **Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.**

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

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

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

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

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

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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 make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.**
- (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) The potential to emit 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 make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.**

- (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]

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or**
- (2) If there is a change in the following:**
 - (A) Asbestos removal or demolition start date;**
 - (B) Removal or demolition contractor; or**
 - (C) Waste disposal site.**
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).**
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).**

All required notifications shall be submitted to:

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

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

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

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

C.9 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

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

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

(e) The Permittee shall maintain the following records:

- (1) monitoring data;**
- (2) monitor performance data, if applicable; and**
- (3) corrective actions taken.**

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test
[326 IAC 2-8-4][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 twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.**
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.**

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

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

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

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.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

Emissions Unit Description:

- (a) One (1) natural gas-fired thermal sand reclaimer, identified as EU6, **constructed in 1993**, with a maximum throughput of 1.0 tons sand per hour and a heat input rate of 1.0 million (MM) British thermal units (Btu) per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 1;
- (b) One (1) mechanical sand reclaimer, identified as EU7, **constructed in 1993**, with a maximum throughput of 1.5 tons sand per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 2;
- (c) One (1) steel shot pangborn table blast machine # 1, identified as EU13, **constructed in 1979**, with a maximum process rate of 0.88 tons **of metal** per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 3;
- (d) One (1) steel shot pangborn table machine # 2, identified as EU14, **constructed in 1985**, with a maximum process rate of 0.18 tons **of metal** per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4; **and**
- (e) One (1) steel shot wheelabrator tumble blast machine # 1, identified as EU15, **constructed in 1985**, with a maximum process rate of 0.18 tons **of metal** per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4; **and**
- (f) **One (1) natural gas-fired thermal sand reclaimer, identified as EU19, constructed in 2004, with a maximum throughput of 0.25 tons of sand per hour and a heat rate of 0.25 MMBtu/hr, utilizing one (1) baghouse for particulate matter control.**

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

D.1.23 Preventive 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 the mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) and ~~its~~ **their control device devices.**

D.1.34 Particulate Matter (PM)

In order to comply with Conditions D.1.1 and D.1.2, the ~~The~~ baghouses for PM control shall be in operation at all times that the mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), thermal sand reclaimer (EU6), ~~and~~ wheelabrator tumble blast machine #1 (EU15), **and thermal sand reclaimer (EU19)**, are in operation.

D.1.45 Visible Emissions Notations

- (a) ~~Daily visible~~ **Visible** emission notations of the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), ~~and~~ wheelabrator tumble blast machine (EU15), **and thermal sand reclaimer (EU19)**, stack exhaust shall be performed **daily** 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.~~ **If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.**

D.1.56 Parametric Monitoring

The Permittee shall record the ~~total static~~ pressure drop across the baghouses used in conjunction with the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), ~~and~~ the wheelabrator tumble blast machine #1 (EU15), **and thermal sand reclaimer (EU19)**, at least once ~~per operating day~~ **daily** when the thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14), ~~and~~ the wheelabrator tumble blast machine #1 (EU15), **and thermal sand reclaimer (EU19)**, 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 baghouses shall be maintained within the range of 1.0 and 9.0 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.~~ **When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.**

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

D.1.67 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) ~~The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) 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) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~
- (b) ~~For 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).~~
- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line). 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).**

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- ~~(f)~~(a) One (1) electric induction melting process, identified as EU2, **constructed in 1978**, with a maximum ~~melt~~ **heat input** capacity of 1.47 MMBtu/hr, consisting of two (2) "large" electric induction melting furnaces each rated at 1,750 pounds **of metal** per hour ~~and two (2) "small" electric induction melting furnaces each rated at 1,200 pounds per hour;~~
- ~~(g)~~(b) One (1) charge handling process, identified as EU1, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per hour;
- ~~(h)~~(c) One (1) pouring/casting process, identified as EU3, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per hour;
- ~~(i)~~(d) One (1) casting cooling process, identified as EU4, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per hour;
- ~~(j)~~(e) One (1) shakeout process, identified as EU5, **constructed in 1970**, with a maximum throughput of 1.47 tons **of metal** per year;
- ~~(k)~~(f) One (1) floor mixer, identified as EU8, **constructed in 1999**, with a maximum throughput of 15.0 tons **of sand** per hour;
- ~~(l)~~(g) One (1) bi-room mixer, identified as EU9, **constructed in 1991**, with a maximum throughput of 3.0 tons **of sand** per hour;
- ~~(m)~~(h) One (1) core room mixer, identified as EU10, **constructed in 1991**, with a maximum throughput of 3.0 tons **of sand** per hour; ~~and~~
- ~~(n)~~(i) One (1) line mixer, identified as EU11, **constructed in 1981**, with a maximum throughput of 7.5 tons **of sand** per hour; **and**
- (j) **Inoculation (with Ferrosilicon).**

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

D.2.4 Record Keeping Requirements

To document compliance with condition D.2.1, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the annual metal input limit to the charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), shakeout (EU5) established in conditions condition D.2.1.

- (1) Calendar dates covered in the compliance determination period;
- (2) Metal Input to the charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4), shakeout (EU5) processes per month since the last compliance determination period; and

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- ~~(a)~~ (a) One (1) mold release spray, identified as EU17, **constructed in 1970**, utilizing a hand brushing application system, coating a maximum of 0.45 metal patterns per hour; and
- ~~(b)~~ (b) One (1) mold/core painting process, identified as EU18, **constructed in 1980**, utilizing an air atomization spray application system, coating a maximum of 10 molds per hour.

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

D.3.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

The usage of VOC delivered to the applicators, including clean up solvents, in the one (1) mold/core painting process, **(EU18)**, shall be limited to less than 25 tons per 12 consecutive month period, ~~rolled on a monthly basis~~ **with compliance determined at the end of each month**. ~~Therefore, the Best Available Control Technology (BACT) requirements in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply~~ **are not applicable. Compliance with this limit will render the requirements of 326 IAC 8-1-6 not applicable to this facility.**

D.3.2 Particulate Matter (PM) [326 IAC 6-3-2]

The particulate matter (PM) from the mold release spray (EU17) and the mold/core painting process (EU18) shall be limited by the following:

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

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

Pursuant to 326 IAC 6-3-2(d), particulate from the mold/core painting process, (EU18), shall be controlled by a dry particulate filter, waterwash, or equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.3.6 Particulate Matter (PM) Control

In order to comply with condition D.3.2 the dry particulate filter, waterwash, or equivalent control device for PM control shall be in operation at all times when mold/core painting process, (EU18), is in operation.

D.3.68 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.3.1.

- (5) The weight of VOCs ~~emitted~~ **used** for each compliance period.

SECTION D.4 — EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) ~~One (1) natural gas-fired normalize heat treat furnace, identified as EU12, with a maximum throughput of 0.44 tons per hour and a heat input rate of 3.04 MMBtu per hour;~~
- (b) ~~Two (2) natural gas-fired ladle preheaters, identified as EU16, each with a maximum heat input rate of 0.33 MMBtu per hour;~~
- (c) ~~Inoculation (with Ferrosilicon);~~
- (d) ~~Outdoor Sand Storage Silos (2) with "Aqua Filter";~~
- (e) ~~Indoor Sand Storage Silos and Tanks (3) with Bin Top Filters; and~~
- (f) ~~Miscellaneous Woodworking Activities in Pattern Shop (Sawing, Cutting, Routing, Planing, etc.);~~

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

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

D.4.1 Particulate Matter (PM) [326 IAC 6-3-2]

The particulate matter (PM) from inoculation shall be limited by the following:

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

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

$$E = 4.10 * (1.47)^{0.67} = 5.31 \text{ lbs PM/hour}$$

Based on the above equation, particulate matter emissions from inoculation shall be limited to 5.31 pounds per hour.

Appendix A: Emission Calculations

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
CP: 053-11804
Plt ID: 053-00022
Reviewer: Julia Handley / EVP

Uncontrolled Potential Emissions (tons/year)

Emissions Generating Activity

Pollutant	Foundry Processes EU1-EU5, Inoculation	Mixers EU8-EU11	Sand Reclaimer & Cleaning EU6, EU7, EU13-EU15, EU19	Mold/Core Painting EU17, EU18	Natural Gas Combustion	TOTAL
PM	92.29	449.39	135.69	11.41	0.04	688.82
PM10	44.66	67.41	15.74	11.41	0.16	139.38
SO2	0.13	0.00	0.00	0.00	0.01	0.14
NOx	0.06	0.00	0.00	0.00	2.17	2.23
VOC	8.65	20.21	0.00	28.31	0.12	57.30
CO	38.63	0.00	0.00	0.00	1.82	40.45
total HAPs	2.91	0.89	0.00	0.00	0.04	3.84
worst case single HAP	(Benzene) 2.02	(Xylene) 0.54	0.00	0.00	0.04	2.02

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

Controlled Potential Emissions (tons/year)

Emissions Generating Activity

Pollutant	Foundry Processes EU1-EU5, Inoculation	Mixers EU8-EU11	Sand Reclaimer & Cleaning EU6, EU7, EU13-EU15, EU19	Mold/Core Painting EU17, EU18	Natural Gas Combustion	TOTAL
PM	33.83	44.94	6.78	11.41	0.04	97.00
PM10	16.37	6.74	0.79	11.41	0.16	35.47
SO2	0.05	0.00	0.00	0.00	0.01	0.06
NOx	0.02	0.00	0.00	0.00	2.17	2.19
VOC	3.17	20.21	0.00	25.29	0.12	48.79
CO	14.19	0.00	0.00	0.00	1.82	16.02
total HAPs	2.91	0.89	0.00	0.00	0.00	3.80
worst case single HAP	(Benzene) 2.02	(Xylene) 0.54	0.00	0.00	0.00	2.02

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

Company Name: Bahr Brothers Manufacturing, Inc.
 Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
 FESOP: 053-11804-00022
 Reviewer: Julia Handley / EVP

SCC# 3-04-003-10

Inoculation

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1080	2000	0.54			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/tons metal charged
	4.00	3.2	--	--	0.005	--
Potential Emissions lbs/hr	5.90	4.72	--	--	0.01	--
Potential Emissions lbs/day	141.60	113.28	--	--	0.18	--
Potential Emissions tons/year	25.84	20.67	--	--	0.03	--
Limited Emissions tons/yr	9.46	7.57	--	--	0.01	--

SCC# 3-04-003-15

Charge Handling (EU1)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1080	2000	0.54			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/tons metal charged
	0.6	0.36	--	--	--	--
Potential Emissions lbs/hr	0.89	0.53	--	--	--	--
Potential Emissions lbs/day	21.24	12.74	--	--	--	--
Potential Emissions tons/year	3.88	2.33	--	--	--	--
Limited Emissions tons/yr	1.42	0.85	--	--	--	--

SCC# 3-04-003-03

Electric Induction Melting (EU2)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1080	2000	0.54			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	0.9	0.86	--	--	--	--
Potential Emissions lbs/hr	1.33	1.27	--	--	--	--
Potential Emissions lbs/day	31.86	30.44	--	--	--	--
Potential Emissions tons/year	5.81	5.56	--	--	--	--
Limited Emissions tons/yr	2.13	2.03	--	--	--	--

SCC# 3-04-003-20

Pouring/Casting (EU3)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2940	2000	1.47			
Limited Throughput (LBS/HR)	1080	2000	0.54			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO*** lbs/tons metal charged
	4.2	2.06	0.02	0.01	0.14	6.00
Potential Emissions lbs/hr	6.17	3.03	0.03	0.01	0.21	8.82
Potential Emissions lbs/day	148.18	72.68	0.71	0.35	4.94	211.68
Potential Emissions tons/year	27.04	13.26	0.13	0.06	0.90	38.63
Limited Emissions tons/yr	9.94	4.87	0.05	0.02	0.33	14.19

Casting Cooling (EU4)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1080	2000	0.54			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/tons metal charged
	1.4	1.4	--	--	--	***
Potential Emissions lbs/hr	2.07	2.07	--	--	--	***
Potential Emissions lbs/day	49.56	49.56	--	--	--	***
Potential Emissions tons/year	9.04	9.04	--	--	--	***
Limited Emissions tons/yr	3.31	3.31	--	--	--	***

SCC# 3-04-003-31

Casting Shakeout (EU5)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1080	2000	0.54			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/tons metal charged
	3.2	2.24	--	--	1.2	***
Potential Emissions lbs/hr	4.72	3.30	--	--	1.77	***
Potential Emissions lbs/day	113.28	79.30	--	--	42.48	***
Potential Emissions tons/year	20.67	14.47	--	--	7.75	***
Limited Emissions tons/yr	7.57	5.30	--	--	2.84	***

Total Potential Emissions (tons/yr)	92.29	44.66	0.13	0.06	8.65	38.63
Limited Emissions (tons/yr)	33.83	16.37	0.05	0.02	3.17	14.19

Note: Emission factors are from FIRE version 6.24

Note: This source is a secondary metal production plant (1 of 28 categories) and therefore is subject to PSD applicability. The source will limit its throughput to 0.9 tons/year, which will limit controlled PM emissions to less than 100 tons/year, thus making the source a minor PSD source.

*** CO emission factor for pouring/cooling includes emissions from shakeout. CO emission factors based on best available information for CO emissions from pouring, cooling and shakeout operations combined.

Company Name: Bahr Brothers Manufacturing, Inc.
 Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
 FESOP: 053-11804-0022
 Reviewer: Julia Handley / EVP

SCC# 3-04-003-50

Sand Grinding/Handling, Type of control: Aqua Filter

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	30000	2000	15			
Floor Mixer (EU8)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	54.00	8.10	--	--	--	--
Potential Emissions lbs/day	1296.00	194.40	--	--	--	--
Potential Emissions tons/year	236.52	35.48	--	--	--	--
Controlled Emissions tons/year	23.65	3.55				

SCC# 3-04-003-50

Sand Grinding/Handling, Type of control: Aqua Filter

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	6000	2000	3			
Bi-Room Mixer (EU9)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	10.80	1.62	--	--	--	--
Potential Emissions lbs/day	259.20	38.88	--	--	--	--
Potential Emissions tons/year	47.30	7.10	--	--	--	--
Controlled Emissions tons/year	4.73	0.71				

SCC# 3-04-003-50

Sand Grinding/Handling, Type of control: Aqua Filter

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	6000	2000	3			
Core Room Mixer (EU10)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	10.80	1.62	--	--	--	--
Potential Emissions lbs/day	259.20	38.88	--	--	--	--
Potential Emissions tons/year	47.30	7.10	--	--	--	--
Controlled Emissions tons/year	4.73	0.71				

SCC# 3-04-003-50

Sand Grinding/Handling, Type of control: Aqua Filter

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	15000	2000	7.5			
Line Mixer (EU11)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	27.00	4.05	--	--	--	--
Potential Emissions lbs/day	648.00	97.20	--	--	--	--
Potential Emissions tons/year	118.26	17.74	--	--	--	--
Controlled Emissions tons/year	11.83	1.77				
Total uncontrolled emissions	449.39	67.41	--	--	--	--
Total controlled emissions	44.94	6.74				

Note: Emission factor are from FIRE version 6.22.

*Source claims control efficiency of 90% for sand mixers due to numerous reasons, one of which is the use of an "aqua filter" water tank that removes fines from 100% of the new virgin sand coming into the facility so that there are very little fine-grained particles left by the time this new sand reaches the sand mixers

**Utilizes a baghouse with 95% control efficiency for PM/PM10 control for mechanical and thermal sand reclamation units

Appendix A: Cleaning/Finishing Calculations

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Reviewer: Julia Handley / EVP

SCC# 3-04-003-40						
Grinding/Cleaning, Type of control: Baghouse						
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Iron/Steel		1760	2000	0.88		
Pangborn Table Blast Machine #1 (EU13)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	17	1.7	--	--	--	--
Potential Emissions lbs/hr	14.96	1.50	--	--	--	--
Potential Emissions lbs/day	359.04	35.90	--	--	--	--
Potential Emissions tons/year	65.52	6.55	--	--	--	--
Controlled Emissions tons/year	3.28	0.33				
SCC# 3-04-003-40						
Grinding/Cleaning, Type of control: Baghouse						
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Iron/Steel		360	2000	0.18		
Pangborn Table Blast Machine #2 (EU14)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	17	1.7	--	--	--	--
Potential Emissions lbs/hr	3.06	0.31	--	--	--	--
Potential Emissions lbs/day	73.44	7.34	--	--	--	--
Potential Emissions tons/year	13.40	1.34	--	--	--	--
Controlled Emissions tons/year	0.67	0.07				
SCC# 3-04-003-40						
Grinding/Cleaning, Type of control: Baghouse						
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Iron/Steel		360	2000	0.18		
Wheelabrator Tumble Blast Machine #1 (EU15)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	17	1.7	--	--	--	--
Potential Emissions lbs/hr	3.06	0.31	--	--	--	--
Potential Emissions lbs/day	73.44	7.34	--	--	--	--
Potential Emissions tons/year	13.40	1.34	--	--	--	--
Controlled Emissions tons/year	0.67	0.07				
SCC# 3-04-003-50						
Sand Grinding/Handling, Type of control: Baghouse						
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Sand		2000	2000	1		
Thermal Sand Reclaimer (EU6)**						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	3.60	0.54	--	--	--	--
Potential Emissions lbs/day	86.40	12.96	--	--	--	--
Potential Emissions tons/year	15.77	2.37	--	--	--	--

Controlled Emissions tons/year	0.79	0.12				
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SCC# 3-04-003-50		Page 6 of 12 TSD Addendum App A				
Sand Grinding/Handling, Type of control: Baghouse						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	3000	2000	1.5			
Mech. Sand Reclaim (EU7)**						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	5.40	0.81	--	--	--	--
Potential Emissions lbs/day	129.60	19.44	--	--	--	--
Potential Emissions tons/year	23.65	3.55	--	--	--	--
Controlled Emissions tons/year	1.18	0.18				
SCC# 3-04-003-50						
Sand Grinding/Handling, Type of control: Baghouse						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	500	2000	0.25			
Thermal Sand Reclaimer (EU19)**						
approved under Exemption No. 053-18626-00022 Issued June 7, 2004	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	0.90	0.14	--	--	--	--
Potential Emissions lbs/day	21.60	3.24	--	--	--	--
Potential Emissions tons/year	3.94	0.59	--	--	--	--
Controlled Emissions tons/year	0.20	0.03				
Total Uncontrolled Emissions	135.69	15.74	--	--	--	--
Total Controlled Emissions	6.78	0.79	--	--	--	--
Note: Emission factors are from FIRE version 6.24.						
*Utilizes a baghouse for PM/PM10 control that has a 95% control efficiency						

Appendix A: Emissions Calculations

VOC and Particulate

From Mold Release Spray and Mold/Core Painting

Company Name: Bahr Brothers Manufacturing, Inc.

Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952

FESOP: 053-11804-00022

Reviewer: Julia Handley / EVP

Material	Process	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Zip Slip LP-78	EU17	6.25	90.50%	0.0%	90.50%	0.0%	10.00%	0.03520	0.450	5.66	5.66	0.09	2.15	0.39	0.00	56.56	100%

State Potential Emissions

Add worst case coating to all solvents

0.09 2.15 0.39 0.00

Material	Process	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Velvasol 425	EU18	6.57	100.00%	0.0%	100.00%	0.0%	0.00%	0.03653	10.000	6.57	6.57	2.40	57.60	10.51	0.00	n/a	75%
Velvalite ZA 848	EU18	15.6	41.66%	0.0%	41.66%	0.0%	73.00%	0.09808	10.000	6.50	6.50	6.37	152.98	27.92	9.77	8.90	75%
Velvalite OMA 991	EU18	12.55	44.78%	0.0%	44.78%	0.0%	63.50%	0.02151	10.000	5.62	5.62	1.21	29.02	5.30	1.63	8.85	75%

State Potential Emissions

Add worst case coating to all solvents

6.37 152.98 27.92 11.41

Controlled Potential Emissions for EU18

	Material Usage Limitation	Control Efficiency:		Limited VOC lbs per Hour	Limited VOC lbs per Day	Limited VOC tons per Year	Limited PM tons per Year
		VOC	PM				
Total Controlled Potential Emissions:	89.18%	0.00%	0.00%	6.37	152.98	24.90	10.17

Note: Coatings are mutually exclusive

Note: At a 62.45% annual material usage limitation, VOC emissions from EU18 are limited to less than 25 tons per year, therefore, 326 IAC 8-1-6 does not apply.

Note: Coating contain no HAPs. Therefore, coating use results in no HAP emissions.

Total Emissions	VOC	PM/PM10
Uncontrolled (tons/yr)	28.31	11.41
Controlled (tons/yr)	25.29	

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

Appendix A: HAP Emissions from PCS & Cleaning/Finishing

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Reviewer: Julia Handley / EVP

Process	Maximum Rate (tons iron/hr)	Limited Rate** (tons iron/hr)	PM emission factor lb/ton	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Eac (ton/yr)
Charge Handling SCC# 3-04-003-15 AP-42 Ch. 12.10	1.475	0.90	0.60	chromium	2.3E-04	0.001	0.001
				nickel	4.0E-04	0.003	0.002
				arsenic	7.8E-05	0.001	0.000
				Lead	0.002	0.015	0.009
				Manganese	0.019	0.120	0.073
				Antimony	0.001	0.007	0.004
				TOTAL	0.02	0.15	0.09
Melting - Electric Induction Furnaces* EPA SCC# 3-04-003-03 AP-42 Ch. 12.10	1.475	0.90	0.90	chromium	3.4E-04	0.002	0.001
				nickel	0.001	0.004	0.002
				arsenic	0.000	0.001	0.000
				Lead	0.055	0.352	0.215
				Manganese	0.028	0.180	0.110
				Antimony	0.002	0.011	0.007
				TOTAL	0.09	0.55	0.34
Pouring SCC# 3-04-003-18	24.0	0.90	4.20	chromium	0.002	0.168	0.006
				nickel	0.003	0.296	0.011
				arsenic	0.001	0.057	0.002
				Lead	0.016	1.700	0.064
				Manganese	0.130	13.687	0.513
				Antimony	0.008	0.817	0.031
				TOTAL	0.16	16.72	0.63
Cooling SCC# 3-04-003-18	24.0	0.90	1.40	chromium	0.001	0.056	0.002
				nickel	0.001	0.099	0.004
				arsenic	1.8E-04	0.019	0.001
				Lead	0.005	0.567	0.021
				Manganese	0.043	4.562	0.171
				Antimony	0.003	0.272	0.010
				TOTAL	0.05	5.57	0.21
Shakeout SCC# 3-04-003-31	24.0	0.90	3.20	chromium	0.001	0.128	0.005
				nickel	0.002	0.225	0.008
				arsenic	0.000	0.044	0.002
				Lead	0.012	1.295	0.049
				Manganese	0.099	10.428	0.391
				Antimony	0.006	0.622	0.023
				TOTAL	0.12	12.74	0.48
Pangborn Table Blast Machine #1 (EU13) SCC# 3-04-003-40	0.88	0.88	17.00	chromium	0.006	0.025	0.025
				nickel	0.011	0.044	0.044
				arsenic	0.002	0.009	0.009
				Lead	0.065	0.252	0.252
				Manganese	0.527	2.031	2.031
				Antimony	0.031	0.121	0.121
				TOTAL	0.64	2.48	2.48

Pangborn Table Blast Machine #2 (EU14) SCC# 3-04-003-40	0.18	0.18	17.00	chromium	0.006	0.005	0.005
				nickel	0.011	0.009	0.009
				arsenic	0.002	0.002	0.002
				Lead	0.065	0.052	0.052
				Manganese	0.527	0.415	0.415
				Antimony	0.031	0.025	0.025
TOTAL				0.64	0.51	0.508	
Wheelabrator Tumble Blast Machine #1 (EU15) SCC# 3-04-003-40	0.18	0.18	17.00	chromium	0.006	0.005	0.005
				nickel	0.011	0.009	0.009
				arsenic	0.002	0.002	0.002
				Lead	0.065	0.052	0.052
				Manganese	0.527	0.415	0.415
				Antimony	0.031	0.025	0.025
TOTAL				0.64	0.51	0.508	

* Note: HAP emission factors for the electric induction furnaces are based on the PM emission factor from IDEM approved stack test performed on December 10, 2005 and percent of PM that is HAP based on information from SPECIATE, v 3.1. Lead emission factor from FIRE version 6.24.

**Limited metal throughput rates are not all included as limits in the permit. They are based on information from Weil-McLain on actual throughputs and are used to establish the HAP emission limits in the permit in tons/yr.

HAP emission factors for A-Line pouring are based on PM emission factor used in Title V permit from previous in-house stack test and the percent of PM that is HAP based on information from SPECIATE, v 3.1.

All other HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1.

USEPA Speciate v 3.1 Data	
Metal	Gen. Foundry
Manganese	3.100%
Chromium	0.038%
Nickel	0.067%
Arsenic	0.013%
Antimony	0.185%
Lead	0.385%

Total Potential Emissions Before Controls

chromium	0.39 tons/year
nickel	0.68 tons/year
arsenic	0.13 tons/year
Lead	4.23 tons/year
Manganese	31.42 tons/year
Antimony	1.88 tons/year
Total	38.73 tons/year

Total Limited Emissions After Controls

chromium	0.05 tons/year
nickel	0.08 tons/year
arsenic	0.02 tons/year
Lead	0.61 tons/year
Manganese	3.71 tons/year
Antimony	0.22 tons/year
Total	4.68 tons/year

Methodology:

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

1 lb = 2000 tons

**Appendix A: Secondary Metal Production
VOC and HAP Emissions from Sand Handling**

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Reviewer: Julia Handley / EVP

The VOC and HAP emissions from the sand handling process are dependent upon the type of binders being utilized in each particular machine

The four (4) processes using the binder system are: Floor Mixer (EU8), Bi-Room Mixer (EU9), Core Room Mixer (EU10) and Line Mixer (EU11)
 Binder System Used: Phenolic Urethane Nobake Binder (Ashland's "Pepset" Process)

Binder System Used: Phenolic Urethane Nobake Binder (Ashland's "Pepset" Process)
 (for cores made in-house only)

Part I Binder (Pep Set I 1675 HR) Usage Rate (Lbs. of Resin/Year): **197,200**

<u>Volatile Components</u>	<u>% in Product</u> ¹	<u>% Evaporated</u> ²	<u>VOC Emissions (Tons/Yr)</u>
Formaldehyde	0.0	2.0	0.00
Aromatic Petroleum Distillates	7.5	100.0	7.40
Phenol *	7.5	0.0	0.00
Naphthalene *	0.0	5.85	0.00
1,2,4-Trimethyl Benzene	2.0	5.85	0.12
			7.51

Part II Binder (Pep Set X II 2000) Usage Rate (Lbs. of Resin/Year): **163,200**

<u>Volatile Components</u>	<u>% in Product</u> ¹	<u>% Evaporated</u> ²	<u>VOC Emissions (Tons/Yr)</u>
MDI	30.0	0.0	0.00
Polymeric Diphenylmethane Di	35.0	0.0	0.00
1,2,4-Trimethyl Benzene	2.0	5.85	0.12
Aromatic Petroleum Distillates	3.0	50.0	1.48
			1.59

Pepset Catalyst 3451 Usage Rate (Lbs. of Resin/Year): **11,480**

<u>Volatile Components</u>	<u>% in Product</u> ¹	<u>% Evaporated</u> ³	<u>VOC Emissions (Tons/Yr)</u>
Aromatic Petroleum Distillates	81.5	100.0	4.68
Naphthalene	8.5	100.0	0.49
			5.17

Pepset Catalyst 3500 Usage Rate (Lbs. of Resin/Year): **4,920**

<u>Volatile Components</u>	<u>% in Product</u> ¹	<u>% Evaporated</u> ³	<u>VOC Emissions (Tons/Yr)</u>
Aromatic Petroleum Distillates	75.5	100.0	4.33
1,2,4-Trimethyl Benzene	15.5	100.0	0.89
Isopropylbenzene	5.5	100.0	0.32
Xylene	7.0	100.0	0.40
			5.94

Total VOC emissions (tons/yr): 20.21

Total HAP¹ emissions (tons/yr): 0.89

Notes:

Maximum Capacities based on twice the 1999 annual usage, as supplied by the source.

These emissions result from the presence of organic resins which are released during mixing

1 The % in product value is derived from the vendor's MSDS.

2 The % evaporated value is derived from the Form R "Gold Book" for this type of core making system.

Data for Aromatic Petroleum Distillates is not specifically included in Form R, so a worst case of 100% is assumed.

3 The % evaporated value is assumed to be 100% because the Form R "Gold Book" did not include emissions from the use of catalysts.

* HAPs are the pollutants marked with an asterisk (*) after their name.

Appendix A: Secondary Metal Production

VOC and HAP Emissions from Foundry Processes

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Reviewer: Julia Handley / EVP

Pouring/Casting, Casting Cooling and Shakeout Processes

Binder System Used: Phenolic Urethane Nobake Binder (Ashland's "Pepset" Process)

For cores made in-house

Pollutant Name	Emission Factor (lbs pollutant/lbs resin)	Maximum Resin Usage (lbs resin/yr)	HAP Emissions (tons/yr)
Acrolein	0.000005	360400	9.01E-04
Benzene	0.011209	360400	2.02
Formaldehyde	0.00001	360400	1.80E-03
Hydrogen Cyanide	0.000029	360400	5.23E-03
M-Xylene	0.000097	360400	0.02
Napthalene	0.000049	360400	8.83E-03
O-Xylene	0.000049	360400	8.83E-03
Phenol	0.000975	360400	0.18
Toluene	0.000634	360400	0.11
Total Aromatic Amines	0.000049	360400	8.83E-03
Total C2 to C5 Aldehydes	0.00307	360400	0.55
Total Hydrocarbons	0.012159	360400	2.19
		Total VOCs	5.11
		Total HAPs	2.91

Notes: Emission factors are from the American Foudrymen's Society (Mosher) research paper.

Maximum resin usage rate is estimated to be twice the actual 1998 total resin usage (provided by source).

The "Acrylic-Epoxy Cold Box Binder System was not identified in the Mosher research paper, so Green Sand Binder emission factors were used.

Total HAPs include all pollutants except Total Hydrocarbons and Hydrogen Cyanide.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Boilers**

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
Permit Number: 053-11804-00022
Reviewer: Julia Handley / EVP

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
4.950	43.362

Facilities	MMBtu/hr
Thermal Sand Reclaimer (EU6)	1.00
Heat Treat Furnace (EU12)	3.04
2 Ladle Preheaters (EU16)	0.66
Thermal Sand Reclaimer***	0.25
Total	4.95

Emission Factor in lb/MMCF	Criteria Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.04	0.16	0.01	2.17	0.12	1.82

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.553E-05	2.602E-05	1.626E-03	3.903E-02	7.372E-05

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.084E-05	2.385E-05	3.035E-05	8.239E-06	4.553E-05

Total HAPs 0.04 tons per year

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

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

***Thermal Sand Reclaimer approved under Exemption No. 053-18626-00022 Issued June 7, 2004

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 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 are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

Note to Reviewer: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

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

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Indiana Department of Environmental Management Office of Air Management

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

Source Background and Description

Source Name: Bahr Brothers Manufacturing, Inc.
Source Location: 2545 Lincoln Boulevard, Marion, IN 46952
County: Grant
SIC Code: 3321, 3325
Operation Permit No.: F053-11804-00022
Permit Reviewer: Nishat Hydari / EVP

The Office of Air Management (OAM) has reviewed a FESOP application from Bahr Brothers Manufacturing, Inc. relating to the operation of a ductile iron and steel foundry.

Permitted Emission Units and Pollution Control Equipment

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

- (a) One (1) natural gas-fired thermal sand reclaimer, identified as EU6, with a maximum throughput of 1.0 tons sand per hour and a heat input rate of 1.0 million (MM) British thermal units (Btu) per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 1;
- (b) One (1) mechanical sand reclaimer, identified as EU7, with a maximum throughput of 1.5 tons sand per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 2;
- (c) One (1) steel shot pangborn table blast machine # 1, identified as EU13, with a maximum process rate of 0.88 tons per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 3;
- (d) One (1) steel shot pangborn table machine # 2, identified as EU14, with a maximum process rate of 0.18 tons per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4;
- (e) One (1) steel shot wheelabrator tumble blast machine # 1, identified as EU15, with a maximum process rate of 0.18 tons per hour, utilizing one (1) baghouse for particulate matter control, and exhausting to one (1) stack identified as 4; and
- (f) One (1) electric induction melting process, identified as EU2, with a maximum melt capacity of 1.47 MMBtu/hr, consisting of two (2) "large" electric induction melting furnaces each rated at 1,750 pounds per hour and two (2) "small" electric induction melting

furnaces each rated at 1,200 pounds per hour.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

- (a) One (1) charge handling process, identified as EU1, with a maximum throughput of 1.47 tons per hour;
- (b) One (1) pouring/casting process, identified as EU3, with a maximum throughput of 1.47 tons per hour;
- (c) One (1) casting cooling process, identified as EU4, with a maximum throughput of 1.47 tons per hour;
- (d) One (1) shakeout process, identified as EU5, with a maximum throughput of 1.47 tons per year;
- (e) One (1) floor mixer, identified as EU8, with a maximum throughput of 15.0 tons per hour;
- (f) One (1) bi-room mixer, identified as EU9, with a maximum throughput of 3.0 tons per hour;
- (g) One (1) core room mixer, identified as EU10, with a maximum throughput of 3.0 tons per hour;
- (h) One (1) line mixer, identified as EU11, with a maximum throughput of 7.5 tons per hour;
- (i) One (1) mold release spray, identified as EU17, utilizing a hand brushing application system, coating a maximum of 0.45 metal patterns per hour; and
- (j) One (1) mold/core painting process, identified as EU18, utilizing an air atomization spray application system, coating a maximum of 10 molds per hour.

Insignificant Activities

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
 - (1) One (1) natural gas-fired normalize heat treat furnace, identified as EU12, with a maximum throughput of 0.44 tons per hour and a heat input rate of 3.04 MMBtu per hour;
 - (2) Two (2) natural gas-fired ladle preheaters, identified as EU16, each with a maximum heat input rate of 0.33 MMBtu per hour;
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (c) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;
 - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

- (d) Refractory storage not requiring air pollution control equipment;
- (e) Equipment used exclusively for the following:
 - (1) Packaging lubricants and greases;
 - (2) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases;
- (f) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- (g) Machining where an aqueous cutting coolant continuously floods the machining interface;
- (h) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;
- (i) Cleaners and solvents characterized as follows:
 - (1) Having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38 degrees C (100EF) or;
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;
- (j) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (k) Closed loop heating and cooling systems;
- (l) Any of the following structural steel and bridge fabrication activities:
 - (1) Cutting 200,000 linear feet or less of one inch (1") plate or equivalent;
 - (2) Using 80 tons or less of welding consumables;
- (m) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;
- (n) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs;
- (o) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (p) Paved or unpaved roads and parking lots with public access;
- (q) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;
- (r) Emergency generators as follows:
 - (1) Diesel generators not exceeding 1600 horsepower;

- (s) 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;
- (t) Filter or coalescer media changeout;
- (u) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C);
- (v) A laboratory as defined in 326 IAC 2-7-1(20)(C);
- (w) Inoculation (with Ferrosilicon);
- (x) Outdoor Sand Storage Silos (2) with "Aqua Filter";
- (y) Indoor Sand Storage Silos and Tanks (3) with Bin Top Filters; and
- (z) Miscellaneous Woodworking Activities in Pattern Shop (Sawing, Cutting, Routing, Planing, etc.).

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) CP 053-3768-00022, issued on August 16, 1995; and
- (b) Amendment 053-6599-00022, issued on October 6, 1996.

All conditions from previous approvals were incorporated into this FESOP.

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

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 January 25, 2000. Additional information was received on May 1, 2000 and on May 16, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 8).

Potential To Emit of Unpermitted Facilities

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.”

Pollutant	Potential To Emit (tons/year)
PM	520.43
PM-10	116.97
SO ₂	0.13
VOC	66.59
CO	0.00
NO _x	0.06

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)
Benzene	2.02
Hydrogen Cyanide	0.01
M-Xylene	0.02
Napthalene	0.30
O-Xylene	0.01
Phenol	0.17
Toluene	0.11
Aromatic Amines	0.01
C2 - C5 Aldehydes	0.55
Xylene	0.54
Isopropylbenzene	0.42
TOTAL	4.15

Potential To Emit of Permitted Facilities

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.”

Pollutant	Potential To Emit (tons/year)
PM	137.60
PM-10	20.83
SO ₂	0.01
VOC	0.11
CO	1.73
NO _x	2.06

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

Potential To Emit of Entire Facility (Unpermitted and Permitted)

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.”

Pollutant	Potential To Emit (tons/year)
PM	658.03
PM-10	137.80
SO ₂	0.14
VOC	66.70
CO	1.73
NO _x	2.12

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)
Benzene	2.02
Hydrogen Cyanide	0.01
M-Xylene	0.02
Napthalene	0.30
O-Xylene	0.01
Phenol	0.17
Toluene	0.11
Aromatic Amines	0.01
C2 - C5 Aldehydes	0.55
Xylene	0.54
Isopropylbenzene	0.42
TOTAL	4.15

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM10 is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) Fugitive Emissions
 Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

Process/facility	Limited Potential to Emit (tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	HAPs
Unpermitted Facilities (EU1, EU3, EU4, EU5, EU8, EU9, EU10, EU11, EU17 and EU18)	88.69	37.32	0.08	48.81	0.00	0.04	2.02	4.15
Permitted Facilities (EU2, EU6, EU7, EU12, EU13, EU14 and EU15)	10.18	4.32	0.01	0.11	1.73	2.06	0.00	0.00
Total Emissions	98.87*	41.64	0.09	48.92	1.73	2.10	2.02	4.15

*PM emission are limited to less than 100 tons per year, thus the source is considered a minor PSD source.

County Attainment Status

The source is located in Grant County.

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

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Grant County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This existing secondary metal production source, is one of the 28 listed source categories, and not subject to the requirements of this rule based on the following information:

- (a) The throughput to each of the following processes; charge handling (EU1), electric induction melting (EU2), pouring/casting (EU3), casting cooling (EU4) and shakeout (EU5) shall be limited to less than 15,768,000 pounds per 12 consecutive month period, rolled on a monthly basis (equivalent to 0.9 tons per hour). This usage limit will limit PM emissions from the entire source to less than 100 tons per year so that the requirements of 326 IAC 2-2 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it will limit annual PM10 emissions to less than the one hundred (100) tons per year rule applicability threshold for Grant County.

326 IAC 2-8-4 (FESOP)

This source is subject to 326 IAC 2-8-4 (FESOP). Pursuant to this rule, PM10 emission from the floor mixer (EU8), bi-room mixer (EU9), core room mixer (EU10), line mixer (EU11), thermal sand reclaimer (EU6), mechanical sand reclaimer (EU7), pangborn table blast machine #1 (EU13), pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) will be controlled by a baghouse which will limit the source-wide PM10 emissions to less than 100 tons/yr. Therefore, the requirements of 326 IAC 2-7 do not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in 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 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2 (1), (2), or (3).

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) from the following processes shall be limited by the following:

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

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

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Emission Unit	Process Weight Rate (tons/hr)	Uncontrolled PM Emissions (lb/hr)	Control Efficiency %	Controlled PM Emissions (lb/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Charge Handling (EU1)	1.47	0.88	Limited throughput (0.9 tons/hr)	0.54	5.31
Electric Induction Melting (EU2)	1.47	1.32	Limited throughput (0.9 tons/hr)	0.81	5.31
Pouring/Casting (EU3)	1.47	4.12	Limited throughput (0.9 tons/hr)	2.52	5.31
Casting Cooling (EU4)	1.47	2.06	Limited throughput (0.9 tons/hr)	1.26	5.31
Shakeout (EU5)	1.47	4.70	Limited throughput (0.9 tons/hr)	2.88	5.31
Thermal Sand Reclaimer (EU6)	1.0	3.60	95 (baghouse)	0.18	4.10
Mechanical Sand Reclaimer (EU7)	1.5	5.40	95 (baghouse)	0.27	5.38
Floor Mixer (EU8)	15.0	54.00	90	5.40	25.16
Bi-room Mixer (EU9)	3.0	10.80	90	1.08	8.56
Core Room Mixer (EU10)	3.0	10.80	90	1.08	8.56
Line Mixer (EU11)	7.5	27.00	90	2.70	15.82
Pangborn table blast machine #1 (EU13)	0.88	14.96	95 (baghouse)	0.75	3.76
Pangborn table blast machine #2 (EU14)	0.18	3.06	95 (baghouse)	0.15	1.30
Wheelabrator tumble blast machine #1 (EU15)	0.18	3.06	95 (baghouse)	0.15	1.30

(b) The particulate matter (PM) from the mold release spray (EU17) and the mold/core

painting booth (EU18) shall be limited by the following:

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

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

326 IAC 8-1-6 (General Reduction Requirements)

Pursuant to 326 IAC 8-1-6, new facilities located anywhere in the state that were constructed on or after January 1, 1980, which have a potential to emit (PTE) VOC at 25 tons or more per year, and which are not otherwise regulated by another provision of Article 8, are subject to the rule requirements. The one (1) mold/core painting booth (EU18) has a potential to emit VOC above 25 tons per year. The VOC emissions from the one (1) mold/core painting booth (EU18) shall be limited to less than 25 tons per twelve (12) consecutive month period. Therefore the Best Available Control Technology (BACT) requirements under 326 IAC 8-1-6 (General Reduction Requirements) are not applicable to the one (1) mold/core painting booth.

326 IAC 11-1 (Emission Limitations for Specific Type of Operations)

Pursuant to 326 IAC 11-1-1, emission limitations are established for particulate matter from foundries. Particulate emissions from all foundries in operation on or before December 6, 1968 shall comply with the requirements set forth in section 2 of this rule. Section 2 of the rule limits PM emissions from foundry cupolas. There are no foundry cupolas at this source, therefore, the source is not subject to the requirements of 326 IAC 11-1-2.

Testing Requirements

Testing is not required for any of the units in this facility because no single unit accounts for greater than 40% of the potential to emit before controls for any major pollutant, which are PM and PM10 for this source.

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, OAM, 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 thermal sand reclaimier (EU6), the mechanical sand reclaimier (EU7), the pangborn

table blast machine #1 (EU13), the pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) have applicable compliance monitoring conditions as specified below:

- (a) Daily visible emissions notations of the thermal sand reclaimier (EU6), the mechanical sand reclaimier (EU7), the pangborn table blast machine #1 (EU13), the pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) stack exhausts shall be performed during normal daylight operations. 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 Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

- (b) The Permittee shall record the total static pressure drop across the baghouses controlling the thermal sand reclaimier (EU6), the mechanical sand reclaimier (EU7), the pangborn table blast machine #1 (EU13), the pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15), at least once daily when the thermal sand reclaimier (EU6), the mechanical sand reclaimier (EU7), the pangborn table blast machine #1 (EU13), the pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 1.0 to 9.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

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

- (c) An inspection shall be performed each calender quarter of all bags controlling the thermal sand reclaimier (EU6), the mechanical sand reclaimier (EU7), the pangborn table blast machine #1 (EU13), the pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

These monitoring conditions are necessary because the baghouse for the thermal sand reclaimier (EU6), the mechanical sand reclaimier (EU7), the pangborn table blast machine #1 (EU13), the pangborn table blast machine #2 (EU14) and the wheelabrator tumble blast machine #1 (EU15) must operate

properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) FESOP Application Form GSD-08.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations for detailed air toxic calculations (Appendix A, pages 3 and 5).

Conclusion

The operation of this ductile iron and steel foundry shall be subject to the conditions of the attached proposed **FESOP No.: F053-11804-00022**.

Appendix A: Emission Calculations

Company Name:	Bahr Brothers Manufacturing, Inc.
Address City IN Zip:	2545 Lincoln Boulevard, Marion, IN 46952
CP:	053-11804
Plt ID:	053-00022
Reviewer:	Nishat Hydari / EVP

Uncontrolled Potential Emissions (tons/year)

Emissions Generating Activity

Pollutant	Foundry Processes	Sand Grinding/Handling	Cleaning/ Finishing	Mold/Core Painting	Natural Gas Combustion	TOTAL
PM	57.44	488.81	92.33	19.55	0.04	658.17
PM10	35.65	73.32	9.23	19.55	0.16	137.91
SO2	0.13	0.00	0.00	0.00	0.01	0.14
NOx	0.06	0.00	0.00	0.00	2.06	2.12
VOC	13.76	14.03	0.00	28.31	0.11	56.21
CO	0.00	0.00	0.00	0.00	1.73	1.73
total HAPs	2.91	1.24	0.00	0.00	0.00	4.15
worst case single HAP	(Benzene) 2.02	(Xylene) 0.54	0.00	0.00	0.00	2.02
Total emissions based on rated capacity at 8,760 hours/year.						

Controlled Potential Emissions (tons/year)

Emissions Generating Activity

Pollutant	Foundry Processes	Sand Grinding/Handling	Cleaning/ Finishing	Mold/Core Painting	Natural Gas Combustion	TOTAL
PM	35.08	46.91	4.62	19.55	0.04	106.20
PM10	21.76	7.04	0.46	19.55	0.16	48.97
SO2	0.08	0.00	0.00	0.00	0.01	0.09
NOx	0.04	0.00	0.00	0.00	2.06	2.10
VOC	10.39	14.03	0.00	17.83	0.11	42.36
CO	0.00	0.00	0.00	0.00	1.73	1.73
total HAPs	2.91	1.24	0.00	0.00	0.00	4.15
worst case single HAP	(Benzene) 2.02	(Xylene) 0.54	0.00	0.00	0.00	2.02
Total emissions based on rated capacity at 8,760 hours/year, after control.						

Appendix A: Secondary Metal Production

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Plt ID: 053-00022
Reviewer: Gaurav Shil / EVP

SCC# 3-04-003-15

Charge Handling (EU1)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1800	2000	0.9			
	PM lbs/ton metal charged 0.6	PM10 lbs/ton metal charged 0.36	SOx lbs/ton metal charged --	NOx lbs/ton metal charged --	VOC lbs/ton metal charged --	CO lbs/tons metal charged --
Potential Emissions lbs/hr	0.89	0.53	--	--	--	--
Potential Emissions lbs/day	21.24	12.74	--	--	--	--
Potential Emissions tons/year	3.88	2.33	--	--	--	--
Limited Emissions tons/yr	2.37	1.42	--	--	--	--

SCC# 3-04-003-03

Electric Induction Melting (EU2)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1800	2000	0.9			
	PM lbs/ton metal charged 0.9	PM10 lbs/ton metal charged 0.86	SOx lbs/ton metal charged --	NOx lbs/ton metal charged --	VOC lbs/ton metal charged --	CO lbs/ton metal charged --
Potential Emissions lbs/hr	1.33	1.27	--	--	--	--
Potential Emissions lbs/day	31.86	30.44	--	--	--	--
Potential Emissions tons/year	5.81	5.56	--	--	--	--
Limited Emissions tons/yr	3.55	3.39	--	--	--	--

SCC# 3-04-003-20

Pouring/Casting (EU3)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2940	2000	1.47			
Limited Throughput (LBS/HR)	1800	2000	0.9			
	PM* lbs/ton metal charged 2.8	PM10** lbs/ton metal charged 0.66	SOx lbs/ton metal charged 0.02	NOx lbs/ton metal charged 0.01	VOC lbs/ton metal charged 0.14	CO lbs/tons metal charged --
Potential Emissions lbs/hr	4.12	0.97	0.03	0.01	0.21	--
Potential Emissions lbs/day	98.78	23.28	0.71	0.35	4.94	--
Potential Emissions tons/year	18.03	4.25	0.13	0.06	0.90	--
Limited Emissions tons/yr	11.04	2.60	0.08	0.04	0.55	--

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1800	2000	0.9			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/tons metal charged
	1.4	1.4	--	--	--	--
Potential Emissions lbs/hr	2.07	2.07	--	--	--	--
Potential Emissions lbs/day	49.56	49.56	--	--	--	--
Potential Emissions tons/year	9.04	9.04	--	--	--	--
Limited Emissions tons/yr	5.52	5.52	--	--	--	--

SCC# 3-04-003-31
Casting Shakeout (EU5)

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Iron/Steel	2950	2000	1.475			
Limited Throughput (LBS/HR)	1800	2000	0.9			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/tons metal charged
	3.2	2.24	--	--	1.2	--
Potential Emissions lbs/hr	4.72	3.30	--	--	1.77	--
Potential Emissions lbs/day	113.28	79.30	--	--	42.48	--
Potential Emissions tons/year	20.67	14.47	--	--	7.75	--
Limited Emissions tons/yr	12.61	8.83	--	--	4.73	--

Total Potential Emissions (tons/yr)	57.44	35.65	0.13	0.06	8.65	0.00
Limited Emissions (tons/yr)	35.08	21.76	0.08	0.04	5.28	0.00

Note: Emission factors are from FIRE version 6.24

Note: This source is a secondary metal production plant (1 of 28 categories) and therefore is subject to PSD applicability. The source will limit its throughput to 0.9 tons/year, which will limit controlled PM emissions to less than 100 tons/year, thus making the source a minor PSD source.

* PM emission factor for pouring/casting is obtained as follows: Pouring/Casting EF = (Pouring, Cooling EF) - (Castings Cooling EF) = 4.20 - 1.40 = 2.80

** PM10 emission factor for pouring/casting is obtained as follows: Pouring/Casting EF = (Pouring, Cooling EF) - (Castings Cooling EF) = 2.06 - 1.40 = 0.66

Appendix A: Sand Grinding/Handling Maximum Potential Particulate Emissions

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Plt ID: 053-00022
Reviewer: Gaurav Shil / EVP

SCC# 3-04-003-50

Sand Grinding/Handling, Type of control: Aqua Filter

TYPE OF MATERIAL	Throughput					
	LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	30000	2000	15			
Floor Mixer (EU8)*	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	54.00	8.10	--	--	--	--
Potential Emissions lbs/day	1296.00	194.40	--	--	--	--
Potential Emissions tons/year	236.52	35.48	--	--	--	--
Controlled Emissions tons/year	23.65	3.55				

SCC# 3-04-003-50

Sand Grinding/Handling, Type of control: Aqua Filter

TYPE OF MATERIAL	Throughput					
	LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	6000	2000	3			
Bi-Room Mixer (EU9)*	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	10.80	1.62	--	--	--	--
Potential Emissions lbs/day	259.20	38.88	--	--	--	--
Potential Emissions tons/year	47.30	7.10	--	--	--	--
Controlled Emissions tons/year	4.73	0.71				

SCC# 3-04-003-50

Sand Grinding/Handling, Type of control: Aqua Filter

TYPE OF MATERIAL	Throughput					
	LBS/HR	1 TON/2000 lbs	TON/HR			
Sand	6000	2000	3			
Core Room Mixer (EU10)*	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	3.6	0.54	--	--	--	--
Potential Emissions lbs/hr	10.80	1.62	--	--	--	--
Potential Emissions lbs/day	259.20	38.88	--	--	--	--
Potential Emissions tons/year	47.30	7.10	--	--	--	--
Controlled Emissions tons/year	4.73	0.71				

SCC# 3-04-003-50							Page 5 of 10 TSD App A
Sand Grinding/Handling, Type of control: Aqua Filter							
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand		15000	2000	7.5			
Line Mixer (EU11)*							
	PM	PM10	SOx	NOx	VOC	CO	
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced	
	3.6	0.54	--	--	--	--	
Potential Emissions lbs/hr	27.00	4.05	--	--	--	--	
Potential Emissions lbs/day	648.00	97.20	--	--	--	--	
Potential Emissions tons/year	118.26	17.74	--	--	--	--	
Controlled Emissions tons/year	11.83	1.77					
SCC# 3-04-003-50							
Sand Grinding/Handling, Type of control: Baghouse							
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand		2000	2000	1			
Thermal Sand Reclaimer (EU6)**							
	PM	PM10	SOx	NOx	VOC	CO	
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced	
	3.6	0.54	--	--	--	--	
Potential Emissions lbs/hr	3.60	0.54	--	--	--	--	
Potential Emissions lbs/day	86.40	12.96	--	--	--	--	
Potential Emissions tons/year	15.77	2.37	--	--	--	--	
Controlled Emissions tons/year	0.79	0.12					
SCC# 3-04-003-50							
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Sand		3000	2000	1.5			
Mech. Sand Reclaim (EU7)**							
	PM	PM10	SOx	NOx	VOC	CO	
	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/ton Produced	lbs/tons Produced	
	3.6	0.54	--	--	--	--	
Potential Emissions lbs/hr	5.40	0.81	--	--	--	--	
Potential Emissions lbs/day	129.60	19.44	--	--	--	--	
Potential Emissions tons/year	23.65	3.55	--	--	--	--	
Controlled Emissions tons/year	1.18	0.18					
Total uncontrolled emissions	488.81	73.32	--	--	--	--	
Total controlled emissions	46.91	7.04					
Note: Emission factor are from FIRE version 6.22.							
*Source claims control efficiency of 90% for sand mixers due to numerous reasons, one of which is the use of an "aqua filter" water tank that removes fines from 100% of the new virgin sand coming into the facility so that there are very little fine-grained particles left by the time this new sand reaches the sand mixers							
**Utilizes a baghouse with 95% control efficiency for PM/PM10 control for mechanical and thermal sand reclamation units							

Appendix A: Cleaning/Finishing Calculations

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Plt ID: 053-00022
Reviewer: Gaurav Shil / EVP

SCC# 3-04-003-40						
Grinding/Cleaning						
		Throughput				
TYPE OF MATERIAL		LBS/HR	1 TON/2000 lbs	TON/HR		
Iron/Steel		1760	2000	0.88		
Pangborn Table Blast Machine #1 (EU13)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	17	1.7	--	--	--	--
Potential Emissions lbs/hr	14.96	1.50	--	--	--	--
Potential Emissions lbs/day	359.04	35.90	--	--	--	--
Potential Emissions tons/year	65.52	6.55	--	--	--	--
Controlled Emissions tons/year	3.28	0.33				
SCC# 3-04-003-40						
Grinding/Cleaning						
		Throughput				
TYPE OF MATERIAL		LBS/HR	1 TON/2000 lbs	TON/HR		
Iron/Steel		360	2000	0.18		
Pangborn Table Blast Machine #2 (EU14)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	17	1.7	--	--	--	--
Potential Emissions lbs/hr	3.06	0.31	--	--	--	--
Potential Emissions lbs/day	73.44	7.34	--	--	--	--
Potential Emissions tons/year	13.40	1.34	--	--	--	--
Controlled Emissions tons/year	0.67	0.07				
SCC# 3-04-003-40						
Grinding/Cleaning						
		Throughput				
TYPE OF MATERIAL		LBS/HR	1 TON/2000 lbs	TON/HR		
Iron/Steel		360	2000	0.18		
Wheelabrator Tumble Blast Machine #1 (EU15)*						
	PM	PM10	SOx	NOx	VOC	CO
	lbs/ton Produced	lbs/tons Produced				
	17	1.7	--	--	--	--
Potential Emissions lbs/hr	3.06	0.31	--	--	--	--
Potential Emissions lbs/day	73.44	7.34	--	--	--	--
Potential Emissions tons/year	13.40	1.34	--	--	--	--
Controlled Emissions tons/year	0.67	0.07				
Total Uncontrolled Emissions	92.33	9.23	--	--	--	--
Total Controlled Emissions	4.62	0.46	--	--	--	--
Note: Emission factors are from FIRE version 6.24.						
*Utilizes a baghouse for PM/PM10 control that has a 95% control efficiency						

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Plt ID: 053-00022
Reviewer: Gaurav Shil / EVP

Heat Input Capacity	Potential Throughput
MMBtu/hr	MMCF/yr
4.70	41.2

Facilities	MMBtu/hr
Thermal Sand Reclaimer (EU6)	1.00
Heat Treat Furnace (EU12)	3.04
2 Ladle Preheaters (EU16)	0.66
Total	4.70

	Pollutant						
	PM*	PM10*	SO2	NOx	VOC	CO	
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0	5.5	84.0	
				**see below			
Potential Emission in tons/yr	0.04	0.16	0.01	2.06	0.11	1.73	

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(SUPPLEMENT D 3/98)

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

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emissions Calculations

VOC and Particulate

From Mold Release Spray and Mold/Core Painting

Company Name: Bahr Brothers Manufacturing, Inc.

Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952

FESOP: 053-11804-00022

Plt ID: 053-00022

Reviewer: Gaurav Shil / EVP

Material	Process	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Zip Slip LP-78	EU17	6.25	90.50%	0.0%	90.50%	0.0%	10.00%	0.03520	0.450	5.66	5.66	0.09	2.15	0.39	0.00	56.56	100%

State Potential Emissions												Add worst case coating to all solvents						
												0.09	2.15	0.39	0.00			

Material	Process	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Velvasol 425	EU18	6.57	100.00%	0.0%	100.00%	0.0%	0.00%	0.03653	10.000	6.57	6.57	2.40	57.60	10.51	0.00	#DIV/0!	50%
Velvalite ZA 848	EU18	15.6	41.66%	0.0%	41.66%	0.0%	73.00%	0.09808	10.000	6.50	6.50	6.37	152.98	27.92	19.55	8.90	50%
Velvalite OMA 991	EU18	12.55	44.78%	0.0%	44.78%	0.0%	63.50%	0.02151	10.000	5.62	5.62	1.21	29.02	5.30	3.27	8.85	50%

State Potential Emissions												Add worst case coating to all solvents						
												6.37	152.98	27.92	19.55			

Controlled Potential Emissions for EU18

	Material Usage Limitation	Control Efficiency:		Controlled	Controlled	Controlled
		VOC	PM	VOC lbs per Hour	VOC lbs per Day	VOC tons per Year
		62.45%	0.00%	0.00%	6.37	152.98

Note: Coatings are mutually exclusive

Note: At a 62.45% annual material usage limitation, VOC emissions from EU18 are limited to less than 25 tons per year, therefore, 326 IAC 8-1-6 does not apply.

Total Emissions	VOC	PM/PM10
Uncontrolled (tons/yr)	28.31	19.55
Controlled (tons/yr)	17.83	

METHODOLOGY

- Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
- Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
- Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
- Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
- Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
- Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
- Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
- Total = Worst Coating + Sum of all solvents used

**Appendix A: Secondary Metal Production
VOC and HAP Emissions from Sand Handling**

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Pit ID: 053-00022
Reviewer: Gaurav Shil / EVP

The VOC and HAP emissions from the sand handling process are dependent upon the type of binders being utilized in each particular machine.

The four (4) processes using the binder system are: Floor Mixer (EU8), Bi-Room Mixer (EU9), Core Room Mixer (EU10) and Line Mixer (EU11)

Binder System Used: Phenolic Urethane Nobake Binder (Ashland's "Pepset" Process)

For cores made in-house

Pep Set I 2120

Pollutant Name	Weight Percent (%)	% Evaporated	Maximum Usage (lbs resin/yr)	HAP Emissions (tons/yr)
Aromatic Petroleum Distillates	10.00%	50.00%	197200	4.93
Phenol*	10.00%	0.00%	197200	0.00
1,2,4-Trimethylbenzene	3.00%	5.85%	197200	0.17

Pep Set II 2225

Pollutant Name	Weight Percent (%)	% Evaporated	Maximum Usage (lbs resin/yr)	HAP Emissions (tons/yr)
Polymeric Diphenylmethane Di.	40.00%	0.00%	163200	0.00
Methylene Diphenyldiisocyanate*	35.00%	0.00%	163200	0.00
Aromatic Petroleum Distillates	5.00%	50.00%	163200	2.04
1,2,4-Trimethylbenzene	3.00%	5.85%	163200	0.14

Pep Set Catalyst 3500

Pollutant Name	Weight Percent (%)	% Evaporated	Maximum Usage (lbs resin/yr)	HAP Emissions (tons/yr)
Aromatic Petroleum Distillates	83.00%	72.50%	11480	3.45
1,2,4-Trimethylbenzene	23.00%	72.50%	11480	0.96
Xylene*	13.00%	72.50%	11480	0.54
Isopropylbenzene*	10.00%	72.50%	11480	0.42

Pep Set Catalyst 3451

Pollutant Name	Weight Percent (%)	% Evaporated	Maximum Usage (lbs resin/yr)	HAP Emissions (tons/yr)
Aromatic Petroleum Distillates	89.00%	50.00%	4920	1.09
Napthalene*	16.00%	72.50%	4920	0.29

Total VOCs (tons/yr) 14.03

Total HAPs (tons/yr) 1.24

Notes: The maximum usage is estimated to be twice the actual 1998 product usage (provided by source).

% Evaporated for the Pep Set I 2120 and Pep Set II 2225 are from "Form R - Reporting of Binder Chemicals Used in Foundries"

% Evaporated for the Pep Set 3500 and Pep Set Catalyst 3451 are from the volatility content listed in the vendor's MSDS because "Form R" did not include emissions from the use of catalysts (provided by source).

HAPs are the pollutants marked with an asterik (*) after their name.

Appendix A: Secondary Metal Production

VOC and HAP Emissions from Foundry Processes

Company Name: Bahr Brothers Manufacturing, Inc.
Address City IN Zip: 2545 Lincoln Boulevard, Marion, IN 46952
FESOP: 053-11804-00022
Plt ID: 053-00022
Reviewer: Gaurav Shil / EVP

Pouring/Casting, Casting Cooling and Shakeout Processes

Binder System Used: Phenolic Urethane Nobake Binder (Ashland's "Pepset" Process)

For cores made in-house

Pollutant Name	Emission Factor (lbs pollutant/lbs resin)	Maximum Resin Usage (lbs resin/yr)	HAP Emissions (tons/yr)
Acrolein	0.000005	360400	0.000901
Benzene	0.011209	360400	2.0198618
Formaldehyde	0.00001	360400	0.001802
Hydrogen Cyanide	0.000029	360400	0.0052258
M-Xylene	0.000097	360400	0.0174794
Napthalene	0.000049	360400	0.0088298
O-Xylene	0.000049	360400	0.0088298
Phenol	0.000975	360400	0.175695
Toluene	0.000634	360400	0.1142468
Total Aromatic Amines	0.000049	360400	0.0088298
Total C2 to C5 Aldehydes	0.00307	360400	0.553214
Total Hydrocarbons	0.012159	360400	2.1910518
Total VOCs			5.11
Total HAPs			2.91

Binder System Used: Acrylic-Epoxy Cold Box Binder (Chem-Cast's "Isoset" Process)

For "outsourced" cores

Pollutant Name	Emission Factor (lbs pollutant/lbs resin)	Maximum Resin Usage (lbs resin/yr)	HAP Emissions (tons/yr)
Acrolein	0.000002	80	0.00000008
Benzene	0.000611	80	0.00002444
Formaldehyde	0.000004	80	0.00000016
Hydrogen Cyanide	0.000118	80	0.00000472
M-Xylene	0.000021	80	0.00000084
Napthalene	0.000021	80	0.00000084
O-Xylene	0.000021	80	0.00000084
Phenol	0.000131	80	0.00000524
Toluene	0.000063	80	0.00000252
Total Aromatic Amine	0.000021	80	0.00000084
Total C2 to C5 Aldehydes	0.000063	80	0.00000252
Total Hydrocarbons	0.011941	80	0.00047764
Total VOCs			0.00
Total HAPs			0.00

Total VOC Emissions (tons/yr) 5.11

Total HAP Emissions (tons/yr) 2.91

Notes: Emission factors are from the American Foundrymen's Society (Mosher) research paper.

Maximum resin usage rate is estimated to be twice the actual 1998 total resin usage (provided by source).

The "Acrylic-Epoxy Cold Box Binder System" was not identified in the Mosher research paper, so Green Sand Binder emission factors were used.

Total HAPs include all pollutants except Total Hydrocarbons and Hydrogen Cyanide.