



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: May 25, 2007
RE: Muncie Casting Corp / 035-24428-00061
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 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 4-21.5-3-7 and IC 13-15-7-3 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 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-MOD.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
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May 25, 2007

Mr. Aaron Vest
Muncie Casting Corporation
1406 East 18th Street
P.O. Box 2328
Muncie, IN 47302

Re: 035-24428-00061
First Minor Revision to
FESOP Renewal 035-20291-00061

Dear Mr. Vest:

Muncie Casting Corporation was issued a FESOP Renewal on January 20, 2006 for the operation of a stationary iron and aluminum castings production plant. A letter requesting changes to this permit was received on March 13, 2007. Pursuant to the provisions of 326 IAC 2-8-11.1(d), a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of adding additional equipment and to correct several maximum capacities that were incorrectly stated in the FESOP Renewal 035-20291-00061 issued January 20, 2006.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised permit.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bryan Lange, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7854 to speak directly to Mr. Lange. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely,
Origin signed by

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/BL

cc: File - Delaware County
U.S. EPA, Region V
Delaware County Health Department
Air Compliance Section Inspector - Mark Goldman
Compliance Data Section
Administrative and Development
Technical Support and Modeling - Michele Boner
Billing, Licensing, and Training - Dan Stamatkin



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

**Muncie Casting Corporation
1406 East 18th Street
Muncie, Indiana 47302**

(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 provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and 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.

Operation Permit No.: F035-20291-00061	
Original Signed by: Paul Dubenetzky, Acting Assistant Commissioner Office of Air Quality	Issuance Date: January 20, 2006 Expiration Date: January 20, 2011
First Minor Permit Revision No.: 035-24428-00061	
Issued by: Origin signed by Nisha Sizemore, Chief Permits Branch Office of Air Quality	Pages Affected: Entire Permit Issuance Date: May 25, 2007 Expiration Date: January 20, 2011

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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 aluminum and gray and ductile iron foundry.

Source Address:	1406 East 18 th Street, Muncie, Indiana 47302
Mailing Address:	P.O. Box 2328, Muncie, Indiana 47302
General Source Phone:	765-288-2611
SIC Code:	3365, 3321
County Location:	Delaware
Source Location Status:	Nonattainment for ozone under the 8-hour standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) 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:

Iron Foundry

- (a) One (1) charge handling operation, known as EU1, installed in 1992, capacity: 0.45 tons of iron per hour.
- (b) Two (2) electric melting furnaces, known as the 1,000 pound and the 500 pound furnaces, known as EU2, installed in 1992, throughput capacity: 0.45 tons of iron per hour total limited by single power supply.
- (c) One (1) magnesium treatment of ductile iron operation, known as EU3, installed in 1992, capacity: 0.09 tons of iron per hour.
- (d) One (1) pouring/casting operation, known as EU4, installed in 1992, capacity: 0.45 tons of iron per hour.
- (e) One (1) casting cooling operation, known as EU5, installed in 1992, capacity: 0.45 tons of iron castings per hour.
- (f) One (1) shakeout operation (physically located in the aluminum foundry), known as EU6, installed in 1992, capacity: 0.45 tons of iron castings per hour.

Note exhaust fans #1, #2 and #3 are located above the pouring lines and furnaces in the Iron Foundry.

Aluminum Foundry

- (g) Seven (7) electric melting furnaces, consisting of six (6) (2,300-pound furnaces) and one (1) (700 pound furnace), collectively known as EU7, with three (3) of the 2,300-pound furnaces and the one (1) 700 pound furnace installed in 1992, two (2) of the 2,300-pound furnaces installed in June, 2003, and one (1) of the 2,300-pound

furnaces approved for construction in 2007; total throughput capacity: 7.25 tons of aluminum per hour.

- (h) One (1) natural gas-fired melting furnace, (300 pound furnace) known as EU8, rated at 1.0 million British thermal units per hour, installed in 1980, capacity: 0.09 tons of aluminum per hour.
- (i) One (1) magnesium treatment in the aluminum foundry, known as EU9, installed in 1992, capacity: 1.45 tons of magnesium per hour, 1.69 tons of aluminum per hour.
- (j) One (1) pouring/casting operation, known as EU10, installed in 1980, capacity: 1.99 tons of aluminum and sand per hour.
- (k) One (1) casting cooling operation, known as EU11, installed in 1980, capacity: 1.99 tons of aluminum and sand per hour.
- (l) One (1) shakeout operation, known as EU12, installed in 1980, capacity: 1.99 tons of aluminum and sand per hour.

Note exhaust fans #5 through #8 are located above or near the cooling lines and the 700 pound and two (2) 2,300 pound furnaces in the Aluminum Foundry.

Sand Handling Operations

- (m) One (1) mechanical sand reclamation unit (located in the aluminum foundry and used for both foundries), known as EU13, installed in 1991, capacity: 6.0 tons of sand per hour.
- (n) One (1) thermal sand reclamation unit (located in the aluminum foundry and used for both foundries), known as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, capacity: 1 ton of sand per hour.
- (o) One (1) Strong Scott sand mixer (located in the iron foundry and used for both foundries), known as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, capacity: 6.0 tons of sand per hour.
- (p) One (1) Kloster sand mixer (located in the aluminum foundry and used for both foundries), known as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, capacity: 9.0 tons of sand per hour.
- (q) One (1) Palmer core mixer #1 (located in the aluminum foundry and used for both foundries), known as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, capacity: 6.0 tons of sand per hour.
- (r) One (1) Palmer core mixer #2 (located in the aluminum foundry and used for both foundries), known as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, capacity: 6.0 tons of sand per hour.
- (s) Three (3) sand storage silos, equipped with bin-top filler banks exhausted through Stacks #9, #10 and #11, capacity: 10, 40 and 40 tons, respectively, throughput 1,462.25 tons of sand per year total; [326 IAC 6-3-2]

Cleaning/Finishing Operations

- (t) One (1) GOFF steel shot blast machine (located in the aluminum foundry and used for both foundries), known as EU14, equipped with a baghouse, installed in 1993, exhausted through Stack 4, capacity: 1.096 tons of aluminum or iron casting per hour.

- (u) One (1) small aluminum shot blast machine (located in the aluminum foundry and used for both foundries), known as EU15, equipped with a Viking baghouse, installed in 1993, exhausted inside the building, capacity: 0.16 tons of aluminum or iron castings per hour.
- (v) One (1) sand blaster machine (located in the aluminum foundry and used for both foundries), known as EU16, equipped with a Blast-It-All baghouse, installed in 1980, exhausted inside the building, capacity: 0.16 tons of aluminum or iron castings per hour.

Core and Mold Making Operations

- (w) U-180 and Horizontal Bottom Blow core making operations used for both foundries, identified as EU24, including the following:
 - (1) One (1) U-180 core machine, utilizing a shell binder system, installed in 1998, capacity: 0.045 tons of cores per hour.
 - (2) One (1) U-180 core machine, utilizing a shell binder system, installed in January 2004, capacity: 0.045 tons of cores per hour.
 - (3) One (1) U-180 core machines, utilizing a shell binder system, installed in 2005, capacity: 0.045 tons of cores per hour.
 - (4) Two (2) Horizontal Bottom Blow core machines, each utilizing a shell binder system, approved for construction in 2007, and each with maximum capacity of 0.045 tons of cores per hour.
- (x) One (1) CB-22 core machine (located in the aluminum foundry and used for both foundries), known as EU22, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, capacity: 0.5 tons of cores per hour.
- (y) One (1) Dependable 420 core machine (located in the aluminum foundry and used for both foundries), known as EU23, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, capacity: 0.5 tons of cores per hour.

Additional Operations

- (z) One (1) surface coating spray application process (in the mold and core making areas), known as EU26, installed in 1980, capacity: 8,637 pounds of coating materials per year.
- (aa) Fugitive outdoor waste sand storage and handling, known as EUF1, capacity 20 tons of waste foundry sand.

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

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

- (a) 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.
- (b) The following VOC and HAP storage containers: storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (c) Refractory storage not requiring air pollution control equipment.

- (d) Equipment used exclusively for the following: Packaging lubricants and greases, filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (e) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (f) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (g) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Parts washer (covered cold cleaner), capacity: 40 gallon [326 IAC 8-3]
- (h) Cleaners and solvents characterized as follows: having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38°C (100°F) or; having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (i) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-3-2]
- (j) Closed loop heating and cooling systems.
- (k) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (l) Water based adhesives that are less than or equal to 5 percent by volume of VOCs excluding HAPs.
- (m) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (n) Paved and unpaved roads and parking lots with public access.
- (o) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
- (p) Filter or coalescer media changeout.
- (q) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38°C).
- (r) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (s) Other activities with insignificant thresholds:
 - (1) Two (2) electric heat treating machines;
 - (2) Woodworking activities in the pattern shop (sawing, cutting, routing and planing). [326 IAC 6-3-2]
- (t) Experimental sand and shot blasters for research and development.
- (u) One (1) electric heat treat furnace with no emissions.

- (v) Four (4) core shooters, approved for construction in 2007, each with a maximum capacity of 100 pounds of shell sand per day.

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

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

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

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

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

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

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

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

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

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

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

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

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

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

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

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

B.8 Duty to 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (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.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

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

B.10 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.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form 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, IDEM, OAQ, may require to determine the compliance status of the source.

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

B.12 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

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

- (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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.13 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.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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 2-7-5(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 "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 2-7-4(c)(9) 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 2-7 and any other applicable rules.
- (g) 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit [326 IAC 2-8-4(5)(C)]. The

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

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

B.16 Permit Renewal [326 IAC 2-8-3(h)]

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

Request for renewal shall be submitted to:

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

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
 - (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
 - (2) If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

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

B.17 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 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 2-7-20(b), (c), or (e), 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 preconstruction approval required by 326 IAC 2-7-10.5 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 emissions trades that are subject to 326 IAC 2-7-20(b), (c), or (e). 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 2-7-20(b)(1), (c)(1), and (e)(2).

- (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 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
 - (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 is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(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 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(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 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.19 Permit Revision Requirement [326 IAC 2-8-11.1]

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

B.20 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.21 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 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.23 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

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

C.1 Particulate Emission Limitations for Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [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 also make the requirements of 326 IAC 2-2 PSD and 326 IAC 2-3 (Emission Offset) 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) Pursuant to 326 IAC 2-2 (PSD), 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.

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

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

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

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

C.7 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 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 14-10-1 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the 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 upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

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

C.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 prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures in October, 2000.
- (b) 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;
 - (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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

- (a) Records of all required 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) 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

FACILITY OPERATION CONDITIONS

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

Iron Foundry

- (a) One (1) charge handling operation, known as EU1, installed in 1992, capacity: 0.45 tons of iron per hour.
- (b) Two (2) electric melting furnaces, known as the 1,000 pound and the 500 pound furnaces, known as EU2, installed in 1992, throughput capacity: 0.45 tons of iron per hour total limited by single power supply.
- (c) One (1) magnesium treatment of ductile iron operation, known as EU3, installed in 1992, capacity: 0.09 tons of iron per hour.
- (d) One (1) pouring/casting operation, known as EU4, installed in 1992, capacity: 0.45 tons of iron per hour.
- (e) One (1) casting cooling operation, known as EU5, installed in 1992, capacity: 0.45 tons of iron castings per hour.
- (f) One (1) shakeout operation (physically located in the aluminum foundry), known as EU6, installed in 1992, capacity: 0.45 tons of iron castings per hour.

Note

Exhaust fans #1, #2 and #3 are located above the pouring lines and furnaces in the Iron Foundry.

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

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

D.1.1 PM, PM₁₀ and CO [326 IAC 2-8-4][326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, and to render the requirements of 326 IAC 2-2 not applicable, the throughput for the iron foundry shall be limited as follows:
 - (1) The total throughput of iron to the iron foundry, including the iron charge handling operation (EU1), the two (2) electric melting furnaces (EU2), the iron pouring/casting operation (EU4), the iron casting cooling operation (EU5), and the iron shakeout operation (EU6) shall not exceed 1,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
 - (2) The throughput of iron to the iron magnesium treatment operation (EU3) shall not exceed 200 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (b) The PM emissions for the iron foundry shall be limited as follows:
 - (1) PM emissions from the iron charge handling operation (EU1) shall not exceed 0.60 pound per ton of iron throughput;
 - (2) Total PM emissions from the two (2) electric melting furnaces (EU2) shall not exceed 0.90 pound per ton of combined iron throughput;

- (3) Total PM emissions from the iron pouring/casting operation (EU4) and the iron casting cooling operation (EU5) shall not exceed 4.2 pounds per ton of iron throughput;
- (4) PM emissions from the iron shakeout operation (EU6) shall not exceed 3.2 pounds per ton of iron throughput;
- (5) PM emissions from the iron magnesium treatment operation (EU3) shall not exceed 1.80 pounds per ton of iron throughput.

Compliance with these emission limits is necessary to render the requirements of 326 IAC 2-2 not applicable.

- (c) Pursuant to 326 IAC 2-8-4, the PM10 emissions for the iron foundry shall be limited as follows:

- (1) PM10 emissions from the iron charge handling operation (EU1) shall not exceed 0.36 pound per ton of iron throughput;
- (2) Total PM10 emissions from the two (2) electric melting furnaces (EU2) shall not exceed 0.86 pound per ton of combined iron throughput;
- (3) Total PM10 emissions from the iron pouring/casting operation (EU4) and the iron casting cooling operation (EU5) shall not exceed 2.06 pound per ton of iron throughput;
- (4) PM10 emissions from the iron shakeout operation (EU6) shall not exceed 2.24 pounds per ton of iron throughput;
- (5) PM10 emissions from the iron magnesium treatment operation (EU3) shall not exceed 1.80 pounds per ton of iron throughput;

Compliance with these PM10 emission limits is necessary to satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) and 326 IAC 2-2 do not apply.

- (d) Pursuant to 326 IAC 2-8-4, the CO emissions from the pouring, cooling and shakeout operations in the iron foundry shall be limited to 15.2 pound per ton of iron throughput.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Iron Foundry		
Charge Handling EU1	0.45	2.40
Two (2) Electric Melting Furnaces (EU2)	0.45 total	2.40 total
Magnesium Treatment (EU3)	0.09	0.817
Pouring/Casting (EU4) & Casting Cooling (EU5)	1.038	4.20
Shakeout (EU6)	0.519	2.64

- (b) The pounds per hour limitations were calculated using the following equation:

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

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

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.3 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of iron throughput as applicable for each of the facilities included in Condition D.1.1.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 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 require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY OPERATION CONDITIONS

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

Aluminum Foundry

- (g) Seven (7) electric melting furnaces, consisting of six (6) (2,300-pound furnaces) and one (1) (700 pound furnace), collectively known as EU7, with three (3) of the 2,300-pound furnaces and the one (1) 700 pound furnace installed in 1992, two (2) of the 2,300-pound furnaces installed in June, 2003, and one (1) of the 2,300-pound furnaces approved for construction in 2007; total throughput capacity: 7.25 tons of aluminum per hour.
- (h) One (1) natural gas-fired melting furnace, (300 pound furnace) known as EU8, rated at 1.0 million British thermal units per hour, installed in 1980, capacity: 0.09 tons of aluminum per hour.
- (i) One (1) magnesium treatment in the aluminum foundry, known as EU9, installed in 1992, capacity: 1.45 tons of magnesium per hour, 1.69 tons of aluminum per hour.
- (j) One (1) pouring/casting operation, known as EU10, installed in 1980, capacity: 1.99 tons of aluminum and sand per hour.
- (k) One (1) casting cooling operation, known as EU11, installed in 1980, capacity: 1.99 tons of aluminum and sand per hour.
- (l) One (1) shakeout operation, known as EU12, installed in 1980, capacity: 1.99 tons of aluminum and sand per hour.

Note exhaust fans #5 through #8 are located above or near the cooling lines and the 700 Lb and two (2) 2,300 Lb furnaces in the Aluminum Foundry.

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

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

D.2.1 PM, PM₁₀ and CO [326 IAC 2-8-4][326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, and to render the requirements of 326 IAC 2-2 not applicable, the throughput for the aluminum foundry shall be limited as follows:
 - (1) The total throughput of aluminum to the aluminum foundry, including the five (5) 2,300 lb melting furnaces and one (1) 700 lb melting furnace (EU7), the one (1) 300 lb melting furnace (EU8), the aluminum pouring/casting operation (EU10), the aluminum casting cooling operation (EU11), and the aluminum shakeout operation (EU12), shall not exceed 12,042 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
 - (2) The throughput of aluminum to the aluminum magnesium treatment operation (EU9) shall not exceed 10,236 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (b) The PM emissions for the aluminum foundry shall be limited as follows:
 - (1) Total PM emissions from the five (5) 2,300 lb melting furnaces and one (1) 700 lb melting furnace (EU7), and the one (1) 300 lb melting furnace (EU8) shall not exceed 1.90 pounds per ton of aluminum throughput;
 - (2) Total PM emissions from the aluminum pouring/casting operation (EU10) and the aluminum casting cooling operation (EU11) shall not exceed 4.2 pounds per ton

of aluminum throughput;

- (3) PM emissions from the aluminum shakeout operation (EU12) shall not exceed 3.2 pounds per ton of iron throughput;
- (4) PM emissions from the aluminum magnesium treatment operation (EU9) shall not exceed 1.80 pounds per ton of aluminum throughput;

Compliance with these emission limits is necessary to render the requirements of 326 IAC 2-2 not applicable.

- (c) Pursuant to 326 IAC 2-8-4, the PM10 emissions for the aluminum foundry shall be limited as follows:

- (1) Total PM10 emissions from the five (5) 2,300 lb melting furnaces and one (1) 700 lb melting furnace (EU7), and the one (1) 300 lb melting furnace (EU8) shall not exceed 1.70 pounds per ton of aluminum throughput;
- (2) Total PM10 emissions from the aluminum pouring/casting operation (EU10) and the aluminum casting cooling operation (EU11) shall not exceed 2.06 pound per ton of aluminum throughput;
- (3) PM10 emissions from the aluminum shakeout operation (EU12) shall not exceed 2.24 pounds per ton of iron throughput;
- (4) PM10 emissions from the aluminum magnesium treatment operation (EU9) shall not exceed 1.80 pounds per ton of aluminum throughput.

Compliance with these PM10 emission limits is necessary to satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) and 326 IAC 2-2 do not apply.

- (d) Pursuant to 326 IAC 2-8-4, the CO emissions from the pouring, cooling and shakeout operations in the iron foundry shall be limited to 15.2 pound per ton of aluminum throughput.

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Aluminum Foundry		
Six (6) 2,300lb Melting Furnace (EU7)	6.90 (1.15 each)	5.78 (1.74 each)
700 lb Melting Furnace (EU7)	0.23	1.53
300 lb Melting Furnace (EU8)	0.09	0.82
Magnesium Treatment (EU9)	1.69	5.83
Pouring/Casting (EU10) & Casting Cooling (EU11)	3.98	10.34
Shakeout (EU12)	1.99	6.50

D.2.3 Material Usage [40 CFR 63, Subpart RRR]

The Permittee shall only melt clean charge, customer returns, or internal scrap in the aluminum foundry as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.4 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records of aluminum throughput as applicable for each of the facilities included in Condition D.2.1.
- (b) To document compliance with Condition D.2.3, the Permittee shall maintain records of determinations of the type, quality and origin of all materials melted at this source required under Condition D.2.3.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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

SECTION D.3

FACILITY OPERATION CONDITIONS

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

Sand Handling Operations

- (m) One (1) mechanical sand reclamation unit (located in the aluminum foundry and used for both foundries), known as EU13, installed in 1991, capacity: 6.0 tons of sand per hour.
- (n) One (1) thermal sand reclamation unit (located in the aluminum foundry and used for both foundries), known as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, capacity: 1 ton of sand per hour.
- (o) One (1) Strong Scott sand mixer (located in the iron foundry and used for both foundries), known as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, capacity: 6.0 tons of sand per hour.
- (p) One (1) Kloster sand mixer (located in the aluminum foundry and used for both foundries), known as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, capacity: 9.0 tons of sand per hour.
- (q) One (1) Palmer core mixer #1 (located in the aluminum foundry and used for both foundries), known as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, capacity: 6.0 tons of sand per hour.
- (r) One (1) Palmer core mixer #2 (located in the aluminum foundry and used for both foundries), known as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, capacity: 6.0 tons of sand per hour.
- (s) Three (3) sand storage silos, equipped with bin-top filler banks exhausted through Stacks #9, #10 and #11, capacity: 10, 40 and 40 tons, respectively, throughput 1,462.25 tons of sand per year total; [326 IAC 6-3-2]

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

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

D.3.1 PM and PM₁₀ [326 IAC 2-8-4][326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, and to render the requirements of 326 IAC 2-2 not applicable, the throughput for the sand handling operations shall be limited as follows:
 - (1) The combined throughput of sand to the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
 - (2) The throughput of sand to the mechanical sand reclamation unit (EU13) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
 - (3) The throughput of sand to the thermal sand reclamation unit (EU17) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The PM emissions for the sand handling operations shall be limited as follows:
 - (1) Total PM emissions from the Kloster Sand Mixer (EU19), the Palmer Core Mixer

#1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) shall not exceed 0.36 pounds per ton of sand throughput;

- (2) PM emissions from the mechanical sand reclamation unit (EU13) shall not exceed 3.6 pounds per ton of sand throughput;
- (3) PM emissions from the baghouse controlling the thermal sand reclamation unit (EU17) shall not exceed 0.10 pound per ton of sand throughput;

Compliance with these emission limits is necessary to render the requirements of 326 IAC 2-2 not applicable.

(c) Pursuant to 326 IAC 2-8-4, the PM10 emissions for the sand handling operations shall be limited as follows:

- (1) Total PM10 emissions from the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) shall not exceed 0.54 pounds per ton of sand throughput;
- (2) PM10 emissions from the mechanical sand reclamation unit (EU13) shall not exceed 0.54 pounds per ton of sand throughput;
- (3) PM10 emissions from the baghouse controlling the thermal sand reclamation unit (EU17) shall not exceed 4.926 pounds per ton of sand throughput;

Compliance with these PM10 emission limits is necessary to satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) and 326 IAC 2-2 do not apply.

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Mechanical Sand Reclamation Unit (EU13)	6.0	13.6
Thermal Sand Reclamation Unit (EU17)	1.0	4.10
Strong Scott Mixer (EU18)	6.0	13.6
Closter Mixer (EU19)	9.0	17.9
Palmer Core Mixer #1 (EU20)	6.0	13.6
Palmer Core Mixer #2 (EU21)	6.0	13.6

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 thermal sand reclamation unit (EU17), the two (2) sand mixers and the two core (2) mixers, known as EU18 through EU21, and their control devices.

Compliance Determination Requirements

D.3.4 Particulate Control

- (a) In order to comply with conditions D.3.1 and D.3.2, the baghouse for particulate control shall be in operation and control emissions from the thermal sand reclamation unit (EU17) at all times that the thermal sand reclamation unit (EU17) is in operation.
- (b) In order to comply with condition D.3.1, the inherent moisture and binder resins shall be used with the Strong Scott and Kloster sand mixers and the two (2) Palmer core mixers at all times that the mixers are in operation.

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

D.3.5 Visible Emissions Notations

- (a) Visible emission notations of the four (4) mixers (EU18 - EU21) and the thermal sand reclamation unit (EU17), respectively, shall be performed once per day 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 at any baghouse exhaust, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit.

D.3.6 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the thermal sand reclamation unit (EU17) at least daily when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 8.0 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.3.7 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 emissions unit. 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 Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.8 Record Keeping Requirements

- (a) To document compliance with Condition D.3.5, the Permittee shall maintain records of daily visible emission notations of the four (4) mixers (EU18 - EU21) and the thermal sand reclamation unit (EU17), respectively. 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.3.6, the Permittee shall maintain the following:
 - (1) Daily records of the pressure drop during normal operation.
 - (2) 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) To document compliance with Condition D.3.1(a)(1), the Permittee shall maintain records of combined sand throughput to the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) on a monthly basis.
- (d) To document compliance with Condition D.3.1(a)(2), the Permittee shall maintain records of the total sand throughput to the mechanical sand reclamation unit (EU13) on a monthly basis.
- (e) To document compliance with Condition D.3.1(a)(3), the Permittee shall maintain records of the total sand throughput to the thermal sand reclamation unit (EU17) on a monthly basis.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.9 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 require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.4

FACILITY OPERATION CONDITIONS

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

Cleaning/Finishing Operations

- (t) One (1) GOFF steel shot blast machine (located in the aluminum foundry and used for both foundries), known as EU14, equipped with a baghouse, installed in 1993, exhausted through Stack 4, capacity: 1.096 tons of aluminum or iron castings per hour.
- (u) One (1) small aluminum shot blast machine (located in the aluminum foundry and used for both foundries), known as EU15, equipped with a Viking baghouse, installed in 1993, exhausted inside the building, capacity: 0.16 tons of aluminum or iron castings per hour.
- (v) One (1) sand blaster machine (located in the aluminum foundry and used for both foundries), known as EU16, equipped with a Blast-It-All baghouse, installed in 1980, exhausted inside the building, capacity: 0.16 tons of aluminum or iron castings per hour.

Core and Mold Making Operations

- (w) U-180 and Horizontal Bottom Blow core making operations used for both foundries, identified as EU24, including the following:
 - (1) One (1) U-180 core machine, utilizing a shell binder system, installed in 1998, capacity: 0.045 tons of cores per hour.
 - (2) One (1) U-180 core machine, utilizing a shell binder system, installed in January 2004, capacity: 0.045 tons of cores per hour.
 - (3) One (1) U-180 core machines, utilizing a shell binder system, installed in 2005, capacity: 0.045 tons of cores per hour.
 - (4) Two (2) Horizontal Bottom Blow core machines, each utilizing a shell binder system, approved for construction in 2007, and each with maximum capacity of 0.045 tons of cores per hour.
- (x) One (1) CB-22 core machine (located in the aluminum foundry and used for both foundries), known as EU22, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, capacity: 0.5 tons of cores per hour.
- (y) One (1) Dependable 420 core machine (located in the aluminum foundry and used for both foundries), known as EU23, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, capacity: 0.5 tons of cores per hour.

Additional Operations

- (z) One (1) surface coating spray application process (in the mold and core making areas), known as EU26, installed in 1980, capacity: 8,637 pounds of coating materials per year.
- (aa) Fugitive outdoor waste sand storage and handling, known as EUF1, capacity 20 tons of waste foundry sand.

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

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

D.4.1 PM and PM₁₀ [326 IAC 2-8-4][326 IAC 2-2]

(a) Pursuant to 326 IAC 2-8-4, and to render the requirements of 326 IAC 2-2 not applicable, the throughput for the cleaning/finishing operations shall be limited as follows:

- (1) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed 7,825 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (3) The throughput of metal castings to the sand blaster machine (EU16) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM emissions for the cleaning/finishing operations shall be limited as follows:

- (1) The PM emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 0.85 pound per ton of metal castings throughput;
- (2) The PM emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 0.85 pound per ton of metal castings throughput;
- (3) The PM emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 0.85 pound per ton of metal castings throughput.

Compliance with these emission limits is necessary to render the requirements of 326 IAC 2-2 not applicable.

(c) Pursuant to 326 IAC 2-8-4, the PM₁₀ emissions for the sand handling operations shall be limited as follows:

- (1) The PM₁₀ emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 1.7 pounds per ton of metal castings throughput;
- (2) The PM₁₀ emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 1.7 pounds per ton of metal castings throughput;
- (3) The PM₁₀ emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 1.7 pounds per ton of metal castings throughput.

Compliance with these PM₁₀ emission limits is necessary to satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) and 326 IAC 2-2 do not apply.

D.4.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
GOFF Shot Blaster (EU14)	1.096	4.36
Small Aluminum Shot Blaster (EU15)	0.16	1.2
Sand Blaster (EU16)	0.16	1.2

D.4.3 Volatile Organic Compounds [326 IAC 8-1-6]

Any change or modification which may increase the potential emissions of VOC to twenty-five (25) tons per year from the core machines (EU22 - EU24), the four (4) U-180 core machines, and/or pattern parting booth and the core release application area (EU26) must be approved by the Office of Air Quality before such change may occur.

D.4.4 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 two (2) shot blaster machines (EU14 and EU15) and the one (1) sand blaster machine (EU16) and their control devices.

Compliance Determination Requirements

D.4.5 Particulate Control

In order to comply with conditions D.4.1 and D.4.2, the baghouses for particulate control shall be in operation and control emissions from the two (2) shot blaster machines (EU14 and EU15) and the one (1) sand blaster machine (EU16) at all times that the two (2) shot blaster machines (EU14 and EU15) and the one (1) sand blaster machine (EU16) are in operation.

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

D.4.6 Visible Emissions Notations

- (a) Visible emission notations of the stack exhausts 4 and 12 for the GOFF shot blaster (EU14) shall be performed once per day 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 at any baghouse exhaust, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit.

D.4.7 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the GOFF blaster (EU14) at least daily when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 8.0 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 - Other 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.4.8 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 emissions unit. 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 Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.4.9 Record Keeping Requirements

- (a) To document compliance with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the stack exhausts 4 and 12 for the GOFF shot blaster (EU14). 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.4.7, the Permittee shall maintain the following:
 - (1) Daily records of the pressure drop during normal operation.
 - (2) 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) To document compliance with Condition D.4.1(a), the Permittee shall maintain records of the throughput of metal castings to each of the GOFF shot blast machine (EU14), the small shot blast machine (EU15) and the sand blaster machine on a monthly basis.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.1 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 require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.5

FACILITY OPERATION CONDITIONS

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

- (g) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Parts washer (covered cold cleaner), capacity: 40 gallon [326 IAC 8-3]
- (i) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-3-2]
- (o) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
- (s) Other activities with insignificant thresholds:
 - (1) Two (2) electric heat treating machines;
 - (2) Woodworking activities in the pattern shop (sawing, cutting, routing and planing). [326 IAC 6-3-2]

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

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

D.5.1 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.5.2 Volatile Organic Compounds (VOC)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)));

- (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.5.3 Particulate Matter (PM) [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. This limit applies to the following units:

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-3-2]

- (b) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
- (c) Other activities with insignificant thresholds:
 - (1) Woodworking activities in the pattern shop (sawing, cutting, routing and planing). [326 IAC 6-3-2]

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061

**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: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <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: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061
Facility: Iron charge handling (EU1), two (2) iron melt furnaces (EU2), iron magnesium treatment (EU3), iron pouring/casting (EU4), iron casting cooling (EU5), iron shakeout (EU6)
Parameter: Iron throughput to limit PM and PM10 emissions
Limit: The total throughput of iron to the iron foundry, including EU1, EU2, EU4, EU5, and EU6 shall not exceed 1,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of iron to the iron magnesium treatment operation (EU3) shall not exceed 200 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

YEAR: _____

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Iron Throughput This Month (tons)	Iron Throughput Previous 11 Months (tons)	12 Month Total Iron Throughput (tons)
Month 1	EU1, EU2, EU4, EU5, EU6			
	EU3			
Month 2	EU1, EU2, EU4, EU5, EU6			
	EU3			
Month 3	EU1, EU2, EU4, EU5, EU6			
	EU3			

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: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061
Facility: Six (6) 2300 lb and one (1) 700 lb melt furnace (EU7), one (1) 300 lb melt furnace (EU8), aluminum magnesium treatment (EU9), aluminum pouring/casting (EU10), aluminum casting cooling (EU11), aluminum shakeout (EU12)
Parameter: Aluminum throughput to limit PM and PM10 emissions
Limit: The total throughput of aluminum to the aluminum foundry, including the six (6) 2,300 lb melting furnaces and one (1) 700 lb melting furnace (EU7), the one (1) 300 lb melting furnace (EU8), the aluminum pouring/casting operation (EU10), the aluminum casting cooling operation (EU11), and the aluminum shakeout operation (EU12), shall not exceed 12,042 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of aluminum to the aluminum magnesium treatment operation (EU9) shall not exceed 10,236 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

YEAR: _____

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Aluminum Throughput This Month (tons)	Aluminum Throughput Previous 11 Months (tons)	12 Month Total Aluminum Throughput (tons)
Month 1	EU7, EU8, EU10, EU11, EU12			
	EU9			
Month 2	EU7, EU8, EU10, EU11, EU12			
	EU9			
Month 3	EU7, EU8, EU10, EU11, EU12			
	EU9			

- 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: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061
Facility: Kloster Sand Mixer (EU19), Palmer Core Mixer #1 (EU20), Palmer Core Mixer #2 (EU21), Strong Scott Sand Mixer (EU18)
Parameter: Sand throughput to limit PM and PM10 emissions
Limit: The combined throughput of sand to EU18, EU19, EU20, and EU21 shall not exceed 9,675 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
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: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061
Facility: mechanical sand reclamation unit (EU13), thermal sand reclamation unit (EU17)
Parameter: Sand throughput to limit PM and PM10 emissions
Limit: The throughput of sand to the mechanical sand reclamation unit (EU13) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of sand to the thermal sand reclamation unit (EU17) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
Month 1	EU13			
	EU17			
Month 2	EU13			
	EU17			
Month 3	EU13			
	EU17			

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: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061
Facility: GOFF shot blast machine (EU14), small shot blast machine (EU15), sand blaster machine (EU16)
Parameter: Metal casting throughput to limit PM and PM10 emissions
Limit: The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed 7,825 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of metal castings to the sand blaster machine (EU16) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Metal Casting Throughput This Month (tons)	Metal Casting Throughput Previous 11 Months (tons)	12 Month Total Metal Casting Throughput (tons)
Month 1	EU14			
	EU15			
	EU16			
Month 2	EU14			
	EU15			
	EU16			
Month 3	EU14			
	EU15			
	EU16			

- 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: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061

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>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
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:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

**Technical Support Document (TSD) for a Minor Permit Revision (MPR) to a
Federally Enforceable State Operating Permit**

Source Background and Description

Source Name:	Muncie Casting Corporation
Source Location:	1406 East 18th Street, Muncie, IN 47302
County:	Delaware
SIC Code:	3321
Operation Permit No.:	035-20291-00061
Operation Permit Issuance Date:	January 20, 2006
Permit Revision No.:	035-24428-00061
Permit Reviewer:	ERG/BL

The Office of Air Quality (OAQ) has reviewed a revision application from Muncie Casting Corporation relating to the operation of a stationary iron and aluminum castings production plant.

History

On March 5, 2007, Muncie Casting Corporation submitted an application to the OAQ requesting to add additional equipment and to correct several maximum capacities that were incorrectly stated in the FESOP Renewal 035-20291-00061 issued January 20, 2006. Muncie Casting Corporation is requesting the following changes to their FESOP:

1. FESOP Renewal 035-20291-00061 issued January 20, 2006 identifies four (4) U-180 core machines located in the Iron Foundry. Due to customer demand only three (3) of the four (4) permitted U-180 core machines described in SPR 035-19855-00061 issued July 26, 2005 were installed. To meet future customer demand the facility has installed two (2) new Horizontal Bottom Blow core machines in the Iron Foundry. These machines are similar to the operating U-180 core machines; both use a shell sand binder system and have identical maximum process capacities.

Muncie Casting also plans to install an additional 2,300-pound furnace, for a total of six (6) 2,300 pound aluminum electric melting furnaces.

Pursuant to 326 IAC 2-2, the total throughput of aluminum to the aluminum foundry shall not exceed 12,042 tons per year; therefore this new unit will not change the source potential emission after issuance.

2. FESOP Renewal 035-20291-00061 issued January 20, 2006 included several errors in permit descriptive information. The specific errors are listed below:
 - (a) The Permit No. 035-20291-00061 identified the maximum capacity of the mechanical sand reclamation (EU13) as 1.5 tons of sand per hour. The actual maximum capacity is 6.0 tons per hour. Pursuant to 326 IAC 2-2, sand to the mechanical sand reclamation unit (EU13) shall not exceed 9,675 tons per year; therefore this unit's potential emission after issuance will not change.
 - (b) The Permit No. 035-20291-00061 identified the maximum capacity of the magnesium treatment process (EU9) as 1.17 tons of aluminum per hour. The

actual maximum capacity is 1.69 tons of aluminum per hour. Pursuant to 326 IAC 2-2 the magnesium treatment for aluminum (EU9) shall not exceed 10,236 tons per year; therefore this unit's potential emission after issuance will not change.

- (c) The Permit No. 035-20291-00061 identified the maximum capacity of the pouring/casting operation (EU10), the casting cooling operation (EU11), and the shakeout operation (EU12) as 1.71 tons of aluminum per hour. The actual maximum capacity is 1.99 tons of aluminum per hour. These capacities include maximum metal and sand throughputs. Pursuant to 326 IAC 2-2, the total throughput of aluminum to the aluminum foundry shall not exceed 12,042 tons per year.
- 3 Muncie Casting has installed four (4) new core shooters in the Iron Foundry to make very small cores for certain parts manufactured on an infrequent basis. Calculated emissions show that this equipment is insignificant.
- 4 Muncie Casting is phasing out the outdoor sand handling and storage operation because the facility has installed mechanical and thermal sand reclamation units to internally reclaim the sand. As a result trivial amounts of used sand are removed from the sand handling system and stored outside in covered roll-off boxes while waiting for disposal. It should also be noted that the source is under an IDEM Agreed Order to remove all waste foundry sand currently stored outside the facility on the ground. This sand was generated before the reclamation units were installed, and the deadline for removal of this sand is October 2007.
- 5 Muncie Casting provided additional HAP emission detail for the iron melt furnaces (EU2) and the aluminum melt furnaces (EU7 and EU8). No HAP emissions are expected from the magnesium treatment (EU9).

Existing Approvals

The source was issued a FESOP Renewal F035-20291-00061 on January 20, 2006. There have been no additional approvals issued since the Renewal.

Enforcement Issue

IDEM is aware that equipment, two (2) new Horizontal Bottom Blow core machines, has been operated prior to receipt of the proper permit. 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 Minor Permit Revision 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 application for the purposes of this review was received on March 13, 2007.

Emission Calculations

See Appendix A of this document for detailed emissions calculations for this revision (pages 1 through 10).

Potential To Emit of the Revision

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

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

Pollutant	Potential To Emit (tons/year)
PM	24.7
PM-10	10.4
SO ₂	0.02
VOC	5.77
CO	64.1
NO _x	0.01

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)
TOTAL	0.79

Justification for Revision

The FESOP is being modified through a FESOP Minor Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(d)(4), because this modification results in a potential to emit of PM less than twenty-five (25) tons per year and in a potential to emit of CO less than one hundred (100) tons per year.

Potential to Emit after Revision

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

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Iron Charge Handling (EU1) ⁽¹⁾	0.30	0.18	-	-	-	-	-
Two (2) iron melt furnaces (EU2) ⁽¹⁾	0.45	0.43	-	-	-	-	0.07
Magnesium treatment for iron (EU3) ⁽¹⁾	0.18	0.18	-	-	-	-	0.60
Iron Pouring/casting (EU4) & Iron Casting cooling (EU5) ⁽¹⁾⁽²⁾	2.10	1.03	0.01	0.07	3.50	0.01	See EU10, EU11, and EU12 for emissions
Iron Foundry Shakeout (EU6) ⁽¹⁾⁽²⁾	1.60	1.12	-	0.60	3.50	-	
Three (3) U-180 core machines (EU24) and Two (2) Horizontal Bottom Blow core machines ⁽³⁾	-	-	-	22.0	-	-	-
Seven (7) aluminum melt furnaces (EU7) ⁽⁴⁾ and One (1) 300 pound aluminum melt furnace (EU8) ⁽⁴⁾⁽⁵⁾	11.4	10.2	-	1.20	-	-	0.03
Magnesium treatment for aluminum (EU9) ⁽⁴⁾	9.21	9.21	-	-	-	-	negligible

Aluminum Pouring/casting & Casting cooling (EU10 & EU11) ⁽²⁾⁽⁴⁾	25.3	12.4	0.12	0.84	42.2	0.06	6.59 (includes EU4, EU5, and EU6)
Aluminum Foundry Shakeout (EU12) ⁽²⁾⁽⁴⁾	19.3	13.5	-	7.23	42.2	-	
Mechanical Sand Reclamation (EU13) ⁽⁶⁾	17.4	2.61	-	-	-	-	-
GOFF steel shot blast machine (EU14) ⁽⁷⁾	3.33	0.33	-	-	-	-	-
Small Aluminum shot blast machine (EU15) ⁽⁸⁾	0.50	0.05	-	-	-	-	-
Sand blaster machine (EU16) ⁽⁹⁾	0.50	0.05	-	-	-	-	-
Thermal sand reclamation (EU17) ⁽⁵⁾⁽⁶⁾	0.48	0.48	0.01	0.05	0.74	0.88	0.02
Strong Scott sand mixer (EU18) ⁽¹⁰⁾ + Kloster sand mixer (EU19) ⁽¹⁰⁾ + Palmer core mixer #1 (EU20) ⁽¹⁰⁾ + Palmer core mixer #2 (EU21) ⁽¹⁰⁾	1.74	0.26	-	-	-	-	-
CB-22 core machine (EU22) and Dependable 420 core machine (EU23) ⁽¹¹⁾	-	-	3.75	10.5	-	-	1.03
Surface coating (EU26)	0.51	0.51	-	2.64	-	-	0.07
New Core shooters	-	-	-	0.20	-	-	0.07
Total Emissions	94.3	52.6	3.89	45.4 45.3	92.0	0.95	7.69 8.46

Notes:

- (1) Emissions from the iron melting and casting process are based on a limited iron throughput of 1,000 tons per twelve (12) consecutive month period.
- (2) HAP emissions from pouring, cooling, and shakeout are based on the total source-wide binder usage and therefore represent combined emissions from pouring, cooling, and shakeout at both the iron and aluminum foundries.
- (3) Emissions from the three U-180 core machines are based on a maximum resin bonded sand throughput of 800,000 pounds per twelve (12) consecutive month period.
- (4) Emissions from the aluminum melting and casting process are based on a limited aluminum throughput of 12,042 tons per twelve (12) consecutive month period.
- (5) Emissions from the one (1) 300 pound melt furnace and the thermal sand reclamation include emissions from natural gas combustion.
- (6) Emissions from mechanical sand reclamation and thermal sand reclamation are each based on a limited maximum sand throughput of 9,675 tons per twelve (12) consecutive month period.
- (7) Emissions from the GOFF shotblast machine are based on a maximum metal (aluminum and iron) throughput of 7,825 tons per twelve (12) consecutive month period.
- (8) Emissions from the Small aluminum shotblast machine are based on a maximum metal (aluminum and iron) throughput of 1,174 tons per twelve (12) consecutive month period.
- (9) Emissions from the Sand blaster machine are based on a maximum metal (aluminum and iron) throughput of 1,174 tons per twelve (12) consecutive month period.
- (10) Emissions from sand and core mixers are based on a maximum sand throughput of 9,675 tons per twelve (12) consecutive month period.
- (11) As stated in the original FESOP, SO₂ gas emissions from these core machines are from the Isojet activator component.

After adding additional equipment and correcting the maximum capacity of the mechanical sand reclamation unit, the potential to emit of the criteria pollutants from the entire source is still less than the Title V major source thresholds. Therefore, the requirements of 326 IAC 2-7 are not applicable to this source.

County Attainment Status

The source is located in Delaware County.

Pollutant	Status
PM-10	Attainment
PM2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
8-hour Ozone	Maintenance
CO	Attainment
Lead	Attainment

Note: On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard and revoking the one-hour ozone standard in Indiana.

- (a) Delaware County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability - Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) emissions are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Delaware County has been designated as maintenance for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.
- (c) Delaware County has been classified as attainment or unclassifiable in Indiana for PM-10, SO₂, NO₂, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.
- (d) Fugitive Emissions
This type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2. Therefore, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD applicability.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this revision for this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) included in this revision for this source.
- (c) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63.1500 through 63.1519, Subpart RRR, because pursuant to 40 CFR 63.1500 (d), the requirements of this subpart do not apply to manufacturers of aluminum die castings, aluminum foundries, or aluminum extruders that melt no materials other than clean charge and materials generated within the facility; and that also do not operate a thermal chip dryer, sweat furnace or scrap dryer/delacquering kiln/decoating kiln. This source only melts clean charge and does not operate a thermal chip dryer, sweat furnace or scrap dryer/delacquering kiln/decoating kiln, therefore, the requirements of this rule do not apply.

- (d) On April 22, 2004, U.S. EPA promulgated a NESHAP for iron and steel foundries. The NESHAP, 40 CFR 63.7680 - 63.7762, Subpart EEEEE, applies to each new or existing iron and steel foundry that is a major source of HAPs. A major source of HAPs is a source that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAPs at a rate of 25 tons or more per year. This source is not a major source of HAPs and is therefore not subject to this rule.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

Since the source is melting and casting iron, it is considered a secondary metal production plant, and therefore one of the 28 listed source categories. The source has accepted throughput limits for aluminum, iron and sand for the emission units at this source, so that source-wide PM emissions, including potential PM emissions from insignificant activities, are limited to less than 100 tons per year making this a minor PSD source. The limits pursuant to 326 IAC 2-8-4 (FESOP) will limit source-wide PM10 emissions to less than 100 tons per year. Therefore, this source is a minor source under PSD because it is one of the twenty eight (28) listed source categories under this rule and the potential emissions of all regulated criteria pollutants are limited to less than 100 tons per year.

This modification to an existing minor PSD source is not major for PSD, because the unrestricted potential to emit of this modification is less than the PSD significant levels for all pollutants. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

State Rule Applicability - Individual Facilities

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

The particulate from the facilities at this source shall be limited as specified in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)
Iron Foundry			
Charge Handling EU1	0.45	2.40	0.07 (limited)
Two (2) Electric Melting Furnaces (EU2)	0.45 total	2.40 total	0.10 (total after limit)
Magnesium Treatment (EU3)	0.09	0.817	0.04 (limited)
Pouring/Casting (EU4) & Casting Cooling (EU5)*	1.038	4.20	0.48 (limited)
Shakeout (EU6)*	0.519	2.64	0.37 (limited)
Aluminum Foundry			
Six (6) 2,300 lb Melting Furnace (EU7)	6.90 (1.15 each)	5.78 (1.74 each)	3.17 (0.53 each)
700 lb Melting Furnace (EU7)	0.23	1.53	0.36
300 lb Melting Furnace (EU8)	0.09	0.82	0.13
Magnesium Treatment (EU9)	1.69	5.83	2.10
Pouring/Casting (EU10) & Casting Cooling (EU11)*	3.98	10.34	5.77

Emission Unit	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)
Shakeout (EU12)*	1.99	6.50	4.40
Mechanical Sand Reclamation Unit (EU13)	6.0	13.6	3.97 (limited)
GOFF Shot Blaster (EU14)	1.096	4.36	0.76 (controlled)
Small Aluminum Shot Blaster (EU15)	0.16	1.20	0.11 (controlled)
Sand Blaster (EU16)	0.16	1.20	0.11 (controlled)
Thermal Sand Reclamation Unit (EU17)	1.00	4.10	0.11 (controlled)
Strong Scott Mixer (EU18)	6.00	13.6	0.20 (limited uncontrolled)
Kloster Mixer (EU19)	9.00	17.9	2.38 (limited uncontrolled)
Palmer Core Mixer #1 (EU20)	6.0	13.6	1.19 (limited uncontrolled)
Palmer Core Mixer #2 (EU21)	6.0	13.6	0.20 (limited uncontrolled)

*Note process weight rates for the pouring/casting, casting cooling, and shakeout operations in both the iron and aluminum foundry include maximum metal and sand throughputs.

The allowable particulate matter (PM) emission rates from the above facilities were calculated 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:

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

The baghouses for EU14, EU15, EU16 and EU17 shall be in operation at all times when the GOFF shot blaster, the small aluminum shot blaster, the sand blaster, and thermal sand reclamation system are in operation to comply with this limit.

Compliance Requirements

State rules and compliance shall remain unchanged as a result of this modification.

Proposed Changes

The following changes have been made to the permit based on the changes requested by the Permittee and the additional changes made by IDEM, OAQ. Language with a line through it has been deleted, and bold language has been added. The Table of Contents has been updated as necessary.

1. IDEM, OAQ has decided to remove the information regarding the Authorized Individual from Section A.1 of the permit. Listing the name and/or title in the permit has resulted in unnecessary administrative amendments in the past. Therefore, IDEM, OAQ does not consider it beneficial to maintain or update this information in the permits. IDEM, OAQ will continue to retain this information up-to-date in their permit tracking system.

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

The Permittee owns and operates a stationary aluminum and gray and ductile iron foundry.

Authorized individual: ~~President~~

2. FESOP Renewal 035-20291-00061 issued January 20, 2006 identifies four (4) U-180 core machines located in the Iron Foundry. Due to customer demand only three (3) of the four (4) permitted U-180 core machines described in SPR 035-19855-00061 issued July 26, 2005 were installed. To meet future customer demand the facility has installed two (2) new Horizontal Bottom Blow core machines in the Iron Foundry. These machines are similar to the operating U-180 core machines; both use a shell sand binder system and have identical maximum process capacities. Muncie Casting also plans to install an additional 2,300-pound furnace, for a total of six (6) 2,300 pound aluminum electric melting furnaces. The facility does not currently use flux material. IDEM, OAQ has revised the permit to include this additional equipment.

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:

...

Aluminum Foundry

- (g) ~~Six (6)~~ **Seven (7)** electric melting furnaces, consisting of ~~five (5)~~ **six (6)** (2,300-pound furnaces) and one (1) (700 pound furnaces), collectively known as EU7, with three (3) of the 2,300-pound furnaces and the one (1) 700 pound furnace installed in 1992, ~~and two (2) of the 2,300-pound furnaces installed in June, 2003, and one (1) of the 2,300-pound furnaces approved for construction in 2007; total~~ throughput capacity: ~~4.39~~ **7.25** tons of aluminum per hour ~~for the five (5) (2,300-pound furnaces) and 0.23 tons of aluminum per hour for the one (1) (700 pound furnace), total throughput capacity: 4.62 tons of aluminum per hour.~~

...

- (i) One (1) magnesium treatment in the aluminum foundry, known as EU9, installed in 1992, capacity: 1.45 tons of magnesium per hour, ~~4.47~~ **1.69** tons of aluminum per hour.
- (j) One (1) pouring/casting operation, known as EU10, installed in 1980, capacity: ~~4.74~~ **1.99** tons of aluminum ~~and sand~~ per hour.
- (k) One (1) casting cooling operation, known as EU11, installed in 1980, capacity: ~~4.74~~ **1.99** tons of aluminum ~~and sand~~ per hour.
- (l) One (1) shakeout operation, known as EU12, installed in 1980, capacity: ~~4.74~~ **1.99** tons of aluminum ~~and sand~~ per hour.

...

Core and Mold Making Operations

- (w) U-180 ~~and Horizontal Bottom Blow~~ core making operations used for both foundries, identified as EU24, including the following:
- (1) One (1) U-180 core machine, utilizing a shell binder system, installed in 1998, capacity: 0.045 tons of cores per hour.
- (2) One (1) U-180 core machine, utilizing a shell binder system, installed in January 2004, capacity: 0.045 tons of cores per hour.
- (3) ~~Two (2)~~ **One (1)** U-180 core machines, ~~each~~ utilizing a shell binder system, installed in 2005, ~~and each with maximum capacity of~~ : 0.045 tons of cores per hour.
- (4) **Two (2) Horizontal Bottom Blow core machines, each utilizing a shell binder system, approved for construction in 2007, and each with maximum capacity of 0.045 tons of cores per hour.**

SECTION D.2 FACILITY OPERATION CONDITIONS

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

Aluminum Foundry

- (g) ~~Six (6)~~ **Seven (7)** electric melting furnaces, consisting of ~~five (5)~~ **six (6)** (2,300-pound furnaces) and one (1) (700 pound furnace), collectively known as EU7, with three (3) of the 2,300-pound furnaces and the one (1) 700 pound furnace installed in 1992, ~~and two (2) of the 2,300-pound furnaces installed in June, 2003, and one (1) of the 2,300-pound furnaces approved for construction in 2007; total~~ throughput capacity: ~~4.39~~ **7.25** tons of aluminum per hour ~~for the five (5) (2,300-pound furnaces) and 0.23 tons of aluminum per hour for the one (1) (700-pound furnace), total throughput capacity: 1.62 tons of aluminum per hour.~~
- ...
- (i) One (1) magnesium treatment in the aluminum foundry, known as EU9, installed in 1992, capacity: 1.45 tons of magnesium per hour, ~~4.47~~ **1.69** tons of aluminum per hour.
- (j) One (1) pouring/casting operation, known as EU10, installed in 1980, capacity: ~~4.74~~ **1.99** tons of aluminum **and sand** per hour.
- (k) One (1) casting cooling operation, known as EU11, installed in 1980, capacity: ~~4.74~~ **1.99** tons of aluminum **and sand** per hour.
- (l) One (1) shakeout operation, known as EU12, installed in 1980, capacity: ~~4.74~~ **1.99** tons of aluminum **and sand** per hour.
- ...

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

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Aluminum Foundry		
Five (5) Six (6) 2,300 lb Melting Furnace (EU7)	4.39 (0.278 each) 6.90 (1.15 each)	5.11 (1.02 each) 5.78 (1.74 each)
700 lb Melting Furnace (EU7)	0.23	1.53
300 lb Melting Furnace (EU8)	0.09	0.82
Magnesium Treatment (EU9)	4.45 1.69	5.26 5.83
Pouring/Casting (EU10) & Casting Cooling (EU11)	3.972 3.98	40.33 10.34
Shakeout (EU12)	4.986 1.99	6.49 6.50

SECTION D.4

FACILITY OPERATION CONDITIONS

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

...

Core and Mold Making Operations

(w) **U-180 and Horizontal Bottom Blow** core making operations used for both foundries, identified as EU24, including the following:

- (1) One (1) U-180 core machine, utilizing a shell binder system, installed in 1998, capacity: 0.045 tons of cores per hour.
- (2) One (1) U-180 core machine, utilizing a shell binder system, installed in January 2004, capacity: 0.045 tons of cores per hour.
- (3) ~~Two (2)~~ **One (1)** U-180 core machines, each utilizing a shell binder system, installed in 2005, and each with maximum capacity of : 0.045 tons of cores per hour.
- (4) **Two (2) Horizontal Bottom Blow core machines, each utilizing a shell binder system, approved for construction in 2007, and each with maximum capacity of 0.045 tons of cores per hour.**

...

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

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

FESOP Quarterly Report

Source Name: Muncie Casting Corporation
Source Address: 1406 East 18th Street, Muncie, Indiana 47302
Mailing Address: P.O. Box 2328, Muncie, Indiana 47302
FESOP No.: F035-20291-00061
Facility: ~~Five (5)~~ **Six (6)** 2300 lb and one (1) 700 lb melt furnaces (EU7), one (1) 300 lb melt furnace (EU8), aluminum magnesium treatment (EU9), aluminum pouring/casting (EU10), aluminum casting cooling (EU11), aluminum shakeout (EU12)
Parameter: Aluminum throughput to limit PM and PM10 emissions
Limit: The total throughput of aluminum to the aluminum foundry, including the ~~five (5)~~ **six (6)** 2,300 lb melting furnaces and one (1) 700 lb melting furnace (EU7), the one (1) 300 lb melting furnace (EU8), the aluminum pouring/casting operation (EU10), the aluminum casting cooling operation (EU11), and the aluminum shakeout operation (EU12), shall not exceed 12,042 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

3. FESOP Renewal 035-20291-00061 issued January 20, 2006 identifies the maximum capacity of the mechanical sand reclamation as 1.5 tons of sand per hour. The actual maximum capacity is 6.0 tons per hour. Changing the unit capacity does not impact the facility's FESOP status. IDEM, OAQ has revised the permit to include the corrected capacity.

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:

...

Sand Handling Operations

- (m) One (1) mechanical sand reclamation unit (located in the aluminum foundry and used for both foundries), known as EU13, installed in 1991, capacity: ~~4.5~~ **6.0** tons of sand per hour.

...

SECTION D.3 FACILITY OPERATION CONDITIONS

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

Sand Handling Operations

- (m) One (1) mechanical sand reclamation unit (located in the aluminum foundry and used for both foundries), known as EU13, installed in 1991, capacity: ~~4.5~~ **6.0** tons of sand per hour.

...

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

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Mechanical Sand Reclamation Unit (EU13)	4.5 6.0	5.38 13.6
Thermal Sand Reclamation Unit (EU17)	1.0	4.10
Strong Scott Mixer (EU18)	6.0	13.6
Closter Mixer (EU19)	9.0	17.9
Palmer Core Mixer #1 (EU20)	6.0	13.6
Palmer Core Mixer #2 (EU21)	6.0	13.6

- 4. Muncie Casting has installed four (4) new core shooters in the Iron Foundry to make very small cores for certain parts manufactured on an infrequent basis. Calculated emissions show that this equipment is insignificant. IDEM, OAQ has revised the permit to include this additional equipment.

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

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

...

- (v) **Four (4) core shooters, approved for construction in 2007, each with a maximum capacity of 100 pounds of shell sand per day.**

5. The specific mail codes (MC) for each of the IDEM branches has been added to improve mail delivery, as follows:

Permits Branch: **MC 61-53 IGCN 1003**
Compliance Branch: **MC 61-53 IGCN 1003**
Asbestos Section: **MC 61-52 IGCN 1003**
Technical Support and Modeling: **MC 61-50 IGCN 1003**

6. The contact numbers for IDEM, OAQ were updated as shown:

Phone: 317-233-~~5674~~**0178**
Fax: 317-233-~~5967~~**6865**

7. In order to correct rule citations from the 326 IAC 2-7 (Part 70 Permit Program) to 326 IAC 2-8 (Federally Enforceable State Operating Permit Program) the following revisions were made to the permit.

B.12 Preventive Maintenance Plan [~~326 IAC 2-7-5(1),(3) and (13)~~] [~~326 IAC 2-7-6(1) and (6)~~] [~~326 IAC 1-6-3~~] [**326 IAC 1-6-3**][**326 IAC 2-8-4(9)**][**326 IAC 2-8-5(a)(1)**]

...

B.13 Emergency Provisions [~~326 IAC 2-7-16~~] [**326 IAC 2-8-12**]

...

B.18 Operational Flexibility [~~326 IAC 2-7-20~~] [~~326 IAC 2-7-10.5~~] [**326 IAC 2-8-15**][**326 IAC 2-8-11.1**]

...

C.13 Instrument Specifications [~~326 IAC 2-1.1-11~~] [~~326 IAC 2-7-5(3)~~] [~~326 IAC 2-7-6(1)~~] [**326 IAC 2-8-4(3)**]
[**326 IAC 2-8-5(1)**]

...

C.16 Response to Excursions or Exceedances [~~326 IAC 2-7-5~~] [~~326 IAC 2-7-6~~] [**326 IAC 2-8-4**] [**326 IAC 2-8-5**]

...

8. Minor grammatical errors throughout Section C have been updated. The citation for Condition C.2 was revised

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~~ **one hundred** (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 PSD and 326 IAC 2-3 (Emission Offset) 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) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than ~~one hundred~~ **one hundred** (100) tons per twelve (12) consecutive month period.

...

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in ~~one hundred and~~ **one hundred** twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

...

8. Condition C.8 is revised to remove the statement that the requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable, since all conditions and requirements in a FESOP are federally enforceable.

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

...

- (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. ~~The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.~~
9. The four (4) mixers (EU18 - EU21), the thermal sand reclamation unit (EU17), and the stack exhausts 4 and 12 for the GOFF shot blaster (EU14) always vent outdoors. Also, it is IDEM's intent that the Permittee keep daily records for all compliance monitoring conditions in the permit. In order to clarify the requirements in the permit, IDEM, OAQ has revised the Compliance Determination Requirements, Compliance Monitoring Requirements and the Record Keeping and Reporting Requirements as follows:

D.3.5 Visible Emissions Notations

- (a) Visible emission notations of the four (4) mixers (EU18 - EU21) and the thermal sand reclamation unit (EU17), respectively, shall be performed once per day during normal daylight operations ~~when exhausting to the atmosphere~~. A trained employee shall record whether emissions are normal or abnormal.

...

D.3.6 Parametric Monitoring

The Permittee shall record the ~~total static~~ pressure drop across the baghouse used in conjunction with the thermal sand reclamation unit (EU17) at least daily when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 8.0 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.

...

D.3.8 Record Keeping Requirements

- (a) To document compliance with Condition D.3.5, the Permittee shall maintain records of daily visible emission notations of the four (4) mixers (EU18 - EU21) and the thermal sand reclamation unit (EU17), respectively. **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.3.6, the Permittee shall maintain the following:
 - (1) Daily records of the total static pressure drop during normal operation.
 - (2) ~~Documentation of the dates vents are redirected.~~ **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).**

...

D.4.6 Visible Emissions Notations

- (a) Visible emission notations of the stack exhausts 4 and 12 for the GOFF shot blaster (EU14) shall be performed once per day during normal daylight operations ~~when exhausting to the atmosphere.~~ A trained employee shall record whether emissions are normal or abnormal.

...

D.4.7 Parametric Monitoring

The Permittee shall record the ~~total static~~ pressure drop across the baghouse used in conjunction with the GOFF blaster (EU14) at least daily when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 8.0 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.

...

D.4.9 Record Keeping Requirements

- (a) To document compliance with Condition D.4.8~~6~~, the Permittee shall maintain records of daily visible emission notations of the stack exhausts 4 and 12 for the GOFF shot blaster (EU14). **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.4.9~~7~~, the Permittee shall maintain the following:
 - (1) Daily records of the pressure drop during normal operation.
 - (2) ~~Documentation of the dates vents are redirected.~~ **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).**

Conclusion

This permit revision shall be subject to the conditions of the attached proposed Minor Permit Revision No. 035-24428-00061.

**Appendix A: Emission Calculations
Pouring, Cooling, and Shakeout**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

Binder System Used: Phenolic Nobake Binder (Pepset Process)		
Total Part I Binder Used:	10,560	
Total Part II Binder Used:	8,480	
Maximum Total Resin Usage Rate (Lbs. of Resin/Year): ¹		38,080
	Emission Factor²	HAP Emissions³
<u>Pollutant Name</u>	<u>(Lbs. Pollutant/Lbs. Resin)</u>	<u>(Tons/Yr)</u>
Formaldehyde	1.00E-05	1.90E-04
Phenol	9.75E-04	1.86E-02
Benzene	1.12E-02	2.13E-01
Toluene	6.34E-04	1.21E-02
M-xylene	9.70E-05	1.85E-03
O-xylene	4.90E-05	9.33E-04
Naphthalene	4.90E-05	9.33E-04
Total HAPs ⁴		2.48E-01
Binder System Used: Acrylic-Epoxy Cold Box Binder (Isoset) ⁵		
Total Part I Binder Used:	834	
Total Part II Binder Used:	667	
Maximum Total Resin Usage Rate (Lbs. of Resin/Year):		3,002
	Emission Factor²	HAP Emissions³
<u>Pollutant Name</u>	<u>(Lbs. Pollutant/Lbs. Resin)</u>	<u>(Tons/Yr)</u>
Formaldehyde	4.00E-06	6.00E-06
Phenol	1.31E-04	1.97E-04
Benzene	6.11E-04	9.17E-04
Toluene	6.30E-05	9.46E-05
M-xylene	2.10E-05	3.15E-05
O-xylene	2.10E-05	3.15E-05
Naphthalene	2.10E-05	3.15E-05
Total HAPs ⁴		1.31E-03
Binder System Used: Shell Binder (Resin-Bonded Sand)		
Total Part I Binder Used: ⁶	33,334	
Maximum Total Resin Usage Rate (Lbs. of Resin/Year):		66,668
	Emission Factor²	HAP Emissions³
<u>Pollutant Name</u>	<u>(Lbs. Pollutant/Lbs. Resin)</u>	<u>(Tons/Yr)</u>
Formaldehyde	3.50E-05	1.17E-03
Phenol	2.46E-03	8.19E-02
Benzene	6.67E-03	2.22E-01
Toluene	2.81E-03	9.36E-02
M-xylene	5.85E-04	1.95E-02
O-xylene	1.17E-04	3.90E-03
Naphthalene	5.80E-05	1.93E-03
Total HAPs ⁴		4.24E-01

Notes:

- ¹ Maximum total resin usage rate is estimated to be twice the total resin usage.
- ² Emission factors are based upon the American Foundrymen's Society (Mosher) research paper.
- ³ HAP Emissions = Maximum Total Resin Usage Rate x Emission Factor x (1 ton/2000 lbs)
- ⁴ Total HAPs is the sum of all pollutants listed except Hydrogen Cyanide and Total Hydrocarbons.
- ⁵ This system was not identified in Mosher research paper, so Green Sand Binder factors used.
- ⁶ Maximum total resin usage rate is estimated to be twice the total resin usage. The total resin-coated sand (shell binder) throughput for the small core shooters is less than 1/10 the total throughput of the main core machines combined.

**Appendix A: Emission Calculations
Cleaning / Finishing Process**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

<u>Process Description</u>	<u>SCC #</u>	<u>Process Rate¹ (tons/hr)</u>	<u>Pollutant</u>	<u>Emission Factor² (lb/ton produced)</u>	<u>Emissions Before Controls (tons/yr)</u>	<u>Type of Control</u>	<u>Control Efficiency (%)</u>	<u>Emissions After Controls (tons/yr)</u>
GOFF Shotblast Machine ³	3-04-003-40	0.14	PM	17.0	10.42	Baghouse	98.0	0.21
		0.14	PM-10	1.7	1.04	Baghouse	98.0	0.02
Small Shotblast Machine ⁴	3-04-003-40	0.007	PM	17.0	0.52	Baghouse	98.0	0.01
		0.007	PM-10	1.7	0.05	Baghouse	98.0	0.00
Sand Blaster Machine ⁴	3-04-003-40	0.007	PM	17.0	0.52	Baghouse	98.0	0.01
		0.007	PM-10	1.7	0.05	Baghouse	98.0	0.00
PM Emissions					11.5			
PM-10 Emissions					1.15			

Notes:

- ¹ The process rate for the shotblasting operation is based upon the fact that only 50% of the total iron and aluminum melted actually reaches this process operation (this is the current and expected future yield).
- ² The VOC emissions are derived from EPA's FIRE version 6.25 (SCC: 30400340 - Secondary Metal Production > Grey Iron Foundries > Grinding/Cleaning)
- ³ This machine processes 100% of the total amount of castings that require shotblasting.
- ⁴ This machine processes only 5% of the total amount of castings that require shotblasting.

**Appendix A: Emission Calculations
CO Emissions**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

<u>Process Description</u>	<u>SCC #</u>	<u>Process Rate¹ (tons/hr)</u>	<u>Pollutant</u>	<u>Emission Factor² (lb/ton produced)</u>	<u>Emissions Before Controls (tons/yr)</u>	<u>Type of Control</u>	<u>Control Efficiency (%)</u>	<u>Emissions After Controls (tons/yr)</u>
IRON FOUNDRY:								
Pouring/Casting	3-04-001-14	0.45	CO	6.00	11.8	None	0	11.8
Casting Cooling	3-04-003-25	0.45	CO	See Below ³				
Shakeout	3-04-003-31	0.45	CO	See Below ³				
ALUMINUM FOUNDRY:								
Pouring/Casting	3-04-001-14	1.99	CO	6.00	52.3	None	0	52.3
Casting Cooling	3-04-003-25	1.99	CO	See Below ³				
Shakeout	3-04-003-31	1.99	CO	See Below ³				
CO Emissions					64.1			

Notes:

- ¹ The process rate is the sum of the individual process rate capacities of each melt furnace in the Iron and Aluminum Foundry.
- ² The CO emission factor of 7.0 lbs/ton is based upon the default factor identified in the IDEM guidance dated 11/3/06.
- ³ The CO emission factor is for the combined pouring, cooling and shakeout processes.

**Appendix A: Emission Calculations
Core Making**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

Binder System Used:		Phenolic Nobake Binder (Pepset Process)	
Maximum Part I Binder Usage Rate (Lbs. of Resin/Year): ¹		21,120	
<u>Volatile Components</u>	<u>% in Product</u> ²	<u>% Evaporated</u> ³	<u>VOC Emissions (Tons/Yr)</u>
Formaldehyde	47.5	2.0	0.10
Aromatic Petroleum Distillates	30.0	50.0	1.58
Phenol	7.5	0.0	0.00
Naphthalene	3.0	5.85	0.02
Maximum Part II Binder Usage Rate (Lbs. of Resin/Year): ¹		16,960	
<u>Volatile Components</u>	<u>% in Product</u> ²	<u>% Evaporated</u> ³	<u>VOC Emissions (Tons/Yr)</u>
Methylene Phenylene Isocyanate	20.0	0.0	0.00
Binder System Used:		Epoxy/SO ₂ Coldbox Binder (Isoset Process)	
Maximum Part I Binder Usage Rate (Lbs. of Resin/Year): ¹		1,668	
<u>Volatile Components</u>	<u>% in Product</u> ²	<u>% Evaporated</u> ³	<u>VOC Emissions (Tons/Yr)</u>
Cumene Hydroperoxide	29.0	0.0	0.00
Isopropylbenzene	5.0	50.0	0.02
Maximum Part II Binder Usage Rate (Lbs. of Resin/Year): ¹		1,334	
<u>Volatile Components</u>	<u>% in Product</u> ²	<u>% Evaporated</u> ³	<u>VOC Emissions (Tons/Yr)</u>
Trimethylolpropane Triacrylate	45.5	50.0	0.15
Maximum SO ₂ Usage Rate (Lbs./Year):		1,250	
<u>Chemical Components</u>	<u>% in Product</u> ²	<u>% Evaporated</u> ³	<u>SO₂ Emissions (Tons/Yr)</u>
Sulfur Dioxide	100	100	0.63
Notes:			
¹ The maximum binder usage rate is estimated to be twice the actual 2003 usage.			
² The % in product value is derived from the vendor's MSDS.			
³ The % evaporated value is derived from the AFS "Form R" Gold Book (1998).			
Binder System Used:		Shell Binder (Resin-Bonded Sand)	
Maximum Resin-Bonded Sand Usage Rate (Lbs. of Resin/Year): ¹		66,668	
<u>Volatile Components</u>	<u>% in Product</u> ²	<u>% Evaporated</u> ³	<u>VOC Emissions (Tons/Yr)</u>
P/F Novolac Resin	3.5	100.0	1.17
Hexamethylenetetramine	2.0	100.0	0.67
Total VOC (tons/year):		3.71	
Total HAPs (tons/year) ⁴ :		0.12	

Notes:

- ¹ The maximum binder usage rate is estimated to be twice the total resin usage.
- ² The % in product value is derived from the vendor's MSDS.
- ³ The % evaporated value is assumed to be 100% since no data on this type of binder system appears in the "Form R" Gold Book (1998).
- ⁴ The total HAPs from the core and mold making process is the sum of the Formaldehyde, Phenol, and Naphthalene from all the various binder systems.

**Appendix A: Emission Calculations
Aluminum Melting and Casting Process**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

<u>Process Description</u>	<u>SCC #</u>	<u>Process Rate (tons/hr)</u>	<u>Pollutant</u>	<u>Emission Factor (lb/ton produced)</u>	<u>Emissions Before Controls (tons/yr)</u>	<u>Type of Control</u>	<u>Control Efficiency (%)</u>	<u>Emissions After Controls (tons/yr)</u>
2300 Lb. Furnace (1) (Electric)	3-04-001-02	0.28	PM	1.90	2.31	None	0	2.31
		0.28	PM-10	1.70	2.07	None	0	2.07
		0.28	VOC	0.20	0.24	None	0	0.24
Magnesium Treatment ¹	3-04-003-21	0.24	PM	1.80	1.86	None	0	1.86
		0.24	PM-10	1.80	1.86	None	0	1.86
Pouring/Casting	3-04-001-14	0.28	PM ²	2.80	3.43	None	0	3.43
		0.28	PM-10	0.66	0.81	None	0	0.81
		0.28	SO ₂	0.02	0.02	None	0	0.02
		0.28	NO _x	0.01	0.01	None	0	0.01
		0.28	VOC ³	0.14	0.17			
Casting Cooling	3-04-003-25	0.28	PM	1.40	1.72	None	0	1.72
		0.28	PM-10	1.40	1.72	None	0	1.72
		0.28	VOC ³	0.14	0.17			
Shakeout	3-04-003-31	0.28	PM	3.20	3.92	None	0	3.92
		0.28	PM-10	2.24	2.75	None	0	2.75
		0.28	VOC ³	1.20	1.47			
PM Emissions					13.3			
PM-10 Emissions					9.21			
SO₂ Emissions					0.02			
NO_x Emissions					0.01			
VOC Emissions					0.24			

Notes:

- ¹ Magnesium treatment is only performed on 85% (maximum) of the total aluminum melted.
- ² The PM and PM-10 emission factors for this process are based upon the Gray Iron pouring/casting data in AP-42.
- ³ The VOC emissions are derived from EPAs FIRE version 6.25 (SCC: 30400114 - Secondary Metal Production > Aluminum > Pouring/Casting; and SCC: 30400331 Secondary Metal Production > Grey Iron Foundries > Casting Shakeout)

**Appendix A: Emission Calculations
Mechanical Sand Reclamation Unit**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

<u>Process Description</u>	<u>SCC #</u>	<u>Process Rate (tons/hr)</u>	<u>Pollutant</u>	<u>Emission Factor¹ (lb/ton produced)</u>	<u>Emissions Before Controls (tons/yr)</u>	<u>Type of Control</u>	<u>Control Efficiency (%)</u>	<u>Emissions After Controls (tons/yr)</u>
Sand Handling ²	3-04-003-50	1.50	PM	3.60	23.7	None	0	23.7
		1.50	PM-10	0.54	3.5	None	0	3.55
Sand Handling ³	3-04-003-50	6.00	PM	3.60	94.6	None	0	94.6
		6.00	PM-10	0.54	14.2	None	0	14.2
Sand Handling ⁴	3-04-003-50	1.10	PM	3.60	17.4	None	0	17.4
		1.10	PM-10	0.54	2.61	None	0	2.61

Theoretical Increase in Potential Emissions

PM Emissions 71.0
PM-10 Emissions 10.6

Notes:

- ¹ The PM/PM10 emissions are derived from EPAs FIRE version 6.25 (SCC: 30400350 - Secondary Metal Production > Grey Iron Foundries > Sand Grinding/Handling)
- ² Mechanical Sand Reclamation Unit at Old Level (1.5 tph)
- ³ Mechanical Sand Reclamation Unit at New Level (6.0 tph):
- ⁴ Pursuant to 326 IAC 2-8-4, the sand to the mechanical sand reclamation unit (EU13) shall not exceed 9,675 tons per year

**Appendix A: Emission Calculations
Magnesium Treatment for Aluminum (EU9)**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

<u>Process Description</u>	<u>SCC #</u>	<u>Process Rate (tons/hr)</u>	<u>Pollutant</u>	<u>Emission Factor (lb/ton produced)</u>	<u>Emissions Before Controls (tons/yr)</u>	<u>Type of Control</u>	<u>Control Efficiency (%)</u>	<u>Emissions After Controls (tons/yr)</u>
Magnesium Treatment ²	3-04-003-21	1.17	PM	1.80	9.2	None	0	9.22
		1.17	PM-10	1.80	9.2	None	0	9.22
Magnesium Treatment ³	3-04-003-21	1.69	PM	1.80	13.3	None	0	13.3
		1.69	PM-10	1.80	13.3	None	0	13.3
Magnesium Treatment ⁴	3-04-003-21	1.17	PM	1.80	9.2	None	0	9.2
		1.17	PM-10	1.80	9.21	None	0	9.21

Theoretical Increase in Potential Emissions

PM Emissions 4.10
PM-10 Emissions 4.10

Notes:

- ¹ The PM/PM10 emissions are derived from EPAs FIRE version 6.25 (SCC: 3-04-003-21 - Secondary Metal Production > Grey Iron Foundries > Magnesium Treatment)
- ² Magnesium Treatment Unit at Old Level (1.17 tph)
- ³ Magnesium Treatment Unit at New Level (1.69 tph):
- ⁴ Pursuant to 326 IAC 2-8-4, the magnesium treatment for aluminum (EU9) shall not exceed 10,236 tons per year.

**Appendix A: Emission Calculations
Shakeout (EU12)**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

<u>Process Description</u>	<u>SCC #</u>	<u>Process Rate (tons/hr)</u>	<u>Pollutant</u>	<u>Emission Factor¹ (lb/ton produced)</u>	<u>Emissions Before Controls (tons/yr)</u>	<u>Type of Control</u>	<u>Control Efficiency (%)</u>	<u>Emissions After Controls (tons/yr)</u>
Shakeout ²	3-04-003-31	1.71	PM	3.20	24.0	None	0	24.0
			PM-10	2.24	16.8	None	0	16.8
			VOC	1.20	8.99	None	0	8.99
			CO	7.00	52.4	None	0	52.4
Shakeout ⁴	3-04-003-31	1.99	PM	3.20	27.9	None	0	27.9
			PM-10	2.24	19.5	None	0	19.5
			VOC	1.20	10.5	None	0	10.5
			CO	7.00	61.0	None	0	61.0
Shakeout ⁵	3-04-003-31	1.37	PM	3.20	19.3	None	0	19.3
			PM-10	2.24	13.5	None	0	13.5
			VOC	1.20	7.23	None	0	7.23
			CO	7.00	42.1	None	0	42.1

Theoretical Increase in Potential Emissions

<i>PM Emissions</i>	<i>3.92</i>
<i>PM-10 Emissions</i>	<i>2.75</i>
<i>VOC Emissions</i>	<i>1.47</i>
<i>CO Emissions</i>	<i>8.58</i>

Notes:

- ¹ The PM/PM10 emissions are derived from EPAs FIRE version 6.25 (SCC: 3-04-003-31 - Secondary Metal Production > Grey Iron Foundries > Casting Shakeout)
- ² Shakeout at Old Level (1.71 tph)
- ³ Shakeout at New Level (1.99 tph):
- ⁴ Pursuant to 326 IAC 2-8-4, the total throughput of aluminum to the aluminum foundry shall not exceed 12,042 tons per year.

MUNCIE CASTING CORPORATION
HAP Emission Calculations
May 2007

Appendix A: Emission Calculations
HAP Emissions from Melting

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

Process	Maximum Rate (tons/hr)	PM emission factor (lb/ton)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Control Device	Control Efficiency (%)
Iron Electric Melting Furnaces (EU2) EPA SCC# 3-04-003-03 AP-42 Ch. 12.10	0.45	0.90	chromium	0.00034	0.001	N/A	
			nickel	0.00060	0.001		
			arsenic	0.00012	0.000		
			Lead	0.00347	0.007		
			Manganese	0.02790	0.055		
			Antimony	0.00167	0.003		
			TOTAL	0.03409	0.07		
Aluminum Electric Melting Furnaces (EU7)	1.90	1.90	chromium	0.00072	0.006	N/A	
			nickel	0.00127	0.011		
			arsenic	0.00025	0.002		
			Lead	0.00732	0.061		
			Manganese	0.05890	0.490		
			Antimony	0.00352	0.029		
			TOTAL	0.07197	0.60		
Aluminum Natural Gas-Fired Melting Furnace (EU8)	0.09	1.90	chromium	0.00072	0.000	N/A	
			nickel	0.00127	0.001		
			arsenic	0.00025	0.000		
			Lead	0.00732	0.003		
			Manganese	0.05890	0.023		
			Antimony	0.00352	0.001		
			TOTAL	0.07197	0.03		

HAP concentration data from USEPA Speciate v 3.1 has been applied to the calculated PM emissions.

Methodology:

Emission Factor (lb/ton produced) = PM emission factor (lb/ton) x USEPA Speciate v 3.1 Data

Emissions Before Control (ton/yr) = Maximum Rate (tons/hr) x Emission Factor (lb/ton produced) x 8,760 hrs/yr x 1 ton / 2000 lbs

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	0.01	tons/year
nickel	0.01	tons/year
arsenic	0.00	tons/year
Lead	0.07	tons/year
Manganese	0.57	tons/year
Antimony	0.00	tons/year
Total	0.66	tons/year

**Appendix A: Emission Calculations
Summary**

Company Name: Muncie Casting Corporation
Address: 1406 East 18th Street Muncie Indiana 47302
FESOP MPR: F035-24428-00061
Reviewer: Verified by ERG/BL
Date: April 13, 2007

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NOx	HAPs
New 2,300-pound furnace	-	-	-	-	-	-	-
Cleaning / Finishing Process	11.5	1.15	-	-	-	-	-
Aluminum Melting and Casting Process	13.3	9.21	0.02	0.24	64.1	0.01	-
Pouring, Cooling, and Shakeout	-	-	-	1.82	-	-	0.67
New Horizontal Core Machine	-	-	-	3.71	-	-	0.12
Additional Magnesium Treatment	-	-	-	-	-	-	-
Additional Sand Handling	-	-	-	-	-	-	-
Additional Shakeout	-	-	-	-	-	-	-
HAP Emissions from Melting (EU2, EU7, EU8)	-	-	-	-	-	-	0.66
Total	24.7	10.4	0.02	5.77	64.1	0.01	1.46