



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant

DATE: August 12, 2008

RE: Accucast Technologies / 141-24573-00203

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

## Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures  
FNPER.dot12/03/07



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## FEDERALLY ENFORCEABLE STATE OPERATING PERMIT OFFICE OF AIR QUALITY

**Accucast Technologies  
220 W. Eckman Street  
South Bend, Indiana 46614**

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

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

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

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

Operation Permit No.: F141-24573-00203	
Issued by:  <i>Original document signed by</i>  Matthew Stuckey, Chief Permits Branch Office of Air Quality	Issuance Date: August 12, 2008  Expiration Date: August 12, 2013

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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)]

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

Source Address:	220 W. Eckman Street, South Bend, Indiana 46614
Mailing Address:	220 W. Eckman Street, South Bend, Indiana 46614
General Source Phone Number:	(574) 251-1460
SIC Code:	3321
County Location:	St. Joseph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Major Source, under PSD Rules (PM) 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)]

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

- (a) One (1) melting process, with a maximum capacity of 6 tons of iron per hour, emissions uncontrolled, consisting of the following emission units:
  - (1) One (1) electric induction furnace, constructed in September 1983, identified as unit 11B, with a maximum capacity of 3.0 tons of iron per hour, with emissions uncontrolled; and
  - (2) One (1) electric induction furnace, constructed in September 1980, identified as unit 11C, with a maximum capacity of 3.0 tons of iron per hour, with emissions uncontrolled.
- (b) One (1) scrap and charge handling process, identified as Unit 3A, constructed in 1977, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (c) One (1) scrap preheater, constructed in 1980, with a maximum heat input capacity of 2.17 MMBtu/hr, with emissions uncontrolled.
- (d) One (1) castings pouring/cooling process, identified as Unit 3, constructed prior to 1950, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (e) One (1) casting cooling process, identified as Unit 6B, constructed prior to 1950, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (f) One (1) shakeout system, constructed in 1977, identified as unit 6A, utilized for servicing the herman and slinger mold lines, with a maximum capacity of 6 tons of iron per hour and 30 tons of sand per hour, controlled by a 20,000 acfm baghouse.

- (g) One (1) core making process, with a maximum capacity of 6 tons of iron per hour, emissions uncontrolled and consisting of the following emission units:
  - (1) One (1) Beardsley and Piper Petibone, constructed in 1974, identified as unit 13G with a maximum heat input capacity 0.2 MMBtu/hr, and a maximum throughput capacity of 150 pounds of sand per hour and 3.75 pounds of resin per hour;
  - (2) One (1) Feco-A-Bangor Punta water based core wash drying oven, constructed in 1987, identified as unit 15B, with a maximum heat input capacity 0.2 MMBtu/hr, with emissions exhausting through stack S2;
  - (3) One (1) oil sand core making process, constructed prior to 1970, identified as unit 17, with a maximum capacity of 110 pounds of sand per hour and 3.52 pounds of binder per hour; and
  - (4) One (1) no-bake core making process, constructed in August 1976, identified as unit 5, with a maximum capacity of 1.25 tons of sand per hour and 0.015 tons of resin per hour.
- (h) One (1) magnesium treatment process for producing ductile iron, identified as unit 22, constructed in 1977, with a maximum capacity of 6.0 tons of iron per hour, with emissions controlled with the use of the Sigmat process. The Sigmat process is essentially an enclosed box used to hold the magnesium. The iron is poured into the box to react with the magnesium. There is no vent.
- (i) One (1) casting cleaning/finishing operation consisting of the following emission units.
  - (1) One (1) Tableblast shotblaster, constructed in July, 1967, identified as unit 4, with a maximum capacity of 3.0 tons of iron casting per hour, using a 4500 acfm baghouse, identified as CE-2 as control; and
  - (2) One (1) Spinnerblast shotblaster, constructed in July, 1979, identified as unit 7, with a maximum capacity of 0.85 tons of iron casting per hour, using a 4500 acfm baghouse, identified as CE-3 as control.
- (j) One (1) muller green sand handling system including two (2) 150 ton sand storage bins, constructed in August 1976, identified as unit 5, with a maximum throughput capacity of 60 tons of sand per hour, with emissions controlled by a 20,000 acfm baghouse.
- (k) One (1) oil/shell core sand handling system, including two silos each with a capacity of 25 tons of sand, identified as unit 10A, constructed in 1977, with a maximum capacity of 2.11 tons of sand per hour and emissions uncontrolled.
- (l) One (1) no-bake sand handling system, constructed prior to 1970, identified as unit 10, located in south yard, with a maximum capacity of 1.25 tons of sand per hour, with emissions uncontrolled and consisting of the following emission units:
  - (1) One (1) pneumatic air driven silo, with a maximum capacity of 75 tons of sand; and
  - (2) One (1) sand hopper with a maximum capacity of 15 tons of sand.
- (m) One (1) Alphaset sand handling system, including one silo with a capacity of 50 tons of sand and one (1) storage hopper with a capacity of 10 tons, identified as unit 10B, constructed in 1976, with a maximum capacity of 5.0 tons of sand per hour, with

emissions uncontrolled.

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

This stationary source also includes the following insignificant activities:

- (a) Nine (9) portable grinders, constructed in 1960, identified as units 2E through 2K, with emissions uncontrolled [326 IAC 6-3-2].
- (b) One (1) welding/grinding station, constructed in 1960, identified as unit 2L, with emissions uncontrolled [326 IAC 6-3-2].
- (c) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hours including:  
  
Two (2) air make-up units, identified as 16A and 16B, constructed in 1976, each with a maximum heat input capacity of 5 MMBtu/hr.
- (d) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filters in other air filtration equipment.
- (e) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].
- (f) A laboratory as defined in 326 IAC 2-7-1(21) (D).

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

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

## SECTION B GENERAL CONDITIONS

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

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

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

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- (a) This permit, F141-24573-00203, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

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

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

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

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

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

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(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

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

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

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

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

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

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

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

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

Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

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

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

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or

contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

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

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- (a) All terms and conditions of permits established prior to F141-24573-00203 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

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

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

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

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

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

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

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

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination**

[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

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

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

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

Request for renewal shall be submitted to:

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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- (a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.
- (b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2.

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

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to

assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

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

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

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

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.

- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

#### C.1 Overall Source Limit [326 IAC 2-8]

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

- (a) Pursuant to 326 IAC 2-8:
  - (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
  - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
  - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

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Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on. The plan is included as Attachment A.

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

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

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

---

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

All required notifications shall be submitted to:

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

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

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

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

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

---

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

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

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

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

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

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

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

---

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

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

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

---

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

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

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

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

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

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

---

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

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

---

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

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

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

---

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

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

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

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

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

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

- (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) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain the following records:
    - (A) A description of the project.
    - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
    - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
      - (i) Baseline actual emissions;
      - (ii) Projected actual emissions;
      - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
      - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A) and/or 40 CFR 51.166 (r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
  - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period.

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

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

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

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1 (II)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ.
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and
  - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
  - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
  - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
  - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

### **Stratospheric Ozone Protection**

#### **C.20 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

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

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) melting process, with a maximum capacity of 6 tons of iron per hour, emissions uncontrolled, consisting of the following emission units:
- (1) One (1) electric induction furnace, constructed in September 1983, identified as unit 11B, with a maximum capacity of 3.0 tons of iron per hour, with emissions uncontrolled; and
  - (2) One (1) electric induction furnace, constructed in September 1980, identified as unit 11C, with a maximum capacity of 3.0 tons of iron per hour, with emissions uncontrolled.

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

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

#### D.1.1 PM10 Limitations [326 IAC 2-8]

Pursuant to 326 IAC 2-8 (FESOP),

- (a) The two (2) electric induction furnaces, identified as Unit 11B and Unit 11C, combined, shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM10 emissions from each of two (2) electric induction furnaces shall not exceed 0.86 pounds per ton of iron.

These limitations are structured such that, when including the limited emissions from Conditions D.2.1, D.3.1, and D.4.1, and the PTE of the Feco-A-Bangor drying oven, the electric induction furnaces, and the spinnerblast shot-blaster, the source-wide PM10 emissions shall be limited to less than one hundred (100) tons per year. Compliance with these limits renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.1.2 Particulate Matter Emission Limitations [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(e)(2), the particulate matter emissions from the two (2) electric induction furnaces (melting process) shall not exceed 0.07 grain per dry standard cubic foot, each.

#### D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

### Compliance Determination Requirements

#### D.1.4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

Within 180 days after issuance of this Permit T141-24573-00010, in order to demonstrate compliance with Conditions D.1.1 through D.1.2, the Permittee shall perform PM and PM10 testing on the Electric Induction Furnace (Unit 11A) utilizing methods as approved by the Commissioner. PM10 includes filterable and condensable PM10. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

### **D.1.5 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain monthly records of the metal throughput in the melting process.
  
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### **D.1.6 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2, 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.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (b) One (1) scrap and charge handling process, identified as Unit 3A, constructed in 1977, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (c) One (1) scrap preheater, constructed in 1980, with a maximum heat input capacity of 2.17 MMBtu/hr, with emissions uncontrolled.
- (d) One (1) castings pouring/cooling process, identified as Unit 3, constructed prior to 1950, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (e) One (1) casting cooling process, identified as Unit 6B, constructed prior to 1950, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (f) One (1) shakeout system, constructed in 1977, identified as unit 6A, utilized for servicing the herman and slinger mold lines, with a maximum capacity of 6 tons of iron per hour and 30 tons of sand per hour, controlled by a 20,000 acfm baghouse.
- (g) One (1) core making process, with a maximum capacity of 6 tons of iron per hour, emissions uncontrolled and consisting of the following emission units:
  - (1) One (1) Beardsley and Piper Petibone, constructed in 1974, identified as unit 13G with a maximum heat input capacity 0.2 MMBtu/hr, and a maximum throughput capacity of 150 pounds of sand per hour and 3.75 pounds of resin per hour;
  - (2) One (1) Feco-A-Bangor Punta water based core wash drying oven, constructed in 1987, identified as unit 15B, with a maximum heat input capacity 0.2 MMBtu/hr, with emissions exhausting through stack S2;
  - (3) One (1) oil sand core making process, constructed prior to 1970, identified as unit 17, with a maximum capacity of 110 pounds of sand per hour and 3.52 pounds of binder per hour; and
  - (4) One (1) no-bake core making process, constructed in August 1976, identified as unit 5, with a maximum capacity of 1.25 tons of sand per hour and 0.015 tons of resin per hour.
- (h) One (1) magnesium treatment process for producing ductile iron, identified as unit 22, constructed in 1977, with a maximum capacity of 6.0 tons of iron per hour, with emissions controlled with the use of the Sigmat process. The Sigmat process is essentially a enclosed box used to hold the magnesium. The iron is poured into the box to react with the magnesium.

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

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

#### D.2.1 PM10 [326 IAC 2-8]

Pursuant to 326 IAC 2-8 (FESOP), the Permittee shall be subject to the following conditions:

- (a) Scrap and charge handling:
  - (1) The scrap and charge handling operation, identified as Unit 3A, shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) The PM10 emissions from the scrap and charge handling operation, identified as Unit 3A, shall not exceed 0.36 pounds per ton of iron.
- (b) Castings pouring/cooling:
  - (1) The castings pouring/cooling operation, identified as Unit 3, shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) The PM10 emissions from the castings pouring/cooling operation, identified as Unit 3, combined, shall not exceed 2.06 pounds per ton of iron.
- (c) Casting cooling:
  - (1) The casting cooling operation (Unit 6B), shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) The PM10 emissions from the casting cooling operation (Unit 6B) shall not exceed 1.40 pounds per ton of iron.
- (d) Casting shakeout:
  - (1) The casting shakeout operation (Unit 6A), shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) The PM10 emissions from the casting shakeout operation (Unit 6A) shall not exceed 2.24 pounds per ton of iron.
- (e) Core making:
  - (1) The iron produced in the core making processes, including the Beardsley and Piper Petibone core making (Unit 13G), the oil and sand core making (Unit 17), and the no-bake core making (Unit 5), shall not exceed 3.357 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) The PM10 emissions from the core making processes, including the Beardsley and Piper Petibone core making (Unit 13G), the oil and sand core making (Unit 17), and the no-bake core making (Unit 5), shall each not exceed 1.1 pounds per ton of iron produced.
- (f) Magnesium treatment:
  - (1) The magnesium treatment process, identified as Unit 22, shall not exceed 10,537 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.

- (2) The PM10 emissions from the magnesium treatment process, identified as Unit 22, shall not exceed 1.80 pounds per ton of iron.

These limitations are structured such that, when including the limited emissions from Conditions D.1.1, D.3.1, and D.4.1, and the PTE of the Feco-A-Bangor drying oven, the electric induction furnaces, and the spinnerblast shot-blaster, the source-wide PM10 emissions shall be limited to less than one hundred (100) tons per year. Compliance with these limits renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

**D.2.2 Carbon Monoxide [326 IAC 2-8]**

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Pursuant to 326 IAC 2-8 (FESOP), the Permittee shall be subject to the following conditions:

- (a) The castings pouring/cooling operation, identified as Unit 3, shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The castings pouring/cooling operation, identified as Unit 3, shall not exceed 6.0 lbs of CO per ton of iron produced.

**D.2.3 Particulate Matter Emission Limitations [326 IAC 6.5-1-2]**

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Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the scrap and charge handling, pouring/casting, casting cooling, shakeout system, and Magnesium treatment shall not exceed 0.03 grain per dry standard cubic foot, each.

**D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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

**Compliance Determination Requirements**

**D.2.5 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]**

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- (a) Within 180 days after issuance of this Permit T141-24573-00010, in order to demonstrate compliance with Condition D.2.1 and D.2.3, the Permittee shall perform PM and PM10 testing on the shakeout baghouse utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 180 days after issuance of this Permit T141-24573-00010, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM10 testing on the Scrap and Charge Handling (Unit 3A) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
- (c) Within 180 days after issuance of this Permit T141-24573-00010, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM10 testing on the Castings Pouring and Cooling (Unit 3) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
- (d) Within 180 days after issuance of this Permit T141-24573-00010, in order to demonstrate compliance with Condition D.2.3, the Permittee shall perform CO testing on the Castings Pouring and Cooling (Unit 3) utilizing methods as approved by the Commissioner. This

test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

#### D.2.6 Particulate Matter (PM)

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- (a) In order to comply with Condition D.2.1 and D.2.3 the baghouse for PM control shall be in operation at all times when the shakeout system is in operation.
- (b) In the event that bag failure is observed in a multi-compartment dust collector, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also included the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

#### D.2.7 Visible Emissions Notations

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

#### D.2.8 Parametric Monitoring

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The Permittee shall record the pressure drop across the baghouse in conjunction with the shakeout system at least once per day when the shakeout system is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 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 and 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 and Exceedances shall be considered deviation from the 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.2.9 Broken or Failed Bag Detection

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- (a) For a single compartment dust collector 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 dust collector 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 dust collector's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, or dust traces.

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

#### **D.2.10 Record Keeping Requirements**

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- (a) To document compliance with Condition D.2.1, the Permittee shall maintain monthly records of the metal throughput to the scrap and charge handling operation, the castings pouring/cooling operation, the casting cooling operation, the casting shakeout, the core making processes, and the magnesium treatment process.
- (b) To document compliance with Condition D.2.7, the Permittee shall maintain records of daily visible emission notations from the baghouse controlling the shakeout operation. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (e.g. the process did not operate that day);
- (b) To document compliance with Condition D.2.8, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling shakeout system. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.2.11 Reporting Requirements**

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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.

## SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (i) One (1) casting cleaning/finishing operation consisting of the following emission units.
  - (1) One (1) Tableblast shotblaster, constructed in July, 1967, identified as unit 4, with a maximum capacity of 3.0 tons of iron casting per hour, using a 4500 acfm baghouse, identified as CE-2 as control; and
  - (2) One (1) Spinnerblast shotblaster, constructed in July, 1979, identified as unit 7, with a maximum capacity of 0.85 tons of iron casting per hour, using a 4500 acfm baghouse, identified as CE-3 as control.

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

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

#### D.3.1 PM10 Limitations [326 IAC 2-8]

Pursuant to 326 IAC 2-8 (FESOP), the Permittee shall comply with the following:

- (a) Tableblast shot blaster (baghouse CE-2):
  - (1) The PM10 emissions from the Tableblast shot blaster, identified as Unit 4, shall not exceed 1.70 pounds per ton of iron.
  - (2) The Tableblast shot blaster, identified as Unit 4, shall not exceed 7,288.42 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Spinner blast shot blaster (baghouse CE-3):
  - (1) The PM10 emissions from the Spinnerblast shot blaster, identified as Unit 7, shall not exceed 1.70 pounds per ton iron.
  - (2) The Spinnerblast shot blaster, identified as Unit 7, shall not exceed 4140.3 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month.

These limitations are structured such that, when including the limited emissions from Conditions D.1.1, D.2.1, and D.4.1, and the PTE of the Feco-A-Bangor drying oven, the electric induction furnaces, the source total PM10 emissions remain less than one hundred (100) tons per year. Compliance with these limits renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.3.2 Particulate Matter Emission Limitations [326 IAC 6.5-7-14]

Pursuant to 326 IAC 6.5-7-14, the particulate matter emissions from the tableblast shot blaster, identified as Unit 4, shall not exceed 0.037 grain per dry standard cubic foot and 4.3 tons per year.

#### D.3.3 Particulate Matter Emission Limitations [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the spinnerblast shotblaster, identified as Unit 7, shall not exceed 0.03 grain per dry standard cubic foot.

#### D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

### Compliance Determination Requirements

#### D.3.5 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

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Within 180 days after issuance of this Permit T141-24573-00010, in order to demonstrate compliance with Conditions D.3.1 and D.3.2, the Permittee shall perform PM and PM10 testing on the tableblast shotblaster utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

#### D.3.6 Particulate Matter (PM)

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- (a) In order to comply with Conditions D.3.1, D.3.2 and D.3.3, the baghouses for PM control shall be in operation at all times when the tableblast and the spinnerblast shotblaster are in operation.
- (b) In the event that bag failure is observed in a multi-compartment dust collector, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also included the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

### Compliance Monitoring Requirements

#### D.3.7 Visible Emissions Notations

---

- (a) Daily visible emission notations of the baghouse CE-2 and CE-3 stack exhausts shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### D.3.8 Parametric Monitoring

---

The Permittee shall record the pressure drop across the baghouse in conjunction with the tableblast and the spinnerblast shotblaster at least once per day when the tableblast and the spinnerblast shotblaster are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 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 and 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 and Exceedances shall be considered deviation from the 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.3.9 Broken or Failed Bag Detection

---

- (a) For a single compartment dust collector 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 dust collector 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 dust collector's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, or dust traces.

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

#### D.3.10 Record Keeping Requirements

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- (a) To document compliance with Conditions D.3.1 and D.3.2, the Permittee shall maintain monthly records of the iron throughput to the tableblast and spinnerblast shotblasters.
- (b) To document compliance with Condition D.3.7, the Permittee shall maintain records of daily visible emission notations of the baghouse CE-2 and CE-3 stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (e.g. the process did not operate that day);
- (c) To document compliance with Condition D.3.8, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling tableblast and the spinnerblast shotblaster. 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.3.11 Reporting Requirements

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A quarterly summary of the information to document compliance with Conditions D.3.1 and D.3.2, 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.

## SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (j) One (1) muller green sand handling system including two (2) 150 ton sand storage bins, constructed in August 1976, identified as unit 5, with a maximum throughput capacity of 60 tons of sand per hour, with emissions controlled by a 20,000 acfm baghouse.
- (k) One (1) oil/shell core sand handling system, including two silos each with a capacity of 25 tons of sand, identified as unit 10A, constructed in 1977, with a maximum capacity of 2.11 tons of sand per hour and emissions uncontrolled.
- (l) One (1) no-bake sand handling system, constructed prior to 1970, identified as unit 10, located in south yard, with a maximum capacity of 1.25 tons of sand per hour, with emissions uncontrolled and consisting of the following emission units:
  - (1) One (1) pneumatic air driven silo, with a maximum capacity of 75 tons of sand; and
  - (2) One (1) sand hopper with a maximum capacity of 15 tons of sand.
- (m) One (1) Alphaset sand handling system, including one silo with a capacity of 50 tons of sand and one (1) storage hopper with a capacity of 10 tons, identified as unit 10B, constructed in 1976, with a maximum capacity of 5.0 tons of sand per hour, with emissions uncontrolled.

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

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

#### D.4.1 PM10 Limitations [326 IAC 2-8]

Pursuant to 326 IAC 2-8 (FESOP), the Permittee shall be subject to the following conditions:

- (a) Mueller green sand handling:
  - (1) The PM10 emissions from the Mueller green sand handling operation, identified as Unit 5, shall not exceed 0.54 pounds per ton of sand.
  - (2) The throughput of sand to the Mueller green sand handling, identified as Unit 5, shall not exceed 5173.51 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Sand to the oil/shell core sand handling:
  - (1) The PM10 emissions from the oil/shell core sand handling, identified as Unit 10A, shall not exceed 0.54 pounds per ton of sand throughput.
  - (2) The throughput of sand to the oil/shell core sand handling, identified as Unit 10A, shall not exceed 447.6 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Sand to the no bake sand handling:

- (1) The PM10 emissions from the no-bake sand handling, identified as Unit 10, shall not exceed 0.54 pounds per ton of sand throughput.
  - (2) The throughput of sand to the no-bake sand handling, identified as Unit 10, shall not exceed 4,278.31 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) Alphasat sand handling:
- (1) The PM10 emissions from the Alphasat sand handling, identified as Unit 10B, shall not exceed 0.54 pounds per ton of sand throughput.
  - (2) The throughput of sand to the Alphasat sand handling, identified as Unit 10B, shall not exceed 447.6 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

These limitations are structured such that, when including the limited emissions from Conditions D.1.1, D.2.1, and D.3.1, and the PTE of the Feco-A-Bangor drying oven, the electric induction furnaces, and the spinnerblast shot-blaster, the source-wide PM10 emissions shall be limited to less than one hundred (100) tons per year. Compliance with these limits renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.4.2 Particulate Matter Emission Limitations [326 IAC 6.5-7-14]

- (a) Pursuant to 326 IAC 6.5-7-14, the particulate matter emissions from the muller green sand handling shall not exceed 0.074 grain per dry standard cubic foot and 19.0 tons per year. The mueller green sand handling is identified as NEDS Plant ID 06, and Point Input 6P.
- (b) Pursuant to 326 IAC 6.5-7-14, the particulate matter emissions from the No-Bake sand handling shall not exceed 0.027 grain per dry standard cubic foot and 14.6 tons per year. The no-bake sand handling is identified as NEDS Plant ID 07, and Point Input 7P.
- (c) Pursuant to 326 IAC 6.5-7-14, the particulate matter emissions from the Alphasat sand handling system shall not exceed 0.021 grain per dry standard cubic foot and 5.6 tons per year. The Alphasat sand handling is identified as NEDS Plant ID 08, and Point Input 8P.
- (d) Pursuant to 326 IAC 6.5-7-14, the particulate matter emissions from the oil shell/core sand handling system shall not exceed 0.052 grain per dry standard cubic foot and 5.0 tons per year. The oil/shell core sand handling is identified as NEDS Plant ID 05, and Point Input 5P.

#### D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

### **Compliance Determination Requirements**

#### D.4.4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

Within 180 days after issuance of this Permit T141-24573-00010, in order to demonstrate compliance with Conditions D.4.1 and D.4.2, the Permittee shall perform PM AND PM10 testing on the muller green sand handling utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

#### D.4.5 Particulate Matter (PM)

---

- (a) In order to comply with Condition D.4.1 and D.4.2, the baghouse for PM control shall be in operation at all times when the muller green sand handling is in operation.
- (b) In the event that bag failure is observed in a multi-compartment dust collector, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

#### D.4.6 Visible Emissions Notations

---

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

#### D.4.7 Parametric Monitoring

---

The Permittee shall record the pressure drop across the baghouse in conjunction with the muller green sand handling at least once per day when the muller green sand handling is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 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 and 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 and Exceedances shall be considered deviation from the 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.4.8 Broken or Failed Bag Detection

---

- (a) For a single compartment dust collector 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.
- (b) For a single compartment dust collector 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.

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

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

#### **D.4.9 Record Keeping Requirements**

---

- (a) To document compliance with Condition D.4.1 and D.4.2, the Permittee shall maintain monthly records of the throughput of sand to the oil shell/sand core handling, mueller green sand handling, no-bake sand handling, and Alphaset sand handling operations.
- (b) To document compliance with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the baghouse controlling the mueller green sand handling operation. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.4.7, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling muller green sand handling. 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) 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.

## SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description: Insignificant Activities

- (a) Nine (9) portable grinders, constructed in 1960, identified as units 2E through 2K, with emissions uncontrolled [326 IAC 6-3-2].
- (b) One (1) welding/grinding station, constructed in 1960, identified as unit 2L, with emissions uncontrolled [326 IAC 6-3-2].

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

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

#### D.5.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate matter (PM) emission rate from the nine (9) portable grinders and welding/grinding station shall not exceed 0.551 pounds per hour when operating at a process weight rate of less than 100 pounds per hour.

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

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

Where:

P = process weight in tons/hr and  
E = rate of emission in pounds per hour.

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

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

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203

**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: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- 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 <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

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

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

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

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

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: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: Scrap and charge handling system (Unit 3A)  
Parameter: Iron Production  
Limit: 22,525 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: Castings pouring/cooling operation (Unit 3)  
Parameter: Iron production  
Limit: 22,525 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: Casting cooling operation (Unit 6B)  
Parameter: Iron production  
Limit: 22,525 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: Casting shakeout (Unit 6A)  
Parameter: Iron production  
Limit: 22,525 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

### FESOP Quarterly Report

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: Core making processes (Units 13G, 17, and 5)  
Parameter: Sand throughput  
Limit: 3.357 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
 Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
 Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
 FESOP Permit No.: F141-24573-00203  
 Facility: Magnesium treatment process (Unit 22)  
 Parameter: Iron production  
 Limit: 10,537.25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: Two (2) electric induction furnaces (Units 11B and 11C)  
Parameter: Iron production  
Limit: 22,525 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

### FESOP Quarterly Report

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: One (1) Tableblast shotblaster (Unit 4)  
Parameter: Iron production  
Limit: 7,288.42 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: One (1) Spinnerblast shot blaster (Unit 7)  
Parameter: Iron production  
Limit: 4,140.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: One (1) muller green sand handling operation (Unit 5)  
Parameter: Sand throughput  
Limit: 5,173.51 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: One (1) oil/shell core sand handling operation (Unit 10A)  
Parameter: Sand throughput  
Limit: 447.6 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
 Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
 Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
 FESOP Permit No.: F141-24573-00203  
 Facility: One (1) no-bake sand handling system (Unit 10)  
 Parameter: Sand throughput  
 Limit: 4278.31 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Accucast Technologies  
Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
FESOP Permit No.: F141-24573-00203  
Facility: One (1) Alphaset sand handling operation (Unit 10B)  
Parameter: Sand throughput  
Limit: 447.6 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: \_\_\_\_\_

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

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

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

Attach a signed certification to complete this report.

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

Source Name: Accucast Technologies  
 Source Address: 220 W. Eckman Street, South Bend, Indiana 46614  
 Mailing Address: 220 W. Eckman Street, South Bend, Indiana 46614  
 FESOP Permit No.: F141-24573-00203

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

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

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

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

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

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

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

Attach a signed certification to complete this report.

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

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

**Source Background and Description**

<b>Source Name:</b>	Accucast Technologies
<b>Source Location:</b>	220 W. Eckman Street, South Bend, Indiana 46614
<b>County:</b>	St. Joseph
<b>SIC Code:</b>	3321
<b>Permit No.:</b>	F141-24573-00203
<b>Permit Reviewer:</b>	ERG/TDP

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Accucast Technologies relating to the operation of a gray ductile iron foundry.

**History**

The source received an initial Part 70 Operating Permit on February 18, 1999 under the name Accucast Technology, LLC. The Part 70 Operating Permit expired on February 18, 2004. The source applied for a renewal in April 2005. IDEM, OAQ determined that the Part 70 Operating Permit could not be renewed. The source submitted a new permit application to IDEM, OAQ on April 5, 2007 under the name Accucast Technologies. The source has removed several emission units from the facility, and agreed to limit the potential to emit of all criteria pollutants and HAP to less than Title V levels. Therefore, the source will be issued an initial FESOP.

**Emission Units and Pollution Control Equipment Operated Without a Permit**

- (a) One (1) melting process, with a maximum capacity of 6 tons of iron per hour, emissions uncontrolled, consisting of the following emission units:
  - (1) One (1) electric induction furnace, constructed in September 1983, identified as unit 11B, with a maximum capacity of 3.0 tons of iron per hour, with emissions uncontrolled; and
  - (2) One (1) electric induction furnace, constructed in September 1980, identified as unit 11C, with a maximum capacity of 3.0 tons of iron per hour, with emissions uncontrolled.
- (b) One (1) scrap and charge handling process, identified as Unit 3A, constructed in 1977, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (c) One (1) scrap preheater, constructed in 1980, with a maximum heat input capacity of 2.17 MMBtu/hr, with emissions uncontrolled.
- (d) One (1) castings pouring/cooling process, identified as Unit 3, constructed prior to 1950, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (e) One (1) casting cooling process, identified as Unit 6B, constructed prior to 1950, with a maximum capacity of 6 tons of iron per hour, with emissions uncontrolled.
- (f) One (1) shakeout system, constructed in 1977, identified as unit 6A, utilized for servicing the herman and slinger mold lines, with a maximum capacity of 6 tons of iron per hour and 30 tons of sand per hour, controlled by a 20,000 acfm baghouse.

- (g) One (1) core making process, with a maximum capacity of 6 tons of iron per hour, emissions uncontrolled and consisting of the following emission units:
  - (1) One (1) Beardsley and Piper Petibone, constructed in 1974, identified as unit 13G with a maximum heat input capacity 0.2 MMBtu/hr, and a maximum throughput capacity of 150 pounds of sand per hour and 3.75 pounds of resin per hour;
  - (2) One (1) Feco-A-Bangor Punta water based core wash drying oven, constructed in 1987, identified as unit 15B, with a maximum heat input capacity 0.2 MMBtu/hr, with emissions exhausting through stack S2;
  - (3) One (1) oil sand core making process, constructed prior to 1970, identified as unit 17, with a maximum capacity of 110 pounds of sand per hour and 3.52 pounds of binder per hour; and
  - (4) One (1) no-bake core making process, constructed in August 1976, identified as unit 5, with a maximum capacity of 1.25 tons of sand per hour and 0.015 tons of resin per hour.
- (h) One (1) magnesium treatment process for producing ductile iron, identified as unit 22, constructed in 1977, with a maximum capacity of 6.0 tons of iron per hour, with emissions controlled with the use of the Sigmat process. The Sigmat process is essentially an enclosed box used to hold the magnesium. The iron is poured into the box to react with the magnesium. There is no vent.
- (i) One (1) casting cleaning/finishing operation consisting of the following emission units.
  - (1) One (1) Tableblast shotblaster, constructed in July, 1967, identified as unit 4, with a maximum capacity of 3.0 tons of iron casting per hour, using a 4500 acfm baghouse, identified as CE-2 as control; and
  - (2) One (1) Spinnerblast shotblaster, constructed in July, 1979, identified as unit 7, with a maximum capacity of 0.85 tons of iron casting per hour, using a 4500 acfm baghouse, identified as CE-3 as control.
- (j) One (1) muller green sand handling system including two (2) 150 ton sand storage bins, constructed in August 1976, identified as unit 5, with a maximum throughput capacity of 60 tons of sand per hour, with emissions controlled by a 20,000 acfm baghouse.
- (k) One (1) oil/shell core sand handling system, including two silos each with a capacity of 25 tons of sand, identified as unit 10A, constructed in 1977, with a maximum capacity of 2.11 tons of sand per hour and emissions uncontrolled.
- (l) One (1) no-bake sand handling system, constructed prior to 1970, identified as unit 10, located in south yard, with a maximum capacity of 1.25 tons of sand per hour, with emissions uncontrolled and consisting of the following emission units:
  - (1) One (1) pneumatic air driven silo, with a maximum capacity of 75 tons of sand; and
  - (2) One (1) sand hopper with a maximum capacity of 15 tons of sand.
- (m) One (1) Alphaset sand handling system, including one silo with a capacity of 50 tons of sand and one (1) storage hopper with a capacity of 10 tons, identified as unit 10B, constructed in 1976, with a maximum capacity of 5.0 tons of sand per hour, with emissions uncontrolled.

### Insignificant Activities

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

- (a) Nine (9) portable grinders, constructed in 1960, identified as units 2E through 2K, with emissions uncontrolled [326 IAC 6-3-2].
- (b) One (1) welding/grinding station, constructed in 1960, identified as unit 2L, with emissions uncontrolled [326 IAC 6-3-2].
- (c) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hours including:  
  
Two (2) air make-up units, identified as 16A and 16B, constructed in 1976, each with a maximum heat input capacity of 5 MMBtu/hr.
- (d) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filters in other air filtration equipment.
- (e) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].
- (f) A laboratory as defined in 326 IAC 2-7-1(21) (D).

### Existing Approvals

Since the issuance of the Part 70 Operating Permit T141-6210-00010 on February 18, 1999, the source has constructed or has been operating under the following approvals as well:

- (a) Significant Source Modification T141-11175-00010, issued on February 22, 2000;
- (b) Administrative Amendment T141-12734-00010, issued on November 14, 2000;
- (c) Minor Source Modification T141-21187-00010, issued on September 19, 2005; and
- (d) Minor Permit Modification T141-21443-00010, issued on January 3, 2006.

The source received an initial Part 70 Operating Permit on February 18, 1999 under the name Accucast Technology, LLC. The Part 70 Operating Permit expired on February 18, 2004. The source applied for a renewal in April 2005. IDEM, OAQ determined that the Part 70 Operating Permit could not be renewed. The source submitted a new permit application to IDEM, OAQ on April 5, 2007 under the name Accucast Technologies. The source has removed several emission units from the facility, and agreed to limit the potential to emit of all criteria pollutants and HAP to less than Title V levels. Therefore, the source will be issued an initial FESOP.

### Enforcement Issue

IDEM is aware that equipment has been operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit".

- (a) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the operating permit rules.

### Stack Summary

Stack ID	Operation	Diameter (feet)	Temperature (°F)
S1	Mueller Green Sand Handling	1.0	ambient
S2	Tableblast Shotblaster	1' x 5'	Ambient
S3	Spinnerblast Shotblaster	1' x 5'	Ambient

### Emission Calculations

See Appendix A of this document for detailed emission calculations (1 through 24).

### County Attainment Status

The source is located in St. Joseph County

Pollutant	Status
PM <sub>10</sub>	attainment
PM <sub>2.5</sub>	attainment
SO <sub>2</sub>	attainment
NOx	attainment
8-hour Ozone	attainment
CO	attainment
Lead	attainment

Note: On November 8, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to redesignate Clark, Floyd, Elkhart, St. Joseph, LaPorte, Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby Counties as attainment for the 8-hour ozone standard.

- (a) St. Joseph County has been classified as unclassifiable or attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions 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) St. Joseph County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

- (e) **Fugitive Emissions**  
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

**Unrestricted Potential Emissions**

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	2,185
PM10*	520
SO <sub>2</sub>	0.56
VOC	37.1
CO	4.53
NO <sub>x</sub>	66

HAPs	tons/year
Lead	1.15
Total	5.11

\* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". U.S. EPA has directed states to regulate PM10 emissions as surrogate for PM<sub>2.5</sub> emissions.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10 is equal to or greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their PM10 emissions to less than Title V levels, therefore the source will be issued a FESOP.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of SO<sub>2</sub>, VOC, CO, and NO<sub>x</sub> are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year, and the potential emit of total HAP is less than twenty-five (25) tons per year.
- (d) Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are counted toward the determination of Part 70 applicability.

**Actual Emissions**

The following table shows the actual emissions from the source. This information reflects the 2006 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	0
PM-10	23
SO <sub>2</sub>	1
VOC	18
CO	2
NO <sub>x</sub>	3
Pb	0.13

**Potential to Emit After Issuance**

The source has opted to become a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Emission Unit	Limited Potential to Emit						
	PM (tons/yr)	PM <sub>10</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO <sub>x</sub> (tons/yr)	HAPs (tons/yr)
Scrap and Charge handling (1977)	6.75	4.05	0	0	0	0	0.03
Electric Induction Furnace Unit 11B (1983)	5.06	4.84	0	0	0	0	0.44
Electric Induction Furnace Unit 11C (1980)	5.06	4.84	0	0	0	0	0.44
Scrap Preheater (1980)	0.02	0.07	0.01	0.05	67.6	0.93	0
Casting Pouring/ Cooling Unit 3 (1950)	47.3	23.2	0.23	1.58	0	0	0.24
Casting Cooling Unit 6B (1950)	15.8	15.8	0	0	0	0	0
Shakeout System Unit 6A (Iron and sand) (1977)	36.0	25.2	0	13.5	0	0	0.19
Beardsley and Piper Petibone Core making Unit 13G (1974)	Neg.	Neg.	0	0.82	0	0	0.20
Feco-A-bangor Punta Core making unit 15B (1987)	Neg.	Neg.	0	0.09	0	0.07	Neg.
Oil Sand Core Making Unit 17 (1970)	Neg.	Neg.	0	Neg.	0	0	0.19
No-Bake Core making Unit 5 (1976)	Neg.	Neg.	0	0.77	0	0	0
Magnesium Treatment Process Unit 22 (1977)	9.48	9.48	0	0.05	0	0	0.21
Tableblast Shot Blaster Unit 4 (1967)	4.29	0.06	0	0	0	0	0.32
Spinnerblast Shot Blaster Unit 7 (1979)	5.08	0.07	0	0	0	0	0.18
Muller green sand handling Unit 5 (1976)	0.19	0.03	0	0	0	0	0
Oil Shell Sand Core Handling Unit 10A (1977)	0.81	0.12	0	0	0	0	0
No-Bake Sand Handling Unit 10 (1970)	7.70	1.16	0	0	0	0	0
Alphaset sand handling (1976)	0.81	0.12	0	0	0	0	0
Insignificant Combustion	0.08	0.33	0.03	0.24	4.6	4.29	0.01
Paved Roads	3.89	1.95	0	0	0	0	0

Emission Unit	Limited Potential to Emit						
	PM (tons/yr)	PM <sub>10</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO <sub>x</sub> (tons/yr)	HAPs (tons/yr)
Total Emissions	140*	91.1**	0.26	17.0	72.2	5.51	2.25
Part 70 Major Levels	--	100	100	100	100	100	10/25
PSD Major Levels	100	100	100	100	100	100	--

\* Refer to the State Applicability Determination-for 326 IAC 2-2 of this TSD for details.

\*\* Refer to the State Applicability Determination for 326 IAC 2-8 of this TSD for details

- (a) This existing stationary source is major for PSD because the PM emissions of at least one criteria pollutant are greater than one hundred (>100) tons per year, and it is one of the twenty-eight (28) listed source categories.
- (b) Fugitive Emissions  
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

### Federal Rule Applicability

The following federal rules are applicable to the source:

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for 40 CFR 63, Subpart EEEEE, Iron and Steel Foundries are not included in the permit. This source has a potential to emit of less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

### State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

- (a) Prior to 1977: This source is one of the 28 listed source categories and had potential to emit of at least one attainment pollutant greater than 100 tons per year before August 7, 1977. Therefore, this source was a major source pursuant to 326 IAC 2-2 (PSD), prior to August 7, 1977.
- (b) 1979 Modification: The Spinnerblast Shot blaster, constructed in 1979 has uncontrolled PM emissions of greater than 25 tons per year. Pursuant to 326 IAC 6.5-1-2 and 326 IAC 2-2, the PM emissions shall not exceed 1.16 pounds per hour. Compliance with this limit shall limit the PM emissions to less than 25 tons per year and render the requirements 326 IAC 2-2 not applicable to the 1979 modification. In 1979, only PM (not PM10 or PM2.5) was considered a regulated pollutant under PSD.
- (c) 1980 Modification: The electric induction furnace, identified as unit 11C and the scrap preheater, constructed in 1980, have uncontrolled PM emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1980 modification.
- (d) 1983 Modification: The electric induction furnace, identified as unit 11B, constructed in 1983, has uncontrolled PM emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1983 modification.

- (e) 1987 Modification: In 1987, PM<sub>10</sub> became a regulated pollutant under PSD. The Feco-A-Bangor drying oven, constructed in 1987, had uncontrolled PM and PM<sub>10</sub> emissions of less than 25 and 15 tons per year, respectively. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1987 modification.

326 IAC 2-6 (Emission Reporting)

This source is located in St. Joseph County, is not required to have an operating permit under 326 IAC 2-7 (Part 70 Permit Program) and does not have lead emissions greater than five (5) tons per year. Therefore, only the additional information requests under 326 IAC 2-6-5 apply to this source.

326 IAC 2-8 (FESOP)

Pursuant to 326 IAC 2-8 (FESOP), the Permittee shall be subject to the following limitations, as requested by the source and approved by IDEM OAQ.

- (a) The two (2) electric induction furnaces, identified as Unit 11B and Unit 11C, combined, shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month. The PM<sub>10</sub> emissions from each of two (2) electric induction furnaces shall not exceed 0.86 pounds per ton of iron. These limitations are equivalent to 4.84 tons per year of PM<sub>10</sub> emissions from the two (2) electric induction furnaces 11B and 11C.
- (b) The scrap and charge handling operation, identified as Unit 3A, shall not exceed 22,525 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month. The PM<sub>10</sub> emissions from the scrap and charge handling operation shall not exceed 0.36 pounds per ton of iron. This limitation is equivalent to 4.05 tons of PM<sub>10</sub> emissions per year from the finishing operation.
- (c) The PM<sub>10</sub> emissions from the castings pouring/cooling operation, identified as Unit 3, combined, shall not exceed 2.06 pounds per ton of iron produced. This limitation, combined with the limitation of 22,525 tons of iron per year, is equivalent to 23.2 tons per year of PM<sub>10</sub> emissions from the pouring/casting operation.

The CO emissions from the castings pouring/cooling operation, identified as Unit 3 shall not exceed 6.0 lb per ton iron produced. This limitation, combined with the limitation of 22,525 tons of iron per year, is equivalent to 67.6 tons per year of CO emissions from the pouring/casting operations.

- (d) The PM<sub>10</sub> emissions from the casting cooling operation (Unit 6B), shall not exceed 1.40 pounds per ton of iron produced. This limitation, combined with the limitation of 22,525 tons of iron per year, is equivalent to 15.8 tons per year of PM<sub>10</sub> emissions from the casting cooling operation.
- (e) The PM<sub>10</sub> emissions from the casting shakeout operation (Unit 6A) shall not exceed 2.24 pounds per ton of iron produced. This limitation, combined with the 22,525 ton of iron per year limit is equivalent to 25.23 tons per year of PM<sub>10</sub> emissions from the casting shakeout operation.
- (f) The PM<sub>10</sub> emissions from the Tableblast shot blaster, identified as Unit 4, shall not exceed 1.70 pounds per ton iron produced. Baghouse CE-2 shall be in operation at all times that the Tableblast shot blaster is in operation in order to comply with these limits. These limitations, combined with the limitation of 7,288.42 tons iron per year, are equivalent to PM<sub>10</sub> emissions of 0.014 pounds per hour or 0.06 tons per year from baghouse CE-2.
- (g) The PM<sub>10</sub> emissions from the Spinnerblast shot blaster, identified as Unit 7, shall not exceed 1.70 pounds per ton iron produced. Baghouse CE-3 shall be in operation at all times that the Spinnerblast shot blaster is in operation in order to comply with these limits. These limitations, combined with the limitation of 4,140.3 tons iron per year, are equivalent to PM<sub>10</sub> emissions of 0.016 pounds per hour or 0.07 tons per year from baghouse CE-3.

- (h) The PM10 emissions from the Mueller green sand handling operation, identified as Unit 5, shall not exceed 0.54 pounds per ton of sand. The baghouse controlling the Mueller Green Sand handling operation shall be in operation at all times that the process is in operation in order to comply with these limits. These limitations, combined with the throughput limitation of 5,173.51 tons sand per year, are equivalent to PM10 emissions of 0.006 pounds per hour or 0.03 tons per year from the baghouse controlling the Mueller Green Sand handling operation.
- (i) The PM10 emissions from the oil shell/core sand handling, identified as Unit 10A shall not exceed 0.54 pounds per ton of sand throughput. This limitation, combined with the 447.6 tons of sand per year throughput limitation, is equivalent to 0.12 tons per year of PM10 emissions from the oil shell/core sand handling system.
- (j) The PM10 emissions from the no-bake sand handling, identified as Unit 10, shall not exceed 0.54 pounds per ton of sand throughput. This limitation, combined with the 4,278.31 tons of sand per year throughput limitation, is equivalent to 1.16 tons per year of PM10 emissions from the no-bake sand handling system.
- (k) The PM10 emissions from the Alphasat sand handling, identified as Unit 10B, shall not exceed 0.54 pounds per ton of sand throughput. This limitation, combined with the 447.6 tons per year throughput limitation, is equivalent to 0.12 tons per year of PM10 emissions from the Alphasat sand handling system.
- (l) The core making processes, including the Beardsley and Piper Petibone core making (Unit 13G), the oil and sand core making (Unit 17), the no-bake core making (Unit 5) shall not exceed 3.357 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month. The PM10 emissions from the core making processes shall not exceed 1.1 pounds per ton of iron produced. These limitations are equivalent to 0.005 tons per year of PM10 emissions from the core making processes.
- (m) The magnesium treatment process, identified as Unit 22, shall not exceed 10,537.25 tons of iron produced per twelve (12) consecutive month period with compliance determined at the end of each month. The PM10 emissions from the magnesium treatment process shall not exceed 1.80 pounds per ton of iron produced. These limitations are equivalent to 9.48 tons per year of PM10 emissions from the magnesium treatment process.

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

#### 326 IAC 5-1 (Opacity Limitations)

This source is located in the portion of St. Joseph County north of Kern Road and east of Pine Road. Therefore, this source is subject to the provisions of 326 IAC 2-6-2(2). Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.

**326 IAC 6-4 (Fugitive Dust)**

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.

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

This source is not subject to 326 IAC 6-5 because this source was constructed prior to December 13, 1985.

**State Rule Applicability – Individual Facilities**

**326 IAC 2-4.1 (Hazardous Air Pollutants)**

This source is not subject to the requirements of 326 IAC 2-4.1 (Hazardous Air Pollutants) because this facility does not have the potential to emit greater than 10 tons per year of a single HAP or 25 tons per year of any combination of HAPs.

**326 IAC 6.5 and 326 IAC 6-3-2 (Particulate Matter Limitations)**

This facility is located in St. Joseph County and has the potential to emit one hundred (100) tons per year of particulate matter. Therefore, the emission units at this facility must comply with the more stringent requirements of 326 IAC 6.5 or 326 IAC 6-3-2. This facility was previously known as Sibley Machine and Foundry which is specifically regulated under 326 IAC 6.5-7-14. However, several units have been removed or relabeled following the acquisition by Accucast Technologies. The cupola, grinding, and tumble blast units identified in 326 IAC 6.5-7-14 are no longer at the source. The remaining units have been reclassified as follows:

326 IAC 6.5-7-14 Previous ID	New Emission ID (assigned by Accucast)	Limits from 326 IAC 6.5-7-14	
		(tons/yr)	(grain/dscf)
04 Table Blasting	Unit 4 TableBlast	4.3	0.037
05 Sand Handling	Unit 10A Oil/shell core sand handling	5.0	0.052
06 Sand Handling	Unit 5 Mueller green sand handling	19.0	0.074
07 Sand Handling	Unit 10 No bake sand handling	14.60	0.027
08 Sand Handling	Unit 10B Alphaset sand handling	5.6	0.021

Operation	Process Weight Rate (tons/hr)	326 IAC 6.5 Allowable Limits <sup>a</sup> (lb/hr)	326 IAC 6-3-2 Allowable Limits (lb/hr)	Most Stringent Limit
Shakeout System	36.0	5.14	41.57	326 IAC 6.5
Spinner blast shotblaster	0.85	1.16	3.67	326 IAC 6.5
Table blast <sup>b</sup> shotblaster	3.0	0.98	8.56	326 IAC 6.5
Muller green sand <sup>c</sup> handling	60.0	4.34	46.3	326 IAC 6.5
No-Bake sand <sup>d</sup> handling	1.25	3.33	4.84	326 IAC 6.5
Alphaset sand <sup>e</sup> handling system	5.0	1.28	12.05	326 IAC 6.5
Oil shell/core sand handling system <sup>f</sup>	2.11	1.14	6.76	326 IAC 6.5
Nine (9) portable grinders and welding/grinding station	less than 100 pounds/hour	0.68	0.551	326 IAC 6-3-2

<sup>a</sup> Limits for facilities not identified in 326 IAC 6.5-7 are from 326 IAC 6.5-1-2(a). The facility shall not exceed three-hundredth (0.03) grains per dscf.

<sup>b</sup> Pursuant to 326 IAC 6.5-7-14, the particulate matter (PM) emissions from the Tableblast shot blaster shall not exceed 0.037 grains per dry standard cubic foot.

<sup>c</sup>Pursuant to 326 IAC 6.5-7-14, the particulate matter (PM) emissions from the muller green sand handling shall not exceed 0.074 grains per dry standard cubic foot.

<sup>d</sup>Pursuant to 326 IAC 6.5-7-14 the particulate matter (PM) emissions from the No-Bake sand handling system shall not exceed 0.027 grains per dry standard cubic foot.

<sup>e</sup>Pursuant to 326 IAC 6.5-7-14 the particulate matter (PM) emissions from the Alphaset sand handling system shall not exceed 0.021 grains per dry standard cubic foot.

<sup>f</sup>Pursuant to 326 IAC 6.5-7-14 the particulate matter (PM) emissions from the oil/shell core sand handling system shall not exceed 0.052 grains per dry standard cubic foot.

326 IAC 6.5-1-2 (County Specific Particulate Matter Limitations)

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter (PM) emissions from the spinnerblast shot blaster and the shakeout system shall not exceed 0.03 grains per dry standard cubic foot, each.

326 IAC 6.5-1-2 (County Specific Particulate Matter Limitations)

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter (PM) emissions from the scrap and charge handling, pouring/casting, casting cooling, and magnesium treatment which are uncontrolled shall be limited to 0.03 grains per dry standard cubic foot, each. It was assumed that 326 IAC 6.5 is more stringent than 326 IAC 6-3-2.

326 IAC 6.5-1-2 (County Specific Particulate Matter Limitations)

Pursuant to 326 IAC 6.5-1-2(e)(2), the particulate matter (PM) emissions from the two (2) electric Induction furnaces (melting process) which are uncontrolled shall be limited to 0.07 grains per dry standard cubic foot, each. It was assumed that 326 IAC 6.5 is more stringent than 326 IAC 6-3-2

The baghouse for particulate control shall be in operation at all times when the tableblast shot blaster, the spinnerblast shot blaster, the muller green sand handling, and the shakeout system are in operation, in order to comply with these limits.

**State Rule Applicability - Insignificant Activities**

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

The scrap preheater, the core wash drying oven, the one Beardsley and Piper Petibone curing oven, and the two (2) air make-up units are not subject to 326 IAC 6-3-2 because these units have a potential to emit particulate less than 0.551 pounds per hour.

Pursuant to 326 IAC 6-3-2(e)(2), (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate matter (PM) emission rate from the nine (9) portable grinders and welding/grinding station shall not exceed 0.551 pounds per hour when operating at a process weight rate of less than 100 pounds per hour.

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

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

Where: P = process weight in tons/hr and  
E = rate of emission in pounds per hour.

The PM limit for the nine (9) portable grinders and welding/grinding station from 326 IAC 6-3-2 is more stringent than the PM limit from 326 IAC 6.5-7-14. Therefore, the nine (9) portable grinders and welding/grinding station are exempt from the requirements of 326 IAC 6.5-7-14.

326 IAC 8-1-6 (New facilities; general reduction requirements)

The pouring/casting, casting cooling, shakeout system, beardsley and petibone, oil and sand core making process, and no-bake core making process, were constructed prior to January 1, 1980. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to these emission units.

### Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

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

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
Tableblast Shotblaster (Unit 4)	Baghouse CE-2	Within 180 days of permit issuance	PM10	Once every 5 years	1.7 lb/ton iron
Mueller Green Sand Handling (Unit 5)	One (1) 20,000 acfm baghouse	Within 180 days of permit issuance	PM10	Once every 5 years	0.54 lb/ton sand
Shakeout (Unit 6A)	One (1) 20,000 acfm baghouse	Within 180 days of permit issuance	PM10	Once every 5 years	2.24 lb/ton iron
Electric Induction Furnace (Unit 11A)	Uncontrolled	180 days	PM/PM10	Once every 5 years	0.86 lb/ton iron
Scrap and Charge Handling (Unit 3A)	Uncontrolled	180 days	PM/PM10	Once every 5 years	0.36 lb/ton iron
Castings pouring and cooling (Unit 3)	Uncontrolled	180 days	PM/PM10	Once every 5 years	2.06 lb/ton iron
Castings pouring and cooling (Unit 3)	Uncontrolled	180 days	CO	Once every 5 years	6.0 lb/ton iron

The Tableblast shotblast unit identified as Unit 4, is controlled by a baghouse, designated as CE-2. The PM10 emissions are limited to PM/PM10 0.014 lbs/hr by 326 IAC 2.8 and 0.037 gr/dscf per 326 IAC 6.5-7-14. The Mueller Green Sand Handling operation, identified as Unit 5, is controlled by one (1) 20,000 acfm baghouse. The PM10 emissions are limited to 0.006 lb/hr per 326 IAC 2-8 and 0.074 gr/dscf per 326 IAC 6.5-7-14. The shakeout operation, identified as Unit 6A, is controlled by one (1) 20,000 acfm baghouse. The PM10 emissions are limited to 2.24 lb/ton iron by 326 IAC 2-2 or 0.03 gr/dscf per 326 IAC 6.5-7-14. The Electric Induction Furnaces (Unit 11A and 11B) are uncontrolled. Testing is required for one of the furnaces to determine that they comply with the emission limitation of 0.86 lb/ton iron as established under 326 IAC 2-8. The

scrap and charge handling operation (Unit 3A) is also uncontrolled. Testing is required for this operation to determine that it complies with the emission limitation established under 326 IAC 2-8 (0.36 lb/ton iron). The castings pouring and cooling operation (Unit 3) is uncontrolled. Testing is required for this facility to determine compliance with the emission limitation under 326 IAC 2-8 (2.06 lb/ton).

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

Control	Parameter	Frequency	Range	Excursions and Exceedances
Shakeout Baghouse	Water Pressure Drop	Daily	2.0 to 8.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Tableblast Baghouse CE-2	Water Pressure Drop	Daily	2.0 to 8.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Spinnerblast Baghouse CE-3	Water Pressure Drop	Daily	2.0 to 8.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Mueller Green Sand Handling Baghouse	Water Pressure Drop	Daily	2.0 to 8.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	

These monitoring conditions are necessary because the baghouses for the Tableblast and Spinnerblast shotblasters and the mueller green sand handling operation must operate properly to ensure compliance with 326 IAC 6.5 (Particulate Matter Emission Limitations) and 326 IAC 2-8 (FESOP). The baghouse for the shakeout system must operate properly to ensure compliance with 326 IAC 6.5 (Particulate Matter Emission Limitations).

**Recommendation**

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

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

An application for the purposes of this review was received on April 5, 2007.

**Conclusion**

The operation of this gray iron foundry shall be subject to the conditions of the attached FESOP No. 141-24573-00203.

**Appendix A: Emission Calculations  
Melting Process**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons /hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Electric Induction Furnace Unit 11B	3.0	PM	0.9	11.83	11.83	None	0.00%	5.06
		PM-10	0.86	11.30	11.30	None	0.00%	4.84
Limited Throughput:		Chromium	0.00034	0.0045	0.0045			1.9E-03
22,500 tpy		Cobalt	0.00003	0.0004	0.0004			1.5E-04
		Nickel	0.00060	0.0079	0.0079			3.4E-03
		Arsenic	0.00008	0.0011	0.0011			4.5E-04
		Cadmium	0.00005	0.0007	0.0007			3.0E-04
		Selenium	0.00001	0.0001	0.0001			5.1E-05
		Manganese	0.0225	0.2957	0.2957			1.3E-01
		Lead	0.0545	0.7161	0.7161			3.1E-01

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1 ton/2000lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 11,250 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission Factor based on AP-42 Section 12.10, Table 12.10-3 and US EPA's WebFIRE for SCC# 3-04-003-03

All other HAP emission factors are based on the emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 4.0.

Note: Furnaces 11B and 11C are limited by conditions in the permit to a total metal throughput of 22,500 tons per year. For determining limited PTE, assume each furnace has a yearly throughput of 11,250 tons of metal.

**Appendix A: Emission Calculations  
Melting Process**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons /hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Electric Induction Furnace Unit 11C	3.0	PM	0.90	11.83	11.83	None	0.00%	5.06
		PM-10	0.86	11.30	11.3004	None	0.00%	4.84
		Chromium	0.00034	0.0045	0.0045			1.92E-03
		Cobalt	0.00003	0.0004	0.0004			1.52E-04
		Nickel	0.00060	0.0079	0.0079			3.39E-03
		Arsenic	0.00008	0.0011	0.0011			4.50E-04
		Cadmium	0.00005	0.0007	0.0007			3.04E-04
		Selenium	0.00001	0.0001	0.0001			5.06E-05
		Manganese	0.02250	0.2957	0.2957			1.27E-01
		Lead	0.0545	0.7161	0.7161			3.07E-01

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1 ton/2000lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 11,250 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission Factor based on AP-42 Section 12.10, Table 12.10-3 and US EPA's WebFIRE for SCC# 3-04-003-03

All other HAP emission factors are based on the emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 4.0.

Note: Furnaces 11B and 11C are limited by conditions in the permit to a total metal throughput of 22,500 tons per year. For determining limited PTE, assume each furnace has a yearly throughput of 11,250 tons of metal.

**Appendix A: Emission Calculations  
Casting Cooling Process (Unit 6B)**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Casting Cooling Process	6.0	PM	1.4	36.79	36.79	None	0.00%	15.8
		PM <sub>10</sub>	1.4	36.79	36.79	None	0.00%	15.8
Limited Throughput:								
22,525 tpy								

Assume PM = PM10

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1 ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 22,525 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission factors based on US EPA's WebFIRE SCC# 3-04-003-25 .

Note: The casting cooling process is limited by conditions in the permit to a total throughput of 22,525 tons per year.

**Appendix A: Emission Calculations  
Shakeout System (Iron)**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE Before Control (tons/yr)
Shakeout System (Iron)	6.0	PM	3.20	84.10	1.68	Baghouse	98.00%	36.0
		PM <sub>10</sub>	2.24	58.87	1.18	Baghouse	98.00%	25.2
Limited Throughput:		VOC	1.20	31.54	31.54			13.5
22,525 tpy		Chromium	0.00122	0.0320	0.0320			0.01
		Cobalt	0.00019	0.0050	0.0050			0.00
		Nickel	0.00214	0.0563	0.0563			0.02
		Arsenic	0.00042	0.0109	0.0109			0.00
		Cadmium	0.00019	0.0050	0.0050			0.00
		Selenium	0.00003	0.0008	0.0008			0.00
		Lead	0.01232	0.3238	0.3238			0.14

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1 - Control Efficiency)

Limited PTE Before Control (tons/yr) = 22,525 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Limited PTE After Control (tons/yr) = Limited PTE Before Control (tons/yr) \* (1 - Control Efficiency %)

Emission factors based on SCC# 3-04-003-31, AP 42 CH 12 Table 12.10-7 and US EPA's Webfire.

All other HAP emission factors are based on the emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 4.0.

**Appendix A: Emission Calculations  
Shakeout System (Sand )**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE Before Control	Limited PTE After Control
								(tons/yr)	(tons/yr)
Shakeout System (Sand )	30	PM	3.6	473	9.46	Baghouse	98.00%	40.5	0.81
		PM-10	0.54	71.0	1.42	Baghouse	98.00%	6.08	0.12
Limited Throughput:									
22,525 tpy									

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1 - Control Efficiency)

Limited PTE Before Control (tons/yr) = 22,525 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Limited PTE After Control (tons/yr) = Limited PTE Before Control (tons/yr) \* (1 - Control Efficiency %)

Emission factors based on SCC# 3-04-003-50, AP 42 CH 12 Table 12.10-7 and US EPA's WebFIRE.

**Appendix A: Emission Calculations  
Tableblast Shot Blaster**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons /hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE Before Control	Limited PTE After Control
								(tons/yr)	(tons/yr)
Tableblast Shot Blaster	3.0	PM	17.00	223.38	2.23	Baghouse	99.00%	62.0	0.620
		PM-10	1.70	22.34	0.22	Baghouse	99.00%	6.20	0.062
Limited Throughput:		Chromium	0.00646	0.08488	0.08			2.35E-02	2.4E-04
7288.42 tpy		Cobalt	0.00102	0.01340	0.01			3.72E-03	3.7E-05
		Nickel	0.01139	0.14966	0.15			4.15E-02	4.2E-04
		Arsenic	0.00221	0.02904	0.03			8.05E-03	8.1E-05
		Cadmium	0.00102	0.01340	0.01			3.72E-03	3.7E-05
		Selenium	0.00017	0.00223	0.00			6.20E-04	6.2E-06
		Lead	0.06545	0.86001	0.86			2.39E-01	2.4E-03

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1 - Control Efficiency)

Limited PTE Before Control (tons/yr) = 7288.42 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Limited PTE After Control (tons/yr) = Limited PTE Before Control (tons/yr) \* (1 - Control Efficiency %)

Emission factors based on SCC # 3-04-003-40, AP 42 CH 12 Table 12.10-7 and US EPA's WebFIRE.

All other HAP emission factors are based on the emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 4.0.

**Appendix A: Emission Calculations  
Spinnerblast Shot Blaster**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE Before Control	Limited PTE After Control
								(tons/yr)	(tons/yr)
Spinnerblast Shot Blaster	0.85	PM	17.00	63.29	1.27	Baghouse	98.00%	35.2	0.70
		PM-10	1.70	6.33	0.13	Baghouse	98.00%	3.52	0.07
Limited Throughput: 4140.3 tpy		Chromium	0.00646	0.0241	0.0241			1.34E-02	2.7E-04
		Cobalt	0.00102	0.0038	0.0038			2.11E-03	4.2E-05
		Nickel	0.01139	0.0424	0.0424			2.36E-02	4.7E-04
		Arsenic	0.00221	0.0082	0.0082			4.58E-03	9.2E-05
		Cadmium	0.00102	0.0038	0.0038			2.11E-03	4.2E-05
		Selenium	0.00017	0.0006	0.0006			3.52E-04	7.0E-06
		Lead	0.06545	0.2437	0.2437			1.35E-01	2.7E-03

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1 - Control Efficiency)

Limited PTE Before Control (tons/yr) = 4,140.3 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Limited PTE After Control (tons/yr) = Limited PTE Before Control (tons/yr) \* (1 - Control Efficiency %)

Emission factors based on SCC # 3-04-003-40, AP 42 CH 12 Table 12.10-7 and US EPA's WebFIRE.

All other HAP emission factors are based on the emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 4.0.

**Appendix A: Emission Calculations  
Muller Green Sand Handling**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons /hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE Before Control	Limited PTE After Control
								(tons/yr)	(tons/yr)
Muller Green Sand handling	60	PM	3.6	946.08	18.92	Baghouse	98.00%	9.31	0.19
		PM-10	0.54	141.91	2.84	Baghouse	98.00%	1.40	0.03
Limited Throughput:									
5173.51 tpy									

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb  
 Controlled Emissions = Uncontrolled Emissions \* (1 - Control Efficiency)  
 Limited PTE Before Control (tons/yr) = 5,173.51 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs  
 Limited PTE After Control (tons/yr) = Limited PTE Before Control (tons/yr) \* (1 - Control Efficiency %)  
 Emission factors based on SCC# 3-04-003-50, AP 42 CH 12 Table 12.10-7 and US EPA's WebFIRE.

**Appendix A: Emission Calculations  
Oil Shell Core Sand Handling**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Oil Shell Core Sand Handling	2.11	PM	3.6	33.3	33.3	none	none	0.81
		PM-10	0.54	4.99	4.99			0.12
Limited Throughput: 447.6 tpy								

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 447.6 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission factors based on SCC# 3-04-003-50, AP 42 CH 12 Table 12.10-7 and US EPA's WebFIRE.

**Appendix A: Emission Calculations  
No-Bake Sand Handling**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
No-Bake Sand Handling	1.25	PM	3.6	19.71	19.71	none	none	7.70
		PM-10	0.54	2.96	2.96			1.16
Limited Throughput: 4278.31 tpy								

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb  
 Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)  
 Limited PTE (tons/yr) = 4278.31 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs  
 Emission factors based on SCC# 3-04-003-50, AP 42 CH 12 Table 12.10-7 and US EPA's WebFIRE.

**Appendix A: Emission Calculations  
Alphaset Sand Handling**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons /hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Alphaset Sand Handling	5.0	PM	3.6	78.84	78.84	none	none	0.81
		PM-10	0.54	11.83	11.83			0.12
Limited Throughput: 447.6 tpy								

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 447.6 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission factors based on SCC# 3-04-003-50, AP 42 CH 12 Table 12.10-7 and US EPA's WebFIRE.

**Appendix A: Emission Calculations  
Magnesium Treatment Process**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE Before Control (tons/yr)
Magnesium Treatment Process	6.0	PM	1.8	47.30	4.73	Sigmat Process	90.00%	9.48
		PM-10	1.8	47.30	4.73			9.48
Limited Throughput: 10,537.25 tpy								

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb  
 Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)  
 Limited PTE Before Control (tons/yr) = 10,537.25 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs  
 Limited PTE After Control (tons/yr) = Limited PTE Before Control (tons/yr) \* (1 - Control Efficiency %)  
 PM and PM10 emission factors from SCC# 3-04-003-21, AP 42 Chapter 12, Table 12.10-7.

**Appendix A: Emission Calculations  
Beardsley and Piper Petibone Core making**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Beardsley and Piper Petibone	2	PM	1.1	9.64	9.64	none	none	1.85E-03
		PM-10	1.1	9.64	9.64			1.85E-03
Limited Throughput: 3.357 tpy								

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 3.357 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission factors from AP 42, Chapter 12, Table 12.10-7

**Appendix A: Emission Calculations  
Oil and Sand Core making**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Oil and Sand Core making	2	PM	1.1	9.64	9.64	none	none	1.85E-03
		PM-10	1.1	9.64	9.64			1.85E-03
Limited Throughput: 3.357 tpy								

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1 ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 3.357 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission factors from AP 42 Chapter 12, Table 12.10-7

**Appendix A: Emission Calculations  
No-Bake Core making**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
No-Bake Core making	2	PM	1.1	9.64	9.64	none	none	1.85E-03
		PM-10	1.1	9.64	9.64			1.85E-03
Limited Throughput: 3.357 tpy								

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb  
 Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)  
 Limited PTE (tons/yr) = 3.357 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs  
 Emission factors from AP 42 Chapter 12, Table 12.10-7

**Appendix A: Emission Calculations  
Scrap and Charge Handling**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons /hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Scrap and charge handling	6.0	PM	0.60	15.77	15.77	None	0.00%	6.75
		PM-10	0.36	9.46	9.46	None	0.00%	4.05
Limited Throughput:		Chromium	0.00023	0.006	0.0060			2.57E-03
22,500 tpy metal		Cobalt	0.00004	0.0009	0.0009			4.05E-04
		Nickel	0.00040	0.0106	0.0106			4.52E-03
		Arsenic	0.00008	0.0020	0.0020			8.78E-04
		Cadmium	0.00004	0.0009	0.0009			4.05E-04
		Selenium	0.00001	0.0002	0.0002			6.75E-05
		Lead	0.00231	0.0607	0.0607			0.03

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 22,500 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission Factor based on SCC# 3-04-003-15, AP 42 Ch 12 Table 12.10-7 and US EPA's WebFIRE.

All other HAP emission factors are based on the emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 4.0.

**Appendix A: Emission Calculations  
Pouring/Casting**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Process	Maximum Throughput Rate (tons /hr)	Pollutant	Emission Factor (lb/ton produced)	PTE Before Control (tons/yr)	PTE After Control (tons/yr)	Type of Control	Control Efficiency (%)	Limited PTE (tons/yr)
Pouring/Casting	6.0	PM	4.20	110.38	110.38	None	0.00%	47.3
		PM-10	2.06	54.14	54.1368	None	0.00%	23.2
Limited Throughput: 22525 tpy		SO2	0.02	0.53	0.53			0.23
		NOx	0.01	0.26	0.26			0.11
		VOC	0.14	3.68	3.68			1.58
		CO	6.00	157.68	157.68			67.6
		Chromium	0.00160	0.042	0.0419			1.8E-02
		Cobalt	0.00025	0.0066	0.0066			2.8E-03
		Nickel	0.00281	0.0740	0.0740			3.2E-02
		Arsenic	0.00055	0.0143	0.0143			6.1E-03
		Cadmium	0.00025	0.0066	0.0066			2.8E-03
		Selenium	0.00004	0.0011	0.0011			4.7E-04
		Lead	0.01617	0.4249	0.4249			1.8E-01

**Methodology**

Uncontrolled Emissions = Maximum Throughput Rate (tons/hr) \* Emission Factor (lb/ton) \* 8760hrs/yr \* 1ton/2000 lb

Controlled Emissions = Uncontrolled Emissions \* (1- Control Efficiency)

Limited PTE (tons/yr) = 22,500 tons/yr \* Emission Factor (lb/ton) \* 1 ton/2,000 lbs

Emission factors based on SCC# 3-04-003-18, AP 42 Chapter 12, Table 12.10-7 and SCC# 3-04-003-20, US EPA's WebFIRE.

The CO emission factor is based on the best available information for CO emissions from pouring, cooling and shakeout.

All other HAP emission factors are based on the emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 4.0.

**Appendix A: Emission Calculations  
Natural Gas Combustion**

**From One (1) Scrap Preheater, One (1) Beardsley and Piper Petibone Oven,  
One (1) Core Wash Drying Oven, and Two (2) Air Make-up Units**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Heat Input Capacity MMBtu/hr
12.57

Potential Throughput MMCF/yr
108

	Pollutant					
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.4	0.03	5.4	0.3	4.5

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

\*\*Emission factor for NOx: Uncontrolled = 100

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

**Methodology**

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Potential Emission (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x 1 ton/2,000 lbs

**Appendix A: Emission Calculations  
Natural Gas Combustion - HAPs Emissions**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.134E-04	6.477E-05	4.048E-03	9.716E-02	1.835E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.699E-05	5.937E-05	7.557E-05	2.051E-05	1.134E-04

Methodology is the same as page 19.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations  
VOC from Resin**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Materials	Maximum Resin Usage (lb/yr)	Emission Factor (lbs VOC/lbs resin)	Uncontrolled VOC Emissions (lb/yr)	Uncontrolled VOC Emissions (tons/yr)	Controlled VOC Emissions (tons/yr)
Beardsley and Piper Petibone (resin)	32,850	0.05	1643	0.82	0.82
Oil Sand Core Making (binder)	30,835	0.05	1542	0.77088	0.77
No-Bake Core Making (resin)	131	0.05	6.57	3.29E-03	3.29E-03
<b>Total Emissions</b>				1.60	1.60

Emission factors are based on an OCMA study.  
 Conservative estimate of uncontrolled emissions so that no stack test would be necessary.

**METHODOLOGY**

VOC Emissions = Maximum Resin Usage Rate (lbs/yr) \* Emission Factor (lb/lb) \* 1 tons/2000 lbs

**Appendix A: Grey Iron Foundry Operations**  
**Potential HAP Emission Calculations - Pouring, Cooling and Shakeout**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

Material	Maximum Resin Usage (tons/yr)	Acrolein EF (lb/lb)	Benzene EF (lb/lb)	Formaldehyde EF (lb/lb)	Hydrogen Cyanide EF (lb/lb)	Xylenes EF (lb/lb)	Naphthalene EF (lb/lb)	Phenol EF (lb/lb)	Toluene EF (lb/lb)	Aromatic Amines EF (lb/lb)	Aldehydes EF (lb/lb)
Beardsley and Piper Petibone	16.43	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219
Oil Sand Core making Process	15.42	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219
No-Bake Core making process	0.07	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219

Potential Acrolein Emissions (tons/yr)	Potential Benzene Emissions (tons/yr)	Potential Formaldehyde Emissions (tons/yr)	Potential HCN Emissions (ton/yr)	Potential Xylenes Emissions (tons/yr)	Potential Naphthalene Emissions (tons/yr)	Potential Phenol Emissions (ton/yr)	Potential Toluene Emissions (tons/yr)	Potential Aromatic Amines Emissions (tons/yr)	Potential Aldehyde Emissions (tons/yr)	Total HAPs (tons/yr)
0.001	0.088	0.000	0.017	0.009	0.000	0.064	0.014	0.006	0.004	0.203
0.000	0.082	0.000	0.016	0.009	0.000	0.060	0.013	0.005	0.003	0.191
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
<b>Total Emissions</b>										<b>0.394</b>

**METHODOLOGY**

Emission factors from the 1994 Modern Casting article titled "Calculating Emission Factors for Pouring, Cooling and Shakeout" by Gary Mosher.  
HAP Emissions = Maximum Usage Rate (tons/yr) \* 2000 lbs/ton \* Emission Factor (lb/lb) \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
Emission Summary**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

**Uncontrolled Potential Emissions**

	<b>Year of Construction</b>	<b>PM (tons/yr)</b>	<b>PM<sub>10</sub> (tons/yr)</b>	<b>SO<sub>2</sub> (tons/yr)</b>	<b>VOC (tons/yr)</b>	<b>CO (tons/yr)</b>	<b>NOx (tons/yr)</b>	<b>HAPs (tons/yr)</b>
<b>Emission Unit</b>								
Scrap and Charge Handling	1977	15.8	9.46	0.00	0.00	0.00	0.00	0.08
Electric Induction Furnace Unit 11 B	1983	11.8	11.3	0.00	0.00	0.00	0.00	1.03
Electric Induction Furnace Unit 11 C	1980	11.8	11.3	0.00	0.00	0.00	0.00	1.03
Pouring and Casting	1950	110	54.1	0.53	3.68	157.68	0.26	0.57
Casting Cooling	1950	36.8	36.8	0.00	0.00	0.00	0.00	0.00
Shakeout System (Iron and Sand)	1977	557	130	0.00	31.5	0.00	0.00	0.43
Tableblast Shot Blaster	1967	223	22.3	0.00	0.00	0.00	0.00	1.15
Spinnerblast Shot Blaster	1979	63.3	6.33	0.00	0.00	0.00	0.00	0.33
Beardsley and Petibone	1974	9.64	9.64	0.00	0.82	0.00	0.00	0.20
Oil Sand Core Making	1970	9.64	9.64	0.00	0.77088	0.00	0.00	0.19
No-Bake Core Making	1976	9.64	9.64	0.00	0.00	0.00	0.00	0.00
Oil Shell Core Sand Handling	1977	33.3	4.99	0.00	0.00	0.00	0.00	0.00
Muller Green Sand Handling	1976	946	142	0.00	0.00	0.00	0.00	0.00
No-Bake Sand Handling	1970	19.7	2.96	0.00	0.00	0.00	0.00	0.00
Alphaset Sand Handling	1976	78.8	11.8	0.00	0.00	0.00	0.00	0.00
Magnesium Treatment Process	1977	47.3	47.3	0.00	0.00	0.00	0.00	0.00
Insignificant Activities		0.10	0.41	0.03	0.30	4.53	5.40	0.10
<b>Total Emissions</b>		<b>2185</b>	<b>520</b>	<b>0.56</b>	<b>37.1</b>	<b>162.21</b>	<b>5.66</b>	<b>5.11</b>

**Appendix A: Emissions Calculations**

**Emission Summary**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

**Controlled Potential Emissions**

	<b>Year of Construction</b>	<b>PM (tons/yr)</b>	<b>PM<sub>10</sub> (tons/yr)</b>	<b>SO<sub>2</sub> (tons/yr)</b>	<b>VOC (tons/yr)</b>	<b>CO (tons/yr)</b>	<b>NO<sub>x</sub> (tons/yr)</b>	<b>HAPs (tons/yr)</b>
<b>Emission Unit</b>								
Scrap and Charge Handling	1977	15.8	9.46	0.00	0.00	0.00	0.00	0.08
Electric Induction Furnace Unit 11 B	1983	11.8	11.3	0.00	0.00	0.00	0.00	1.03
Electric Induction Furnace Unit 11 C	1980	11.8	11.3	0.00	0.00	0.00	0.00	1.03
Pouring and Casting	1950	110	54.1	0.53	3.68	157.68	0.26	0.57
Casting Cooling	1950	36.8	36.8	0.00	0.00	0.00	0.00	0.00
Shakeout System (Iron and Sand)	1977	11.1	2.60	0.00	31.5	0.00	0.00	0.43
Tableblast Shot Blaster	1967	2.23	0.22	0.00	0.00	0.00	0.00	1.15
Spinnerblast Shot Blaster	1979	1.27	0.13	0.00	0.00	0.00	0.00	0.33
Beardsley and Petibone	1974	9.64	9.64	0.00	0.82	0.00	0.00	0.20
Oil Sand Core Making	1970	9.64	9.64	0.00	0.77	0.00	0.00	0.19
No-Bake Core Making	1976	9.64	9.64	0.00	0.00	0.00	0.00	0.00
Oil Shell Core Sand Handling	1977	33.3	4.99	0.00	0.00	0.00	0.00	0.00
Muller Green Sand Handling	1976	18.9	2.84	0.00	0.00	0.00	0.00	0.00
No-Bake Sand Handling	1970	19.7	2.96	0.00	0.00	0.00	0.00	0.00
Alphaset Sand Handling	1976	78.8	11.8	0.00	0.00	0.00	0.00	0.00
Magnesium Treatment Process	1977	4.73	4.73	0.00	0.00	0.00	0.00	0.00
Insignificant Activities		0.1	0.4	0.03	0.3	4.6	5.4	0.01
<b>Total Controlled Emissions</b>		<b>386</b>	<b>183</b>	<b>0.56</b>	<b>37.1</b>	<b>162.28</b>	<b>5.66</b>	<b>5.02</b>

**Appendix A: Emissions Calculations**

**Emission Summary**

**Source Name:** Accucast Technology, LLC  
**Source Location:** 220 Eckman Street, South Bend, Indiana 46614  
**Permit Number:** T141-24573-00203  
**Permit Reviewer:** ERG/TDP  
**Date:** December 6, 2007

**LIMITED Potential Emissions**

	<b>Year of Construction</b>	<b>PM (tons/yr)</b>	<b>PM<sub>10</sub> (tons/yr)</b>	<b>SO<sub>2</sub> (tons/yr)</b>	<b>VOC (tons/yr)</b>	<b>CO (tons/yr)</b>	<b>NOx (tons/yr)</b>	<b>HAPs (tons/yr)</b>
<b>Emission Unit</b>								
Scrap and Charge Handling	1977	6.75	4.05	0.00	0.00	0.00	0.00	0.03
Electric Induction Furnace Unit 11 B	1983	5.06	4.84	0.00	0.00	0.00	0.00	0.44
Electric Induction Furnace Unit 11 C	1980	5.06	4.84	0.00	0.00	0.00	0.00	0.44
Pouring and Casting	1950	47.3	23.2	0.23	1.58	67.58	0.11	0.24
Casting Cooling	1950	15.8	15.8	0.00	0.00	0.00	0.00	0
Shakeout System (Iron and Sand)	1977	36.0	25.2	0.00	13.5	0.00	0.00	0.19
Tableblast Shot Blaster	1967	0.62	0.06	0.00	0.00	0.00	0.00	0.32
Spinnerblast Shot Blaster	1979	0.70	0.07	0.00	0.00	0.00	0.00	0.18
Beardsley and Petibone	1974	0.002	0.002	0.00	0.82	0.00	0.00	0.20
Oil Sand Core Making	1970	0.002	0.002	0.00	0.77088	0.00	0.00	0.19
No-Bake Core Making	1976	0.002	0.002	0.00	0.00	0.00	0.00	0.00
Oil Shell Sand Core Handling	1977	0.81	0.12	0.00	0.00	0.00	0.00	0.00
Muller Green Sand Handling	1976	0.19	0.03	0.00	0.00	0.00	0.00	0.00
No-Bake Sand Handling	1970	7.70	1.16	0.00	0.00	0.00	0.00	0.00
Alphaset Sand Handling	1976	0.81	0.12	0.00	0.00	0.00	0.00	0.00
Magnesium Treatment Process	1977	9.48	9.48	0.00	0.00	0.00	0.00	0.00
Insignificant Activities		0.1	0.4	0.03	0.3	4.6	5.4	0.01
<b>Total Emissions</b>		<b>136.4</b>	<b>89.4</b>	<b>0.26</b>	<b>17.0</b>	<b>72.18</b>	<b>5.51</b>	<b>2.25</b>