



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Jim Bopp  
Plymouth Foundry, Inc.  
523 West Harrison Street  
Plymouth, IN 46563-0537

Re: 099-25002-00003  
Second Significant Permit Modification to  
Part 70 No.: T 099-7366-00003

Dear Mr. Bopp:

Plymouth Foundry, Inc. was issued a permit on July 21, 1999 for a stationary gray iron foundry. A letter requesting changes to this permit was received on June 21, 2007. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the installation of one (1) electric sand heater, two (2) sand mixers and sand handling operations, one (1) no bake core machine, and two (2) Isocure core machines equipped with a new acid scrubber for control of VOC (DMIPA) emissions at the existing gray iron foundry.

All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised permit.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Ms. Trish Earls, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (201) 722-1460 to speak directly to Ms. Earls. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

Attachments  
ERG/TE

cc: File – Marshall County  
U.S. EPA, Region V  
Marshall County Health Department  
IDEM Northern Regional Office  
Air Compliance Section Inspector  
Compliance Data Section  
Administrative and Development  
Technical Support and Modeling



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## PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Plymouth Foundry, Incorporated  
523 West Harrison Street  
Plymouth, Indiana 46563-0537**

(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. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: 099-7366-00003	
Original Issued by:  Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: July 21, 1999  Expiration Date: July 21, 2004

First Significant Permit Modification No.: 099-11440-00003, issued April 20, 2000  
First Reopening No.: R 099-13417-00003, issued January 7, 2002  
First Administrative Amendment No.: 099-20415-00003, issued May 31, 2005

Second Significant Permit Modification No.: 099-25002-00003	Affected pages: Entire permit
Issued by:  Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date:

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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 2-7-4(c)][326 IAC 2-7-5(15)]

---

The Permittee owns and operates a stationary gray iron foundry.

Source Address:	523 West Harrison Street, Plymouth, Indiana 46563-0537
Mailing Address:	523 West Harrison Street, Plymouth, Indiana 46563-0537
General Source Phone Number:	574-936-2106
SIC Code:	3321
County Location:	Marshall
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

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

- (a) Two (2) electric induction furnaces (iron), installed in 1986, capacity: 1.5 tons of iron per hour, each.
- (b) One (1) pouring and cooling operation, installed prior to 1976, capacity: 1.5 tons of iron per hour and a maximum of 10 tons of sand per hour.
- (c) One (1) manual shakeout operation, installed prior to 1976, capacity: 1.5 tons of iron per hour and 4.4 tons of sand per hour.
- (d) One (1) cleaning and finishing operation, consisting of a tumble and shot blast unit and two (2) baghouses for particulate matter control, exhausting through stacks 2-A and 2-B, installed in 1987 and 1993, capacity: 1.5 tons of iron per hour, total.
- (e) One (1) sand handling operation consisting of one (1) muller, one (1) power screen, one (1) skip bucket, one (1) wet sand conveyor, one (1) sand and clay addition system, six (6) overhead wet sand transfer belt conveyors, six (6) mold machine feed hoppers and a baghouse for particulate matter control, exhausting through stack 4, installed in 1992, capacity: 10.0 tons of sand per hour, total.
- (f) One (1) core making operation, consisting of two (2) core making machines, capacity 0.25 tons of cores per hour each and five (5) mold making machines, capacity: one (1) at 10 tons of sand per hour and four (4) at 3 tons of sand per hour each, installed prior to 1976, capacity: 4.61 pounds of resins per hour.
- (g) One (1) surface coating operation, consisting of an airless spray applicator and dip tank system, equipped with an 11,000 actual cubic feet per minute exhaust fan, installed in 1976, capacity: 120 iron parts per hour.
- (h) One (1) shakeout machine, installed in 1997, capacity: 1.5 tons of iron per hour and 20 tons of sand per hour.
- (i) One (1) baghouse dust collector controlling particulate matter emissions inside the foundry installed in 1997.

- (j) Two (2) core sand mixers, identified as M-1 and M-2, approved for construction in 2007, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.
- (k) One (1) electric sand heater, approved for construction in 2007, capacity: 3.0 tons of sand per hour.
- (l) Two (2) core sand handling operations associated with the core sand mixers, identified as SH-1 and SH-2, approved for construction in 2007, consisting of conveyors and hoppers, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.
- (m) One (1) core making operation, consisting of two (2) Isocure core machines, identified as CM 1 and CM 2, approved for construction in 2007, capacity 3.0 tons of cores per hour combined, 0.015 pound of resin per pound of sand and 0.0007 pound of DMIPA catalyst per pound of sand. DMIPA catalyst emissions from both core machines are controlled by an acid scrubber exhausting to stack 5.
- (n) One (1) No Bake core machine, identified as CM 3, approved for construction in 2007, capacity: 0.0375 tons of cores per hour, 0.015 pound of resin per pound of sand and 0.0007 pound of catalyst per pound of sand.

A.3 Specifically Regulated Insignificant Activities  
[326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(15)]

---

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

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (b) Charge Handling - Putting raw materials into furnaces and associated material handling - PM = 21.6 pounds per day, PM<sub>10</sub> = 21.6 pounds per day

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

---

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

**SECTION B**

**GENERAL CONDITIONS**

**B.1 Permit No Defense [326 IAC 2-1-10] [IC 13]**

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- (a) 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 Part 70 permit under 326 IAC 2-7.
- (b) This prohibition shall not apply to alleged violations of applicable requirements for which the Commissioner has granted a permit shield in accordance with 326 IAC 2-1-3.2 or 326 IAC 2-7-15, as set out in this permit in the Section B condition entitled "Permit Shield."

**B.2 Definitions [326 IAC 2-7-1]**

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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, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

**B.3 Permit Term [326 IAC 2-7-5(2)]**

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

**B.4 Enforceability [326 IAC 2-7-7(a)]**

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

**B.5 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]**

---

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 2-7-3 and 326 IAC 2-7-4(a).

**B.6 Severability [326 IAC 2-7-5(5)]**

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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.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]**

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

**B.8 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]**

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

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

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

- (c) Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAQ, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAQ, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, then the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

**B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)]**

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- (a) Any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air 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, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (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 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 compliance of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3);

- (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 the "responsible official" as defined by 326 IAC 2-7-1(34).

**B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]**

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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 (PMP) 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;
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ.

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

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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 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

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

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

Telephone Number: 317-233-0178 (ask for Compliance Section)

Facsimile Number: 317-233-6865

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

Indiana Department of Environmental Management

Compliance Branch, Office of Air Quality

100 North Senate Avenue

MC 61-53 IGCN 1003

Indianapolis, Indiana 46204-2251

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

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

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

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 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 materials of substantial economic value.

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

**B.13 Permit Shield [326 IAC 2-7-15]**

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- (a) This condition provides a permit shield as addressed in 326 IAC 2-7-15.
- (b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that:
  - (1) The applicable requirements are included and specifically identified in this permit; or
  - (2) The permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable.
- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

**B.14 Multiple Exceedances [326 IAC 2-7-5(1)(E)]**

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Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

within ten (10) calendar days from the date of the discovery of the deviation.

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
- (2) An emergency as defined in 326 IAC 2-7-1(12); or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
- (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

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

(c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]**

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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 Part 70 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 2-7-5(6)(C)]

(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 2-7-9(a)(3)]

- (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 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

**B.17 Permit Renewal [326 IAC 2-7-4]**

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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 2-7-4. 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).

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) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
  - (1) A timely renewal application is one that is:
    - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
    - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due. [326 IAC 2-5-3]
  - (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]

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 2-7 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.
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]

If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 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 should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]**  
[326 IAC 2-7-12 (b)(2)]

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- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

**B.20 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-7-20(b)]**

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The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a) and the following additional conditions:

- (a) For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
- (b) The permit shield, described in 326 IAC 2-7-15, shall not apply to any change made under 326 IAC 2-7-20(b).

**B.21 Operational Flexibility [326 IAC 2-7-20]**

---

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management

Permits Branch, Office of Air Quality  
100 North Senate Avenue  
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 which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20 (b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

- (b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) 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.22 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

**B.23 Inspection and Entry [326 IAC 2-7-6(2)]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, 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 Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-7-6(6)]
  - (1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAQ, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source.  
In the event that a claim of confidentiality is so asserted, neither IDEM, OAQ, nor an authorized representative, may disclose the information unless and until IDEM, OAQ, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]
  - (2) The Permittee, and IDEM, OAQ, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

**B.24 Transfer of Ownership or Operation [326 IAC 2-1-6] [326 IAC 2-7-11]**

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Pursuant to 326 IAC 2-1-6 and 326 IAC 2-7-11:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change. Notification shall include a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the Permittee and the new owner.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an administrative amendment pursuant to 326 IAC 2-7-11. The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) IDEM, OAQ, shall reserve the right to issue a new permit.

**B.25 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. 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.26 Enhanced New Source Review [326 IAC 2]**

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The requirements of the construction permit rules in 326 IAC 2 are satisfied by this permit for any previously unpermitted facilities and facilities to be constructed within eighteen (18) months after the date of issuance of this permit, as listed in Sections A.2 and A.3.

**SECTION C**

**SOURCE OPERATION CONDITIONS**

Entire Source

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

**C.1 Major Source**

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 this source is a major source.

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

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

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

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

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

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

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

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

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

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

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

**C.7 Operation of Equipment [326 IAC 2-7-6(6)]**

All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]**

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

### **Testing Requirements [326 IAC 2-7-6(1)]**

#### **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 methods 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 Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

#### **C.10 Compliance Schedule [326 IAC 2-7-6(3)]**

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The Permittee:

- (a) Has certified that all facilities at this source are in compliance with all applicable requirements; and
- (b) Has submitted a statement that the Permittee will continue to comply with such requirements; and
- (c) Will comply with such applicable requirements that become effective during the term of this permit.

#### **C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend compliance schedule 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 the "responsible official" as defined by 326 IAC 2-7-1(34).

#### **C.12 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]**

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- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

**C.13 Pressure Gauge Specifications**

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Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.

**C.14 Monitoring Methods [326 IAC 3]**

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Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

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

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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 not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(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.16 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]**

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(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

- (1) This condition;
- (2) The Compliance Determination Requirements in Section D of this permit;
- (3) The Compliance Monitoring Requirements in Section D of this permit;

- (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
- (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
  - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
  - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

**C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

#### **C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]**

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- (a) In accordance with the compliance schedule specified in 326 IAC 2-6-3 (b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
  - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) The emission statement 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.19 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]**

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- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6 (2)(B)]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. 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 written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks. Therefore, there are no changes to part (c)(4).
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported.

- (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, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

### **Stratospheric Ozone Protection**

#### **C.22 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**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (a) Two (2) electric induction furnaces (iron), installed in 1986, capacity: 1.5 tons of iron per hour, each.

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

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

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

- (a) The particulate matter (PM) emissions from each of the two (2) induction furnaces shall not exceed 5.4 pounds per hour for a process weight rate of 1.5 tons per hour.

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

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

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

**D.1.2 Melt Capacity**

The two (2) induction furnaces shall not exceed a 1.5 ton per hour total melt rate without prior approval of OAQ.

**Compliance Determination Requirements**

**D.1.3 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

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

**D.1.4 Visible Emissions Notations**

- (a) Daily visible emission notations of the two (2) induction furnace stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

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

D.1.5 Record Keeping Requirements

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- (a) To document compliance with Condition D.1.4 the Permittee shall maintain records of daily visible emission notations of each facility.
  
- (b) To document compliance with Condition D.1.2 the Permittee shall maintain records of the total metal melted at the two (2) induction furnaces.

**SECTION D.2**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (b) One (1) pouring and cooling operation, installed prior to 1976, capacity: 1.5 tons of iron per hour and a maximum of 10 tons of sand per hour.

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

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

**D.2.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

- (a) The particulate matter (PM) emissions from the pouring and cooling operation shall not exceed 13.5 pounds per hour for a process weight rate (including sand) of 5.9 tons per hour.

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

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

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

**Compliance Determination Requirements**

**D.2.2 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**SECTION D.3**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (c) One (1) manual shakeout operation, installed prior to 1976, capacity: 1.5 tons of iron per hour and 4.4 tons of sand per hour.

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

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

**D.3.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

- (a) The particulate matter (PM) emissions from the manual shakeout operation shall not exceed 13.5 pounds per hour for a process weight rate (including sand) of 5.9 tons per hour.

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

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

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

**Compliance Determination Requirements**

**D.3.2 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**SECTION D.4**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (d) One (1) cleaning and finishing operation, consisting of a tumble and shot blast unit and two (2) baghouses for particulate matter control, exhausting through stacks 2-A and 2-B, installed in 1987 and 1993, capacity: 1.5 tons of iron per hour, total.

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

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

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

- (a) The particulate matter (PM) emissions from the cleaning and finishing operation shall not exceed 5.4 pounds per hour for a process weight rate of 1.5 tons per hour.
- (b) The pounds per hour limitations were calculated with the following equation:

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

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

**D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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

**Compliance Determination Requirements**

**D.4.3 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.4.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

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

**D.4.4 Visible Emissions Notations**

- (a) Daily visible emission notations of the two (2) cleaning and finishing baghouse stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

#### D.4.5 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the cleaning and finishing operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors.. All defective bags shall be replaced.

#### D.4.6 Broken or Failed Bag Detection

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In the event that bag failure has been observed.

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.4.7 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the cleaning and finishing operations, at least once daily when these operations are occurring and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0.5 and 9.5 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

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

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

#### D.4.8 Record Keeping Requirements

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- (a) To document compliance with Condition D.4.4, the Permittee shall maintain records of daily visible emission notations of each facility and the results of the inspections required under Condition D.4.5.
- (b) To document compliance with Condition D.4.7, the Permittee shall maintain the following:
  - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    - Inlet and outlet differential static pressure; and
  - (2) Documentation of all response steps implemented, per event.

- (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.
  - (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION D.5**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (e) One (1) sand handling operation consisting of one (1) muller, one (1) power screen, one (1) skip bucket, one (1) wet sand conveyor, one (1) sand and clay addition system, six (6) overhead wet sand transfer belt conveyors, six (6) mold machine feed hoppers and a baghouse for particulate matter control, exhausting through stack 4, installed in 1992, capacity: 10.0 tons of sand per hour, total.

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

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

**D.5.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

- (a) The particulate matter (PM) emissions from the sand handling operations shall not exceed 19.2 pounds per hour for a process weight rate of 10.0 tons per hour.

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

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

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

**D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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

**Compliance Determination Requirements**

**D.5.3 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.5.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

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

**D.5.4 Visible Emissions Notations**

- (a) Daily visible emission notations of the sand handling baghouse stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

#### D.5.5 Baghouse Inspections

---

An inspection shall be performed each calendar quarter of all bags controlling the sand handling operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors.. All defective bags shall be replaced.

#### D.5.6 Broken or Failed Bag Detection

---

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.5.7 Parametric Monitoring

---

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the sand handling operations, at least once daily when these operations are occurring and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0.5 and 9.5 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

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

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

#### D.5.8 Record Keeping Requirements

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- (a) To document compliance with Condition D.5.4, the Permittee shall maintain records of daily visible emission notations of each facility and the results of the inspections required under Condition D.5.5.
- (b) To document compliance with Condition D.5.7, the Permittee shall maintain the following:
  - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    - Inlet and outlet differential static pressure; and

- (2) Documentation of all response steps implemented, per event.
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.
  - (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION D.6**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (f) One (1) core making operation, consisting of two (2) core making machines, capacity 0.25 tons of cores per hour each and five (5) molds making machines, capacity: one (1) at 10 tons of sand per hour and four (4) at 3 tons of sand per hour each, installed prior to 1976, capacity: 4.61 pounds of resins per hour.

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

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

**D.6.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

- (a) The particulate matter (PM) emissions from the core making operation shall not exceed 2.58 pounds per hour for a process weight rate of 0.5 tons per hour.
- (b) The particulate matter (PM) emissions from the mold making operation shall not exceed 32.5 pounds per hour for a process weight rate of 22.0 tons per hour.
- (c) The pounds per hour limitations were calculated with the following equation:

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

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

**Compliance Determination Requirements**

**D.6.2 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.6.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**SECTION D.7**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (g) One (1) surface coating operation, consisting of an airless spray applicator and dip tank system, equipped with an 11,000 actual cubic feet per minute exhaust fan, installed in 1976, capacity: 120 iron parts per hour.

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

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

**D.7.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

The PM from the surface coating operation shall not exceed the pound per hour emission rate established as E in the following formula:

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

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

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

**Compliance Determination Requirements**

**D.7.2 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.7.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**SECTION D.8**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (h) One (1) shakeout machine, installed in 1997, capacity: 1.5 tons of iron per hour and 20 tons of sand per hour.
- (i) One (1) baghouse dust collector controlling particulate matter emissions inside the foundry (does not have to be operated at all times) installed in 1997.

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

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

**D.8.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

(a) The particulate matter (PM) emissions from the shakeout machine operation shall not exceed 13.5 pounds per hour for a total process weight rate (includes sand) of 5.9 tons per hour.

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

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

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

**D.8.2 Particulate Matter (PM)**

Any change or modification which may increase potential PM emissions after control to twenty-five (25) from the shakeout machine shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change shall occur.

**D.8.3 PM10**

PM10 emissions shall not exceed 3.40 pounds per hour. This limit is equivalent to a PM10 emission rate of less than fifteen (15) tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable.

**Compliance Determination Requirements**

**D.8.4 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM<sub>10</sub> limits specified in Conditions D.8.1 and D.8.3, respectively, shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**SECTION D.9**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)] Insignificant Activities**

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (b) Charge Handling - Putting raw materials into furnaces and associated material handling, capacity: 1.5 tons of metal per hour, - PM = 21.6 pounds per day, PM<sub>10</sub> = 21.6 pounds per day.

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

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

**D.9.1 Volatile Organic Compounds (VOC)**

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

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

**D.9.2 Volatile Organic Compounds (VOC)**

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

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

#### D.9.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]

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- (a) The particulate matter (PM) emissions from the charge handling operation shall not exceed 5.4 pounds per hour for a process weight rate of 1.5 tons per hour.
- (b) The pounds per hour limitations were calculated with the following equation:

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

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

### Compliance Determination Requirements

#### D.9.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

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The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.9.3 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**SECTION D.10**

**EMISSIONS UNIT OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (j) Two (2) core sand mixers, identified as M-1 and M-2, approved for construction in 2007, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.
- (k) One (1) electric sand heater, approved for construction in 2007, capacity: 3.0 tons of sand per hour.
- (l) Two (2) core sand handling operations associated with the core sand mixers, identified as SH-1 and SH-2, approved for construction in 2007, consisting of conveyors and hoppers, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.
- (m) One (1) core making operation, consisting of two (2) Isocure core machines, identified as CM 1 and CM 2, approved for construction in 2007, capacity 3.0 tons of cores per hour combined, 0.015 pound of resin per pound of sand and 0.0007 pound of DMIPA catalyst per pound of sand. DMIPA catalyst emissions from both core machines are controlled by an acid scrubber exhausting to stack 5.
- (n) One (1) No Bake core machine, identified as CM 3, approved for construction in 2007, capacity: 0.0375 tons of cores per hour, 0.015 pound of resin per pound of sand and 0.0007 pound of catalyst per pound of sand.

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

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

**D.10.1 Particulate Matter (PM) [326 IAC 2-2][326 IAC 2-7-10.5(d)(4)(E)]**

The source shall limit PM emissions from raw material usage and sand handling as follows:

- (a) The throughput of sand to the one (1) core sand handling operation, identified as SH-1, shall not exceed 13,505 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (b) PM emissions from the one (1) core sand handling operation, identified as SH-1, shall not exceed 3.6 pounds per ton of sand throughput.

Compliance with raw material usage limit and PM emission limit will limit the potential to emit from the modification in 2007 to less than twenty-five (25) tons of PM per year and therefore will render the requirements of 326 IAC 2-2 not applicable. Compliance with this limit will also satisfy the requirements for a minor source modification pursuant to 326 IAC 2-7-10.5(d)(4)(E).

**D.10.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-7-10.5(d)(6)]**

The source shall limit VOC emissions from the core machines as follows:

- (a) Resin Usage
  - (1) The total resin usage for the two (2) Isocure core machines combined shall not exceed 505,317 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (2) The VOC emissions from resin usage in the two (2) Isocure core machines shall not exceed 0.05 pound per pound of resin.
- (b) Catalyst Usage

Catalyst usage for the two (2) Isocure core machines combined shall not exceed 23,581 pounds of VOC catalyst per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the usage limits and VOC emission limit will limit VOC emissions from the two (2) Isocure core machines (CM 1 and CM 2) to less than twenty-five (25) tons per year and therefore will render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable. Compliance with this limit will also satisfy the requirements for a minor source modification pursuant to 326 IAC 2-7-10.5(d)(6).

#### D.10.3 Particulate [326 IAC 6-3-2]

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Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Core Sand Mixer M1 and Core Sand Handling SH-1 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

#### D.10.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the core sand mixers and core sand handling operations and their control device.

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

#### D.10.5 Particulate Control

---

- (a) In order to comply with Condition D.10.3, the baghouse dust collector for particulate control shall be in operation and control emissions from the core sand mixer M1 and core sand handling SH-1 at all times that the core sand mixer M1 and core sand handling SH-1 are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

## Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

### D.10.6 Visible Emissions Notations

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- (a) Visible emission notations of the stack exhaust for the baghouse controlling the core sand mixer M1 and the sand handling operations SH-1 shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

### D.10.7 Parametric Monitoring

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The Permittee shall record the pressure drop across the baghouse used in conjunction with the core sand mixer M1 and core sand handling operation SH-1, at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

### D.10.8 Broken or Failed Bag Detection

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

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

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

**D.10.9 Record Keeping Requirements**

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- (a) To document compliance with Condition D.10.1, the Permittee shall maintain monthly records of the throughput of sand to the one (1) core sand handling operation, identified as SH-1.
- (b) To document compliance with Condition D.10.2, the Permittee shall maintain monthly records of the resin and catalyst usage in the two (2) Isocure core machines (CM 1 and CM 2).
- (c) To document compliance with Condition D.10.6, the Permittee shall maintain records of visible emission notations of the stack exhaust for the baghouse controlling the core sand mixer M1 and the sand handling operations SH-1 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day or did not exhaust to the atmosphere).
- (d) To document compliance with Condition D.10.7, the Permittee shall maintain records once per day of the pressure drop. 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).
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.10.10 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.10.1 and D.10.2 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. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

**PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Plymouth Foundry, Incorporated  
Source Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Mailing Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Part 70 Permit No.: T 099-7366-00003

**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)
- 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**

**PART 70 OPERATING PERMIT  
SEMI-ANNUAL COMPLIANCE MONITORING REPORT**

Source Name: Plymouth Foundry, Incorporated  
Source Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Mailing Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Part 70 Permit No.: T 099-7366-00003

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

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted semi-annually. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

<b>Compliance Monitoring Requirement</b> (e.g. Permit Condition D.1.3)	<b>Number of Deviations</b>	<b>Date of Each Deviation</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 COMPLIANCE DATA SECTION

## Part 70 Quarterly Report

Source Name: Plymouth Foundry, Incorporated  
Source Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Mailing Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Part 70 Permit No.: T099-7366-00003  
Facility: core sand handling operation, identified as SH-1  
Parameter: PM emissions  
Limit: The throughput of sand to the one (1) core sand handling operation, identified as SH-1, shall not exceed 13,505 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
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.  
Deviation has been reported on:

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

Source Name: Plymouth Foundry, Incorporated  
 Source Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
 Mailing Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
 Part 70 Permit No.: T099-7366-00003  
 Facility: two (2) Isocure core machines (CM 1 and CM 2)  
 Parameter: VOC emissions  
 Limit: (a) The total resin usage for the two (2) Isocure core machines (CM 1 and CM 2) combined shall not exceed 505,317 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month.  
 (b) Catalyst usage for the two (2) Isocure core machines (CM 1 and CM 2) combined shall not exceed 23,581 pounds of VOC catalyst 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	
	Resin Usage This Month (pounds)	Catalyst Usage This Month (pounds)	Resin Usage Previous 11 Months (pounds)	Catalyst Usage Previous 11 Months (pounds)	12 Month Total Resin Usage (pounds)	12 Month Total Catalyst Usage (pounds)
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  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT  
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: Plymouth Foundry, Incorporated  
Source Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Mailing Address: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
Part 70 Permit No.: T 099-7366-00003

**This form consists of 2 pages**

**Page 1 of 2**

Check either No. 1 or No.2

1. 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) days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16
2. This is a deviation, reportable per 326 IAC 2-7-5(3)(c)
- The Permittee must submit notice in writing within ten (10) calendar days

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/Deviation:

Describe the cause of the Emergency/Deviation:

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

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation?    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/deviation:
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: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**Technical Support Document (TSD) for a Part 70 Minor Source  
Modification and Significant Permit Modification.**

**Source Description and Location**

Source Name:	Plymouth Foundry, Inc.
Source Location:	523 West Harrison Street, Plymouth, IN 46563
County:	Marshall
SIC Code:	3321
Operation Permit No.:	T099-7366-00003
Operation Permit Issuance Date:	July 21, 1999
Minor Source Modification No.:	099-24954-00003
Significant Permit Modification No.:	099-25002-00003
Permit Reviewer:	ERG/TE

**Existing Approvals**

The source was issued Part 70 Operating Permit No. T099-7366-00003 on July 21, 1999. The source has since received the following approvals:

- (a) Significant Permit Modification No. 099-11440-00003, issued on April 20, 2000;
- (b) First Reopening to a Part 70 Operating Permit No. 099-13417-00003, issued on January 7, 2002; and
- (c) Administrative Amendment No. 099-20415-00003, issued on May 31, 2005.

The source submitted an application for a Part 70 Operating Permit Renewal on September 18, 2003. At this time, this application is still under review.

**County Attainment Status**

The source is located in Marshall County.

<b>Pollutant</b>	<b>Status</b>
PM10	Attainment
PM2.5	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Marshall County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) Marshall County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.
- (c) Marshall County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (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) Since this source is classified as a secondary metal production plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (f) **Fugitive Emissions**  
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

<b>Source Status</b>
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The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

<b>Pollutant</b>	<b>Emissions (tons/year)</b>
PM	200.5
PM10	253.6
SO <sub>2</sub>	1.0
VOC	34.3
CO	1.0
NO <sub>x</sub>	3.0

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) These emissions are based upon Part 70 Operating Permit No. T099-7366-00003, issued July 21, 1999.

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

<b>HAPs</b>	<b>Potential To Emit (tons/year)</b>
Methanol	Less than 10
Toluene	Less than 10
Xylene	Less than 10
Ethylbenzene	Less than 10
Lead	Less than 10
Nickel	Less than 10
Chromium	Less than 10
Manganese	Less than 10
TOTAL	2.40

This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

### Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM2.5	4.0
PM10	5.0
SO <sub>2</sub>	Not reported
VOC	0.0
CO	Not reported
NO <sub>x</sub>	Not reported
HAP	Not reported

### Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Plymouth Foundry, Inc. on June 21, 2007, relating to the installation of one (1) electric sand heater, two (2) sand mixers and sand handling operations, one (1) no bake core machine, and two (2) Isocure core machines equipped with a new acid scrubber for control of VOC emissions at the existing gray iron foundry. VOC emissions from the core machines are generated from the use of a DMIPA catalyst. The following is a list of the proposed emission units and pollution control devices:

- (a) Two (2) core sand mixers, identified as M-1 and M-2, approved for construction in 2007, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively;
- (b) One (1) electric sand heater, approved for construction in 2007, capacity: 3.0 tons of sand per hour;
- (c) Two (2) core sand handling operations associated with the core sand mixers, identified as SH-1 and SH-2, approved for construction in 2007, consisting of conveyors and hoppers, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively;
- (d) One (1) core making operation, consisting of two (2) Isocure core machines, identified as CM 1 and CM 2, approved for construction in 2007, capacity 3.0 tons of cores per hour combined, 0.015 pound of resin per pound of sand and 0.0007 pound of DMIPA catalyst per pound of sand. DMIPA catalyst emissions from both core machines are controlled by an acid scrubber exhausting to stack 5; and
- (e) One (1) No Bake core machine, identified as CM 3, approved for construction in 2007, capacity: 0.0375 tons of cores per hour, 0.015 pound of resin per pound of sand and 0.0007 pound of catalyst per pound of sand.

There will not be an increase in metal throughput or sand throughput to any of the existing melting, pouring, cooling, shakeout, cleaning, finishing, sand handling, or surface coating operations because the cores that will be produced are to replace those that have been purchased in the past. Plymouth wishes to produce more of their own cores in the future rather than relying on outside suppliers.

The source has requested a limit on VOC emissions from the three (3) core machines to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable.

**Enforcement Issues**

There are no pending enforcement actions related to this modification.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
5	New Acid Scrubber	10.0	1.65	2900	70

**Emission Calculations**

See Appendix A of this document for detailed emission calculations.

**Permit Level Determination – Part 70**

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

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit Before Limits (tons/year)	Potential To Emit After Limits (tons/year)
PM	47.89	<25
PM10	7.19	<15
SO <sub>2</sub>	0.00	0.00
VOC	38.58	<25
CO	0.00	0.00
NO <sub>x</sub>	0.00	0.00

HAPs	Potential To Emit (tons/year)
Formaldehyde	0.001
Naphthalene	0.01
Glycol ethers	4.99
Methanol	0.02
Xylene	0.005
Cumene	0.002
TOTAL	5.03

This source modification is considered a minor source modification because:

- (a) Pursuant to 326 IAC 2-7-10.5(d)(4)(E), the source will limit raw material usage to the sand mixers and sand handling so that PM emissions are limited to less than 25 tons per year.
- (b) Pursuant to 326 IAC 2-7-10.5(d)(6), the source will accept a VOC emission limit for the core machines of less than 25 tons per year to render the requirements of 326 IAC 8-1-6 not applicable.

Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because additional compliance monitoring, record keeping and reporting requirements are being added to the permit which are considered significant.

**Permit Level Determination – PSD**

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/Emission Unit	Potential to Emit (tons/year)							Total HAPs
	PM	PM10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	Single HAP	
<b>Two (2) core sand mixers (M-1 and M-2) and core sand handling operations (SH-1 and SH-2)<sup>(1)</sup></b>	24.90	7.19	0.00	0.00	0.00	0.00	0.00	0.00
<b>Isocure core machines (CM 1 and CM 2)<sup>(2)</sup></b>	0.00	0.00	0.00	24.42	0.00	0.00	2.563 (Glycol Ethers)	2.568
<b>No Bake core machine (CM 3)</b>	0.00	0.00	0.00	0.48	0.00	0.00	0.023 (Methanol)	0.031
<b>Electric sand heater</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total for Modification</b>	<b>24.9</b>	<b>7.19</b>	<b>0.00</b>	<b>24.90</b>	<b>0.00</b>	<b>0.00</b>	<b>2.563</b>	<b>2.599</b>
<b>Significant Level or Major Source Threshold</b>	<b>25</b>	<b>15</b>	<b>40</b>	<b>40</b>	<b>100</b>	<b>40</b>	<b>NA</b>	<b>NA</b>

Notes:

- (1) Limited PM emissions from core sand handling operations are based on a sand throughput limit for SH-1 of 13,505 tons per twelve (12) consecutive month period and 3.6 pounds of PM per ton of sand, with compliance determined at the end of each month, such that 326 IAC 2-2 does not apply. VOC emissions from the resin and catalyst added to the mixers are accounted for in the VOC emissions from core making.
- (2) Limited VOC emissions from the Isocure core machines are based on resin and catalyst throughput limits of 505,317 and 23,581 pounds per twelve (12) consecutive month period, respectively, and 0.05 pound of VOC per pound of resin, with compliance determined at the end of each month, such that 326 IAC 8-1-6 does not apply. Please refer to Appendix A for details.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Since this source is considered a major PSD source and the unrestricted potential to emit of this modification is greater than twenty-five (25) tons of PM per year, this source has elected to limit the potential to emit of this modification as follows:

- (a) The throughput of sand to the one (1) core sand handling operation, identified as SH-1, shall not exceed 13,505 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

- (b) PM emissions from the one (1) core sand handling operation, identified as SH-1, shall not exceed 3.6 pounds per ton of sand throughput.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than twenty-five (25) tons of PM per year and therefore will render the requirements of 326 IAC 2-2 not applicable.

Note: The baghouse controlling PM emissions from the core sand handling operation SH-1 is not required to comply with this limit.

<b>Federal Rule Applicability Determination</b>
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- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification since this source is a minor source for HAPs.
- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
- (1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;
  - (2) is subject to an emission limitation or standard for that pollutant; and
  - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Core Sand Handling SH-1 – PM10	Baghouse	N	7.10	0.77	100	N	N
Core Sand Handling SH-2 – PM10	Baghouse	N	0.09	0.03	100	N	N
Isocure Core Machines CM 1 and CM 2 - VOC	Scrubber	Y	38.11	12.89	100	N	N
No Bake Core Machine CM 3 - VOC	None	N	0.48	0.48	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the source due to the modification:

**326 IAC 2-2 and 2-3 (PSD and Emission Offset)**

PSD and Emission Offset applicability is discussed under the Permit Level Determination - PSD and Emission Offset section.

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

The operation of the three (3) core machines, two (2) sand mixers, and sand handling operations will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### 326 IAC 2-6 (Emission Reporting)

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The first report was due no later than July 1, 2004, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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

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

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

#### 326 IAC 6-4 (Fugitive Dust Emissions)

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

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

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the Core Sand Mixer M1 and Core Sand Handling SH-1 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour. The pound per hour limitation was calculated with the following equation:

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

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

The baghouse controlling the core sand mixer M1 and core sand handling SH-1 shall be in operation at all times the core sand mixer M1 and core sand handling SH-1 are in operation, in order to comply with this limit.

Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour are exempt from this rule. Therefore, since the core sand mixer M2 and core sand handling SH-2 have potential PM emissions of less than 0.551 pound per hour, they are not subject to this rule.

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

This rule applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compounds (VOC) emissions of 25 tons per year or more, and which are not otherwise regulated by other provisions of 326 IAC 8, and requires the reduction of VOC emissions using Best Available Control Technology (BACT). The unlimited VOC emissions from the two (2) Isocure core machines are greater than 25 tons per year; however, the source will limit uncontrolled VOC emissions from the two (2) Isocure core machines to less than 25 tons per year as follows:

- (a) Resin Usage
  - (1) The total resin usage for the two (2) Isocure core machines combined shall not exceed 505,317 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (2) The VOC emissions from resin usage in the two (2) Isocure core machines shall not exceed 0.05 pound per pound of resin.
- (b) Catalyst Usage
  - Catalyst usage for the two (2) Isocure core machines combined shall not exceed 23,581 pounds of VOC catalyst per twelve (12) consecutive month period, with compliance determined at the end of each month.

The acid scrubber is not required to comply with the above VOC emission limit.

The potential to emit of VOC from the No Bake core machine is less than 25 tons per year, therefore, this rule does not apply to the No Bake core machine.

### **Compliance Determination and Monitoring Requirements**

Permits issued under 326 IAC 2-7 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 2-7-5. 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.

There are no Compliance Determination Requirements applicable to this modification.

- (a) PM testing is not required to demonstrate compliance with the PSD minor limit for PM for the core sand handling operation because the baghouse is not required to comply with the limit, which is based on the uncontrolled PM emission factor for sand handling from U.S. EPA's AP-42.
- (b) There are no testing requirements for the acid scrubber controlling the Isocure core machines because the scrubber is not required for compliance with any applicable emission limits.

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

- (c) The baghouse controlling emissions from the core sand mixer M1 and core sand handling operation SH-1, which exhausts inside the building, has applicable compliance monitoring conditions as specified below:
  - (1) Visible emission notations of the stack exhaust for the baghouse controlling the core sand mixer M1 and the sand handling operations SH-1 shall be performed once per day during normal daylight operations when exhausting to the

atmosphere. A trained employee shall record whether emissions are normal or abnormal.

- (2) 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.
- (3) 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.
- (4) 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.
- (5) 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.
- (6) The Permittee shall record the pressure drop across the baghouse used in conjunction with the core sand mixer M1 and core sand handling operation SH-1, at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

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

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

These monitoring conditions are necessary because the baghouse for the core sand mixer M1 and core sand handling operation SH-1 must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-7 (Part 70)).

- (d) There are no applicable compliance monitoring requirements for the acid scrubber controlling DMIPA emissions from the Isocure core machines because the control device is not required to be in operation to comply with the VOC limits for the core machines.

### Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T099-7366-00003, issued on July 21, 1999. Deleted language appears as ~~strike~~throughs and new language appears in **bold**:

1. The identification of the responsible official has been removed from Condition A.1 because it has been determined by IDEM that this information is not necessary to include in the permit and will reduce the need for administrative amendments resulting from changes in the responsible official. Also, the phone number for the source has been added. Therefore, Condition A.1 is revised as follows:

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary ~~grey~~ **gray** iron foundry.

<del>Responsible Official:</del>	<del>Samuel Schlosser</del>
Source Address:	523 West Harrison Street, Plymouth, Indiana 46563-0537
Mailing Address:	523 West Harrison Street, Plymouth, Indiana 46563-0537
<b>General Source Phone Number:</b>	<b>574-936-2106</b>
SIC Code:	3321
County Location:	Marshall
<del>County</del> <b>Source Location Status:</b>	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

2. Condition A.2 is revised to include the new emission units as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

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

- (a) Two (2) electric induction furnaces (iron), installed in 1986, capacity: 1.5 tons of iron per hour, each.
- (b) One (1) pouring and cooling operation, installed prior to 1976, capacity: 1.5 tons of iron per hour and a maximum of 10 tons of sand per hour.
- (c) One (1) manual shakeout operation, installed prior to 1976, capacity: 1.5 tons of iron per hour and 4.4 tons of sand per hour.
- (d) One (1) cleaning and finishing operation, consisting of a tumble and shot blast unit and two (2) baghouses for particulate matter control, exhausting through stacks 2-A and 2-B, installed in 1987 and 1993, capacity: 1.5 tons of iron per hour, total.
- (e) One (1) sand handling operation consisting of one (1) muller, one (1) power screen, one (1) skip bucket, one (1) wet sand conveyor, one (1) sand and clay addition system, six (6) overhead wet sand transfer belt conveyors, six (6) mold machine feed hoppers and a baghouse for particulate matter control, exhausting through stack 4, installed in 1992, capacity: 10.0 tons of sand per hour, total.
- (f) One (1) core making operation, consisting of two (2) core making machines, capacity 0.25 tons of cores per hour each and five (5) mold making machines, capacity: one (1) at 10 tons of sand per hour and four (4) at 3 tons of sand per hour each, installed prior to 1976, capacity: 4.61 pounds of resins per hour.

- (g) One (1) surface coating operation, consisting of an airless spray applicator and dip tank system, equipped with an 11,000 actual cubic feet per minute exhaust fan, installed in 1976, capacity: 120 iron parts per hour.
- (h) One (1) shakeout machine, installed in 1997, capacity: 1.5 tons of iron per hour and 20 tons of sand per hour.
- (i) One (1) baghouse dust collector controlling particulate matter emissions inside the foundry (~~does not have to be operated at all times~~) installed in 1997.
- (j) Two (2) core sand mixers, identified as M-1 and M-2, approved for construction in 2007, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.**
- (k) One (1) electric sand heater, approved for construction in 2007, capacity: 3.0 tons of sand per hour.**
- (l) Two (2) core sand handling operations associated with the core sand mixers, identified as SH-1 and SH-2, approved for construction in 2007, consisting of conveyors and hoppers, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.**
- (m) One (1) core making operation, consisting of two (2) Isocure core machines, identified as CM 1 and CM 2, approved for construction in 2007, capacity 3.0 tons of cores per hour combined, 0.015 pound of resin per pound of sand and 0.0007 pound of DMIPA catalyst per pound of sand. DMIPA catalyst emissions from both core machines are controlled by an acid scrubber exhausting to stack 5.**
- (n) One (1) No Bake core machine, identified as CM 3, approved for construction in 2007, capacity: 0.0375 tons of cores per hour, 0.015 pound of resin per pound of sand and 0.0007 pound of catalyst per pound of sand.**

3. A new section D.10 has been added to the Part 70 permit for the new units as follows:

### **SECTION D.10 EMISSIONS UNIT OPERATION CONDITIONS**

#### **Facility Description [326 IAC 2-7-5(15)]**

- (j) Two (2) core sand mixers, identified as M-1 and M-2, approved for construction in 2007, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.
- (k) One (1) electric sand heater, approved for construction in 2007, capacity: 3.0 tons of sand per hour.
- (l) Two (2) core sand handling operations associated with the core sand mixers, identified as SH-1 and SH-2, approved for construction in 2007, consisting of conveyors and hoppers, using the existing baghouse dust collector that was installed in 1997 for particulate control which exhausts inside the building, capacity: 3.0 and 0.0375 tons of sand per hour, respectively.
- (m) One (1) core making operation, consisting of two (2) Isocure core machines, identified as CM 1 and CM 2, approved for construction in 2007, capacity 3.0 tons of cores per hour combined, 0.015 pound of resin per pound of sand and 0.0007 pound of DMIPA catalyst per pound of sand. DMIPA catalyst emissions from both core machines are controlled by an acid scrubber exhausting to stack 5.
- (n) One (1) No Bake core machine, identified as CM 3, approved for construction in 2007, capacity: 0.0375 tons of cores per hour, 0.015 pound of resin per pound of sand and 0.0007 pound of catalyst per pound of sand.

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

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

##### **D.10.1 Particulate Matter (PM) [326 IAC 2-2][326 IAC 2-7-10.5(d)(4)(E)]**

The source shall limit PM emissions from raw material usage and sand handling as follows:

- (a) The throughput of sand to the one (1) core sand handling operation, identified as SH-1, shall not exceed 13,505 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (b) PM emissions from the one (1) core sand handling operation, identified as SH-1, shall not exceed 3.6 pounds per ton of sand throughput.

Compliance with raw material usage limit and PM emission limit will limit the potential to emit from the modification in 2007 to less than twenty-five (25) tons of PM per year and therefore will render the requirements of 326 IAC 2-2 not applicable. Compliance with this limit will also satisfy the requirements for a minor source modification pursuant to 326 IAC 2-7-10.5(d)(4)(E).

##### **D.10.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-7-10.5(d)(6)]**

The source shall limit VOC emissions from the core machines as follows:

- (a) Resin Usage

- (1) The total resin usage for the two (2) Isocure core machines combined shall not exceed 505,317 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (2) The VOC emissions from resin usage in the two (2) Isocure core machines shall not exceed 0.05 pound per pound of resin.
- (b) **Catalyst Usage**  
Catalyst usage for the two (2) Isocure core machines combined shall not exceed 23,581 pounds of VOC catalyst per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the usage limits and VOC emission limit will limit VOC emissions from the two (2) Isocure core machines (CM 1 and CM 2) to less than twenty-five (25) tons per year and therefore will render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable. Compliance with this limit will also satisfy the requirements for a minor source modification pursuant to 326 IAC 2-7-10.5(d)(6).

#### D.10.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Core Sand Mixer M1 and Core Sand Handling SH-1 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

#### D.10.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the core sand mixers and core sand handling operations and their control device.

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

#### D.10.5 Particulate Control

- (a) In order to comply with Condition D.10.3, the baghouse dust collector for particulate control shall be in operation and control emissions from the core sand mixer M1 and core sand handling SH-1 at all times that the core sand mixer M1 and core sand handling SH-1 are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

#### D.10.6 Visible Emissions Notations

- (a) Visible emission notations of the stack exhaust for the baghouse controlling the core sand mixer M1 and the sand handling operations SH-1 shall be performed once

per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

#### **D.10.7 Parametric Monitoring**

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The Permittee shall record the pressure drop across the baghouse used in conjunction with the core sand mixer M1 and core sand handling operation SH-1, at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

#### **D.10.8 Broken or Failed Bag Detection**

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

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

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

#### **D.10.9 Record Keeping Requirements**

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- (a) To document compliance with Condition D.10.1, the Permittee shall maintain monthly records of the throughput of sand to the one (1) core sand handling operation, identified as SH-1.
- (b) To document compliance with Condition D.10.2, the Permittee shall maintain monthly records of the resin and catalyst usage in the two (2) Isocure core machines (CM 1 and CM 2).
- (c) To document compliance with Condition D.10.6, the Permittee shall maintain records of visible emission notations of the stack exhaust for the baghouse controlling the core sand mixer M1 and the sand handling operations SH-1 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day or did not exhaust to the atmosphere).
- (d) To document compliance with Condition D.10.7, the Permittee shall maintain records once per day of the pressure drop. 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).
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.10.10 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.10.1 and D.10.2 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. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- 4. The following report forms have been added to the Part 70 permit:

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

### Part 70 Quarterly Report

**Source Name:** Plymouth Foundry, Incorporated  
**Source Address:** 523 West Harrison Street, Plymouth, Indiana 46563-0537  
**Mailing Address:** 523 West Harrison Street, Plymouth, Indiana 46563-0537  
**Part 70 Permit No.:** T099-7366-00003  
**Facility:** core sand handling operation, identified as SH-1  
**Parameter:** PM emissions  
**Limit:** The throughput of sand to the one (1) core sand handling operation, identified as SH-1, shall not exceed 13,505 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
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.  
 Deviation/s occurred in this quarter.

Deviation has been reported on:

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

**Source Name:** Plymouth Foundry, Incorporated  
**Source Address:** 523 West Harrison Street, Plymouth, Indiana 46563-0537  
**Mailing Address:** 523 West Harrison Street, Plymouth, Indiana 46563-0537  
**Part 70 Permit No.:** T099-7366-00003  
**Facility:** two (2) Isocure core machines (CM 1 and CM 2)  
**Parameter:** VOC emissions  
**Limit:** (a) The total resin usage for the two (2) Isocure core machines (CM 1 and CM 2) combined shall not exceed 505,317 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month.  
 (b) Catalyst usage for the two (2) Isocure core machines (CM 1 and CM 2) combined shall not exceed 23,581 pounds of VOC catalyst 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	
	Resin Usage This Month (pounds)	Catalyst Usage This Month (pounds)	Resin Usage Previous 11 Months (pounds)	Catalyst Usage Previous 11 Months (pounds)	12 Month Total Resin Usage (pounds)	12 Month Total Catalyst Usage (pounds)
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.

Upon further review, IDEM, OAQ has decided to make the following changes to the permit:

1. The address for IDEM, OAQ has been updated and mail codes have been added to improve mail delivery. In addition, the phone numbers have been corrected:

Telephone No.: 317-233-~~5674~~ **0178**  
Facsimile No.: 317-233-~~5967~~ **6865**

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana ~~46206-6015~~ **46204-2251**

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

### Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 099-24954-00003 and Significant Permit Modification No. 099-25002-00003. The staff recommends to the Commissioner that this Part 70 Minor Source Modification and Significant Permit Modification be approved.

**Appendix A: Emission Calculations Summary**

**Company Name:** Plymouth Foundry, Inc.  
**Plant Location:** 523 West Harrison Street, Plymouth, Indiana 46563-0537  
**Permit Modification No.:** 099-25002-00003  
**Pit. ID #:** 099-00003  
**Reviewer:** ERG/TE  
**Date:** August 6, 2007

<b>Total Unlimited Potential To Emit (tons/year)</b>			
Emissions Generating Activity			
Pollutant	Sand Mixers and Sand Handling	Core Making	TOTAL
PM*	47.9	0.0	47.9
PM10*	7.19	0.0	7.2
SO2	0.0	0.0	0.0
NOx	0.0	0.0	0.0
VOC**	0.0	38.6	38.6
CO	0.0	0.0	0.0
total HAPs	0.0	5.0	5.0
worst case single HAP	0.0	(Glycol ethers) 4.99	(Glycol ethers) 4.99
Total emissions based on rated capacities at 8,760 hours/year.			
*For the purposes of determining Title V applicability, PM10 (not PM) is the regulated pollutant in consideration			
**Any VOC emissions from the sand mixers are accounted for in the core making emissions.			
<b>Total Limited Potential To Emit (tons/year)</b>			
Emissions Generating Activity			
Pollutant	Sand Mixers and Sand Handling	Core Making	TOTAL
PM*	24.9	0.0	24.9
PM10*	3.7	0.0	3.7
SO2	0.0	0.0	0.0
NOx	0.0	0.0	0.0
VOC**	0.0	24.9	24.9
CO	0.0	0.0	0.0
total HAPs	0.0	2.6	2.6
worst case single HAP	0.0	(Glycol ethers) 2.56	(Glycol ethers) 2.56
Total emissions based on rated capacities at 8,760 hours/year.			
*For the purposes of determining Title V applicability, PM10 (not PM) is the regulated pollutant in consideration			
**Any VOC emissions from the sand mixers are accounted for in the core making emissions.			
<b>Total Limited Potential To Emit After Control (tons/year)</b>			
Emissions Generating Activity			
Pollutant	Sand Mixers and Sand Handling	Core Making	TOTAL
PM*	1.4	0.0	1.4
PM10*	1.4	0.0	1.4
SO2	0.0	0.0	0.0
NOx	0.0	0.0	0.0
VOC	0.0	13.4	13.4
CO	0.0	0.0	0.0
total HAPs	0.0	2.6	2.6
worst case single HAP	0.0	(Glycol ethers) 2.56	(Glycol ethers) 2.56
Total emissions based on rated capacities at 8,760 hours/year.			
*For the purposes of determining Title V applicability, PM10 (not PM) is the regulated pollutant in consideration			

## Appendix A: Grey Iron Foundry Operations

Company Name: Plymouth Foundry, Inc.  
 Plant Location: 523 West Harrison Street, Plymouth, Indiana 46563-0537  
 Permit Modification No.: 099-25002-00003  
 Pit. ID #: 099-00003  
 Reviewer: ERG/TE  
 Date: August 6, 2007

SCC# 3-04-003-50 Core Sand Handling (SH-1) - Uncontrolled Emissions							
TYPE OF MATERIAL		Maximum Throughput		Control Device: Baghouse			
		LBS/HR	TON/HR				
Sand		6000	3				
		Limited Throughput*					
		LBS/HR	TON/HR				
		3083	1.54				
Pollutant Units	PM lbs/ton sand handled	PM10 lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled	Lead lbs/ton sand handled
Emission Factor	3.6	0.54	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/hr	10.80	1.62	0.00	0.00	0.00	0.00	0.00
<b>Potential Uncontrolled Emissions tons/year</b>	<b>47.30</b>	<b>7.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Limited Uncontrolled Emissions lbs/hr	5.55	0.83	0.00	0.00	0.00	0.00	0.00
<b>Limited Uncontrolled Emissions tons/year</b>	<b>24.31</b>	<b>3.65</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24.

\* The source will accept a sand throughput limit of 1.54 tons per hour as a raw material usage limit to limit PM emissions to less than 25 tons per year so that this is a minor source modification pursuant to 326 IAC 2-7-10.5(d)(4)(E).

SCC# 3-04-003-50 Core Sand Handling (SH-1) - Controlled Limited Emissions							
TYPE OF MATERIAL		Limited Throughput		Control Device: Baghouse			
		LBS/HR	TON/HR				
Sand		3083	1.54				
Pollutant Units	PM lbs/ton sand handled	PM10 lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled	Lead lbs/ton sand handled
Emission Factor	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Limited Controlled Emissions lbs/hr	0.31	0.31	0.00	0.00	0.00	0.00	0.00
<b>Limited Controlled Emissions tons/year</b>	<b>1.35</b>	<b>1.35</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24, using a baghouse for control.

SCC# 3-04-003-50 Core Sand Handling (SH-2) - Uncontrolled Emissions							
TYPE OF MATERIAL		Maximum Throughput		Control Device: Baghouse			
		LBS/HR	TON/HR				
Sand		75	0.0375				
Pollutant Units	PM lbs/ton sand handled	PM10 lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled	Lead lbs/ton sand handled
Emission Factor	3.6	0.54	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/hr	0.14	0.02	0.00	0.00	0.00	0.00	0.00
<b>Potential Uncontrolled Emissions tons/year</b>	<b>0.59</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24.

SCC# 3-04-003-50 Core Sand Handling (SH-2) - Controlled Limited Emissions							
TYPE OF MATERIAL		Limited Throughput		Control Device: Baghouse			
		LBS/HR	TON/HR				
Sand		75	0.0375				
Pollutant Units	PM lbs/ton sand handled	PM10 lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled	Lead lbs/ton sand handled
Emission Factor	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/hr	0.01	0.01	0.00	0.00	0.00	0.00	0.00
<b>Potential Controlled Emissions tons/year</b>	<b>0.03</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24, using a baghouse for control.

**Appendix A: Emission Calculation:**

**Company Name:** Plymouth Foundry, Inc.  
**Plant Location:** 523 West Harrison Street, Plymouth, Indiana 46563-0537  
**Permit Modification No.:** 099-25002-00003  
**Plt. ID #:** 099-00003  
**Reviewer:** ERG/TE  
**Date:** August 6, 2007

**Core Making Process**

Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Max. Catalyst Usage (lb/ton cores)	Potential VOC Emissions from resin evap (tons/yr)	Potential VOC Emissions from Catalyst Usage (tons/yr)	Total Potential VOC Emissions (tons/yr)
Isocure Core Machines	2007	3	1.5%	1.5	1.4	19.71	18.40	38.11
Pepset No Bake Core Machine	2007	0.0375	1.5%	1.5	1.4	0.25	0.23	0.48
<b>Total</b>						<b>19.96</b>	<b>18.63</b>	<b>38.58</b>

The Isocure catalyst is 100% DMIPA by weight which is not a HAP.

**Limits Necessary to comply with 326 IAC 2-7-10.5(d)(4) and to render 326 IAC 2-2 (PSD) not applicable**

Core Machines	VOC limit (tons/yr)	VOC EF for resin evaporation (lb/ton cores)	VOC EF for resin evaporation (lb VOC/lb resin)	Catalyst EF (lb VOC/ton cores)	Core production* (tons cores/yr)	Catalyst usage limit (lbs/yr)	Resin usage limit (lbs/yr)
Isocure Core Machines	24.42	1.5	0.05	1.4	16,844	23,581	505,317
Pepset No Bake Core Machine	NA	1.5	0.05	1.4	329	NA	NA

Core Machines	Catalyst Limited VOC Emissions (tons/yr)	Resin Limited VOC Emissions (tons/yr)	Total Limited VOC Emissions (tons/yr)
Isocure Core Machines	11.79	12.63	24.42
Pepset No Bake Core Machine	0.23	0.25	0.48
<b>TOTAL</b>	<b>12.02</b>	<b>12.88</b>	<b>24.90</b>

Core Machines	DMIPA Control Efficiency	Catalyst Limited VOC Emissions After Control (tons/yr)	Resin Limited VOC Emissions (tons/yr)	Total Controlled/Limited VOC Emissions (tons/yr)
Core	97.86%	0.25	12.63	12.89
Pepset No Bake Core Machine	NA	0.23	0.25	0.48
<b>TOTAL</b>		<b>0.48</b>	<b>12.88</b>	<b>13.36</b>

Note: The acid scrubber for DMIPA control is not required to comply with the VOC emission limit of less than 25 tons per year.

**Appendix A: Emission Calculations**  
**HAP Emission Calculations - Core Making**

**Company Name:** Plymouth Foundry, Inc.  
**Plant Location:** 523 West Harrison Street, Plymouth, Indiana 46563-0537  
**Permit Modification No.:** 099-25002-00003  
**Plt. ID #:** 099-00003  
**Reviewer:** ERG/TE  
**Date:** August 6, 2007

**Limited Uncontrolled Emissions****Isocure Core Making Emissions**

Unlimited Process Rate (tons/year) = 26280  
 Limited Process Rate (tons/year)\* = 13505

	Emission Factor (lb/ton core sand)				
	Formaldehyde <sup>1</sup>	Phenol <sup>1</sup>	Naphthalene <sup>1</sup>	Glycol Ethers <sup>2</sup>	MDI <sup>3</sup>
Core Mixing	0.0001	0.003	0		
Core Making	0.0028	0.0108	0.0131		
Core Storage	0.0005	0	0.009		
<b>Total</b>	<b>0.0034</b>	<b>0.0138</b>	<b>0.0221</b>	<b>0.38</b>	<b>0.88</b>

	Emissions (tons/yr)					
	Formaldehyde <sup>1</sup>	Phenol <sup>1</sup>	Naphthalene <sup>1</sup>	Glycol Ethers <sup>2</sup>	MDI <sup>3</sup>	Combined HAPs
Total Unlimited Emissions	8.94E-04	0.000	0.009	4.987	0.000	4.998
Total Limited Emissions	4.59E-04	0.000	0.005	2.563	0.000	2.568

**Methodology**

<sup>1</sup> Emission factors from Technikon, LLC report, "Core Room Baseline" prepared for Casting Emission Reduction

<sup>2</sup> Emission factor based on 25% VOC EF because Glycol Ethers make up 25% of VOC content in Resin

<sup>3</sup> Emission factor based on 40% VOC EF because MDI makes up 40% of VOC content in Resin

PTE (tons/yr) = Process Rate (tons / year) \* EF (lb/ton) \* 1 ton/2000lbs \* Form R Reduction Factor

\* Limited Process Rate (tons/yr) = 1.54 tons/hr \* 8760 hrs/year

**No Bake Core Making Emissions**

Maximum Process Rate (tons / year) = 328.5

Emission Factor (lb/ton core sand)						
Formaldehyde <sup>1</sup>	Phenol <sup>1</sup>	Naphthalene <sup>1</sup>	MDI <sup>1</sup>	Methanol <sup>2</sup>	Xylene <sup>2</sup>	Cumene <sup>2</sup>
0.024	0.194	0.138	0.894	0.14	0.028	0.014

  

Emissions (tons/yr)							
Formaldehyde <sup>1</sup>	Phenol <sup>1</sup>	Naphthalene <sup>1</sup>	MDI <sup>1</sup>	Methanol <sup>2</sup>	Xylene <sup>2</sup>	Cumene <sup>2</sup>	Combined HAPs
7.99E-05	0.000	0.001	0.000	0.023	0.005	0.002	0.031

**Methodology**

<sup>1</sup> Emission factors based on VOC emission factor and percentage of resin made up by specific HAP as indicated by MSDSs for resin

<sup>2</sup> Emission factor based on MSDSs for catalyst and 100% emissions of each HAP at 0.0007 lbs catalyst/lb sand

PTE (tons/yr) = Maximum Process Rate (tons / year) \* EF (lb/ton) \* 1 ton/2000lbs \* Form R Reduction Factor

**Reduction Factors for Core Making**

Pollutant	Phenolic Urethane Coldbox Part I Binder Reduction Factors	Phenolic Urethane Coldbox Part II Binder Reduction Factors	Phenolic Urethane No Bake Part I Binder Reduction Factors	Phenolic Urethane No Bake Part II Binder Reduction Factors
Phenol	0.00%	N/A	0.00%	N/A
MDI	N/A	0.00%	N/A	0.00%
Formaldehyde	2.00%	N/A	2.00%	N/A
Naphthalene	3.25%	3.25%	5.85%	5.85%
Glycol Ethers	N/A	N/A	N/A	N/A
Methanol	N/A	N/A	N/A	N/A
Xylene	3.25%	3.25%	5.85%	5.85%
Cumene	3.25%	N/A	5.85%	5.85%

Reduction factors obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in