



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 20, 2008

RE: Casting Technologies Company / 081-25263-00032

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

**Casting Technologies Company
1450 Musicland Drive
Franklin, Indiana 46131**

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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 MSOP under 326 IAC 2-6.1.

Operation Permit No.: M081-25263-00032	
Issued by:	Issuance Date: May 20, 2008
Original signed by:	Expiration Date: May 20, 2018
Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	

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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 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary aluminum molding and die casting plant.

Source Address:	1450 Musicland Drive, Franklin, Indiana 46131
Mailing Address:	1450 Musicland Drive, Franklin, Indiana 46131
General Source Phone Number:	317-738-0282
SIC Code:	3363
County Location:	Johnson
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) natural gas-fired aluminum melter, identified as RVB1, with a maximum heat input of 1.5 MMBtu/hr and a maximum throughput rate of 1,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. This unit was constructed in 1997 and exhausts through stack #RVB1-1.
- (b) One (1) natural gas-fired aluminum melter, identified as RVB2, with a maximum heat input of 11.25 MMBtu/hr and a maximum throughput rate of 3,500 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1997 and exhausts through stack #RVB2-2.
- (c) One (1) natural gas-fired aluminum melter, identified as JM1, with a maximum heat input of 3.75 MMBtu/hr and a maximum throughput rate of 2,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. This unit was constructed in 1995 and exhausts through stack #JM1-1.
- (d) One (1) natural gas-fired aluminum melter, identified as JM2, with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1996 and exhausts through stack #JM2-2.
- (e) One (1) natural gas-fired aluminum melter, identified as JM3, each with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1996 and exhausts through stack #JM3-3.
- (f) One (1) natural gas-fired aluminum melter, identified as JM4, with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit is to be constructed in 2008 and

exhausts through stack #JM4.

- (g) One (1) dross cooling operation cooling up to 362.5 pound of furnace dross per hour, with emissions exhausting into the building.
- (h) Twelve (12) aluminum casting machines, constructed in 1995 and comprised of electric holding furnaces and die casting molds, each with a maximum process rate of 1,875 pounds of aluminum per hour. The release agent for the molding process, which is comprised of graphite and water mixture, is controlled by six baghouses (identified as GDC1, GDC2, GDC3, GDC4, GDC5, and GDC6) which vent into the building. The maximum graphite usage is 5.0 pounds per day for each casting machine.

[Note: There are no emissions from the pouring and cooling operations because the die casting process is an enclosed molding process.]

- (i) Nine (9) die casting machines, to be constructed in 2008 and comprised of die casting, die lube and tip lube, with a total maximum process rate of 4000 pounds of aluminum per hour.
- (j) One (1) steel shot blaster, identified as SSB with a maximum process rate of 2,000 pounds of shot per hour, constructed in 1995, with emissions controlled by a baghouse, which vent inside the building.
- (k) The welding equipment related to manufacturing activities not resulting in the emission of HAPs and consuming less than 625 pounds of rod or wire per day.
- (l) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including the following:
 - (1) Three (3) heat treat furnaces (identified as HTC1, HTC2, and HTC3), each with a maximum heat input capacity of 5.0 MMBtu/hr, and exhausting through stacks HTC1-1, HTC2-2, and HTC3-3. Furnaces HTC1 and HTC2 were constructed in 1996. Furnace HTC3 was constructed in 1997;
 - (2) Three (3) age ovens (identified as HTA-1, HTA-2, and HTA-3), each with a maximum heat input capacity of 0.8 MMBtu/hr;
 - (3) Four (4) air make-up units, each with a maximum heat input capacity of 3.3 MMBtu/hr;
 - (4) Two (2) air make-up units, each with a maximum heat input capacity of 8.25 MMBtu/hr;
 - (5) Two (2) dock heaters, each with a maximum heat input capacity of 0.2 MMBtu/hr;
 - (6) Five (5) roof top air conditioners/heaters, each with a maximum heat input capacity of 0.2 MMBtu/hr;
 - (7) Two (2) roof top air conditioners/heaters, each with a maximum heat input capacity of 0.16 MMBtu/hr;
 - (8) One (1) roof top air conditioner/heater, with a maximum heat input capacity of 0.65 MMBtu/hr; and
 - (9) One (1) domestic water heaters for front offices, with a maximum heat input capacity of 0.199 MMBtu/hr.

- (m) One (1) 30-gallon parts cleaner using NAPHTHA as the solvent.
- (n) One (1) 40-gallon parts cleaner using petroleum distillate as the solvent.
- (o) One (1) surface coating booth using Boron Nitride as the coating material.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M081-25263-00032, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability

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

B.5 Severability

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

B.6 Property Rights or Exclusive Privilege

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

B.7 Duty to Provide Information

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

B.8 Certification

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

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251
- (c) The notification 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.

B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M081-25263-00032 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.12 Termination of Right to Operate [326 IAC 2-6.1-7(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 ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.13 Permit Renewal [326 IAC 2-6.1-7]

- (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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
- (1) Submitted at least ninety (90) days prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.15 Source Modification Requirement

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

B.16 Inspection and Entry

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

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

B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (b) 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.19 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

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

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

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

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

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

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.8 Performance Testing [326 IAC 3-6]

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

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

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

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

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. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.12 Instrument Specifications [326 IAC 2-1.1-11]

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

Corrective Actions and Response Steps

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

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

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

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

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

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) 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
- (b) 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.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-6.1]:

- (a) One (1) natural gas-fired aluminum melter, identified as RVB1, with a maximum heat input of 1.5 MMBtu/hr and a maximum throughput rate of 1,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. This unit was constructed in 1997 and exhausts through stack #RVB1-1.
- (b) One (1) natural gas-fired aluminum melter, identified as RVB2, with a maximum heat input of 11.25 MMBtu/hr and a maximum throughput rate of 3,500 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1997 and exhausts through stack #RVB2-2.
- (c) One (1) natural gas-fired aluminum melter, identified as JM1, with a maximum heat input of 3.75 MMBtu/hr and a maximum throughput rate of 2,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. This unit was constructed in 1995 and exhausts through stack #JM1-1.
- (d) One (1) natural gas-fired aluminum melter, identified as JM2, with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1996 and exhausts through stack #JM2-2.
- (e) One (1) natural gas-fired aluminum melter, identified as JM3, each with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1996 and exhausts through stack #JM3-3.
- (f) One (1) natural gas-fired aluminum melter, identified as JM4, with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit is to be constructed in 2008 and exhausts through stack #JM4.
- (g) One (1) dross cooling operation cooling up to 362.5 pound of furnace dross per hour, with emissions exhausting into the building.

(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 2-6.1]

D.1.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e) (Manufacturing Processes), the allowable particulate emissions from each of the aluminum melters shall not exceed the pounds per hour rate listed in the table below:

Process Description	Process ID	Throughput Rate (lbs/hr)	PM Emission Limit (lbs/hr)
Aluminum Melter	RVB1	1,000	2.58
Aluminum Melter	RVB2	3,500	5.97
Aluminum Melter	JM1	2,000	4.10
Aluminum Melter	JM2	4,000	6.52

Process Description	Process ID	Throughput Rate (lbs/hr)	PM Emission Limit (lbs/hr)
Aluminum Melter	JM3	4,000	6.52
Aluminum Melter	JM4	4,000	6.52

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:

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

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-6.1]:

- (h) Twelve (12) aluminum casting machines, constructed in 1995 and comprised of electric holding furnaces and die casting molds, each with a maximum process rate of 1,875 pounds of aluminum per hour. The release agent for the molding process, which is comprised of graphite and water mixture, is controlled by six baghouses (identified as GDC1, GDC2, GDC3, GDC4, GDC5, and GDC6) which vent into the building. The maximum graphite usage is 5.0 pounds per day for each casting machine.

[Note: There are no emissions from the pouring and cooling operations because the die casting process is an enclosed molding process.]

- (i) Nine (9) die casting machines, to be constructed in 2008 and comprised of die casting, die lube and tip lube, with a total maximum process rate of 4000 pounds of aluminum per hour.
- (j) One (1) steel shot blaster, identified as SSB with a maximum process rate of 2,000 pounds of shot per hour, constructed in 1995, with emissions controlled by a baghouse, which vent inside the building.

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

Emission Limitations and Standards

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions from each of the shot blasters, aluminum and die casting machines shall not exceed the pounds per hour rate listed in the table below:

Process Description	Process ID	Throughput Rate (lbs/hr)	PM Emission Limit (lbs/hr)
Steel Shot Blaster	SSB	2,000	4.10
Each Aluminum Casting Machine	--	1,875	3.93
Die Casting Machines	--	4000	6.52

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:

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

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

D.2.2 Particulate Control

In order to comply with Condition D.2.1, the baghouse used to control particulate emissions from the shot blaster shall be in operation and control emissions from the shot blaster at all times the shot blaster is in operation.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-6.1]:

- (m) One (1) 30-gallon parts cleaner using NAPTHA as the solvent.
- (n) One (1) 40-gallon parts cleaner using petroleum distillate as the solvent.
- (o) One (1) surface coating booth using Boron Nitride as the coating material.

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

Emission Limitations and Standards

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaner degreaser 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.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaner degreaser shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications

where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaning degreaser 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.

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

**MINOR SOURCE OPERATING PERMIT (MSOP)
CERTIFICATION**

Source Name: Casting Technologies Company
Source Address: 1450 Musicland Drive, Franklin, Indiana 46131
Mailing Address: 1450 Musicland Drive, Franklin, Indiana 46131
MSOP No.: M081-25263-00032

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 Notification
- Test Result (specify) _____
- Report (specify) _____
- Notification (specify) _____
- Affidavit (specify) _____
- Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Date:

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Casting Technologies Company
Address:	1450 Musicland Drive
City:	Franklin, Indiana 46131
Phone #:	317-738-0282
MSOP #:	M081-25263-00032

I hereby certify that Casting Technologies Company is : still in operation.
 no longer in operation.
I hereby certify that Casting Technologies Company is : in compliance with the requirements of MSOP M081-25263-00032.
 not in compliance with the requirements of MSOP M081-25263-00032.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER - 317 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?____, 25 TONS/YEAR SULFUR DIOXIDE ?____, 25 TONS/YEAR NITROGEN OXIDES?____, 25 TONS/YEAR VOC ?____, 25 TONS/YEAR HYDROGEN SULFIDE ?____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?____, 25 TONS/YEAR FLUORIDES ?____, 100 TONS/YEAR CARBON MONOXIDE ?____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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

**Addendum to the Technical Support Document
for Minor Source Operating Permit (MSOP) Renewal**

Source Background and Description

Source Name: Casting Technologies Company
 Source Location: 1450 Musicland Drive, Franklin, Indiana 46131
 County: Johnson
 SIC Code: 3363
 Operation Permit No.: M081-25263-00032
 Permit Reviewer: Teresa Freeman

On March 25, 2008, the Office of Air Quality (OAQ) had a notice published in the Franklin Daily Journal, Franklin, Indiana, stating that Casting Technologies Company had applied for a Minor Source Operating Permit (MSOP) renewal to continue to operate an aluminum molding and die casting plant. The notice also stated that OAQ proposed to issue a MSOP renewal for this operation and provided information on how the public could review the proposed MSOP renewal and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this MSOP renewal should be issued as proposed.

On April 1, 2008, Casting Technologies Company submitted comments on the proposed MSOP. The summary of the comments (bolded language has been added, the language with a line through it has been deleted) is as follows:

Comment 1: Nine (9) die casting machines are being added to this facility instead of seven (7) die casting machines.

Response 1: Changes have been made to Condition A.2, D.2 Description Box. New calculations for the aluminum die casting process emissions and summary emissions have been included as Appendix A to this ATSD as follows:

- (i) ~~Seven (7)~~ **Nine (9)** die casting machines, to be constructed in 2008 and comprised of die casting, die lube and tip lube, with a total maximum process rate of 4000 pounds of aluminum per hour.

1. Emissions from the Aluminum Die Casting Process:

Clean AI Input

26500

(Total for 21 machines)

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor (lbs/ton)	0.04	0.04	NA	NA	NA	NA
Potential to Emit before Control (lbs/hr)	0.53	0.53				
Potential to Emit before Control (tons/yr)	2.32	2.32	-	-	-	-

* Assume all the PM emissions are PM10 emissions.

2. Emissions from the Unmolding Process:

Max. Graphite Usage: 5 lbs/day/machine
 Control Device: 6 Baghouses

The release agent on the mold surfaces consists of graphite and water. Assume all the graphite used are PM/PM10 emissions:

The Potential to Emit PM/PM10 before Control =
 5 lbs/day/machine x 365 day/yr x 12 machines x 1 tons/2000 lbs
 = **10.95 tons/yr**

3. Total Emissions from the Die Casting Machines:

The Potential to Emit PM/PM10 before Control
 = (Emissions from the Die Casting Process) + (Emissions from the Unmolding Process)
 = 2.32 tons/yr + 10.95 tons/yr = **13.27 tons/yr**

3. Total Emissions from the Die Casting Machines:

The Potential to Emit PM/PM10 after Control
 PTE of PM/PM10 after Control = PTE of PM/PM10 before Control x (1 - Control Efficiency)
 = **0.13 tons/yr**

POTENTIAL TO EMIT BEFORE CONTROLS IN TONS PER YEAR

Emission Units	PM	PM10	SO ₂	NOx	VOC	CO
Shot Blasting Unit	74.0	7.4				
Aluminum Melters fluxing	2.42	3.18	0.08	13.27	0.73	11.15
Die casting machines dross cooling	13.3	13.3				
Natural Gas-Fired Units	0.41	1.65	0.13	21.76	1.20	18.27
TOTAL	92.5	26.9	0.21	35.03	1.93	29.42

LIMITED POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO ₂	NOx	VOC	CO
Shot Blasting Unit	0.74	0.07				
Aluminum Melters fluxing	2.42	3.18	0.08	13.27	0.73	11.15
Die casting machines dross cooling	0.13	0.13				
Natural Gas-Fired Units	0.41	1.65	0.13	21.76	1.20	18.27
TOTAL	6.08	6.39	0.21	35.03	1.93	29.42

Upon further review IDEM, OAQ has made the following changes to the Source Operating Permit (MSOP) renewal. (deleted language appears as ~~strikeout~~.)

Change 1: Equipment was not included in the operating permit prior to public notice. There are no applicable rules that apply to the surface coating booth, however the two part cleaners are covered under 326 IAC 8-3-2 and 326 IAC 8-3-5. Changes to the permit includes the additional equipment added to Condition A.2, the creation of Section D.3 and applicable conditions as follows; the Table of Contents has been updated without reproduction herein:

A.2 Emission Units and Pollution Control Equipment Summary

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

...

- (m) One (1) 30-gallon parts cleaner using NAPTHA as the solvent.
- (n) One (1) 40-gallon parts cleaner using petroleum distillate as the solvent.
- (o) One (1) surface coating booth using Boron Nitride as the coating material.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-6.1]:

- (m) One (1) 30-gallon parts cleaner using NAPTHA as the solvent.
- (n) One (1) 40-gallon parts cleaner using petroleum distillate as the solvent.
- (o) One (1) surface coating booth using Boron Nitride as the coating material.

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

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaner degreaser 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.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaner degreaser 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:

Change 2: The Minor Source Operating Permit (MSOP) Certification form was not included during public notice and has been added as page 22 of 25 in the permit as follows:

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

**MINOR SOURCE OPERATING PERMIT (MSOP)
CERTIFICATION**

Source Name: Casting Technologies Company
Source Address: 1450 Musicland Drive, Franklin, Indiana 46131
Mailing Address: 1450 Musicland Drive, Franklin, Indiana 46131
MSOP No.: M081-25263-00032

<p style="text-align: center;">This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.</p> <p>Please check what document is being certified:</p> <p><input type="checkbox"/> Annual Compliance Notification</p> <p><input type="checkbox"/> Test Result (specify) _____</p> <p><input type="checkbox"/> Report (specify) _____</p> <p><input type="checkbox"/> Notification (specify) _____</p> <p><input type="checkbox"/> Affidavit (specify) _____</p> <p><input type="checkbox"/> Other (specify) _____</p>
--

<p>I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.</p>
Signature:
Printed Name:
Title/Position:
Date:

**Appendix A: Emission Calculations
Summary**

Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: February 21, 2008

POTENTIAL TO EMIT BEFORE CONTROLS IN TONS PER YEAR

Emission Units	PM	PM10	SO₂	NOx	VOC	CO
Shot Blasting Unit	74.0	7.4				
Aluminum Melters	2.42	3.18	0.08	13.27	0.73	11.15
fluxing	2.26	1.2				
Die casting machines	13.3	13.3				
dross cooling	0.12	0.16				
Natural Gas-Fired Units	0.41	1.65	0.13	21.76	1.20	18.27
TOTAL	92.5	26.9	0.21	35.03	1.93	29.42

LIMITED POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO₂	NOx	VOC	CO
Shot Blasting Unit	0.74	0.07				
Aluminum Melters	2.42	3.18	0.08	13.27	0.73	11.15
fluxing	2.26	1.2				
Die casting machines	0.13	0.13				
dross cooling	0.12	0.16				
Natural Gas-Fired Units	0.41	1.65	0.13	21.76	1.20	18.27
TOTAL	6.08	6.39	0.21	35.03	1.93	29.42

Appendix A: Emission Calculations
Revised-Emissions from the Die Casting Machines

Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: May 9, 2008

1. Emissions from the Aluminum Die Casting Process:

Clean Al Input
lbs/hr

26500 (Total for 21 machines)

Emission Factor (lbs/ton)	Pollutant					
	PM*	PM10*	SO2	NO _x	VOC	CO
	0.04	0.04	NA	NA	NA	NA
Potential to Emit before Control (lbs/hr)	0.53	0.53				
Potential to Emit before Control (tons/yr)	2.32	2.32	-	-	-	-

* Assume all the PM emissions are PM10 emissions.

Methodology

Emission Factors are from FIRE Version 6.23, SCC 3-04-004-09 (Lead Casting), which is the only available emission factor for pure metal casting process in FIRE. In addition, the die casting process is an enclosed molding process. Therefore, the particulate emissions from the die casting process are limited. There is not pouring and cooling casting processes involved with the die casting process. Therefore, the emissions factors for secondary aluminum production facilities are not suitable here.

PTE (lbs/hr) = Al Input (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton)

PTE (tons/yr) = Al Input (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton) x 8760 hr/yr x 1 ton/2000 lbs

2. Emissions from the Unmolding Process:

Max. Graphite Usage: 5 lbs/day/machine
 Control Device: 6 Baghouses

The release agent on the mold surfaces consists of graphite and water. Assume all the graphite used are PM/PM10 emissions:

The Potential to Emit PM/PM10 before Control =
 5 lbs/day/machine x 365 day/yr x 12 machines x 1 tons/2000 lbs = **10.95 tons/yr**

3. Total Emissions from the Die Casting Machines:

The Potential to Emit PM/PM10 before Control
 = (Emissions from the Die Casting Process) + (Emissions from the Unmolding Process)
 = 2.32 tons/yr + 10.95 tons/yr = **13.27 tons/yr**

3. Total Emissions from the Die Casting Machines:

The Potential to Emit PM/PM10 after Control
 PTE of PM/PM10 after Control = PTE of PM/PM10 before Control x (1 - Control Efficiency)
 = **0.13 tons/yr**

Six baghouses control the die casting machines with a control efficiency equal to 99%.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name:	Casting Technologies Company
Source Location:	1450 Musicland Drive, Franklin, Indiana 46131
County:	Johnson
SIC Code:	3363
Operation Permit No.:	M081-25263-00032
Permit Reviewer:	Teresa Freeman

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Casting Technologies Company relating to the operation of an aluminum molding and die casting plant.

History

On September 11, 2007, Casting Technologies Company submitted an application to the OAQ requesting to renew its operating permit. Casting Technologies Company was issued a MSOP on December 13, 2002.

Permitted Emission Units and Pollution Control Equipment

- (a) One (1) natural gas-fired aluminum melter, identified as RVB1, with a maximum heat input of 1.5 MMBtu/hr and a maximum throughput rate of 1,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. This unit was constructed in 1997 and exhausts through stack #RVB1-1.
- (b) One (1) natural gas-fired aluminum melter, identified as RVB2, with a maximum heat input of 11.25 MMBtu/hr and a maximum throughput rate of 3,500 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1997 and exhausts through stack #RVB2-2.
- (c) One (1) natural gas-fired aluminum melter, identified as JM1, with a maximum heat input of 3.75 MMBtu/hr and a maximum throughput rate of 2,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. This unit was constructed in 1995 and exhausts through stack #JM1-1.
- (d) One (1) natural gas-fired aluminum melter, identified as JM2, with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1996 and exhausts through stack #JM2-2.
- (e) One (1) natural gas-fired aluminum melter, identified as JM3, each with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum per hour and chlorine flux of 0.2 pounds per hr. The unit was constructed in 1996 and exhausts through stack #JM3-3.
- (f) One (1) dross cooling operation cooling up to 362.5 pound of furnace dross per hour, with emissions exhausting into the building.

- (g) Twelve (12) aluminum casting machines, constructed in 1995 and comprised of electric holding furnaces and die casting molds, each with a maximum process rate of 1,875 pounds of aluminum per hour. The release agent for the molding process, which is comprised of graphite and water mixture, is controlled by six baghouses (identified as GDC1, GDC2, GDC3, GDC4, GDC5, and GDC6) which vent into the building. The maximum graphite usage is 5.0 pounds per day for each casting machine.
- [Note: There are no emissions from the pouring and cooling operations because the die casting process is an enclosed molding process.]
- (h) One (1) steel shot blaster, identified as SSB with a maximum process rate of 2,000 pounds of shot per hour, constructed in 1995, with emissions controlled by a baghouse, which vent inside the building.
- (i) The welding equipment related to manufacturing activities not resulting in the emission of HAPs and consuming less than 625 pounds of rod or wire per day.
- (j) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including the following:
- (1) Three (3) heat treat furnaces (identified as HTC1, HTC2, and HTC3), each with a maximum heat input capacity of 5.0 MMBtu/hr, and exhausting through stacks HTC1-1, HTC2-2, and HTC3-3. Furnaces HTC1 and HTC2 were constructed in 1996. Furnace HTC3 was constructed in 1997;
 - (2) Three (3) age ovens (identified as HTA-1, HTA-2, and HTA-3), each with a maximum heat input capacity of 0.8 MMBtu/hr;
 - (3) Four (4) air make-up units, each with a maximum heat input capacity of 3.3 MMBtu/hr;
 - (4) Two (2) air make-up units, each with a maximum heat input capacity of 8.25 MMBtu/hr;
 - (5) Two (2) dock heaters, each with a maximum heat input capacity of 0.2 MMBtu/hr;
 - (6) Five (5) roof top air conditioners/heaters, each with a maximum heat input capacity of 0.2 MMBtu/hr;
 - (7) Two (2) roof top air conditioners/heaters, each with a maximum heat input capacity of 0.16 MMBtu/hr;
 - (8) One (1) roof top air conditioner/heater, with a maximum heat input capacity of 0.65 MMBtu/hr; and
 - (9) One (1) domestic water heaters for front offices, with a maximum heat input capacity of 0.199 MMBtu/hr.

Emission Units and Pollution Control Equipment Constructed

On March 6, 2002, Casting Technologies Company submitted an application to the OAQ requesting to add new emission units to be built in 2008. The following emission units have been added:

- (a) One (1) natural gas-fired aluminum melter, identified as JM4, with a maximum heat input of 4.6 MMBtu/hr and a maximum throughput rate of 4,000 pounds of aluminum

per hour and chlorine flux of 0.2 pounds per hr. The unit is to be constructed in 2008 and exhausts through stack #JM4.

- (b) Seven (7) die casting machines, to be constructed in 2008 and comprised of die casting, die lube and tip lube, with a total maximum process rate of 4000 pounds of aluminum per hour.

Emission Units and Pollution Control Equipment Removed From the Source

One (1) steel shot blaster, identified KSB, with a maximum process rate of 2,000 pounds of shot per hour, constructed in 1995, with emissions controlled by a baghouse, which vent inside the building. It was removed from source in 2007.

Existing Approvals

Since the issuance of the MSOP 081-15797-00032 on December 13, 2002, the source has constructed or has been operating under the following approvals as well:

- (a) Administrative Amendment No. (081-23304-00032), issued on July 31, 2006.

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

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Johnson County

Pollutant	Status
PM ₁₀	attainment
PM _{2.5}	nonattainment
SO ₂	attainment
NO _x	attainment
8-hour Ozone	attainment
CO	attainment
Lead	attainment

- (a) Ozone Standards
 - (1) 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.
 - (2) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.

- (3) 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. Johnson 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) **PM2.5**
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Johnson County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5.
- (c) **Other Criteria Pollutants**
Johnson County has been classified as attainment in Indiana for PM10, NOx, SO₂, CO and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) **Fugitive Emissions**
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.
- (c) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

Federal Rule Applicability

- (a) The requirements of the New Source Performance Standard for primary aluminum reduction plants, (40 CFR 60.190-195, Subpart S) are not included in the permit because the source does not manufacture aluminum.
- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for primary aluminum reduction plants (40 CFR 63.840-859, Subpart LL) are not included in the permit because the source does not manufacture aluminum.
- (c) The provisions of 40 CFR 63, Subpart RRR - National Emission Standards of Hazardous Air Pollutants for Secondary Aluminum Production are not included in this permit for this

aluminum diecasting plant because according to the applicability section of the federal rule - 40 CFR 63.1500 (f), the requirements of this subpart do not apply to manufacturers of aluminum die castings, aluminum foundries, or aluminum extruders that melt no materials other than clean charge and materials generated within the facility; and that also do not operate a thermal chip dryer, sweat furnace or scrap dryer/delacquering kiln/decoating kiln. This source is not a major source of HAPS and has no new or existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Johnson County and the potential to emit all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 is not applicable.

326 IAC 5-1 (Opacity Limitations)

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

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

State Rule Applicability – Individual Facilities

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

Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from each of the shot blasters, aluminum melters, aluminum and die casting machines shall be limited to the pound per hour limitation 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:

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

The particulate limit for each unit is listed in the table below:

Process Description	Process ID	Throughput Rate (lbs/hr)	PM Emission Limit (lbs/hr)
Aluminum Melter	RVB1	1,000	2.58
Aluminum Melter	RVB2	3,500	5.97
Aluminum Melter	JM1	2,000	4.10
Aluminum Melter	JM2	4,000	6.52
Aluminum Melter	JM3	4,000	6.52
Aluminum Melter	JM4	4,000	6.52

Process Description	Process ID	Throughput Rate (lbs/hr)	PM Emission Limit (lbs/hr)
Steel Shot Blaster	SSB	2,000	4.10
Each Aluminum Casting Machine	--	1,875	3.93
Die Casting Machines	--	4000	6.52

According to the emission calculations (see Page 2 of Appendix A), the potential to emit PM from each shot blaster (with particulate matter emissions controlled by a 99% efficient baghouse) is less than the limit in the table above. Therefore, the shot blaster is in compliance with 326 IAC 6-3-2. The use of baghouse for the shot blaster ensures compliance with the limits above.

According to the emission calculations (see Page 3 and 5 of Appendix A), the potential to emit PM from each of the aluminum melters and the casting machines (before control) is less than the limit in the table above. Therefore, the aluminum melters and the casting machines are in compliance with 326 IAC 6-3-2.

The allowable particulate emission for each shot blaster is less than 10 lbs/hr and the actual particulate emissions from each of the aluminum melters and the die casting machines are less than 25 tons per year. Therefore, the Preventive Maintenance Plan and the compliance monitoring requirements are not applicable for these units.

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

The welding operations at this source consume less than 625 pounds of rod or wire per day. Therefore, the welding equipment is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(9).

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

Although constructed after January 1, 1980, the five (5) natural gas-fired aluminum melters and aluminum casting operations are not subject to the requirements of 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) because none of these units result in potential VOC emissions equal to or greater than twenty-five (25) tons per year.

Compliance Determination and Monitoring Requirements

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

Compliance Determination Requirements

- (a) Emission Controls Operation
The baghouse used to control particulate emissions from the shot blaster shall be in operation and control emissions from the shot blaster at all times the shot blaster is in operation.

This requirement is required to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes).

Recommendation

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

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

An application for the purposes of this review was received on September 10, 2007. Additional information was received on February 12, 2008 and February 13, 2008.

Conclusion

The operation of this aluminum molding and die casting plant shall be subject to the conditions of the attached **MSOP Renewal** No. M081-25263-00032.

**Appendix A: Emission Calculations
Summary**

Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: February 21, 2008

POTENTIAL TO EMIT BEFORE CONTROLS IN TONS PER YEAR

Emission Units	PM	PM10	SO₂	NOx	VOC	CO
Shot Blasting Unit	74.0	7.4				
Aluminum Melters	2.42	3.18	0.08	13.27	0.73	11.15
fluxing	2.26	1.2				
Die casting machines	13.3	13.3				
dross cooling	0.12	0.16				
Natural Gas-Fired Units	0.41	1.65	0.13	21.76	1.20	18.27
TOTAL	92.5	26.9	0.21	35.03	1.93	29.42

LIMITED POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO₂	NOx	VOC	CO
Shot Blasting Unit	0.74	0.07				
Aluminum Melters	2.42	3.18	0.08	13.27	0.73	11.15
fluxing	2.26	1.2				
Die casting machines	0.13	0.13				
dross cooling	0.12	0.16				
Natural Gas-Fired Units	0.41	1.65	0.13	21.76	1.20	18.27
TOTAL	6.08	6.39	0.21	35.03	1.93	29.42

**Appendix A: Emissions Calculations
PM and PM10 Emissions
From Steel Shot Blaster**

**Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: January 17, 2008**

Emission/Process Unit	Max. Shot Usage Rate	Emission Factor	Emission Factor	PTE of PM (tons/year)	PTE of PM10 (tons/year)	PTE of PM (tons/year)	PTE of PM10 (tons/year)
	tons/hour	PM (lb/ton)	PM10 (lb/ton)	Before Control	Before Control	After Control	After Control
SSB	1	17	1.7	74	7.4	0.74	0.07

Shot blasting unit is controlled by a baghouse with a control efficiency equal to 99%.
Emission factor is from FIRE, Grey Iron Foundries, SCC 3-04-003-40.

METHODOLOGY

Before Control:

PTE of PM/PM10 (tons/year) = Maximum Throughput Rate (tons/hour) * Emission Factor (lb PM/PM10 per tons Handled) * 8760 hours/year * 1 ton/2000 lbs

After Control:

PTE of PM/PM10 (tons/year) = Maximum Throughput Rate (tons/hour) * Emission Factor (lb PM/PM10 per tons Handled) * 8760 hours/year * 1 ton/2000 lbs * (1- Control Efficiency %)

**Appendix A: Emission Calculations
From Five (5) Aluminum Melters**

**Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: January 17, 2008**

1. From Natural Gas Combustion (<100 MMBtu/hr):

		Pollutant					
Emission Factor in lb/MMCF		PM*	PM10*	SO ₂	**NO _x	VOC	CO
		1.9	7.6	0.6	100	5.5	84.0
Unit ID	Heat Input Capacity (MMBtu/hr)	Potential PM Emissions (tons/yr)	Potential PM10 Emissions (tons/yr)	Potential SO ₂ Emissions (tons/yr)	Potential NO _x Emissions (tons/yr)	Potential VOC Emissions (tons/yr)	Potential CO Emissions (tons/yr)
RVB1	1.5	0.01	0.05	0.004	0.66	0.04	0.55
RVB2	11.25	0.09	0.37	0.030	4.93	0.27	4.14
JM1	3.75	0.03	0.12	0.010	1.64	0.09	1.38
JM2	4.6	0.04	0.15	0.012	2.01	0.11	1.69
JM3	4.6	0.04	0.15	0.012	2.01	0.11	1.69
JM4	4.6	0.04	0.15	0.012	2.01	0.11	1.69
Total	30.30	0.25	1.01	0.08	13.27	0.73	11.15

*PM and PM10 emission factors are condensable and filterable PM10 combined.

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

Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF - 1,000,000 Cubic Feet of Gas

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 7/98)

Potential Emission (tons/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu x Emission Factor (lb/MMCF)/2,000 lb/ton

2. From Aluminum Melting Process:

		Pollutant			
Emission Factor in lb/ton		PM	PM10*	PM	PM10*
		0.03	0.03	0.03	0.03
Unit ID	Throughput Rate (lbs/hr)	Potential PM Emissions (lbs/hr)	Potential PM10 Emissions (lbs/hr)	Potential PM Emissions (tons/yr)	Potential PM10 Emissions (tons/yr)
RVB1	1,000	0.02	0.02	0.07	0.07
RVB2	3,500	0.05	0.05	0.23	0.23
JM1	2,000	0.03	0.03	0.13	0.13
JM2	4,000	0.06	0.06	0.26	0.26
JM3	4,000	0.06	0.06	0.26	0.26
JM4	4,000	0.06	0.06	0.26	0.26
Total	18,500			1.22	1.22

* Assume all the PM emissions are PM10 emissions.

Methodology

Emission factors are from AP-42, Table 12.11-2, SCC #3-04-004-26 (kettle refining for lead, AP-42, 01/95), which is the only available emission factor for melting of refined (pure) metal process in AP-42.

Emissions (lbs/hr) = Throughput (lbs/hr) x 1 tons/2000 lbs x Emission Factor (lb/ton)

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

3. Total Uncontrolled Emissions of the Melters (Combustion & Melting Processes):

Unit ID	Throughput Rate (lbs/hr)	Potential PM Emissions (tons/yr)	Potential PM10 Emissions (tons/yr)	Potential SO ₂ Emissions (tons/yr)	Potential NO _x Emissions (tons/yr)	Potential VOC Emissions (tons/yr)	Potential CO Emissions (tons/yr)
RVB1	1,000	0.08	0.12	0.004	0.66	0.04	0.55
RVB2	3,500	0.32	0.60	0.030	4.93	0.27	4.14
JM1	2,000	0.16	0.26	0.010	1.64	0.09	1.38
JM2	4,000	0.30	0.42	0.012	2.01	0.11	1.69
JM3	4,000	0.30	0.42	0.012	2.01	0.11	1.69
JM4	4,000	1.25	1.37	0.012	2.01	0.11	1.69
Total	18,500	2.42	3.18	0.08	13.27	0.73	11.15

**Appendix A: Emission Calculations
Emissions from fluxing**

**Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: February 21, 2008**

SCC# 3-04-001-04 Fluxing/Chlorine						
TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Flux		1.03	2000	0.000515		
	PM * lbs/ton Chlorine	PM10 * lbs/ton Chlorine	SOx lbs/ton Chlorine	NOx lbs/ton Chlorine	VOC lbs/ton Chlorine	CO lbs/tons Chlorine
	1000	532	0.00	0.00	0.00	--
Potential Emissions lbs/hr	0.52	0.274	0.0	0.0	0.0	--
Potential Emissions lbs/day	12.4	6.6	0.0	0.0	0.0	--
Potential Emissions tons/year	2.26	1.20	0.0	0.0	0.0	0.0

* Note: Emission factor is from FIRE version 6.01.

Emission factors which are not denoted by a "*" are from older versions of FIRE and were not included in FIRE version 6.01 for various reasons.

**Appendix A: Emission Calculations
Revised-Emissions from the Die Casting Machines**

**Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: May 9, 2008**

1. Emissions from the Aluminum Die Casting Process:

**Clean Al Input
lbs/hr**

26500 (Total for 21 machines)

Emission Factor (lbs/ton)	Pollutant					
	PM*	PM10*	SO2	NO _x	VOC	CO
	0.04	0.04	NA	NA	NA	NA
Potential to Emit before Control (lbs/hr)	0.53	0.53				
Potential to Emit before Control (tons/yr)	2.32	2.32	-	-	-	-

* Assume all the PM emissions are PM10 emissions.

Methodology

Emission Factors are from FIRE Version 6.23, SCC 3-04-004-09 (Lead Casting), which is the only available emission factor for pure metal casting process in FIRE. In addition, the die casting process is an enclosed molding process. Therefore, the particulate emissions from the die casting process are limited. There is not pouring and cooling casting processes involved with the die casting process. Therefore, the emissions factors for secondary aluminum production facilities are not suitable here.

PTE (lbs/hr) = Al Input (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton)

PTE (tons/yr) = Al Input (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton) x 8760 hr/yr x 1 ton/2000 lbs

2. Emissions from the Unmolding Process:

Max. Graphite Usage: 5 lbs/day/machine
Control Device: 6 Baghouses

The release agent on the mold surfaces consists of graphite and water. Assume all the graphite used are PM/PM10 emissions:

The Potential to Emit PM/PM10 before Control =
5 lbs/day/machine x 365 day/yr x 12 machines x 1 tons/2000 lbs = **10.95 tons/yr**

3. Total Emissions from the Die Casting Machines:

The Potential to Emit PM/PM10 before Control
= (Emissions from the Die Casting Process) + (Emissions from the Unmolding Process)
= 2.32 tons/yr + 10.95 tons/yr = **13.27 tons/yr**

3. Total Emissions from the Die Casting Machines:

The Potential to Emit PM/PM10 after Control
PTE of PM/PM10 after Control = PTE of PM/PM10 before Control x (1 - Control Efficiency)
= **0.13 tons/yr**

Six baghouses control the die casting machines with a control efficiency equal to 99%.

**Appendix A: Emission Calculations
PM/PM10 Emissions
Dross Cooling Operation**

**Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: February 19, 2008**

Pollutant	Dross Produced (tons/yr)	Emission Factor (lbs/ton)	Emission Rate (lbs/yr)	Emission Rate (tons/yr)
PM	1647.8	0.150	247.17	0.12
PM-10	1647.8	0.200	329.56	0.16

PM, PM-10 Emission Factors From 9/25/03 stack testing at Aluminum Recovery Technology which is similar to this operation plus a 0.05 lbs/ton safety factor for each pollutant

**Appendix A: Emission Calculations
Natural Gas Combustion
(MMBtu/hr < 100)
From All Other Natural Gas Combustion Units**

**Company Name: Casting Technology Company
Address City IN Zip: 1450 Musicland Drive, Franklin, IN 46131
MSOP: 081-25263-00032
Reviewer: Teresa Freeman
Date: January 17, 2008**

Heat Input Capacity
MMBtu/hr
49.67 (24 units combined)

Potential Throughput
MMCF/yr
435.1

	Pollutant					
Emission Factor in lb/MMCF	PM*	PM10*	SO ₂	**NO _x	VOC	CO
	1.9	7.6	0.6	100	5.5	84.0
Potential Emission in tons/yr	0.41	1.65	0.13	21.76	1.20	18.27

*PM and PM10 emission factors are condensable and filterable PM10 combined.

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

Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF - 1,000,000 Cubic Feet of Gas

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

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 7/98)

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