



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: April 16, 2007
RE: General Aluminum Mfg. Company/151-22617-00032
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot 03/23/06



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New Source Review and Minor Source Operating Permit OFFICE OF AIR QUALITY

**General Aluminum Manufacturing Company
303 E. Swager Dr.
Fremont, Indiana 46237**

(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.

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.

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

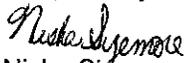
Operation Permit No.: MSOP 151-22617-00032	
Issued by:  Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: April 16, 2007 Expiration Date: April 16, 2012

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 and A.2 for MSOP 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 an aluminum die casting source melting only clean charge.

Source Address:	303 E. Swager Dr., Fremont, Indiana 46237
Mailing Address:	303 E. Swager Dr., Fremont, Indiana 46237
General Source Phone Number:	260 - 495 - 2600
SIC Code:	3365
County Location:	Steuben
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD 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 reverberatory furnace, identified as EU01, exhausting to Stack RF-STK, melting only clean charge which can include aluminum t-bar, sow, ingot and/or internal runarounds, adding cover and wall flux, neither of which contains any HAPs, to prevent the buildup of oxides in the furnace, constructed in July 2003, modified in 2006, increasing capacity: 2.50 to 3.00 tons of metal per hour, 3.50 million British thermal units per hour, and 3.28 pounds per hour of cover flux and 0.32 pounds per hour of wall flux.
- (b) Eight (8) electric die casting machine holding furnaces, identified as EU02, two (2) constructed in 1985, one (1) constructed in 1996, one (1) constructed in 1999, one (1) constructed in 2000, one (1) constructed in 2003 and two (2) constructed in 2006, holding capacity: 2,500 pounds of aluminum each, equipped with two (2) natural gas-fired torches used only during electrical power outages, torch capacity: 0.500 million British thermal units per hour, each.
- (c) Eight (8) die cast machines, identified as EU03, two (2) constructed in 1985, one (1) constructed in 1996, one (1) constructed in 1999, one (1) constructed in 2000, one (1) constructed in 2003 and two (2) constructed in 2006, capacity: 0.4375 tons of aluminum per hour, each, and 2.57 pounds of die lube per hour (11.25 tons of die lube per year), each.
- (d) Four (4) natural gas-fired space heaters, constructed between 1990 and 1995, capacity: 0.035 million British thermal units per hour, each.
- (e) One (1) natural gas-fired ladle preheater, constructed in 1985, capacity: 0.900 million British thermal units per hour.
- (f) Two (2) parts rinsers, constructed in the 1990s, including:

- (1) One (1) enclosed parts rinser which uses a water-based detergent.
- (2) One (1) enclosed parts rinser which uses a water-based detergent, identified as Rainbow Line Hurricane Rinser.
- (g) One (1) natural gas-fired makeup air unit, constructed in 1995, capacity: 1.00 million British thermal units per hour.
- (h) One (1) shotblaster, identified as EU04, constructed in 2006, equipped with a wet scrubber for particulate control that exhausts inside the building, capacity: 3,300 pounds of steel shot and 500 pounds of aluminum parts per hour.

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, 151-22617-00032, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability

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:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

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

- (a) All terms and conditions of permits established prior to 151-22617-00032 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
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
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
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 Stack Height [326 IAC 1-7]

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

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

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

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

(3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.11 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.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.13 Instrument Specifications [326 IAC 2-1.1-11]

- (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.14 Response to Excursions or Exceedances

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

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

C.15 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 and 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.16 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.17 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.18 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
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) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) natural gas-fired reverberatory furnace, identified as EU01, exhausting to Stack RF-STK, melting only clean charge which can include aluminum t-bar, sow, ingot and/or internal runarounds, adding cover and wall flux, neither of which contains any HAPs, to prevent the buildup of oxides in the furnace, constructed in July 2003, modified in 2006, increasing capacity: 2.50 to 3.00 tons of metal per hour, 3.50 million British thermal units per hour, and 3.28 pounds per hour of cover flux and 0.32 pounds per hour of wall flux.
- (b) Eight (8) electric die casting machine holding furnaces, identified as EU02, two (2) constructed in 1985, one (1) constructed in 1996, one (1) constructed in 1999, one (1) constructed in 2000, one (1) constructed in 2003 and two (2) constructed in 2006, holding capacity: 2,500 pounds of aluminum each, equipped with two (2) natural gas-fired torches used only during electrical power outages, torch capacity: 0.500 million British thermal units per hour, each.
- (c) Eight (8) die cast machines, identified as EU03, two (2) constructed in 1985, one (1) constructed in 1996, one (1) constructed in 1999, one (1) constructed in 2000, one (1) constructed in 2003 and two (2) constructed in 2006, capacity: 0.4375 tons of aluminum per hour, each, and 2.57 pounds of die lube per hour (11.25 tons of die lube per year), each.
- (d) Four (4) natural gas-fired space heaters, constructed between 1990 and 1995, capacity: 0.035 million British thermal units per hour, each.
- (e) One (1) natural gas-fired ladle preheater, constructed in 1985, capacity: 0.900 million British thermal units per hour.
- (f) Two (2) parts rinsers, constructed in the 1990s, including:
 - (1) One (1) enclosed parts rinser which uses a water-based detergent.
 - (2) One (1) enclosed parts rinser which uses a water-based detergent, identified as Rainbow Line Hurricane Rinser.
- (g) One (1) natural gas-fired makeup air unit, constructed in 1995, capacity: 1.00 million British thermal units per hour.
- (h) One (1) shotblaster, identified as EU04, constructed in 2006, equipped with a wet scrubber for particulate control that exhausts inside the building, capacity: 3,300 pounds of steel shot and 500 pounds of aluminum parts per hour.

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

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

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the reverberatory furnace, identified as EU01, shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6,000 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the shotblaster, identified as EU04, shall not exceed 6.30

pounds per hour when operating at a process weight rate of 3,800 pounds per hour.

The pounds per hour limitation were calculated with the following equation:

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

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

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the shotblaster and its control device.

Compliance Determination Requirements

D.1.3 Particulate Control

In order to comply with Condition D.1.1, the wet scrubber for particulate control shall be in operation and control emissions from the shotblaster, identified as EU04 at all times that the shotblaster is in operation.

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

Within ninety (90) days after the issuance of this MSOP 151-22617-00032, in order to verify that both the PM and PM₁₀ emission factors for the reverberatory furnace, identified as EU01, exhausting to Stack RF-STK, do not exceed 1.1 pounds per ton, the Permittee shall perform PM and PM₁₀ testing for reverberatory furnace, identified as EU01, utilizing methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.1.5 Visible Emissions Notations

- (a) Visible emission notations of the shotblaster stack exhaust 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.1.6 Wet Scrubber Parametric Monitoring

- (a) The Permittee shall record the pressure drop across the wet scrubber used in conjunction with shot blaster at least once per day when the shotblaster is in operation. When for any

one reading, the pressure drop across the wet scrubber is outside the normal range of 5.0 and 10.0 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.

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

D.1.7 Wet Scrubber Failure Detection

- (a) For a wet scrubber controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (b) For a wet scrubber controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

Record Keeping and Reporting Requirement [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.8 Record Keeping Requirements

- (a) To document compliance with Condition D.1.5, the Permittee shall maintain records of daily visible emission notations of the reverberatory furnace and the shotblaster stack exhausts.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain records once per day of the pressure drop.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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

**MINOR SOURCE OPERATING PERMIT
CERTIFICATION**

Source Name: General Aluminum Manufacturing Company
Source Address: 303 E. Swager Dr., Fremont, Indiana 46237
Mailing Address: 303 E. Swager Dr., Fremont, Indiana 46237
Permit No.: MSOP 151-22617-00032

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

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

Signature:

Printed Name:

Title/Position:

Phone:

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).

Source Name:	General Aluminum Manufacturing Company
Address:	303 E. Swager Dr.
City:	Fremont, Indiana 46237
Phone #:	260 - 495 - 2600
MSOP #:	151-22617-00032

I hereby certify that General Aluminum Manufacturing Company is

- still in operation.
- no longer in operation.

I hereby certify that General Aluminum Manufacturing Company is

- in compliance with the requirements of MSOP 151-22617-00032.
- not in compliance with the requirements of MSOP 151-22617-00032.

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 ? _____, 100TONS/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

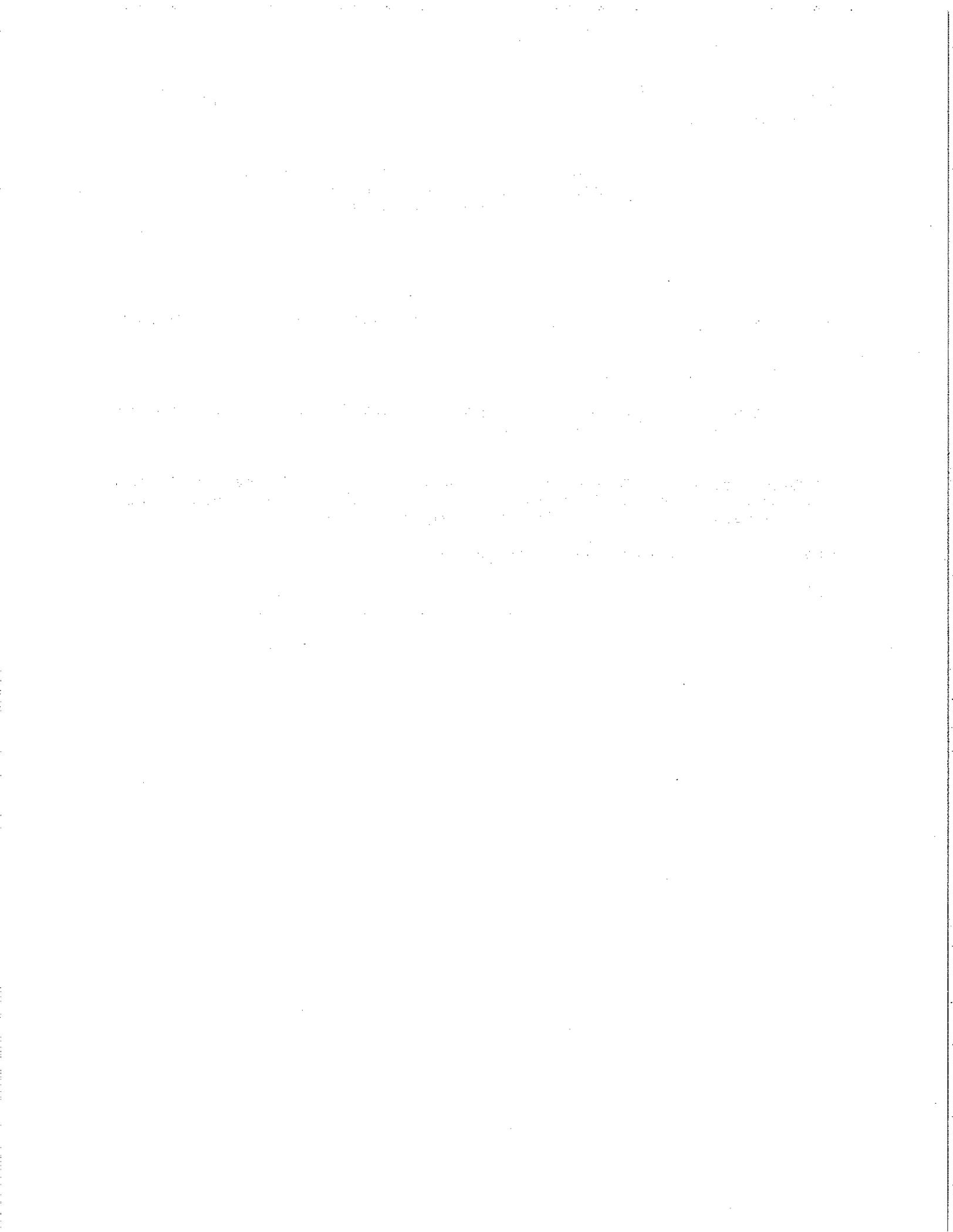
Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

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 a Minor Source Operating Permit**

Source Name:	General Aluminum Manufacturing Company
Source Location:	303 E. Swager Dr., Fremont, Indiana 46737
County:	Steuben
Construction Permit No.:	MSOP 151-22617-00032
SIC Code:	3365
Permit Reviewer:	Frank P. Castelli

On February 28, 2007 the Office of Air Quality (OAQ) had a notice published in the Herald Republican, Angola, Indiana, stating that General Aluminum Manufacturing Co. had applied for an operating permit to operate an aluminum die casting source. The notice also stated that OAQ proposed to issue a permit for this installation and provided information on how the public could review the proposed permit 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 permit should be issued as proposed.

On March 13, 2007, Tom Abernathy of General Aluminum Manufacturing Company submitted a comment on the proposed construction operating permit. The summary of the comment and corresponding response is as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

Comment:

GAMCO requests the removal of the testing requirement for confirmation of the STAPPA/ALAPCO factors contained in Condition D.1.4 for the following reasons:

The STAPPA/ALAPCO emission factor is a published emission factor and therefore should not be considered an alternative emission factor.

GAMCO believes that the STAPPA/ALAPCO emission factor is not only a conservative estimate of emissions from the reverberatory furnace but more representative of PM and PM₁₀ emissions from melting clean charge, which is defined in the Secondary Aluminum NESHAP as t-bar, sow, ingot and internal runaround (non-coated, clean scrap generated at the facility).

The AP-42 emission factors in Table 12.8-2 were developed for reverberatory aluminum furnaces melting scrap aluminum. With the exception of internal runaround which is free of coatings and defined as "clean charge", GAMCO does not melt scrap. The amount of particulate generated from melting scrap is by nature greater than the amount that would be produced melting only clean charge. It stands to reason that GAMCO should not be forced to use an emission factor that was developed based on testing conducted and Secondary Aluminum facilities that melt the aluminum scrap to produce the clean charge (t-bar, sow, and ingot) which GAMCO purchases to re-melt in the Reverberatory Furnace, as the greater part of the emissions have already occurred at the Secondary Aluminum facility.

IDEM and other state regulatory agencies have approved the use of the STAPPA/ALAPCO emissions factors for use at other GAMCO facilities in Indiana and surrounding states and at other similar facilities in the past without requesting stack testing to confirm the emission factor.

IDEM has approved a MSOP for a similar facility using a particulate emission factors lower than the requested factor (0.03 lb PM/ton vs. requested factor 1.1 lb PM/ton) with no stack testing required. Please refer to Casting Technology Company, MSOP 081-15797-00032, a complete copy of which is available on the web at <http://oaqpermits.in.gov/15797.pdf>.

Response:

The one (1) time PM and PM₁₀ stack test of the reverberatory furnace, identified as EU01, is required to assure IDEM, OAQ that the entire source is not subject to the requirements of 326 IAC 2-7 and verify compliance with the requirements of 326 IAC 6-3-2. If the emission factor for PM₁₀ approached the AP-42 emission factor of 4.3 pounds per ton of metal melted for secondary aluminum reverberatory furnaces, the potential to emit PM₁₀ when added to the potential to emit PM₁₀ from the shotblaster would exceed one hundred (100) tons per year. Therefore, no changes have been made to the proposed permit.

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

**Technical Support Document (TSD) for a New Source Review and
Minor Source Operating Permit**

Source Background and Description

Source Name: General Aluminum Manufacturing Company
Source Location: 303 E. Swager Dr., Fremont, Indiana 46737.
County: Steuben
SIC Code: 3365
Operation Permit No.: MSOP 151-22617-00032
Permit Reviewer: Frank P. Castelli

The Office of Air Quality (OAQ) has reviewed an application from General Aluminum Manufacturing Company relating to the operation of an aluminum die casting source melting only clean charge.

History

On September 15, 2006, General Aluminum Manufacturing Company requested a Minor Source Operating Permit (MSOP) since they could not substantiate the PM/PM₁₀ emission factor quoted by the manufacturer for the shotblaster. The potential to emit PM and PM₁₀ calculated with the STAPPA/ALAPCO shot blasting emission factors, exceeds the twenty five (25) tons per year permitting threshold for an MSOP. Therefore, the applicable level of permitting for this source is an MSOP.

Permitted Emission Units and Pollution Control Equipment

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

- (a) One (1) natural gas-fired reverberatory furnace, identified as EU01, exhausting to Stack RF-STK, melting only clean charge which can include aluminum t-bar, sow, ingot and/or internal runarounds, adding cover and wall flux, neither of which contains any HAPs, to prevent the buildup of oxides in the furnace, constructed in July 2003, modified in 2006, increasing capacity: 2.50 to 3.00 tons of metal per hour, 3.50 million British thermal units per hour, and 3.28 pounds per hour of cover flux and 0.32 pounds per hour of wall flux.
- (b) Six (6) electric die casting machine holding furnaces, identified as part of EU02, two (2) constructed in 1985, one (1) constructed in 1996, one (1) constructed in 1999, one (1) constructed in 2000 and one (1) constructed in 2003, holding capacity: 2,500 pounds of aluminum each, equipped with two (2) natural gas-fired torches used only during electrical power outages, torch capacity: 0.500 million British thermal units per hour, each.
- (c) Six (6) die cast machines, identified as part of EU03, two (2) constructed in 1985, one (1) constructed in 1996, one (1) constructed in 1999, one (1) constructed in 2000 and one (1) constructed in 2003, capacity: 0.4375 tons of aluminum per hour, each, and 2.57 pounds of die lube per hour (11.25 tons of die lube per year), each.
- (d) Four (4) natural gas-fired space heaters, constructed between 1990 and 1995, capacity: 0.035 million British thermal units per hour, each.
- (e) One (1) natural gas-fired ladle preheater, constructed in 1985, capacity: 0.900 million British thermal units per hour.

- (f) Two (2) parts rinsers, constructed in the 1990s, including:
 - (1) One (1) enclosed parts rinser which uses a water-based detergent.
 - (2) One (1) enclosed parts rinser which uses a water-based detergent, identified as Rainbow Line Hurricane Rinser.
- (g) One (1) natural gas-fired makeup air unit, constructed in 1995, capacity: 1.00 million British thermal units per hour.

Unpermitted Emission Units and Pollution Control Equipment

- (h) Two (2) electric die casting machine holding furnaces, identified as part of EU02, constructed in 2006, holding capacity: 2,500 pounds of aluminum each.
- (i) Two (2) die cast machines, identified as part of EU03, constructed in 2006, capacity: 0.4375 tons of aluminum per hour, each and 2.57 pounds of die lube per hour (11.25 tons of die lube per year), each.
- (j) One (1) shotblaster, identified as EU04, constructed in 2006, equipped with a wet scrubber for particulate control that exhausts inside the building, capacity: 3,300 pounds of steel shot and 500 pounds of aluminum parts per hour.

New Emission Units and Pollution Control Equipment

There are no proposed emission units during this review process.

Emission Units and Pollution Control Equipment Removed

The following facilities have been removed from the source and are not included in the proposed permit:

- (k) Two (2) rinsers and three (3) parts washers, constructed in the 1990s, including:
 - (1) Two (2) enclosed parts rinsers, which used a water-based detergent.
 - (2) Three (3) enclosed parts washers which employed a cleaning solvent, identified as Walsh Washer on Lowers, Walsh Waster on SUV collector, and Walsh Washer on oil filter adapter, maximum solvent usage rate: 0.47 tons of Permatreat per year, total. There were no HAPs in this cleaning solvent.
 - (3) Seven (7) natural gas-fired parts rinser heaters, capacity: 4.70 million British thermal units per hour, total.

Existing Approvals

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

- (a) R 151-3369-00032, issued on May 18, 1994; and
- (b) R 151-18437-00032, issued on April 24, 2004.

All conditions from previous approvals were incorporated into this permit except the following:

R 151-18437-00032, issued on April 24, 2004;

Condition (c): The requirements of 326 IAC 8-3-4 (Conveyorized degreaser operation).

Reason not incorporated: This source no longer utilizes cleaning solvent in their parts rinsers.

Enforcement Issue

- (a) IDEM is aware that two (2) electric die casting machine holding furnaces, two (2) die cast machines and a shotblaster have been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Unpermitted Emission Units and Pollution Control Equipment". In addition the capacity of the reverberatory furnace, identified as EU01, was increased from 2.5 to 3.0 tons per hour during 2006.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
RF-STK	Reverberatory Furnace (EU01)	30.0	4.0	unknown	220

Recommendation

The staff recommends to the Commissioner that the construction and operation 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.

A Registration Revision application was originally received on January 30, 2006, with additional information received on March 13 and 31 and April 25, 2006. A request to transition this application into an application for an MSOP was received on September 15, 2006, with additional information received on October 19, 2006.

Emission Calculations

See pages 1 through 6 Appendix A of this document for detailed emission calculations.

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions 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, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	72.3
PM ₁₀	64.3
SO ₂	0.329
VOC	24.8
CO	0.836
NO _x	3.48

HAPs	Potential to Emit (tons/yr)
Benzene	0.00002
Dichlorobenzene	0.00001
Formaldehyde	0.001
Hexane	0.017
Toluene	0.00003
Lead Compounds	0.000005
Cadmium Compounds	0.00001
Chromium Compounds	0.00001
Manganese Compounds	0.000003
Nickel Compounds	0.00002
Total	0.017

- (a) The potential to emit of all criteria pollutants is less than one hundred (100) tons per year and the potential to emit PM and PM₁₀ is greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.
- (b) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Steuben County.

Pollutant	Status
PM _{2.5}	attainment
PM ₁₀	attainment
SO ₂	attainment

Pollutant	Status
NO ₂	attainment
8-Hour Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Steuben County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Steuben County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions.
- (c) Steuben County has been classified as attainment or unclassifiable in Indiana for PM₁₀, SO₂, NO₂, CO, and lead. 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 redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard, redesignating Lake County to attainment for the sulfur dioxide standard, and revoking the one-hour ozone standard in Indiana.

Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	15.1
PM ₁₀	15.1
SO ₂	0.329
VOC	24.8
CO	0.836
NO _x	3.48
Single HAP	0.017
Combination HAPs	0.017

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of two-hundred fifty (250) tons per year or greater and it is not in one of the twenty-eight (28) listed source categories.
- (b) Emissions were based on the potential to emit after controls, see page 6 of 6 of Appendix A of this document.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit 151-22617-00032, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than one-hundred (100) tons per year,
- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) the combination of HAPs is less than twenty-five (25) tons per year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

- (a) The requirements of New Source Performance Standard, 326 IAC 12, 40 CFR Part 60.260, Subpart Z, (Standards of Performance for Ferroalloy Production Facilities) are not included in this permit because the source does not operate an electric submerged arc furnace.
- (b) The requirements of the New Source Performance Standard, 326 IAC 12, 40 CFR Part 60.190, Subpart S, (Standards of Performance for Primary Aluminum Production Plants) are not included in this permit because the source is not a primary aluminum reduction plant.
- (c) There are no other New Source Performance Standards included in the permit for this source.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Primary Aluminum Reduction Plants, 40 CFR 63.840, Subpart LL, are not included in this permit because the source is not a primary aluminum reduction plant.
- (e) The parts rinsers at this source do not currently use halogenated solvents, nor did they ever use halogenated solvents. This includes the parts rinsers and washers that have been taken out of service. Therefore, the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning, 40 CFR 63, Subpart T, are not included in this permit.
- (f) Pursuant to National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Secondary Aluminum Production, 40 CFR 63.1503, Subpart RRR, the definition of a secondary aluminum production states that for purposes of this subpart, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. This source melts

only clean charge, customer returns or internal scrap and does not operate a sweat furnace, thermal chip dryer or scrap dryer/delacquering kiln/decoating kiln.

Cover flux and wall flux, neither of which contains any HAPs, are added to the natural gas-fired reverberatory furnace, identified as EU01, to prevent the buildup of oxides in the furnace to ensure that only the highest quality molten metal is produced. Regardless of initial metal quality, fluxes are required due to the formation of oxides during the melting process. Aluminum is a very reactive material and will form oxides in the presence of oxygen. Therefore, if cover and wall fluxes are not employed, the furnace capacity would diminish more quickly over time and furnace refractory replacement would be required more often due to oxide formation. It is common practice in the aluminum industry to employ cover and wall fluxes, even when melting clean aluminum charge consisting of t-bar, sow, ingot and/or internal runarounds.

Therefore, the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63.1500, Subpart RRR are not included in this permit.

- (g) There are no other National Emission Standards for Hazardous Air Pollutants included in the permit for this source.

State Rule Applicability – Entire Source

326 IAC 2-6 (Emission Reporting)

This source is not located in Lake or Porter County, does not emit five (5) tons per year or more of lead and does not require a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 do not apply.

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 the 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.

State Rule Applicability – Individual Facilities

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

The unrestricted potential to emit of each attainment criteria pollutant is less than two hundred-fifty (250) tons per year. Therefore, this source, which is not one of the twenty-eight (28) listed source categories, is a minor source pursuant to 326 IAC 2-2, PSD.

326 IAC 2-4.1-1 (New source toxics control)

The entire source has a potential to emit which is less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1-1 do not apply to any of the facilities at this source.

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

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

- (a) The particulate emission rate from the one (1) reverberatory furnace, identified as EU01, shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6,000 pounds per hour (3.00 tons per hour).

Interpolation of the data for process weight rates 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 potential to emit particulate of 3.30 pounds per hour from the reverberatory furnace is less than 8.56 pounds per hour. Therefore, the reverberatory furnace can comply with this rule.

- (b) The particulate emission rate from the one (1) shotblaster shall not exceed 6.30 pounds per hour when operating at a process weight rate of 3,800 pounds per hour (1.90 tons per hour)

Interpolation of the data for process weight rates 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 wet scrubber shall be in operation at all times that the shotblaster is in operation in order to comply with this limit. The potential to emit particulate after controls of 0.132 pounds per hour from the shotblaster is less than 6.30 pounds per hour. Therefore, the shot blaster can comply with this rule.

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

The eight (8) die cast machines, identified as part of EU03, were all constructed after January 1, 1980 and could be subject to the requirements of 326 IAC 8-1-6. However, since the total potential to emit VOC of 22.5 tons per year from all eight (8) die cast machines, identified as EU03, (two (2) constructed in 1985, one (1) constructed in 1996, one (1) constructed in 1999, one (1) constructed in 2000, one (1) constructed in 2003, and two (2) die cast machines, constructed in 2006), is less than twenty-five (25) tons per year, the requirements of 326 IAC 8-1-6 are not applicable to any of the eight die cast machines.

326 IAC 8-3 (Organic Solvent Degreasing)

The source is no longer using any cleaning solvent that contains organic materials in either of the remaining two (2) parts rinsers. Therefore, the requirements of 326 IAC 8-3 are not included in this permit.

Testing Requirements

- (a) Past Stack Tests

This existing registered source has not been required to conduct any previous performance stack testing.

(b) Proposed Stack Tests

With ninety (90) days of issuance of this MSOP, the Permittee shall conduct a stack test to verify that both the PM and PM₁₀ emission factors for the reverberatory furnace, identified as EU01, exhausting to Stack RF-STK, do not exceed 1.1 pounds per ton.

Compliance Requirements

Permits issued under 326 IAC 2-6.1 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-6.1-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

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

The shot blaster has applicable compliance monitoring conditions as specified below:

- (a) Visible emission notations of the shotblaster exhaust 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. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. 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.
- (b) The Permittee shall record the pressure drop across the wet scrubber used in conjunction with the shotblaster at least once per day when the shotblaster is in operation. When for any one reading, the pressure drop across the wet scrubber is outside the normal range of 5.0 and 10.0 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.

- (c) For a wet scrubber 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.

For a wet scrubber controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

These monitoring conditions are required for the shotblaster in order to ensure that the wet scrubber is operating properly at all times. The wet scrubber must operate properly to in order for the shotblaster to comply with 326 IAC 6-3-2 and 326 IAC 5-1.

Conclusion

The operation of this aluminum die casting source melting only clean charge shall be subject to the conditions of the Minor Source Operating Permit 151-22617-00032.

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

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: MSOP 151-22617
Plt ID: 151-00032
Reviewer: Frank P. Castelli
Application Date: January 30, 2006

Die cutting machine holding furnace torches, 2 @ 0.5 MMBtu/hr, each
 Space heaters, 4 @ 0.035 MMBtu/hr, each
 Makeup air unit, 1 @ 1.0 MMBtu/hr
 Ladle preheater, 1 @ 0.9 MMBtu/hr

Heat Input Capacity
 MMBtu/hr

3.04

Potential Throughput
 MMBtu/yr***

18.4

	Pollutant				
	PM*	PM10*	SO2	NOx	CO
Emission Factor in lb/MMCF	1.90	7.60	0.600	100 **see below	84.0
Potential Emission in tons/yr	0.017	0.070	0.006	0.919	0.772

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
 ***The Potential Usage From the holding furnace torches is based on 500 hours since they are only used in emergency situations

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) of all units except for holding furnace torches = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Potential Throughput (MMCF) of the holding furnace torches = Heat Input Capacity (MMBtu/hr) x 500hrs/hr x 1MMCF/1,000 MMBtu
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: MSOP 151-22617
Pit ID: 151-00032
Reviewer: Frank P. Castelli
Application Date: January 30, 2006

Die cutting machine holding furnace torches, 2 @ 0.5 MMBtu/hr, each
 Space heaters, 4 @ 0.035 MMBtu/hr, each
 Makeup air unit, 1 @ 1.0 MMBtu/hr
 Ladle preheater, 1 @ 0.9 MMBtu/hr

		HAPs - Organics			
Emission Factor in lb/MMcf	Benzene 0.002	Dichlorobenzene 0.001	Formaldehyde 0.075	Hexane 1.80	Toluene 0.003
Potential Emission in tons/yr	0.00002	0.00001	0.001	0.017	0.00003

		HAPs - Metals			Total
Emission Factor in lb/MMcf	Lead 0.001	Cadmium 0.001	Chromium 0.001	Manganese 0.0004	Nickel 0.002
Potential Emission in tons/yr	0.000005	0.00001	0.00001	0.000003	0.00002
					0.017

Methodology is the same as page 1.

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

Company Name: General Aluminum Manufacturing Company
 Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
 Permit Number: MSOP 151-22617
 Pit ID: 151-00032
 Reviewer: Frank P. Castelli
 Application Date: January 30, 2006

SCC# 3-04-001-14
Die Cast Machines - Die Casting Process

TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx * lbs/ton metal charged	NOx * lbs/ton metal charged	VOC * lbs/ton metal charged	CO lbs/ton metal charged
Aluminum	7000	2000	3.50	0	0	0.02	0.01	0.14	--
Potential Emissions lbs/hr	0	0.07	0.035	0	0	0.07	0.035	0.490	--
Potential Emissions lbs/day	0	1.68	0.840	0	0	1.68	0.840	11.76	--
Potential Emissions tons/year	0	0.307	0.153	0	0	0.307	0.153	2.15	--

* Note: Emission factor is from FIRE version 6.24 (March 2004).
There are no PM/PM10 emissions from the die cast machines

Appendix A: Emission Calculations
Die Lube Applications

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: MSOP 151-22617
Plt ID: 151-00032
Reviewer: Frank P. Castelli
Application Date: January 30, 2006

Per Die Casting Machine

Material	Potential Usage (lbs/hr)	Weight % VOC	Potential VOC Emissions (tons/yr)
Die Lube			
Safety-Lube 1613	2.57	25.00%	2.81
Total 8 Machines:			22.5

Methodology

VOC emissions (tons/yr) = Usage (lbs/hr) x Weight % VOC x 8,760 hrs/yr * 1 ton/2,000 lbs
 Weight % VOC is based on the information contained in the MSDS for Safety-Lube 1613
 There are no HAPs in this material.

Appendix A: Emission Calculations
Shotblaster

Company Name: General Aluminum Manufacturing Co.
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: MSOP 151-22617

Plt ID: 151-00032
Reviewer: Frank P. Castelli
Application Date: January 30, 2006

Blast Rate 3300 pounds/hr

Control Eff. 99.00%

	PM	PM10
Emission Factors lbs/lb shot	0.004	0.003
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	13.2	11.4
Potential Emissions tons/yr	57.8	49.7
Potential Emissions after Controls lbs/hr	0.132	0.114
Potential Emissions after Controls tons/yr	0.578	0.497

Emission Factors from STAPPA/LAPCO "Air Quality Permits", Vol. 1, Section 3 "Abrasive Blasting" (1991 edition)

Potential to Emit PM/PM-10 Before Controls (pounds/hour) = PM/PM-10 Emission Factor (lbs/lb) * blast rate (lbs per hour)

Potential to Emit PM/PM-10 After Controls (tons/year) = PM/PM-10 Emission Rate (lbs/hour) * 8760 (hours/year) * 1 ton/2000 pounds

Potential to Emit PM/PM-10 After Controls (tons/year) = Potential to Emit PM/PM-10 Emission Rate Before Controls (lbs/hour) X (1 - Control Efficiency (%))

Summary of Emissions

Uncontrolled Potential Emissions

Emission Unit	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Total HAPs (tons/yr)
Natural Gas Comb.	0.017	0.070	0.006	0.919	0.051	0.772	0.017
Reverb. Furnace	14.5	14.5	0.016	2.410	0.113	0.064	0.000
Pouring/Casting	0.000	0.000	0.307	0.153	2.150	0.000	0.000
Die Lube Application	0.000	0.000	0.000	0.000	22.5	0.000	0.000
Shot Blaster	57.8	49.7	0.000	0.000	0.000	0.000	0.000
Total	72.3	64.3	0.329	3.48	24.8	0.836	0.017

Controlled Potential Emissions

Emission Unit	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Total HAPs (tons/yr)
Natural Gas Comb.	0.017	0.070	0.006	0.919	0.051	0.772	0.017
Reverb. Furnace	14.5	14.5	0.016	2.410	0.113	0.064	0.000
Pouring/Casting	0.000	0.000	0.307	0.153	2.150	0.000	0.000
Die Lube Application	0.000	0.000	0.000	0.000	22.5	0.000	0.000
Shot Blaster	0.578	0.497	0.000	0.000	0.000	0.000	0.000
Total	15.1	15.1	0.329	3.48	24.8	0.836	0.017