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: August 7, 2012

RE: General Aluminum / 151-31744-00032

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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New Source Review and Federally Enforceable State Operating Permit
OFFICE OF AIR QUALITY

General Aluminum Manufacturing Company
303 East Swager Drive
Fremont, Indiana 46737

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

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

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

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

Operation Permit No.: F151-31744-00032	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 7, 2012 Expiration Date: August 7, 2017

TABLE OF CONTENTS

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary aluminum die casting source melting only clean charge.

Source Address:	303 East Swager Drive, Fremont, Indiana 46737
General Source Phone Number:	260-495-2600
SIC Code:	3365 (Aluminum Foundries)
County Location:	Steuben
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State 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 [326 IAC 2-8-3(c)(3)]

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-1, 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, maximum capacity: 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) One (1) shotblaster, identified as EU04, constructed in 2006, equipped with a wet scrubber for particulate control that exhausts outside the building through a side vent SV04, capacity: 3,300 pounds of steel shot and 500 pounds of aluminum parts per hour.

(e) One (1) natural gas-fired reverberatory furnace, identified as EU05, approved for construction in 2011, with a maximum throughput capacity of 1.5 tons aluminum clean charge per hour, with a maximum heat input capacity of 8.0 MMBtu/hr, and exhausting to stack RFT-STK-2. This furnace has a cover flux added at a maximum rate of 3.28 pounds per hour and a wall flux added to prevent oxide buildup on the walls at a maximum rate of 0.32 pounds per hour. Neither flux contains HAPs.

(f) One (1) natural gas-fired reverberatory furnace, identified as EU06, approved for construction in 2012, with a maximum throughput capacity of 0.6 tons aluminum clean charge per hour, with a maximum heat input capacity of 3.0 MMBtu/hr, using no controls, and exhausting to stack RFT-STK-3. This furnace uses flux for maintenance purposes at a rate of 0.5 lb/hr.

(g) One (1) Four-wheel Wire Mesh Tableblaster, identified as EU07, approved for construction in 2012, with a maximum shot capacity of 2,000 pounds of stainless steel shot per hour, and 0.22 tons per hour of metal products throughput, using a 3,000 ACFM wet collector, CU07, for particulate control, and exhausting to outside the plant, via side vent SV05.

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

This stationary source also includes the following insignificant activities:

(a) Four (4) natural gas-fired space heaters, constructed between 1990 and 1995, capacity: 0.035 million British thermal units per hour, each.

(b) One (1) natural gas-fired ladle preheater, constructed in 1985, capacity: 0.900 million British thermal units per hour.

(c) 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.

(d) One (1) natural gas-fired makeup air unit, constructed in 1995, capacity: 1.00 million British thermal units per hour.

(e) Fugitive dust sources including paved roads and storage piles.

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, F151-31744-00032, 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 [326 IAC 2-8-6] [IC 13-17-12]

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

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

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

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

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

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

(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. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(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. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly

signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877**.**

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

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

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

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

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

(a) All terms and conditions of permits established prior to F151-31744-00032 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.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

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

(b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

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

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

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

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

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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 except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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 that meets the requirements of 326 IAC 2-8-5(a)(1) 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.

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

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

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to 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 excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning 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 normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or

certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, 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.

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

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

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-1, 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, maximum capacity: 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) One (1) shotblaster, identified as EU04, constructed in 2006, equipped with a wet scrubber for particulate control that exhausts outside the building through a side vent SV04, capacity: 3,300 pounds of steel shot and 500 pounds of aluminum parts per hour.

(e) One (1) natural gas-fired reverberatory furnace, identified as EU05, approved for construction in 2011, with a maximum throughput capacity of 1.5 tons aluminum clean charge per hour, with a maximum heat input capacity of 8.0 MMBtu/hr, and exhausting to stack RFT-STK-2. This furnace has a cover flux added at a maximum rate of 3.28 pounds per hour and a wall flux added to prevent oxide buildup on the walls at a maximum rate of 0.32 pounds per hour. Neither flux contains HAPs.

(f) One (1) natural gas-fired reverberatory furnace, identified as EU06, approved for construction in 2012, with a maximum throughput capacity of 0.6 tons aluminum clean charge per hour, with a maximum heat input capacity of 3.0 MMBtu/hr, using no controls, and exhausting to stack RFT-STK-3. This furnace uses flux for maintenance purposes at a rate of 0.5 lb/hr.

(g) One (1) Four-wheel Wire Mesh Tableblaster, identified as EU07, approved for construction in 2012, with a maximum shot capacity of 2,000 pounds of stainless steel shot per hour, and 0.22 tons per hour of metal products throughput, using a 3,000 ACFM wet collector, CU07, for particulate control, and exhausting to outside the plant, via side vent SV05.

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

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

D.1.1 PM10 and PM2.5 Emissions [326 IAC 2-8-4]

(a) Pursuant to 326 IAC 2-8, PM10 emissions from the Four-wheel Wire Mesh Tableblaster, EU07, shall not exceed 6.95 pounds per hour.

(b) Pursuant to 326 IAC 2-8, PM2.5 emissions from the Four-wheel Wire Mesh Tableblaster, EU07, shall not exceed 6.95 pounds per hour.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emissions units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than 100 tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

D.1.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) In order to render 326 IAC 2-2 (PSD) not applicable, the Permittee shall melt only clean charge in the three reverberatory melt furnaces, identified as EU01, EU05, and EU06, at all times.

(b) Clean charge shall be defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner or operator to be entirely free of paints, coatings, and lubricants; uncoated/unpainted aluminum chips that have been thermally dried or treated by a centrifugal cleaner; aluminum scrap dried at 343 °C (650°F) or higher; aluminum scrap delacquered/decoated at 482 °C (900 °F) or higher, and runaround scrap.

D.1.3 Stack Height Provisions [326 IAC 1-7]

(a) In order to render 326 IAC 1-7 (Stack Height Provisions) not applicable, PM emissions from the shotblaster unit, EU04, shall not exceed 5.68 pounds per hour.

(b) In order to render 326 IAC 1-7 (Stack Height Provisions) not applicable, PM emissions from the tableblaster unit, EU07, shall not exceed 5.68 pounds per hour.

Compliance with these limits shall limit the PM emissions from the shotblaster unit, EU04, and the tableblaster unit, EU07 to less than 25 tons per twelve (12) consecutive month period, each, and shall render 326 IAC 1-7 not applicable.

D.1.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions (PM) from the following emission units shall not exceed the following:

Emission Unit	Maximum Throughput (ton/hr) (A)	Maximum Throughput (ton/hr) (B)	Process Weight Rate (PWR) (ton/hr) (A) + (B)	PM Emission Limit (lb/hr)
Reverberatory Furnace EU01	3.00 (Metal)	0.002 (Flux)	3.002	8.56
Reverberatory Furnace EU05	1.50 (Metal)	0.002 (Flux)	1.502	5.38
Reverberatory Furnace EU06	0.60 (Metal)	0.0002 (Flux)	0.60002	2.91
Shotblaster EU04	0.25 (Castings)	1.65 (Shot media)	1.90	6.30
Tableblaster EU07	0.22	1.00	1.22	4.68

	(Castings)	(Shot media)		

The pounds per hour limitations 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:

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

D1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.6 Particulate Control

(a) In order to comply with Conditions D.1.3 and D.1.4, the wet scrubber controlling the shotblaster unit EU04 shall operate at all times that the shotblaster unit is operating.

(b) In order to comply with Conditions D.1.1, D.1.3, and D.1.4, the wet collector controlling the tableblaster unit EU07 shall operate at all times that the tableblaster unit is operating.

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

D.1.7 Visible Emissions Notations

(a) Visible emission notations of the shotblaster exhaust vent SV04, the tableblaster exhaust vent SV05, and the reverberatory furnaces stacks RF-STK-1, RF-STK-2, and RF-STK-3, shall be performed once per day during normal daylight operations when exhausting to the atmosphere, as follows. 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the excursions or Exceedances required by this condition. An abnormal observation shall not be considered a deviation from this permit; however, failure to take reasonable response steps shall be considered a deviation from this permit.

D.1.8 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the responses to excursions and Exceedances required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across the wet collector used in conjunction with tableblaster at least once per day when the tableblaster is in operation. When for any one reading, the pressure drop across the wet collector 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the responses to excursions and Exceedances required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.

(c) 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.1.9 Wet Scrubber and Wet Collector 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.

(c) For a wet collector controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.

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

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

D.1.10 Record Keeping Requirement

(a) In order to document the compliance status with Condition D.1.7, the Permittee shall maintain records of daily visible emission notations of the reverberatory furnaces stacks RF-STK-, RF-STK-2, and RF-STK-3, the shotblaster exhaust vents, and the tableblaster exhaust vents. For any day there is not a visible emissions notation, the Permittee shall record the reason for not taking a visible emission notation (e.g. the process did not operate that day.)

(b) In order to document the compliance status with Condition D.1.8, the Permittee shall maintain records once per day of the pressure drop. For any day when there is not a pressure drop reading, the Permittee shall record the reason for not taking a pressure drop reading (e.g. the process did not operate that day.)

(c) Section C - General Record Keeping Requirements, of this permit, contains the

Permittee's obligation with regard to the record keeping required by this condition.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: General Aluminum Manufacturing Company
Source Address: 303 East Swager Drive, Fremont, Indiana 46737
FESOP Permit No.: F151-31744-00032

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:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: General Aluminum Manufacturing Company
Source Address: 303 East Swager Drive, Fremont, Indiana 46737
FESOP Permit No.: F151-31744-00032

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

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

Source Name: General Aluminum Manufacturing Company
Source Address: 303 East Swager Drive, Fremont, Indiana 46737
FESOP Permit No.: F151-31744-00032

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit (MSOP) Transitioning to a Federally Enforceable State Operating Permit (FESOP) with New Source Review (NSR)

Source Description and Location

Source Name:	**General Aluminum Manufacturing Company**
Source Location:	**303 East Swager Drive, Fremont, Indiana 46737**
County:	**Steuben**
SIC Code:	**3365 (Aluminum Foundries)**
Operation Permit No.:	**F 151-31744-00032**
Permit Reviewer:	**Jack Harmon**

On April 16, 2012, the Office of Air Quality (OAQ) received an application from General Aluminum Manufacturing Company, related to the construction and operation of new emission units at an existing stationary aluminum die casting source melting only clean charge and transition from a Minor Source Operating Permit (MSOP) to a FESOP.

Existing Approvals

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

(a) MSOP No. 151-31263-00032, issued on April 13, 2012.

(b) MSOP Notice-only Change No. 151-31722-00032, issued on May 4, 2012.

Due to this application, the source is transitioning from a MSOP to a FESOP.

County Attainment Status

The source is located in Steuben County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
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. Steuben 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) $PM_{2.5}$
Steuben County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Steuben County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

This type of operation is an aluminum die casting source that melts clean charge only, and is not considered a secondary metal production plant, and, therefore, is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. There is no applicable New Source Performance Standard that was in effect on August 7, 1980, and, therefore, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability. This determination was made for this source in MSOP Minor Permit Revision No. 151-30775-00032, issued August 22, 2011, and has been evaluated in conjunction with this permit review, and determined to still be a valid determination.

Background and Description of Permitted Emission Units and New Source Construction

The Office of Air Quality (OAQ) has reviewed an application, submitted by General Aluminum Manufacturing Company on April 16, 2012, relating to the construction and operation of a new four-wheel wire mesh tableblaster unit for its manufacturing facility. The source has been operating under a Minor Source Operating Permit (MSOP). This potential to emit criteria pollutants of the new emission unit will result in the source transitioning from a MSOP to a FESOP.

The stationary 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-1, 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, maximum capacity: 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) One (1) shotblaster, identified as EU04, constructed in 2006, equipped with a wet scrubber for particulate control that exhausts outside the building through a side vent SV04, capacity: 3,300 pounds of steel shot and 500 pounds of aluminum parts per hour.

Note: The control device for this unit was evaluated in MSOP 151-31263-00032, issued April 13, 2012, and determined to not be integral to the process.

(e) One (1) natural gas-fired reverberatory furnace, identified as EU05, approved for construction in 2011, with a maximum throughput capacity of 1.5 tons aluminum clean charge per hour, with a maximum heat input capacity of 8.0 MMBtu/hr, and exhausting to stack RFT-STK-2. This furnace has a cover flux added at a maximum rate of 3.28 pounds per hour and a wall flux added to prevent oxide buildup on the walls at a maximum rate of 0.32 pounds per hour. Neither flux contains HAPs.

(f) One (1) natural gas-fired reverberatory furnace, identified as EU06, approved for construction in 2012, with a maximum throughput capacity of 0.6 tons aluminum clean charge per hour, with a maximum heat input capacity of 3.0 MMBtu/hr, using no controls, and exhausting to stack RFT-STK-3. This furnace uses flux for maintenance purposes at a rate of 0.5 lb/hr.

(g) Insignificant activities consisting of the following:

(1) Four (4) natural gas-fired space heaters, constructed between 1990 and 1995, capacity: 0.035 million British thermal units per hour, each.

(2) One (1) natural gas-fired ladle preheater, constructed in 1985, capacity: 0.900 million British thermal units per hour.

(3) Two (2) parts rinsers, constructed in the 1990s, including:

(i) One (1) enclosed parts rinser which uses a water-based detergent.

(ii) One (1) enclosed parts rinser which uses a water-based detergent, identified as Rainbow Line Hurricane Rinser.

(4) One (1) natural gas-fired makeup air unit, constructed in 1995, capacity: 1.00 million British thermal units per hour.

(5) Fugitive emissions from paved roads and storage piles.

Note: raw materials to be melted are received palletized and clean, with no expected emissions; therefore, there is no raw material handling process included as emission units in this permit.

The following is a description of the new emission unit and pollution control device:

(a) One (1) Four-wheel Wire Mesh Tableblaster, identified as EU07, approved for construction in 2012, with a maximum shot capacity of 2,000 pounds of stainless steel shot per hour, and 0.22 tons per hour of metal products throughput, using a 3,000 ACFM wet collector, CU07, for particulate control, and exhausting to outside the plant, via side vent SV05.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units at this source.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	117.68
PM10[(1)]	103.58
PM2.5	103.58
SO_2	0.42
NO_x	18.92
VOC	25.54
CO	6.72
GHGs as CO_2e	9275.13

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Hexane	1.383E-01
all others	negligible
TOTAL HAPs	**1.45E-01**

(a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM, PM10, and PM2.5 are each greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are each less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

(c) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

PTE of the Entire Source After Issuance of the FESOP

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Natural Gas Combustion Reverb Furnace EU01, EU05	0.096	0.383	0.383	0.030	5.037	0.277	4.231	6081.19	9.51E-02	9.07E-02 (Hexane)
Natural Gas Combustion Reverb Furnace EU06	0.025	0.100	0.100	0.008	1.314	0.072	1.104	1586.40	2.48E-02	2.37E-02 (Hexane)
Natural Gas Combustion - All other Sources	0.025	0.101	0.101	0.008	2.414	0.073	1.118	1607.55	2.51E-02	2.397E-02 (Hexane)
Melt Process Emissions Reverb Furnace EU01	14.45	14.45	14.45	0.016	2.410	0.113	0.064	0.00	0.00	0.00
Melt Process Emissions Reverb Furnace EU05	7.23	7.23	7.23	0.037	5.519	0.258	0.147	0.00	0.00	0.00
Melt Process Emissions Reverb Furnace EU06	2.89	2.89	2.89	0.014	2.070	0.097	0.055	0.00	0.00	0.00
Die Casting EU-03	0.00	0.00	0.00	0.307	0.153	2.146	0.00	0.00	0.00	0.00
Die Lube Application EU03	0.00	0.00	0.00	0.00	0.00	22.50	0.00	0.00	0.00	0.00
Shot Blaster EU04	24.90[(a)]	43.36	43.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Four-Wheel Wire Mesh Tableblaster EU07	24.90[(a)]	30.46	30.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Emissions	0.106	0.021	0.021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	**74.62**	**99.0**	**99.0**	**0.42**	**18.92**	**25.54**	**6.72**	**9275.13**	**1.45E-01**	**1.38E-01 (Hexane)**
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.
[(a)] The source has elected to limit PM Emissions for the Shotblaster unit EU04 and the Tableblaster unit EU07 to less than 25 tons per year, each, in order to render 326 IAC 1-7 (Stack Height Provisions) not applicable.

(a) FESOP Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

(1) PM10 emissions from the Four-wheel Wire Mesh Tableblaster shall not exceed 6.95 pounds per hour.

(2) PM2.5 emissions from the Four-wheel Wire Mesh Tableblaster shall not exceed 6.95 pounds per hour.

Emissions calculations, shown in Appendix A of this document, indicate that, with the use of the control device, this source can comply with this limit, with a minimum control efficiency of 13.1%, as shown below.

$$CE = [1 - \frac{L}{P}] \times 100$$

Where: CE = minimum Control Efficiency (%)
P = Potential emissions before control (lb/hr), and
L = Limited emissions (lb/hr) after control

= [1 - (6.95 / 8.00)] x 100 = [1 - 0.0.869] x 100 = 13.1%

Control Efficiency (%) = 13.1% minimum

The wet collector, CU07, shall operate at all times that the Four-wheel Wire Mesh Tableblaster is operating.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

(b) PSD Minor Source
This existing source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM is less than 250 tons per year, the potential to emit all attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than the PSD subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

Compliance Assurance Monitoring (CAM)

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

New Source Performance Standards (NSPS)

(b) 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.

(c) 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.

(d) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part

60) included for this renewal.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

(e) 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.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, 40 CFR 63, Subpart RRR, are not included in this permit because it does not meet the definition of a secondary aluminum production facility. 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 is a die casting process that 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.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Primary Nonferrous Metals at Area Source - Zinc, Cadmium, or Beryllium, 40 CFR 63, Subpart GGGGGG, are not included in this permit because this facility is not a zinc, cadmium, or beryllium production facility.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing - Area Sources, 40 CFR 63, Subpart TTTTTT, are not included in this permit because it does not meet the definition of a brass or bronze ingot making facility, or a magnesium processing facility, or a zinc processing plant.

(i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZ, are not included in this permit because die casting operations in which only clean charge is melted are excluded from this rule.

(j) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) applicable to this source.

State Rule Applicability Determination

The following state rules are applicable to the source:

(a) 326 IAC 1-7 (Stack Height Provisions)
The shotblaster unit EU04 and the tableblaster unit EU07 would each be subject to the requirements of 326 IAC 1-7 (Stack Height Provisions) because each has the potential to emit particulate through an outside vent of greater than 25 tons of particulate each. However, pursuant to 326 IAC 1-7-5(a), the source has elected to limit its emissions to less than 25 tons per year, after controls, for each unit. Therefore, the provisions of 326 IAC 1-7 do not apply.

In order to render the requirements of 326 IAC 1-7 (Stack Height Provisions) not applicable, the following shall apply:

(1) Particulate (PM) emissions from the wet scrubber controlling emissions for the shotblaster unit EU04 shall not exceed 5.68 pounds per hour. The wet scrubber shall be in operation at all times that the shotblaster unit EU04 is operating.

(2) Particulate (PM) emissions from the wet collector controlling emissions for the

tableblaster unit EU07 shall not exceed 5.68 pounds per hour. The wet collector shall be in operation at all times that the tableblaster unit EU07 is operating.

Based on the emissions calculations in Appendix A of this document, the source can comply with these limits with the use of the control devices. The control devices for each of these units shall operate at all times that the blast machines are operating.

Compliance with these limits shall limit the particulate emissions after control for these units to less than 25 tons per year, each, and shall render 326 IAC 1-7 not applicable.

(b) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

(c) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

(d) 326 IAC 2-3 (Emission Offset)
Emission Offset applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

(e) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
This source is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the entire source is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

(f) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

(g) 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:

(1) 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.

(2) 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.

(h) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

(i) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the fugitive dust sources do not have potential fugitive particulate emissions greater than 25 tons per year.

(j) 326 IAC 6.5 (Fugitive Particulate Matter)

The source is not subject to the requirements of 326 IAC 6.5, because the source is not located not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

(k) 326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter)
The source is not subject to the requirements of 326 IAC 6.8-10, because the source is not located in Lake County.

(l) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The three (3) reverberatory furnaces EU01, EU05, and EU06, the Shotblast Unit, EU04, and the Four-wheel Wire Mesh Tableblaster EU07 are subject to the requirements of 326 IAC 6-3-2 because they are manufacturing processes, as defined in the rule, and have the potential to emit particulate matter. The emissions are limited as shown in the following table:

Emission Unit	Maximum Throughput (ton/hr) (A)	Maximum Throughput (ton/hr) (B)	Process Weight Rate (PWR) (ton/hr) (A) + (B)	PM Emission Limit (lb/hr)
Reverberatory Furnace EU01	3.00 (Metal)	0.002 (Flux)	3.002	8.56
Reverberatory Furnace EU05	1.50 (Metal)	0.002 (Flux)	1.502	5.38
Reverberatory Furnace EU06	0.60 (Metal)	0.0002 (Flux)	0.60002	2.91
Shotblaster EU04	0.25 (Castings)	1.65 (Shot media)	1.90	6.30
Tableblaster EU07	0.22 (Castings)	1.00 (Shot media)	1.22	4.68

The pound 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

Based on calculations, the uncontrolled potential to emit particulate from the reverberatory furnaces, EU01, EU05, and EU06, are each lower than the limits under 326 IAC 6-3-2. Therefore, the source can comply with these limits without the use of the control devices. Detailed calculations are shown in Appendix A of this document.

Based on calculations, the uncontrolled potential to emit particulate from the shotblast unit EU04 is greater than the limits established under 326 IAC 6-3-2. Therefore, the source cannot comply with this limit for the shotblast unit without the control device, and the control device is needed to operate in order to comply with this limit. The control device must operate at all times that the shot blast unit is running.

Based on calculations, the uncontrolled potential to emit particulate from the tableblast unit EU07 is greater than the limits established under 326 IAC 6-3-2. Therefore, the source cannot comply with this limit for the tableblast unit without the control device, and the control device is needed to operate in order to comply with this limit. The control device must operate at all times that the tableblast unit is running.

(m) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

This source is not subject to the requirements of 326 IAC 7-1.1 because the potential to emit sulfur dioxide (SO2) from the entire source and from all facilities is less than 25 tons per year, or 10 pounds per hour. Therefore, the requirements of 326 IAC 7-1.1 do not apply.

(n) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each emission unit is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

(o) 326 IAC 8-3-2 (Cold Cleaner Operations)
The two parts rinsers are not subject to the requirements of 326 IAC 8-3-2 because each parts rinser uses a water-base detergent that contains no VOCs. Therefore, the requirements of 326 IAC 8-3-2 do not apply.

(p) There are no other 326 IAC 8 Rules that are applicable to the emission units.

Compliance Determination, Monitoring and Testing Requirements

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

Control	Parameter	Frequency	Range	Excursions and Exceedances
Wet Scrubber (Shot Blast Unit EU04)	Water Pressure Drop	Daily	5.0 to 10.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Wet Collector (Tableblast Unit EU07)	Water Pressure Drop	Daily	5.0 to 10.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Stack RF-STK-1 (Reverb Furnace EU01)*	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Stack RF-STK-2 (Reverb Furnace EU05)*	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Stack RF-STK-3 (Reverb Furnace EU06)*	Visible Emissions	Daily	Normal-Abnormal	Response Steps

*Even though there are no control devices used, visible emissions notations will be required. These are existing requirements.

These monitoring conditions are necessary because the control devices must operate properly to ensure compliance with limits and conditions contained in the permit, under 326 IAC 2-8-4 (FESOP) and 326 IAC 1-7 (Stack Height Provisions).

(b) The testing requirements applicable to this source are as follows:

(1) The previous MSOP permit for this source required PM and PM10 testing for the reverberatory furnace EU01 to verify the PM and PM10 emissions factors. Testing was conducted on June 27, 2007 on furnace EU01. Testing was not required for furnace EU05 when it was added in 2011 or furnace EU06 when it was added in 2012, because they are identical furnaces with identical processes to furnace EU01. Testing will no longer be required for the reverberatory furnaces in order to demonstrate compliance because it has already been tested and had a valid demonstration of compliance to verify the emission factors used. However, IDEM, OAQ has decided to continue to use the

original emission factors, since they represent the worst case scenario.

(2) There are no testing requirements for the shotblaster unit EU04 and its control device (wet scrubber) because the control device only needs to operate at a minimum control efficiency of 57% to meet all limits contained in the permit, as shown below. This high-efficiency control device normally has a control efficiency of 95% or higher. Therefore, no testing is required at this time.

$$CE = [1 - \frac{L}{P}] \times 100$$

Where: CE = minimum Control Efficiency (%)
P = Potential emissions before control (lb/hr), and
L = Limited emissions after control (lb/hr)

= [1 - (5.68 / 13.20)] x 100 = [1 - 0.43] x 100 = 57.0%

Control Efficiency (%) = 57.0% minimum

(3) There are no testing requirements for the tableblaster unit EU07 and its control device (wet collector) because the control device only needs to operate at a minimum control efficiency of 29% to meet all limits contained in the permit. This high-efficiency control device normally has a control efficiency of 95% or higher. Therefore, no testing is required at this time.

$$CE = [1 - \frac{L}{P}] \times 100$$

Where: CE = minimum Control Efficiency (%)
P = Potential emissions before control (lb/hr), and
L = Limited emissions after control (lb/hr)

= [1 - (5.68 / 8.00)] x 100 = [1 - 0.71] x 100 = 29.0%

Control Efficiency (%) = 29.0% minimum

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on April 16, 2012.

The operation of this source shall be subject to the conditions of the attached proposed New Source Review and FESOP No. 151-31744-00032. The staff recommends to the Commissioner that this New Source Review and FESOP be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Jack Harmon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A: Emission Calculations

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032

Reviewer: Jack Harmon
Application Date: 2012

Summary of Emissions

Uncontrolled Potential Emissions

Emission Unit	PM	PM-10	PM-2.5	SO2	NOx	VOC	CO	GHG/CO2e	Total HAPs	Worst HAP
	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Natural Gas Combustion - EU01, EU05	0.096	0.383	0.383	0.030	5.037	0.277	4.231	6081.19	9.51E-02	9.07E-02
Natural Gas Combustion - EU06	0.025	0.100	0.100	0.008	1.314	0.072	1.104	1586.40	2.48E-02	2.37E-02
Natural Gas Combustion - All Other Sources	0.025	0.101	0.101	0.008	2.414	0.073	1.118	1607.55	2.513E-02	2.397E-02
Melt Process Emissions Reverb. Furnace EU01	14.45	14.45	14.45	0.016	2.410	0.113	0.064	0.000	0.00E+00	0.000E+00
Melt Process Emissions Reverb. Furnace EU05	7.23	7.23	7.23	0.037	5.519	0.258	0.147	0.000	0.00E+00	0.000E+00
Melt Process Emissions Reverb. Furnace EU06	2.89	2.89	2.89	0.014	2.070	0.097	0.055	0.000	0.00E+00	0.000E+00
Die Casting EU03	0.000	0.000	0.000	0.307	0.153	2.146	0.000	0.000	0.00E+00	0.000E+00
Die Lube Application EU03	0.000	0.000	0.000	0.000	0.000	22.50	0.000	0.000	0.00E+00	0.000E+00
Shot Blaster EU04	57.82	43.36	43.36	0.000	0.000	0.000	0.000	0.000	0.00E+00	0.000E+00
Four-wheel Wire Mesh Tableblaster EU07	35.04	35.04	35.04	0.000	0.000	0.000	0.000	0.000	0.00E+00	0.000E+00
Fugitive Emissions	1.06E-01	2.07E-02	2.07E-02	0.000	0.000	0.000	0.000	0.000	0.00E+00	0.000E+00
Total	**117.68**	**103.58**	**103.58**	**0.42**	**18.92**	**25.54**	**6.72**	**9275.13**	**1.45E-01**	**1.383E-01**

Limited Emissions

Emission Unit	PM	PM-10	PM-2.5	SO2	NOx	VOC	CO	GHG/CO2e	Total HAPs	Worst HAP
	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Natural Gas Combustion - EU01, EU05	0.096	0.383	0.383	0.030	5.037	0.277	4.231	6081.19	9.51E-02	9.07E-02
Natural Gas Combustion - EU06	0.025	0.100	0.100	0.008	1.314	0.072	1.104	1586.40	2.48E-02	2.37E-02
Natural Gas Combustion - All Other Sources	0.025	0.101	0.101	0.008	2.414	0.073	1.118	1607.55	2.513E-02	2.397E-02
Melt Process Emissions Reverb. Furnace EU01	14.45	14.45	14.45	0.016	2.410	0.113	0.064	0.000	0.00E+00	0.000E+00
Melt Process Emissions Reverb. Furnace EU05	7.23	7.23	7.23	0.037	5.519	0.258	0.147	0.000	0.00E+00	0.000E+00
Melt Process Emissions Reverb. Furnace EU06	2.89	2.89	2.89	0.014	2.070	0.097	0.055	0.000	0.00E+00	0.000E+00
Die Casting EU03	0.000	0.000	0.000	0.307	0.153	2.146	0.000	0.000	0.00E+00	0.000E+00
Die Lube Application EU-03	0.000	0.000	0.000	0.000	0.000	22.50	0.000	0.000	0.00E+00	0.000E+00
Shot Blaster EU04	24.90	43.36	43.36	0.000	0.000	0.000	0.000	0.000	0.00E+00	0.000E+00
Four-wheel Wire Mesh Tableblaster EU07	24.90	30.46	30.46	0.000	0.000	0.000	0.000	0.000	0.00E+00	0.000E+00
Fugitive Emissions	1.06E-01	2.07E-02	2.07E-02	0.000	0.000	0.000	0.000	0.000	0.00E+00	0.000E+00
Total	**74.62**	**99.00**	**99.00**	**0.42**	**18.92**	**25.54**	**6.72**	**9275.13**	**1.45E-01**	**1.38E-01**

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: F151-31744-00032

Reviewer: Jack Harmon
Application Date: 2012

Die Cutting torches, 2@ 0.5 MMBtu/hr, each	1.00
Space heaters, 4@0.035 MMBtu/hr, each	0.14
Make up air unit, 1@1.0 MMBtu/hr	1.00
Ladle preheater, 1@0.9 MMBtu/hr	0.90
Total MMBtu/hr	3.04

Other Combustion Sources

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
3.04	1000	26.6

	Pollutant					
	PM*	PM10/PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.025	0.101	0.008	1.332	0.073	1.118

*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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
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: F151-31744-00032
Reviewer: Jack Harmon
Application Date: 2012

	HAPs - Organics					Totals
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.796E-05	1.598E-05	9.986E-04	2.397E-02	4.527E-05	2.506E-02

	HAPs - Metals					Totals
	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	6.658E-06	1.465E-05	1.864E-05	5.060E-06	2.796E-05	7.297E-05

Methodology is the same as page 1.

Total HAPs 2.513E-02

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 3 for Greenhouse Gas calculations.

updated 12/10

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

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032
Reviewer: 0.03
Application Date: 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120000	2.3	2.2
Potential Emission in tons/yr	1597.824	0.03062496	0.02929344
Summed Potential Emissions in tons/yr	1597.88		
CO2e Total in tons/yr	1607.55		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission

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: F151-31744-00032

Reviewer: Jack Harmon
Application Date: 2012

Reverb Furnace EU-01		3.50
Reverb Furnace EU-05	(added 2011)	8.00
	Total MMBtu/hr	11.50

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
11.50	1000	100.7

	Pollutant					
	PM*	PM10/PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.096	0.383	0.030	5.037	0.277	4.231

*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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

updated 12/10

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: F151-31744-00032
Reviewer: Jack Harmon
Application Date: 2012

	HAPs - Organics					Totals
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.058E-04	6.044E-05	3.778E-03	9.067E-02	1.713E-04	9.478E-02

	HAPs - Metals					Totals
	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.519E-05	5.541E-05	7.052E-05	1.914E-05	1.058E-04	2.760E-04

Methodology is the same as page 1.

Total HAPs 9.506E-02

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 3 for Greenhouse Gas calculations.

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

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032
Reviewer: Jack Harmon
Application Date: 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120000	2.3	2.2
Potential Emission in tons/yr	6044.4	0.115851	0.110814
Summed Potential Emissions in tons/yr	6044.63		
CO2e Total in tons/yr	6081.19		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission

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: F151-31744-00032

Reviewer: Jack Harmon
Application Date: 2012

Reverb Furnace EU-06	(added 2012)	3.00
	Total MMBtu/hr	3.00

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
3.00	1000	26.3

	Pollutant					
	PM*	PM10/PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.025	0.100	0.008	1.314	0.072	1.104

*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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

updated 12/10

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: F151-31744-00032
Reviewer: Jack Harmon
Application Date: 2012

	HAPs - Organics					Totals
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.759E-05	1.577E-05	9.855E-04	2.365E-02	4.468E-05	2.473E-02

	HAPs - Metals					Totals
	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	6.570E-06	1.445E-05	1.840E-05	4.993E-06	2.759E-05	7.201E-05

Methodology is the same as page 1.

Total HAPs 2.480E-02

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 3 for Greenhouse Gas calculations.

updated 12/10

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

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032
Reviewer: Jack Harmon
Application Date: 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120000	2.3	2.2
Potential Emission in tons/yr	1576.8	0.030222	0.028908
Summed Potential Emissions in tons/yr	1576.86		
CO2e Total in tons/yr	1586.40		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032

Reviewer: Jack Harmon
Application Date: 2012

Melt Process Emissions
Reverberatory Furnace EU01 (RF-STK-1)

		Throughput			Capacity	
TYPE OF MATERIAL		LBS/HR	1 TON/2000 lbs	TON/HR	million British thermal units per hour/hr	mmcf/hr
Aluminum		6000	2000	3.00	3.50	0.0035
	PM	**PM10/PM2.5**	**SOx**	**NOx**	**VOC**	**CO**
lb/ton	1.10	1.10				
lb/mmcf			1.05	157.5	7.35	4.20
Potential Emissions lbs/hr	3.30	3.30	0.0037	0.551	0.0257	0.015
Potential Emissions lbs/day	79.2	79.2	0.088	13.2	0.617	0.353
Potential Emissions tons/year	**14.45**	**14.45**	**0.016**	**2.41**	**0.113**	**0.064**

Source of Emission Factors: STAPPA/ALAPCO Handbook, Section 11. Although stack testing in 2007 verified emission factors, original factors continue to be used as worst case scenario.
These emission factors include the emissions utilizing cover and wall fluxes.
The cover and wall fluxes do not contain any HAPs
PM, PM10, and PM2.5 emission factors are from the melting process, and are not from combustion related to the furnace. Combustion emissions are represented in the Combustion spreadsheets.

Methodology:
Potential PM, PM10, PM2.5 emissions (lbs/hr) = emission factor (lb/ton) x throughput (ton/hr)
Potential PM, PM10, PM2.5 emissions (lbs/day) = Potential PM, PM10, PM2.5 emissions (lbs/hr) x 24 (hrs/day)
Potential PM, PM10, PM2.5 emissions (ton/yr) = Potential PM, PM10, PM2.5 emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)
Potential SO2, NOx, VOC, CO emissions (lbs/hr) = emission factor (lb/mmcf) x throughput (mmcf/hr)
Potential SO2, NOx, VOC, CO emissions (lbs/day) = Potential SO2, NOx, VOC, CO emissions (lbs/hr) x 24 (hrs/day)
Potential SO2, NOx, VOC, COemissions (ton/yr) = Potential SO2, NOx, VOC, CO emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032

Reviewer: Jack Harmon
Date: 2012

Melt Process Emissions
Reverberatory Furnace EU05 (RF-STK-2) Added 2011

	Throughput				Capacity	
TYPE OF MATERIAL		LBS/HR	1 TON/2000 lbs	TON/HR	million British thermal units per hour/hr	mmcf/hr
Aluminum		3000	2000	1.50	8.00	0.008
	PM	**PM10/PM2.5**	**SOx**	**NOx**	**VOC**	**CO**
lb/ton	1.10	1.10				
lb/mmcf			1.05	157.5	7.35	4.20
Potential Emissions lbs/hr	1.65	1.65	0.0084	1.260	0.0588	0.034
Potential Emissions lbs/day	39.6	39.6	0.202	30.2	1.411	0.806
Potential Emissions tons/year	**7.23**	**7.23**	**0.037**	**5.52**	**0.258**	**0.147**

Source of Emission Factors: STAPPA/ALAPCO Handbook, Section 11. Although stack testing in 2007 verified emission factors, original factors continue to be used as worst case scenario.
These emission factors include the emissions utilizing cover and wall fluxes.
The cover and wall fluxes do not contain any HAPs
PM, PM10, and PM2.5 emission factors are from the melting process, and are not from combustion related to the furnace. Combustion emissions are represented in the Combustion spreadsheets.
Throughput per hour and maximum heat input capacity were provided by the source in its application.

Methodology:
Potential PM, PM10, PM2.5 emissions (lbs/hr) = emission factor (lb/ton) x throughput (ton/hr)
Potential PM, PM10, PM2.5 emissions (lbs/day) = Potential PM, PM10, PM2.5 emissions (lbs/hr) x 24 (hrs/day)
Potential PM, PM10, PM2.5 emissions (ton/yr) = Potential PM, PM10, PM2.5 emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)
Potential SO2, NOx, VOC, CO emissions (lbs/hr) = emission factor (lb/mmcf) x throughput (mmcf/hr)
Potential SO2, NOx, VOC, CO emissions (lbs/day) = Potential SO2, NOx, VOC, CO emissions (lbs/hr) x 24 (hrs/day)
Potential SO2, NOx, VOC, COemissions (ton/yr) = Potential SO2, NOx, VOC, CO emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032

Reviewer: Jack Harmon
Date: 2012

Melt Process Emissions
Reverberatory Furnace EU06 (RF-STK-3) Added 2012

		Throughput			Capacity	
TYPE OF MATERIAL		LBS/HR	1 TON/2000 lbs	TON/HR	million British thermal units per hour/hr	mmcf/hr
Aluminum + Flux		1200.5	2000	0.60	3.00	0.003
	PM	**PM10/PM2.5**	**SOx**	**NOx**	**VOC**	**CO**
lb/ton	1.10	1.10				
lb/mmcf			1.05	157.5	7.35	4.20
Potential Emissions lbs/hr	0.66	0.66	0.0032	0.473	0.0221	0.013
Potential Emissions lbs/day	15.8	15.8	0.076	11.3	0.529	0.302
Potential Emissions tons/year	**2.89**	**2.89**	**0.014**	**2.07**	**0.097**	**0.055**

Source of Emission Factors: STAPPA/ALAPCO Handbook, Section 11. Although stack testing in 2007 verified emission factors, original factors continue to be used as worst case scenario.
This furnace uses fluxes for maintenance purposes only, at a rate of 0.00025 tons per hour, or 0.5 lb/hr..

PM, PM10, and PM2.5 emission factors are from the melting process, and are not from combustion related to the furnace. Combustion emissions are represented in the Combustion spreadsheets.
Throughput per hour and maximum heat input capacity were provided by the source in its application.

Methodology:
Potential PM, PM10, PM2.5 emissions (lbs/hr) = emission factor (lb/ton) x throughput (ton/hr)
Potential PM, PM10, PM2.5 emissions (lbs/day) = Potential PM, PM10, PM2.5 emissions (lbs/hr) x 24 (hrs/day)
Potential PM, PM10, PM2.5 emissions (ton/yr) = Potential PM, PM10, PM2.5 emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)
Potential SO2, NOx, VOC, CO emissions (lbs/hr) = emission factor (lb/mmcf) x throughput (mmcf/hr)
Potential SO2, NOx, VOC, CO emissions (lbs/day) = Potential SO2, NOx, VOC, CO emissions (lbs/hr) x 24 (hrs/day)
Potential SO2, NOx, VOC, COemissions (ton/yr) = Potential SO2, NOx, VOC, CO emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)

Appendix A: Secondary Metal Production
Aluminum

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032

Reviewer: Jack Harmon
Date: 2012

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

TYPE OF MATERIAL		Throughput				
		LBS/HR	1 TON/2000 lbs	TON/HR		
Aluminum		7000	2000	3.50		
	PM	**PM10/PM2.5**	**SOx ***	**NOx ***	**VOC ***	**CO**
	lbs/ton metal charged	**lbs/ton metal charged**	**lbs/ton metal charged**	**lbs/ton metal charged**	**lbs/ton metal charged**	**lbs/tons metal charged**
Emission Factor	0	0	0.02	0.01	0.14	--
Potential Emissions lbs/hr	0	0	0.07	0.035	0.490	--
Potential Emissions lbs/day	0	0	1.68	0.840	11.76	--
Potential Emissions tons/year	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

Methodology:
Potential Emissions (lb/hr) = emission factor (lb/ton) x throughput (ton/hr)
Potential Emissions (lb/day) = potential emissions (lb/hr) x 24 (hrs/day)
Potential Emissions (ton/yr) = potential emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)

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: F151-31744-00032

Reviewer: Jack Harmon
Date: 2012

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 Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032

Reviewer: Jack Harmon
Date: 2012 **Shot Usage Rate** 3300 **pounds/hr**

				PM	PM10	PM2.5	Controlled Emissions*			Limited Emissions		
Emission Factors lbs/lb shot **				0.00400	0.00300	0.00300	PM	PM10	PM2.5	PM**	PM10	PM2.5
Percentage of Emissions				100%	100%	100%						
Potential Emissions lbs/hr				13.2	9.9	9.9	0.01	0.01	0.01	5.68		
Potential Uncontrolled and Unlimited Emissions tons/yr*				**57.82**	**43.36**	**43.36**	**0.058**	**0.043**	**0.043**	**24.90**	**43.36**	**43.36**

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

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

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

*An evaluation was made with MSOP Renewal 151-31263-00032 on the control device being Intergral to the Process, and a determination made that the controls are NOT considered as integral.
Therefore, potential emissions for the permit level were made without consideration for the control devices on this unit.

**The values shown here are the emission limits for PM in order to avoid 326 IAC 1-7, as discussed in the Techniocal Support Document, and are shown to illustrate the source's ability to comply with its limits if the control device is used.
In order to comply with this limit, the control efficiency of the wet collector must be a minimum of 57.0%, and the control device is capable of 99.9% control efficiency.
Therefore, the source can comply with this limit, when the control device is operating.

Appendix A: Emission Calculations
Four-wheel Wire Mesh Tableblaster EU-07

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 E. Swager Dr., Fremont, IN 46737
Permit Number: F151-31744-00032

Reviewer: Jack Harmon
Date: 2012 **Shot Usage Rate** 2000 **pounds/hr**

	Unlimited Potential to Emit			Controlled Emissions*			Limited Emissions		
	PM	PM10	PM2.5	PM	PM10	PM2.5	PM***	PM10**	PM2.5**
Emission Factors lbs/lb shot	0.00400	0.00400	0.00400						
Percentage of Emissions	100%	100%	100%						
Potential Emissions lbs/hr	8.00	8.00	8.00	0.01	0.01	0.01	5.68	6.95	6.95
Potential Uncontrolled and Unlimited Emissions tons/yr	**35.04**	**35.04**	**35.04**	**0.03504**	**0.03504**	**0.03504**	**24.90**	**30.46**	**30.46**

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition), and are consistent with those used in the shotblast unit EU-04 at this source.

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

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

* This tableblast unit is controlled by a wet collector, at a rated efficiency of 99.9%. The controlled emissions are the potential to emit (tons/yr) x (1-control efficiency)

** The values shown here are the emission limits for PM10 and PM2.5 under 326 IAC 2-8-4, as discussed in the Technical Support Document, and are shown to illustrate the source's ability to comply with its limits if the control device is used.
In order to comply with this limit, the control efficiency of the wet collector must be a minimum of 13.1%, and the control device is capable of 99.9% control efficiency.
Therefore, the source can comply with this limit, when the control device is operating.

***The values shown here are the emission limits for PM in order to avoid 326 IAC 1-7, as discussed in the Technical Support Document, and are shown to illustrate the source's ability to comply with its limits if the control device is used.
In order to comply with this limit, the control efficiency of the wet collector must be a minimum of 29.0%, and the control device is capable of 99.9% control efficiency.
Therefore, the source can comply with this limit, when the control device is operating.

Appendix A: Emissions Calculations
Particulate Matter from Fugitive Sources
Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 303 East Swager Drive, Fremont, Indiana 46737
Permit #: 151-31744-00032

Reviewer: Jack Harmon
Date: **2012**

Paved Roads

Maximum Vehicular Speed: 10 mph
Average Distance of Haul: 0.25 miles

Vehicle Type	No. of One Way Trips per Day	Weight
Truck	4	40
total	4	

Weighted Average Gross Weight: 40 tons

200,000 tons hauled per year
40 tons/truck load
5000 Trucks loads
13.69863 loads per day

Calculations:
E = k(sL/2)^0.65 * (W/3)^1.5 AP-42 Chapter 13.2.1, Equation 1

E = Emission factor (lbs/vehicle miles traveled(VMT))
k = 0.016 particle size multiplier for PM-10
0.082 particle size multiplier for PM
sL 0.015 road surface silt content (g/m^2) Value provided by AP-42 Ch. 13 for limited access roads
W 40 weighted average vehicle weight (tons)

source: AP-42, chapter 13.2.1, p. 13.2.1-6.

VMT= 1277.5 (miles/yr)

PM
E = 0.165963 lbs/VMT

Potential PM Emissions (ton/yr) = Emission factor (lbs/VMT) * VMT / 2000 (lbs/ton)
Potential PM Emissions (ton/yr) = **1.06E-01** **tpy**

PM-10
E = 0.032383 lbs/VMT

Potential PM-10 Emissions (ton/yr) = Emission factor (lbs/VMT) * VMT / 2000 (lbs/ton)
Potential PM-10 Emissions (ton/yr) = **2.07E-02** **tpy**

Storage Piles

The section that discusses storage piles, AP-42 Section 13.2.4, indicates that the largest contriubution to emissions from the storage pile is the loading into the pile.

Storage Pile Handling

There are no storage piles at this facility and, therefore, no handling of storage piles.

EF (lb/ton) = k * (0.0032) * (U/5)^1.3 / (M/2)^1.4

where:

k value for:

PM	PM10
0.74	0.35

U value = 10 mph
M value = 7.4 % Moisture content is from AP-42 13.2.4-1 for sand
Storage capacity = 0 tons

PM EF = 9.34E-04 lb/ton
PM10 EF = 4.42E-04 lb/ton

PM Emissions (ton/yr) = EF (lb/ton) * Storage Capacity (tons) * use rate (1/year) * 1/2000 ton/lb
PM Emissions (ton/yr) = **0.00E+00**

PM10 Emissions (ton/yr) = EF (lb/ton) * Storage Capacity (tons) * use rate (1/year) * 1/2000 ton/lb
PM10 Emissions (ton/yr) = **0.00E+00**

Total Fugitive Roads and Storage

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Tom Abernathey
General Aluminum
303 E Swager Drive
Fremont, IN 46737

DATE: August 7, 2012

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

SUBJECT: Final Decision
FESOP
151-31744-00032

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Peter Keck, Consultant
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

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: Fremont Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: **General Aluminum**
Permit Number: **151-31744-00032**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	DPABST 8/7/2012 General Aluminum Manufacturing Company 151-31744-00032 (Final)		
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING

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1		Tom Abernathey General Aluminum Manufacturing Company 303 E Swager Dr. Fremont IN 46737 (Source CAATS) (CONFIRM DELEIVERY)									
2		Steuben County Board of Commissioners 317 S Wayne Suite 2H Angola IN 46703 *(Local Official)*									
3		Steuben County Health Department 317 S. Wayne St, Community Center Suite 3-A Angola IN 46703-1938 *(Health Department)*									
4		Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 *(Affected Party)*									
5		Fremont Public Library 2145 E North St, P.O. Box 7 Fremont IN 46737-0007 *(Library)*									
6		Fremont Town Council PO Box 10, 204 N. Coffin Street Fremont IN 47432 *(Local Official)*									
7		Mr. Diane Hanson 490 E 300 N Angola IN 46703 *(Affected Party)*									
8		Orland Town Council P.O. Box 445 Orland IN 46776 *(Local Official)*									
9		Peter Keck Enviropcorp 54520 North Avenue, Unit A South Bend IN 46635 *(Consultant)*									
10		Lynn Blue Lagrange Products 5656 N Wayne Street Fremont IN 46737 *(Affected Party)*									
11		North Central Cooperative 707 S Wayne Fremont in 46737 *(Affected Party)*									
12		Spirit SPE Portfolio 14631 N Scottsdale Road, Suite 200 Phoenix AZ 85254 *(Affected Party)*									
13		Swager Properties, LLC 103 E Swager Drive Fremont IN 46737 (Affected Party)									
14		Carl Coburn 103 E Swager Drive Fremont IN 46737 *(Affected Party)*									
15		Swager Enterprises 501 E Swager Fremont IN 46737 *(Affected Party)*									

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1		H & K Properties 901 Cassel Drive Fremont IN 46737 (Affected Party)									
2		Cold Heading 180 Swager Fremont IN 46737 *(Affected Party)*									
3											
4											
5											
6											
7											
8											
9											
10											
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