



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant

DATE: July 20, 2011

RE: Fort Recovery Industries / 075 - 30379 - 00034

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 Construction and Minor Source Operating  
Permit  
OFFICE OF AIR QUALITY**

**Fort Recovery Industries, Inc.  
710 East 100 North  
Portland, Indiana 47371**

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M075-30379-00034	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 20, 2011  Expiration Date: July 20, 2016

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## SECTION A SOURCE SUMMARY

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

### A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

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

Source Address:	710 East 100 North, Portland, Indiana 47371
General Source Phone Number:	419-375-4121
SIC Code:	3363
County Location:	Jay
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) Three (3) natural gas-fired reverberatory aluminum melting and holding furnaces, identified as V41-01, V41-02, V41-03, approved in 2011 for construction, rated at 2.4 MMBtu/hr each, capacity: 1,200 lbs/hr of clean aluminum each, equipped with no control, emissions exhausting indoors.
- (b) One (1) hydrogen fluoride fluxing operation, approved in 2011 for construction, maximum throughput of 1.75 lbs hydrogen fluoride per ton of aluminum scrap (12,439 lbs of hydrogen fluoride per year), with no control, emissions exhausting indoors.
- (c) Three (3) enclosed aluminum die casting processes, approved in 2011 for construction, maximum throughput of 3,600 lbs/hr, emissions exhausting indoors.
- (d) Six (6) natural gas-fired space heaters, identified as V07, V08, V09, V10, V11, V12, approved in 2011 for construction in 2011, with a maximum heat capacity of 0.40 MMBtu/hr, exhausting outside.

## SECTION B GENERAL CONDITIONS

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

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

### B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

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This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

### B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

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- (a) This permit, M075-30379-00034, 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.5 Term of Conditions [326 IAC 2-1.1-9.5]

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

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

### B.6 Enforceability

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

**B.7 Severability**

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

**B.8 Property Rights or Exclusive Privilege**

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

**B.9 Duty to Provide Information**

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- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. 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.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]**

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- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

**B.11 Preventive Maintenance Plan [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (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 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.
- (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 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M075-30379-00034 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.13 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.14 Permit Renewal [326 IAC 2-6.1-7]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete 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 one hundred twenty (120) days prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.15 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]**

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

**B.16 Source Modification Requirement**

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

**B.17 Inspection and Entry**

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

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

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air

pollution control equipment), practices, or operations regulated or required under this permit;

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

**B.18 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]**

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

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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

**B.19 Annual Fee Payment [326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

**B.20 Credible Evidence [326 IAC 1-1-6]**

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

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

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

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (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]**

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

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

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- (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.

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

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

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

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

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- (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.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (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]**

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

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

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

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

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

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

## **Corrective Actions and Response Steps**

### **C.12 Response to Excursions or Exceedances**

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

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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.

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

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

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

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

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

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- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, 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 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

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- (a) Reports required by conditions in Section D of 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
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) 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.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Three (3) natural gas-fired reverberatory aluminum melting and holding furnaces, identified as V41-01, V41-02, V41-03, approved in 2011 for construction, rated at 2.4 MMBtu/hr each, capacity: 1,200 lbs/hr of clean aluminum each, equipped with no control, emissions exhausting indoors.
- (b) One (1) hydrogen fluoride fluxing operation, approved in 2011 for construction, maximum throughput of 1.75 lbs hydrogen fluoride per ton of aluminum scrap (12,439 lbs of hydrogen fluoride per year), with no control, emissions exhausting indoors.
- (c) Three (3) enclosed aluminum die casting processes, approved in 2011 for construction, maximum throughput of 3,600 lbs/hr, emissions exhausting indoors.

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

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

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

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the melting furnaces, V41-01, V41-02, and V41-03 shall not exceed 2.91 pounds per hour when operating at a process weight rate of 0.60 tons per hour.

The above pounds per hour limitations were calculated with the following equation:

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

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

#### D.1.2 Material Usage [40 CFR 63, Subpart RRR]

The Permittee shall only melt clean aluminum ingots, or internal scrap or customer returns in the aluminum foundry as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR (Secondary Aluminum Production) do not apply.

#### D.1.3 Preventive Maintenance Plan

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

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

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

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

<b>Company Name:</b>	Fort Recovery Industries, Inc.
<b>Address:</b>	710 East 100 North
<b>City:</b>	Portland, Indiana 47371
<b>Phone #:</b>	419-375-4121
<b>MSOP #:</b>	M075-30379-00034

I hereby certify that Fort Recovery Industries, Inc. is :

still in operation.

no longer in operation.

I hereby certify that Fort Recovery Industries, Inc. is :

in compliance with the requirements of MSOP M075-30379-00034.

not in compliance with the requirements of MSOP M075-30379-00034.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

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

<b>Noncompliance:</b>

**MALFUNCTION REPORT**  
**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**COMPLIANCE AND ENFORCEMENT BRANCH**  
**FAX NUMBER: (317) 233-6865**

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

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

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

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

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

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

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

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

**326 IAC 1-6-1 Applicability of rule**

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

**326 IAC 1-2-39 "Malfunction" definition**

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

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

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

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

Fort Recovery Industries, Inc.  
710 East 100 North  
Portland, Indiana 47371

Affidavit of Construction

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make  
these representations on behalf of \_\_\_\_\_  
(Company Name)
4. I hereby certify that Fort Recovery Industries, Inc. 710 East 100 North, Portland, Indiana 47371, completed construction of the a new aluminum molding and die casting plant on \_\_\_\_\_ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on March 28, 2010 and as permitted pursuant to New Source Construction Permit and Minor Source Operating Permit No. M075-30379-00034, Plant ID No. 075-00034 issued on \_\_\_\_\_.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature \_\_\_\_\_  
Date \_\_\_\_\_

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of Indiana  
on this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_. My Commission expires: \_\_\_\_\_.

Signature \_\_\_\_\_  
Name \_\_\_\_\_ (typed or printed)

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

Addendum to the Technical Support Document (ATSD) for a  
New Source Construction and Minor Source Operating Permit (MSOP)

**Source Description and Location**

<b>Source Name:</b>	<b>Fort Recovery Industries, Inc.</b>
<b>Source Location:</b>	<b>710 East 100 North, Portland IN 47371</b>
<b>County:</b>	<b>Jay</b>
<b>SIC Code:</b>	<b>3363</b>
<b>Operation Permit No.:</b>	<b>M075-30379-00034</b>
<b>Permit Reviewer:</b>	<b>Swarna Prabha</b>

On June 18, 2011, the Office of Air Quality (OAQ) had a notice published in Commercial review, Portland, Indiana, stating that Fort Recovery Industries, Inc. had applied for a new source construction and Minor Source Operating Permit. This proposed permit would allow Fort Recovery Industries, Inc., to construct and operate an aluminum molding and die casting plant using aluminum ingots. The notice also stated that the OAQ proposed to issue a Minor Source Operating Permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

**Comments and Responses**

No comments were received during the public notice period.

**Additional Changes**

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e). Therefore, CO<sub>2</sub>e emissions have been calculated for this source. Based on the calculations the unlimited potential to emit greenhouse gases from the entire source is less than 100,000 tons of CO<sub>2</sub>e per year (see ATSD Appendix A for detailed calculations). This did not require any changes to the permit.

**Permit Level Determination – MSOP**

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	36.02
PM10 <sup>(1)</sup>	22.86
PM2.5	19.39
SO <sub>2</sub>	0.03
NO <sub>x</sub>	4.2
VOC	1.81
CO	3.53
<b>GHGs as CO<sub>2</sub>e</b>	<b>5,076.47</b>

- (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".

**The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.**

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed Administrative amendment can be directed to Swarna Prabha 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) (234-5376) or toll free at 1-800-451-6027 extension (45376).
- (b) A copy of the permit 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.idem.in.gov](http://www.idem.in.gov)

**Appendix A: Emission Calculations**  
**Natural Gas Combustion**  
**(MMBtu/hr < 100)**  
**Natural Gas space heaters Units-V07-through V012 and Melting Furnaces**

**Company Name: Fort Recovery Industries, Inc.**  
**Address City IN Zip: 710 East 100 North, Portland, IN 47371**  
**MSOP No. : M075-30379-00034**  
**Reviewer: Swarna Prabha**

Heat Input Capacity MMBtu/hr		Potential Throughput MMCF/yr
7.20	(3 melting furnaces, each 2.4 MMBtu)	63.1
2.40	(6 space heaters, each 0.4 MMBtu )	21.0

**Greenhouse Gas Emissions**

Emission Factor in lb/l	Greenhouse Gas		
	CO2	CH4	N2O
	120000	2.3	2.2
Three melting Furnaces Potential Emission in tons/yr	3784.32	0.0725	0.0694
Six space heaters -Potential Emission in tons/yr	1261.44	0.024	0.023
Summed (Three Melting furnaces) Potential Emissions in tons/yr	3,784.46		
Summed (six space heaters) Potential Emissions in tons/yr	1,261.49		
CO2e (three Melting Furnaces) in tons/yr	3,807.35		
CO2e (six space heaters) in tons/yr	1,269.12		
<b>Total</b>	<b>5,076.47</b>		

**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 ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations  
Summary**

**Company Name: Fort Recovery Industries, Inc.  
Address City IN Zip: 710 East 100 North, Portland, IN 47371  
MSOP No. : M075-30379-00034  
Reviewer: Swarna Prabha**

**POTENTIAL TO EMIT UNLIMITED AND UNCONTROLLED EMISSIONS IN TONS PER YEAR**

<b>Emission Units</b>	<b>PM</b>	<b>PM10*</b>	<b>PM2.5*</b>	<b>SO<sub>2</sub></b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>**CO<sub>2</sub>e</b>
Aluminum Melters	33.96	20.74	17.27	0.02	3.15	1.75	2.65	3,807.35
HF fluxing	1.73	1.73	1.73	-	-	-	-	-
Die casting units	0.32	0.32	0.32	-	-	-	-	-
Natural Gas-Fired Units	0.02	0.08	0.08	0.006	1.05	0.06	0.88	1,269.12
<b>TOTAL</b>	<b>36.02</b>	<b>22.86</b>	<b>19.39</b>	<b>0.03</b>	<b>4.20</b>	<b>1.81</b>	<b>3.53</b>	<b>5,076.47</b>

<b>HAPs Emissions</b>	<b>PTE of HAPs tons/yr</b>
Cadmium	0.0031
Nickel	0.0024
Lead	0.0149
Chromium	0.0020
HF	1.7253
<b>Total Haps</b>	<b>1.7477</b>

\*There are no emissions for PM2.5 in AP-42, PM10 = PM2.5

\* 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".

\*\*Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e). Therefore, CO<sub>2</sub>e emissions have been calculated for this source.

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit (MSOP)

#### Source Description and Location

<b>Source Name:</b>	<b>Fort Recovery Industries, Inc.</b>
<b>Source Location:</b>	<b>710 East 100 North, Portland IN 47371</b>
<b>County:</b>	<b>Jay</b>
<b>SIC Code:</b>	<b>3363</b>
<b>Operation Permit No.:</b>	<b>M075-30379-00034</b>
<b>Permit Reviewer:</b>	<b>Swarna Prabha</b>

On March 28, 2011 the Office of Air Quality (OAQ) received an application from Fort Recovery Industries, Inc. related to the construction and operation of a new aluminum molding and die casting plant using aluminum ingots and does not primarily engaged in the metal recovery process.

#### Existing Approvals

There have been no previous approvals issued to this source.

#### County Attainment Status

The source is located in Jay County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> 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 PM <sub>2.5</sub> .	

- (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. Jay 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<sub>2.5</sub>**  
 Jay County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule

revisions require IDEM to regulate PM10 emissions as a surrogate for PM<sub>2.5</sub> emissions until 326 IAC 2-2 is revised.

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

#### **Fugitive Emissions**

- (a) The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.
- (b) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Note: This source only uses aluminum ingots and is not primarily engaged in the metal recovery process. Therefore, this source is not considered a "secondary metal production plant" and is not in 1 of 28 source categories, as defined in 326 IAC 2-2-1(y), for the PSD regulations.

#### **Background and Description of Emission Units and Pollution Control Equipment**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Fort Recovery Industries, Inc. On March 28, 2011, relating to the construction and operation of three die casting machines, aluminum melting and holding furnaces and combustion units used for space heating.

The following is a list of the new emission units and pollution control devices:

- (a) Three (3) natural gas-fired reverberatory aluminum melting and holding furnaces, identified as V41-01, V41-02, V41-03, approved in 2011 for construction, rated at 2.4 MMBtu/hr each, capacity: 1,200 lbs/hr of clean aluminum each, equipped with no control, emissions exhausting indoors.

NOTE: The aluminum is poured into die cast iron molds or transferred to the holding furnaces. The aluminum melters/furnaces are a component of the integrated molding operation. Mold release is water based silicon. There are no emissions from this process.

- (b) One (1) hydrogen fluoride fluxing operation, approved in 2011 for construction, maximum throughput of 1.75 lbs hydrogen fluoride per ton of aluminum scrap (12,439 lbs of hydrogen fluoride per year), with no control, emissions exhausting indoors.
- (c) Three (3) enclosed aluminum die casting processes, approved in 2011 for construction, maximum throughput of 3,600 lbs/hr, emissions exhausting indoors.

NOTE: (1) The aluminum melters/furnaces are a component of the integrated molding operation. Mold release is water based silicon. There are no emissions from this process.

(2) HF is used for wall cleaning to remove oxide build up to the melting and/or holding units when adding gates and returns. The amount of flash and returns based on Ohio operation is estimated to be 45 % of the aluminum melted. Please see TSD Appendix A for emissions.

(3) There are no emissions from the pouring and cooling operations because the die casting process is an enclosed molding process.

- (d) Six (6) natural gas-fired space heaters, identified as V07, V08, V09, V10, V11, V12, approved in 2011 for construction, with a maximum heat capacity of 0.40 MMBtu/hr, exhausting outside.

**Unpermitted Emission Units and Pollution Control Equipment**

The source does not contain any unpermitted unit.

**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 –MSOP**

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.

Process/ Emission Unit	Unlimited Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)								
	PM	PM10 *	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Reverberatory aluminum melting and holding furnaces (V41-01, V41-02, V41-03)**	33.96	20.74	17.27	0.02	3.15	1.75	2.65	0.03	0.015 (Lead)
HF-Flux	1.73	1.73	1.73	-	-	-	-	1.73	1.73 (Hydrofluoric acid)
Die Casting units	0.32	0.32	0.32	-	-	-	-	-	-
Natural gas-fired Units	0.02	0.08	0.08	0.006	1.05	0.06	0.88	0.02	0.0189 (Hexane HAP)
<b>Total PTE of Entire Source</b>	<b>36.02</b>	<b>22.86</b>	<b>19.39</b>	<b>0.03</b>	<b>4.20</b>	<b>1.81</b>	<b>3.53</b>	<b>1.75</b>	<b>1.73 (Hydrofluoric acid)</b>
Title V Major Source Thresholds	N/A	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	25	10
negl. = negligible * 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". ** These emissions include both from combustion and melting process.									

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all pollutants are each less than one hundred (100) tons per year, but greater than or equal to twenty-five (25) tons per year for particulates. The PTE of all other regulated criteria pollutants are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A Minor Source Operating Permit (MSOP) will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) 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) and not subject to the provisions of 326 IAC 2-7.

<b>Federal Rule Applicability Determination</b>
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New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for primary aluminum reduction plants, 40 CFR 60.190-195, Subpart S are not included in the permit because the source does not manufacture aluminum.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) This source is not subject to the requirements of National Emission Standards for Hazardous Air Pollutants: Area Source standards for Iron and Steel foundry, as defined in § 63.10880, Subpart ZZZZZ (5Z), because this source does not operate an Iron and Steel foundry.
- (d) This source is not subject to the requirements of National Emission Standards for Hazardous Air Pollutants: Area Source standards for aluminum foundry, copper foundry, or other nonferrous metals, including all associated alloys, foundry as defined in §63.11556, Subpart ZZZZZZ (6Z), because the source does not use material containing aluminum foundry HAP, material containing copper foundry HAP, or material containing other nonferrous foundry HAP, as defined in §63.11556.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for primary aluminum reduction plants, 40 CFR Subpart LL, 63.840-859, are not included in the permit because the source does not manufacture aluminum.
- (f) The provisions of 40 CFR 63, Subpart RRR (3R) - National Emission Standards of Hazardous Air Pollutants for Secondary Aluminum Production are not included in this permit for this aluminum die casting plant because according to the applicability section of the federal rule - 40 CFR 63.1500 (f), the requirements of this subpart do not apply to manufacturers of aluminum die castings, aluminum foundries, or aluminum extruders that melt no materials other than clean charge and materials generated within the facility; and that also do not operate a thermal chip dryer, sweat furnace or scrap dryer/delacquering kiln/decoating kiln. This source melts clean charge, and has no new or existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge, therefore, the requirements of this rule do not apply.
- (g) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries, 40 CFR Subpart EEEEE (5E) (63.7680 through 63.7762) because the requirements of this subpart applies to each new or existing iron and steel foundry that is a major source of HAPs. A major source of HAPs is a source that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAPs at a rate of 25 tons or more per year. This source is not an Iron and Steel Foundry, and is therefore not subject to this rule.

- (h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for (40 CFR 63 Subpart YYYYY (5Y) Electric Arc Furnace Steelmaking Facilities) for this source are not included in this permit because this source is not a Stainless and Non-stainless Steel Manufacturer.
- (i) This source is not subject to the requirements of National Emission Standards for Hazardous Air Pollutants for Secondary Nonferrous Metals Processing Area source, 40 CFR Subpart TTTTTT (6T), as defined in § 63.11462, because this source does not process Secondary Nonferrous Metals.
- (j) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (k) 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.

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

326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))

MSOP applicability is discussed under the Permit Level Determination – MSOP section above.

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

This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit 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) and not subject to the provisions of 326 IAC 2-4.1.

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.

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.

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.

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

The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

**State Rule Applicability - Three (3) reverberatory aluminum melting and holding furnaces, V41-01, V41-02, V41-03**

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired three (3) reverberatory aluminum melting and holding furnaces, are not subject to 326 IAC 6-2 as they are not sources of indirect heating.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The natural gas-fired three (3) reverberatory aluminum melting and holding furnaces are not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour each.

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

- (a) Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the each of the melting furnace, shall not exceed 2.91 pounds per hour each when operating at a process weight rate of 0.60 tons per hour.

The above pounds per hour limitations for were calculated with the following equation:

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

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

TSD Appendix A, the potential particulate emissions from three melting furnaces are 7.74 pounds per hour. Therefore, each melting furnace emissions are 2.58 pounds per hour, and will comply with this rule.

- (b) The potential particulate emissions from the die casting and dross handling operations are each less than 0.551 pounds per hour, therefore, the die casting dross handling/cooling operations are exempt from the requirements of 326 IAC 6-3.

NOTE: The dross is manually skimmed from the melting furnace and the holding pot, and is sent to outside facility.

**State Rule Applicability - Natural gas Combustion Units V07, V08, V09, V10, V11, and V12**

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired furnaces are not subject to the requirements 326 IAC 6-2 as they are not a source of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired furnaces, are exempt from the requirements of 326 IAC 6-3, because each has a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The natural gas-fired furnaces are not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour, respectively.

326 IAC 12 (New Source Performance Standards)

See Federal Rule Applicability Section of this TSD.

326 IAC 20 (Hazardous Air Pollutants)

See Federal Rule Applicability Section of this TSD.

<b>Compliance Determination, Monitoring and Testing Requirements</b>
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There are no compliance determination, monitoring or testing requirements for any of the emission units at this source. The source uses clean aluminum charge and PM10 uncontrolled potential emissions are well below the MSOP threshold.

<b>Conclusion and Recommendation</b>
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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 March 28, 2011 and additional information was received on May 02, 2011 and June 02, 2011.

The construction and operation of this source shall be subject to the conditions of the attached proposed new source construction and MSOP No. M075-30379-00034. The staff recommends to the Commissioner that this new source construction and MSOP be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Swarna Prabha 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) 234-5376 or toll free at 1-800-451-6027 extension 45376.
- (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](http://www.in.gov/idem)

**Appendix A: Emission Calculations  
Summary**

**Company Name: Fort Recovery Industries, Inc.  
Address City IN Zip: 710 East 100 North, Portland, IN 47371  
MSOP No. : M075-30379-00034  
Reviewer: Swarna Prabha**

**POTENTIAL TO EMIT UNLIMITED AND UNCONTROLLED EMISSIONS IN TONS PER YEAR**

<b>Emission Units</b>	<b>PM</b>	<b>PM10*</b>	<b>PM2.5*</b>	<b>SO<sub>2</sub></b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>
Aluminum Melters	33.96	20.74	17.27	0.02	3.15	1.75	2.65
HF fluxing	1.73	1.73	1.73	-	-	-	-
Die casting units	0.32	0.32	0.32	-	-	-	-
Natural Gas-Fired Units	0.02	0.08	0.08	0.006	1.05	0.06	0.88
<b>TOTAL</b>	<b>36.02</b>	<b>22.86</b>	<b>19.39</b>	<b>0.03</b>	<b>4.20</b>	<b>1.81</b>	<b>3.53</b>

<b>HAPs Emissions</b>	<b>PTE of HAPs tons/yr</b>
Cadmium	0.0031
Nickel	0.0024
Lead	0.0149
Chromium	0.0020
HF	1.7253
<b>Total Haps</b>	<b>1.7477</b>

\*There are no emissions for PM2.5 in AP-42, PM10 = PM2.5

\* 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".

**Appendix A: Emission Calculations****Three (3) Reverberatory Aluminum Melters and Holders V41-01, V41-02, V41-03**

**Company Name: Fort Recovery Industries, Inc.**  
**Address City IN Zip: 710 East 100 North, Portland, IN 47371**  
**MSOP No. : M075-30379-00034**

**Reviewer: Swarna Prabha**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

7.20 (3 units each 2.4 MMBtu )

63.1

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	**NO <sub>x</sub>	VOC	CO
	1.9	7.6	0.6	100	5.5	84.0
<b>Potential Emission in tons/yr</b>	<b>0.06</b>	<b>0.24</b>	<b>0.02</b>	<b>3.15</b>	<b>0.17</b>	<b>2.65</b>

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

\*\*Emission Factors for NO<sub>x</sub>: Uncontrolled = 100, Low NO<sub>x</sub> Burner = 50, Low NO<sub>x</sub> Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total Haps
	0.0021	0.0012	0.0750	1.8000	0.0034	
<b>Potential Emission in tons/yr</b>	<b>7.56E-06</b>	<b>4.32E-06</b>	<b>2.70E-04</b>	<b>6.48E-03</b>	<b>1.22E-05</b>	<b>6.77E-03</b>

\* Assume all the PM10 emissions are, PM2.5 emissions.

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

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

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

**From Aluminum Melting Reverberatory Furnaces: V41-01, V41-02, V41-03**

Pollutant	Throughput Rate (tons/hr)	Emission Factor in lb/ton	PTE (lbs/hr)	PTE (tons/yr)
Aluminum	1.80	4.30	7.74	33.901
PM	1.80	2.60	4.68	20.498
PM10	1.80	2.16	3.89	17.029
PM2.5	1.80	0.20	0.36	1.577
VOC	1.80	0.00039	0.00070	0.003
Cadmium	1.80	0.00030	0.00054	0.002
Nickel	1.80	0.00190	0.00341	0.015
Lead	1.80	0.00025	0.00045	0.002
Chromium	1.80	0.00034	0.00061	0.003
Copper	1.80			

Emission factors are from FIRES 6.23 (SCC 3-04-001-03 ) for PM, PM10 and PM2.5

Emission factors used are based on the Ohio facility for Metal HAPs and Copper.

**Methodology**

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

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

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

Unit ID	Throughput Rate (lbs/hr)	Potential PM Emissions (tons/yr)	Potential PM10 Emissions (tons/yr)	Potential PM2.5 Emissions (tons/yr)	Potential SO <sub>2</sub> Emissions (tons/yr)	Potential NO <sub>x</sub> Emissions (tons/yr)	Potential VOC Emissions (tons/yr)	Potential CO Emissions (tons/yr)
V41-01, V41-02, V4-03	3,600	33.96	20.74	17.27	0.019	3.15	1.75	2.65
<b>Total</b>	<b>3,600</b>	<b>33.96</b>	<b>20.74</b>	<b>17.27</b>	<b>0.02</b>	<b>3.15</b>	<b>1.75</b>	<b>2.65</b>

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

**Company Name: Fort Recovery Industries, Inc.  
Address City IN Zip: 710 East 100 North, Portland, IN 47371  
MSOP No. : M075-30379-00034  
Reviewer: Swarna Prabha**

Fluxing / fluoride						
TYPE OF MATERIAL	**Flux Throughput lbs/yr					
HF - Flux	12439.2					
Emission Factor	PM * lbs/lb of flux HF 0.2774	PM10 * lbs/lb of flux HF 0.2774	SOx lbs/ton 0.00	NOx lbs/ton 0.00	VOC lbs/ton 0.00	CO lbs/tons 0.00
Potential Emissions tons/year	1.73	1.73	0.00	0.00	0.00	0.0

PM2.5 is assumed equal to PM10

\*Flux agent added to clean and degass returned flash and gates. Typical rate is 1.75 lbs per ton of scrap (0.36kg/metric ton)

\*Flash and gate returns estimated to be 45% of alumium processed in the die casting units based on the Ohio facility.

Metal throughput = 1.8 tons/hr, Flash and gate returns tons/hr = 45% of metal throughput = 1.8 tons/hr \* 45/100 =0.81 tons/hr (scrap)

\*\*Flux throughput = 1.75 lbs per ton of scrap /hr = 0.81 tons/hr \*1.75 lbs/ton = 1.42 lbs/hr or 12,439.2 lbs/yr

**Methodology**

PTE (tons/yr) = Flux Throughput (lbs/yr) x Emission Factor (lbs/lb of flux HF) x 1 ton/2000 lbs

**Appendix A: Emission Calculations  
Three (3) Die Casting Machines**

**Company Name: Fort Recovery Industries, Inc.  
Address City IN Zip: 710 East 100 North, Portland, IN 47371  
MSOP No. : M075-30379-00034  
Reviewer: Swarna Prabha**

**1. Emissions from the Aluminum Die Casting Process:**

**Clean Al Input**  
**lbs/hr      tons/yr**  
3600      15768

**(Total for 3 machines)**

	Pollutant					
	PM*	PM10*	SO2	NO <sub>x</sub>	VOC	CO
Emission Factor (lbs/ton)	0.04	0.04	NA	NA	NA	NA
Potential to Emit before Control (lbs/hr)	0.07	0.07				
Potential to Emit before Control (tons/yr)	0.32	0.32	-	-	-	-

\* Assume all the PM emissions are PM10 and PM2.5 emissions.

**Methodology**

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

$PTE \text{ (lbs/hr)} = AI \text{ Input (lbs/hr)} \times 1 \text{ ton/2000 lbs} \times \text{Emission Factor (lbs/ton)}$

$PTE \text{ (tons/yr)} = AI \text{ Input (lbs/hr)} \times 1 \text{ ton/2000 lbs} \times \text{Emission Factor (lbs/ton)} \times 8760 \text{ hr/yr} \times 1 \text{ ton/2000 lbs}$

**Appendix A: Emission Calculations**  
**Natural Gas Combustion**  
**(MMBtu/hr < 100)**  
**Natural Gas space heaters Units-V07-through V012**

**Company Name: Fort Recovery Industries, Inc.**  
**Address City IN Zip: 710 East 100 North, Portland, IN 47371**  
**MSOP No. : M075-30379-00034**  
**Reviewer: Swarna Prabha**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.40 2.40	21.0 21.0

(6 heaters 0.4 MMBtu each)

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	**NO <sub>x</sub>	VOC	CO
	1.9	7.6	0.6	100	5.5	84.0
<b>Potential Emission in tons/yr</b>	<b>0.02</b>	<b>0.08</b>	<b>0.006</b>	<b>1.05</b>	<b>0.06</b>	<b>0.88</b>

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	0.0021	0.0012	0.0750	1.8000	0.0034
Potential Emission in tons/yr	2.21E-05	1.26E-05	7.88E-04	1.89E-02	3.57E-05

HAPs - Metals						
Emission Factor in lb/MMcf	Lead	Cadmium	Chromium	Manganese	Nickel	Total HAPs
	0.0005	0.0011	0.0014	0.0004	0.0021	
Potential Emission in tons/yr	5.26E-06	1.16E-05	1.47E-05	3.99E-06	2.21E-05	<b>1.98E-02</b>

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

\*\*Emission Factors for NO<sub>x</sub>: Uncontrolled = 100, Low NO<sub>x</sub> Burner = 50, Low NO<sub>x</sub> Burners/Flue gas recirculation = 32

### Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF - 1,000,000 Cubic Feet of Gas

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

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

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



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

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

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

TO: Brian DeLucenay  
Fort Recovery Industries  
2440 State Route 49  
Fort Recovery, IN 45846

DATE: July 20, 2011

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

SUBJECT: Final Decision  
New Construction MSOP  
075 - 30379 - 00034

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:  
Berry Houndshell, VP - Mfg  
Mr. Donald J. Niederkorn EHS Technology Group  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



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July 20, 2011

TO: Jay County Public Library

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

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

**Applicant Name: Fort Recovery Industries**  
**Permit Number: 075 - 30379 - 00034**

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	LPOGOST 7/20/2011 Fort Recovery Industries Inc 075 - 30379 - 00034 /final)		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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1		Brian DeLucenay Fort Recovery Industries Inc 2440 State Route 49 Fort Recovery OH 45846 (Source CAATS) Via confirmed delivery										
2		Berry Houndshell VP - Mfg Fort Recovery Industries Inc 2440 State Route 49 Fort Recovery OH 45846 (RO CAATS)										
3		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 (Affected Party)										
4		Jay County Commissioners Jay County Courthouse Portland IN 47371 (Local Official)										
5		Portland City Council and Mayors Office 321 N. Meridian Portland IN 47371 (Local Official)										
6		Jay County Public Library 315 N. Ship Street Portland IN 47371 (Library)										
7		Jay County Health Department 504 West Arch Street Portland IN 47371 (Health Department)										
8		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
9		Mr. Donald J. Niederkorn EHS Technology Group, LLC 965 Capstone Dr, Ste 420 Miamisburg OH 45343-0187 (Consultant)										
10		Portland Economic Development Corporation 118 S Meridian St, Ste A Portland IN 47371 (Affected Party)										
11		Mr. Gary Gildersleeve 67 May Dr Chatham NJ 07928 (Affected Party)										
12		Mr. William Milligan Portland Building and Planning Department 118 S Meridian St, Ste E Portland IN 47371 (Affected Party)										
13												
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