



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

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

TO: Interested Parties / Applicant  
DATE: October 17, 2007  
RE: Citation Corporation / 033-24018-00016  
FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

**Notice of Decision: Approval – Effective Immediately**

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) 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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency  
401 M Street  
Washington, D.C. 20406

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.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
*We make Indiana a cleaner, healthier place to live.*

---

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Mr. Chris Lautzenhiser  
Citation Corporation  
P.O. Box 80  
Butler, IN 46721

October 17, 2007

Re: 033-24018-00016  
Significant Permit Modification to  
Part 70 No.: T 033-17659-00016

Dear Mr. Lautzenhiser:

Citation Corporation was issued a Part 70 Operating Permit No. T 033-17659-00016 on August 6, 2004 for a stationary aluminum foundry and die casting plant. A letter requesting changes to this permit was received on December 1, 2006. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of changing Citation Corporation's compliance testing requirements for reverberatory furnaces from one (1) furnace per group (A-D) every twenty-one (21) months to one (1) furnace per group (A-D) every 2.5 years pursuant to the Office of Air Quality Guidance on Stack Test Frequency for Title V Operating Permits. Additionally, Citation Corporation proposed the addition of one (1) aluminum sand core casting operation and associated compliance requirements.

All other conditions of the permit shall remain unchanged and in effect. Please find attached the entire Part 70 Operating Permit as modified.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Kristen Layton, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or call at (800) 451-6027, and ask for Kristen Layton or extension 3-3031, or dial (317) 233-3031.

Sincerely,

*Original signed by*  
Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

Attachments  
KRL

cc: File – DeKalb County  
U.S. EPA, Region V  
DeKalb County Health Department  
IDEM Northern Regional Office  
Air Compliance Section Inspector – Doyle Houser  
Compliance Data Section  
Administrative and Development



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## PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Citation Corporation  
600 West Main Street  
Butler, Indiana 46721**

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T033-17659-00016	
Issued by: Original Signed by Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: August 6, 2004 Expiration Date: August 6, 2009

First Significant Permit Modification 033-19703-00016; issued October 11, 2005  
Second Significant Permit Modification 033-22252-00016; issued June 28, 2006

Third Significant Permit Modification No.: T033-24018-00016	
Issued by: <i>Original signed by</i> Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: October 17, 2007 Expiration Date: August 6, 2009

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## SECTION A

## SOURCE SUMMARY

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

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and a stationary aluminum foundry and die casting operation plant.

Source Address:	600 West Main Street, Butler, Indiana 46721
Mailing Address:	P.O. Box 80, Butler, Indiana 46721
General Source Phone Number:	(260)868-2168
SIC Code:	3365, 3363
County Location:	Dekalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) reverberatory melt furnace identified as A1 with a maximum melt capacity of 3.83 tons of aluminum per hour, installed in August 2002, equipped with four (4) natural gas fired burners rated at 9.2 million (MM) British thermal units (Btu) per hour total, exhausting through one (1) stack identified as E-1.
- (b) One (1) reverberatory melt furnace identified as A2 with a maximum melt capacity of 3.28 tons of aluminum per hour, installed in August 2002, equipped with three (3) natural gas fired burners rated at 7.86 MMBtu per hour total, exhausting through one (1) stack identified as E-2.
- (c) One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 6.0 tons of aluminum per hour, installed in July 2003, equipped with two (2) natural gas fired burners rated at 24.0 MMBtu per hour total, exhausting through one (1) stack identified as E-3.
- (d) One (1) reverberatory melt furnace identified as A4 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1974, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-4.
- (e) One (1) reverberatory melt furnace identified as A5 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1976, equipped with two (2) natural gas fired burners rated at 6.7 MMBtu per hour total, exhausting through one (1) stack identified as E-5.

- (f) One (1) reverberatory melt furnace identified as A6 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1978, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-6.
- (g) One (1) reverberatory melt furnace identified as A7 with a maximum melt capacity of 1.0 ton of aluminum per hour, installed in 1982, equipped with two (2) natural gas fired burners rated at 5.2 MMBtu per hour total, exhausting through one (1) stack identified as E-7.
- (h) One (1) reverberatory melt furnace identified as A8 with a maximum melt capacity of 0.25 tons of aluminum per hour, installed in 1993, equipped with one (1) natural gas fired burner rated at 2.5 MMBtu per hour, exhausting through one (1) stack identified as E-8.
- (i) One (1) reverberatory melt furnace identified as A9 with a maximum melt capacity of 2.5 tons of aluminum per hour, installed 1994, equipped with four (4) natural gas fired burners rated at 10.6 MMBtu per hour total, exhausting through one (1) stack identified as E-9.
- (j) One (1) reverberatory melt furnace identified as A10 with a maximum melt capacity of 2.5 tons of aluminum per hour, installed 1995, equipped with six (6) natural gas fired burners rated at 9.0 MMBtu per hour total, exhausting through one (1) stack identified as E-10.
- (k) One (1) reverberatory melt furnace identified as A11 with a maximum melt capacity of 0.9 tons of aluminum per hour, installed 1996, equipped with six (6) natural gas fired burners rated at 15.9 MMBtu per hour total, exhausting through one (1) stack identified as E-11.
- (l) One (1) reverberatory melt furnace identified as A12 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-12.
- (m) One (1) reverberatory melt furnace identified as A13 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 MMBtu per hour total, exhausting through one (1) stack identified as E-13.
- (n) The maximum solid reactive flux injection rate at each of reverberatory furnaces A1 through A13 is ten (10) pounds of flux per 10,000 pounds of aluminum melted.
- (o) Source aluminum casting operations, including:
  - (1) Aluminum pouring and casting operations for furnaces A1 through A11, excluding A3, rated at 18.01 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (2) Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (3) Aluminum pouring and casting operation for furnaces A12 and A13, identified as ME Cell, rated at 7.0 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (4) Holding furnaces used in source casting operations, performing additional molten metal degassing and/or rotofluxing as indicated, each exhausting inside the building except as indicated, including:

- (A) Twenty-seven (27) "basic holding furnaces", including:
- (i) Two (2) natural gas-fired holding furnaces identified as S1 and S2, each with a maximum heat input rating of 5.8 MMBtu per hour and a nominal holding capacity of 5,000 pounds molten metal, exhausting through one (1) common stack. Each furnace performs degassing as needed using argon or nitrogen;
  - (ii) One (1) natural gas-fired holding furnace identified as H1 with a maximum heat input rating of 1.48 MMBtu per hour and a nominal holding capacity of 7,000 pounds molten metal. This furnace performs degassing as needed using argon or nitrogen;
  - (iii) Four (4) natural gas-fired holding furnaces respectively identified as Pots 1A, 1B, 8 and 9, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal. Each furnace performs degassing as needed using argon or nitrogen;
  - (iv) Two (2) natural gas-fired holding furnaces respectively identified as Pots 44 and 45, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment;
  - (v) Two (2) natural gas-fired holding furnaces respectively identified as Pots 46 and 47, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal, performing no additional degassing or rotofluxing;
  - (vi) Six (6) natural gas-fired holding furnaces respectively identified as Pots 17 through 20, 30 and 31, each with a total maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,500 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment; and
  - (vii) Ten (10) electric holding furnaces respectively identified as Pots 34 through 43, each with a nominal holding capacity of 2,000 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment.
- (B) Three (3) "special holding furnaces" as follows:
- (i) One (1) electric holding furnace, identified as SP1, with a total nominal holding capacity of 7,000 pounds molten metal and consisting of a receiving-holding pot, an electric heat transfer, and a pouring-holding supply pot. The furnace performs degassing as needed using argon or nitrogen; and

- (ii) Two (2) electric holding furnaces, identified as SP2 and SP3, each with a nominal holding capacity of 14,000 pounds molten metal and each consisting of a receiving-holding pot, an electric heat transfer, and a pouring-holding supply pot. Each furnace performs degassing as needed using argon or nitrogen.
  
- (p) One (1) sand core line, approved for construction in 2007, consisting of the following equipment:
  - (1) One (1) sand core knockout box, approved for construction in 2007, identified as TTA-KO, with a maximum capacity of 1,738 pounds per hour, venting inside. [326 IAC 6-3-2]
  
  - (2) Other emission units, not regulated by a NESHAP, with PM-10, NO<sub>x</sub>, and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
    - (A) One (1) manual sand handling system, identified as Sigma Sand F94A1, with a maximum of 429.24 tons of core sand and 1,200 tons of purchased sand cores per twelve (12) consecutive month period, with emissions venting inside.
  
    - (B) One (1) shell core production unit, identified as Shell 1, heated by a natural gas unit rated at 2.2 MMCF/yr, with a maximum capacity of forty-eight (48) two (2) pound cores per hour, and venting indoors. [326 IAC 6-2-4]
  
    - (C) One holding furnace, identified as TTA/INT, with a maximum capacity of 748.05 gallons of molten aluminum, heated by a natural gas unit rated at 13.0 MMCF/yr. [326 IAC 6-2-4]
  
    - (D) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station TTA, rated at a maximum capacity of 150 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  
    - (E) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 059, rated at a maximum capacity of 500 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  
    - (F) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 558, rated at a maximum capacity of 760 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  
    - (G) One (1) casting cooler hanger, identified as TTC-CC, with a maximum capacity of 40 parts per hour.

- (H) One (1) casting cooler rack hanger, identified as 059/558-CC, with a maximum capacity of 50 parts per hour.
- (I) One (1) sawing and trimming operation for casting station TTA, identified as TTA-TR, processing up to a total of 20 pounds aluminum per hour.
- (J) One (1) sawing and trimming operation for casting stations 059 and 558, identified as 059/558-TR, processing up to 230 pounds of aluminum per hour.
- (3) Three (3) shot blast cleaners, approved for construction in 2007, identified as Blast 1 through Blast 3, each with a maximum throughput capacity of 1.6 tons per hour, each controlled by one (1) baghouse identified as Blast1A, Blast2A, and Blast3A, respectively, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]

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

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

- (a) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
  - (1) Two (2) sawing and trimming operations for furnaces A1 through A13, excluding A3, individually identified as C-1 and C-2, installed in 1964, processing up to a total of 3.8 tons aluminum per hour; and
  - (2) Sawing and trimming operation for furnace A3, installed in 2003, processing up to 3.0 tons aluminum per hour,  
  
utilizing two (2) cyclones for particulate matter control each exhausting through one (1) stack respectively identified as E-14 and E-15. [326 IAC 6-3-2]
- (b) One (1) shot blast cleaner, constructed in 1980, identified as Blast 4, with a maximum throughput capacity of 1.5 tons per hour, PM controlled by one (1) baghouse identified as Blast4, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]

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

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

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

## SECTION B

## GENERAL CONDITIONS

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

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, 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 2-7-5(2)] [326 IAC 2-1.1-9.5]

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- (a) This permit, T033-17659-00016, 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 or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).
- (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, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

### B.3 Term of Condition [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.4 Enforceability [326 IAC 2-7-7]

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

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

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

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

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

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

### B.8 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

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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. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

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

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

- (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. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

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

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The 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 2-7-5(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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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 2-7-16]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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, and the IDEM 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 Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865

IDEM Northern Regional Office:  
Telephone Number: 574-245-4870  
Facsimile Number: 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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). 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 2-7-4(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.  

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

- (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
- (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)].

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

- (a) All terms and conditions of permits established prior to T033-17659-00016 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised under 326 IAC 2-7-10.5, or
  - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this Part 70 operating permit, all previous registrations and permits are superseded by this permit, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)].
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

**B.17 Permit Renewal** [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
  - (1) Submitted at least 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 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

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

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

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

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

**B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]**

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
  - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emissions trades that are subject to 326 IAC 2-7-20(b), (c), or (e). 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 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade 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 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

**B.21 Source Modification Requirement [326 IAC 2-7-10.5]**

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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 Part 70 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 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 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 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.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. 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) Except as provided in 326 IAC 2-7-19(e), 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.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][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 2-7-5(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 Opacity [326 IAC 5-1]**

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

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

**C.3 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.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]**

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

**C.5 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.6 Operation of Equipment [326 IAC 2-7-6(6)]**

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

**C.7 Stack Height [326 IAC 1-7]**

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

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

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

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

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(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.

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-7-5(12)] [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.16 Response to Excursion or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

The statement must be submitted to:

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

The emission statement does require the certification by the responsible official as defined by 326 IAC 2-7-1(34).

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

**C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]**

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

or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]**

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(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

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

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

- (f) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

**Stratospheric Ozone Protection**

**C.21 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) One (1) reverberatory melt furnace identified as A1 with a maximum melt capacity of 3.83 tons of aluminum per hour, installed in August 2002, equipped with four (4) natural gas fired burners rated at 9.2 million (MM) British thermal units (Btu) per hour total, exhausting through one (1) stack identified as E-1.
- (b) One (1) reverberatory melt furnace identified as A2 with a maximum melt capacity of 3.28 tons of aluminum per hour, installed in August 2002, equipped with three (3) natural gas fired burners rated at 7.86 MMBtu per hour total, exhausting through one (1) stack identified as E-2.
- (c) One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 6.0 tons of aluminum per hour, installed in July 2003, equipped with two (2) natural gas fired burners rated at 24.0 MMBtu per hour total, exhausting through one (1) stack identified as E-3.
- (d) One (1) reverberatory melt furnace identified as A4 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1974, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-4.
- (e) One (1) reverberatory melt furnace identified as A5 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1976, equipped with two (2) natural gas fired burners rated at 6.7 MMBtu per hour total, exhausting through one (1) stack identified as E-5.
- (f) One (1) reverberatory melt furnace identified as A6 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1978, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-6.
- (g) One (1) reverberatory melt furnace identified as A7 with a maximum melt capacity of 1.0 ton of aluminum per hour, installed in 1982, equipped with two (2) natural gas fired burners rated at 5.2 MMBtu per hour total, exhausting through one (1) stack identified as E-7.
- (h) One (1) reverberatory melt furnace identified as A8 with a maximum melt capacity of 0.25 tons of aluminum per hour, installed in 1993, equipped with one (1) natural gas fired burner rated at 2.5 MMBtu per hour, exhausting through one (1) stack identified as E-8.
- (i) One (1) reverberatory melt furnace identified as A9 with a maximum melt capacity of 2.5 tons of aluminum per hour, installed 1994, equipped with four (4) natural gas fired burners rated at 10.6 MMBtu per hour total, exhausting through one (1) stack identified as E-9.
- (j) One (1) reverberatory melt furnace identified as A10 with a maximum melt capacity of 2.5 tons of aluminum per hour, installed 1995, equipped with six (6) natural gas fired burners rated at 9.0 MMBtu per hour total, exhausting through one (1) stack identified as E-10.
- (k) One (1) reverberatory melt furnace identified as A11 with a maximum melt capacity of 0.9 tons of aluminum per hour, installed 1996, equipped with six (6) natural gas fired burners rated at 15.9 MMBtu per hour total, exhausting through one (1) stack identified as E-11.
- (l) One (1) reverberatory melt furnace identified as A12 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-12.
- (m) One (1) reverberatory melt furnace identified as A13 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 MMBtu per hour total, exhausting through one (1) stack identified as E-13.
- (n) The maximum solid reactive flux injection rate at each of reverberatory furnaces A1 through A13 is ten (10) pounds of flux per 10,000 pounds of aluminum melted.
- (o) Source aluminum casting operations:
  - (1) Aluminum pouring and casting operations for furnaces A1 through A11, excluding A3, rated at 18.01 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (2) Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (3) Aluminum pouring and casting operation for furnaces A12 and A13, identified as ME Cell, rated at 7.0 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (4) Holding furnaces used in source casting operations, each exhausting inside the building except as indicated, and including:
    - (A) Twenty-seven (27) "basic holding furnaces", including:
      - (i) Two (2) natural gas-fired holding furnaces identified as S1 and S2, each with a maximum heat input rating of 5.8 MMBtu per hour and a nominal holding capacity of 5,000 pounds molten metal, exhausting through one (1) common stack. Each furnace performs degassing as needed using argon or nitrogen;
      - (ii) One (1) natural gas-fired holding furnace identified as H1 with a maximum heat input rating of 1.48 MMBtu per hour and a nominal holding capacity of 7,000 pounds molten metal. This furnace performs degassing as needed using argon or nitrogen;

- (iii) Four (4) natural gas-fired holding furnaces respectively identified as Pots 1A, 1B, 8 and 9, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal. Each furnace performs degassing as needed using argon or nitrogen;
  - (iv) Two (2) natural gas-fired holding furnaces respectively identified as Pots 44 and 45, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment;
  - (v) Two (2) natural gas-fired holding furnaces respectively identified as Pots 46 and 47, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal, performing no additional degassing or rotofluxing;
  - (vi) Six (6) natural gas-fired holding furnaces respectively identified as Pots 17 through 20, 30 and 31, each with a total maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,500 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment; and
  - (vii) Ten (10) electric holding furnaces respectively identified as Pots 34 through 43, each with a nominal holding capacity of 2,000 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment.
- (B) Three (3) "special holding furnaces" as follows:
- (i) One (1) electric holding furnace, identified as SP1, with a total nominal holding capacity of 7,000 pounds molten metal and consisting of a receiving-holding pot, an electric heat transfer, and a pouring-holding supply pot. The furnace performs degassing as needed using argon or nitrogen; and
  - (ii) Two (2) electric holding furnaces, identified as SP2 and SP3, each with a nominal holding capacity of 14,000 pounds molten metal and each consisting of a receiving-holding pot, an electric heat transfer, and a pouring-holding supply pot. Each furnace performs degassing as needed using argon or nitrogen.
- (p) One (1) sand core line, approved for construction in 2007, consisting of the following equipment:
- (1) One (1) sand core knockout box, approved for construction in 2007, identified as TTA-KO, with a maximum capacity of 1,738 pounds per hour, venting inside. [326 IAC 6-3-2]
  - (2) Other emission units, not regulated by a NESHAP, with PM-10, NO<sub>x</sub>, and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
    - (A) One (1) manual sand handling system, identified as Sigma Sand F94A1, with a maximum of 429.24 tons of core sand and 1,200 tons of purchased sand cores per twelve (12) consecutive month period, with emissions venting inside.
    - (B) One (1) shell core production unit, identified as Shell 1, heated by a natural gas unit rated at 2.2 MMCF/yr, with a maximum capacity of forty-eight (48) two (2) pound cores per hour, and venting indoors. [326 IAC 6-2-4]
    - (C) One holding furnace, identified as TTA/INT, with a maximum capacity of 748.05 gallons of molten aluminum, heated by a natural gas unit rated at 13.0 MMCF/yr. [326 IAC 6-2-4]
    - (D) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station TTA, rated at a maximum capacity of 150 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
    - (E) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 059, rated at a maximum capacity of 500 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
    - (F) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 558, rated at a maximum capacity of 760

	pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
(G)	One (1) casting cooler hanger, identified as TTC-CC, with a maximum capacity of 40 parts per hour.
(H)	One (1) casting cooler rack hanger, identified as 059/558-CC, with a maximum capacity of 50 parts per hour.
(I)	One (1) sawing and trimming operation for casting station TTA, identified as TTA-TR, processing up to a total of 20 pounds aluminum per hour.
(J)	One (1) sawing and trimming operation for casting stations 059 and 558, identified as 059/558-TR, processing up to 230 pounds of aluminum per hour.
(3)	Three (3) shot blast cleaners, approved for construction in 2007, identified as Blast 1 through Blast 3, each with a maximum throughput capacity of 1.6 tons per hour, each controlled by one (1) baghouse identified as Blast1A, Blast2A, and Blast3A, respectively, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]

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

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

#### D.1.1 PSD Minor Limits [326 IAC 2-2]

Pursuant to Significant Permit Revision No. 033-17746, issued on January 14, 2004, and revised by this Title V permit, the source shall limit the total aluminum production in reverberatory melt furnaces A1 through A13 as follows:

- (a) The total aluminum produced in reverberatory furnaces A2, A3, A4, A6, A7, A8, A10, A11, and A12 shall not exceed 28,910.3 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month:
  - (1) PM emissions from each furnace shall not exceed 4.3 pounds of PM per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle; and
  - (2) PM-10 emissions from each furnace shall not exceed 2.6 pounds of PM-10 per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.
  
- (b) The total aluminum produced in reverberatory furnaces A1, A5, A9, and A13 shall not exceed 16,072.5 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month:
  - (1) PM emissions from each furnace shall not exceed 3.0 pounds of PM per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle; and
  - (2) PM-10 emissions from each furnace shall not exceed 2.6 pounds of PM-10 per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.

Compliance with these limits in conjunction with the PM and PM-10 emissions from all other emission units at this source, shall ensure that the source-wide PM and PM-10 emissions are limited to less than 250 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) are rendered not applicable.

D.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-4.1-1]

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- (a) The Permittee shall limit flux usage as follows:
  - (1) For chlorine-based fluxing:
    - (A) The total hexachloroethane input usage at the source, including all reverberatory and holding furnaces, shall not exceed 10,541 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
    - (B) The chlorine content in the flux shall not exceed 92.4 percent (%) by weight.
    - (C) The total emissions of chlorine from all reverberatory and holding furnaces shall not exceed 4.87 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) For fluorine-based fluxing:
    - (A) The total SF-350 type flux input usage at the source, including all reverberatory and holding furnaces, shall not exceed 79,578 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
    - (B) The fluorine content in the flux shall not exceed 21.614 percent (%) by weight.
    - (C) The total emissions of fluorine from all reverberatory and holding furnaces shall not exceed 8.60 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The Permittee shall limit HAP emissions for the sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO as follows:
  - (1) The total sand usage for the sand core line shall not exceed 700.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) The total emissions of any combination of HAPs from the sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO shall not exceed 10.09 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (3) The emissions of any single HAP from the sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO shall not exceed 9.88 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Compliance with the single and combination HAP limits in this condition, in conjunction with single and combination HAP emissions from all other emission units including insignificant activities, shall ensure that the source-wide potential to emit HAPs is less than ten (10) tons of a single HAP and less than twenty-five (25) tons of a combination of HAPs per twelve (12) consecutive month period, respectively, with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-4.1-1 and 326 IAC 20-1 are rendered not applicable.

D.1.3 Volatile Organic Compounds [326 IAC 8-1-6]

- (a) The emissions of VOC from the sand core making operation identified as Shell 1 shall not exceed 116.53 pound of VOC per ton of sand with compliance determined at the end of each month.
- (b) The total throughput of sand to the sand core making operation identified as Shell 1 shall not exceed 420.48 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall ensure that the sand core making operation potential to emit VOC is less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 8-1-6 are rendered not applicable to the sand core making operation.

D.1.4 Volatile Organic Compounds [326 IAC 8-1-6]

- (a) The emissions of VOC from the pouring/cooling operations identified as units 059, 558, and TTA shall not exceed 0.14 pound of VOC per ton of aluminum each with compliance determined at the end of each month.
- (b) The throughput of aluminum to the pouring/cooling unit 059 shall not exceed 2,190 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) The throughput of aluminum to the pouring/cooling unit 558 shall not exceed 3,328.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) The throughput of aluminum to the pouring/cooling unit TTA shall not exceed 657 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (e) The emissions of VOC from the knock out operation identified as unit TTA-KO shall not exceed 1.20 pound of VOC per ton of aluminum with compliance determined at the end of each month.
- (f) The throughput of aluminum to the knock out operation identified as unit TTA-KO shall not exceed 6,175.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall ensure that the potential to emit VOC from the pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO are less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 8-1-6 are rendered not applicable to the sand core line.

D.1.5 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the facilities listed below shall be limited as specified when operating at the respective process weight:

Emission Unit/Activity	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Reverberatory furnace A1	3.83	10.08
Reverberatory furnace A2	3.28	9.09

Emission Unit/Activity	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Reverberatory furnace A3	6.00	13.62
Reverberatory furnace A4	1.25	4.76
Reverberatory furnace A5	1.25	4.76
Reverberatory furnace A6	1.25	4.76
Reverberatory furnace A7	1.00	4.10
Reverberatory furnace A8	0.25	1.62
Reverberatory furnace A9	2.50	7.58
Reverberatory furnace A10	2.50	7.58
Reverberatory furnace A11	0.90	3.82
Reverberatory furnace A12	3.50	9.49
Reverberatory furnace A13	3.50	9.49
Pouring and casting for furnaces A1 through A11 (excludes A3)	18.01	28.44
FLCA pouring and casting for furnace A3	6.00	13.61
ME Cell pouring and casting for furnaces A12 & A13	7.00	15.10
Pouring and cooling for station 059	0.29	1.8
Pouring and cooling for station 558	0.46	2.5
Pouring and cooling for station TTA	0.12	1.0
Sand core knockout unit TTA-KO	0.87	3.7
Shot Blast Cleaners #1 - #3	4.8	11.7

The pounds per hour allowable particulate emission rates were calculated with the following equation:

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

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

**D.1.6 Secondary Aluminum Production Facility NESHAP [4 CFR Part 63, Subpart RRR]**

- (a) The Permittee shall only melt clean charge, customer returns, or internal scrap in the aluminum foundry as defined under 40 CFR 63.1503. The Permittee shall not operate sweat furnaces, thermal chip dryers, or dryers/delacquering kilns/decoating kilns. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.
- (b) The Permittee shall notify U.S. EPA in writing at least 30 days prior to charging any materials other than clean charge, internal scrap, or customer returns, or operating sweat furnaces, thermal chip dryers, or dryers/delacquering kilns/decoating kilns.

- (c) If the Permittee chooses to change its operations, as described in paragraph (b) above, it will fully comply with the NESHAP General Provisions at 40 CFR 63, Subpart A and the NESHAP for Secondary Aluminum Production at 40 CFR 63, Subpart RRR.
- (d) Any change or modification to this source as described in paragraph (b) above shall also require prior approval from the Office of Air Quality (OAQ) before such change can occur.

**D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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

**Compliance Determination Requirements**

**D.1.8 Hazardous Air Pollutants**

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- (a) In order to determine compliance with twelve (12) consecutive month limit in Condition D.1.2(a), the HAP emission rates shall be calculated monthly based on complete (100%) chemical conversion using the following equation:

$$E = L * P$$

Where E = Rate of emission in tons per month;  
L = Actual usage rate of flux in tons per month; and  
P = HAP percent by weight.

- (b) In order to determine compliance with the twelve (12) consecutive month limit in Condition D.1.2(b)(2), the total emissions of any combination of HAPs shall be calculated monthly based on the following equation:

$$\text{HAPs (Combined HAPs)} = (A + B + C) * D$$

Where: A = phenol-formaldehyde copolymer percent by weight;  
B = phenol percent by weight;  
C = formaldehyde percent by weight; and  
D = sand usage per month.

- (c) In order to determine compliance with the twelve (12) consecutive month limit in Condition D.1.2(b)(3), the emissions of any single HAP shall be calculated monthly based on the following equations:

$$\text{HAPs (phenol)} = (A + B) * D$$

$$\text{HAPs (formaldehyde)} = (A + C) * D$$

Where: A = phenol-formaldehyde copolymer percent by weight;  
B = phenol percent by weight;  
C = formaldehyde percent by weight; and  
D = sand usage per month.

**D.1.9 Particulate Control [326 IAC 2-7-6(6)]**

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- (a) In order to comply with Condition D.1.5, the baghouses for particulate control shall be in operation and control emissions from the shot blast cleaners #1 - #3 at all times these units are in operation.

- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

**D.1.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

- (a) In order to demonstrate compliance with Conditions D.1.1 and D.1.5, the following shall apply:

- (1) For the purposes of PM and PM-10 compliance stack testing, the thirteen (13) furnaces at this source are grouped as follows:

**Group A:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A8	0.25	2.5 (1 burner)
A11	0.9	15.9 (6 burners, total)
A7	1.0	5.2 (2 burners, total)

**Group B:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A4	1.25	10.05 (3 burners, total)
A5	1.25	6.7 (2 burners, total)
A6	1.25	10.05 (3 burners, total)

**Group C:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A9	2.5	10.6 (4 burners, total)
A10	2.5	9.0 (6 burners, total)
A2	3.28	9.2 (4 burners, total)
A12	3.5	12.5 (2 burners, total)

**Group D:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A13	3.5	12.5 (2 burners, total)
A1	3.83	9.2 (4 burners, total)
A3	6.0	24.2 (2 burners, total)

- (2) The Permittee shall perform PM and PM-10 testing on one (1) furnace from each of Groups A, B, C and D by April 25, 2008. The tests shall be conducted during metal melting and metal fluxing utilizing methods as approved by the Commissioner. This test shall be repeated every 2.5 years from the date of the prior valid compliance demonstration. If more than one (1) unit in a group has been in operation since the last valid compliance demonstration, the source will test the furnace for which the longest period of time has passed since the last valid compliance test. The first complete PM/PM-10 testing of Groups A, B and C shall not include furnaces A11, A5, A6, A9 and A2. Testing shall be conducted in accordance with Section C- Performance Testing. PM-10 includes filterable and condensable PM-10.

- (b) In order to demonstrate compliance with Condition D.1.3, the Permittee shall perform VOC testing for the sand core making operation identified as Shell 1, within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance

demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

- (c) In order to demonstrate compliance with Condition D.1.4, the Permittee shall perform VOC testing for the pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO, within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

#### **D.1.11 Visible Emissions Notations**

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- (a) Visible emission notations of the reverberatory melt furnaces' exhaust stacks (E-1 through E-13) shall be performed once per day during normal daylight operations when metal melting and fluxing is occurring and when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### **D.1.12 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

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- (a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the shot blast cleaners at least once per day when the shot blast cleaners are in operation. When for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### **D.1.13 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

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- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B – Emergency Provisions).

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

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

### **D.1.14 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Total aluminum produced in furnaces A2, A3, A4, A6, A7, A8, and A10 - A12 for each month; and
  - (3) Total aluminum produced in furnaces A1, A5, A9, and A13 for each month.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (7) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (1) Calendar dates covered in the compliance determination period.
  - (2) Total hexachloroethane input usage at the source for each month, and weight percent of chlorine in the hexachloroethane flux.
  - (3) Total SF-350 type flux input usage at the source for each month, and weight percent of fluorine in the SF-350 type flux.
  - (4) The total weight of HCl and HF, each as a single HAP, emitted for each compliance period based on the equation utilized in Condition D.1.8.
  - (5) Total sand usage, core sand and purchased sand cores, for each compliance period.
  - (6) The HAPs content of the core sand and purchased sand cores used on a monthly basis.
    - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
    - (B) Records shall include the weight percent of phenol, formaldehyde, and phenol-formaldehyde copolymer.
  - (7) The weight of single HAP and combined HAPs emitted for each compliance period based on the equations utilized in Condition D.1.8.
- (c) To document compliance with Condition D.1.3, the Permittee shall maintain records for the sand throughput in the sand core making operation identified as Shell 1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (d) To document compliance with Condition D.1.4, the Permittee shall maintain records for the aluminum throughput in the pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (e) To document compliance with Condition D.1.11, the Permittee shall maintain a daily record of visible emission notations of the reverberatory melt furnaces' exhaust stacks (E-1 through E-13). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (f) To document compliance with D.1.12, the Permittee shall maintain a daily record of the pressure drop across the baghouses controlling shot blast cleaners #1 - #3, identified as Blast1A through Blast3A. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.15 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the calendar quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**SECTION D.2 FACILITY OPERATION CONDITIONS**

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

The following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
  - (1) two (2) sawing and trimming operations for furnaces A1 through A13, excluding A3, individually identified as C-1 and C-2, installed in 1964, processing up to a total of 3.8 tons aluminum per hour; and
  - (2) sawing and trimming operation for furnace A3, installed in 2003, processing up to 3.0 tons aluminum per hour,

utilizing two (2) cyclones for particulate matter control each exhausting through one (1) stack respectively identified as E-14 and E-15. [326 IAC 6-3-2]
- (b) One (1) shot blast cleaner, constructed in 1980, identified as Blast 4, with a maximum throughput capacity of 1.5 tons per hour, PM controlled by one (1) baghouse identified as Blast4, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors.

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

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

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the facilities listed below shall be limited as specified when operating at the respective process weight:

Emission Unit/Activity	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Sawing and trimming C-1 and C-2	3.8	10.0
Sawing and trimming for furnace A3	3.0	8.6
Shot blast cleaner #4	1.5	5.4

The pounds per hour allowable particulate emission rates were calculated with the following equation:

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

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

**D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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

## Compliance Determination Requirements

### D.2.3 Particulate Control

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- (a) In order to comply with Condition D.2.1, the cyclones for particulate control shall be in operation and control emissions from the saw/trim facilities at all times that these facilities are in operation.
- (b) In order to comply with Condition D.2.1, the baghouse for particulate control shall be in operation and control emissions from the shot blast cleaner #4 at all times that this unit is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

### D.2.4 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

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- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the shot blast cleaners at least once per day when the shot blast cleaner is in operation. When for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

### D.2.5 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

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

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

### **D.2.6 Record Keeping Requirements**

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- (a) To document compliance with D.2.4, the Permittee shall maintain a daily record of the pressure drop across the baghouse controlling shot blast cleaner #4, identified as Blast4A. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Citation Corporation  
Source Address: 600 West Main Street, Butler, IN 46721  
Mailing Address: P.O. Box 80, Butler, IN 46721  
Part 70 Permit No.: T033-17659-00016

**This certification shall be included when submitting monitoring, testing reports/results  
or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Citation Corporation  
Source Address: 600 West Main Street, Butler, IN 46721  
Mailing Address: P.O. Box 80, Butler, IN 46721  
Part 70 Permit No.: T033-17659-00016

**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
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
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: \_\_\_\_\_

A certification is not required for this report.

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

### Part 70 Quarterly Report

Source Name: Citation Corporation  
 Source Address: 600 West Main Street, Butler, IN 46721  
 Mailing Address: P.O. Box 80, Butler, IN 46721  
 Part 70 No.: T033-17659-00016  
 Facility: Reverberatory melt furnaces A1 through A13  
 Parameter: Aluminum produced  
 Limit (a) total aluminum produced in reverberatory furnaces A2, A3, A4, A6, A7, A8, A10, A11, and A12 shall not exceed 28,910.3 tons per 12 consecutive month period with compliance determined at the end of each month  
 (b) total aluminum produced in reverberatory furnaces A1, A5, A9, and A13 shall not exceed 16,072.5 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: \_\_\_\_\_

Month	Aluminum Produced This Month (tons)		Aluminum Produced Previous 11 Months (tons)		12 Month Aluminum Produced (tons)	
	A2, A3, A4, A6, A7, A8, A10, A11, A12(total)	A1, A5, A9, A13 (total)	A2, A3, A4, A6, A7, A8, A10, A11, A12(total)	A1, A5, A9, A13 (total)	A2, A3, A4, A6, A7, A8, A10, A11, A12(total)	A1, A5, A9, A13 (total)
Month 1						
Month 2						
Month 3						

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

Source Name: Citation Corporation  
 Source Address: 600 West Main Street, Butler, IN 46721  
 Mailing Address: P.O. Box 80, Butler, IN 46721  
 Part 70 No.: T033-17659-00016  
 Facility: Entire source  
 Parameter: Hexachloroethane input usage in the chlorine-based fluxing process; and SF-350 type flux input usage in the fluorine-based fluxing process  
 Limit: (a) For chlorine-based fluxing:  
 total hexachloroethane input usage at the source, including all reverberatory and holding furnaces, shall not exceed 10,541 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month  
 (b) For fluorine-based fluxing:  
 total SF-350 type flux input usage at the source, including all reverberatory and holding furnaces, shall not exceed 79,578 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month

YEAR: \_\_\_\_\_

Month	Input Usage at Source This Month (tons)		Input Usage at Source Previous 11 Months (tons)		12 Month Input Usage at Source (tons)	
	hexachloroethane	SF-350 flux	hexachloroethane	SF-350 flux	hexachloroethane	SF-350 flux
Month 1						
Month 2						
Month 3						

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

Source Name: Citation Corporation  
 Source Address: 600 West Main Street, Butler, IN 46721  
 Mailing Address: P.O. Box 80, Butler, IN 46721  
 Part 70 No.: T033-17659-00016  
 Facility: Sand Core Line - sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO  
 Parameter: Sand usage  
 Limit: total sand usage for the sand core line, including core sand and purchased sand cores, shall not exceed 700.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: \_\_\_\_\_

Month	Sand Usage This Month (tons)			Sand Usage Previous 11 Months (tons)			12 Month Sand Usage (tons)		
	Shell 1	Units 059, 558, TTA, and TTA-KO	Total	Shell 1	Units 059, 558, TTA, and TTA-KO	Total	Shell 1	Units 059, 558, TTA, and TTA-KO	Total
Month 1									
Month 2									
Month 3									

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

Source Name: Citation Corporation  
 Source Address: 600 West Main Street, Butler, IN 46721  
 Mailing Address: P.O. Box 80, Butler, IN 46721  
 Part 70 No.: T033-17659-00016  
 Facility: Sand Core Line  
 Parameter: Single and Total HAPs  
 Limit: (a) The total combined HAPs from the pouring/cooling and knock out associated with the sand core line shall not exceed 10.09 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit shall be determined using the following equation:

HAPs (Combined HAPs) = (A + B + C) \* D  
 Where: A = phenol-formaldehyde percent by weight;  
 B = phenol percent by weight;  
 C = formaldehyde percent by weight; and  
 D = sand usage per month.

(b) The total single HAP from the pouring/cooling and knock out associated with the sand core line shall not exceed 9.88 tons per twelve consecutive month period. Compliance with this limit shall be determined using the following equations:

HAPs (phenol) = (A + B) \* D  
 HAPs (formaldehyde) = (A + C) \* D  
 Where: A = phenol-formaldehyde percent by weight;  
 B = phenol percent by weight;  
 C = formaldehyde percent by weight; and  
 D = sand usage per month.

YEAR: \_\_\_\_\_

Month	Total for This Month (tons)		Total for Previous 11 Months (tons)		Total for 12 Months (tons)	
	Single HAP	Combined HAPs	Single HAP	Combined HAPs	Single HAP	Combined HAPs
Month 1						
Month 2						
Month 3						

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

Source Name: Citation Corporation  
 Source Address: 600 West Main Street, Butler, IN 46721  
 Mailing Address: P.O. Box 80, Butler, IN 46721  
 Part 70 No.: T033-17659-00016  
 Facility: Entire Source  
 Parameter: Single and Total HAPs

- Limit: (a) The total emissions of chlorine from the source, including all reverberatory and holding furnaces, shall not exceed 4.87 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit shall be determined using the equation found in (c).
- (b) The total emissions of fluorine from the source, including all reverberatory and holding furnaces, shall not exceed 8.60 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit shall be determined using the equations found in (c).
- (c) In order to determine compliance with twelve (12) consecutive month limits in (a) and (b), the HAP emission rates shall be calculated monthly based on complete (100%) chemical conversion using the following equation:

$$E = L * P$$

Where E = Rate of emission in tons per month;  
 L = Actual usage rate of flux in tons per month; and  
 P = HAP percent by weight.

YEAR: \_\_\_\_\_

Month	Total for This Month (tons)		Total for Previous 11 Months (tons)		Total for 12 Months (tons)	
	Chlorine	Fluorine	Chlorine	Fluorine	Chlorine	Fluorine
Month 1						
Month 2						
Month 3						

- No deviation occurred in this quarter.  
 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

## Part 70 Quarterly Report

Source Name: Citation Corporation  
Source Address: 600 West Main Street, Butler, IN 46721  
Mailing Address: P.O. Box 80, Butler, IN 46721  
Part 70 No.: T033-17659-00016  
Facility: The sand core making operation identified as Shell 1  
Parameter: Total VOC emissions  
Limit: The emissions of VOC from the sand core making operation identified as Shell 1 shall not exceed 116.53 pound of VOC per ton of sand with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Total VOC This Month (tons)	Total VOC Previous 11 Months (tons)	Total VOC 12 Months (tons)
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

Source Name: Citation Corporation  
 Source Address: 600 West Main Street, Butler, IN 46721  
 Mailing Address: P.O. Box 80, Butler, IN 46721  
 Part 70 No.: T033-17659-00016  
 Facility: Pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO

Parameter: Aluminum throughput  
 Limit: (a) The throughput of aluminum to the pouring/cooling unit 059 shall not exceed 2,190 tons per twelve (12) consecutive month period with compliance determined at the end of each month.  
 (b) The throughput of aluminum to the pouring/cooling unit 558 shall not exceed 3,328.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.  
 (c) The throughput of aluminum to the pouring/cooling unit TTA shall not exceed 657 tons per twelve (12) consecutive month period with compliance determined at the end of each month.  
 (d) The throughput of aluminum to the knock out operation identified as unit TTA-KO shall not exceed 6,175.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Total Aluminum This Month (tons)				Total Aluminum Previous 11 Months (tons)				Total Aluminum 12 Months (tons)			
	059	558	TTA	TTA-KO	059	558	TTA	TTA-KO	059	558	TTA	TTA-KO
Month 1												
Month 2												
Month 3												

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

## PART 70 OPERATING PERMIT QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Citation Corporation  
Source Address: 600 West Main Street, Butler, IN 46721  
Mailing Address: P.O. Box 80, Butler, IN 46721  
Part 70 No.: T033-17659-00016

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

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, 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".</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Part 70 Significant Source and Significant Permit Modification

#### Source Description and Location

Source Name:	Citation Corporation
Source Location:	600 West Main Street, Butler, IN 46721
Mailing Address:	P.O. Box 80, Butler, IN 46721
County:	Dekalb
SIC Code:	3365 and 3363
Operation Permit No.:	T033-17659-00016
Operation Permit Issuance Date:	August 6, 2004
Significant Source Modification No.:	033-24343-00016
Significant Permit Modification No.:	033-24018-00016
Permit Reviewer:	Kristen Layton

#### Existing Approvals

The source was issued Part 70 Operating Permit No. T033-17659-00016 on August 6, 2004. The source has since received the following approvals:

- (a) Significant Permit Modification No. 033-19703-00016, issued on October 11, 2005; and
- (b) Significant Permit Modification No. 033-22252-00016, issued on June 28, 2006.

#### County Attainment Status

The source is located in Dekalb County.

Pollutant	Status
PM <sub>10</sub>	Attainment
PM <sub>2.5</sub>	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Dekalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Dekalb County has been classified as attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions.

- (c) Dekalb County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

**Source Status**

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

Pollutant	Emissions (ton/yr)
PM	Less than 100
PM <sub>10</sub>	Less than 100
SO <sub>2</sub>	0.9
VOC	7.9
CO	57.5
NO <sub>x</sub>	68.4

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) These emissions are based upon the Technical Support Document (TSD) to the Part 70 operating Permit No. T033-17659-00016.

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

HAPs	Potential To Emit (ton/yr)
Single HAP	Less than 10
Total HAPs	Less than 25

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

**Actual Emissions**

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

Pollutant	Actual Emissions (ton/yr)
PM	Not reported
PM <sub>10</sub>	24
SO <sub>2</sub>	8
VOC	5
CO	17
NO <sub>x</sub>	27
Total HAPs	Not reported

**Description of Proposed Modification**

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Citation Corporation on October 3, 2006, requesting a change to the testing requirements for existing reverberatory melt furnaces A1 through A13, from one (1) furnace per group (A-D) every twenty-one (21) months to one (1) furnace out of thirteen (13) every 2.5 years. Upon further review, IDEM, OAQ Compliance Branch has determined that a testing frequency of one (1) furnace per group (A-D) once every 2.5 years is sufficient for the reverberatory furnaces at this source. Therefore, the testing frequency has been modified from one (1) furnace per group (A-D) every twenty-one (21) months to one (1) furnace per group (A-D) once every 2.5 years. Furthermore, on December 1, 2006, Citation Corporation submitted an application proposing the addition of the following units:

- (a) The construction and operation of the following new units:
  - (1) One (1) sand core line, approved for construction in 2007, consisting of:
    - (A) One (1) sand core knockout box, approved for construction in 2007, identified as TTA-KO, with a maximum capacity of 1,738 pounds per hour, venting inside. [326 IAC 6-3-2]
    - (B) Other emission units, not regulated by a NESHAP, with PM-10, NO<sub>x</sub>, and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
      - (i) One (1) manual sand handling system, identified as Sigma Sand F94A1, with a maximum of 429.24 tons of core sand and 1,200 tons of purchased sand cores per twelve (12) consecutive month period, with emissions venting inside.
      - (ii) One (1) shell core production unit, identified as Shell 1, heated by a natural gas unit rated at 0.25 MMBtu/hr, with a maximum capacity of forty-eight (48) two (2) pound cores per hour, and venting indoors. [326 IAC 6-2-4]
      - (iii) One holding furnace, identified as TTA/INT, with a maximum capacity of 748.05 gallons of molten aluminum, heated by a natural gas unit rated at 1.5 MMBtu/hr. [326 IAC 6-2-4]

- (iv) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station TTA, rated at a maximum capacity of 150 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  - (v) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 059, rated at a maximum capacity of 500 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  - (vi) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 558, rated at a maximum capacity of 760 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  - (vii) One (1) casting cooler hanger, identified as TTC-CC, with a maximum capacity of 40 parts per hour.
  - (viii) One (1) casting cooler rack hanger, identified as 059/558-CC, with a maximum capacity of 50 parts per hour.
  - (ix) One (1) sawing and trimming operation for casting station TTA, identified as TTA-TR, processing up to a total of 20 pounds aluminum per hour.
  - (x) One (1) sawing and trimming operation for casting stations 059 and 558, identified as 059/558-TR, processing up to 230 pounds of aluminum per hour.
- (C) Three (3) shot blast cleaners, approved for construction in 2007, identified as Blast 1 through Blast 3, each with a maximum throughput capacity of 1.6 tons per hour, each controlled by one (1) baghouse identified as Blast1A, Blast2A, and Blast3A, respectively, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]
- (b) The following existing insignificant activity:
- (1) One (1) shot blast cleaner, constructed in 1980, identified as Blast 4, with a maximum throughput capacity of 1.5 tons per hour, PM controlled by one (1) baghouse identified as Blast4, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]

Due to the addition of this equipment, the single and combined HAP limits for individual emission units have been modified. The source-wide HAP emissions are still limited to less than ten (10) and twenty-five (25) tons per year for single and combined HAPs, respectively.

<b>Enforcement Issues</b>
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IDEM is aware that equipment has been operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the operating permit rules.

**Emission Calculations**

See Appendix A of this Technical Support Document for detailed emission calculations.

**Permit Level Determination – Part 70**

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

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

<b>Pollutant</b>	<b>Potential To Emit (ton/yr)</b>
PM	495.07
PM <sub>10</sub>	60.87
SO <sub>2</sub>	0.06
VOC	28.66
CO	18.66
NO <sub>x</sub>	0.79
Total HAPs	21.14

This source modification is subject to 326 IAC 2-7-10.5(f)(4), because the modification has "a potential to emit greater than or equal to twenty-five (25) tons per year of particulate matter (PM) or particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM-10)." Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because it does require a case-by-case determination of an emission limitation and involves a significant change to an existing monitoring requirement in the Part 70 Permit.

**Permit Level Determination – PSD**

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

<b>Process</b>	<b>Potential to Emit (ton/yr)</b>					
	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>VOC</b>	<b>CO</b>	<b>NO<sub>x</sub></b>
Unit 059, 558, and TTA	12.97	6.36	0.06	0.43	18.53	0.03
TTA/INT	0.01	0.05	-	0.01	0.04	0.65
TTA-KO	9.88	6.92	-	3.71	-	-
Blast 1, Blast 2, Blast 3, and Blast 4	4.69	0.47	-	-	-	-
Shell 1	0.19	0.19	-	24.51	0.09	0.11
Sigma Sand F94A1	2.92	0.44	-	-	-	-
TTA-TR and 059/558-TR	0.01	2.46E-03	-	-	-	-
<b>Total for Modification</b>	<b>30.67</b>	<b>14.43</b>	<b>0.06</b>	<b>28.66</b>	<b>18.66</b>	<b>0.79</b>
Major Source Threshold	250	250	250	250	250	250

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

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

<b>Potential to Emit (ton/yr)</b>						
<b>Process</b>	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>VOC</b>	<b>CO</b>	<b>NO<sub>x</sub></b>
Metal Smelting	86.3	58.5	-	0.9	-	-
Pouring/Cooling	21.27	14.66	0.56	3.63	18.53	0.23
Holding Furnace	0.01	0.05	-	0.01	0.04	0.65
Sand Core Knockout	9.88	6.92	-	3.71	-	-
Shot Blasting	4.69	0.47	-	-	-	-
Shell Core Unit	0.19	0.19	-	24.51	0.09	0.11
Sand Handling	2.92	0.44	-	-	-	-
Combustion	1.3	5.2	0.4	3.8	57.5	68.4
Sawing and Trimming	4.11	4.10	-	-	-	-
<b>Total for Source</b>	<b>130.67</b>	<b>90.53</b>	<b>0.96</b>	<b>36.56</b>	<b>76.16</b>	<b>69.39</b>
Major Source Threshold	250	250	250	250	250	250

**Federal Rule Applicability Determination**

There is no change in the federal applicability requirements due to this modification.

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
  - (2) is subject to an emission limitation or standard for that pollutant; and
  - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

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

<b>CAM Applicability Analysis</b>							
<b>Emission Unit</b>	<b>Control Device Used</b>	<b>Emission Limitation (Y/N)</b>	<b>Uncontrolled PTE of Phenol / Phenol-formaldehyde Copolymer (ton/yr)</b>	<b>Controlled PTE of Phenol / Phenol-formaldehyde Copolymer (ton/yr)</b>	<b>Part 70 Major Source Threshold (ton/yr)</b>	<b>CAM Applicable (Y/N)</b>	<b>Large Unit (Y/N)</b>
Blast 1	baghouse	Y	negligible	negligible	10	N	N
Blast 2	baghouse	Y	negligible	negligible	10	N	N
Blast 3	baghouse	Y	negligible	negligible	10	N	N
Blast 4	baghouse	N	negligible	negligible	10	N	N

<b>CAM Applicability Analysis</b>							
<b>Emission Unit</b>	<b>Control Device Used</b>	<b>Emission Limitation (Y/N)</b>	<b>Uncontrolled PTE of Phenol / Phenol-formaldehyde Copolymer (ton/yr)</b>	<b>Controlled PTE of Phenol / Phenol-formaldehyde Copolymer (ton/yr)</b>	<b>Part 70 Major Source Threshold (ton/yr)</b>	<b>CAM Applicable (Y/N)</b>	<b>Large Unit (Y/N)</b>
Station 059	none	Y	4.58	4.58	10	N	N
Station 558	none	Y	9.86	9.39	10	N	N
Station TTA	none	Y	5.28	5.28	10	N	N
Unit TTA-KO	none	Y	19.23	9.39	10	N	N
Unit TTA/INT	N	Y	negligible	negligible	10	N	N
Shell 1	N	Y	negligible	negligible	10	N	N
Unit TTA-TR	N	Y	negligible	negligible	10	N	N
Unit 059/558-TR	N	Y	negligible	negligible	10	N	N
Sigma Sand F94A1	N	Y	negligible	negligible	10	N	N

\* For sand core operations, HAPs are emitted during the pouring/cooling and knockout processes. Uncontrolled and controlled PTE numbers were calculated based on the maximum (controlled) or limited (uncontrolled) capacity of each unit and the assumption that 100% of phenol and phenol-formaldehyde copolymer is emitted by each unit.

<b>CAM Applicability Analysis</b>							
<b>Emission Unit</b>	<b>Control Device Used</b>	<b>Emission Limitation (Y/N)</b>	<b>Uncontrolled PTE of Formaldehyde / Phenol-formaldehyde Copolymer (ton/yr)</b>	<b>Controlled PTE of Formaldehyde / Phenol-formaldehyde Copolymer (ton/yr)</b>	<b>Part 70 Major Source Threshold (ton/yr)</b>	<b>CAM Applicable (Y/N)</b>	<b>Large Unit (Y/N)</b>
Blast 1	baghouse	Y	negligible	negligible	10	N	N
Blast 2	baghouse	Y	negligible	negligible	10	N	N
Blast 3	baghouse	Y	negligible	negligible	10	N	N
Blast 4	baghouse	N	negligible	negligible	10	N	N
Station 059	none	Y	4.82	4.82	10	N	N
Station 558	none	Y	10.38	9.88	10	N	N
Station TTA	none	Y	5.55	5.55	10	N	N
Unit TTA-KO	none	Y	20.24	9.88	10	N	N
Unit TTA/INT	N	Y	negligible	negligible	10	N	N
Shell 1	N	Y	negligible	negligible	10	N	N
Unit TTA-TR	N	Y	negligible	negligible	10	N	N
Unit 059/558-TR	N	Y	negligible	negligible	10	N	N
Sigma Sand F49A1	N	Y	negligible	negligible	10	N	N

\* For sand core operations, HAPs are emitted during the pouring/cooling and knockout processes. Uncontrolled and controlled PTE numbers were calculated based on the maximum (controlled) or limited (uncontrolled) capacity for each unit and the assumption that 100% of phenol and phenol-formaldehyde copolymer is emitted by each unit.

The total emissions for the new units of PM-10, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC are less than the Part 70 Major Source Threshold. Therefore, based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification.

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

### 326 IAC 2-2 (PSD)

This existing minor stationary source was initially constructed on or before 1974, prior to the August 7, 1977 rule applicability date. On December 4, 1998, U.S. EPA issued a memorandum clarifying that die casting operations are not considered as secondary aluminum production plants for purposes of PSD, provided two (2) critical criteria are met. These criteria include plant use of a feedstock that is of a specified alloy and purity (e.g., ingots) or scrap of a specified quality for which little fluxing or alloying is required; and the plant cannot produce intermediate forms of feedstock for sale or use by other sources. The Citation Butler plant previously did not use clean charge as their sole reverberatory furnace feedstock and, therefore, the plant die casting operation was considered a secondary metal production plant. However, an Administrative Consent Order (EPA-5-05-113(a)IN-07) was issued to Citation Corporation on March 31, 2005 wherein Citation Corporation certified that the only materials its Butler, Indiana facility melts are clean charge, customer returns, or internal scrap. Therefore, since the source now only uses clean charge in the reverberatory furnaces, this source is no longer considered 1 of the 28 listed source categories under 326 IAC 2-2. The major source threshold is now 250 tons per year of any criteria pollutant. This source shall continue to be a minor stationary source and, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

Pursuant to 40 CFR 63.1500 (d), the requirements of 40 CFR 63, Subpart RRR 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. An Administrative Consent Order (EPA-5-05-113(a)IN-07) was issued to Citation Corporation on March 31, 2005 wherein Citation Corporation certified that the only materials its Butler, Indiana facility melts are clean charge, customer returns, or internal scrap as defined in 40 CFR 63.1503 and it does not operate sweat furnaces, thermal chip dryers, or dryers/delacquering kilns/decoating kilns. Therefore, this source no longer meets the definition of a secondary aluminum production facility as defined in 40 CFR 63.1503. In the Administrative Consent Order, Citation also certified that it will notify U.S. EPA in writing at least 30 days prior to charging any materials other than clean charge, internal scrap, or customer returns, or operating sweat furnaces, thermal chip dryers, or dryers/delacquering kilns/decoating kilns. Citation also certified that if it chooses to change its operations, as described in the previous sentence, it will fully comply with the NESHAP General Provisions at 40 CFR 63, Subpart A and the NESHAP for Secondary Aluminum Production at 40 CFR 63, Subpart RRR.

The emission limits from the new units and the existing HAP limits shall ensure the operation of the facility will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

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

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the following operations shall not exceed the pounds per hour limits listed in the table below:

Summary of Process Weight Rate Limits		
Process / Emission Unit	P (ton/hr)	E (lb/hr)
Pouring/Cooling Station 059	0.29	1.8
Pouring/Cooling Station 558	0.46	2.5
Pouring/ Cooling Station TTA	0.12	1.0
Sand Core Knockout Unit TTA-KO	0.87	3.7
Shot Blast Cleaners #1 - #3	4.8	11.7
Shot Blast Cleaner #4	1.5	5.4

The pound per hour limitation was calculated with the following equation:

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

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

The baghouses shall be in operation at all times the shot blast cleaners are in operation, in order to comply with this limit.

- (b) Pursuant to 326 IAC 6-3-1(b)(4), the potential to emit for the holding furnace (TTA/INT), shell core unit (Shell 1), sand handling processes (Sigma Sand F94A1), and sawing and trimming units (TTA-TR and 059/558-TR) are less than 0.551 lb/hr each. Therefore, 326 IAC 6-3-2 is not applicable.

**326 IAC 8-1-6 (New Facilities; General Reduction Requirement)**

The TLI Coating Line will be constructed after January 1, 1980 and shall emit less than twenty-five (25) tons of VOC per year. Therefore, 326 IAC 8-1-6 does not apply.

**Compliance Determination and Monitoring Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

The compliance determination and monitoring requirements applicable to the new equipment in this modification are as follows:

- (1) Hazardous Air Pollutants  
(a) In order to determine compliance with twelve (12) consecutive month limit in Condition D.1.2(a), the HAP emission rates shall be calculated monthly based on complete (100%) chemical conversion using the following equation:

$$E = L * P$$

Where E = Rate of emission in tons per month;  
L = Actual usage rate of flux in tons per month; and  
P = HAP percent by weight.

- (b) In order to determine compliance with the twelve (12) consecutive month limit in Condition D.1.2(b)(2), the total emissions of any combination of HAPs shall be calculated monthly based on the following equation:

$$\text{HAPs (Combined HAPs)} = (A + B + C) * D$$

Where: A = phenol-formaldehyde copolymer percent by weight;

B = phenol percent by weight;  
C = formaldehyde percent by weight; and  
D = sand usage per month.

- (c) In order to determine compliance with the twelve (12) consecutive month limit in Condition D.1.2(b)(3), the emissions of any single HAP shall be calculated monthly based on the following equations:

$$\text{HAPs (phenol)} = (A + B) * D$$

$$\text{HAPs (formaldehyde)} = (A + C) * D$$

Where: A = phenol-formaldehyde copolymer percent by weight;  
B = phenol percent by weight;  
C = formaldehyde percent by weight; and  
D = sand usage per month.

- (2) **Particulate Control**  
In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (3) **Baghouse Parametric Monitoring**
- (a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the shot blast cleaners at least once per day when the shot blast cleaners are in operation. When for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.
- (4) **Broken or Failed Bag Detection**
- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B – Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B – Emergency Provisions).

These determination and monitoring conditions are necessary because the four (4) baghouses associated with the shot blast cleaners must operate properly to ensure compliance with 326 IAC 2-7-6 (Compliance Requirements), 326 IAC 2-7-5 (Permit Content), and 326 IAC 2-7 (Part 70).

**Proposed Changes**

The changes listed below have been made to Part 70 Operating Permit No. T033-17659-00016. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

- (1) The OAQ decided to delete the name and/or title of the Responsible Official (RO) in Section A.1, General Information, of the permit. However, OAQ will still be evaluating if a change in RO meets the criteria specified in 326 IAC 2-7-1(34). Additionally, per Administrative Consent Order (EPA-5-05-113(a)IN-07), issued on March 31, 2005, Citation Corporation is no longer classified as a secondary aluminum production facility. Therefore, SIC Code 3341 has been removed from Section A.1. The revised permit condition is as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and a stationary aluminum foundry and die casting operation plant.

<del>Responsible Official:</del>	<b>General Manager</b>
Source Address:	600 West Main Street, Butler, Indiana 46721
Mailing Address:	P.O. Box 80, Butler, Indiana 46721
General Source Phone Number:	(260)868-2168
SIC Code:	3365, 3363, <del>3341</del>
County Location:	Dekalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

- (2) All references to IDEM, OAQ's mailing address have been revised as follows:

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

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

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

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

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

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

- (3) IDEM, OAQ Compliance Branch Phone and Fax Number changes:

All references to the IDEM, OAQ, Compliance Section telephone number have been revised as follows: ~~317-233-5674~~ **317-233-0178**.

All references to the IDEM, OAQ, Compliance Section facsimile number have been revised as follows: ~~317-233-5967~~ **317-233-6865**.

- (4) Condition B.2 – Permit Term contained a typographical error and has been corrected as follows:

**B.2 Permit Term** [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

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- (a) This permit, ~~T033-22252-00016~~ **T033-17659-00016**, 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 or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).
- (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, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.
- (5) Upon further review, IDEM, OAQ has clarified the time frame for the maintenance and implementation of Preventive Maintenance Plans in Condition B.11 - Preventative Maintenance Plan as follows:

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

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) **within ninety (90) days after issuance of this permit**, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
  - (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.
- (6) Upon further review, IDEM, OAQ has clarified the language in Condition B.14 - Prior Permits Superseded as follows:

**B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]**

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- (a) All terms and conditions of permits established prior to T033-17659-00016 **and issued** pursuant to permitting programs approved into the state implementation plan have been either:
    - (1) incorporated as originally stated,
    - (2) revised under 326 IAC 2-7-10.5, or
    - (3) deleted under 326 IAC 2-7-10.5.

~~by this permit.~~
  - (b) Provided that all terms and conditions are accurately reflected in this **Part 70 operating** permit, all previous registrations and permits are superseded by this permit, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).
- (7) The requirements for instrument specifications were added to the permit as a new condition, Condition C.13 – Instrument Specifications.

**C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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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.**
- (8) The requirements for emergency reduction plans were added to the permit as a new condition, Condition C.14 – Emergency Reduction Plans.

**C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

**Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):**

(a) **The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.**

(b) **These ERPs shall be submitted for approval to:**

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

**within ninety (90) days after the date of issuance of this permit.**

**The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).**

(c) **If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.**

(d) **These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.**

(e) **Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.**

(f) **Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]**

(9) Upon further review IDEM, OAQ has found a spelling error in Condition C.15 - Actions Related to Noncompliance Demonstrated by a Stack Test. This error has been corrected as follow:

**C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]**

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in ~~one hundred and twenty~~ **one hundred twenty** (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(10) Upon further review IDEM, OAQ has clarified the language in Condition C.18 - General Reporting Requirements as follows:

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
**MC 61-53 IGCN 1003**  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, **unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.**
- (f) **The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.**

- (11) Emission unit descriptions have been updated in Section A.2 - Emission Units and Pollution Control Equipment Summary and Section A.3 - Specifically Regulated Insignificant Activities as follows to reflect the new equipment and existing emission units:

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

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

- (a) ...
- (b) ...
- (c) ...
- (d) ...
- (e) ...
- (f) ...

- (g) ...
- (h) ...
- (i) ...
- (j) ...
- (k) ...
- (l) ...
- (m) ...
- (n) ...
- (o) ...
- (p) One (1) sand core line, approved for construction in 2007, consisting of the following equipment:**
  - (1) One (1) sand core knockout box, approved for construction in 2007, identified as TTA-KO, with a maximum capacity of 1,738 pounds per hour, venting inside. [326 IAC 6-3-2]**
  - (2) Other emission units, not regulated by a NESHAP, with PM-10, NO<sub>x</sub>, and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:**
    - (A) One (1) manual sand handling system, identified as Sigma Sand F94A1, with a maximum of 429.24 tons of core sand and 1,200 tons of purchased sand cores per twelve (12) consecutive month period, with emissions venting inside.**
    - (B) One (1) shell core production unit, identified as Shell 1, heated by a natural gas unit rated at 0.25 MMBtu/hr, with a maximum capacity of forty-eight (48) two (2) pound cores per hour, and venting indoors. [326 IAC 6-2-4]**
    - (C) One holding furnace, identified as TTA/INT, with a maximum capacity of 748.05 gallons of molten aluminum, heated by a natural gas unit rated at 1.5 MMBtu/hr. [326 IAC 6-2-4]**
    - (D) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station TTA, rated at a maximum capacity of 150 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]**

- (E) **Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 059, rated at a maximum capacity of 500 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]**
- (F) **Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 558, rated at a maximum capacity of 760 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]**
- (G) **One (1) casting cooler hanger, identified as TTC-CC, with a maximum capacity of 40 parts per hour.**
- (H) **One (1) casting cooler rack hanger, identified as 059/558-CC, with a maximum capacity of 50 parts per hour.**
- (I) **One (1) sawing and trimming operation for casting station TTA, identified as TTA-TR, processing up to a total of 20 pounds aluminum per hour.**
- (J) **One (1) sawing and trimming operation for casting stations 059 and 558, identified as 059/558-TR, processing up to 230 pounds of aluminum per hour.**
- (3) **Three (3) shot blast cleaners, approved for construction in 2007, identified as Blast 1 through Blast 3, each with a maximum throughput capacity of 1.6 tons per hour, each controlled by one (1) baghouse identified as Blast1A, Blast2A, and Blast3A, respectively, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]**

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

---

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

- (a) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
  - ~~(a)~~ (1) ~~Two~~ (2) sawing and trimming operations for furnaces A1 through A13, excluding A3, individually identified as C-1 and C-2, installed in 1964, processing up to a total of 3.8 tons aluminum per hour; and
  - ~~(b)~~ (2) ~~s~~Sawing and trimming operation for furnace A3, installed in 2003, processing up to 3.0 tons aluminum per hour,

utilizing two (2) cyclones for particulate matter control each exhausting through one (1) stack respectively identified as E-14 and E-15. [326 IAC 6-3-2]

- (b) **One (1) shot blast cleaner, constructed in 1980, identified as Blast 4, with a maximum throughput capacity of 1.5 tons per hour, PM controlled by one (1) baghouse identified as Blast4, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]**

- (12) The following modifications have been made to Section D.1:
- (a) The language in Condition D.1.1 - PSD Minor Limits has been modified for clarification purposes.
  - (b) Due to the potential to emit of Hazardous Air Pollutants (HAPs) from this proposed modification No. 033-24343-00016; the HAP limits for Condition D.1.2 - Hazardous Air Pollutants have been revised in order for the source to remain a minor source of HAPs and for clarification purposes. Associated compliance determination requirements have been removed from the record keeping requirements to create the new Condition D.1.8 - Hazardous Air Pollutants.
  - (c) Pursuant to 326 IAC 8-2-6, Condition D.1.3 - VOC has been added.
  - (d) Condition D.1.4 - Particulate and Condition D.1.15 - Record Keeping Requirements have been updated to include the new emission units from the sand core line and for clarification purposes.
  - (e) Pursuant to 326 IAC 6-2-4, Condition D.1.5 - Particulate has been added.
  - (f) Pursuant to 326 IAC 2-7-5 and 326 IAC 2-7-6, new Condition D.1.6 - Particulate Control, D.1.9 - Baghouse Parametric Monitoring, and Condition D.1.10 - Broken or Failed Bag Detection have been added.
  - (h) The Permittee requested a change to the testing requirements for existing reverberatory melt furnaces A1 through A13, from one (1) furnace per group (A-D) every twenty-one (21) months to one (1) furnace out of thirteen (13) every 2.5 years. Upon further review, IDEM, OAQ Compliance Branch has determined that a testing frequency of one (1) furnace per group (A-D) once every 2.5 years is sufficient for the reverberatory furnaces at this source. Therefore, the testing frequency has been modified from one (1) furnace per group (A-D) every twenty-one (21) months to one (10 furnace per group (A-D) once every 2.5 years. Compliance testing was last conducted on October 25, 2005, therefore, the next compliance test is due by April 25, 2008.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

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

- (a) One (1) reverberatory melt furnace identified as A1 with a maximum melt capacity of 3.83 tons of aluminum per hour, installed in August 2002, equipped with four (4) natural gas fired burners rated at 9.2 million (MM) British thermal units (Btu) per hour total, exhausting through one (1) stack identified as E-1.
- (b) One (1) reverberatory melt furnace identified as A2 with a maximum melt capacity of 3.28 tons of aluminum per hour, installed in August 2002, equipped with three (3) natural gas fired burners rated at 7.86 MMBtu per hour total, exhausting through one (1) stack identified as E-2.
- (c) One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 6.0 tons of aluminum per hour, installed in July 2003, equipped with two (2) natural gas fired burners rated at 24.0 MMBtu per hour total, exhausting through one (1) stack identified as E-3.
- (d) One (1) reverberatory melt furnace identified as A4 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1974, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-4.
- (e) One (1) reverberatory melt furnace identified as A5 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1976, equipped with two (2) natural gas fired burners rated at 6.7 MMBtu per hour total, exhausting through one (1) stack identified as E-5.
- (f) One (1) reverberatory melt furnace identified as A6 with a maximum melt capacity of 1.25 tons of aluminum per hour, installed in 1978, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-6.
- (g) One (1) reverberatory melt furnace identified as A7 with a maximum melt capacity of 1.0 ton of aluminum per hour, installed in 1982, equipped with two (2) natural gas fired burners rated at 5.2 MMBtu per hour total, exhausting through one (1) stack identified as E-7.
- (h) One (1) reverberatory melt furnace identified as A8 with a maximum melt capacity of 0.25 tons of aluminum per hour, installed in 1993, equipped with one (1) natural gas fired burner rated at 2.5 MMBtu per hour, exhausting through one (1) stack identified as E-8.
- (i) One (1) reverberatory melt furnace identified as A9 with a maximum melt capacity of 2.5 tons of aluminum per hour, installed 1994, equipped with four (4) natural gas fired burners rated at 10.6 MMBtu per hour total, exhausting through one (1) stack identified as E-9.
- (j) One (1) reverberatory melt furnace identified as A10 with a maximum melt capacity of 2.5 tons of aluminum per hour, installed 1995, equipped with six (6) natural gas fired burners rated at 9.0 MMBtu per hour total, exhausting through one (1) stack identified as E-10.

- (k) One (1) reverberatory melt furnace identified as A11 with a maximum melt capacity of 0.9 tons of aluminum per hour, installed 1996, equipped with six (6) natural gas fired burners rated at 15.9 MMBtu per hour total, exhausting through one (1) stack identified as E-11.
- (l) One (1) reverberatory melt furnace identified as A12 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-12.
- (m) One (1) reverberatory melt furnace identified as A13 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 MMBtu per hour total, exhausting through one (1) stack identified as E-13.
- (n) The maximum solid reactive flux injection rate at each of reverberatory furnaces A1 through A13 is ten (10) pounds of flux per 10,000 pounds of aluminum melted.
- (o) Source aluminum casting operations:
  - (1) Aluminum pouring and casting operations for furnaces A1 through A11, excluding A3, rated at 18.01 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (2) Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (3) Aluminum pouring and casting operation for furnaces A12 and A13, identified as ME Cell, rated at 7.0 tons of melted aluminum per hour, using holding furnaces listed in paragraph (4).
  - (4) Holding furnaces used in source casting operations, each exhausting inside the building except as indicated, and including:
    - (A) Twenty-seven (27) "basic holding furnaces", including:
      - (i) Two (2) natural gas-fired holding furnaces identified as S1 and S2, each with a maximum heat input rating of 5.8 MMBtu per hour and a nominal holding capacity of 5,000 pounds molten metal, exhausting through one (1) common stack. Each furnace performs degassing as needed using argon or nitrogen;
      - (ii) One (1) natural gas-fired holding furnace identified as H1 with a maximum heat input rating of 1.48 MMBtu per hour and a nominal holding capacity of 7,000 pounds molten metal. This furnace performs degassing as needed using argon or nitrogen;
      - (iii) Four (4) natural gas-fired holding furnaces respectively identified as Pots 1A, 1B, 8 and 9, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal. Each furnace performs degassing as needed using argon or nitrogen;
      - (iv) Two (2) natural gas-fired holding furnaces respectively identified as Pots 44 and 45, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment;
      - (v) Two (2) natural gas-fired holding furnaces respectively identified as Pots 46 and 47, each with a maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,000 pounds molten metal, performing no additional degassing or rotofluxing;
      - (vi) Six (6) natural gas-fired holding furnaces respectively identified as Pots 17 through 20, 30 and 31, each with a total maximum heat input rating of 0.5 MMBtu per hour and a nominal holding capacity of 1,500 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment; and
      - (vii) Ten (10) electric holding furnaces respectively identified as Pots 34 through 43, each with a nominal holding capacity of 2,000 pounds molten metal. As needed, each furnace performs degassing, using argon or nitrogen, and rotofluxing, using up to one (1) pound of solid reactive flux per treatment.
    - (B) Three (3) "special holding furnaces" as follows:
      - (i) One (1) electric holding furnace, identified as SP1, with a total nominal holding capacity of 7,000 pounds molten metal and consisting of a receiving-holding pot, an electric heat transfer, and a pouring-holding supply pot. The furnace performs degassing as needed using argon or nitrogen; and
      - (ii) Two (2) electric holding furnaces, identified as SP2 and SP3, each with a nominal holding capacity of 14,000 pounds molten metal and each consisting of a receiving-holding pot, an electric heat transfer, and a pouring-holding supply pot. Each furnace performs degassing as needed using argon or nitrogen.
- (p) **One (1) sand core line, approved for construction in 2007, consisting of the following equipment:**
  - (1) **One (1) sand core knockout box, approved for construction in 2007, identified as TTA-KO,**

- (2) with a maximum capacity of 1,738 pounds per hour, venting inside. [326 IAC 6-3-2]  
Other emission units, not regulated by a NESHAP, with PM-10, NO<sub>x</sub>, and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
- (A) One (1) manual sand handling system, identified as Sigma Sand F94A1, with a maximum of 429.24 tons of core sand and 1,200 tons of purchased sand cores per twelve (12) consecutive month period, with emissions venting inside.
  - (B) One (1) shell core production unit, identified as Shell 1, heated by a natural gas unit rated at 0.25 MMBtu/hr, with a maximum capacity of forty-eight (48) two (2) pound cores per hour, and venting indoors. [326 IAC 6-2-4]
  - (C) One holding furnace, identified as TTA/INT, with a maximum capacity of 748.05 gallons of molten aluminum, heated by a natural gas unit rated at 1.5 MMBtu/hr. [326 IAC 6-2-4]
  - (D) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station TTA, rated at a maximum capacity of 150 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  - (E) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 059, rated at a maximum capacity of 500 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  - (F) Aluminum pouring and casting operations using sand cores for furnace A12 (or backup furnace A13), identified as casting station 558, rated at a maximum capacity of 760 pounds of melted aluminum per hour, using the holding furnace identified as TTA/INT. [326 IAC 6-3-2]
  - (G) One (1) casting cooler hanger, identified as TTC-CC, with a maximum capacity of 40 parts per hour.
  - (H) One (1) casting cooler rack hanger, identified as 059/558-CC, with a maximum capacity of 50 parts per hour.
  - (I) One (1) sawing and trimming operation for casting station TTA, identified as TTA-TR, processing up to a total of 20 pounds aluminum per hour.
  - (J) One (1) sawing and trimming operation for casting stations 059 and 558, identified as 059/558-TR, processing up to 230 pounds of aluminum per hour.
- (3) Three (3) shot blast cleaners, approved for construction in 2007, identified as Blast 1 through Blast 3, each with a maximum throughput capacity of 1.6 tons per hour, each controlled by one (1) baghouse identified as Blast1A, Blast2A, and Blast3A, respectively, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors. [326 IAC 6-3-2]

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

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

#### **D.1.1 PSD Minor Limits [326 IAC 2-2]**

Pursuant to Significant Permit Revision No. 033-17746, issued on January 14, 2004, and revised by this Title V permit, the source shall limit the total aluminum production in reverberatory melt furnaces A1 through A13 as follows:

- (a) The total aluminum produced in reverberatory furnaces A2, A3, A4, A6, A7, A8, A10, A11, and A12 shall not exceed 28,910.3 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month, based on the following:
  - (1) PM emissions from each furnace shall not exceed 4.3 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition)

stage at the end of the melt cycle; and

- (2) PM-10 emissions from each furnace shall not exceed 2.6 pounds of PM-10 ~~emitted~~ per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.

~~This material usage limit is equivalent to limiting PM and PM-10 emissions to 62.16 and 37.58 tons per year, respectively.~~

- (b) The total aluminum produced in reverberatory furnaces A1, A5, A9, and A13 shall not exceed 16,072.5 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month, ~~based on the following:~~
  - (1) PM emissions from each furnace shall not exceed 3.0 pounds of PM ~~emitted~~ per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle; and
  - (2) PM-10 emissions from each furnace shall not exceed 2.6 pounds of PM-10 ~~emitted~~ per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.

~~This material usage limit is equivalent to limiting PM and PM-10 emissions to 24.11 and 20.89 tons per year, respectively.~~

**Compliance with these usage limits in conjunction with the PM and PM-10 emissions from all other emission units at this source, shall ensure that** ~~are required to limit the source-wide potential to emit both PM and PM-10 emissions are limited~~ to less than 250 tons per twelve (12) consecutive month period **with compliance determined at the end of each month.** ~~Compliance with this condition shall make~~ **Therefore,** the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) **are rendered** not applicable.

#### D.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-4.1-1]

- 
- (a) ~~Pursuant to Significant Permit Revision No. 033-16754, issued on June 24, 2003, the~~ Permittee shall limit flux usage as follows:

- (a1) For chlorine-based fluxing:

- (4A) The total hexachloroethane input usage at the source, including all reverberatory and holding furnaces, shall not exceed ~~21,645~~ **10,541** pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.

- ~~(2) Hydrochloric acid (HCl) emissions from each furnace shall not exceed 0.924 pounds of HCl emitted per pound of hexachloroethane used.~~

- (B) **The chlorine content in the flux shall not exceed 92.4 percent (%) by weight.**

- (C) **The total emissions of chlorine from the source, including all reverberatory and holding furnaces, shall not exceed 4.87 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

~~This material usage limit is equivalent to limiting single HAP (as HCl) emissions to less than 10 tons per year.~~

- (b2) For fluorine-based fluxing:

- (4A) The total SF-350 type flux input usage at the source, including all reverberatory and holding furnaces, shall not exceed ~~82,425~~ **79,578** pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
- ~~(2) Hydrogen fluoride (HF) emissions from each furnace shall not exceed 0.2276 pounds of HF emitted per pound of flux used.~~
- (3B) The fluorine content in the flux shall not exceed 21.614 percent (%) by weight.
- (C) **The total emissions of fluorine from the source, including all reverberatory and holding furnaces, shall not exceed 8.60 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

~~This material usage limit is equivalent to limiting single HAP (as HF) emissions to less than 10 tons per year.~~

- (b) **The Permittee shall limit HAP emissions for the sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO as follows:**
  - (1) **The total sand usage for the sand core line shall not exceed 700.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
  - (2) **The total emissions of any combination of HAPs from the sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO shall not exceed 10.09 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
  - (3) **The emissions of any single HAP from the sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO shall not exceed 9.88 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
- (c) ~~These usage limits are required to limit the potential to emit of a single HAP to less than 10 tons per twelve (12) consecutive month period. Compliance with the single and combination HAP limits in (a) and (b) of this condition, in conjunction with single and combination HAP emissions from all other emission units including insignificant activities, shall ensure that also limit the source-wide potential to emit combined HAPs to is less than ten (10) tons of a single HAP and less than twenty-five (25) tons of a combination of HAPs per twelve (12) consecutive month period, respectively, with compliance determined at the end of each month. Compliance with this condition shall render~~ **Therefore, the requirements of 326 IAC 2-4.1-1 and 326 IAC 20-1 are rendered** not applicable ~~to all emission units installed after July 27, 1997.~~

**D.1.3 Volatile Organic Compounds [326 IAC 8-1-6]**

- (a) The emissions of VOC from the sand core making operation identified as Shell 1 shall not exceed 116.53 pound of VOC per ton of sand with compliance determined at the end of each month.
- (b) The total throughput of sand to the sand core making operation identified as Shell 1 shall not exceed 420.48 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall ensure that the sand core making operation potential to emit VOC is less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 8-1-6 are rendered not applicable to the sand core making operation.

**D.1.4 Volatile Organic Compounds [326 IAC 8-1-6]**

- (a) The emissions of VOC from the pouring/cooling operations identified as units 059, 558, and TTA shall not exceed 0.14 pound of VOC per ton of aluminum each with compliance determined at the end of each month.
- (b) The throughput of aluminum to the pouring/cooling unit 059 shall not exceed 2,190 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) The throughput of aluminum to the pouring/cooling unit 558 shall not exceed 3,328.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) The throughput of aluminum to the pouring/cooling unit TTA shall not exceed 657 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (e) The emissions of VOC from the knock out operation identified as unit TTA-KO shall not exceed 1.20 pound of VOC per ton of aluminum with compliance determined at the end of each month.
- (f) The throughput of aluminum to the knock out operation identified as unit TTA-KO shall not exceed 6,175.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall ensure that the potential to emit VOC from the pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO are less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 8-1-6 are rendered not applicable to the sand core line.

**D.1.35 Particulate [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the facilities listed below shall be limited as specified when operating at the respective process weight:

Emission Unit/Activity	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Reverberatory furnace A1	3.83	10.08
Reverberatory furnace A2	3.28	9.09
Reverberatory furnace A3	6.00	13.62

Emission Unit/Activity	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Reverberatory furnace A4	1.25	4.76
Reverberatory furnace A5	1.25	4.76
Reverberatory furnace A6	1.25	4.76
Reverberatory furnace A7	1.00	4.10
Reverberatory furnace A8	0.25	1.62
Reverberatory furnace A9	2.50	7.58
Reverberatory furnace A10	2.50	7.58
Reverberatory furnace A11	0.90	3.82
Reverberatory furnace A12	3.50	9.49
Reverberatory furnace A13	3.50	9.49
Pouring and casting for furnaces A1 through A11 (excludes A3)	18.01	28.44
FLCA pouring and casting for furnace A3	6.00	13.61
ME Cell pouring and casting for furnaces A12 & A13	7.00	15.10
<b>Pouring and cooling for station 059</b>	<b>0.29</b>	<b>1.8</b>
<b>Pouring and cooling for station 558</b>	<b>0.46</b>	<b>2.5</b>
<b>Pouring and cooling for station TTA</b>	<b>0.12</b>	<b>1.0</b>
<b>Sand core knockout unit TTA-KO</b>	<b>0.87</b>	<b>3.7</b>
<b>Shot Blast Cleaners #1 - #3</b>	<b>4.8</b>	<b>11.7</b>

The pounds per hour allowable particulate emission rates were calculated with the following equation:

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

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

### Compliance Determination Requirements

#### D.1.8 Hazardous Air Pollutants

- (a) In order to determine compliance with twelve (12) consecutive month limit in Condition D.1.2(a), the HAP emission rates shall be calculated monthly based on complete (100%) chemical conversion using the following equation:

$$E = L * P$$

Where E = Rate of emission in tons per month;  
 L = Actual usage rate of flux in tons per month; and  
 P = HAP percent by weight.

- (b) In order to determine compliance with the twelve (12) consecutive month limit in Condition D.1.2(b)(2), the total emissions of any combination of HAPs shall be calculated monthly based on the following equation:

$$\text{HAPs (Combined HAPs)} = (A + B + C) * D$$

Where: A = phenol-formaldehyde copolymer percent by weight;  
B = phenol percent by weight;  
C = formaldehyde percent by weight; and  
D = sand usage per month.

- (c) In order to determine compliance with the twelve (12) consecutive month limit in Condition D.1.2(b)(3), the emissions of any single HAP shall be calculated monthly based on the following equations:

$$\text{HAPs (phenol)} = (A + B) * D$$

$$\text{HAPs (formaldehyde)} = (A + C) * D$$

Where: A = phenol-formaldehyde copolymer percent by weight;  
B = phenol percent by weight;  
C = formaldehyde percent by weight; and  
D = sand usage per month.

#### **D.1.9 Particulate Control [326 IAC 2-7-6(6)]**

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- (a) In order to comply with Condition D.1.5, the baghouses for particulate control shall be in operation and control emissions from the shot blast cleaners #1 - #3 at all times these units are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### **D.1.610 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

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- (a) Pursuant to Significant Permit Revision No. 033-17746, issued on January 14, 2004, in order to demonstrate compliance with Conditions D.1.1 and D.1.35, the following shall apply:

- (a1) For the purposes of PM and PM-10 compliance stack testing, the thirteen (13) furnaces at this source are grouped as follows:

**Group A:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A8	0.25	2.5 (1 burner)
A11	0.9	15.9 (6 burners, total)
A7	1.0	5.2 (2 burners, total)

**Group B:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A4	1.25	10.05 (3 burners, total)
A5	1.25	6.7 (2 burners, total)
A6	1.25	10.05 (3 burners, total)

**Group C:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A9	2.5	10.6 (4 burners, total)
A10	2.5	9.0 (6 burners, total)
A2	3.28	9.2 (4 burners, total)
A12	3.5	12.5 (2 burners, total)

**Group D:**

<u>Furnace ID</u>	<u>Melt Rate (ton/hr)</u>	<u>Total Burner Rating (MMBtu/hr)</u>
A13	3.5	12.5 (2 burners, total)
A1	3.83	9.2 (4 burners, total)
A3	6.0	24.2 (2 burners, total)

(b2) The Permittee shall perform PM and PM-10 testing on one (1) furnace from each of Groups A, B, C and D by ~~December 31, 2005~~ **April 25, 2008**. The tests shall be conducted during metal melting and metal fluxing utilizing methods as approved by the Commissioner. This test shall be repeated every ~~twenty-one (21) months~~ **2.5 years** from the date of the prior valid compliance demonstration, but shall not be repeated on any one (1) furnace in a group until all furnaces in the respective group are tested. **If more than one (1) unit in a group has been in operation since the last valid compliance demonstration, the source will test the furnace for which the longest period of time has passed since the last valid compliance test.** The first complete PM/PM-10 testing of Groups A, B and C shall not include furnaces A11, A5, A6, A9 and A2. **Testing shall be conducted in accordance with Section C- Performance Testing. PM-10 includes filterable and condensible PM-10.**

- (b) **In order to demonstrate compliance with Condition D.1.3, the Permittee shall perform VOC testing for the sand core making operation identified as Shell 1, within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.**
- (c) **In order to demonstrate compliance with Condition D.1.4, the Permittee shall perform VOC testing for the pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO, within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.**

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

D.1.711 Visible Emissions Notations

- (a) Visible emission notations of the reverberatory melt furnaces' exhaust stacks (E-1 through E-13) shall be performed once per day during normal daylight operations when metal melting and fluxing is occurring and when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances shall be considered a deviation from this permit.

**D.1.12 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

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- (a) **The Permittee shall record the pressure drop across the baghouses used in conjunction with the shot blast cleaners at least once per day when the shot blast cleaners are in operation. When for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.**
- (b) **The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.**

**D.1.13 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

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

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

**D.1.14 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Total aluminum produced in furnaces A2, A3, A4, A6, A7, A8, and A10 - A12 for each month; and
  - (3) Total aluminum produced in furnaces A1, A5, A9, and A13 for each month.

- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through ~~(4)~~ **(7)** below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (1) Calendar dates covered in the compliance determination period.
  - (2) Total hexachloroethane input usage at the source for each month, **and weight percent of chlorine in the hexachloroethane flux.**
  - (3) Total SF-350 type flux input usage at the source for each month, and weight percent of fluorine in the SF-350 type flux.
  - (4) The total weight of HCl and HF, each as a single HAP, emitted for each compliance period **based on the equation utilized in Condition D.1.8.** ~~This determination shall be based on complete (100%) chemical conversion of chlorine in the hexachloroethane in the flux to HCl emitted, and complete (100%) chemical conversion of fluorine in the flux to HF emitted based on a maximum of 21.614 weight percent fluorine in the flux.~~
  - (5) **Total sand usage, core sand and purchased sand cores, for each compliance period.**
  - (6) **The HAPs content of the core sand and purchased sand cores used on a monthly basis.**
    - (A) **Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**
    - (B) **Records shall include the weight percent of phenol, formaldehyde, and phenol-formaldehyde copolymer.**
  - (7) **The weight of single HAP and combined HAPs emitted for each compliance period based on the equations utilized in Condition D.1.8.**
- (c) To document compliance with Condition D.1.3, the Permittee shall maintain records for the sand throughput in the sand core making operation identified as Shell 1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (d) To document compliance with Condition D.1.4, the Permittee shall maintain records for the aluminum throughput in the pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- ~~(e)~~**(e)** To document compliance with Condition D.1.8**11**, the Permittee shall maintain a **daily** records of ~~once per day~~ visible emission notations of the reverberatory melt furnaces' exhaust stacks **(E-1 through E-13)**. **The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).**
- (f) To document compliance with D.1.12, the Permittee shall maintain a daily record of the pressure drop across the baghouses controlling shot blast cleaners #1 - #3, identified as Blast1A through Blast3A. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

- ~~(d)~~**(g)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.1.915 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.1.1, ~~and~~ D.1.2, **D.1.3, and D.1.4** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the calendar quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (13) The Part 70 Quarterly Report form for Hazardous Air Pollutants has been updated and Part 70 Quarterly Report form tracking sand usage, HAP emission, and VOC input for the sand core line and HAP emissions for the entire source have been added to reflect changes in Condition D.1.2 - Hazardous Air Pollutants.

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

### Part 70 Quarterly Report

**Source Name:** Citation Corporation  
**Source Address:** 600 West Main Street, Butler, IN 46721  
**Mailing Address:** P.O. Box 80, Butler, IN 46721  
**Part 70 No.:** T033-17659-00016  
**Facility:** Sand Core Line - sand core making, pouring/cooling, and knock out operations identified as units Shell 1, 059, 558, TTA, and TTA-KO  
**Parameter:** Sand usage  
**Limit:** total sand usage for the sand core line, including core sand and purchased sand cores, shall not exceed 700.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: \_\_\_\_\_

Month	Sand Usage This Month (tons)			Sand Usage Previous 11 Months (tons)			12 Month Sand Usage (tons)		
	Shell 1	Units 059, 558, TTA, and TTA-KO	Total	Shell 1	Units 059, 558, TTA, and TTA-KO	Total	Shell 1	Units 059, 558, TTA, and TTA-KO	Total
Month 1									
Month 2									
Month 3									

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

**Source Name:** Citation Corporation  
**Source Address:** 600 West Main Street, Butler, IN 46721  
**Mailing Address:** P.O. Box 80, Butler, IN 46721  
**Part 70 No.:** T033-17659-00016  
**Facility:** Sand Core Line  
**Parameter:** Single and Total HAPs

**Limit:** (a) The total combined HAPs from the pouring/cooling and knock out associated with the sand core line shall not exceed 10.09 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit shall be determined using the following equation:

$$\text{HAPs (Combined HAPs)} = (A + B + C) * D$$

Where: A = phenol-formaldehyde percent by weight;  
 B = phenol percent by weight;  
 C = formaldehyde percent by weight; and  
 D = sand usage per month.

(b) The total single HAP from the pouring/cooling and knock out associated with the sand core line shall not exceed 9.88 tons per twelve consecutive month period. Compliance with this limit shall be determined using the following equations:

$$\text{HAPs (phenol)} = (A + B) * D$$

$$\text{HAPs (formaldehyde)} = (A + C) * D$$

Where: A = phenol-formaldehyde percent by weight;  
 B = phenol percent by weight;  
 C = formaldehyde percent by weight; and  
 D = sand usage per month.

YEAR: \_\_\_\_\_

Month	Total for This Month (tons)		Total for Previous 11 Months (tons)		Total for 12 Months (tons)	
	Single HAP	Combined HAPs	Single HAP	Combined HAPs	Single HAP	Combined HAPs
Month 1						
Month 2						
Month 3						

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

**Source Name:** Citation Corporation  
**Source Address:** 600 West Main Street, Butler, IN 46721  
**Mailing Address:** P.O. Box 80, Butler, IN 46721  
**Part 70 No.:** T033-17659-00016  
**Facility:** Entire Source  
**Parameter:** Single and Total HAPs

- Limit:**
- (a) The total emissions of chlorine from the source, including all reverberatory and holding furnaces, shall not exceed 4.87 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit shall be determined using the equation found in (c).
  - (b) The total emissions of fluorine from the source, including all reverberatory and holding furnaces, shall not exceed 8.60 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit shall be determined using the equations found in (c).
  - (c) In order to determine compliance with twelve (12) consecutive month limits in (a) and (b), the HAP emission rates shall be calculated monthly based on complete (100%) chemical conversion using the following equation:

$$E = L * P$$

Where E = Rate of emission in tons per month;  
 L = Actual usage rate of flux in tons per month; and  
 P = HAP percent by weight.

YEAR: \_\_\_\_\_

Month	Total for This Month (tons)		Total for Previous 11 Months (tons)		Total for 12 Months (tons)	
	Chlorine	Fluorine	Chlorine	Fluorine	Chlorine	Fluorine
Month 1						
Month 2						
Month 3						

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

**Source Name:** Citation Corporation  
**Source Address:** 600 West Main Street, Butler, IN 46721  
**Mailing Address:** P.O. Box 80, Butler, IN 46721  
**Part 70 No.:** T033-17659-00016  
**Facility:** The sand core making operation identified as Shell 1  
**Parameter:** Total VOC emissions  
**Limit:** The emissions of VOC from the sand core making operation identified as Shell 1 shall not exceed 116.53 pound of VOC per ton of sand with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Total VOC This Month (tons)	Total VOC Previous 11 Months (tons)	Total VOC 12 Months (tons)
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

**Source Name:** Citation Corporation  
**Source Address:** 600 West Main Street, Butler, IN 46721  
**Mailing Address:** P.O. Box 80, Butler, IN 46721  
**Part 70 No.:** T033-17659-00016  
**Facility:** Pouring/cooling and knock out operations identified as units 059, 558, TTA, and TTA-KO  
**Parameter:** Aluminum throughput  
**Limit:**

- (a) The throughput of aluminum to the pouring/cooling unit 059 shall not exceed 2,190 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The throughput of aluminum to the pouring/cooling unit 558 shall not exceed 3,328.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) The throughput of aluminum to the pouring/cooling unit TTA shall not exceed 657 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) The throughput of aluminum to the knock out operation identified as unit TTA-KO shall not exceed 6,175.8 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Total Aluminum This Month (tons)				Total Aluminum Previous 11 Months (tons)				Total Aluminum 12 Months (tons)			
	059	558	TTA	TTA-KO	059	558	TTA	TTA-KO	059	558	TTA	TTA-KO
Month 1												
Month 2												
Month 3												

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

### Part 70 Quarterly Report

Source Name: Citation Corporation  
 Source Address: 600 West Main Street, Butler, IN 46721  
 Mailing Address: P.O. Box 80, Butler, IN 46721  
 Part 70 No.: T033-17659-00016  
 Facility: Entire source  
 Parameter: Hexachloroethane input usage in the chlorine-based fluxing process; and SF-350 type flux input usage in the fluorine-based fluxing process

Limit: (a) For chlorine-based fluxing:  
 Total hexachloroethane input usage at the source, including all reverberatory and holding furnaces, shall not exceed ~~21,645~~ **10,541** pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.

(b) For fluorine-based fluxing:  
 Total SF-350 type flux input usage at the source, including all reverberatory and holding furnaces, shall not exceed ~~82,425~~ **79,578** pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.

YEAR: \_\_\_\_\_

Month	Input Usage at Source This Month (tons)		Input Usage at Source Previous 11 Months (tons)		12 Month Input Usage at Source (tons)	
	hexachloroethane	SF-350 flux	hexachloroethane	SF-350 flux	hexachloroethane	SF-350 flux
Month 1						
Month 2						
Month 3						

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

- (14) Section D.2 has been modified to incorporate the emissions limitations and standards, compliance determination, compliance monitoring, and record keeping requirements for Shot Blast Cleaner #4 as follows:

**SECTION D.2 FACILITY OPERATION CONDITIONS**

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

The following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
  - (a1) Two (2) sawing and trimming operations for furnaces A1 through A13, excluding A3, individually identified as C-1 and C-2, installed in 1964, processing up to a total of 3.8 tons aluminum per hour; and
  - (b2) Sawing and trimming operation for furnace A3, installed in 2003, processing up to 3.0 tons aluminum per hour,

utilizing two (2) cyclones for particulate matter control each exhausting through one (1) stack respectively identified as E-14 and E-15. [326 IAC 6-3-2]
- (b) **One (1) shot blast cleaner, constructed in 1980, identified as Blast 4, with a maximum throughput capacity of 1.5 tons per hour, PM controlled by one (1) baghouse identified as Blast4, a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot, a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, and venting indoors.**

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

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

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sawing and trimming operations identified as C-1 and C-2 shall not exceed 10.0 pounds per hour when operating at a process weight rate of 3.8 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sawing and trimming operation for furnace A3 shall not exceed 8.6 pounds per hour when operating at a process weight rate of 3.0 tons per hour.

**Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the facilities listed below shall be limited as specified when operating at the respective process weight:**

Emission Unit/Activity	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Sawing and trimming C-1 and C-2	3.8	10.0
Sawing and trimming for furnace A3	3.0	8.6
Shot blast cleaner #4	1.5	5.4

The pounds per hour allowable particulate emission rates were calculated with the following equation:

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

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

#### **D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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

#### **Compliance Determination Requirements**

##### **D.2.23 Particulate Control**

- (a) In order to comply with Condition D.2.1, the cyclones for particulate control shall be in operation and control emissions from the saw/trim facilities at all times that these facilities are in operation.
- (b) In order to comply with Condition D.2.1, the baghouse for particulate control shall be in operation and control emissions from the shot blast cleaner #4 at all times that this unit is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

##### **D.2.4 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the shot blast cleaner at least once per day when the shot blast cleaner is in operation. When for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

##### **D.2.5 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B – Emergency Provisions).

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

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

**D.2.6 Record Keeping Requirements**

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- (a) To document compliance with D.2.4, the Permittee shall maintain a daily record of the pressure drop across the baghouse controlling shot blast cleaner #4, identified as Blast4A. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).**
  
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

<b>Conclusion and Recommendation</b>
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The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 033-24343-00016 and Significant Permit Modification No. 033-240018-00016. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

**Appendix A: Emission Calculations**  
**Pouring/Cooling Emissions**

Company Name: Citation Corporation  
 Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
 Significant Permit Modification No: 033-24018-00016  
 Significant Source Modification No: 033-24343-00016  
 Plt ID: 033-00016  
 Reviewer: Kristen Layton  
 Date: July 3, 2007

Process:	Rate (tons Al/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Cooling unit 059 Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-18 (except as noted)	0.250	PM	4.20	4.60	None		4.60
		PM-10	2.06	2.26	None		2.26
	FIRE 5.0	SO2	0.02	0.02	None		0.02
		NOx	0.01	0.01	None		0.01
		VOC	0.14	0.15	None		0.15
		HAP <sup>a</sup>	--	0.00	None		0.00
		CO <sup>b</sup>	6.00	6.57	None		6.57

**Allowable Emissions:**

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 0.289 \text{ tons/hr} \quad (P \text{ includes the weight of the aluminum plus the weight of the sand cores}).$$

$$\text{limit} = 4.1 \times (0.289^{0.67}) = 1.8 \text{ lb/hr} \quad (\text{allowable})$$

with potential:

$$4.6 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 1.1 \text{ lb/hr} \quad (\text{can comply})$$

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Limited Emissions = Ef x Limited Rate (tons/hr)

1ton = 2000 lbs

a- HAP emission calculations can be found on page 13.

b- CO emission factor for Pouring/Cooling and Knockout based on site specific testing for foundries in Indiana

Citation Corporation  
600 West Main St., Butler, Indiana 46721

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Date: July 3, 2007

Process:	Rate (tons Al/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Cooling Unit 558	0.380	PM	4.20	6.99	None		6.99
<i>Source of Criteria</i>		PM-10	2.06	3.43	None		3.43
<i>Pollutant Factors:</i>		SO2	0.02	0.03	None		0.03
<i>FIRE 6.01</i>	FIRE 5.0	NOx	0.01	0.02	None		0.02
<i>SCC# 3-04-003-18</i>	FIRE 5.0	VOC	0.14	0.23	None		0.23
<i>(except as noted)</i>	FIRE 5.0	HAP <sup>a</sup>	--	0.00	None		0.00
		CO <sup>b</sup>	6.00	9.99	None		9.99

**Allowable Emissions:**

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 0.464 \text{ tons/hr} \quad (P \text{ includes the weight of the aluminum plus the weight of the sand cores}).$$

$$\text{limit} = 4.1 \times (0.464^{0.67}) = 2.5 \text{ lb/hr} \quad (\text{allowable})$$

with potential:

$$7.0 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 1.6 \text{ lb/hr} \quad (\text{can comply})$$

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Limited Emissions = Ef x Limited Rate (tons/hr)

1ton = 2000 lbs

a- HAP emission calculations can be found on page 13.

b- CO emission factor for Pouring/Cooling and Knockout based on site specific testing for foundries in Indiana

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Process:	Rate (tons Al/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Cooling Unit TTA <i>Source of Criteria</i> <i>Pollutant Factors:</i> <i>FIRE 6.01</i> <i>SCC# 3-04-003-18</i> <i>(except as noted)</i>	0.075	PM	4.20	1.38	None		1.38
	FIRE 5.0	PM-10	2.06	0.68	None		0.68
		SO2	0.02	0.01	None		0.01
		NOx	0.01	0.00	None		0.00
		VOC	0.14	0.05	None		0.05
		HAP <sup>a</sup>	--	0.00	None		0.00
		CO <sup>b</sup>	6.00	1.97	None		1.97

**Allowable Emissions:**

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 0.12 \text{ tons/hr} \quad (P \text{ includes the weight of the aluminum plus the weight of the sand cores}).$$

$$\text{limit} = 4.1 \times (0.12^{0.67}) = 1.0 \text{ lb/hr} \quad (\text{allowable})$$

with potential:

$$1.4 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.3 \text{ lb/hr} \quad (\text{can comply})$$

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Limited Emissions = Ef x Limited Rate (tons/hr)

1ton = 2000 lbs

a- HAP emission calculations can be found on page 13.

b- CO emission factor for Pouring/Cooling and Knockout based on site specific testing for foundries in Indiana

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Holding Furnace (TTA/INT)**

Company Name: Citation Corporation  
Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
Significant Permit Modification No: 033-24018-00016  
Significant Source Modification No: 033-24343-00016  
Plt ID: 033-00016  
Reviewer: Kristen Layton  
Date: July 3, 2007

Heat Input Capacity  
MMBtu/hr

1.5

Potential Throughput  
MMCF/yr

13.0

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.01	0.05	0.00	0.65	0.04	0.54

\*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

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

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

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

See page 5 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Holding Furnace (TTA/INT)**  
**HAPs Emissions**

Company Name: Citation Corporation  
Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
Significant Permit Modification No: 033-24018-00016  
Significant Source Modification No: 033-24343-00016  
Plt ID: 033-00016  
Reviewer: Kristen Layton  
Date: July 3, 2007

HAPs - Organics					
	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	1.361E-05	7.779E-06	4.862E-04	1.167E-02	2.204E-05

HAPs - Metals					
	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	3.241E-06	7.131E-06	9.075E-06	2.463E-06	1.361E-05

Methodology is the same as page 4.

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

**Appendix A: Emissions Calculations  
Sand Core Knockout Emissions**

Company Name: Citation Corporation  
 Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
 Significant Permit Modification No: 033-24018-00016  
 Significant Source Modification No: 033-24343-00016  
 Plt ID: 033-00016  
 Reviewer: Kristen Layton  
 Date: July 3, 2007

Process:	Rate (tons Al/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Sand Core Knockout (TTA-KO) SCC# 3-04-003-31 AP-42 Ch. 12.10 Fifth edition 1995	0.705	PM	3.20	9.88	None		9.88
		PM-10	2.24	6.92	None		6.92
		SO2	0.00	0.00	None		0.00
		NOx	0.00	0.00	None		0.00
		VOC	1.20	3.71	None		3.71
		HAP <sup>a</sup>	--	--	None		--
		CO	---	--	None		--

**Allowable Emissions:**

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 0.869 \text{ tons/hr} \quad (\text{P includes the weight of the aluminum plus the weight of the sand cores}).$$

$$\text{limit} = 4.1 \times (0.869^{0.67}) = 3.7 \text{ lb/hr} \quad (\text{allowable})$$

with potential:

$$9.9 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 2.3 \text{ lb/hr} \quad (\text{can comply})$$

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

1ton = 2000 lbs

a- HAP emission calculations can be found on page 13.

**Appendix A: Emission Calculations  
Shot Blast Cleaner Emissions**

Company Name: Citation Corporation  
 Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
 Significant Permit Modification No: 033-24018-00016  
 Significant Source Modification No: 033-24343-00016  
 Plt ID: 033-00016  
 Reviewer: Kristen Layton  
 Date: July 3, 2007

Process:	Rate (tons/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Shot Blast #1, #2 and #3 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995	4.800	PM	17.00	357.41	Dust Collector	99.00%	3.57
		PM-10	1.70	35.74	Dust Collector	99.00%	0.36
		SO2	0.00	0.00	Dust Collector	99.00%	0.00
		NOx	0.00	0.00	Dust Collector	99.00%	0.00
		VOC	0.00	0.00	Dust Collector	99.00%	0.00
		CO	0.00	0.00	Dust Collector	99.00%	0.00

*Allowable Emissions:*

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 4.8 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (4.8^{0.67}) = 11.7 \text{ lb/hr (allowable)}$$

with potential:

$$3.6 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.8 \text{ lb/hr (can comply)}$$

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

1ton = 2000 lbs

Rate = maximum weight from casting per cycle (tons/cycle) + weight of shot \* hours per cycle

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Process:	Rate (tons/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Shot Blast #4 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995	1.500	PM	17.00	111.690	Dust Collector	99.00%	1.12
		PM-10	1.70	11.169	Dust Collector	99.00%	0.11
		SO2	0.00	0.000	Dust Collector	99.00%	0.00
		NOx	0.00	0.000	Dust Collector	99.00%	0.00
		VOC	0.00	0.000	Dust Collector	99.00%	0.00
		CO	0.00	0.000	Dust Collector	99.00%	0.00

**Allowable Emissions:**

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 1.5 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (1.5^{0.67}) = 5.4 \text{ lb/hr (allowable)}$$

with potential:

$$1.1 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.3 \text{ lb/hr (can comply)}$$

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

1ton = 2000 lbs

Rate = maximum weight from casting per cycle (tons/cycle) + weight of shot \* hours per cycle

**Appendix A: Emission Calculations  
Shell Core Unit Emissions**

Company Name: Citation Corporation  
 Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
 Significant Permit Modification No: 033-24018-00016  
 Significant Source Modification No: 033-24343-00016  
 Plt ID: 033-00016  
 Reviewer: Kristen Layton  
 Date: July 3, 2007

Process:	Rate (tons Sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Shell Core Unit (Shell 1) <i>Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-53</i>	0.048	PM	0.90	0.19	none		0.19
		PM-10	0.90	0.19	none		0.19
		SO2	0.00	0.00	none		0.00
		NOx	0.50	0.11	none		0.11
		VOC	116.53	24.50	none		24.50
		CO	---	0.00	none		0.00
		Lead	---	0.00	none		0.00

Since PTE is less than 0.551 lb/hr, 326 IAC 6-3-2 does not apply.

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

1ton = 2000 lbs

a - A VOC emission factor for shell core units is not available. The VOC emission factor was backcalculated based on the total VOC emissions of 24.50 tpy necessary to render 326 IAC 8-1-6 (BACT) not applicable.

b - Combustion emission calculations from the 0.25 MMBtu/hr Shell Core Unit are located on pages 10 and 11.

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Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

0.25

2.2

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM-10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.002	0.01	0.001	0.11	0.01	0.09

\*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 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

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

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

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

See page 11 for HAPs emissions calculations.

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HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.300E-06	1.314E-06	8.213E-05	1.971E-03	3.723E-06

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	5.475E-07	1.205E-06	1.533E-06	4.161E-07	2.300E-06

Total HAPs Emissions:	2.066E-03
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Methodology is the same as page 10.

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

**Appendix A: Emission Calculations**  
**Sand Handling Emissions**

Company Name: Citation Corporation  
 Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
 Significant Permit Modification No: 033-24018-00016  
 Significant Source Modification No: 033-24343-00016  
 Plt ID: 033-00016  
 Reviewer: Kristen Layton  
 Date: July 3, 2007

Process:	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	
Sand Core and Sand Handling Source of Criteria Pollutant Factors: FIRE 6.01 EPA SCC# 3-04-003-50	0.185	PM	3.6	2.92	none		2.92	
		PM-10	0.54	0.44	none		0.44	
								0.00
								0.00
								0.00

Since PTE is less than 0.551 lb/hr, 326 IAC 6-3-2 does not apply.

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

1ton = 2000 lbs

**Appendix A: Emission Calculations  
Aluminum Foundry HAP Emissions**

Company Name: Citation Corporation  
Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
Significant Permit Modification No: 033-24018-00016  
Significant Source Modification No: 033-24343-00016  
Plt ID: 033-00016  
Reviewer: Kristen Layton  
Date: July 3, 2007

**Pound of HAP Emissions Per Pound of Sand**

Material	Pound of Sand	Weight % Phenol-formaldehyde copolymer	Weight % Phenol	Weight % Formaldehyde	Phenol-formaldehyde copolymer Emissions (lb of HAP/ lb of sand)	Phenol Emissions (lb of HAP / lb of Sand)	Formaldehyde Emissions (lb of HAP / lb of sand)	Total HAPs (lb of HAP / lb of sand)
Sigma Sand F94A1	1	1.31%	0.03%	0.10%	0.0131	0.0003	0.001	0.0144

**METHODOLOGY**

Calculations based on information provided by the Sigma Sand F94A1 manufacturer.  
Single HAP (lb of single HAP / lb of sand) = 1lb \* Weight %

**Unlimited Emissions**

Material	Maximum Sand Usage (lb/hr)	Weight % Phenol-formaldehyde copolymer	Weight % Phenol	Weight % Formaldehyde	Phenol-formaldehyde copolymer Emissions (ton/yr)	Phenol Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Total HAPs (ton/yr)
Sigma Sand F94A1	335	1.31%	0.03%	0.10%	19.22	0.44	1.47	21.13

**METHODOLOGY**

Single HAP (ton/yr) = Maximum Sand Usage (lb/hr) \* Weight % \* 8760 (hr/yr) \* 1 ton / 2000 lb

**Limited Emissions**

Material	Limited Sand Usage (lb/hr)	Weight % Phenol-formaldehyde copolymer	Weight % Phenol	Weight % Formaldehyde	Phenol-formaldehyde copolymer Emissions (ton/yr)	Phenol Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Total HAPs (ton/yr)
Sigma Sand F94A1	160	1.31%	0.03%	0.10%	9.18	0.21	0.70	10.09

**METHODOLOGY**

Single HAP (ton/yr) = Limited Sand Usage (lb/hr) \* Weight % \* 8760 (hr/yr) \* 1 ton / 2000 lb

**Appendix A: Emission Calculations**  
**Sawing and Trimming Emissions**

Company Name: Citation Corporation  
 Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
 Significant Permit Modification No: 033-24018-00016  
 Significant Source Modification No: 033-24343-00016  
 Plt ID: 033-00016  
 Reviewer: Kristen Layton  
 Date: July 3, 2007

Process	Rate (tons of Aluminum/hr)	PM Ef (lb/ton of Aluminum)	PM Emissions (ton/year)
Sawing and Trimming Unit TTA-TR	0.01	0.01	0.000438
Sawing and Trimming Unit 059/558-TR	0.115	0.01	0.005037
Total			0.005475

Process	Rate (tons of Aluminum/hr)	PM-10 Ef (lb/ton of Aluminum)	PM-10 Emissions (ton/year)
Sawing and Trimming Unit TTA-TR	0.01	0.0045	0.0001971
Sawing and Trimming Unit 059/558-TR	0.115	0.0045	0.00226665
Total			0.00246375

**Methodology**

PM and PM-10 emission factors based on FIRE 6.01 SCC# 3-04-003-60.

PM / PM10 Emissions = Rate (tons of Aluminum/hr) \* Ef (lb/ton of Aluminum) \* 8760 (hour/year) / 2000 (lb/ton)

**Appendix A: Emission Calculations**

**Aluminum Foundry Emissions**

Company Name: Citation Corporation  
 Address City IN Zip: 600 West Main St., Butler, Indiana 46721  
 Significant Permit Modification No: 033-24018-00016  
 Significant Source Modification No: 033-24343-00016  
 Pit ID: 033-00016  
 Reviewer: Kristen Layton  
 Date: July 3, 2007

Uncontrolled Emissions							
Process	PM (tons/yr)	PM-10 (tons/yr)	SO <sub>2</sub> (tons/yr)	NO <sub>x</sub> (tons/yr)	CO (tons/yr)	VOC (tons/yr)	HAPs* (tons/yr)
Pouring/Cooling	12.97	6.36	0.06	0.03	18.53	0.43	21.13
Holding Furnace	0.01	0.05	-	0.65	0.04	0.01	0.01
Sand Core Knockout	9.88	6.92	-	-	-	3.71	-
Shot Blast Units	469.10	46.91	-	-	-	-	-
Shell Core Unit	0.19	0.19	-	0.11	0.09	24.51	2.07E-03
Sand Handling	2.92	0.44	-	-	-	-	-
Sawing and Trimming	0.01	2.46E-03	-	-	-	-	-
<b>Total (tons/yr)</b>	<b>495.07</b>	<b>60.87</b>	<b>0.06</b>	<b>0.79</b>	<b>18.66</b>	<b>28.66</b>	<b>21.14</b>

Controlled Emissions							
Process	PM (tons/yr)	PM-10 (tons/yr)	SO <sub>2</sub> (tons/yr)	NO <sub>x</sub> (tons/yr)	CO <sub>2</sub> (tons/yr)	VOC (tons/yr)	HAPs *(tons/yr)
Pouring/Cooling	12.97	6.36	0.06	0.03	18.53	0.43	10.09
Holding Furnace	0.01	0.05	-	0.65	0.04	0.01	0.01
Sand Core Knockout	9.88	6.92	-	-	-	3.71	-
Shot Blast Units**	4.69	0.47	-	-	-	-	-
Shell Core Unit	0.19	0.19	-	0.11	0.09	24.51	2.07E-03
Sand Handling	2.92	0.44	-	-	-	-	-
Sawing and Trimming	0.01	2.46E-03	-	-	-	-	-
<b>Total (tons/yr)</b>	<b>30.67</b>	<b>14.43</b>	<b>0.06</b>	<b>0.79</b>	<b>18.66</b>	<b>28.66</b>	<b>10.11</b>

\* HAP emissions from Sand Core Knockout are included in the HAP emissions from Pouring/Cooling.

\*\* 99.0% control efficiency from manufacturer

Limited/Controlled Potential to Emit for the entire source (tons/yr)				
Pollutant	Metal Smelting	Sand Core Line	Combustion	Total
Single HAP	<4.87 HCL & <8.6 HF	9.88	1.2	9.88 H <sub>2</sub> CO
Total HAPs	13.47	10.11	1.3	24.88